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PROCEEDINGS OF THE PLAGUE COMMISSIONER.

(1899)

PRINTED.

No. 321/26

DATED 3—2—99

Desp.ᵈ 4/2/99 mkg Expenditure Collector
Desp.ᵈ 6 & 11 mkd R.E. 10/2/99

[Despatch Abstract.]

Inspection Notes

Passing orders on the Sanry. Condns—
—— on certain Places of the Bellary District.

BACK PAPERS.

No.	Date.	No.	Date.

FURTHER PAPERS.

No.	Date.	No.	Date.
3643	27-1-99		

Proceedings of the Plague Commissioner,

MADRAS—1899.

Recd. } 1899. *Enclosures*

Regd. } *Spare copies*

Proceedings, No. $\frac{321}{26}$, 3rd February 1899.

FEBRUARY.

Sanitary Commissioner's Inspection Notes.

Passing orders on — on certain places of the Bellary district.

PROCEEDINGS OF THE PLAGUE COMMISSIONER.

Read—the following paper :—

No. 160-S.

INSPECTION NOTES OF THE SANITARY COMMISSIONER FOR MADRAS.

Tungabadra Railway Inspection Camp.

Inspected 27th December 1898.

The inspection of passengers is carried out with care and discretion, under the direction of Major Hakim, I.M.S. Detention is effected only in the case of persons actually suffering from fever, and hence giving rise to suspicion of plague, or persons who, by reason of the insanitary state of their person and property, are classed sanitarily as suspicious. Disinfection of clothing having been accomplished, all who are capable of giving trustworthy addresses are allowed to proceed.

2. *Disinfection.*—A solution of phenyle (1 per cent.) is poured over the whole body of those whom it is intended to disinfect. Subsequently, they are allowed to bathe in hot water. The contact with the phenyle thus permitted is brief, as it is probable that a 1 per cent. solution would require about five minutes to kill the plague microbe. The skin of the native that has from time to time been saturated with oil in the process of the "oil bath" does not seem well calculated to obtain the maximum of action of the disinfectant, as it simply rolled off the skin of cases watched by me. I think, in future, it would suffice to use the disinfecting bath in the following cases only :—

(1) where the dirty condition of the skin of the traveller is, on inspection, found to be of a decidedly pronounced type ;

(2) before discharge from hospital after treatment for plague ;

(3) where persons are known to have been in intimate contact with plague cases. In these cases, the bath should be preceded by the use either soap nut or soft soap—both vegetable preparations, and, therefore, unobjectionable. The phenyle solution should not in such cases be washed from the body, until the contact had been continued for not less than five minutes. In all other instances of detention where bathing is prescribed, it would suffice if the body be washed thoroughly in warm water after the body had been lathered with soap nut, or soft soap, coupled with, as usual, steam disinfection of all clothing and property. Bundles of clothing are opened prior to disinfection in the waiting room. So long as the soil is not wet, it would be better to appoint a spot in the open air. When wet, the examination of bundles should be conducted in the bathing shed which could be flushed . . . . .

* * * * *

5. *Equipment.*—In the hospital no equipment has been provided, it being understood that sufficient can be borrowed from the observation sheds, and thus allow time for the procuring of additional stores that may be required. This is perhaps in the presence of sufficient stores for the observation sheds, a sufficiently satisfactory arrangement ; but it certainly should not include the provision of shoes, this being a matter that should not be delayed. Not only would they be required in the hospital sheds, but they should be worn by all natives having work to do in connection with the disinfection and waiting sheds . . . . .

* * * * *

8. *Molagavalli—Inspected 31st December* 1898.—The sepoys engaged here were found actively employed in disinfection duties. At a house about to be disinfected was a hand-cart, with men who had come in from the camps in the fields, to take away their moveable property. This was not disinfected before removal, nor was there any order that this should be done. A perchloride mercury solution was in use, but no Chinese pumps were on the spot for its distribution. Subsequent enquiry showed that only one pump was provided for this staff, and that this was not in working order —although so far as I could ascertain, it but required a little adjustment. The appendix to the Additional Mufassal Regulations requires that each ambulance staff should be provided with five pumps. The men on entering the dwelling at once attacked the walls with the perchloride, instead of the floor first. The distribution over the walls was effected by throwing the perchloride solution with the hands. Constant use in this manner is likely to lead to mercurial poisoning. The store bavildar was provided with a concentrated solution of mercury perchloride and had doubtless been given at the outset correct directions as to the extent of dilution to be practised ; but his ideas were decidedly hazy. No marked vessel existed to show the extent of dilution. I afterwards ascertained a tub had been appointed for the purpose, but, on my inspection, I found this filled with stale lime and water. According to the native officer in charge, on the same day as the disinfection by the perchloride, and within two hours of its use, the flooring is dug up and burnt by the kiln method. It would seem unlikely if this account be correct that the burning could be effected with facility. Neither can it be supposed that the use of stale lime is of any utility for disinfecting purposes. The solution of perchloride of mercury is made with common salt. The disinfectants allowed with the equipment of the ambulance staff will show that it was intended that, with reference to the action of perchloride of mercury as to precipitation of albuminoid matter, hydrochloric acid should be employed in the proportion laid down in rule 15 embodied in G.O., No. 522 M., dated 13th March 1897, viz. :—

