

MADRAS RECORD OFFICE.

Government of Madras.

Police **DEPARTMENT.**

G.O. No.	540	Press Mis.
Dated	29.5.1955	1955

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Department,

29th May 1866.

No. 149. Read the following Proceedings of Government in the Military Department, dated 21st May 1866, No. 1745.

Forwarding a copy of the Proceedings of the Madras Sanitary Commission for } (Vide Proceedings, Military Dept., dated
March last. } 21st May 1866, Nos. 413 & 414.)

No. 150. ORDER THEREON, 29th May 1866, No. 540.

Communicated to the Municipal Commissioners, who are requested to state whether any and what steps have been taken by them with reference to the letter addressed to them by the Sanitary Commission under date the 23rd March last, regarding the Latrine at Lang's Garden.

(Signed) A. J. ARBUTHNOT,
Chief Secretary.

To the Municipal Commissioners,
with Proceedings of the Sanitary Commission.
„ Sanitary Commissioner.
„ Military Department.

Edw. J. Tulloch.

PROCEEDINGS

OF A MEETING OF THE SANITARY COMMISSION FOR MADRAS.

HELD ON 2ND MARCH 1866.

PRESENT.

INSPR. GENL. OF HOSPITALS D. MACPHERSON, M. D., *Offg. President.*

SURGEON MAJOR H. W. PORTEOUS,
LIEUT.-COLONEL A. F. PLACE, 34TH REGT. C. L. I.,
CAPTAIN WILLIAM CHRYSTIE, R. E., (*Acting*),
ASST. SURGEON W. ARNOLD SMITH, M. D., *Secretary*, } *Members.*

The Proceedings of last Meeting being laid upon the table were agreed to.

74 Clothing destroyed by Fire to prevent contagion.

Read Proceedings of Government, Military Department, No. 708, dated 23rd February, sanctioning certain bills submitted for compensation for clothing, &c., destroyed by fire under authority, in Her Majesty's 19th Regiment at Thyetmyo, 27th November 1865, to prevent the spread of cholera by contagion.

In future, charges of this description will be adjusted under the provisions of G. O. C. C., No. 162, dated 12th December 1865, recorded at page 271 of the Proceedings of the Commission for 1865.

75 Chindwarrah and Moothoor Sanitaria.

Read Proceedings of Government, Military Department, No. 679, 21st February 1866, transmitting for the information of this Commission, certain correspondence concerning the sanitary condition of Chindwarrah and Moothoor, with regard to their suitability as Convalescent Depôts for the station of Kamptee.

These sanitarium have been before under notice of Government in their Proceedings marginally noted which are recorded at page 196 of the Proceedings of this Commission for 1865.

Further correspondence shows that Moothoor is a most unsuitable locality for a sanitarium from the country in its vicinity being highly malarious.

The Dinoor valley covered with jungle and primeval forest, is in its immediate vicinity, the malaria from which is wafted up by the south-west winds, and renders it unhealthy for nine months of the year.

It is stated that out of twenty-four healthy men who were sent to Moothoor sanitarium in the month of March 1864, a few died on the march up, from an attack of cholera, and but fourteen are at present in the country, the others having died or been invalided Home, almost all suffering from the effects of fever contracted in this unhealthy locality.

One man, while at Moothoor, was obliged to be sent away to Chindwarrah, suffering under a dangerous form of low remittent or jungle fever.

Chindwarrah has been found to be very healthy and to possess all the advantages of an Invalid station for patients suffering debility, resulting from fevers and the relaxing effects of the great heat of the plain of Kamptee.

The Government under the circumstances reported, concur with His Excellency the Commander-in-Chief that it is inadvisable to send any men to Moothoor.

76 Conservancy of Native Regimental Lines.

Read the following Circular Memorandum on the Conservancy of Native Regimental lines which was forwarded by the Quarter Master General for the observations of this Commission.

"The attention of the Commander-in-Chief has been drawn to the present condition of domestic conservancy among the families of Native Troops in lines, and he is anxious that endeavours be made Regimentally to ameliorate, if not remove, the intolerable nuisance produced by the existing system."

"2. At some future time when a suitable plan has been decided on, and money is forthcoming, it is intended that in every Regiment there shall be one or more Latrines for Males and Females, constructed and maintained by Government."

"It will be some time before this can be done, and whenever it still remain a large class of persons of the better sort in a Regiment, particularly of females, who cannot be expected to make use of the Latrines in some houses must therefore continue to be used."

"3. The course now adopted is to dig filth pits in each area. The consequence is that cleanliness is impossible, and the health of the community must suffer, and when it is considered that there are perhaps 800 of these in a space of about 120 yards square in every Regimental Lines, the nature and intensity of the abomination can be appreciated."

"4. It is in vain that Government strives in every Department under it to carry out the principles of Sanitary science exterior to the Lines, so long as within them this hot bed of disease is suffered to exist, and as Government cannot exercise any direct control over the family arrangements of the men, the remedy must be found Regimentally."

"5. The Commander-in-Chief therefore directs that you convene a Committee of Native Officers to enquire into the subject. Filth-pits must be absolutely prohibited where they exist; they must be dug up and filled with fresh earth."

"6. Daily removal of the excreta to a distance is to be the only allowable mode of procedure. Instead of the desultory arrangements made by families sepa-

rately, for providing servants for this purpose, it seems possible that a general Fund for each Troop or Company can be established, which will pay for the carts and servants required for the removal."

"7. Periodical Inspection is essential to success, and this is the point to which particular attention is to be directed. How this can be effected, and by whom, must be left entirely to the Regimental Committee to suggest. No intrusion offensive to the rational prejudices of the people is to be allowed, but they should be carefully informed of the object sought, how much their own interests are concerned, how superior to all other considerations is the public good and it is hoped that guided by the judgment and influenced by the authority of their own Native Officers, they may be led to co-operate."

"8. The Commander-in-Chief does not wish to impose any burden on the men in the way of monthly deductions. He trusts that the men themselves will unite in furthering the plan, by paying into the Common Fund proposed of their own accord, as they do for Dhobies and Barbers, a sum sufficient to cover the cost of a moderate establishment."

"9. Each Troop or Company would have its own Sanitary Committee of Native Commissioned and Non-Commissioned Officers and the Pay Havildar of the Company would keep the accounts."

"Government has always objected to bear any part of the expense and the Regiment must be looked to organize the arrangements and pay for the establishment."

"10. The Commander-in-Chief wishes you to convene the Committee of Native Officers now ordered as soon as possible, to explain to them fully the contents of this letter, and to obtain from them a report in reply. A digest of this should be communicated to me by you in as few words as possible, stating what measures are agreed on in the Regiment, particularly as regards inspection."

Resolved the following observations containing the views of this Commission on the above subject be forwarded to the Quarter Master General in returning his Memorandum.

The Sanitary Commission cannot too highly commend the resolution arrived at by His Excellency the Commander-in-Chief in this Circular which has in view the introduction of the most important sanitary measure yet proposed for the domestic conservancy of the Native Soldier and his family. The remarks made in paragraphs 3 and 4 of this Circular render it necessary for this Commission to enlarge on the imperative necessity that exists for immediate action and they quite coincide with His Excellency that the only effectual mode to carry out the required reform is that proposed by him.

Filth pits must in future be absolutely prohibited but the excavation of old ones would be attended with danger and would necessitate the removal of the men from their lines while the operation was going on.

It will be better therefore to fill in all existing pits with fresh earth and level the surface of each compound so that no water could lodge.

Remarks to paragraph 6. This Commission consider that the removal of all excreta to a distance is the only measure compatible with any thing approaching

to a perfect state of Conservancy and that if the arrangement proposed can be carried out it will be attended with most beneficial results.

In some Native Regiments even now funds are provided by subscriptions from troops and companies for providing a small scavenging establishment for the removal of rubbish outside the lines, and to this extent this Commission anticipate no difficulty, but they cannot help expressing a doubt as to whether the pay of the Sepoy is sufficient to enable him to maintain an efficient scavenging establishment for the removal to a distance of all that will be necessary to be carted away.

Remarks to paragraph 7. The Commission entirely concur in the observations by His Excellency the Commander-in-Chief from paragraph 7 to the end of the Circular regarding which they have no remarks to offer.

77 Latrines at Saint Thomas' Mount.

Read Proceedings of Madras Government, No. 644, dated February 20th, in which His Excellency the Commander-in-Chief in forwarding the letter from the Officiating President, No. 686, dated 22nd January 1866, upon the subject of the re-construction of the latrine at the Mount (recorded at page 20 of these Proceedings) strongly recommends that this long postponed measure may be specially provided for as being of urgent necessity.

The above letter has been "communicated to the Department Public Works with reference to the Proceedings of Government, No. 387, dated 29th January 1866, with a view to the provision of funds for the work in question on plans and estimates being submitted and approved."

"It is assumed that the "Mount" is one of the stations selected by His Excellency the Commander-in-Chief to carry out the experiment sanctioned in the Proceedings of Government, adverted to in the foregoing paragraph."

NOTE.—With reference to the second paragraph of the above order, this Commission would remark that the "Mount" is not one of the stations which in communication with the Quarter Master General have been proposed by them for the experimental trial of the dry earth system as it is not well adapted for the purpose. The reasons for this opinion will be found in Minute 73, page 36, of last Proceedings.

78 Mortuary Department.

Read Extract from the Proceedings of a Meeting of the Municipal Commissioners for the Town of Madras under date the 21st February 1866, stating with reference to a letter from the Officiating Secretary Sanitary Commission, dated 16th, upon the subject recorded at page 31 of these Proceedings, the Board regret they have no funds available for this purpose.

The Municipal Commission state with reference to other correspondence that a plan of the latrine at Lang's Garden will be furnished in order that the necessary additions to it may be given.

Resolved that the above information connected with the Mortuary Department be recorded with an expression of regret that under the circumstances this Commission are unable, at present, to propose any other plan for the improvement of the registration of Native deaths in the Town of Madras.

Military Buildings, Secunderabad.

- * 1. Docket, No. 1257, dated 20th January 1866, from the Executive Engineer, Secunderabad Division, to the Assistant Quarter Master General, Hyderabad Subsidary Force.
2. Letter, No. 54, dated 26th January, from the Assistant Quarter Master General, to the Executive Engineer, Secunderabad Division.
3. Docket, No. 1293, dated 27th January, from the Executive Engineer, to the Superintending Engineer,

Read letter from the Executive Engineer, Secunderabad, with the enclosures marginally* noted.

Resolved that Colonel Phillips be informed that this Commission entirely concur with him in recommending that the doors of Barracks about to be erected at Trimulgherry should in future be double folding ones such as are now in use in the Barracks of the 1st European Infantry Regiment at that station; but that instead of the venetian blinds being moveable, they should be fixed.

80 Military Buildings, Race Course, Bangalore.

Read again docket, No. 856, dated 17th February 1866, from the Executive Engineer, Bangalore, forwarding for the approval of this Commission the plan of a Wash-house for married quarters—also letter, No. 875, dated 22nd February, giving further explanation regarding the plan.

Read also docket, No. 879, dated 23rd February 1866, forwarding for the approval of this Commission the following plans:—

Guard room for Artillery, on Race Course Barracks (one for each Battery—the Guard room to accommodate 1 Serjeant and 13 men, and each Prisoners' room to accommodate 4 men.)

