Local & Munl. (1895) Department.

PRINTED.

G.O., No. 303/m

DATED 26th February 1895.

[Despatch Abstract.]

Inspection Notes.

Recording, with remarks, Sanitary Commissioner's---on the Tirupati Municipality.

BACK PAPERS.

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

FURTHER PAPERS.

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

[Note to Press. 1st- to be published with G.O.]

25-1-95.

To —

The Head Clerk.
Local & Mud. Depts.

Sir.

Please attach thes[e] two diagrams in C. No. 3 [of] Tirupati Municipality [as] Note sent on the 17/1/95.

There two diagrams a[re] for approval.

N.D'Sch[ott]
for [illegible]

Rcpt 25/1.

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12-2-

, No 1765 m,

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Chairmen will be expected to obtain the remarks of the Council and to forward the notes to Government within six weeks.

By J. F. Price. Chief Secy

True extract

W. Elting

Surgn. Lieut. Col.
8.9.94 Ag Sanitary Commissioner

BACK PAPERS.

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

FURTHER PAPERS.

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

Rec'd
Circulated
12-9-94

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S.O. dated 23 Decr: 1893, Nº 1765 M.,
Local and Municipal.

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2. In future the following procedure shall be adopted:—

The Sanitary Commissioner will send his notes written on half margin to the Chairmen who will enter what they have to say on the other margin of the page to face the notes, the notes and the Chairmens comments and replies will then be forwarded in original to Government. Chairmen will be expected to obtain the remarks of the Council and to forward the notes to Government within six weeks.

By J. F. Price - Chief Secy

[Note to Press. Not to be published in G.O.]

True extract

W. Stevens

Surgn. Lieut. Col.

8.9.94 Ag Sanitary Commissioner

No. 1699/S

OFFICE OF SANITARY COMMISSIONER,
Fort St. George, 13th Septr. 1894

From

SURGEON LIEUT.-COL. W. G. KING, M.B., C.M., D.P.H.,
Ag. SANITARY COMMISSIONER FOR MADRAS,

To

THE Chairman Municipal Council
Tirupathi
Thro' the Collector of North Arcot

Enclosure 1
Form

SIR,

In accordance with G.O. dated 23 Decr. 1893 No. 1765 Mu, Local and Municipal, I have the honor to forward herewith my Inspection Notes on Tirupathi and should feel obliged by your kindly informing me when you intend placing them before a meeting of your Council.

2. I would invite attention to para 2 of the G.O. Copy enclosed.

I have the honor to be
Sir
Your most obed. servt

W. G. King
Surgn. Lt.-Col.
Ag. Sanitary Commissioner

DS/ CURRENT No. 1147 Res

DATED 15-9-94

From,
Surgeon Lt-Col: W.J. King
D.B.C.M. D.P.H
Ag Sanitary Commissr

To, Indn No. 891 of 94
The Chairman
Municipal Council
Tirupati
Thro' the Collector

Dated 13th
Despd. 13th } Septr/94
Recd.

No 1699/S
Enclo 4.

Subject.

Forwarding Inspection Notes of the Sanitary Commissioner for Madras on the Municipal town of Tirupati in North Arcot Dt

1/32 19 Jan 95

[1,500—27-3-94.]

2413 of 94

Forwarded

DESPATCHED. 15 SEP. 94

14.9.94

Proof of diagrams will be rec.d from the Survey office on the 25-1-95

26 February 303

80
12 Rolls

JANUARY 1895, No. M., LOCAL AND MUNICIPAL.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper :—

From M.R.Ry. K. GOPALACHARIAR Avargal, Chairman, Municipal Council, Tirupati, to the Chief Secretary to Government (through the Divisional officer), dated 10th December 1894, No. 29 M.

In accordance with the instructions conveyed in G.O., dated 23rd December 1893, No. 1765 M., Local and Municipal, I have the honour to forward herewith the inspection notes of the Sanitary Commissioner for Madras on this municipality, together with my comments and replies duly approved by the council in its general meeting held on the 8th instant.

2. An extract from the minutes of proceedings of the municipal council is submitted herewith. As the paper was under circulation among the councillors, there has been some delay in its submission.

ENCLOSURES.

INSPECTION NOTES of the Sanitary Commissioner for Madras.

NORTH ARCOT DISTRICT.

TIRUPATI MUNICIPALITY.

Inspected 16*th*, 17*th and* 19*th August* 1894.

Population per census of ... ... { 1881 ... 13,232 / 1891 ... 14,242

Inspection Notes.

I. (1) The town is situated upon a red gravel plain extending from the Tirupati Hill (Tirumalai) to the river Swarnamukhi, which is distant four to five miles.

(2) Its existence probably is due to the fact that it lies at the bottom of the sacred hill, to which there is throughout the year a constant stream of pilgrims, and where once yearly the important festival of Brahmotchavam takes place. In my report, dated 7th September 1893, which was communicated to the Chairman, Municipal Council, with my letter, dated 7th September 1893, No. 1975, the chief defects in regard to water-supply, drainage, and pilgrim accommodation have been brought to notice, with the object of securing early remedial measures before the advent of the annual festival. I, therefore, would suggest that the municipality regard the following as an extension of the communication already furnished.

Chairman's Remarks.

A detailed special report in regard to the arrangements made to remedy the defects pointed out in this reference has already been forwarded to the Collector of North Arcot, in my letter No. 677, dated 23rd September 1894, for incorporation and submission to Government with his report as was done in last year.

Inspection Notes.

II. (3) *Drainage.*—The most glaring sanitary defect is the Pentah drain. This meanders through the greater part of the town. It is, except in the upper portion, a simple earthen channel. It receives the sullage water of houses on both sides, and, moreover, the people regard it as the correct place for easement. More absolutely awful stenches and disgusting sights then result from the mixture of fœal matter and sewage water can hardly be conceived. Pending the introduction of a correct drainage scheme, I see no reason why the municipality, at a cost probably not exceeding three hundred rupees, should not be able to conduct the drainage by a method that would serve sufficiently well as a temporary expedient, until a correct sewerage scheme is introduced by the Sanitary Engineering Department. Thus common earthen tiles of six inches diameter might be used for drains, if well dipped in a mixture of boiling tar and pitch in the first place. These laying upon a well-regulated foundation of puddled clay and jointed with Portland cement ought to secure a very fair impervious, though temporary, form of drain. Care should be taken to grade the whole drain from the head to the end, so as to have a suitable fall. The sides of the whole of the existing earthen channel after being duly trimmed might be paved with the cobble stones, which are now in great use in the town, and are procurable near the locality at the cost of carting. Having secured the correct collection of the sewage, care should be taken not to dispose of it by mere soaking near the outlet. It should be received upon land for broad irrigation either direct—if the surface gradient will suit,—or by being lifted from a sewage reservoir by means of a picottah, if this is not the case.

Chairmans Remark's.

Rupees 300 will be provided in the next budget to conduct the Pentah drainage as suggested. As for the disposal of the sewage water collected from the said channel, necessary arrangements will be made.

III. (4) *Water-supply.*—Under G. O., dated 9th July 1894, No. 883 M., Local and Municipal, the first engineering effort towards improvement has now been directed to securing the all-important matter in a pilgrim centre of a protected water-supply, in lieu of the already projected drainage scheme. This also will, doubtless, come in due time; but unless the municipality is in a position to effect both works simultaneously, it seems to me that the change of programme is of the utmost importance and utility, not only in the

The Sanitary Engineer to Government has already been addressed to make the requisite investigation for water-supply scheme and a sum of Rs. 500 has also been allotted from the general balance towards its cost. As for effecting both the schemes simultaneously, the council has already intimated to Government in its letter, No. 16, dated 12th June last, that unless the latter treats this municipality with exceptional generosity by providing funds therefor, it will not be in a position to meet such

Inspection Notes.

interests of the inhabitants of Tirupati, but also of the rest of the Presidency. The Assistant Sanitary Engineer to Government, who has, I believe, already surveyed the spot with the object of ascertaining a good source, is hopeful of accomplishing this readily, having found a suitable place at some distance from the town. Amongst the schemes that may be considered by the Sanitary Engineer's Department—without being able to say I have examined the country elsewhere—I think the possibility of obtaining a good supply in the red gravel plain between the town and the hill, by means of an infiltration gallery, should be considered. The water would have to be raised, of course, but probably the lift would not be heavy.

