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# MADRAS RECORD OFFICE

Government of Madras

*Public Works*

DEPARTMENT

|          |        |        |
|----------|--------|--------|
| G.O. No. | 939-40 | Press  |
| B.P. No. |        | Mis. — |
| Dated    | 9-4-   | 195    |

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,  
9th April 1875.*

No. 179. Read the following letter from Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Madras, 23rd March 1875, No. 172:—

With reference to the Order of Government, dated 10th February 1875, No. 495, I have the honor to forward a letter\* from the Agent of the South

Indian Railway giving the Chief Engineer's opinion regarding the necessity for using extra fang bolts for fastening rails to creosoted pine sleepers on curves of small radius. It will be observed that Mr. Logan does not consider that anything more than the usual mode of fastening will be required on ordinary curves on the narrow gauge, but that where the radius does not exceed 500 or 600 feet some extra fang bolts will be necessary.

2. I understand that a similar difficulty has been experienced on the Nizam's State Railway, where the curves are somewhat sharp for the broad gauge.

From W. S. BETTS, Esq., Agent of the South Indian Railway, to Lieutenant-Colonel J. H. M. SHAW-STEWART, R.E., Consulting Engineer for Railways, dated Negapatam, 20th March 1875, No. 466.

In reply to the inquiry contained in your letter, No. 114, of the 24th ultimo, I have the pleasure to quote the following report from the Chief Engineer:—

"On curves of small radius, such as 500 or 600 feet and under, I have found the passage of engines to char or rather spread outwards, the spikes holding the outer rail. Even on the broad (5' 6") gauge this was found to be the case with the spikes holding down the chains for double headed rails.

"The wood of the sleepers being soft (creosoted pine) it yields to the side pressure exerted by a long wheel based vehicle such as a locomotive. To counteract this I consider that it will be necessary to put some fang bolts to each length of rail on such sharp curves as I have named, but I do not think this will be necessary on the ordinary curves of the main line."

No. 180. ORDER THEREON, 9th April 1875, No. 939.

RAILWAY, No. 23.

ORDERED to be recorded, and a copy, with previous correspondence, forwarded to the Government of India for information.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,

Secretary to Government.

No. 181. (DOCKET No. 940, dated 9th April 1875.)

Copy of the above forwarded to the Government of India with G. O., No. 495, dated 20th February 1875.

(True Extract.)

Colonel, R.E.,  
Secretary to Government.

Exd. S. T. Austin.

Spare Copies

No. 466, GREAT SOUTHERN OF INDIA RAILWAY.

AGENTS' OFFICE,  
NEGAPATAM, 20<sup>th</sup> March 1875.

From

THE AGENT,

Great Southern of India Railway,

To

The Consulting Engineer for Railways.

SIR,

In reply to the inquiry contained in your letter No. 114 of the 24<sup>th</sup> Ult., I have the pleasure to quote the following report from the Chief Engineer.

"On curves of small radius such as 500 or 600 feet and under I have found the passage of Engines to clear or rather spread outwards the spikes holding the outer rail. Even on the broad (5' 6") gauge this was found to be the case with the spikes holding down the chairs for double-headed rails.

The wood of the sleepers being soft (especially pine) it yields to the side pressure exerted by a long wheel-based vehicle such

Mr 1945/75

not consider that any thing  
more than the usual mode of  
fastening will be required  
on ordinary curves on the  
narrow gauge, but that where  
the radius does not exceed 500  
or 600 feet some extra gage  
bolts will be necessary.

I understand that a  
similar difficulty has been  
experienced on the Mysore State  
Railway, where the curves are  
somewhat sharp for the broad  
gage.

I have the honour to be

Yours most obedt Servt

Madras  
23 Nov 1875  
W. B. M.

W. B. M. J. R. E.

For Com: Engr for Rly

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the

Read the following:—

From the *Comr. Engrs.*  
for Railways.

N. S. No. 172 dated  
23<sup>rd</sup> March 1875.

939

Ordered to be re-  
corded and a copy,  
with previous correspondence  
forwarded to the Govt.  
of India for information.

To The *Comr. Engrs.* for Ry.  
Recd. 10-4-75

N. S. No. 9481

Copy of the above  
forwarded to the Govt.  
of India with G. O.  
No. 495 dated 20<sup>th</sup>  
February 1875.

*J.M.W.*

25  
Recd. with 6 spare  
copies of the order 17  
copies of 90-495 17/75 - 10-4-75

P. W. 1875 Dept.

(31)

RAILWAY DEPARTMENT.

From *No. 1945*  
The Consulting Engineer  
for Railways,

To  
The Secretary to Government,  
P. W. Department,  
Fort Saint George.

Dated 23<sup>rd</sup> March 1875.  
Recd. 24

E. I. No. 172.

Forwarding  
a letter from the  
Agent & Co.  
regarding the necessity  
for using extra  
large bolts for  
fastening rails  
to cross-ties pine  
sleepers on curves  
of small radius.  
G.O. No. 939. 9-4-75

N. 179

1023-3-75 10-4-75

60 20 Feb/75 No. 195 512-513

1945  
Govt. of 1875: Madras.

PUBLIC WORKS.

To

Carey & Co.  
Railways.  
Secy

Dated

Recd.

Encl.

G. O., 9 April 1875, No. 939

940

Nos. 179-181.

Forwarding Pro. on the  
necessity for using extra  
large bolts for fastening  
rails to cross-tied pine  
sleepers on curves of  
small radius.

Large bolts (S. I. Ry.)

Letter from the Com. Engr for  
Rys forwarding a letter from  
the Agent S. I. Ry. regarding  
the necessity for using extra  
— for fastening rails to  
cross-tied pine sleepers on  
curves of small radius,  
of the No. ...  
recorded, and a copy with  
previous correspondence  
ordered to be  
forwarded to the Govt. of  
India.