Privy for the two guard rooms for the two Batteries.

Ablution room for do. do. for washing hands and face.

Resolved, with reference to the plan of wash-house that the Executive Engineer at Bangalore, be directed to the remarks made by this Commission on buildings of this description at page 15, paragraphs 81 and 82 of their report on the station of Bangalore, and that a standard plan of wash-house which carries out these views be sent for his inspection.

With reference to the plan of guard-room, this Commission in returning a similar plan of guard-room, conveyed to them through the Quarter Master General, stated that they entirely disapproved of the relative position of the prison and guard rooms, *vide* page 268 of these Proceedings.

They consider these rooms interfere very considerably with the ventilation of the guard-room and should be placed at each end of the building.

In other respects the plan is entirely approved of but they suggest that ridge ventilation should be introduced.

The plan of ablution room and latrines attached appears very suitable.

81 New pattern Bengal Tents.

Read Proceedings of the Madras Government, No. 621, dated 17th February 1866, forwarded for the information of this Commission with reference to previous correspondence on this subject, recorded at page 12 of these Proceedings stating that the Governor General in Council concurs in opinion with His Excellency the Commander-in-Chief that it is inexpedient to carry out the proposals for ventilating the European Privates' tents and that steps will be taken to send the new pattern tents as early as possible to Madras and Bombay.

82

Public Health Service.

Read Proceedings of the Madras Government, Public Department, No. 181, dated 20th February 1866, communicating to this Commission the following letter from the Secretary to the Government of India, to the Secretary to Government, Fort Saint George.

"I am directed to acknowledge the receipt of your letter No. 17, dated the 6th ultimo, relative to the establishment of a Public Health Service in the Madras Presidency, at a cost of Rupees 5,000 per mensem."

2. "In reply, I am directed to refer you to my letter of this date, No. 1225 and the papers therewith forwarded, and to state that the Governor General in Council is not prepared at present to sanction more expensive measures."

3. "I am to add that, whenever special health officers are thought necessary the expenses should be provided by the local funds."

83

Plans of new Barrack buildings.

Read Proceedings of Madras Government, Public Works Department, dated 16th February 1866, No. 543, communicated to this Commission by the Military Department and which contained the following Circular.

1. "I am directed to request that whenever projects for new Barrack buildings are submitted for the Orders of the Government of India, a block plan may accompany showing the positions of the buildings proposed for construction, and those of all neighbouring existing buildings that are to be maintained, also all wells, tanks, and other important features, particularly drainage channels."

2. "The points of the compass should be prominently marked on the Plan; the relative levels of the ground should be also noted in some readily distinguishable character on various parts of the Plan, so as to give a fair idea of the general nature and inclination of the ground."

3. "A column of remarks on the Plan should give information on the following points:—

- I. The general direction of prevailing healthy and unhealthy winds.
- II. The nature of the exposure of the site.
- III. The general character of the soil, its dryness, dampness, &c., &c., and of country over which the prevailing winds blow."

84.

Sites for Barracks at Hill stations.

Read Proceedings of the Madras Government, Public Works Department No. 553, dated 16th February, communicating to this Commission the following remarks by the Army Sanitary Commission in England regarding the selection of sites for Barracks at Hill stations.

"The best barrack sites are unquestionably those which occupy the summit level of the ground, and such should always be selected when possible. In proportion, as sites are selected at a lower level, with higher ground rising close behind them, will sites even on the Hills, be found to be less and less healthy. Sites on terraces, constructed on slopes, should be avoided unless under the pressure of necessity. But where such sites must be occupied, care should be taken that the drainage of the higher ground should be completely cut off from the site, and that no part of the barrack room be nearer the slope than 20 or 30 feet. The ends of the rooms should face the slopes, but never the sides."

85. Water supply Saint Thomas' Mount.

Read letter from S. J. Wyndowe, Esq., M. D., Chemical Examiner, to the Officiating Secretary, Sanitary Commission, enclosing with reference to the Proceedings of this Commission at page 15, a fresh analysis of the water from the well in the hospital compound as follows:—

<i>Sensible properties.</i>		
Appearance....	...	In a long tube compared with distilled water slightly greenish brown in colour.
Taste....	...	Unrefreshing.
Odour....	...	Nothing remarkable.
<i>Chemical properties.</i>		
To test paper, reaction.		Very faintly alkaline.
Solid matter in one imperial gallon.	Organic and other volatile matters.	27.45
	In organic salts &c.	61.05
Total...		88.5
Oxidizable matter by Permanganate solution ; relation of oxygen to organic matter 1 to 8.		1.008 grs. in the gallon.
Hardness to soap test 1° = .727 grs. of carbonate of lime.	Temporary.	5.5
	Permanent.	33
Total...		38.5
Chlorides determined volumetrically as chloride of sodium in one gallon.		32.737
Carbonate of lime.		Average proportions.
do of Magnesia.		In large proportions.
Iron.		Traces.
In solution after boiling.		
Lime....	...	In large proportions.
Magnesia..	...	Average do.
Chlorides...	...	Determined above.
Sulphates...	...	Large proportions.
Nitrates....	...	Large proportions.
Ammonia....	...	More diluted.

MADRAS,
23rd February 1866.

(Signed) S. J. WYNDOWE, M. D.
Chemical Examiner.

The Chemical Examiner remarks "that these results though differing somewhat in quantity as regards the volatile matters from the previous analysis still shew the same results as before, viz., that the water contains a very large quantity of Nitrates and Chlorides and is therefore unfit for drinking or domestic use."

"With reference to the Proceedings of your Commission, dated 29th January 1866, I would beg to point out it is very essential to determine the source of this impurity that the suggestion of your sub-committee be carried out, viz., that the well be emptied cleaned and when re-filled the water be again examined, also that the water in all other wells in the immediate vicinity be examined."

"I may state here the quantity of Nitrates was so large that upon igniting the dried residue, copious fumes of Nitrous acid were evolved."

Resolved that the following letter No. 831, dated 9th March 1866, to the Military Secretary to Government, be despatched with reference to the above analysis:—

I have the honor to bring to the notice of Government, the very impure state of the water supply at Saint Thomas' Mount as shown by the appended analysis of that derived from ten wells which has already been briefly noticed in the report by this Commission on the Sanitary condition of Saint Thomas' Mount.

2. From this it appears that in ten samples the solid ingredients in an imperial gallon vary from 19·7 grains to 90 grains and that the amount of organic matter contained in seven wells out of the ten is from 10·6 grains to 35·3 grains per gallon while in the remaining three it ranges from 3·7 to 5·8 grains per gallon.

3. The excessive impurity of the former wells has prevented their being used for drinking purposes for some time past and even the wells that are used contain a larger amount of organic matter than is considered by competent authority* sufficient to render its use free from the danger of inducing or producing disease.

*Vide Report of the Royal Commissioners.

4. The attention of this Commission was drawn to the alarming impurity of water of those wells situated in the immediate neighbourhood of a crowded bazaar and more especially to that in the Hospital compound; and in order to discover if possible any obvious causes other than those which may be attributed to the bad surface conservancy, a sub-committee was formed by this Commission who proceeded to the Mount on the 19th ultimo for this purpose and their Report has already been recorded at page 15 of the Proceedings of this Commission for January 1866.

5. In conformity with the resolution then passed a fresh supply of water from the well in the Hospital compound was collected with great care and the following is the result of the second analysis with the Chemical Examiner's remarks.

(Here enter analysis with remarks.)

6. As a careful examination of all these wells has failed to discover any cause which directly vitiates their supply, this Commission cannot help thinking that this excessive impurity is derived from the filtering of the water through a soil loaded with animal and other matters and that it results from the extremely defective conservancy of the neighbouring crowded bazaars—two of the wells which afford the purest supply being furthest removed from any contaminating source of this description.

7. To determine this point satisfactorily this Commission suggest that the seven wells referred to be carefully cleaned out and a fresh analysis then be made of their contents. Should the water supply still continue as impure as it is now we can only add that it will show the greater urgency for improving the conservancy arrangements. This subject has been fully referred to in the Sanitary Report by this Commission attached to their Proceedings for December 1865.

The Proceedings of the Bombay Sanitary Commission for January 1866, were placed on the table

Read papers of official routine.

The Meeting then adjourned.

(Signed) D. MACPHERSON, M. D.
Offg. President Sanitary Commission.

PROCEEDINGS

OF A MEETING OF THE SANITARY COMMISSION FOR MADRAS,

HELD ON 12TH MARCH 1866.

PRESENT.

INSPECTOR GENERAL OF HOSPITALS D. MACPHERSON, M. D., *Offg. President.*
DEPUTY INSPECTOR GENERAL OF HOSPITALS H. W. PORTEOUS, }
LIEUTENANT-COLONEL A. F. PLACE, 34th Regiment C. L. I., } *Members.*
CAPTAIN WILLIAM CHRYSTIE, R. E., *Acting.*
ASSISTANT SURGEON W. ARNOLD SMITH, M. D., *Offg. Secretary,*

The Proceedings of last Meeting being placed on the table were agreed to.

86. Absence of Officiating President on Privilege leave.

Read Proceedings of Government No. 860, 6th March 1866, sanctioning twenty days' leave of absence to the Officiating President, with reference to his application dated 6th March.

Deputy Inspector General Porteous, senior Member, conducts the duties of this Commission during the interval.

87. Bedding for European Troops.

Read Proceedings of Madras Government, Military Department, No. 840, 5th March 1866, forwarding, for the information of this Commission, certain correspondence upon the subject of bedding for European troops from which the Governor in Council is satisfied as to the expediency of re-placing the quilt, now forming part of the bedding issued to European Troops, by a second blanket.

88. Cholera Congress at Constantinople.

Read the following report from the Officiating President having reference to the above subject which, after circulation amongst the Members, was ordered to be despatched to the Chief Secretary to Government for transmission to the Bengal Sanitary Commission.

1. The Sanitary Commission for Bengal having invited the co-operation and assistance of this Commission, to furnish as much information as possible with regard to cholera to enable them to prepare a report to be laid before the Sanitary Congress about to assemble at Constantinople, and having been instructed by Government on the same subject,* they now present their report with a view to its transmission to Calcutta, with such observations as may be thought necessary.

Enclosures 2.
1. Dr. Bill's Etiology on cholera.
1. Memo: by this Commission on the marching of Troops.

* Nos. 193 and 78 dated 31st Jan. and 19th Feb. 1866 respectively.

2. The queries put to this Commission in the papers referred to above are answered *seriatim* with as much conciseness and brevity as the importance of the subject admits.

Question 1st.—Is the delta of the Ganges, as is generally believed in Europe, the permanent source of cholera?

This question is more satisfactorily answered in Bengal than in this Presidency, as it appears to this Commission that the opinion therein expressed is purely conjectural. As far as their own knowledge extends, the delta of the Ganges is not now the permanent source of cholera, although a very severe epidemic did originate at Jessore (a place situated there) in 1817, which rapidly spread over a large tract of country; and it is generally supposed that this was the first known outbreak of this pestilence—a fact not at all clearly proved.

Question 2nd.—This year it was imported into Egypt by the pilgrims who returned from Mecca, but had not these pilgrims brought with them the germ of the disease from their original country?

