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MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No. 1014

Press
Mis.

Dated

12-8

1870

Not to be folded or roughly handled

No. 73. Read the following letter from the Sanitary Commissioner for Madras, to the President and Members of the Salem Municipal Commission, dated Salem, 28th July 1870, No. 10.

Having, in obedience to Order of Government, dated 7th April 1870, No. 402, made a careful inspection of the sanitary and other works executed by the Salem Municipality, I have the honour to lay before the Commissioners briefly my views as to the bearing of the Commissioners' labours on the public health of the town.

2. ROADS.—The very considerable outlay which has been incurred on the repairs and metalling of the public roads has given to the town of Salem excellent roads and streets, better, in fact, than in any other town of the same size and population with which I am acquainted. All the more important roads have been substantially metalled, and many streets have been widened where practicable. The roadside drains are kept free of silt, and the surface drainage of the town is much facilitated by the care and labour that has been bestowed on the public streets.

3. CONSERVANCY.—The practical supervision of the conservancy establishment maintained by the Commissioners, under the system which gives each Municipal Commissioner a division of the town to look over, is at once seen in the perfect cleanliness of the streets, side-drains, and gutters. I do not believe it is possible for any town to be kept in a cleaner condition, so far as the public streets are concerned. In the course of some miles of wandering through the streets within the limits of Municipal supervision, I neither saw nor smelt anything of an offensive or objectionable character. This fact I have much pleasure in placing on record, because it testifies in a satisfactory manner to the efficiency of the personal supervision of each Commissioner in his district.

4. While acknowledging the very satisfactory state of the public streets, it is, however, my duty to point out to the Commissioners what I regard as the weak points in their system of conservancy.

5. So far as I can see, no attempt is made to remove human excreta from the interior of dwelling-houses to appointed places without the town. The rubbish carts take up plantain leaves, straw, ashes, &c., from the dust-bins, but the much more dangerous and offensive human filth is left to pollute the soil of the house enclosures. A considerable portion of the population, I am aware, frequent the public latrines that have been set up by the Commissioners; but a large portion of the more respectable people do not leave their houses for purposes of nature, but use cesspits sunk in their backyards. In a soil so porous as that on which the town stands, these pits, I am informed, cause no nuisance. The fluids are absorbed by the soil, and the solids are said to be periodically cleaned out. The use of such privies, however, must be fraught with danger to the water-supply yielded from the soil at lower levels; and that the soil of the town has been abundantly charged with organic impurities, is sufficiently evident from the formation of nitrous earths (saltpetre) about the old walls of the houses.

6. Any system of conservancy which does not aim at the removal of human excrement from the dwelling places of men, either by flushing with water or by the dry method, is, however well it may be carried out, faulty in principle, and I am compelled to say that the system in operation under the Salem Municipality is

faulty, because it makes no provision for the removal of the most dangerous of all town refuse.

7. **LIABILITY OF THE TOWN TO CHOLERA.**—I may here direct the attention of the Commissioners to the fact that their town has in past times had an evil repute as a breeding place of the cholera pestilence. The situation of the town—lying, as it does, in the lowest and dampest part of a valley between high ranges of hills, the drainage of which mainly falls into the valley—is undoubtedly unfavourable to healthful influences; but I am not sure that the pollution of the soil of this low-lying valley, by the means I have indicated, has not had a great deal to say to the persistence with which cholera haunts the town.

I see by the Civil Dispensary records—an institution which has been established for just a quarter of a century—that in all these years cholera has on only *two* occasions been absent from the returns for twelve months together. One of these periods was in 1856-57, when no patient was treated for cholera for about fifteen months. The other period was in 1868-69, when for nineteen months no one affected with the disease applied for help to the dispensary. Cholera, therefore, may fairly be regarded as an endemic disease in Salem town, and the fact that it is so should be regarded by the Commissioners as an additional incentive to renewed exertions for the purification of the dwelling places of the people.

