

[L. & M.]
[1,000—48.]

Local & Munl. (1899) Department.

MISCELLANEOUS.

G.O., No. 280 P. 101

DATED 22/2/99

[Despatch Abstract.]

Disinfection of ordinary mud & Cooching floors.

*Recording Proceedings of the Plague Commission
Com. 44. with remarks to all Comrs. & the
from the Sanitary Commr. forwarding his opinion
on the —, regarding the —
to the —, regarding the —
to the —, regarding the —*

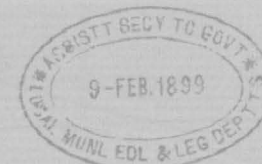
BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Proceedings of the Plague Commissioner, MADRAS — 1899.



Ch. 292 P

Recd. } 9-2-1899.
Regd. }

Enclosures

Spare copies 6 of Curr.

Proceedings, No. 308/24, 1st February 1899.

FEBRUARY.

*At 2.12.99.
Order No 280 P Miss 9/22/99
Miss H. M. (Hara. 1)*

Recorded

*1.2
14/2/99*

AT

17 2 99

Disinfection of ordinary mud and cowdung floors.

Communicating, with remarks, to all Collectors letter from the Sanitary Commissioner forwarding his opinion on the — requesting the Sanitary Commissioner to send his "gravity disinfector" to Vellore for trial; and informing him that his portable burner will also be tried when ready.

PROCEEDINGS OF THE PLAGUE COMMISSIONER.

READ—the following papers:—

G.O., No. 1519 P., dated 9th December 1898.

Recording letter from the Government of India forwarding copy of despatch from the Secretary of State for India to His Excellency the Viceroy on the subject of the disinfection of ordinary mud and cowdung floor against plague.

Ref. on C. No. 2567.

Forwarded to the Sanitary Commissioner for favour of opinion with reference to paragraphs 4, 5, 7 and 8 of Lieutenant-Colonel R. Boustead's remarks. Our present system of disinfection takes overlong, and could not be attempted on any large scale. Lieutenant-Colonel Boustead's proposal would apparently make it a still lengthier proceeding. The Venice Convention recommends as an alternative disinfectant a 5 per cent. solution of pure crystallized carbolic acid, or 5 per cent. of crude commercial carbolic acid in a warm solution of soft soap. Perhaps the latter, rubbed in with brushes, might permeate the cowdung floors and walls and be sufficient disinfection by itself without digging up the floors and burning them.

(Signed) L. E. BUCKLEY,
Plague Commissioner.

30th December 1898.

From Lieutenant-Colonel W. G. KING, M.B., C.M., D.P.H., Sanitary Commissioner for Madras, to the Plague Commissioner, Madras, dated Bellary, 23rd January 1899, No. 250-S.

With reference to your Ref. on C. No. 2567, dated 30th December 1898, I have the honour to state that it would be undesirable to place any reliance upon Lieutenant-Colonel Boustead's recommendation, having regard to the fact that these are entirely unsupported by experiments conducted either by himself or others. He appears to have made his deductions therefrom. These represented Mr. Hankin's incomplete results. Subsequent to the period thus referred to, Mr. Hankin worked further at the subject. He was then able to invite attention to the efficacy of burning over the flooring by means of straw, and of using sulphuric acid solution, in cases where mud or cowdung was dealt with. It does not appear that by the sulphuric acid process an absolutely sterile flooring was secured; but, on the other hand, Lieutenant-Colonel Boustead is certainly not in a position to show that his mode of procedure would go any further towards that end. Mr. Hankin, in advising this solution, ends with a statement that most of the medical profession are likely to agree with having regard to the known effect of acids upon the microbe of plague:—"Dilute sulphuric acid * * * is not volatile and, if used in sufficient quantities, is likely for some time at least to make the floor an unsuitable medium for the bubonic microbe."