Question 3rd.—Did not these pilgrims count in their number some Mussulmen who came from the Districts of India when cholera was raging?

Question 4th.—What is in general the rise, progress, and advance of cholera in British India, and what are its chief characteristics?

They are further of opinion that its visitations are governed by the same laws which mark the progress of other epidemics, and that the germs of the disease, when once developed, are propagated in various ways, from one place to another, and that the virulence of the disease is increased in intensity by various local causes, more especially by the overcrowding of large masses of people.

It seems probable that the germ of the choleraic poison is spontaneously generated by the transformation of the elements of organic matter, during their passage, into a state of decomposition, and that the specific cholera cell thus produced rapidly re-produces itself in a similar manner, more especially in the excretions of those attacked.

The nature of this poison is purely conjectural, but probably exists either in a fluid or dry state, and in this form it may be carried about from place to place by various agencies.

Whether this poison introduces itself into the body through the agency of substances taken into the stomach, or directly into the system, through the medium of

3. The Commission have no reliable data whatever upon which to answer these two questions, and, as is shewn in their answers to question No. 11, the number of pilgrims, who embarked from ports in the Madras Presidency for Mecca, is remarkably small; and they have, at present, no evidence to shew either that those who did embark were suffering from any epidemic, or had passed through any District where cholera was prevailing.

4. This Commission are of opinion that the actual origin of this disease is still purely enigmatical, although from long experience with its visitations there are many well ascertained facts with regard to its progress, advance and decline, which are now almost universally accepted by medical men in this country.

the lungs, are questions still too problematical to hazard an opinion upon; but that after the introduction of the cholera poison it rapidly exhibits its effect on the system in the most violent symptoms, which are all characterised as efforts on the part of nature to rid the system of some irritant substance.

In the majority of cases the powers of life rapidly fail from the excessive serous discharges which take place along the whole course of the mucous lining of the intestinal canal and the person dies in a state of collapse.

The symptoms of this disease are so well known as to render any recapitulation of them unnecessary here; this Commission will, therefore, confine their remarks to those causes which favor the propagation of the disease, and which they are justified in believing from the accumulation of evidence recorded concerning them.

1st. This Commission have no hesitation in recording their belief that cholera is propagated from one place to another by human intercourse; and that its course on the map can be traced along the high roads from one station to another. Innumerable instances demonstrating this fact may be given as occurring in this Presidency, of which the following are examples:—

In 1860 the 35th Regiment Native Infantry marched from Hurryhur, in the Mysore country, to Bellary, in the Ceded Districts, taking with them the carriage of the 16th, the relieving Regiment. The 16th Regiment had a few sporadic cases of cholera on the line of march, but it never appeared in an epidemic form.

* “On the 5th morning, after leaving Hurryhur *en-route* to Bellary, the disease “broke out with much severity. On finding that an increasing number were being “daily struck down, on the recommendation of the Surgeon, the Corps, on the 19th “January, was broken up into three divisions, each party proceeding by separate “routes to different encamping grounds. Immediate marked benefit was the result “of this step. Under instructions from the General Commanding the Division, the “Regiment was again re-united on the 22nd January. The cholera instantly in- “creased three-fold, the type of the disease being also more severe than hitherto; “when, on Surgeon Hadwen’s urgent recommendation, the Regiment was again “broken up on the 27th January; the disease at once began to decline, and the “last two cases were admitted into hospital on the 4th and 5th February; but the “Corps did not re-unite until the 14th February, the day they entered the Canton- “ment. Each division marched five or six miles daily, and the hospital tents were “removed regularly twice a day to a fresh spot of ground. Independent of the “cholera, diarrhoea prevailed largely.”

* “Ninety-two fighting men were taken ill with cholera, fifty of whom died; “129 followers were seized with the disease, and fifty-eight died. Altogether the “deaths to admissions were 47·36 per cent.”

* “A Company of Her Majesty’s 74th Highlanders *en-route* from Sholapoor to “Bellary, in perfect health, one day struck upon an encampment of the above Re- “giment then suffering from cholera; instantly turning right about, they passed “the camp and proceeded by a forced march of 24 miles to Bellary, by another “route; good food and moderate stimulants were served out to them on the march,

* Vide Selections from the Records of Government.

"and they reached Bellary without fatigue. On the second and third day, afterwards, ten men of this Company were seized with the disease of whom seven died. The epidemic did not extend, precautions having been taken not to let these men mingle with the rest of the Corps."

"In March 1857 the left wing of Her Majesty's 43rd Light Infantry left Bangalore 537 strong *en-route* to Madras. For eight days their march was prosperous. On the ninth day, as cholera was reported in the village adjoining their proposed encampment, the Commanding Officer pushed on to the next halting ground, 11 miles distant; the entire march of 21½ miles having been performed without apparent fatigue. Here a halt was called for a day. The following morning, after a seven miles' march, cholera appeared epidemically in the wing, and in twelve days,

	Men.	Women	Children.
"out of a strength of...	537	65	130
"there were seized with cholera...	98	9	29
"and there died from the disease...	41	5	13

"It is obvious, that the primary cause of this loss of life was the prevalence of the epidemic in the District through which the Corps marched; and that neither fatigue, discomfort, nor dissipation was an exciting cause, is proved by the melancholy fate of two ladies one gentleman, one child, and one servant, who proceeded over the same road, four days after the epidemic broke out in the wing; and although they travelled with all the comforts that affluence usually procures, with one exception, all perished from the disease."

The introduction of cholera into the camp of Her Majesty's 74th Highlanders quartered near the Race Course at Guindy is clearly shewn in the following extract from the Mortuary Report of Madras for 1864:—

"It seems that a Hospital cooly of Her Majesty's 74th Highlanders (that Corps having at the time cholera cases in camp) was in the habit of coming home of nights to his hut in New Town. A servant of the Quarter Master Serjeant of 2nd Regiment N. I. lived in the same hut or house with this cooly, and therefore the chain of communication between the cholera camp and the house in New Town, where the first case occurred, may be regarded as complete. A child of the Quarter Master Serjeant was taken ill on the night of the 27th, another on the 28th, and both died. On the latter date the wife and child of the Sergeant Major of the Regiment, living close by, were attacked and died, and from this time the other cases followed in rapid succession. It seems that the servant boy had come to the Quarter Master Serjeant's house late at night on the 27th and that almost immediately after the first child, that was attacked, began to sicken."

"Curiously enough another instance of the communicable nature of the cholera poison was afforded during the prevalence of the disease in the camp of Her Majesty's 74th Highlanders. It is full of warning and instruction. The particulars are extracted from the Stational Report of the Zillah Surgeon of Chingleput."

"Cholera first made its appearance on the 24th February 1864. Two landymen belonging to this place, who were engaged in transporting tents of the 74th

"Highlanders from Guindy to Palaveram, when the Regiment shifted its quarters in consequence of the outbreak of cholera, in their ignorance appropriated to their own use the *straw spread in the tents* of the cholera patients."

"No sooner had they deposited their loads and turned homewards, than they were seized by the disease, and both fell victims to it the day after their arrival here. The disease now spread, and several cases were reported to have occurred in the town."

This Commission also believe that the transmission of the disease by cholera stools, is now sufficiently proved to lead them to urge that the greatest care be taken in the destruction of all excreta passed from the body.

They are further disposed to hold to the view, that water highly charged with animal organic impurity is a great means of preparing the system to imbibe the poison.

They also believe the following to be acknowledged facts regarding this disease:—

1st.—That it is more prevalent during the first six months of the year.

2nd.—That those travelling are more likely to be attacked than those stationary.

3rd.—That new arrivals, in places where the disease is prevailing, are more subject to attack than residents.

4th.—That over-crowding predisposes to the disease and renders its attacks more fatal.

5th.—Fatigue and debility from all causes predispose to it.

6th.—That the type of the disease is most acute at the first outbreak of an epidemic, when the majority of cases are fatal. The reverse takes place at its decline.

7th.—The time of attack is generally at night or early morning.

8th.—That a relation exists between the prevalence of cholera and the elevation of the surface above the level of the sea, the disease diminishing in frequency with the ascent.

Question 5th.—Are there any official documents published that, with the sanction of Government, the following documents relating to cholera, may be procured?—
In accordance with this requisition it is suggested that, with the sanction of Government, the following documents relating to cholera, may be procured:—

1st.—Dr. Lorimer's report on Epidemic Cholera from 1820 to 1844.

2nd.—Dr. Cornish's printed report on the mortality of Black Town for 1860.

3rd.—Dr. Bidie's Etiology of cholera, herewith sent.

4th.—Memorandum by this Commission on the marching of regiments in the Madras Presidency, recorded in Proceedings of Government, Military Department, No. 2,074, dated 3rd June 1865, herewith sent.

5th.—Dr. Balfour's pamphlet on the statistics of Cholera.

Question 6th.—In what Districts does cholera generally break out, and what are the localities where it rages more or less permanently?

6. As far as this question refers to this Presidency, it may be safely asserted that this disease is rarely entirely absent from any of its large native cities; for, when not prevailing in an epidemic form, sporadic cases constantly occur. The filthy towns of Madras and Hyderabad are examples, and with regard to the latter city, it may be said to form a focus from which cholera is disseminated into the surrounding Districts.

Outbreaks of this disease occur with almost unerring regularity in certain towns, which are resorted to annually at certain seasons for celebrating native festivals, and also at shrines such as Mahadao near Nagpore and Juggernath near Cuttack, where pilgrims collect by thousands from distant parts of the country. The entire absence of all conservancy arrangements amongst a large concourse of people, whose constitutions are generally depressed by fatigue and want of proper nourishment, speedily leads to a virulent outbreak; and as these vast masses immediately disperse, they carry the seeds of death with them along every route they travel, and their course may be traced by the dead and dying they leave behind them in their flight. These assemblages may be pointed to, with almost prophetic truth, as likely to form nurseries in which this disease will be hatched and propagated in every direction, so long as present customs continue.

It has been observed that cholera more frequently breaks out in those parts of this Presidency, lying at a low sea level, where the geological formation of the surface is *regur*. The Ceded Districts and the country on the East Coast in the neighbourhood of Ongole, may be taken as examples.

Question 7th.—Have any particular phenomena manifested themselves this year, and if so, what are they?

7. No peculiar atmospheric or other phenomena have manifested themselves in the year 1865, as far as the knowledge of the Commission extends. The setting in of the north-east monsoon was late, and at its first burst was attended with a violent cyclone which was felt a considerable distance inland. It may be here remarked, however, that the almost entire absence of all scientifically recorded observations in this Presidency would place it beyond their power to answer this question at any time satisfactorily.

Question 8th.—Was the cholera unusually violent this year?

8. No—With the exception of certain isolated outbreaks amongst the pilgrims visiting certain shrines, there has been no general outbreak of cholera throughout the Presidency.

Question 9th.—About what time did it break out?

9. The particular outbreak referred to in the last paragraph took place at the temple of Mahadao near Kamptee in February.

Question 10th.—What is the number of deaths this year amidst the Native or European population, during the Indian Commercial year?

10. This Commission have no means of obtaining this information with any degree of accuracy. There are no data at the disposal of this Commission for shewing what the ratio of mortality from this disease has been amongst the civil population throughout this Presidency, but at Madras where a Mortuary Register is kept, the past two years shew a decline in the number of deaths as contrasted with previous periods.