(5) With the object of protecting the Narasimha well in Robinson's Park during the festival, I have suggested the use of fixed platforms of iron rails, &c.; this arrangement will not, however, suit when the water in the tank rises. To meet this condition floating platforms would require to be designed, and I think either of the simple forms shown in the attached diagram would serve the purpose.

(6) *Mungunath Gunta.*—This tank is within a burial ground, and is used by persons bathing after funerals, and by Muhammadans for drinking purposes by choice. This latter use is distinctly dangerous, and I would advise the municipality to at once attempt to provide a more suitable source of drinking supply for these people. The whole of the plain between Tirumalai and the town is charged with good water, and at a very small expense the municipality could provide for the sinking of a correctly protected well, and thus secure a pure water-supply.

Chairman's Remarks.

a large outlay in consideration of the limited funds at its disposal.

As suggested by the Sanitary Commissioner in his memorandum for Brahmotchavam festival, two platforms were erected at the corners of the tank in question. The public made a very strong protest to the Head Assistant Collector who was in the town then against the use of the platforms on religious and other grounds, and after hearing them, he was constrained to allow them the usual practice of taking water from the tank, but in doing so, the people were required not to dip their legs or rags into the water and that they should take water only by resting themselves on the first step just immediate to the surface of water. The two platforms which were constructed at a cost of Rs. 350–10–5 have thus become a mere waste. Under such circumstances, it is very much to be apprehended whether the proposed floating platforms would not be objected to by the public on similar grounds. The council, therefore, prefers it better to postpone it for the present.

There is a tank, Thathya gunta by name, which has been reserved for drinking purposes alone. It is not very far from the Muhammadan quarters. Those people will be persuaded to use the water of the said tank for drinking purposes. It is to be noted that the Murikinati gunta is beyond the municipal limits. A signboard has, however, been put up there restricting the use of its water for drinking purposes. Hence the project of sinking a new well for the purpose above is considered not expedient at present, especially when the water-supply scheme is under contemplation at a very high expense.

Inspection Notes.

(7) *Washing wells and tanks.*—I trust the municipality will make the order suggested during the festival as to the washing of clothing outside the tanks permanent. By making a small drain run near the stones, the foul water could be directed either to a cesspool and thence be lifted by hand, or be discharged at once for broad irrigation.

Chairman's Remarks.

The arrangement suggested herein though very commendable, yet it is less appreciated by the public for the following reasons. During the past Brahmotchavam at Tirumalai, the said arrangement was put into force both at Lower Tirupati and Upper Tirupati with much disappointment. As a matter of fact, they were very little used for the purpose. There are in the vicinity of this town some tanks and wells other than those under reference which are also used for the said purpose. When some restriction is put upon the public as to the use of the tanks as suggested, they give them up altogether resorting to others as the conditions of our restriction entail much difficulty on them especially in bringing water from the tank to the tank bund outside, while the cleaning of clothes can well and easily be conducted near the water. Further, superior castes consider it derogatory to bring water outside in tubes or tins provided for the purpose on religious scruples. The council is, however, of opinion that the co-operation of the public views is essential in matters of importance of this kind, and that it cannot be effectually achieved without much discontent if insisted upon. Hence this proposal also as to be kept in abeyance for some time.

IV. (8) *Conservancy.*—There are twelve latrines. These, without exception, are simple "open spaces." Of course, these are better than nothing; but as the municipality has been in existence since 1886, it might reasonably have been expected that types of latrines more in accordance with sanitary requirements would have been erected by this time. The standard plans issued by the Sanitary Engineer's office should be followed, and it is possible that these might be modified in certain particulars, so as to enable the municipality to utilize Cuddapah slabs which, from their proximity to the tract of country producing them, they should be able to procure cheaply.

There is a pucca latrine in Anatha street, which requires renewal. This building was originally constructed by the people of that street and it is expected to be repaired by themselves. If they should so do it, it is proposed to erect another pucca latrine with brick walls as there is a provision of Rs. 200 made in the current year's budget for the purpose, otherwise the said allotment will be utilized for its repair. Provision for another one under the standard plan will also be made in the next year's budget.

(9) As Tirupati starts with no ready-made "pucca" latrines, I should like to see an attempt towards the employment of very small latrines on the dry-earth system at convenient corners of the streets, instead of efforts being confined entirely to the large form of latrines just mentioned. These if kept clean would, doubtless, be much used by the people, and if supplied

Provision for the latrine of the pattern suggested will be made in the next budget.

Inspection Notes.

with a lamp at nights would afford the accommodation required sufficiently near their houses.

(10) *Removal of night-soil.*—To cleanse twelve latrines and remove night-soil by hand to a distance of about a mile from the town, five toties are employed. They are supposed to remove the night-soil in two trips daily. For the purpose, they employ two hand conservancy buckets mounted on wheels, having the total capacity of 2·5 cubic feet. These are supposed in the two trips to accommodate 8·27 cubic feet per 1,000 of population of excreta, without allowing for a drop of urine. It, therefore, follows that 107·7 cubic feet of fœcal matter daily never leaves the town. Much of this is consumed by pigs, and either thus slightly altered or unchanged, makes an ever-increasing addition to the soil.

(11) To effect removal of night-soil correctly, not less than six carts of the cylindrical form manufactured by Messrs. Richardson and Cruddas, and known as the "Bombay pattern," should be employed, and these should be drawn by two bullocks. This estimate ignores urine. The municipality would doubtless be unable to purchase these all at once, but the effort should be made to buy them as rapidly as means will allow. The present endeavour to remove the night-soil of 14,242 inhabitants in two night-soil hand buckets is about as useless an effort as an attempt to place the water of the Bay of Bengal in a pint bottle.

Chairman's Remarks.

Necessary provision will be made in the ensuing budget for the purchase of more carts of the pattern suggested herein for the purpose.

(12) *Rubbish disposal.*—Thirteen carts are employed. These are all of the open bamboo basket type; but an improved form has lately been introduced by the Chairman M.R.Ry. K. Gopalachariar; the intention, however, is still to retain the open form. I consider it would be possible to line cheaply the new carts shown me with sheet iron and to provide covers. It is usually thought a harmless matter to drive rubbish through a town in open carts; but the practice is absolutely dangerous and should be stopped. It cannot be satisfactory to the tax-payer to know that, whilst the municipality professes to remove the rubbish of the town, he cannot leave his house in the morning without encountering a cart, from which every jolt or breath of wind drives dust that may be derived from a house affected with small-pox tubercle, cholera, ringworm, &c.

Improvements to rubbish carts will be made as soon as practicable.

Inspection Notes.

(13) *Rubbish and night-soil depôt—Rubbish depot.*—There are two of these: one is situated at the north-east about 3 furlongs from the travellers' bungalow and the other near the Chendragiri road. In both cases, the distance from important parts of the town is such as to involve a journey of about a couple of miles for the sweepers who have to collect the rubbish from $15\frac{1}{2}$ miles of streets, and to pull the carts. Consequently, not more than two trips daily can be accomplished. It is therefore impossible considering the small size of the carts (12 cubic feet) and the agency employed for traction, that the rubbish can be completely removed from the town.