Perchloride of mercury	oz.	½
Hydrochloric acid	"	1
Aniline blue	gr.	5
Water	gal.	3

When even this is considered unsuitable, having regard to the difficulty of dealing with mud, the sulphuric acid solution (for which sulphuric acid is duly provided in the list of disinfectants) 1—250 should be employed.

9. Although it is understood that persons encamped in the fields are not to return to, their infected houses there being no guard to enforce the order, they do return. In fact, I found one man passing from the village.

10. The mark used on the houses to distinguish the plague infected is a large P (plague) and the date. I think it would be well to lay down that a uniform system be adopted throughout the Presidency, namely, to denote plague the use of black paint, and of red paint that a house has been disinfected. Both these are provided with the equipment of ambulance staffs. If then a horizontal line, a cubit long and a hand breadth thick, be made on the wall close to the door with the day, month and year (all in figures) immediately above the line, it will be understood that plague was detected on the date quoted ; the number of cases could be shown immediately below the line. Above this could be exhibited a red line, of the same size with date showing when the house was disinfected. If the house be attacked more than once, the procedure could be repeated.

11. In respect to the camps in the fields, the arrangement pursued seems to have been throughout that adopted in the Anantapur district, round Guntakal. Beyond attempting at intervals to ascertain how many persons had died, no effort had been made to control these people. The matter is one I pressed on the attention of the Plague Commissioner, and the Collectors of Bellary and Anantapur at a consultation with them lately, and previously. I hold that, notwithstanding the people of a village proceeding to the fields in separate camps—an excellent sanitary method in itself, although by no means so effective from an administrative point as collection

of the population in large health camps—daily supervision should not be relaxed over them. The argument brought against this is that if any such attempt were made, the people would scatter more than they do now. I think I know enough however of the character of the people of the Ceded Districts to be sure that if their supervision were exercised with a very small amount of patience and tact, the discipline required could be obtained. They should be made to understand that their being allowed to remain in the field chosen by them, is contingent upon their not straying from the village revenue boundaries; the strict segregation of the sick in the proximity of the chosen sites; obedience to the order that the village is not to be visited without a written permit; the reporting at a certain spot of sickness or death or departure from the camp. They should be told that no interference would be made with their treatment of the sick or with their temporary dwellings provided they effected sanitary requirements as to the sick and healthy in the camp. The determination by individuals to encamp in the fields is a matter that should be reported by the person concerned to the Plague officer on the spot—so that in no instance should departure take place, without property and clothing being disinfected in the first place. Each block of huts should be provided with its number, its census should be known and be registered. A tall bamboo with a flag and painted blackboard should be provided. Similarly, before return from the fields to the houses lately disinfected be permitted, a rigid course of inspection of property brought back should be required—otherwise the epidemic may again start.

BELLARY, 13*th January* 1899. (Signed) W. G. KING, Lieut-Col., I.M.S., *Sanitary Commissioner for Madras.*

PROCEEDINGS—No. 321/26, dated 3rd February 1899.

The inspection notes are forwarded to the Collector of Bellary in original for perusal and return.

2. Paragraphs 1, 2, 5, 8, 9 and 10 of the notes will be printed and communicated to all Collectors for information and guidance.

3. The opinion of the Collectors of infected districts is invited on the Sanitary Commissioner's remarks in paragraph 11 of his notes.

4. Instructions have been already issued in the Plague Commissioner's diary for 17th December 1898 for the preparation of an estimate for improving the Tungabhadra Camp.

5. Shoes should at once be provided in all the infected districts as recommended by the Sanitary Commissioner in paragraph 5 of his notes.

L. E. BUCKLEY,
Plague Commissioner.

To the Collector of Bellary (A—H).
" all other Collectors (A—H).
" the Sanitary Commissioner.
" the Surgeon-General.

Exd. A. F. Eccleston.