This will be observed in the following table:—

Years.	Deaths from Cholera.	Years.	Deaths from Cholera.	Years.	Deaths from Cholera.
1855	1,956	1859	1,082	1863	1,684
1856	805	1860	2,580	1864	574
1857	1,378	1861	2,776	1865	944
1858	1,965	1862	3,635		

During the past year there has been no very serious outbreak of cholera amongst the European Troops in Cantonment, and the Native Army has been quite as exempt from the disease.

The Principal Inspector General, Medical Department, in a letter to the Secretary to Government, Military Department, dated 11th May 1864, writes as follows:—

“The great mortality from cholera, of Troops, on the line of march sometime since attracted attention. As regards Europeans, in the year 1857, the practice of moving them by *transit* was introduced, and although several thousands of men have been moved in this way subsequently, the cholera mortality has been exceedingly slight.”

“The measure has undoubtedly been attended by great saving of life, and I should be sorry to see a reversion to the old practice of marching the men from place to place, through any short sighted motives of economy.”

“The Native Troops of late years have been moved less frequently, and the cholera mortality has been diminishing in consequence.”

Vide Proceedings of Government, No. 1,797, dated 27th May 1864.

The following return shews the proportion of deaths from cholera to all other mortality for 23 years, from which will it be seen that of late years the disease has been somewhat diminishing.

Statement shewing the number and per-centage of deaths from all causes and especially from Cholera among European and Native Troops for the past 23 years.

Years.	EUROPEANS.					NATIVES.				
	Average strength.	Deaths from all causes.	Deaths from Cholera.	Per-centage of		Average strength.	Deaths from all causes.	Deaths from Cholera.	Per-centage of	
				Deaths from all causes.	Deaths from Cholera.				Deaths from all causes.	Deaths from Cholera.
1842	12,680	508	163	4.2	1.3	74,618	1,887	741	2.5	0.9
1843	12,436	610	206	4.9	1.6	73,763	1,749	905	2.3	1.2
1844	13,057	367	54	2.8	0.4	73,083	1,458	519	1.9	0.7
1845	12,548	491	124	3.9	0.9	74,861	1,544	708	2.0	0.9
1846	11,113	402	75	3.6	0.6	74,682	2,002	1,208	2.6	1.6
1847	11,429	337	22	2.9	0.1	67,950	880	78	1.2	0.1
1848	9,679	174	2	1.7	0.02	55,946	690	93	1.2	0.1
1849	9,559	245	26	2.5	0.2	50,030	610	104	1.2	0.2
1850-51	9,136	226	21	2.4	0.2	50,448	712	183	1.4	0.3
1851-52	9,119	216	15	2.3	0.1	49,881	658	202	1.3	0.4
1852-53	9,170	478	155	5.2	1.6	49,747	739	125	1.4	0.2
1853-54	8,291	324	61	3.9	0.7	47,887	944	284	1.9	0.5
1854-55	9,021	300	65	3.3	0.7	46,988	745	190	1.5	0.4
1855-56	7,599	200	11	2.6	0.1	47,938	690	59	1.4	0.1
1856-57	7,513	215	58	2.8	0.7	47,968	785	141	1.6	0.2
1857-58	9,396	385	112	4.09	1.1	47,902	1,072	177	2.2	0.3
1858-59	15,482	655	47	4.2	0.3	57,653	1,008	227	1.7	0.3
1859-60	16,921	463	99	2.7	0.5	60,750	1,047	260	1.7	0.4
9 Months 1860	10,741	205	36	1.9	0.3	35,401	524	107	1.4	0.3
1861	15,121	221	43	1.4	0.2	40,315	451	69	1.1	0.1
1862	13,920	238	49	1.7	0.3	33,551	321	83	0.9	0.2
1863	12,396	201	39	1.6	0.3	30,613	295	85	0.9	0.2
1864	13,280	268	36	2.01	0.27	29,708	381	116	1.2	0.3

Return shewing the number of admissions and deaths from Cholera, among European Troops in the following stations in the Madras Presidency during 1865.

Stations.	Average strength.	Admissions.	Deaths.
1. Secunderabad ...	2,604	6	5
2. Bangalore...	2,310	15	5
3. Kamptee...	1,204	15	11
4. Bellary...	1,166	18	9
5. Madras...	805	4	2
6. Cannanore...	771	1	1
7. Rangoon (11 months)	754	...	...
8. Wellington...	665	...	...
9. Saint Thomas' Mount	597	...	...
10. Thayetmyo...	566	8	4
11. Trichinopoly...	273	...	...
12. Palaveram...	247	...	...
13. Tonghoo (4 months)	159	...	...
14. Singapore...	155	...	...
15. Vizagapatam...	132	2	2
16. Port Blair ...	110	...	...
17. Malliapooram...	102	...	...
18. Calicut...	84	...	...

Return shewing the number of admissions and deaths from Cholera, among Native Troops in the following stations in the Madras Presidency during 1865.

Stations.	Average strength.	Admissions.	Deaths.	Stations.	Average strength.	Admissions.	Deaths.
1. Secunderabad ...	2,621	21	12	16. Samalcottah ...	704	1	1
2. Bangalore...	2,467	4	3	17. Mysore ...	702	6	2
3. Madras...	2,254	19	8	18. Thayetmyo ...	688	1	...
4. Bellary...	1,904	11	4	19. Palamcottah ...	650	3	2
5. Kamptee...	1,662	37	20	20. Mercara... ..	635	...	...
6. Cannanore ...	1,352	...	...	21. Hurrelyhur ...	634	8	5
7. Trichinopoly ...	1,321	19	14	22. Moulmein ...	628	1	...
8. Vizagapatam ...	935	3	1	23. Tonghoo ...	574	...	...
9. Mangalore ...	890	1	1	24. Singapore ...	533	2	...
10. Rangoon...	824	...	...	25. Cuttack ...	479	...	...
11. Cuddapah...	817	4	2	26. Kurnool ...	468	3	...
12. Raepore...	760	8	3	27. Quilon...	334	5	1
13. Vellore...	736	...	...	28. Hoshungabad ...	332	9	3
14. Berhampore ...	706	5	2	29. Malacca ...	187	...	...
15. Vizianagram ...	715	2	2				

Question 11th.—What is the number, on an average, of the pilgrims who left India this year for Mecca; from what part did they start, and what was their sanitary condition at the time of starting?

11. There being no Mahomedan population in Southern India, no pilgrim ships ever proceed to Mecca from thence. On the Western Coast, however, a tribe of Moplahs, who have mixed Mahomedan tenets, but are not zealots in that faith, occasionally proceed on pilgrimages. A few individuals only go at a time, taking with them goods for sale, and take up their residence in Arabia for longer or shorter periods for commercial pursuits. Their numbers, however, are so few and their movements so erratic that no record of their departure out of the Presidency is officially observed by the authorities.

The Superintendent of Marine has furnished this Commission with the following list of vessels which proceeded to Jeddah with passengers during 1865:—

Vessels.	Tons.	No. of passengers.	Ports of embarkation.	Destination.	Remarks.
Fathel Karren or La Fayette.....	541	45 63 21	Atcheen. Alleppy. Calicut.	Jeddah	
Iskander Shah.....	777	25 30	Calcutta. Tellicherry.		
Fathel Ryman.....	375	78 34	Atcheen. Calicut.		
Jadool Barce.....	460	75	Tellicherry.	do.	
Shelomith.....	816	30 15	Calcutta. Tellicherry.	do.	

MADRAS, MARINE SPT.'S OFFICE,

2nd March 1866.

(Signed) JOHN J. FRANKLIN,
Superintendent of Marine.

From this it is observed that only 238 persons embarked from ports in this Presidency, including 63 from Alleppy. This Commission have no direct evidence of the sanitary condition of these pilgrims at the time of starting; but as all these vessels have certificates granted them, in accordance with Act XXI. of 1853, they would not have been allowed to leave port unless the passengers were in a good state of health, and their condition on arrival at their destination could only be known to the authorities at Jeddah.

The Inspector General of Police informs this Commission that, during a long residence on the Western Coast, he never heard of a serious outbreak of cholera on board a pilgrim ship after leaving the ports of Malabar.

Further enquiries are being made, in communication with the Collectors of Districts on the West Coast under this head, and they will be forwarded, should it be thought desirable to do so.

They understand that the great stream of pilgrimages from British India proceed from Bombay, from which place information on this point will be obtained.

It is from this port that pilgrims from the dominions of the Nizam and other Mahomedan rulers embark, and this Commission have applied to the Minister of His Highness to tender them such information as he has it in his power on this subject.

But as this report has already been kept back in expectation of the receipt of the information solicited, they are reluctant, under the circumstances noted in the Order of Government, regarding the expectation of receiving an early reply, to delay its transmission, as an addendum to this report will be transmitted hereafter, should the intelligence received warrant it.

Question 12th.—What measures, in your opinion, should be resorted to in order to check the evil and to extirpate it, if possible, at its origin? 12. As already stated in paragraph 6, the Commission believe that one of the great sources of cholera in this Presidency is the vast assemblages of native devotees, which yearly take place at the various shrines and large towns, to celebrate festivals connected with their religious creed; and they consider that to check the evil and to extirpate one great source at its origin can only be attained by enforcing by legislative enactment, the strictest and most practical conservancy arrangements possible at these yearly gatherings.

Beyond pointing out the ordinary rules, which are laid down for the conservancy of towns and communities, this Commission are not in a position to suggest how these regulations are to be enforced amongst a people, living in independent States and other parts of the country, where any interference with their habits and customs, has, as a matter of policy, been always avoided by the authorities.

Such interference is never appreciated by the people themselves and even the wealthier classes, if they can be induced at all to contribute funds towards conservancy arrangements, always do so grudgingly.

This Commission believe the Municipal Act will be attended with great good in all towns when thoroughly carried out, and will be the means of checking, to a great extent, out-breaks of this disease, and they think that much might be done by discouraging as much as possible these yearly congregations of natives.

They are aware of the many difficulties which encompass any effectual method proposed for checking this evil; but they believe that the only real remedy will be that which has been hinted at above, viz., to prevent by direct legislation the accumulation of the vast concourse of Natives at the various cities and shrines throughout the country.

Once the disease has originated amongst these pilgrims, there natural remedy and the best for their own safety is dispersion, and in so doing the disease is distributed along the lines of roads into the villages and every Cantonment through which they may have to pass and tracts of country are thus rendered only passable to travellers, with the greatest risk to their lives.

In order to still further check the evil caused by the diffusion of the germs of the disease this Commission would suggest that measures should be instituted at the ports of embarkation by which the same restrictions now applicable to those embarking under the Emigration Act, should be adopted with regard to all classes of pilgrims.

The replies to questions conveyed in G. O. No. 178, dated 19th February 1866 are embodied in this letter.

89. Cooum River Cess Pit Experiment.

Read Extract from the Proceedings of a Meeting of the Municipal Commissioners for the Town of Madras under date the 1st March 1866.

Read the following Memorandum by the Civil Engineer, dated 21st ultimo.

“With reference to the Board’s Resolution under date 15th February 1866 No. 20, the Civil Engineer has the honor to report that the Pipe Drain leading to the Cess Pit near the Penitentiary has been cleared.”

