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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1142	Press
B.P. No.		Mis.
389.390		
Dated	23. 4.	1873.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
23rd April 1873.*

No. 389. Read the following Circular from the Government of India, Public Works Department, (Railway,) dated Fort William, 1st April 1873, No. 10:—

Cooling of Railway Carriages during the hot season.

Read again—

Circular No. 41-R, dated the 11th September 1872.

" " 54-R, " " 7th November "

Read also—

Report from R. D. SANDERS, Esq., Deputy Locomotive Superintendent, Great Indian Peninsula Railway, to the Secretary to the Government of Bombay in the Public Works Department, (Railway Branch,) dated 27th February 1873.

I HEREWITH beg to hand a modified plan of my patent for cooling railway carriages as it is now being applied on the Great Indian Peninsula Railway.

The improvements which have been made in the original design are the following:—

One tank only is placed on the roof, in place of the separate tanks on the ends of the carriage.

The operation of filling is thus much simplified.

The sides of the tank are made use of for the exhausting passages as shown, and the original reversible ventilators are dispensed with.

The bucket-boxes are of a much more simple construction and placed as high as possible. The head of water thus obtained is sufficient to water the tatties in a most effective manner without the use of the perforated trays which were necessary when the bucket was placed nearer the level of the floor.

These trays are therefore dispensed with, and a simple perforated pipe is all that is now required. When the bucket capsizes, the water is projected to the sides of the air chamber, and, as the head diminishes, the streams of water from the perforated pipe gradually subside to the centre. The whole area of the tatties is thus effectively watered.

The ventilators at the bottom under the floor are suspended on pivots in the centre as shown, and are easily adjusted from the interior of the carriage. This arrangement dispenses with the chain and pulley reversing gear as formerly adopted, and offers considerably less obstruction to the air passing underneath to the following carriage.

The cus-cus tatties and the gratings for supporting them are dispensed with, and in place thereof I have substituted perforated boards supported by battens on the sides of the air chamber. These boards can be covered with any absorbent material, or cus-cus if preferred.

By this arrangement an increased current of air is obtained on account of the increased area between the evaporating surfaces and the absence of friction in the air passages.

With these modifications this apparatus can be applied to a double compartment carriage in the manner shown for the estimated cost of Rupees 180 per carriage.

The arrangement of the tank on the roof is designed to admit punkahs upon my pneumatic principle, should it be considered desirable to adopt them.

This invention has been in use for three years, and the question of its general introduction is one upon which I beg to solicit the early consideration of the Government of India.

Having already offered my patent to Government, I am not in a position to make definite arrangements with the different Railway Companies who are now adopting it until I am in possession of the decision of the Government as to whether it will take over my patent or not.

In making terms with the different Railway Companies difficulties may arise on account of the interchange of stock from one line to another, and these difficulties may delay the general adoption of my improvements.

I am, therefore, desirous of placing my patent in the hands of Government, which will be the most satisfactory manner of introducing it. Its use can then be universally extended throughout the entire Railway system in India.

*Proceedings of the Madras Government, Public Works Department,
23rd April 1873.*

The application of these improvements is now so simple and inexpensive that, if put in hand at once, much may be done before the approaching hot season.

ORDER.—Ordered that this Report (without the plan) be forwarded for information to the Secretary of State and to the Governments, Administrations and Officers named in the margin.

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and the Punjab.
The Chief Commissioners of the Central Provinces and Oudh.
The Resident at Hyderabad.
The Agents to the Governor-General for Central India and Rajpootana.
The Consulting Engineers to the Government of India for Guaranteed Railways at Calcutta, Lucknow, and Lahore.
The Engineer-in-Chief, Indus Valley (State) Railway.
The Officiating Chief Engineer, Punjab Northern (State) Railway.
The Superintending Engineers, Delhi and Agra Districts, Rajpootana (State) Railway, and Holkar (State) Railway.

(Signed) A. H. VAUX,
for Offg. Deputy Secretary.

No. 390.

ORDER THEREON, 23rd April 1873, No. 1,172.

RAILWAY, No. 44.

COMMUNICATED to the Consulting Engineer for Railways.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. E. C. Shunker.

W. 1873 Department

No. 2381.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

RAILWAY.

To

CIRCULAR No. 10 RAILWAY.

Dated April 1, 1873.

Received — 10^a

To the Secy for Railways. Dept. 8-5-73-

Ne 1172
Circular No. 10 to the Secy for
Railways —

Wm

Forwards Report by Mr. Sanders des-
criptive of certain modifications in his
apparatus for cooling railway carriages.

P. W. D. Press—1-4-73—436.

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With an Envelope

C/ 2321

Govt. of India
PUBLIC WORKS.

*The Consulting Eng.
for Railways*

Date

Recd.

Encl.

G. O. 23 April 1872

For 389 + 390

Cooling Railway Carriages.

Circular from the Govt.
of India forwarding re-
port by Mr. Sanders des-
criptive of certain im-
provements in his ap-
paratus for cooling
Railway Carriages, Cont.
to the Engineer...