8. I am not prepared to say how the ancient custom of resorting to cesspit privies is to be brought into disuse; but possibly the Commissioners may be able to devise a system of small moveable receptacles for each house, the contents of which might be emptied daily by the public scavengers into properly-constructed night-soil carts. The solid excreta of each house might certainly be collected and removed in this way, and, if stored for a time on the outskirts of the town in suitable localities, would be of value as manure.

9. **TOWN RUBBISH.**—The disposal of the town rubbish by using it for the filling up of excavations and unsightly hollows in the ground, though convenient and adding to the neat appearance of the town, is, in a sanitary point of view, I conceive, most objectionable; for, although the rubbish may be free of night soil, it is largely made up of organic matter which in fermentation yields products calculated to make the water-supply impure. From the natural slope of the ground on each side of the river the sub-soil moisture must percolate towards the lowest level, *i. e.*, the river bed, and the wells and water-supply are likely to be made impure if these collections of filth are put away into holes and hollows on the higher ground. I seriously recommend the Commission to adopt some less objectionable mode of filling up excavations, and to choose suitable sites for rubbish depôts near to cultivated land, where in process of time the refuse might be used in an unobjectionable way as manure for the soil.

10. The excavations, which are so troublesome to the Commission in filling up, appear to be due chiefly to the digging of the soil for building mud walls of houses, &c. In the suburb of Gocay, where some new houses are being built, I observed that the soil for the mud walls was taken from deep pits in the backyards, which pits will hereafter become receptacles for all the house filth and rubbish. When the soil of each tenement is thus polluted by a rubbish heap at the back door, it is scarcely a matter for surprise that the inhabitants should be liable

to sickness and early death. Any measures that the Commissioners may be able to devise for the prevention of this mode of building will, I feel confident, be followed by satisfactory results as regards public health.

11. **LATRINES.**—The system of public latrines in force is one that I cannot express approval of. The enclosures are spacious and they appear to be freely used, but nearly all that I have seen are most offensive. If I understand the system in force, there is no attempt to sweep up the excreta from the surface and take it away to night-soil depôts; but it is *buried on the spot* by the toties—such portions, at least, as the Wudder pigs, which are always seen suspiciously near to the latrines, do not consume. (In three latrines I have found pigs inside feeding on excrement).

12. The trench system of latrines is one, I think, excellently adapted to the habits and customs of the people; but the Salem latrines comprise too small an area to be used permanently in that way, and they are too large to be kept clean by the ordinary methods. Considering the number of cultivated fields quite close to, and even within, the town, I would suggest to the Commission for their consideration whether it would not be feasible to hire or make some arrangement with the cultivators for the use of small portions of the fields in suitable localities, and to adopt the trench system entirely, closing the old latrines altogether.

13. In carrying out the trench system of latrines, a piece of ground, say ten yards square, might be enclosed by moveable bamboo hurdles, (such as cattle are penned in). Trenches three feet apart and one foot wide and one and a half deep should be dug in the soil of the enclosure, (not more than one or two trenches at a time,) and these, after use by the people, should be filled every day with the earth taken out until quite full. When the whole of the enclosure has been trenched, and the trenches filled with excreta and earth, the hurdles should be shifted to a clean piece of ground and the process repeated. After lying a couple of months fallow, the land thus manured might be ploughed up and put under crop. Some eight or ten acres of ground taken up and used in this way would, I think, be sufficient for the latrine accommodation of the town, and the land instead of being injured would probably be found to have increased much in value, while the ordure would be turned to its proper use without nuisance to anybody.

14. If some such system as this be not adopted, then it will be necessary, I think, for the Commission to employ night-soil carts for the cleansing of the present latrines, the surface soil in them being already saturated with ordure, so as to be very offensive and unwholesome to the people who frequent them.

15. **WATER-SUPPLY.**—The principal sources of water-supply—the river and wells—I have examined as regards the proportion of organic matter. As might be expected, after heavy rains the river-water is at this season of the year sufficiently pure for use, and the same may be said of the water of many wells, especially on the northern bank of the river. A few wells in which the organic matter is in excess I shall notice separately.