(14) If the municipality is so poor as not to be able to afford bullocks for traction, it must look to some other mode of getting over the difficulty. In the first place, a rubbish depôt might be safely retained closer than at present to the town, provided each day's collection is carefully covered up with dry earth to the extent of 4 inches, and is retained neatly and firmly packed till required for sale. But, in addition to this, a depôt might be made still nearer the town on the outskirts, where rubbish disposal by incineration might be pursued by means of Silchar incinerators. One will not suffice for the whole town; but it is a trustworthy form, and I would advise the municipality to have a specimen erected and, on its suitability having been made apparent, others could be ordered. The cost is usually estimated at about Rs. 450. Further, particulars can be obtained by perusal of proceedings of the Sanitary Commissioner for the second quarter of 1894.

(15) *Night-soil depôt.*—This is maintained on the same spot as the rubbish depôt at Chendragiri road. Attempts have been made to trench the excreta, but this has not been systematically carried out. I gave careful directions to the Sanitary Inspector as to the method to be pursued, and I have no doubt he will be able to see this correctly effected in future.

(16) The total rubbish was disposed of last year for only Rs. 189. The night-soil was unsaleable. I would advise the municipality to acquire a portion of land; direct that it be trenched correctly; and, after the lapse of sufficient time (generally a period of six months is required) to render the changed fœcal

Chairman's Remarks.

Formerly there was a rubbish depôt by the side of the Theertam road, quite close to the town. The people having protested that it should be removed to some other place on the ground that it throws offensive odours being within a few yards of the dwelling houses and as the surface water of the depôt flows into the feeder of Thathaya gunta which is reserved for drinking purposes only, the council was obliged to select the present site. Attempt will, however, be made to open more depôts in close proximity to the town. It may be noted here that the mileage of the streets actually swept is not more that 7 or 8 miles as the remaining extent is beyond the town, though formally it is included within the municipal limits.

Arrangements will be made next year for constructing one Silchar incenerator as suggested, if funds would permit.

Will be carefully attended to.

Attempts will be made to adopt the suggestion as early as practicable.

Inspection Notes.

matter unrecognizable in the midst of the constituents of the soil, to cultivate the whole area, it should invite its toties and sweepers to cultivate the land in the absence of any offer from ryots. Land thus cultivated ought to be highly productive, and the municipality could well afford to allow a certain share of the profits to the staff, who have worked to secure the success of the experiment. A practical demonstration of the efficacy of night-soil as manure would be of the greatest value, and is, in fact, the only way in which it may be expected ryots would be persuaded to follow its example. There need be no fear that any caste prejudice will stand in the way of the ryot using such manure, provided he is convinced that the material is really of utility; this has, at least, been the experience in several parts of the country. By the methods suggested, or other mode, the municipality should aim at securing this conviction. Any little expenditure upon the experiment, may be regarded in the light of a profitable investment.

(17). *Private scavengering.*—There can be no doubt that the successful working of the private scavengering system is of the greatest importance in retaining the town in a cleanly condition. Only 167 houses of a total of 2,918 are, however, attended to, under this method. There are special reasons why it should be carried out with exactitude in this municipality. Such pilgrim houses as were entered were found either to be devoid of latrines, or to have these represented only by corners in the compounds—for removal whence no arrangements existed. In the case of one large chuttram (Narrashanah's), although a latrine has been built, the owner apparently, to save himself the expense of having it cleaned, maintains it shut. Under section 207, the municipality has full power to compel the provision of private latrines, and I strongly advise that they determine that not a single house known to receive pilgrims either for charity or for money be allowed longer to be without this necessary sanitary adjunct. In this connection, the new chuttram built by the Mahunt should be carefully watched, and it should be seen that conservancy in all respects is carefully attended to.

(18) Six toties are engaged, or one toty for 28 houses. This is probably more than the men can attend to correctly under present circumstances, as they are required

Chairman's Remarks.

The instructions conveyed herein will be attended to for the future.

Buckets or some other closed conveyance will be supplied to the scavengers, and necessary arrangements will be made to meet the suggestions.

Inspection Notes.

to carry the contents of latrines out to the night-soil depôt— a distance, including the area of town, of about two miles. The transport is effected in open baskets—a most objectionable method; but I understand the municipality is about to provide iron closed buckets. If the men were relieved of the toil of carrying the excreta such a distance, they could easily look after forty houses each, and thus both enable the municipality to include more houses in the scheme as well as reduce the charge per head. This could be accomplished by having correct iron covered conservancy pans for each latrine, and a small covered iron bucket for each private toty. The toties could then carry the excreta to the nearest latrine and deposit them in the pans, whence they could be removed by the carts above described.

V. (19) *Graveyards.*—Both the Hindu and Muhammadan burial-grounds are between the hill and the town, and in the direct watershed of the Tathia gunta, one of the two chief tanks of the town. Irrespective of this tank being abandoned when the new water-supply is arranged, it is not desirable in the case of a town with so pervious a soil that the graveyard should be so placed that the sub-soil flow through it is towards the town. I would, therefore, advise that a site on either of the flanks, or the opposite side of the town, be obtained.

VI. (20) *Markets.*—The market is of the ordinary pyal type sheltered by a roof. Slabs are used for the flooring, but these are rough, and are not pointed with Portland cement. All irregularities should be chiseled off, and new slabs be placed where necessary, so as to make the surface uniform and permit no lodgment of filth. The joints should be pointed with Portland cement, both on the floor and in front of the basement. The pillars should be painted with white silicate paint; also the dividing partition, after it has been plastered with Portland cement. The well should be enclosed and a chain pump be provided. The cost of a suitable pump would be about Rs. 60.

(21). *Fish Bazaar.*—This is a private market. Fish are sold upon the flooring, which is walked over by customers. Small Cuddapah polished slabs should be provided for each seller of fish. A corrugated iron roof should also be provided for shelter. The wall for five feet from

Chairman's Remarks.

Will be attempted.

The improvements suggested herein will be duly attended to as early as possible.

The fish market owner was communicated with an extract from this suggestion for doing the needful.

Inspection Notes.

the floor should be cement plastered, and painted with white silicate paint.

(22). *Vegetable Market.*— The municipality has purchased a small site at a cost of Rs. 600 for a vegetable market. Only the fact that no other site can be procured within the means of the municipality, can afford an excuse for the very confined space that will be placed at disposal. In view of the fact also that the Mahunt applied for a license for holding a private market in a well populated portion of the town, the necessity for the municipality launching out into this expenditure before it has provided for a correct conservancy, is not apparent. At the request of the Mahunt, I inspected the site he had suggested, and consider that, provided certain improvements are effected, it would be all that is required. If the Mahunt is still willing to get the place into correct order, I would advice the municipality not to oppose his reasonable request to hold a market. But he should be required to put a suitable roof throughout and provide a drain along the whole front ending in a cesspool in default of a correct outlet. The cesspool should be built of masonry with a clay backing, and to be lined with Portland cement; to be provided with an air-tight cover and be ventilated by a suitable pipe. The existing gneiss slabs should be pointed with Portland cement throughout. The Mahunt should further be required to show how he intends to provide a sufficient and correctly protected water-supply.

Chairman's Remarks.