“With reference to the query asked by the Sanitary Commission, the Civil Engineer begs to report that the sewage which flows into the side open drain east of the Park, finds its way into the Cooum by drain under the road leading to the river.”

(Signed) G. R. LEGGATT,
Civil Engineer.

Ordered to be communicated to the Officiating Secretary, Sanitary Commission.

(A True Extract.)

(Signed) B. CARDOZ,
Municipal Commissioner for the Town of Madras.

This Commission were then engaged in discussing matters connected with the carrying out of the experimental trial of this Cess Pit, in which Mr. Fraser, C. E., who obligingly attended this day’s Meeting, took part.

Resolved 1st.—That the Civil Engineer attached to the Municipal Commission be invited to meet Captain Chrystie, Mr. Fraser and the Officiating Secretary of

this Commission at the site of the proposed experiment on the banks of the Cooum river to-morrow morning, for the purpose of examining the building which has been constructed, and of ascertaining that all the details required for carrying out the experimental trial, are complete.

2nd.—That the Municipal Commission be informed that one cart and two men will be required for conservancy purposes.

3rd.—That permission be obtained from the Secretary of the People's Park, for obtaining the necessary quantity of earth from that place in exchange for the sewage deodorized by its agency from the Cess Pit.

4th.—That the Engineer Member of this Commission be requested to watch the progress of the experiment, as soon as the necessary arrangements for its commencement are complete.

90. Dry earth system of sewage, Wellington Barracks.

Read letter from the Executive Engineer, No. 564, dated 7th March 1866; requesting to be furnished with plans of latrines, pans and urinals, which have been recommended by this Commission for carrying out the dry earth system of sewage—Government having sanctioned an estimate for the construction of privies on this system at the Wellington Barracks.

Resolved that the above request be complied with.

91. Halting grounds for troops marching.

Read Proceedings of the Madras Government, Military Department, No. 826, 3rd March 1866, communicating reports on the halting places on the road from Trichinopoly to Ootacamund, and the routes most frequented in the Salem District.

92. Lang's Garden Latrine.

Read Extract from the Proceedings of a Meeting of the Municipal Commissioners for the Town of Madras, under date the 7th March, forwarding a plan of the latrine at Lang's Garden as requested by this Commission in compliance with their Resolution at page 35 of these Proceedings.

Resolved that a plan of the alterations considered necessary for adapting this latrine to the dry earth system of conservancy, be at once prepared and dispatched to the Municipal Commissioners' Office.

93. Military Buildings, Bangalore.

Read the following dockets, Nos. 901, 902, 918, 919, and 937, dated 3rd, 6th, and 8th March, respectively, forwarding for the approval of this Commission the plans noted below.

- | | |
|--|---|
| 1 Plan of Canteen for Artillery on Race course Barracks. | 1 Plan of a Plunge Bath for Cavalry in Race course Barracks. |
| 1 Plan of Plunge Bath for do. do. | 1 Plan of a Building holding a Skittle and a Bowling Alley for Artillery in Race Course Barracks. |
| 1 Plan of Apothecary's Quarters for Sappers. | |

Resolved that the above be returned with the following letter, containing the views of this Commission.

The plan of the proposed Canteen is approved of, and this Commission agree with you that the wall round the store-room should not be built, as it would interfere with ventilation. They advise that the openings from the bar room be grated with iron bars as formerly proposed, being better than wooden shutters.

The plans of plunge baths require no remark, but arrangements should be made for urinaries in all these buildings. A small recess for a urine pan would be all that is necessary.

The plan of Apothecary's quarters is approved of.

The plan of skittle and bowling alley requires no comment.

New Pattern Bengal Tents.

94. *Read* Proceedings of Government, Military Department, No. 788, 1st March, also No. 852, 6th March 1866, communicating to this Commission, certain details connected with the construction and supply of the New Pattern Bengal Tents about to be used in the Madras Presidency.

New Pattern Cooking Ranges.

95. *Read* Proceedings of the Madras Government, Military Department, No. 858, 3th March 1866, regarding an experimental trial of new pattern cooking range constructed by Lieutenant-Colonel Dumbleton, Executive Engineer, Upper Sirhind Division.

The following is a report of its qualities by a Committee assembled at Dugshaie, 3rd June 1865, with order thereon.

"The first form of stove experimented upon, since the arrival of the 101st Royal Bengal Fusiliers at Dugshaie, was the simple "Franklyn" Stove. This seems to have found favor with the 42nd Royal Highland Regiment, and to have been reported on favorably by the Executive Engineer, in the fall of last year. However, it was plain to the Executive Engineer, as well as to the Officer Commanding Her Majesty's 101st, the Officer Commanding the Company using the stove, and all others visiting the range, that it was a failure. A heavy gaseous smoke rose when the fire was lighted, and, notwithstanding a small flue attached to it, the cook-house was full of smoke, so much so that it was most painful to the eyes to remain within it. This was one defect; another was, the water took so long a time to heat, that to have coffee for breakfast at 8 or 9 o'clock required that the caldrons should be put on the fire some three hours beforehand. The consumption of fuel was very great also, so much so that much extra wood had to be procured to feed the furnace. The Executive Engineer gives it, as his opinion, that the failure of this Franklyn Stove here (whereas it acts well in Umballa) is caused by the difference of wood. It may be said that dry wood is always obtainable below; but in the hills it is different; very frequently dry wood cannot be had, either from causes of sap in the wood, or from continuance of wet and snowy weather. The Executive Engineer states, he thinks in the present instance the two causes combined to cause the failure, especially as it was in dry weather, and in the fall of the year, when the stove used by Her Majesty's 42nd Royal Highland Regiment, acted satisfactorily, and even was considered to save fuel."

2. "The failure of the "Franklyn" Stove as above recorded, caused the Executive Engineer to produce the present form, which most undoubtedly acts in every way satisfactorily. The form and shape of this stove may be considered as a circular oven, with a flat top, the top being formed of iron. This top sheet of iron has holes cut in it, as near as possible to fit the caldrons—one 9 gallons, and two 7 gallons. An ordinary furnace door is constructed at one end, and at the opposite, a small flue to carry off what smoke may not be consumed in the furnace. The sides of the furnace being of brick, on becoming heated, retain the heat as an oven does; and the caldrons fitting well down through the upper plate, a very little fire serves to keep up the necessary cooking heat. After a trial of six or seven weeks of this stove, it can safely be said that a saving of one-third the fuel can be effected. It seems handy and applicable for all the purposes required in cooking for Soldiers, excepting baking and roasting. It seems to effect readily, boiling, stewing, curry-cooking, frying, hashing, soup-making, coffee, tea, &c., &c.; any of these may be carried on expeditiously, and in a manner perfectly cleanly, without a particle of smoke, and without even sight of the fire. The fire requires no particular attention. The heat is so much equalized by the radiations from the brick sides, that, though the fire may be low, no sudden chill takes place; in fact, the fire may be extinguished altogether, still the heat of the furnace itself will retain a vessel of water at boiling point for some time, and keep it warm probably till time for the next meal. This is extremely handy where, on occasions of duty, men may be away at the ordinary meal hour. As this furnace is used at present, it is capable of cooking for 120 men; the daily cooking from it required is for 73 or 74 only. Two such stoves in a cook-house, 36 by 16, would readily cook for two Companies."

3. "The Committee are of opinion that the surplus heat from this furnace, or that going up the chimney and escaping to no purpose, would hardly be applicable to heating an oven, and passing away as it does in shape of smoke, it is probably better to let it go clear than to endeavor further to put it to any purpose, as in any endeavor to carry it round the outside of an oven, which would be the only way to apply the heat, it could not be so arranged that choking of flues from soot would not be the result. The Committee would, therefore, strongly advocate that ovens, separate from the cooking ranges, projecting at one corner of the cook-house, should be resorted to in preference to attaching it to the cooking range. A common brick oven, four inches by three, would suffice for a Company, giving sufficient space for eight large joints of meat or pies."

4. "Accompanying is a drawing of the stove as it stands. The common fire-places in the middle were constructed with a view to frying from, but this was not found necessary, as the frying is readily done over the furnace; the frying pan being the only peculiarity required, it may be considered a caldron of small depth about five and half inches only; this is let in at one of the holes used for the caldrons, and as the meat is cooked, it is picked out with a fork. This cooks the meat very nicely, and as the vessel fits to the furnace top quite close, no smoke or other dirt can touch the meat."

5. "The uses of this stove may, no doubt, be further developed, and its capabilities of cooking increased in the hands of an ingenious man, like Private Rourke, Her Majesty's 101st, who has had the charge of it since it was set to work."

6. "The cost of a stove, such as this, may be taken at from Rupees 30 to Rupees 50; sheet iron is expensive here, and moreover, a cast-iron half inch or one inch plate, for the top of the furnace, would be the proper thing, instead of the thin metal only that was available to the Executive Engineer at the time of the construction of the stove."

"The Governor in Council concurs in the suggestion of His Excellency the Commander-in-Chief that a trial should be made with the Dumbleton Cooking Range at Bangalore, and its merits thus fairly tested with the Duff's ranges just made in the Mint."

Soldier's Liquor Allowances.

96. *Read* Proceedings of the Madras Government, Military Department, No. 814, 2nd March 1866, communicating to the President of this Commission (with reference to Proceedings of Government, No. 2,056, dated 2nd June 1865,) the decision of the Government of India, that it is inexpedient at present to disturb the existing system regarding the quantity of malt liquor and spirits issued to soldiers.

"Extract from a letter from the Officiating Adjutant General, 12th January 1866, No. 12E; to the Secretary to the Government of India, Military Department."

"Paragraph 2. His Excellency has carefully considered the papers forwarded to him for opinion, and desires to submit that, on the whole, there seems to be no good cause to interfere with the present arrangements for the issue of Rum and malt liquor."

3. "With reference to Sir Hope Grant's recommendation to debar soldiers under five years' service from receiving spirits, Sir William Mansfield is of opinion that distinctions cannot be drawn between soldiers of different terms of service, which are not recognized by the Mutiny Act and Articles of war."

97. Site of Quarters for Native Servants attached to the General Hospital.

Read Proceedings of Government P. W. D., 6th March 1866, with order thereon, No. 753, regarding the proposed site for the servants attached to the General Hospital, a subject concerning which the views of this Commission have already been recorded at page 7 of their Proceedings for January.

Government consider "as the only space available within the General Hospital grounds for the erection of the proposed quarters for the Native servants attached to the establishment is on the edge of the canal, which is to windward, and therefore objectionable, and as no difficulty appears to be experienced by the Hospital servants in providing themselves with accommodation in the neighbourhood, His Excellency the Governor in Council concurs in opinion with the Sanitary Commission that there is no necessity for the erection of public quarters."

Read other papers of official routine.

The Commission then adjourned.

(Signed) D. MACPHERSON, M. D.,
Offg. President, Sanitary Commission.

PROCEEDINGS
OF A MEETING OF THE SANITARY COMMISSION FOR MADRAS,
HELD ON 23RD MARCH 1866.

PRESENT.

DEPUTY INSPECTOR GENERAL OF HOSPITALS H. W. PORTEOUS.
LIEUTENANT-COLONEL A. F. PACE, 34th C. L. I.
CAPTAIN WILLIAM CHRYSTIE, R. E., (Acting).
ASSISTANT SURGEON W. ARNOLD SMITH, M. D., *Secretary.*

} *Members.*

ABSENT ON LEAVE.

