

Local & Munl. (1898) Department.

MISCELLANEOUS.

G.O., No. 636 P.

DATED 2. 7. 1898

[Despatch Abstract.]

Destruction of infection Distributing
the 25 copies of a memorandum on
the treatment of plague infected
premises and the destruction of the
infection by the kiln process of
burning, by Mr Stevens, Deputy
Plague Commissioner, Hyderabad.

BACK PAPERS.

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

FURTHER PAPERS.

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

Local & Munl. (1898) Department.

CURRENT No. 9748

From

A. H. Stevens Esq.
Deputy Plague Commissioner
Hyderabad.

Order No. 636 P. mis. d. 2. 7. 98

The 25 copies of Mr. Stevens' printed memorandum on the treatment of plague infected premises and the destruction of the infection by the Kilm process of burning will be distributed as follows

21 Cllrs each 1 copy — 21 ✓
Sanitary Commr — 1 ✓
Engineer General — 1 ✓
President, M.C. Madras — 1 ✓
Govt Office — 1 ✓

No. 463

Dated 23-6-1898

Received 30-6-1898

Registered 30-6-1898.

Enclosures

Spare copies.

SUBJECT.

Stating that 25 more copies of the printed memorandum on the treatment of plague infected houses will be sent as soon as received from the press.

Long
17/7/98
A copy of the memo may be circulated for information

Recd
2-7-1898
17/7/98

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

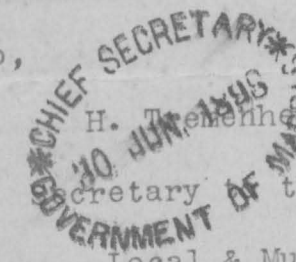
NO: 463.

From,

A. H. Stevens Esq:

Deputy Plague Commissioner,
Hyderabad.

To,



H. T. Menhure Esq: I.C.S.

Secretary of the Government of Madras,
Local & Municipal Department.

Dated, Hyderabad, 23rd: June 1898.

Sir,

With reference to your communication NO: 582 P.Mis. dated 16th: June 1898, I am directed by the Plague Commissioner Surgeon Lieut: Colonel E. Lawrie (who is laid-up with a broken arm) to state that 25 more copies of the printed memorandum on the treatment of plague infected houses will be sent you as soon as received from the press.

I have the honour to be,

Sir,

Your most obedient servant,

A. Stevens

Deputy Plague Commissioner.

Local & Munl. (1898) Department.

CURRENT No.

985P

From

The Deputy Plague
Commissioner Hyderabad

Order

No. 472

Dated 28-6-1898

Received 2-7-1898

Registered 2-7-1898.

Enclosures

Spare copies.

SUBJECT.

Advising despatch of
25 copies of the printed
Memorandum on the treat-
ment of plague infected
houses.

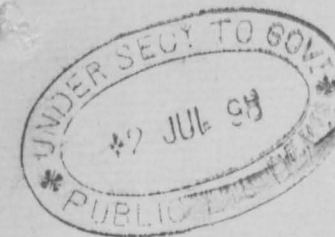
BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

NO: 472.



From,

A. H. Stevens Esq:

Deputy Plague Commissioner,
Hyderabad.

To,

H. Tremeneere Esq: I.C.S.

Secretary to the Government of Madras,
Local and Municipal Department,
Ootacamund.

Dated, Hyderabad, the 28th: June 1898.

Sir,

In continuation of my letter NO: 463 of 23rd: June 1898

I have the honour to advise the dispatch by Book-post of 25
copies of the printed memorandum on the treatment of plague
infected houses.

I have the honour to be,

Sir,

Your most obedient servant,

Attendant

Deputy Plague Commissioner.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 1668

From

N. Bonham-Carter, Esq.,

Offg. Under Secy. to the Govt. of India.

To

The Secretary to the Government of Madras

Local and Municipal Department

Home Department.

(Sanitary)

Simla, the 7th July 1898.

Sir,

I am directed to forward, for the information of the Governor in Council, a copy of a Memorandum by Mr. A.H. Stevens, Deputy Plague Commissioner, Hyderabad, on the treatment of plague infected premises and the destruction of the infection by the kiln process of burning.

I have the honour to be,

Sir,

Your most obedient Servant,

N Bonham Carter

Offg. Under Secy. to the Govt. of India.