Owing to inconvenience felt by a majority of the public in respect of the Mahunt's market, and also to the gross atrocities which the Mutt servants were committing towards innocent vegetable sellers there, most of whom were females from the surrounding villages, and to the defective construction of the building as well, he was refused a license when he applied for the same some three years ago. His untimely application has also formed one of the main reasons for such a refusal. Further, he made some improvements to the said building only very recently, that is to say, some time before the inspection of the spot by the Sanitary Commissioner. With the object of having a market for its own, the council selected the present site for the purpose. In doing so, the council was careful to note that the place was just in the heart of the town were people could command all comforts and security, besides being free from violence by any one. The land was accordingly purchased for Rs. 1,246, of which Rs. 637 have already been paid and Rs. 609 remain unpaid pending adjudication in the Civil Court. The land was acquired under the Land Acquisition Act and put in possession of the council by the Revenue authorities. Undoubtedly as there was no other place more suitable for this purpose, the present site had to be purchased. It may not be out of place here to mention that the Mahunt has the option to maintain or withhold his market according to his will and pleasure. In such circumstance, the council cannot be considered to have been inadvisable in its selection of the site under reference. As for the correct conservancy of the place, every possible arrangement was proposed to be made in consultation with the Sanitary officers. The council is, however, now in a great dilemma after the inspection of the town by the Sanitary Commissioner whether it could utilize the land for the purpose intended for or abandon the project altogether. The Mahunt was communicated with an extract from this, so far as it relates to his vegetable market, but he has not expressed his views till now in carrying out the improvements suggested by the Sanitary Commissioner. If he agrees to do the improvements suggested by the Sanitary Commissioner, the council will think of granting him the license. Nothing, however, prevents the

Inspection Notes.

(23) *Slaughter-house.*—This is merely a space enclosed by bamboo tatties. The ground becomes saturated with blood. A correctly built slaughter-house is a necessity. A plan should be obtained from the Sanitary Board.

Chairman's Remarks.

council to have its own market in addition just in the heart of the town in the locality acquired after a good deal of deliberation, delay and expense.

In my opinion the new market proposed by the council is unnecessary, and moreover the site does not appear to me to be a good one. It is much too cramped. The Mahunt's is on a more convenient site.

(Intld.) G. P.

The council finds it extremely difficult to acquire at a suitable distance a piece of land for this purpose. The present site being close to the supply channel of Ramachandra Gunta—a washing and bathing tank—some objections is advanced as to the erection of a pucka building there. Besides the land is a private property. It is only under this circumstance the council is hesitating to provide a pucka building.

VII. (24) *Vaccination.*—The following table shows the result of the working of the compulsory clauses of the Act as to vaccination. It is evident that much more effort in *enforcing* vaccination is requisite :—

Total births during preceding six months, *i.e.*, births registered between 1st July and 31st December 1893.	Number vaccinated.		Number vaccinated a second time, first operation proved unsuccessful.		Postponed under Medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccinations to total births per cent.
	Successfully.	Unsuccessfully for the first time.	Successful.	Unsuccessful.					
228	121	7	..	..	29	48	23	..	53·07

Whilst I was examining the condition as to vaccination in a pyal school, one of the bye-standers ventured the remark that whilst he did not deny that vaccination was of some utility, it was untrustworthy, and its protective influence soon wore off. I was able, however, with the material before me to convey a sufficiently practical lesson, to secure full acquiescence in the efficacy of vaccination. Of sixteen unprotected children, fifteen had been attacked with small-pox; of nineteen children who had been protected by vaccination, only three bore slight marks of small-pox. The contrast between the highly scarred children (in one case an eye had been damaged) who, unprotected had been subject to the disease, was striking, when compared with the barely recognizable marks found in the

Inspection Notes.

attacked vaccinated cases. The following table shows the vaccine success rate and total vaccinated during the last three years :—

Years.	Total number vaccinated.	Percentage of success.
1891–92	653	91·0
1892–93	527	94·5
1893–94	573	95·3

(25) The floor of the vaccine calf depôt requires to be remodelled, so as to permit of correct drainage, whilst retaining the calf in position. The animal should not be allowed more rope than enough to stand up and lie down. Allowing for the animal to lie comfortably on its side, the distance from one paling to the other should not be more than to permit of the animal lying down comfortably. The flooring should be made with very shallow fish-bone pattern drains in the cement. The calf should always be provided with clean straw for bedding.

Chairman's Remarks.

Necessary improvements will be effected as suggested.

VIII. (26) *Registration.*—One Registrar on a salary of Rs. 8 (!) is employed. Instead of directing persons to register births and deaths at the office, the municipality relies upon members of its staff ascertaining that a birth or death has occurred; it then sends a *notice* to the persons concerned, that it is their business to register. This is a most undesirable interpretation of the compulsory clauses of Act IV of 1884. As the law stands all inhabitants are bound to register at such places as the municipality appoints, and it should be the business of the municipality to prosecute all such as fail to carry this order out. The defective results secured by this mode may be *estimated* by the following figures :—

Census population of 1891.	Estimated population on 31st December 1893.	Population on 31st December 1893 according to registration results.
14,242	14,542	13,992

The following is an abstract from the statistics gathered during the last three years up to date :—

The procedure adopted by the council was simply to obviate the escape of cases from registration especially as many of the inhabitants are illiterate. Further, the instructions to its staff in serving on the parties concerned notices requiring them to register such cases within the prescribed time otherwise they would be criminally liable to punishment, was simply intended as a check over the staff itself for calling upon it to account for omission, if any, of the above cases and also to serve as a precaution to the parties to do their duty with promptitude. The council would, however, take the matter into deep consideration and make necessary amends. It may be noted that the existing forms are stated to have been read over to Dr. Laing, the then Sanitary Commissioner, and that he raised no objection to their adoption.

Inspection Notes. Chairman's Remarks.

Year.	Birth rate per mille of the estimated population.	Death rate per mille of the estimated population.	Ratio per cent. of deaths.						Ratio per mille of deaths among children under one year of age to registered births in the preceding year.
			Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhœa.	Injuries.	Other causes.	
1891	26·8	30·5	16·5	1·3	28·1	10·8	1·6	41·7	219·4
1892	22·0	29·2	3·8	3·5	41·7	10·2	1·2	39·6	223·4
1893	28·3	35·8	6·2	11·2	31·2	15·2	4·1	32·1	293·3
1894	27·0	33·6	4·9	2·4	31 7	7·4	2·4	51·2	233 6

IX. (27) *Sanitary Administration.*—The municipality is well aware of the special reasons why sanitation should receive at their hands very careful attention, having regard to the town being an important point of pilgrimage. The sanitation of pilgrim houses should, therefore, be at all times an object of special care. The Act they administer gives very full powers for the retention of all dwellings in a cleanly condition, and it but requires an effort on the part of the municipality to enforce it. It is essential that defœcation in the streets, as now pursued with apparently no fear of the legal consequences by the inhabitants, *cease absolutely*. The District Magistrate has notified his intention of fully supporting the municipality in putting a stop to this disgusting and unsafe practice, and it now rests with the municipality to show they are in earnest on this subject. Such sights as were found by myself and the District Magistrate in the vicinity of the Pentah drain, ought to be an impossibility in the case of a council administering Act No. IV of 1884. During the whole of 1893, only 134 cases were prosecuted by the Police. This number itself shows that very little attention is paid to the working of the Town Nuisances Act by the Police. But this apathy, doubtless, would not be exhibited had the municipality vigorously protested on the subject.

The attention of the Police in abating the commission of nuisances in public streets has been so very often called upon, but the result turned out bespeaks for itself without any comment on the subject.