INSPECTOR GENERAL OF HOSPITALS, D. MACPHERSON M. D., *Offg. President.*

The Proceedings of last Meeting being placed on the table were agreed to.

98. **Cholera Congress at Constantinople.**

Read the following letters from the Collector of Malabar and the Superintendent of Marine, dated respectively, 13th and 16th March 1866, containing information concerning the number of pilgrims who annually leave this Presidency for Arabia.

—

“ I have the honor, with reference to your letter No. 807, dated 27th ultimo, regarding the number of Moplah pilgrims who annually leave for Arabia, to furnish you with the fullest information obtainable on the points indicated.”

“ 1st.—The number of pilgrims who leave the ports of Malabar for Arabia, taking an average of the last four years, is slightly over 500 annually. In some years the number is as large as 700 (and that from the single port of Calicut)-sometimes it falls as low as 350.”

“ 2nd.—All pilgrims from this District proceed by sea direct to Jeddah, and it may be added that on landing the great majority travel by land to Mecca and Medina, while a few avail themselves of small coasting craft to proceed to the same places.”

“ 3rd.—During the year 1865 the number of pilgrims from the ports of Malabar was 596, of whom 502 sailed from Calicut.”

“ 4th.—The passengers were in all cases healthy on their departure, but next to nothing is known of them thereafter. As far as can be ascertained on enquiry it would appear that cholera has not appeared on board the pilgrim ships. The pilgrims land in most cases in a healthy condition, but die occasionally in considerable numbers of cholera in the subsequent part of their journey.”

—

“ Referring to the last paragraph of my letter of the 2nd instant, No. 947, I have the honor to annex supplementary list of vessels that left the Malabar Coast during the year 1865, with pilgrims for the Red Sea.”

" 2. The inhabitants of the Western Coast, when desirous of performing their pilgrimage, generally proceed to Bombay, embarking finally at that port for the Red Sea."

Supplementary list of Vessels which proceeded to Jeddah with passengers during 1865 from the Malabar Coast, as per returns received from the Masters Attendant and Conservators.

Vessels.	Tons.	No. of Passengers.	From	To	Remarks.
Teazer... ..	363	210	Calicut...	Jeddah	All healthy when leaving the port.
Shah Allum...	498	150	Calcutta touching at Cochin	Do.	Do.
Bhooj Nuggar ...	442	85	Do.	Do.	Do.

Resolved that the above be forwarded to Government in continuation of the report on this subject recorded at page 55 of these Proceedings, with a request that it may be forwarded to the Bengal Sanitary Commission.

99. Cattle Disease on the Neilgherries.

Read Proceedings of the Board of Revenue, No. 1,845, dated 16th March 1866, containing a report on the outbreak of Cattle Disease or Rinderpest on the Neilgherries, by Mr. Thacker, and the measures and treatment adopted to arrest it.

100. Family Quarters, Saint Thomas' Mount.

Read Proceedings of Government, Military Department, No. 950, 13th March 1866, concerning certain correspondence relating to the conversion of an old Quarter Master's stores into seven family quarters at Saint Thomas' Mount.

101. Hospital Accommodation, Secunderabad.

Read Proceedings of Government, Military Department, containing letter from the Inspector General of Hospitals for Principal Inspector General, Medical Department, dated 5th March 1866, No. 89, reporting that in the Trimulgherry General Hospital, calculating for the established strength of two Regiments of Infantry and two Field Batteries of Artillery, to allow of 100 superficial feet each for 12 per cent. of sick, additional accommodation will be required for 142 patients.

The space calculated is exclusive of enclosed verandahs, which it is considered should not be occupied.

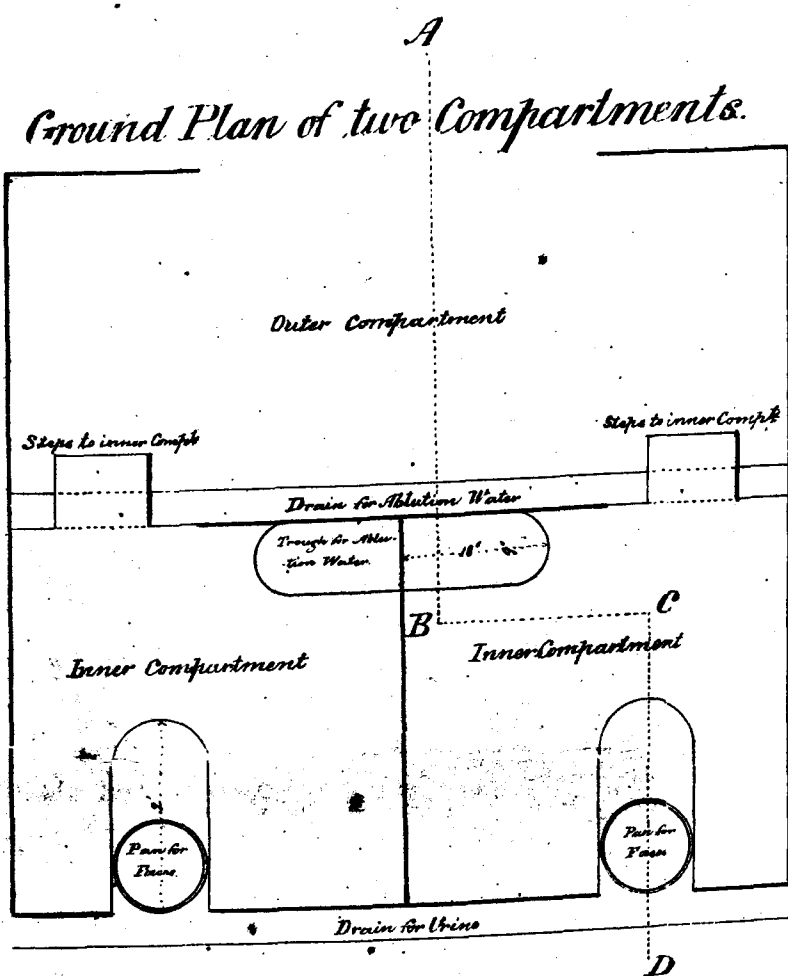
102. Latrines at Trichinopoly.

Read Proceedings of the Madras Government, Military Department, No. 889, 9th March 1866, containing a letter from the Superintending Engineer, 6th Division dated 20th February 1866, No. 1,867, concerning information relative to the latrines at Trichinopoly in which the dry sewage system is being experimented, upon.

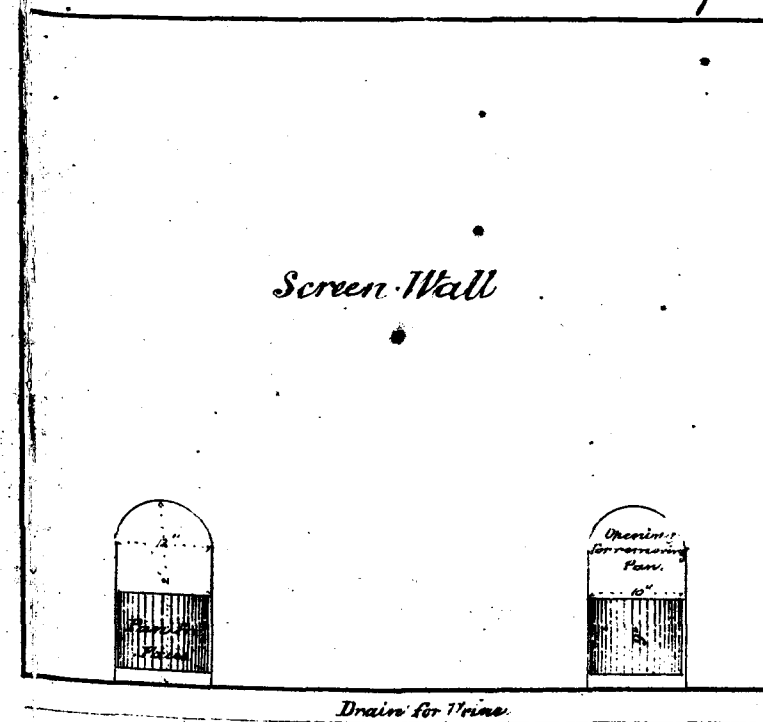
103. Latrine at Lang's Garden.

Read the following letter which was despatched to the Municipal Commissioners for the town of Madras with reference to the Resolution by the Commission on this subject at last Meeting; also reply thereto.

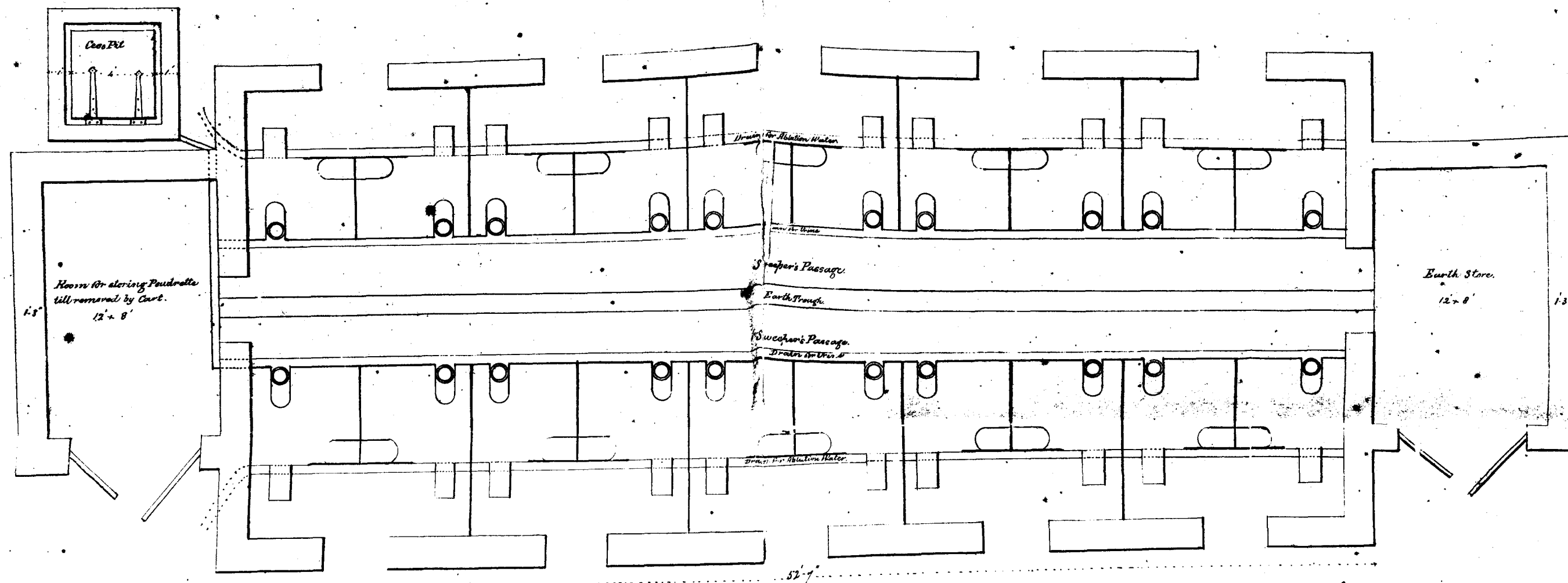
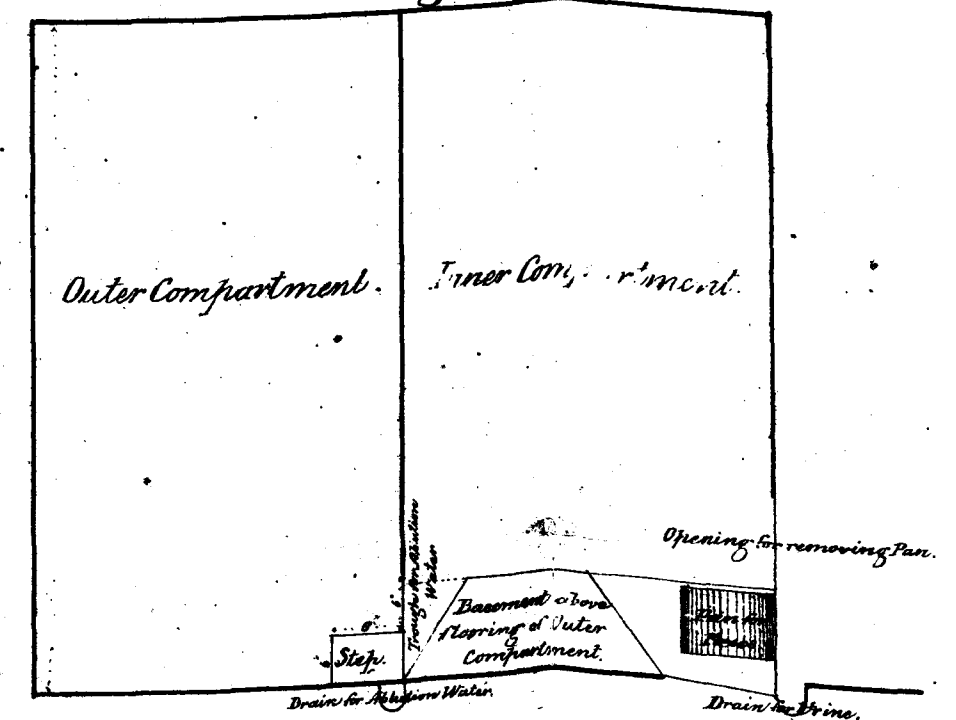
Plan of Alterations proposed to Lang's Garden Latrine.