H.B.

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PLAGUE—HYDERABAD STATE.

MEMORANDUM ON THE TREATMENT OF PLAGUE-INFECTED PREMISES AND THE DESTRUCTION
OF THE INFECTION BY THE KILN PROCESS OF BURNING.

BY

A. H. STEVENS, Deputy Plague Commissioner.

ADDISON & CO., PRINTERS, MADRAS.

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10-5-5-0 of 1898

PLAGUE—HYDERABAD STATE.

Memorandum on the treatment of plague-infected premises and the destruction of the infection by the kiln process of burning.

By A. H. STEVENS, Deputy Plague Commissioner.

On a case of bubonic plague or of suspected plague occurring in a house, the following treatment of the house and its occupants should be adopted without delay. In the case of the first appearance of plague or suspected plague in a single house or group of huts in a hitherto uninfected town or village, the following entire course of evacuation and disinfection should if possible be completed the same day or at latest within the ensuing 24 hours.

The infected or suspected house must be promptly evacuated of its occupants and completely emptied of all its contents, the occupants obtaining temporary shelter under the shade of trees, etc., or even remaining in the open fields until huts are constructed. This operation usually only takes a few hours, the huts being constructed of sticks or bamboos covered in with gunny bags, matting, cloth, brushwood, palm leaves, jowari stalks, grass, straw or whatever other suitable material is available.

The house having been evacuated must next be completely emptied of the whole of its contents such as beds, furniture, grain, cotton, bags, boxes, bales, pots, pans, grinding stones, etc.; every single article must be removed and nothing but the bare walls, floors, roofs, and doors left. If the site of the future encampment is at some distance from the house, all the property should first be collected in a convenient spot not more than 20 or 30 yards from the evacuated house, and if exposed to the sun so much the better. A Government guard should be placed over the property until the occupants are able to remove it to the encampment.

An inventory should now be made of the number of rooms, verandahs and yards in the house to be disinfected, to be again taken after the process of disinfection is complete, so as to preclude the possibility of any portion of the premises being overlooked and not disinfected.

Until the labour, tools and materials for disinfection are at hand, the house should be kept locked, nobody being permitted to enter it.

The following tools and materials are required, the number of quantity of each depending on the size of the house to be disinfected:—

- (1) Some buckets of thick lime-wash with brushes.
- (2) Spades, pickaxes, and iron baskets.
- (3) A cartload or more of "oopies" (dry cowdung fuel cakes).
- (4) Perchloride of mercury solution 1 to 1,000 parts of water.

It having been authoritatively decided that the infection of plague is to be found on the surface of the floors of houses occupied by persons suffering from plague, the destruction of this infection is the first object to be aimed at. The most perfect disinfectant for plague is *fire*, which effects the almost-instantaneous destruction of all trace of the infection. Various methods of applying fire *in situ* to the floors and walls of infected buildings have been tried, such as kerosine oil sprinkled over the floor surface and then fired, or thin layers of straw, chaff, sawdust, or pounded "ooplies," etc., spread over the floors, sprinkled with kerosine oil and then fired, but after a prolonged trial all were rejected for two reasons.

First it was found that the destruction of the infection was not complete and patches of the floor still retained the infection after the surface burning. Secondly a great danger was run of setting fire to the roof and burning the house down altogether. To meet these objections, the kiln method of destroying the infection was introduced. It is carried out as follows.

The Kiln-method of destroying plague-infection.

The infection of plague does not penetrate to any appreciable depth below the surface of the floors in which it is found; it is therefore only essential that no portion of the actual floor surface escapes removal from the house and subsequent destruction by burning in the kiln.

The surface of all floors and the lower portion of walls two feet from the floor surface is first to be painted over with rather thick lime-wash and allowed to dry. This serves two useful purposes:—(1) it lays the dust and thus lessens the risk of inoculation to the coolies working in the house, and (2) it colours *white* every part of all surfaces that have to be removed and burnt. The whitened surface is easily seen and there is little or no chance of any portions of the infected earth remaining behind and being left unburnt.