(28) Both the staff of toties and sweepers should be strengthened, as soon as the necessary plant for removal of rubbish and night-soil has been acquired. I would advice that the Sanitary Inspector be required to devote his time as strictly to sanitary matters as possible; *e.g.*, bill collection should form no part of his duties. I would also advise that this man be mounted, to enable him to perform his duties correctly and, for that purpose, an

Due consideration will be given in the ensuing budget in this respect. It has been remarked that the Sanitary Inspector should be free from collection duty. This man is, in addition to his conservancy duties, entrusted with the collection of private scavenging fees alone and nothing else. As contemplated in paragraph 16 of Mr. Stokes' memorandum of municipal accounts embodied in G.O., No. 1059, Financial, dated 29th May 1883, it is clear

Inspection Notes. Chairman's Remarks.

allowance of Rs. 15 per mensem would seem but equitable; the present allowance of Rs. 8 is inadequate; a man on his slender pay cannot be expected to support an animal, and take the risk of its break down on this sum.

that the said business should be done by that officer alone for obvious reasons. Further, in many municipalities, I understand that this duty is done by Sanitary Inspectors themselves. The Sanitary Inspector of this town has been given two assistants styled "maistries" for immediate charge of the supervision of the conservancy. In these circumstances, the council could not see any reason why Government Order referred to above should be disregarded. The Sanitary Inspector is now paid Rs. 15 as salary *plus* Rs. 5 as horse allowance. He is paid in addition an allowance of Rs. 5 for the supervision of the private scavenging. The object of the council in allowing the said extra allowance to the Sanitary Inspector was simply to give encouragement to him in the shape of promotion. The council considers to keep in abeyance for some time to come the question of increasing the horse allowance from Rs. 5 to 15 which is just equal to his pay.

FORT ST. GEORGE,
12*th September* 1894.

(Signed) W. G. KING, Surgeon-Lieut.-Col.,
Ag. Sany. Commr., Madras.

No. .

Forwarded.

14*th September* 1894.

(Signed) G. F. T. POWER,
Acting Collector.

No. 2413.

Forwarded.

17*th September* 1894.

(Signed) R. F. GRIMLEY,
Ag. Head Asst. Collector.

EXTRACT from the Minutes of Proceedings of the Municipal Council, Tirupati, passed at its general meeting held on the 8th December 1894.

* * * * *

1. Read inspection notes of the Sanitary Commissioner for Madras, on the Municipal town of Tirupati and the replies of the Chairman thereto.

Resolved that the same be approved of and submitted to Government.

* * * * *

Forwarded.

17*th December* 1894.

(Signed) R. F. GRIMLEY,
Ag. Head Asst. Collector.

Forwarded.

20*th December* 1894.

(Signed) G. F. T. POWER,
Acting Collector.

3270 m/

Tirupati insp: note

2 diagrams

[5]
1,000—17-11-93.

LOCAL AND MUNICIPAL DEPARTMENT.

Papers to be read in Proceedings:—

28

Again G.O., dated 189 , No.

Current No. 3270 M of 1894, dated 10th December, from the Chairman the Tirupati

Order. 26- 2- 1895 No. 303 m

Recorded with the following remarks:-

(1) The Sanitary Engineer's attention will be drawn to Dr. King's remarks, regarding water supply in para. III (4) of his notes.

(2) The Municipal Council will be requested to reconsider, with reference to the Collector's remarks on the subject, its proposal to open a vegetable market of its own, and to report the result of its deliberations to Government.

(3) The attention of the Inspector General of Police will be drawn in the Judicial Department, to the Chairman's remarks on para. IX (27) of the notes.

To.

The Chairman Mc Tirupati
" Collector of North Arcot
" Sanitary Commissioner
" Engineer
" Judicial Department
Editor's Table. Despd. 18/3/95

VR 24/2/95

Mr. 24-2-95

26/2/95

Tirupati Inspection notes

3270 M

P.S.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following paper :—

From M.R.Ry. K. GOPALACHARIAR Avargal, Chairman, Municipal Council, Tirupati, to the Chief Secretary to Government (through the Divisional officer), dated 10th December 1894, No. 29 M.

In accordance with the instructions conveyed in G.O., dated 23rd December 1893, No. 1765 M., Local and Municipal, I have the honour to forward herewith the inspection notes of the Sanitary Commissioner for Madras on this municipality, together with my comments and replies duly approved by the council in its general meeting held on the 8th instant.

2. An extract from the minutes of proceedings of the municipal council is submitted herewith. As the paper was under circulation among the councillors, there has been some delay in its submission.

ENCLOSURES.

INSPECTION NOTES of the Sanitary Commissioner for Madras.

NORTH ARCOT DISTRICT.

TIRUPATI MUNICIPALITY.

Inspected 16*th*, 17*th and* 19*th August* 1894.

Population per census of ... ... { 1881 ... 13,232 / 1891 ... 14,242

Inspection Notes.	Chairman's Remarks.
I. (1) The town is situated upon a red gravel plain extending from the Tirupati Hill (Tirumalai) to the river Swarnamukhi, which is distant four to five miles. (2) Its existence probably is due to the fact that it lies at the bottom of the sacred hill, to which there is throughout the year a constant stream of pilgrims, and where once yearly the important festival of Brahmotchavam takes place. In my report, dated 7th September 1893, which was communicated to the Chairman, Municipal Council, with my letter, dated 7th September 1893, No. 1975, the chief defects in regard to water-supply, drainage, and pilgrim accommodation have been brought to notice, with the object of securing early remedial measures before the advent of the annual festival. I, therefore, would suggest that the municipality regard the following as an extension of the communication already furnished.	A detailed special report in regard to the arrangements made to remedy the defects pointed out in this reference has already been forwarded to the Collector of North Arcot, in my letter No. 677, dated 23rd September 1894, for incorporation and submission to Government with his report as was done in last year.

Inspection Notes.

II. (3) *Drainage.*—The most glaring sanitary defect is the Pentah drain. This meanders through the greater part of the town. It is, except in the upper portion, a simple earthen channel. It receives the sullage water of houses on both sides, and, moreover, the people regard it as the correct place for easement. More absolutely awful stenches and disgusting sights than result from the mixture of fœcal matter and sewage water can hardly be conceived. Pending the introduction of a correct drainage scheme, I see no reason why the municipality, at a cost probably not exceeding three hundred rupees, should not be able to conduct the drainage by a method that would serve sufficiently well as a temporary expedient, until a correct sewerage scheme is introduced by the Sanitary Engineering Department. Thus common earthen tiles of six inches diameter might be used for drains, if well dipped in a mixture of boiling tar and pitch in the first place. These laying upon a well-regulated foundation of puddled clay and jointed with Portland cement ought to secure a very fair impervious, though temporary, form of drain. Care should be taken to grade the whole drain from the head to the end, so as to have a suitable fall. The sides of the whole of the existing earthen channel after being duly trimmed might be paved with the cobble stones, which are now in great use in the town, and are procurable near the locality at the cost of carting. Having secured the correct collection of the sewage, care should be taken not to dispose of it by mere soaking near the outlet. It should be received upon land for broad irrigation either direct—if the surface gradient will suit,—or by being lifted from a sewage reservoir by means of a picottah, if this is not the case.

Chairmans Remark's.

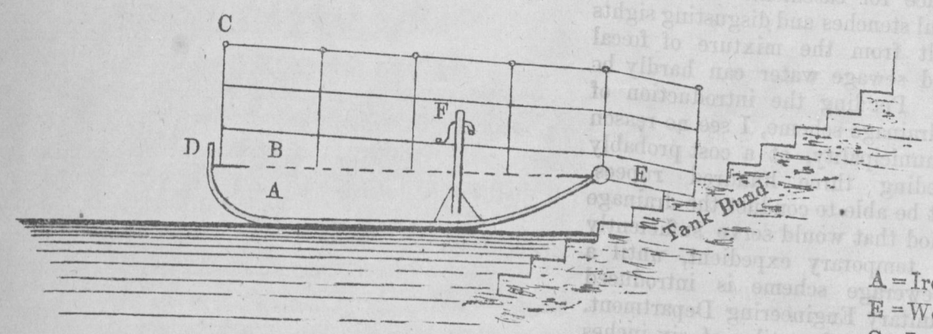
Rupees 300 will be provided in the next budget to conduct the Pentah drainage as suggested. As for the disposal of the sewage water collected from the said channel, necessary arrangements will be made.