Back view of Screen Wall from Sweeper's Passage.



Section through A B C D.



I am directed to acknowledge the receipt of the extract from your Proceedings, dated 7th instant, with the plan of the Latrine at Lang's garden, herewith returned with the alterations necessary for adapting the building to the dry earth system of conservancy marked in dotted lines:

Enclosures 2.
1 Plan of Latrine.
1 Rough ground plan of Latrine.

2. A rough ground plan of these alterations is also enclosed, and a model of a Native latrine which has met the approval of this Commission, (in which these details are carried out), may be seen at this Office, and the examination of which would greatly facilitate the understanding of these suggestions.

3. It will be observed that in the alterations proposed there are ten private compartments on each side of the building, entered from the outside by doorways cut through the wall; that there is a passage for the sweepers down the centre of the building in which the conservancy operations would be carried on; and that the persons using the latrine would squat in Native fashion over the pan in each compartment, while the urine would flow away by a channel in rear of the pan; that a separate channel is provided for the ablution water, which might run to waste, while the urine is collected in a receptacle at the end of the building. An earth trough runs down the centre of the sweepers' passage, so as to be conveniently situated for its contents being applied to the pans as they are used. The pans when full should be removed by the sweeper through the archway, in rear of the compartment, and emptied into a pug mill which must be attached to the latrine, when the fæces and earth being thoroughly mixed may be removed as poudrette in an open cart without offence to the community.

4. The present scavengers' and ablution rooms must be removed, and an earth store erected at one end of the sweepers' passage, and a room for the storage of the poudrette in covered receptacles at the other.

5. Twenty iron or earthenware pans, ten inches in depth and diameter, must be provided, and it would be desirable to have two iron receptacles with tight fitting lids, such as are used in the family latrine of the Regiment quartered in Fort Saint George, for containing the poudrette till removed by the cart.

6. The urine should be removed in cistern carts, a very convenient pattern being that sanctioned for adoption by G. O. No. 1,509, dated 28th April 1862, and used in barrack latrines. A plan may be seen in the Quarter Master General's Office.

7. A pattern of the pug mill proposed may be seen at work in the latrine attached to the Male Orphan Military Asylum.

8. The division walls should be of corrugated iron and no puckah masonry work of any description should be admitted into the construction of the latrine, the floors of which should be of asphalte sprinkled with dry sand.

9. It has been thought necessary to go minutely into these details, as the successful working of the system depends upon these being fully carried out.

10. The conservancy establishment necessary depends upon the number of persons resorting to the place, but it is suggested that steps be taken by means of advertisement, to induce parties to remove the poudrette in exchange for earth, when the only cost would be the sweepers'.

"Extract from the Proceedings of a Meeting of the Municipal Commissioners for the Town of Madras, under date the 21st March 1866.

"Read letter from the Officiating Secretary, Sanitary Commission, dated 14th instant returning the plan and latrine at Lang's garden, shewing alterations necessary for adopting the building to the dry earth system of conservancy."

"**RESOLUTION.**—In 1864 the Board, with a view of aiding the Sanitary Commission consented to bear the expense of altering and adapting a latrine near Lang's Garden's Parcherry, to the dry earth system of conservancy. It was completed in October 1864, and was inspected and approved by one of the Members of that Commission (Surgeon-Major Macfarlane), it was then provided with an Establishment of menials previously instructed in the dry earth system, and opened for use."

"The Sanitary Commission now proposes such radical changes and alterations in the arrangements of this latrine as to amount almost to re-construction, from which this Board must infer that the first experiment, although no report has been made, has resulted in failure. It is observed also that the plan now proposed differs materially from that submitted to Government on the 12th December 1864, by the Sanitary Commission, as a standard latrine for the use of natives: the individual private compartments are considerably larger, and are each provided with water cisterns, the Pug-mill is also a new feature. As this Board is not prepared to bear the expense of a costly series of experiments, it resolves to decline making any alterations to Lang's Garden Latrine, beyond placing it in a fit condition for a second experiment (if desired) on the plan originally contemplated."

(True Extract.)

B. CARBOZ

*Municipal Commissioner
for the Town of Madras.*

Resolved that the following letter be despatched to the Municipal Commissioners for the Town of Madras, in reply to their Proceedings recorded above.

I am directed to acknowledge the receipt of the Extract of your Proceedings, dated 21st March, having reference to the experimental trial of the latrine at Lang's Garden, now stating that your Board are not prepared to bear the expense of a costly series of experiments, and resolve to decline making any alterations to Lang's Garden Latrine, beyond placing it in a fit condition for a second experiment, if desired, on the plan originally contemplated.

2. This Commission, while regretting that the plan submitted has not met with your approval, consider that some misconception exists on this subject, as certain expressions are now made use of in your Proceedings from which it would be inferred that experiments have already been undertaken by this Commission with this latrine.

3. Up to this time this Commission believed that your Board were fully aware, that not only has no experiments ever been attempted by them, but that you were fully cognizant of the fact that the building has never yet been completed for the trial of the dry earth system; more especially as nearly two months ago the state of the building was officially brought to your notice, and you immediately expressed

your readiness to make any alterations considered by this Commission necessary for the introduction of this system of conservancy.

4. To avoid further misunderstanding, this Commission now beg to distinctly assert that no trial of the building has been made by them, as it has never been completed; and in order that the whole matter may now be clearly understood, it is necessary to refer back to the entire correspondence on the subject.

5. The first reference to this subject is made in paragraph 4 of your letter marginally noted, in which you state as follows:—"We have, at Dated 23rd June 1865.

"the request of your Commission, adapted a latrine situate in Lang's Garden, Egmore, to the dry earth system according to plans furnished us, and have placed it entirely at the disposal of your Commission, in order to the

"experiment being satisfactorily carried out." On this you were informed* "With reference to paragraph 4 of your letter, * From Officiating President to Municipal Board, dated 29th June 1865.

"I beg to inform you that there is no official record in this office to shew when or by whom the latrine in Lang's Road

"was made over to this Commission, nor were we aware of its having been so.

Being now, for the first time, acquainted with your willingness to permit the experiment of the dry earth system of conservancy to be tried therein, we shall gladly co-operate with you in making the necessary arrangements." It will be thus self-evident that at this early date this Commission had no knowledge that the latrine had been made over to them for experimenting upon, and a visit to the building will convince you that the statement made in paragraph 4 of the letter above quoted, (that the building was adapted to the dry earth system of conservancy) is at variance with facts.

6. Having so lately received a plan of it from your Office, it is almost superfluous to inform you that it is simply a tiled shed with a bare floor, totally devoid of all receptacles for the excreta, and that the persons using it squat indiscriminately all over its interior, rendering it a nuisance to the neighbourhood.

7. In a letter dated July 4th, 1865, you state that your "President personally placed the latrine entirely under the control of Dr. Macfarlane, immediately on its completion last year." Of this transaction now as then this Commission have no knowledge; but in the same letter you also state you were prepared to meet the cost of every arrangement deemed necessary and suggested that the latrine should be under the sole control of this Commission.

8. On the 12th of August 1865, you were informed that during the temporary absence of the Officiating President on inspection duty, the Members of this Commission at Madras would be happy to advise with you regarding the method whereby the practical use of the building could be determined, it being recommended that its conservancy arrangements should be under your own orders, to which, in

reply,* you stated your regret of the absence on duty of the President "and the other duties of the Members necessitated the discontinuance of the experiments," and that the latrine would be kept open for the public on the best arrangements you could devise. From this it is clear that at this date this Commission were perfectly willing to advise with you and report upon the carrying out of the dry system of conservancy, as soon as the building was reported complete for the purpose; but that the arrangements for so doing

were discontinued by your own orders, upon the gratuitous assumption that the "duties of the other Members" would prevent their co-operating with you.

9. On the return of the Officiating President from inspection duty, it was reported to you that the building was incomplete and in a most offensive condition, and you were informed that this Commission were prepared to watch the trial of the dry earth system in it, and would be glad to see it completed; that plans for this purpose would be furnished from this Office, if wished; and information was desired as to the conservancy establishment available for the building. To this, your Board promptly replied that you were prepared to supply any establishment this Commission thought necessary, and would carry out such alterations as were required. A plan of the latrine, as it now stands, was furnished by you as requested, and another submitted in return, of the alterations which this Commission considered desirable and most appropriate, for adapting the building to the dry earth system of conservancy, and they are now informed that you are only willing to alter the building to the plan originally contemplated, which, it is presumed, is the plan of the latrine forwarded to Government by this Commission on the 12th December 1864.

10. It is true the plan last submitted differs somewhat from that originally proposed by this Commission about a year ago; but increased experience in the working of the dry earth system has led them to believe that it is the more suitable one of the two; that its conservancy can be attended to with greater efficiency and less labor; and that from the solid excreta being alone deodorized, less earth is required to be brought in, while the cost of the alterations, as compared with those required on the former plan, is trifling—amounting to about three hundred and fifty Rupees extra.