Proceedings of the Plague Commissioner, MADRAS—1899.

Recd. } 1899. Enclosures
Regd. } Spare copies

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Passing orders on the Sanitary Commissioner's— on certain towns of the Bellary district.

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9. Although it is understood that persons encamped in the fields are not to return to, their infected houses there being no guard to enforce the order, they do return. In fact, I found one man passing from the village.

10. The mark used on the houses to distinguish the plague infected is a large P (plague) and the date. I think it would be well to lay down that a uniform system be adopted throughout the Presidency, namely, to denote plague the use of black paint, and of red paint that a house has been disinfected. Both these are provided with the equipment of ambulance staffs. If, then, a horizontal line a cubit long and a hand breadth thick be made on the wall close to the door with the day, month and year (all in figures) immediately above the line, it will be understood that plague was detected on the date quoted; the number of cases could be shown immediately below the line. Above this could be exhibited a red line, of the same size with date showing when the house was disinfected. If the house be attacked more than once, the procedure could be repeated.

11. In respect to the camps in the fields, the arrangement pursued seems to have been throughout that adopted in the Anantapur district, round Guntakal. Beyond attempting at intervals to ascertain how many persons had died, no effort had been made to control these people. The matter is one I pressed on the attention of the Plague Commissioner, and the Collectors of Bellary and Anantapur at a consultation with them lately, and previously. I hold that, notwithstanding the people of a village proceeding to the fields in separate camps—an excellent sanitary method in itself, although by no means so effective from an administrative point as collection

of the population in large health camps—daily supervision should not be relaxed over them. The argument brought against this is that if any such attempt were made, the people would scatter more than they do now. I think I know enough however of the character of the people of the Ceded Districts to be sure that if their supervision were exercised with a very small amount of patience and tact, the discipline required could be obtained. They should be made to understand that their being allowed to remain in the field chosen by them, is contingent upon their not straying from the village revenue boundaries; the strict segregation of the sick in the proximity of the chosen sites; obedience to the order that the village is not to be visited without a written permit; the reporting at a certain spot of sickness or death or departure from the camp. They should be told that no interference would be made with their treatment of the sick or with their temporary dwellings provided they effected sanitary requirements as to the sick and healthy in the camp. The determination by individuals to encamp in the fields is a matter that should be reported by the person concerned to the Plague officer on the spot—so that in no instance should departure take place, without property and clothing being disinfected in the first place. Each block of huts should be provided with its number, its census should be known and be registered. A tall bamboo with a flag and painted blackboard should be provided. Similarly, before return from the fields to the houses lately disinfected be permitted, a rigid course of inspection of property brought back should be required—otherwise the epidemic may again start.

Bellary, 13*th January* 1899. (Signed) W. G. KING, Lieut-Col., I.M.S., *Sanitary Commissioner for Madras.*

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5. Shoes should at once be provided in all the infected districts as recommended by the Sanitary Commissioner in paragraph 5 of his notes.

Personal Assistant,
for *Plague Commissioner.*

To the Collector of Bellary (A—1).
„ all other Collectors (A—1).
„ the Sanitary Commissioner.
„ the Surgeon-General.

Exd. A. F. Eccleston.

PLAGUE COMMISSIONER'S OFFICE.

(1899)

CURRENT No. 770

Progs.
Letter
Ref.

No. 321/26 & 3/2

4/68

From

The Sanitary Commissioner for Madras.

No. 160/S.

Dated 13th January 1899.
Received
Registered
Enclosures
Spare copies

P. C. 19 JAN. 1899

SUBJECT.

Forwarding his inspection notes on certain towns of the Bellary District.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No. 160
5

Inspection Notes of the Sanitary Commissioner for Madras.

Singabadra Railway inspection Camp. Inspected 27th December 1898.

The inspection of passengers is carried out with care and discretion under the direction of Major Hankin I.M.S. Detention is effected only in the case of persons actually suffering from fever, and hence giving rise to suspicion of plague, or persons who by reason of the insanitary state of their person and property are classed sanitarily as suspicious. Disinfection of clothing having been accomplished, all who are capable of giving trustworthy addresses are allowed to proceed.

Disinfection. A solution of phenyle (1 per cent) is poured over the whole body of those whom it is intended

to disinfect. Subsequently, they are allowed to bathe in hot water. The contact with the phenyle thus permitted is brief, as it is probable that a 1 per cent solution would require about five minutes to kill the plague microbe. The skin of the native that has from time to time been saturated with oil in the process of the "oil bath" does not seem well calculated to obtain the maximum of action of the disinfectant, as it simply rolled off the skin of cases watched by me. I think, in future, it would suffice to use the disinfecting bath in the following cases only:—

(1) where the dirty condition of the skin of the traveller is on inspection found to be of a decidedly pronounced type;

(2) before discharge from

hospital after treatment for plague;

(3) where persons are known to have been in intimate contact with plague cases.

