

(1) Number of pages _____

(2) Date of receipt _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	224	27	Press
B.P. No.			Mis.
Dated	2. 3. 5		18 76.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
8th May 1876.*

No. 55. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-
STEWART, R.E., Consulting Engineer for Railways, to Major-General
O. W. WALKER, R.E., Secretary to Government, Public Works Depart-
ment, dated Madras, 28th April 1876, No. 205 —

ADVERTISE to paragraph 3 of the Order of Government, dated the 9th February
1876. No. 358, I have the honor to quote as follows from a letter written by Mr.
Trevithick, the Locomotive Superintendent on the Madras Railway :—
No. 123, 14th March 1876

" With regard to the efficiency of the spark-arresters, they are practically of the
same pattern as the spark-arrester in common use in Canada and the United States,
and I have no hesitation in declaring that they are efficient. As a matter of fact,
provided the spark-arresters are in good repair, it is impossible for any object to escape
from the engine chimneys larger than could pass through a hole $\frac{1}{4}$ th of an inch square,
and I cannot believe that such a spark could set fire to the timber of a railway carriage."

" All the wood-burning engines in the possession of the Company are provided
with spark-arresters in the chimneys, but from some recent cases I am led to believe
that wagons may have caught fire from sparks emitted from the ash-pans, and I am
about to try an experiment with the object of ascertaining whether under certain
conditions large pieces of burning wood may not fall from the ash-pans even against
the strong indraught caused by the blast and by the motion of the engine."

" There will be no difficulty in protecting the ash-pans by wire gauze in the same
manner as the chimneys; indeed this has already been done with satisfactory results
in one instance adverted to by the Consulting Engineer's reference to a letter from
Mr. Boodle. Another less expensive and far more convenient plan might be worth a
trial, viz., to attach a light iron plate transversely between the life guards at the back
of the tender buffer beam to within 4 to 5 inches of the rails. The effect of this screen
would be to arrest sparks from the ash-pan and prevent their bounding along the ballast
under the train."

2. I am inclined to agree with Mr. Trevithick that cases in which vehicles have
caught fire, and for which no explanation was apparent, may probably be often ascribed
with good reason, to the action of sparks emitted from the ash-pans. Upon this point
the Agent has promised to report the result of the experiments which Mr. Trevithick
proposes to make. There is every reason to expect that the risk of fire from this
cause can be effectually reduced by the application of one or other of the contrivances
mentioned by the Locomotive Superintendent.

3. One of the engines upon the Madras Railway has been fitted with a spark-
arrester according to the design in use upon the Scinde, Punjab and Delhi Railway,
of which a drawing was some time ago
received from the Government* of India.

* Proceedings of Government, dated 11th June
1874, No. 1,537.
No. 2,147, 5th August 1874

† Letters from Agent, Madras Railway, No. 923,
31st September 1875
No. 390, 11th April 1876, with enclosure

Two reports upon the working of this
engine are enclosed, and Mr. Trevithick
promises to report further upon it, as
compared with the arrester of the original

design, after he has had more opportunities of watching its behaviour.

Proceedings of the Minister General, Public Works Department,
8th May 1876.

No. 86.

ORDER THEREON, 8th May 1876, No. 1,121.

RAILWAY, No. 8.

Ordered to be recorded.

(True Extract.)

Colonel,

Off. Under Secy. to Govt., P.W.D.

To the Consulting Engineer for Railways

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Melbourne, 28 April 1876

No. 206

From

DIRECTOR COLONEL J. H. M. SHAW-STEWART, R.E.,

Consulting Engineer for Railways,

To

MAJOR GENERAL G. W. WALKER, R.E.,

Secretary to Government,

Public Works Department,

at Sand George.

Paragraph 3

to dated

5th March

Under from

which is, the

3
4/7/76 Locomotive Superintendent on the
Melbourne Railways:-

"With regard to the efficiency

"of the spark arresters, they are
practically of the same pattern

"as the spark arresters in common

"use in Canada and the United

States

Proceedings of the Madras Government, Public Works Department,
8th May 1876.

No. 85

ORDER THEREON, 8th May 1876, No. 1,124.

RAILWAY, No. 5.

ORDERED to be recorded.

(True Extract.)

Cd. 1876.