11. That the plan has not been understood by your Board is evident from your speaking of water cisterns in each compartment which do not exist, and the Pug-mill spoken of, as a new feature, has already been described at pages 12 and 48 of the Pamphlet on the dry earth system of conservancy (copies of which have been supplied to you), and is now considered by this Commission a *sine qua non* in all latrines conducted on the dry earth system.

12. In conclusion, I am instructed to add that this Commission have no desire to impose upon your Board "costly series of experiments," which they themselves would have no time to attend to; but their object has been to advise as to the most efficient and suitable form of latrine for Native use; which the attention they have paid to the subject places them in a position to offer.

13. The latrine, as it now exists, is not in accordance with any plan that has been forwarded by this Commission nor could it be efficiently worked on any system of earth conservancy, with which they are acquainted. They have brought to your notice that it is in a dangerously offensive state, and suggested what, in their opinion, is the most suitable plan for introducing into it the dry earth system of conservancy, in carrying out which they are still ready to co-operate with you upon the terms which have already been proposed, and which up to the receipt of your last communication, they believed had been accepted by you.

Having thus fully expressed their views on this subject this Commission leave the matter entirely in your hands.

104. New Gun Carriage Manufactory, Saint Thomas' Mount.

Read Proceedings of Government, Military Department, No. 891, 9th March 1866, in which the Governor in Council observes that certain questions regarding the accommodation for the Superintendent and subordinates of the Gun Carriage Manufactory, had better lie over until the plans for the manufacturing establishments at the Mount, have been finally decided on, and received the approval of the Right Honorable the Secretary of State:—

105. Nuisance at Vepery, Madras.

Read the following letter to the Secretary Sanitary Commission, from the Officer Commanding 2nd Regiment N. I.

"I have the honor to bring to your notice the very offensive state of an open drain in the vicinity of the lines of the Regiment under my command, situated on the Vepery High Road, and also the filthy state of the Parcherry on the east side of the lines; several cases of cholera have occurred in the vicinity, and I request that immediate measures may be taken for the removal of the nuisance."

Resolved that the above be forwarded to the Municipal Commissioners for their information and attention.

Read Extract from the Proceedings of the Municipal Commissioners for the Town of Madras, under date the 21st March 1866.

"Read letter from the Officer Commanding 2nd Regiment N. I. to the Secretary Sanitary Commission, dated 12th instant, requesting that immediate measures may be taken for the removal of the nuisance occasioned by an open drain and the filthy state of the Parcherry in the neighbourhood of the lines of the 2nd Regiment N. I. under his command, forwarded to the Board for their information and attention."

"Resolved that a copy of this letter be submitted to Government, with a request that sanction be accorded for opening streets through the Parcherry adjoining the 2nd Regiment Parade ground. The drain referred to has been attended to."

106. Plans of Military Buildings, Race Course, Bangalore.

Read docket No. 943, dated 13th March 1866, forwarding for the approval of this Commission, Plan of an American Bowling-Alley, to be built for Cavalry on Race Course Barracks.

Resolved that in returning the above plan, the Executive Engineer be informed that it requires no comment.

107. Pug Mill for Latrines on the dry earth system of Conservancy.

Read letter from the Superintending Engineer, 4th Division, No. 4,547 dated 19th March 1866, forwarding a design of a Pug Mill for the approval of this Commission, to be attached to the Native Latrine at Vepery.

Resolved that the Superintending Engineer be informed that the design is approved of, with the following exceptions.

1st.—The bottom of the mill should be conical in form, otherwise poudrette will collect at the bottom and close it.

2nd.—The arms inserted into the revolving axis should only be at right angles with it at the top. The lower ones should point downwards, their angle with the axis

becoming more acute as they descend. The last one will then sweep the surface of the conical shaped bottom.

Also that a plan of the mill such as is now being used with success at the Male Orphan Asylum, be sent for his guidance.

108 Plan of Wash-house Saint Thoms' mount.

Read letter No. 849, dated 16th March 1866, from the Executive Engineer, Mount Range, forwarding a plan of Wash-house and Urinary for one Company of Europeans, for the approval of this Commission.

Resolved that the Executive Engineer be informed that the plan of bath-room is highly approved of by this Commission, and that a letter (of which the following is an extract) be despatched to that Officer, containing suggestions on minor matters of detail connected with it.

* * *

2. Bath-houses somewhat resembling this plan are attached to some of the new Barracks at Trimulghery, and are found, in practice, a great improvement on the old ones.

3. I am instructed, however, to offer the following remarks concerning the arrangement of taps. You are doubtless aware that a large number of men usually resort to these rooms at one time immediately before going to parade, and that on these occasions (from the number of basons being limited) they are obliged to perform their ablutions as quickly as is compatible with cleanliness, in order to make room for their comrades.

4. In the bath-rooms hitherto inspected, taps are generally provided at the rate of one for every two basons on each side of the stand; but from their discharge of water not being sufficiently rapid, the men, to save time, generally fill their basons direct from the reservoir.

5. In the plan now submitted it is observed that there is only one tap for filling the basons; it is therefore suggested that six *full sized* ones be placed at convenient distances on each side the bason stand, as the benefits conferred by these arrangements are lost, if practical details of this description are overlooked.

109 Secunderabad Inspection Report.

The Commission were then engaged in discussing matters connected with this Inspection Report.

The Proceedings of the Bengal Sanitary Commission for January 1866 were placed on the table.

Read other papers of official routine.

The Commission then adjourned.

(Signed) D. MACPHERSON, M. D.

Offg. President Sanitary Commission.

(True Copy.)

Edward Smith Esq
Offg. Secretary Sanitary Commission.

Public Department.

MILITARY DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following letter :—
From the Officiating Sanitary Commissioner, Madras, 5th May 1866, No. 10; to the Secretary to Government, Military Department, Fort Saint George.
I have the honor to forward, for submission to Government and for transmission to the Secretary of State for India, 7 copies of the Proceedings of the late Sanitary Commission for the month of March 1866.

Enclosures 7.
ORDER, No. 1745, 21st May 1866.

Ordered that four copies of the Proceedings received with the foregoing letter be forwarded to the Secretary of State for India, and the others be disposed of as indicated in the margin.
2. The subject of Lang's Garden Latrine will be considered in the Public Department.
(True Extract.)

William L. ...
Deputy Secretary to Government.

To the Sanitary Commissioner.
" Public Department, with one copy of Proceedings.
" Judicial Department, with one copy do.

Ed. A. W. Cooke.

... to be returned ...

PROCEEDINGS OF MEETINGS

OF THE

SANITARY COMMISSION

FOR MADRAS,

DURING THE MONTH OF MARCH

1866.

M.O. No 2158 of 10 66

Proc 29 May 1866 ...
in file No 600/66

Public Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Read Proceedings in the
Military Department.

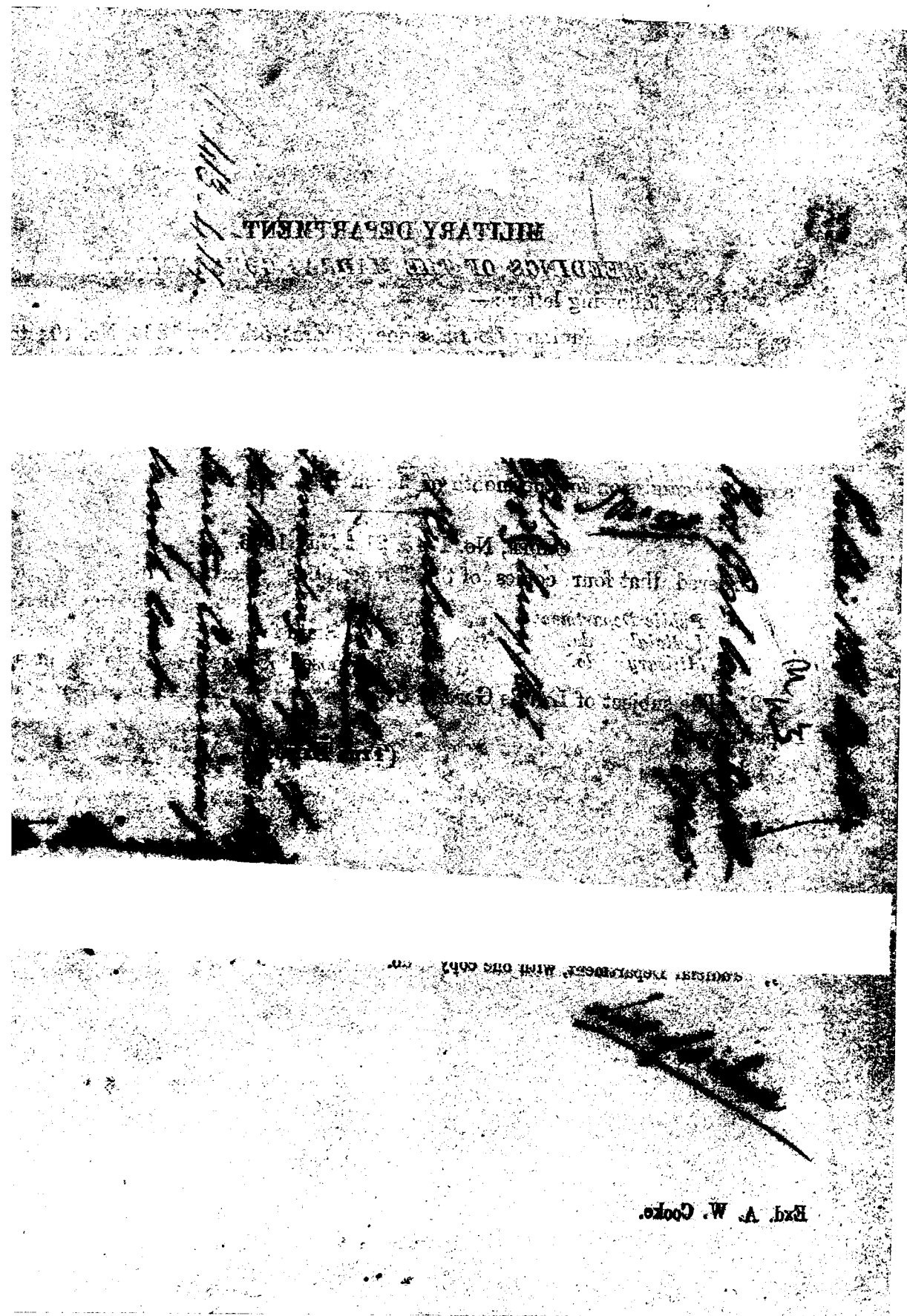
Here enter 21st May 1866 N^o 715.

Order. 29 May 1866 4:510.

Communicated to the Municipal Commissioners, who are requested to state whether any and what steps have been taken by them with reference to the letter addressed to them by the Sanitary Commission under date the 25th March last regarding the Latrine at Lang's Garden.

To the Municipal Commissioners
" Sanitary Commissioner.
" Military Department.

(with Off. of the San. Com. to be returned).
desp. 29/5



List of Volume.

For 1860. Department.

No. 5740.

PROCEEDINGS OF GOVERNMENT.

No. 641.

Dated 29. Dec. 1868.

147-150.