In these cases the bath should be preceded by the use either Soap nuts or Soft soap—both vegetable preparations, and therefore unobjectionable. The phenyle solution should not in such cases be washed from the body until the contact has been continued for not less than five minutes.

In exhibitions of sustained depression where bathing is proscribed, it would suffice if the body be washed thoroughly in warm water, after the body had been bathed with Soap nuts, or Soft Soap, carbolised with, as usual, steam disinfection of all clothing and property. Bundles of clothing are opened prior to disinfection

the waiting rooms. So long as the soil is not wet it would be better to appoint a spot in the open air. When actual the examination of bundles should be conducted in the bathing shed which can be flushed.

5. Equipment. In the hospital no equipment has been provided, it being understood that sufficient can be borrowed from the observation sheds and thus allow time for the procuring of additional stores that may be required. This is perhaps in the presence of sufficient stores for the observation sheds, a sufficiently satisfactory arrangement; but it certainly should not include the provision of shoes; this being a matter that should not be delayed. Not only

would they be required in the hospital sheds, but they should be worn by all natives having work to do in connection with the disinfection and waiting sheds.

Molegavalle

Inspected 31st December 1877

The Sepoys engaged here were found actively employed in disinfection duties. At a house about to be disinfected was a hand cart, with men who had come in from the camps in the fields, to take away their movable property. This was not disinfected before removal nor was there any order that this should be done. A perchloride mercury solution was in use but no Chinese pumps were on the spot for its distribution. Subsequent enquiry showed that only one pump was

provided for this staff,
and that this was not
in working order — although
so far as I could as-
certained but required
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appendix to the additional
Mufassil Regulations
requires that each
ambulance staff should
be provided with five
pumps: the men on
entering the dwelling
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walls with the perchloride
instead of the floor first.
The distribution over the
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solution with the hands.
For long continued use in this
manner is likely to lead
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The Sirsa Tahsildar was
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(as

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and water. According
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two hours of its use,
the flooring is dug up
and burnt by the kiln
method. It would seem
unlikely if this account
be correct that the
burning could be effected
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can it be supposed
that the use of slaked
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The solution of perchloride

of mercury is made with common salt. The disinfectants allowed with the equipment of the Ambulance Staff will show that it was intended that with reference to the action of perchloride of mercury as to precipitation of albuminoid matter hydrochloric acid should be employed in the proportion laid down in rule 15 embodied in G.O. Jr. 522 M. dated 13th March 1897, viz:- Perchloride of Mercury - - - ½ oz.
Hydrochloric acid - - - 1
Aniline blue - - - gr 5
Water - - - - gal 3
When even this is considered unsuitable, having regard to the difficulty of dealing with mud, the Sulphuric acid solution (for which Sulphuric acid is duly provided in the list of disinfectants) 1-250 should be employed.

Vs. Hon. C.N. 1710

9. Although it is understood that persons engaged in the fields are not to return to their infected houses there being no guard to enforce the order, they do return. In fact, I found one man passing from the village. The mark used on the houses to distinguish the plague infected is a large P (plague) and the date. I think it would be well to lay down that a uniform system be adopted throughout the Presidency, namely, to denote plague the use of black paint, and cholera red paint that a house has been disinfected. Both these are provided with the equipment of ambulance staffs. If, then, a horizontal line a cubit long and a hand's breadth thick be made on the wall close to the door with the day

month, and year (all in figures) immediately above the line; it will be understood that plague was detected on the date quoted; the number of cases could be shown immediately below the line. Above this could be exhibited a red line, of the same size with a date showing when the house was disinfected. If the house be attacked more than once, the procedure could be repeated.

11: In respect to the Camps in the fields, the arrangement pursued seems to have been throughout that adopted in the Anantapur District, round Gootakal. Beyond attempting at intervals to ascertain how many persons had died, no effort had been made to control these people. The matter to one I pressed on the attention of the Plague

Commissioner, and the Collectors of Bellary and Anantapur at a consultation with them lately, and previously. I hold that, notwithstanding the people of a village proceeding to the fields in separate camps — an excellent Sanitary method in itself, although by no means so effective from an administrative point as collection of the population in large health camps — daily supervision should not be relaxed over them. The argument brought against this is that if any such attempt were made, the people would scatter more than they do now. I think I know enough however of the character of the people of the Ceded districts to be sure that if ~~there~~ their supervision were exercised

with a very small
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and tact, the discipline
required could be obtained.
They should be made
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chosen by them, is
contingent upon their
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village revenue boundaries;
the strict segregation
of the sick in the
proximity of the chosen
site; obedience to the
order that the village is
not to be visited without
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reporting at a certain
spot of sickness or death
or departure from the
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the Epidemic

May again start.