Off. Under Secy. to Govt. P.W.D.

T. G. C. S. S. E.

RAILWAY DEPARTMENT.

CONSULTING ENGINEER'S OFFICE,

Madras, 28 April 1876

No. 206

From

MAJOR COLONEL J. H. M. SHAW-STEWART, R.E.,

Consulting Engineer for Railways,

To

MAJOR GENERAL G. W. WALKER, R.E.,

Secretary to Government,

Public Works Department,

Fort Saint George.

Sir,

Referring to paragraph 3
of the order of Government dated
the 9th February 1876 No 358, I have
the honour to quote as follows from
a letter written by Mr. Smith to the
Locomotive Superintendent on the
Madras Railway:-

"With regard to the efficiency
of the spark arresters, they are
practically of the same pattern
as the spark arresters in common
use in Canada and the United
States."

No 123
H. H. C. S. S. E.

States, and have no hesitation
in declaring that they are
efficient. As a matter of fact,
provided the spark arresters are
in good repair, it is impossible
for any object to escape from
the engine chimneys larger
than could pass through a hole
of an inch square, and
cannot believe that such
a spark could set fire to the
timber of a sailing carrier
all the world knows
engines in the possession of
the Government are provided
with spark arresters in the
chimneys, but from some recent
cases I am led to believe
that they may have caught
fire

fire from sparks emitted from
the ashpan, and I am about
to try an experiment with the
view of ascertaining whether
under certain conditions large
pieces of burning wood may
be kept from the ashpan
by means of the strong in-
draft caused by the blast
and by the motion of the engine
which will be no dif-
ficulty in protecting the
ashpan by wire gauze in
the same manner as the chui-
neys, indeed this has already
been done with satisfactory
results in one instance adverted
to by the former Mr. Seymour
reference to a letter from Mr. Brodie
Another

Another less expensive and far
more convenient place might
be built a trifle higher, to attach
to a light, portable structure
in the distance the life guards at the
back of the tender being bound
to within 4 to 5 inches of the
sails. The effect of this arrangement
would be to arrest sparks
from the ash pan and prevent
their travelling along the
sails and under the tender.

2. I am inclined to
agree with the statement that
that case in which the vessel has
caught fire, and for which no ex-
planation was given, may
probably be often ascribed, with
good

good reason, to the action of
sparks emitted from the ash pan.
Upon this point, the agent has pro-
mised to report the result of the
experiments which Mr. Fairbank
proposed to make. There is every
reason to expect that the risk of
fire from this cause can be ef-
fectually reduced by the ap-
plication of one or other of the
contrivances mentioned by the
Locomotive Superintendent.

3. One of the engines upon the
Reading Railway has been fitted
with a spark arrester according
to the design ^{made} upon the Leeds,
Penny, and Beltham Railway,
of which a drawing was some
time

Since ago received from the Government
 of India. The defects upon the
 working of the regulations included,
 and Mr. David Hicks, Minister to report
 further upon it, as compared with
 the results of the original design,
 after he has had more opportunities
 of watching its behaviour.

No of Cont.
 11 June 74
 No 1537
 5 June 74
 No 2147

Letter from
 Mr. H. H. H.
 3 Sept 1875
 No 290
 11 Sept 1876
 Mr. H. H. H.

Have the honour to

Yours obediently

W. H. H.

for the purpose of the

1876 Sept
No: 2057

No. 1124 Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 8th May 1896.

Read the following:—

From
The Congress of the } P. O. No. 205 of 25th April 1876
Riding

[illegible]

RAILWAY DEPARTMENT.

From

The Consulting Engineer

for Railways,

To

The Secretary to Government,

R. W. Department,

Fort Saint George.

Date: 11th April 1876.
 Received of Johnston & Co.
 No. 205.
 the sum of £100 for
the purchase of 100 shares of the
London & North Western Railway
Company Limited.

under the existing state
of the frontier and
of the region.

CPM

under the existing state
of the frontier and
of the region.

1850

3057✓

Govt. of India
PUBLIC WORKS.

The Comdant for H.A.

5. May 1124

Left in P. 11
20-5-96

Spark Arresters -

Letter from the Comdant
for P. submitting with
remarks report on the
efficiency or otherwise
of the — in use
on the M. P., London