2. Lieutenant-Colonel Boustead's remarks, however, assume that the preparation of perchloride of mercury employed does not take into account the tendency to form albuminates of mercury. In this Presidency, however, no other solution of the perchloride has been recommended by this office than combined with hydrochloric acid—it having long been recognized in European practice that this combination was essential, if the inimical action upon the perchloride of mercury of albuminous matters so frequently found in substances to be disinfected was to be frustrated. The formula (Local Government Board, England) which all Sanitary Inspectors have been taught to use is the following:—

Perchloride of mercury	..	..	..	..	..	..	..	oz. 1
Hydrochloric acid	..	..	..	..	..	..	..	oz. 1
Aniline blue	..	..	..	..	..	..	..	gr. 5
Water	..	..	..	..	..	..	..	gal. 3

There are doubtless many occasions when both the strengths of the acid and the perchloride of mercury could be advantageously doubled. It is with reference to this formula that the provision for hydrochloric acid appears in the list of disinfectants allowed ambulance staffs. Taking advantage of the results of Mr. Hankin's experiments with sulphuric acid, this has also been provided, on the understanding that it be used wherever mud or cowdung material of so thick a nature has to be attacked that the ordinary perchloride solution may fail.

3. Lieutenant-Colonel Boustead advances as one of the reasons why sea water should be employed, in the first place—or even a solution of common salt—that the chlorine present would have a beneficial effect. I think it may go without argument that the amount of free chlorine in sea water, or in a solution of salt, may fairly be regarded as a negligible quantity.

4. In connection with your remarks as to the length of time at present consumed in effecting disinfection, I am of opinion that the attempt to burn all floors within an infected area by the "kiln method" might well be dispensed with. In houses where cases have actually occurred, it is a method that can do no harm and, if carefully conducted may do much good. But, the chance of this toilful method being conducted with any degree of thoroughness where houses throughout an extensive area, e.g., a so-called "infected block," are concerned, seems to me, from practical observation, so remote that I think both expense and time may well be spared in this particular.

5. In another detail, I think time and efficiency can be secured, namely, by arranging a different system in regard to distribution of the disinfecting solution upon walls. Any one who has tried to work a Chinese pump for half an hour, will be convinced that the possession of a good conscience is essential, plus much perseverance and physical strength. The great effort needed is a direct inducement to scamp the work. Holding this view, I have designed a portable "gravity disinfector." This allows of the elevation of a receptacle containing 20 gallons of the disinfectant, which is thence distributed by hose under a head of from 18 to 20 feet. Two men can work and transport the machine. Recognizing also that the process of disinfection by heat (than which indubitably none can be better, but which to be effectual must be under complete control, be conducted, if possible, *in situ* instead of after disturbance), I can shortly offer you a readily portable machine that will, by means of kerosine-oil gas, united with a blast, secure such heat and direct application as shall without doubt ensure the effectual killing of the plague microbes whether surrounded by albuminous material or not. By means of a flexible tube the blast can be applied with the same facility to any given part as the "painter's lamp." I am of opinion that with the aid of such a machine all objections raised by Lieutenant-Colonel Boustead can be correctly met.

PROCEEDINGS—No. 200, dated 1st February 1899.

The Sanitary Commissioner's letter is communicated to all Collectors. Their attention is especially invited to the fourth paragraph. For the present, the kiln-burning of floors should not be wholly given up. In towns and villages in which

plague is not indigenous, the floors of infected houses should always be burnt. Where plague is indigenous, the floors of houses actually infected, and as far as possible of immediately adjacent houses should be treated in this way; other houses in a block in which a general disinfection is being carried out need not be kiln-burnt.

2. The Sanitary Commissioner is requested to send the "gravity disinfectant" designed by him and referred to in paragraph 5 of his letter to Vellore for trial and to report the cost of it. The portable burner will also be tried as soon as ready.

S. M. S. S. S.
9/2/89
Personal Assistant,
for Plague Commissioner.

To all Collectors (A—L).
" the Sanitary Commissioner.

Copy to the Surgeon-General.

" " President, Municipal Commission, Madras.

" " Secretary to Government, Local and Municipal Department.

When given for copying _____
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READ AGAIN G.O. No. _____
189 .

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

A A A A A A A

LETTER OF GOVERNMENT.

STATEMENT WITH DUTY.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
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