(Sd) H E Hunfalvy Lt Col. D.M.S
Sanitary Commissioner
for Madras

Office of Sanitary Commissioner &
Camp. Bellary 13th Jany 1875

To Chl: Bellary in M.S. Advice
& the contents for notice

X Vide minute

Chc 770/85

Regd No 321/26 Jan 93

The inspection notes are forwarded to the Collector of Bellary in original for perusal and return.

2. Cases 1, 2, 5, 8, 9 & 10 with the of the notes will be printed & Communicated to all Collectors for information & guidance.

3. The opinion of the Collector of infected districts is invited on the Sanitary Commr's remarks in para 11 of his notes.

4. Instructions have been already solicited in the P.C's dcy for 17-12-74 for the preparation of an estimate for improving the Dungabhadra Camps.

5. Sheds should at once be provided in all the infected & to as recommended by the S.C. in para 8 of his notes.

(Sd) Henry Forbes
2-2-75

To the Chl: of Bellary (No 48)
notes as noted in the Sub.
To all the Chls (No 49-61)
" Sanitary Comrs
" Surgeon General

Despatched 4/2/75

Closed to all 10/2/75

Nov. Hon. Cir. to 70

NOTE FOR THE Plague Comm:

Paras 6, 4, 5, 7, 9, 24 & 26 of the S.C's inspection notes of 16-12-98 and paras 1, 4, 5, 8, 9 10 of those dated 13-1-99 may be printed & circulated to all Collectors.

Cho. 770/85

2. The orders of Government referred to in para 3 of this report are those contained in G.O. No G.O No 256 P. dy 23-3-98

Order requested as to whether the Colrs should be asked to get an early estimate for improving the camps.

Para 5. It will be seen that the S. Comr. agrees with the D.C. that the full equipment need not be kept ready at once. Steps may be owned.

Hon 25/1/99

(B)

Cho 2603/98

Cho. 770/98.

Cho. 770/85

PLAGUE COMMISSIONER'S OFFICE.

(1899)

This may be filed
in Progs No 321/26 of 3 Feby 99

CURRENT No. 2127

2 1/2 Progs.
Letter
Ref.

From
The Collector
Bellary

Mysore No 5-5-6-P

Dated 15-2-99
Received 17 FEB 1899 P.C.
Registered 17-2-99
Enclosures 1 as 170 cold
Spare copies

SUBJECT.

Returning the inspection notes forwarded with his proceedings No 321/26 dated 3.2.99.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No. 160/5 C.P. 770

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Inspected 27th December 1898.

The inspection of passengers is carried out with care and discretion, under the direction of Major Hakim I.M.S. Detention is effected only in the case of persons actually suffering from fever, and hence giving rise to suspicion of plague, or persons who by reason of the insanitary state of their person and property are classed sanitarily as suspicious. Disinfection of clothing having been accomplished all who are capable of giving trustworthy addresses are allowed to proceed.

2. Disinfection. A solution of phenyle (1 per cent) is poured over the whole body of those whom it is intended to disinfect. Subsequently, they are allowed to bathe in hot water. The contact with the phenyle thus permitted is brief,* as it is probable that a 1 per cent solution would require about five minutes to kill the plague microbe. The skin of the native that has from time to time been saturated with oil in the process of the "oil bath" does not seem well calculated to obtain the maximum of action of the disinfectant; as it simply

* This was brought to my notice by the Plague Commissioner, Nasik.

simply rolled off the skin of cases watched by me. I think, in future, it would suffice to use the disinfecting bath in the following cases only:— (1) where the dirty condition of the skin of the traveller is on inspection, found to be of a decidedly pronounced type; (2) before discharge from hospital after treatment for plague; (3) where persons are known to have been in intimate contact with plague cases. In these cases, the bath should be preceded by the use of either soap-nut or soft soap — both vegetable preparations, and, therefore, unobjectionable. The phenyle solution should not in such cases be washed from the body, until the contact has been continued for not less than five minutes. In all other instances of detention where bathing is prescribed, it would suffice if the body be washed thoroughly in warm water, after the body had been lathered

lathered with soap paste, or soft soap, coupled with, as usual, steam disinfection of all clothing and property. Bundles of clothing are opened prior to disinfection in the washing room. So long as the air is not wet, it would be better to appoint a spot in the open air. When wet, the examination of bundles should be conducted in the bathing shed, which could be flushed.