III. (4) *Water-supply.*—Under G. O., dated 9th July 1894, No. 883 M., Local and Municipal, the first engineering effort towards improvement has now been directed to securing the all-important matter in a pilgrim centre of a protected water-supply, in lieu of the already projected drainage scheme. This also will, doubtless, come in due time; but unless the municipality is in a position to effect both works simultaneously, it seems to me that the change of programme is of the utmost importance and utility, not only in the

The Sanitary Engineer to Government has already been addressed to make the requisite investigation for water-supply scheme and a sum of Rs. 500 has also been allotted from the general balance towards its cost. As for effecting both the schemes simultaneously, the council has already intimated to Government in its letter, No. 16, dated 12th June last, that unless the latter treats this municipality with exceptional generosity by providing funds therefor, it will not be in a position to meet such

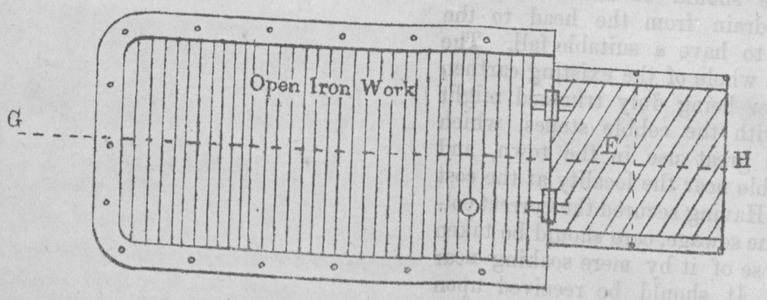
FIG. 1.

SECTION ON G. H.



A = Iron or wooden Pontoon.
E = Wooden platform.
C = Iron railing (gastubing).
D = Projecting iron or wood Shield preventing spilt water entering tank.
F = Hand pump to empty foul water.

PLAN.

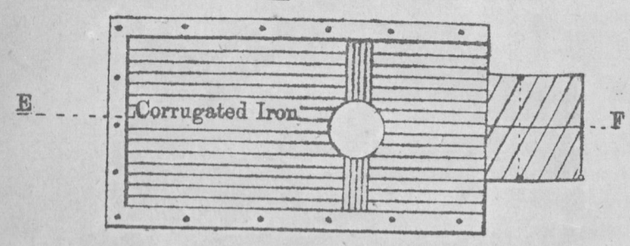


REG: No. 1853—COPIES 95

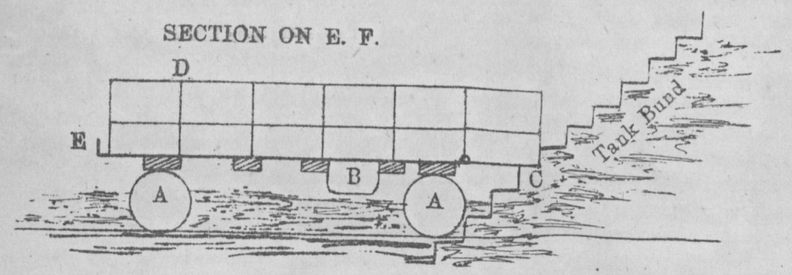
PHOTO-ZINCO., SURVEY OFFICE, MADRAS.
1895.

FIG. 2.

PLAN.



SECTION ON E. F.



A = Barrels lashed to platform.
B = Foul water iron tank.
C = Platform.
D = Railing.
E = Projecting iron or wood Shield preventing spilt water entering tank.

REG: No. 1854 — COPIES 95

PHOTO-ZINCO., SURVEY OFFICE, MADRAS.

1895.

Inspection Notes.

interests of the inhabitants of Tirupati, but also of the rest of the Presidency. The Assistant Sanitary Engineer to Government, who has, I believe, already surveyed the spot with the object of ascertaining a good source, is hopeful of accomplishing this readily, having found a suitable place at some distance from the town. Amongst the schemes that may be considered by the Sanitary Engineer's Department—without being able to say I have examined the country elsewhere—I think the possibility of obtaining a good supply in the red gravel plain between the town and the hill, by means of an infiltration gallery, should be considered. The water would have to be raised, of course, but probably the lift would not be heavy.

(5) With the object of protecting the Narasimha well in Robinson's Park during the festival, I have suggested the use of fixed platforms of iron rails, &c.; this arrangement will not, however, suit when the water in the tank rises. To meet this condition floating platforms would require to be designed, and I think either of the simple forms shown in the attached diagram would serve the purpose.

(6) *Mungunath Gunta.*—This tank is within a burial ground, and is used by persons bathing after funerals, and by Muhammadans for drinking purposes by choice. This latter use is distinctly dangerous, and I would advise the municipality to at once attempt to provide a more suitable source of drinking supply for these people. The whole of the plain between Tirumalai and the town is charged with good water, and at a very small expense the municipality could provide for the sinking of a correctly protected well, and thus secure a pure water-supply.

Chairman's Remarks.

a large outlay in consideration of the limited funds at its disposal.

As suggested by the Sanitary Commissioner in his memorandum for Brahmotchavam festival, two platforms were erected at the corners of the tank in question. The public made a very strong protest to the Head Assistant Collector who was in the town then against the use of the platforms on religious and other grounds, and after hearing them, he was constrained to allow them the usual practice of taking water from the tank, but in doing so, the people were required not to dip their legs or rags into the water and that they should take water only by resting themselves on the first step just immediate to the surface of water. The two platforms which were constructed at a cost of Rs. 350–10–5 have thus become a mere waste. Under such circumstances, it is very much to be apprehended whether the proposed floating platforms would not be objected to by the public on similar grounds. The council, therefore, prefers it better to postpone it for the present.

There is a tank, Thathya gunta by name, which has been reserved for drinking purposes alone. It is not very far from the Muhammadan quarters. Those people will be persuaded to use the water of the said tank for drinking purposes. It is to be noted that the Murikinati gunta is beyond the municipal limits. A signboard has, however, been put up there restricting the use of its water for drinking purposes. Hence the project of sinking a new well for the purpose above is considered not expedient at present, especially when the water-supply scheme is under contemplation at a very high expense.

Inspection Notes.

(7) *Washing wells and tanks.*—I trust the municipality will make the order suggested during the festival as to the washing of clothing outside the tanks permanent. By making a small drain run near the stones, the foul water could be directed either to a cesspool and thence be lifted by hand, or be discharged at once for broad irrigation.

IV. (8) *Conservancy.*—There are twelve latrines. These, without exception, are simple "open spaces." Of course, these are better than nothing; but as the municipality has been in existence since 1886, it might reasonably have been expected that types of latrines more in accordance with sanitary requirements would have been erected by this time. The standard plans issued by the Sanitary Engineer's office should be followed, and it is possible that these might be modified in certain particulars, so as to enable the municipality to utilize Cuddapah slabs which, from their proximity to the tract of country producing them, they should be able to procure cheaply.

(9) As Tirupati starts with no ready-made "pucca" latrines, I should like to see an attempt towards the employment of very small latrines on the dry-earth system at convenient corners of the streets, instead of efforts being confined entirely to the large form of latrines just mentioned. These if kept clean would, doubtless, be much used by the people, and if supplied

Chairman's Remarks.