16. The strict conservancy of the river-banks and the setting apart of a portion of the stream low down for washing and bathing are subjects which will doubtless commend themselves to the notice of the Commissioners. Above the aricut, and I think beyond Municipal limits, the river-bank is much fouled by ordure.

*Proceedings of the Madras Government, Public Department,
12th August 1870.*

17. DRAINAGE.—The few masonry drains now existing discharge into the river, and at points where, if the sewage was of large amount, it would lead to dangerous fouling of the water. The drainage of the town on a systematic plan, though acknowledged to be most essential to the public health, has not yet been taken up by the Commissioners. Before such a work can be attempted, it is necessary that a careful survey of the town should be made, and for various other reasons it seems desirable that a plan of the town, showing its general configuration and levels, should be in existence. I beg to recommend the consideration of this subject to the attention of the Commissioners.

18. The best lines of drainage for the town will doubtless be chosen by the professional Engineer who is an *ex-officio* member of the Commission. In regard to this matter I will only add that, in a sanitary point of view, the sewage would be best purified by running it on to fields before it is allowed to fall into the river, and that the outfall of sewage should be below the portion of the stream where the people get their drinking water. The drainage of the town must necessarily be costly; but, if the main lines are well selected in the first instance, the work is one that may be persevered in by the Municipality, year by year, as funds become available, to carry into execution the design for the completed work.

19. In conclusion, I would add that the comparative freedom of the town from epidemic cholera since the establishment of the Municipal Commission (three years ago) must not be regarded as wholly due to the measures of conservancy, &c., then introduced. Salem, in common with the greater portion of South India, was nearly free of cholera in 1867 and 1868, and is so happily at the present time. But the present immunity is no guarantee for the future. A similar interval of rest occurred in 1856, and was followed by many bad cholera years. The site of the town, which the Commissioners have no power to remedy, is undeniably bad. Many of the buildings are old, and their walls saturated with organic moisture. The soil in many places is tainted, and the water-supply at some seasons of the year scanty and of doubtful quality. Under these circumstances, and especially until present defects in house conservancy, drainage, and water-supply are remedied, I do not apprehend any *permanent* improvement in the susceptibility of the population to suffer from cholera epidemics. While of opinion that much good has been done in the last three years by the Municipality, I must state plainly my opinion that much more requires to be done before the sanitary condition of the town of Salem can be considered as permanently improved.

C. No. 14.

Forwarded to the Chief Secretary to the Government of Fort Saint George for information.

1st August 1870.

(Signed) W. R. CORNISH, F.R.C.S.,
Sanitary Commissioner for Madras.

No. 74.

ORDER THEREON, 12th August 1870, No. 1014.

To be recorded.

(Signed) R. S. ELLIS,
Chief Secretary.

Lsd. A. S. Rodgers.

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I have the honor to be
Sir

Your most obedient servant
Signed/ to. R. Cornish F.R.C.S.
Sanitary Commissioner
for Valparaiso

(True Copy)
C. No. 14.

Forwarded to the Chief Secretary to the
Government of Port Saint George for information

18. August 1870.

Informants F.R.C.S.
Sanitary Commissioner
for Valparaiso

Genl. of 1870: 23/11/70.
PUBLIC.

Dated August 19th.

Recd.

C. O. 12th August 1870 No. 14.

ARGENT.
Nos. 73/74.

Receiving letter from the Sanitary Officer
showing containing his suggestions to the Sanitary
Municipality for improving the town.

1870.

Public Department

From

His Sanitary Com.
: uniform

Dated 11th August/70
Recd 6th August/70

No. 14.

No. 1226

Forwards, for information
suggestions made to the Municipal
Commission at Dublin for the im-
provement of the town.

Order - forwarded 12th August/70

J. W. S. Rees

No. 10/4

Govt. of 1870 Madras.

Pills

Oct. 1. 12

Encl.

3. 0. 12. Aug. 1.

1870, No 1114

Nos. 73 74

*Regarding letter from the
taxi board containing
a question to the*

C98 B. 124