9. The steam disinfecting machine is an excellent apparatus, and performs its work well. In the possession of means for securing a vacuum, of doors at opposite ends of the disinfecting

disinfecting chamber, and of a capacity that admits a large cradle, it is in marked contrast to the rough machine in use at Hospet. (In the absence of an outside jacket as in the case of the Washington Lyon's apparatus, notwithstanding precautions taken during working to minimize the effect, some condensation of steam naturally occurs. This dripping from the roof made a few bundles here and there, to a limited extent, damp on the upper side. In the original design of this machine, it was arranged that there should be a canvas cover, just sufficient to protect the cradle contents from the dripping from the roof of the chamber. This should now be arranged for.)

A

(The division of the room for receipt of infected from that for disinfected clothing has not been carried out, according to plan given to the Engineer. This should be done.

B

This should the division complete

complete to the roof. This should now be completed.

3. It would serve no good purpose to enter into details in respect to this Camp. It was constructed in haste, with material that the Engineer could have had little power of choice concerning — seeing that it was sent from the Kuinoot forest lands direct. Much of the old material from the Quintaket sheds was also employed. No detailed plans were given him. A ground plan only was arranged, showing the areas and intervals between buildings. This absence of details was in strict accordance with the wishes of Government. I had in march last pointed

pointed out that it was most desirable that each detail should be definitely settled. Government, however, preferred that each local authority having been provided with the ground plan, should determine all further points. The Engineer had, therefore, to content himself with my verbal descriptions of what was required. It is not, therefore, surprising to find that, in several details, misconceptions or departures from specifications have been made. For example, the latrines expose far more surface to contact of urine before reaching the drain than requisite. The

the cisterns attached to these are enormously out of proportion to requirements; for the hospital, no — paved drains are + provided in the cement floors or cisterns to receive the floor washings so conveyed. Throughout the buildings, ventilation at the eaves has been neglected, and most markedly so in the hospitals, where it is most important it should exist. In no case, have cisterns and impervious floors been provided for the quarters of nurses, or Hospital Assistants. In respect to roofing, I purposely gave the Engineer no instructions, and told him he was to give such slope as he might think necessary.

Certain

certain ventilators in the "observation sheds" have been left without covers. Consequently they are not weather-proof. In the Circular sheds there has been considerable departure from instructions; but as they fulfil their purpose better than any other shed, this departure from instruction is of no importance in practice. Contrary to instructions, the Camp bathing spaces have been roofed. Notwithstanding these criticisms, the Camp, which it is well to remember, in reference to cost, is an observation Camp for Europeans and natives, Railway observation staff quarters, plague hospital with medical and

medical

the excavation and using a pipe as a shaft in which the pump is inserted has been adopted. but, in the plague hospital camp, this plan has not been adhered to - probably on account of difficulty of construction through indifferent soil. It is a pity this segregation camp well was not carried down to a greater depth than 25½ feet, as the shaft provided measures 32 feet. On account of stopping the sinking of the well and absence of cutting instruments, it has been necessary to build up this shaft so as to ~~demand~~ that more work from the pump is exacted from ~~necessary~~. The opposite condition of affairs is found in the plague camp, where the

the depth of the well is 36 feet, and length of pump 28 feet. Here, at least, economy might have been practised, by not raising the pump on platform three feet from the ground level. The quality of water at the observation camp well is excellent, whilst its mode of protection speaks as its purity in respect to freedom from contamination from surface soakage practically absolute, which is more than can be said of many wells in the Presidency. The water of the Plague Camp well is undrinkable, being loaded with vegetable matter from the surrounding black cotton soil - no impervious backing having been used for the

the straining. Steady pumping, however, will gradually improve the water by washing out the deposits. It would especially be advisable to sink the pump, and cause it to reach the lower stratum. Whilst unfit for drinking in its present state, the water will prove of great convenience for flushing, disinfection and other purposes in the plague hospital camp.

5 Equipment. In the hospital no equipment has been provided, it being understood that sufficient can be borrowed from the observation sheds, and thus allow time for the procuring of additional stores that may be required. This is perhaps,

in the presence of sufficient stores for the observation sheds, a sufficiently satisfactory arrangement: but it certainly should not include the provision of stores; this being a matter that should not be delayed. Not only would they be required in the hospital sheds, but they should be worn by all natives having work to do in connection with the disinfection and washing sheds

6. Cooking Arrangements. Under orders from the Plague Commissioner, a new kitchen has been erected for cooly men.

. Pedda Hotur.