The arrangement suggested herein though very commendable, yet it is less appreciated by the public for the following reasons. During the past Brahmotchavam at Tirumalai, the said arrangement was put into force both at Lower Tirupati and Upper Tirupati with much disappointment. As a matter of fact, they were very little used for the purpose. There are in the vicinity of this town some tanks and wells other than those under reference which are also used for the said purpose. When some restriction is put upon the public as to the use of the tanks as suggested, they give them up altogether resorting to others as the conditions of our restriction entail much difficulty on them especially in bringing water from the tank to the tank bund outside, while the cleaning of clothes can well and easily be conducted near the water. Further, superior castes consider it derogatory to bring water outside in tubes or tins provided for the purpose on religious scruples. The council is, however, of opinion that the co-operation of the public views is essential in matters of importance of this kind, and that it cannot be effectually achieved without much discontent if insisted upon. Hence this proposal also has to be kept in abeyance for some time.

There is a pucca latrine in Anatha street, which requires renewal. This building was originally constructed by the people of that street and it is expected to be repaired by themselves. If they should so do it, it is proposed to erect another pucca latrine with brick walls as there is a provision of Rs. 200 made in the current year's budget for the purpose, otherwise the said allotment will be utilized for its repair. Provision for another one under the standard plan will also be made in the next year's budget.

Provision for the latrine of the pattern suggested will be made in the next budget.

Inspection Notes.

with a lamp at nights would afford the accommodation required sufficiently near their houses.

(10) *Removal of night-soil.*—To cleanse twelve latrines and remove night-soil by hand to a distance of about a mile from the town, five toties are employed. They are supposed to remove the night-soil in two trips daily. For the purpose, they employ two hand conservancy buckets mounted on wheels, having the total capacity of 2·5 cubic feet. These are supposed in the two trips to accommodate 8·27 cubic feet per 1,000 of population of excreta, without allowing for a drop of urine. It, therefore, follows that 107·7 cubic feet of fœcal matter daily never leaves the town. Much of this is consumed by pigs, and either thus slightly altered or unchanged, makes an ever-increasing addition to the soil.

(11) To effect removal of night-soil correctly, not less than six carts of the cylindrical form manufactured by Messrs. Richardson and Cruddas, and known as the "Bombay pattern," should be employed, and these should be drawn by two bullocks. This estimate ignores urine. The municipality would doubtless be unable to purchase these all at once, but the effort should be made to buy them as rapidly as means will allow. The present endeavour to remove the night-soil of 14,242 inhabitants in two night-soil hand buckets is about as useless an effort as an attempt to place the water of the Bay of Bengal in a pint bottle.

(12) *Rubbish disposal.*—Thirteen carts are employed. These are all of the open bamboo basket type; but an improved form has lately been introduced by the Chairman M.R.Ry. K. Gopalachariar; the intention, however, is still to retain the open form. I consider it would be possible to line cheaply the new carts shown me with sheet iron and to provide covers. It is usually thought a harmless matter to drive rubbish through a town in open carts; but the practice is absolutely dangerous and should be stopped. It cannot be satisfactory to the tax-payer to know that, whilst the municipality professes to remove the rubbish of the town, he cannot leave his house in the morning without encountering a cart, from which every jolt or breath of wind drives dust that may be derived from a house affected with small-pox tubercle, cholera, ringworm, &c.

Chairman's Remarks.

Necessary provision will be made in the ensuing budget for the purchase of more carts of the pattern suggested herein for the purpose.

Improvements to rubbish carts will be made as soon as practicable.

Inspection Notes.

(13) *Rubbish and night-soil depôt—Rubbish depot.*—There are two of these: one is situated at the north-east about 3 furlongs from the travellers' bungalow and the other near the Chendragiri road. In both cases, the distance from important parts of the town is such as to involve a journey of about a couple of miles for the sweepers who have to collect the rubbish from 15½ miles of streets, and to pull the carts. Consequently, not more than two trips daily can be accomplished. It is therefore impossible considering the small size of the carts (12 cubic feet) and the agency employed for traction, that the rubbish can be completely removed from the town.

(14) If the municipality is so poor as not to be able to afford bullocks for traction, it must look to some other mode of getting over the difficulty. In the first place, a rubbish depôt might be safely retained closer than at present to the town, provided each day's collection is carefully covered up with dry earth to the extent of 4 inches, and is retained neatly and firmly packed till required for sale. But, in addition to this, a depôt might be made still nearer the town on the outskirts, where rubbish disposal by incineration might be pursued by means of Silchar incinerators. One will not suffice for the whole town; but it is a trustworthy form, and I would advise the municipality to have a specimen erected and, on its suitability having been made apparent, others could be ordered. The cost is usually estimated at about Rs. 450. Further, particulars can be obtained by perusal of proceedings of the Sanitary Commissioner for the second quarter of 1894.

(15) *Night-soil depôt.*—This is maintained on the same spot as the rubbish depôt at Chendragiri road. Attempts have been made to trench the excreta, but this has not been systematically carried out. I gave careful directions to the Sanitary Inspector as to the method to be pursued, and I have no doubt he will be able to see this correctly effected in future.

(16) The total rubbish was disposed of last year for only Rs. 189. The night-soil was unsaleable. I would advise the municipality to acquire a portion of land; direct that it be trenched correctly; and, after the lapse of sufficient time (generally a period of six months is required) to render the changed fœcal

Chairman's Remarks.

Formerly there was a rubbish depôt by the side of the Theertam road, quite close to the town. The people having protested that it should be removed to some other place on the ground that it throws offensive odours being within a few yards of the dwelling houses and as the surface water of the depôt flows into the feeder of Thathaya gunta which is reserved for drinking purposes only, the council was obliged to select the present site. Attempt will, however, be made to open more depôts in close proximity to the town. It may be noted here that the mileage of the streets actually swept is not more that 7 or 8 miles as the remaining extent is beyond the town, though formally it is included within the municipal limits.

Arrangements will be made next year for constructing one Silchar incenerator as suggested, if funds would permit.

Will be carefully attended to.

Attempts will be made to adopt the suggestion as early as practicable.

Inspection Notes.

matter unrecognizable in the midst of the constituents of the soil, to cultivate the whole area, it should invite its toties and sweepers to cultivate the land in the absence of any offer from ryots. Land thus cultivated ought to be highly productive, and the municipality could well afford to allow a certain share of the profits to the staff, who have worked to secure the success of the experiment. A practical demonstration of the efficacy of night-soil as manure would be of the greatest value, and is, in fact, the only way in which it may be expected ryots would be persuaded to follow its example. There need be no fear that any caste prejudice will stand in the way of the ryot using such manure, provided he is convinced that the material is really of utility; this has, at least, been the experience in several parts of the country. By the methods suggested, or other mode, the municipality should aim at securing this conviction. Any little expenditure upon the experiment, may be regarded in the light of a profitable investment.

(17). *Private scavengering.*—There can be no doubt that the successful working of the private scavengering system is of the greatest importance in retaining the town in a cleanly condition. Only 167 houses of a total of 2,918 are, however, attended to, under this method. There are special reasons why it should be carried out with exactitude in this municipality. Such pilgrim houses as were entered were found either to be devoid of latrines, or to have these represented only by corners in the compounds—for removal whence no arrangements existed. In the case of one large chuttram (Narrashanah's), although a latrine has been built, the owner apparently, to save himself the expense of having it cleaned, maintains it shut. Under section 207, the municipality has full power to compel the provision of private latrines, and I strongly advise that they determine that not a single house known to receive pilgrims either for charity or for money be allowed longer to be without this necessary sanitary adjunct. In this connection, the new chuttram built by the Mahunt should be carefully watched, and it should be seen that conservancy in all respects is carefully attended to.

(18) Six toties are engaged, or one toty for 28 houses. This is probably more than the men can attend to correctly under present circumstances, as they are required

Chairman's Remarks.

The instructions conveyed herein will be attended to for the future.

Buckets or some other closed conveyance will be supplied to the scavengers, and necessary arrangements will be made to meet the suggestions.

