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MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No. Press / Mis.

Dated 18 .

*Not to be folded or roughly handled*

217. Read the following Circular from the Government of India, Public Works Department, (Buildings and Roads—Military,) to the Secretaries to the Governments of Madras, Bombay, Bengal, the North-Western Provinces, and the Punjab in the Public Works Department; the Chief Commissioners of Oudh, the Central Provinces, British Burmah, and Mysore and Coorg; the Resident at Hyderabad; the Governor-General's Agents for Central India and Rajpootana; the Military Department, the Adjutant-General, the Quartermaster-General, and the Sanitary Commissioner with the Government of India, dated Simla, 19th August 1870, No. 47:—

THE following practical remarks on punkahs, by the "Committee on Barrack ventilation," are circulated for information:—

I.—The motion being that of a true pendulum, a swing should be ensured to the punkahs of 5 feet in extent, with an average velocity of 2·5 feet per second, without shocks, and with perfect general regularity.

II.—When in a train the punkahs should generally be framed lightly, and in the ordinary system of single-action pulling, one punkah should have weight to act as a driver to the train, or a heavy pendulum should be connected with the system for the same object, the whole train in all cases being rigidly connected. Whenever punkahs are connected with ropes, *i.e.*, flexibly, shocks and jerks invariably occur, causing irregularity and loss of effect, the greater the number of punkahs the greater being the loss. Great advantage, therefore, arises from rigidly connecting the whole set of punkahs moved from the same origin; by this arrangement equal movement of the air is ensured throughout the room, and considerable saving of labour, due to the cessation of shocks and irregularities, is effected. A train of punkahs should, therefore, invariably be rigidly connected.

III.—Either the ordinary-framed punkah or the bar and flap punkah may be adopted with perfect efficiency, and according as circumstances render either of them convenient or economical. The ordinary punkah should have its frame 18 inches deep, suspended with its lower edge $6\frac{1}{2}$ feet from the ground, with a substantial fringe from 12 to 18 inches deep, made in pleats and of two or three thicknesses of cloth. The bar and flap punkah should consist of a substantial wood, or iron bar from 3 to 6 inches deep with a stiff and heavy flap of canvass in pleats 18 inches in depth, suspended with its lower edge at the same height from the ground, namely, $6\frac{1}{2}$ feet, and with a similar fringe attached to it.

IV.—In all arrangements and fixings in European Barracks, the punkahs and their gearing must be calculated to suit the circumstances, so as to prevent the chance of damage from the soldiers. It will be found that men will use for gymnastic purposes, etc., anything within their reach like strong cross bars, and will hang things upon rigid bars whether strong or weak, if within convenient distance. Such bars

should, therefore, be placed as much out of the men's reach as possible.

V.—In the detail arrangements, fittings, and gearing, which are generally much neglected, greater accuracy of make and fitting is much required. Pulleys should be well bored and turned, lubricated and kept in order, so as to move in their bearings easily and without noise; and there should always be a guide pulley above each to prevent the rope from slipping off the pulley on which it works; the cord used should also work freely: with these points attended to, the direction can be changed without much loss.

VI.—In punkahs moved by direct manual labour, the length from the point of suspension to the top of the punkah bar or frame should not be less than 10 feet. This is the most suitable length, but the necessary condition for the requisite velocity should be added, namely, that the punkah should move through an arc of about 5 feet in length. The lengths of suspension and of arc may vary; any length of either may be used, provided a corresponding length of the other be ensured, the obligatory point being the velocity of 2·5 feet per second.

(Signed.) W. A. CROMMELIN, Colonel, R.E.,
*Offg. Secy. to the Govt. of India.*

To the Secretary to the Government of Madras, Public Works Department.

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No. 218. ORDER THEREON, 13th September 1870, No. 2,200.

MILITARY WORKS, No. 13.

COMMUNICATED to the Military Department and to the Superintending Engineers.

(True Extract.)

Colonel, R.E.,
*Secretary to Government.*

To the Military Department.
To Superintending Engineers.
„ Major R. B. Kennedy.

Exd. E. C. Shunker.

P.P. 1870 Sept. f. 3522

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

BUILDINGS & ROADS.
Military.

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To

CIRCULAR No. 17 PUBLIC WORKS.

*Dated Simla, 19th August* 1870.

*Received* 7th Sept.

Forwarded for the Brit. Med. Board & Sup. Sanitary Engineer. Bengal Presidency. Rec'd 14/9/70.

Forwarded for information, practical remarks on punkahs by the Committee on Barrack Ventilation.

With an Order No 2202 dt. 12th September 1870.

Communicated to the Military Med. Board & Sup. Sanitary Engineer. Bengal Presidency. Rec'd 14/9/70.

Forwards for information, practical remarks on punkahs by the Committee on Barrack Ventilation.

With an Order No 2202 dt. 13th September 1870.

Ch 3522

Gobt. of 1870 Session.

PUBLIC WORKS.

Ho Military Departm

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Barrack Ventilation. Cir-
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practical remarks on pa
taken by Committee
on Barrack Ventilation
Communicated to the

Military Dept: & to the Mfg

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