Inspected 30th Dec 1898.

7 This is a village about 7½ miles from Nolagavalli

Nolagavalli a village
that has been severely
affected with plague.
In Peddathotur, three
cases of plague had
occurred up to date
of my visit. Yesterday
the Collector of Bellary was
promptly taken — appa-
rently, with the effect
of checking further
spread of the disease.
So far as could be ascer-
tained from personal en-
quiry, the origin of
the attacks was con-
tact with persons of
the village of Nolaga-
valli camped in fields
adjoining those of
Pedda Hotur. The poor
of Pedda Hotur obtained
labour by working
side by side with these per-
sons. A significant fact
was also stated —
to me by Mr. Lever, the
Deputy Collector, on
plague duty. He as-
certained that the
people

people of Nolagavalli
and of Pedda Hotur
met at a certain well,
when at labour in
the fields. It seemed
have been an interest-
ing matter to have
had the water ex-
amined for the pre-
sence of the plague
microbe, but as no
laboratory in working
order exists in the
Presidency, the chance
of survival of the
microbe in unsteri-
lized water as far
as Bombay was not
thought sufficiently good
to make the attempt.
Hence, the practical
precaution of disinfecting
was advised. Prior to
my inspection, the pa-
tients had been removed
from the houses; segre-
gation sheds had been
erected, the houses
of those attacked had
been disinfected; the
people

people, partly by persuasion, partly from fright, had encamped in the adjoining fields; so that the whole of the suspected block of houses was fully evacuated. To this effective action, must be ascribed the prevention of further spread.

My advice given personally to the Supervisor and repeated subsequently, demi-officially, to the Collector simply covered ordinary sanitary precautions as to protection of the water-supply, erection of latrines, general cleansing of the village, house-to-house inspection and inspection of those encamped in the fields. The inspection of Contacts was, I found, being conducted. The erection of small incinerators for consumption

of the rubbish in this remarkably dirty village was also advised. The houses in which the cases occurred were mere hovels. Personally, I think the best course would have been to have completely unroofed these. The minor course taken is however within the present instructions issued to local authorities.

Nolagavalli

Inspected 31 December

8. The sepoys engaged here were found actively employed in disinfection duties. At a house (about to be) disinfected was a hand cart with men who had come in from the camps in the fields, to take away their movable property. This was not disinfected before removal, nor was there any order that this should be done.

A

perchloride mercury
solution was in use,
but no Chinese pumps
were on the spot for —
its distribution. Subse-
quent enquiry showed
that only one pump
was provided for this
staff, and that this
was not in working
order — although so far
as I could ascertain
it but required a lit-
tle adjustment. The Ap-
pendix to the Additional
Manufacturing Regulations
requires that each Ambu-
lance staff should be provided
with five pumps. The
men on entering the
dwelling at once at-
tacked the walls with the
perchloride, instead
of the floor first. The
distribution over the
walls was effected
by throwing the per-
chloride solution with
the hands. Constant
use in this manner

is likely to lead to mer-
curial poisoning. The
Store Havildar was
provided with a con-
centrated solution of mer-
cury perchloride and had doubt-
less been given at
the outset correct
directions as to the
extent of dilution to
be practised; but his
ideas were decidedly
hazy. No marked mea-
sure existed to show the
extent of dilution. Afte-
wards ascertained
a tub had been ap-
pointed for the purpose,
but, on my inspection, I
found this filled with
stale lime and wate
According to the mating
officer in charge, on the
same day as the disin-
fection by the perchlo-
ride, and within two
hours of its use, the
flooring is dug up
and burnt by the
kiln method. It would
seem

seem unlikely if this account be correct that the burning could be effected with facility. Neither can it be supposed that the use of stable lime is of any utility for disinfecting purposes. The solution of perchloride of mercury is made with common salt. The disinfectants allowed with the equipment of the Ambulance staff will show that it was intended that, with reference to the action of perchloride of mercury as to precipitation of albuminoid matter, hydrochloric acid should be employed in the proportion laid down in rule 15 embodied in G.O. No 522 Hi: dated 13 March 1897, viz.,

Perchloride of Mercury ... Oz ½
Hydrochloric acid ... 1
Aniline blue ... Gr: 5
Water ... Gal: 3.

When

when even this is considered unsuitable, having regard to the difficulty of dealing with mud & the sulphuric acid solution (for which sulphuric acid is duly provided in the list of disinfectants) 1-250 should be employed.