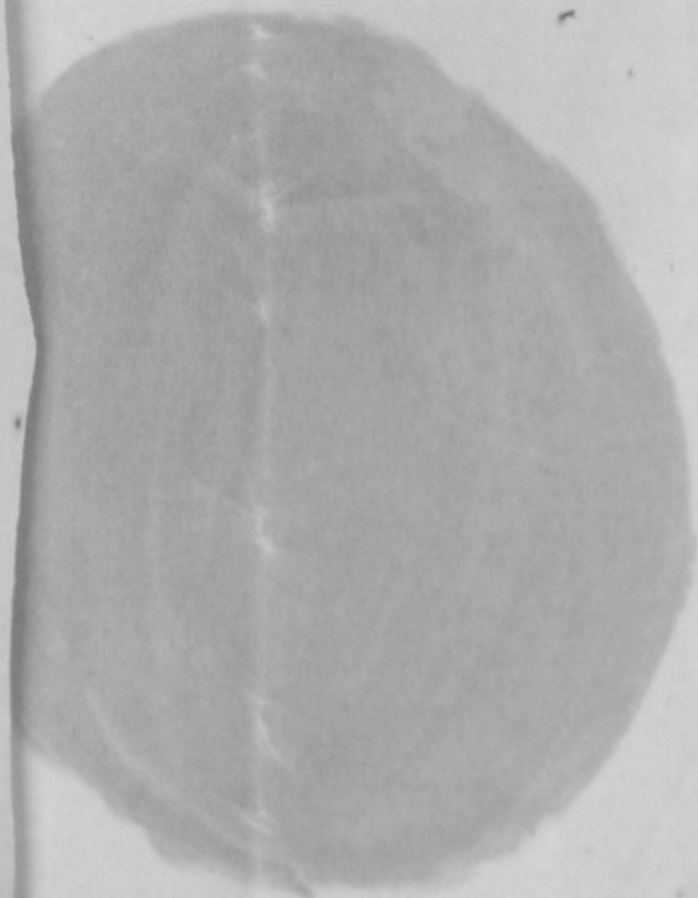
While the lime-wash is drying on the surfaces, the foundation or floor of the kiln in which the surface earth is to be burnt should be laid. The kiln should be made in any sufficiently large-sized courtyard, garden, or open space in or near the house, or the road or pathway immediately facing the front entrance of the house can be used. A circular kiln will be found the most convenient in shape. The floor of the kiln is made of two layers of "oopies," four inches deep, laid flat and packed closely together. The mud floor of the infected house should be carefully dug out to the depth of $1\frac{1}{2}$ inches from every room, verandah and yard which has been whitewashed, and filled into iron baskets, or empty kerosine oil tins, if possible without spilling or raising any dust. The dug-out earth should now be carried to the kiln and evenly spread over the "oopies" which form the floor of the kiln, to a depth of $1\frac{1}{2}$ inches. This, the first layer of infected earth, is then completely covered with a layer of "oopies," 2 inches deep, upon which a second layer of earth is spread and covered with "oopies," then a third layer of infected earth and so on with alternate layers of infected earth and "oopies" until the kiln is complete. One and a half to two feet is the best height for a kiln. Lastly the kiln is covered in from top to bottom with two layers of "oopies." It should then be fired at the base and

ELEVATION SHOWING COVERING OF "OOLIES"

FIG. 5.



SCALE OF FIGS 1, 2 AND 3, $\frac{1}{4}$ "=1'
DO. DO. 4 AND 5, 2"=1'



allowed to slowly burn itself out, a process that usually takes about 48 hours. It is however advisable not to disturb the ashes of the burnt kiln for a week, as it continues to smoulder for about that time. When the kiln has cooled down it should be opened in one or two places and examined, and if found completely burnt out, the ashes should be removed to cultivated lands and used for manure.

The entire lime-washed surface of the infected floors having been dug out and burnt in the kiln, all that remains to be done to the infected house is to fill in the empty floor space with fresh field earth, moisten it with water and consolidate it by ramming, subsequently mudplastering or "leeping" it. Finally the new floor surface and walls should be well drenched with perchloride of mercury solution of the strength 1 to 1,000 parts of water. The house is now perfectly disinfected, and as soon as the floors have dried it is fit for occupation.

The accompanying drawings in elevation, cross section and ground plan are of a circular kiln, the diameter of which is 5 feet and the height $1\frac{1}{2}$ feet.

A. H. STEVENS,
Deputy Plague Commissioner.

HYDERABAD,
Dated the 7th May, 1898.