9 Although it is understood that persons encamped in the fields are not to return to their infected houses there being no guard to enforce the order, they do return. In fact, I found one man passing from the village.

10 The mark used on the houses to distinguish the plague infected is a large P (plague) and the date. I think it would be well to lay down that a uniform system be adopted throughout the Presidency, namely, to denote

denote plague the use of black paint, and of red paint that a house has been disinfected. Both these are provided with the equipment of Ambulance staffs. If, then, a horizontal line a cubit long and a hand breadth thick be made on the wall close to the door with the day, month, and year (all in figures) immediately above the line, it will be understood that plague was detected on the date quoted; the number of cases could be shown immediately below the line. Above this could be exhibited a red line, of the same size, with date showing when the house was disinfected. If the house be attacked more than once, the procedure could be repeated.

II. In respect to the Camps

camps in the fields, the arrangement pursued seems to have been thought that adopted in the Anantapur district, round Gantakul. Beyond attempting at intervals to ascertain how many persons had died, no effort has been made to control these people. The matter is one I pressed on the attention of the Plague Commissioner and the Collectors of Bellary and Anantapur at a conference with them lately, and previously. I hold that, notwithstanding the people of a village proceeding to the fields in separate camps — an excellent sanitary precaution in itself, although by no means so effective from an administrative point as collection of the population in large Health Camps — daily

daily supervision should not be relaxed over them. The argument brought against this is that if any such attempt were made, the people would scatter more than they do now. I think I know enough however of the character of the people of the ceded Districts to be sure that if their supervision were exercised with a very small amount of patience and tact, the discipline required could be obtained. They should be made to understand that their being allowed to remain in the field chosen by them, is contingent upon their not straying from the village perimeter — boundaries; the strict segregation of the sick in the proximity of the chosen sites; obedience to

to the order that the village is not to be visited without a written permit; the reporting at a certain spot of sickness, or death, or departure from the camp. They should be told that no interference would be made with their treatment of the sick or with their temporary dwellings, provided they effected sanitary requirements as to the sick and healthy in the camp. The determination by individuals to encamp in the fields is a matter that should be reported by the person concerned to the Plague officer in the spot — so that in no instance should departure take place, without property and clothing being disinfected in the first place. Each

block

block of huts should be provided with its number, its census should be known and be registered. A tall bamboo with a flag and painted black board should be provided. Similarly, before return from the fields to the houses lately disinfected be permitted, a rigid course of inspection of property brought back should be required — otherwise the epidemic may again start.

The huts are generally scattered much in blocks
Rly

12 The Hospital Camp, Sepoy's Camp, and staff Camp, were in exceedingly neat condition. The patients — four then in camp — seemed absolutely comfortable. Dr Edwards, the Medical officer in charge here, has done excellent work in carrying out inoculation in this and the neighbouring village of —

Johanapuram

13 The water-supply of the Camp is obtained from an open step-well. The water is muddy in the extreme, and I advised the use of the alum and lime process, which will doubtless have the effect of securing a more palatable supply. A platform has been provided. It should however be built over with gravel, and the slope be so arranged that it shall deliver by a small drain to an earthen chatty, or other device, for receipt of foul water. To effect this, one or more steps of the steps should be removed.

Maddikera

Inspected 18th & 22nd December

14 This village in the Kurnool District was inspected with the —

Plague

Plague Commissioner on
18th and by myself again,
on the 22nd December. With
this office No. 28/J dated 29th
December 1898 copy of letter
on the subject to the
Collector of Kurnool
has been furnished.

1069
21-12-98 put up.

Lt. Col. I.M.S.
Sanitary Commissioner
for Madras.

Office of Sanitary Commr
Camp Bellary 13 Jany 1899

To Plague Commissioner.

PLAGUE. No.

BELLARY COLLECTOR'S OFFICE.
Dated 15 . 2 . 1899.

From R. N. Campbell Esquire
ag COLLECTOR OF
BELLARY.

To

THE Plague Commissioner
Madras

Sir,

I have the honour to return the inspection notes forwarded with your proceedings No. 321/26 of 3.2.99 and to state that I have communicated extracts therefrom to the officers concerned for guidance.

2. The report called for on para 11 of the inspection notes will be submitted shortly.

I have the honour to be
Sir,
Your most obedient Servt
Gopalaram
for Collector

First copy sent to Press. 4. 2. 99

Returned for Signature.

Despatched in print.

Number of copies required: { Order complete. / Letter only. / Order complete with Letter.

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Please send Proof soon.
H.L.
4.2.99

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