Inspection Notes.

to carry the contents of latrines out to the night-soil depôt— a distance, including the area of town, of about two miles. The transport is effected in open baskets—a most objectionable method; but I understand the municipality is about to provide iron closed buckets. If the men were relieved of the toil of carrying the excreta such a distance, they could easily look after forty houses each, and thus both enable the municipality to include more houses in the scheme as well as reduce the charge per head. This could be accomplished by having correct iron covered conservancy pans for each latrine, and a small covered iron bucket for each private toty. The toties could then carry the excreta to the nearest latrine and deposit them in the pans, whence they could be removed by the carts above described.

V. (19) *Graveyards.*—Both the Hindu and Muhammadan burial-grounds are between the hill and the town, and in the direct watershed of the Tathia gunta, one of the two chief tanks of the town. Irrespective of this tank being abandoned when the new water-supply is arranged, it is not desirable in the case of a town with so pervious a soil that the graveyard should be so placed that the sub-soil flow through it is towards the town. I would, therefore, advise that a site on either of the flanks, or the opposite side of the town, be obtained.

VI. (20) *Markets.*—The market is of the ordinary pyal type sheltered by a roof. Slabs are used for the flooring, but these are rough, and are not pointed with Portland cement. All irregularities should be chiseled off, and new slabs be placed where necessary, so as to make the surface uniform and permit no lodgment of filth. The joints should be pointed with Portland cement, both on the floor and in front of the basement. The pillars should be painted with white silicate paint; also the dividing partition, after it has been plastered with Portland cement. The well should be enclosed and a chain pump be provided. The cost of a suitable pump would be about Rs. 60.

(21). *Fish Bazaar.*—This is a private market. Fish are sold upon the flooring, which is walked over by customers. Small Cuddapah polished slabs should be provided for each seller of fish. A corrugated iron roof should also be provided for shelter. The wall for five feet from

Chairman's Remarks.

Will be attempted.

The improvements suggested herein will be duly attended to as early as possible.

The fish market owner was communicated with an extract from this suggestion for doing the needful.

Inspection Notes.

the floor should be cement plastered, and painted with white silicate paint.

(22). *Vegetable Market.*—The municipality has purchased a small site at a cost of Rs. 600 for a vegetable market. Only the fact that no other site can be procured within the means of the municipality, can afford an excuse for the very confined space that will be placed at disposal. In view of the fact also that the Mahunt applied for a license for holding a private market in a well populated portion of the town, the necessity for the municipality launching out into this expenditure before it has provided for a correct conservancy, is not apparent. At the request of the Mahunt, I inspected the site he had suggested, and consider that, provided certain improvements are effected, it would be all that is required. If the Mahunt is still willing to get the place into correct order, I would advice the municipality not to oppose his reasonable request to hold a market. But he should be required to put a suitable roof throughout and provide a drain along the whole front ending in a cesspool in default of a correct outlet. The cesspool should be built of masonry with a clay backing, and to be lined with Portland cement; to be provided with an air-tight cover and be ventilated by a suitable pipe. The existing gneiss slabs should be pointed with Portland cement throughout. The Mahunt should further be required to show how he intends to provide a sufficient and correctly protected water-supply.

Chairman's Remarks.

Owing to inconvenience felt by a majority of the public in respect of the Mahunt's market, and also to the gross atrocities which the Mutt servants were committing towards innocent vegetable sellers there, most of whom were females from the surrounding villages, and to the defective construction of the building as well, he was refused a license when he applied for the same some three years ago. His untimely application has also formed one of the main reasons for such a refusal. Further, he made some improvements to the said building only very recently, that is to say, some time before the inspection of the spot by the Sanitary Commissioner. With the object of having a market for its own, the council selected the present site for the purpose. In doing so, the council was careful to note that the place was just in the heart of the town where people could command all comforts and security, besides being free from violence by any one. The land was accordingly purchased for Rs. 1,246, of which Rs. 637 have already been paid and Rs. 609 remain unpaid pending adjudication in the Civil Court. The land was acquired under the Land Acquisition Act and put in possession of the council by the Revenue authorities. Undoubtedly as there was no other place more suitable for this purpose, the present site had to be purchased. It may not be out of place here to mention that the Mahunt has the option to maintain or withhold his market according to his will and pleasure. In such circumstance, the council cannot be considered to have been inadvisable in its selection of the site under reference. As for the correct conservancy of the place, every possible arrangement was proposed to be made in consultation with the Sanitary officers. The council is, however, now in a great dilemma after the inspection of the town by the Sanitary Commissioner whether it could utilize the land for the purpose intended for or abandon the project altogether. The Mahunt was communicated with an extract from this, so far as it relates to his vegetable market, but he has not expressed his views till now in carrying out the improvements suggested by the Sanitary Commissioner. If he agrees to do the improvements suggested by the Sanitary Commissioner, the council will think of granting him the

Inspection Notes.

Chairman's Remarks.

(23) *Slaughter-house.*—This is merely a space enclosed by bamboo tatties. The ground becomes saturated with blood. A correctly built slaughter-house is a necessity. A plan should be obtained from the Sanitary Board.

license. Nothing, however, prevents the council to have its own market in addition just in the heart of the town in the locality acquired after a good deal of deliberation, delay and expense.

In my opinion the new market proposed by the council is unnecessary, and moreover the site does not appear to me to be a good one. It is much too cramped. The Mahunt's is on a more convenient site.

(Intld.) G. P.

The council finds it extremely difficult to acquire at a suitable distance a piece of land for this purpose. The present site being close to the supply channel of Ramachandra Gunta—a washing and bathing tank—some objections is advanced as to the erection of a pucka building there. Besides the land is a private property. It is only under this circumstance the council is hesitating to provide a pucka building.

VII. (24) *Vaccination.*—The following table shows the result of the working of the compulsory clauses of the Act as to vaccination. It is evident that much more effort in *enforcing* vaccination is requisite :—

Total births during preceding six months, *i.e.*, births registered between 1st July and 31st December 1893.	Number vaccinated.		Number vaccinated a second time, first operation proved unsuccessful.		Postponed under Medical certificate at the end of six months.	Died.	Left the town.	Unaccounted for.	Ratio of successful vaccinations to total births per cent.
	Successfully.	Unsuccessfully for the first time.	Successful.	Unsuccessful.					
228	121	7	..	..	29	48	23	..	53 07

Whilst I was examining the condition as to vaccination in a pyal school, one of the by-standers ventured the remark that whilst he did not deny that vaccination was of some utility, it was untrustworthy, and its protective influence soon wore off. I was able, however, with the material before me to convey a sufficiently practical lesson, to secure full acquiescence in the efficacy of vaccination. Of sixteen unprotected children, fifteen had been attacked with small-pox; of nineteen children who had been protected by vaccination, only three bore slight marks of small-pox. The contrast between the highly scarred children (in one case an eye had been damaged) who, unprotected had been subject to the

Inspection Notes.

Chairman's Remarks.

disease, was striking, when compared with the barely recognizable marks found in the attacked vaccinated cases. The following table shows the vaccine success rate and total vaccinated during the last three years :—

Years.	Total number vaccinated.	Percentage of success.
1891-92	653	91·0
1892-93	527	94·5
1893-94	573	95·3

(25) The floor of the vaccine calf depôt requires to be remodelled, so as to permit of correct drainage, whilst retaining the calf in position. The animal should not be allowed more rope than enough to stand up and lie down. Allowing for the animal to lie comfortably on its side, the distance from one paling to the other should not be more than to permit of the animal lying down comfortably. The flooring should be made with very shallow fish-bone pattern drains in the cement. The calf should always be provided with clean straw for bedding.

Necessary improvements will be effected as suggested.

VIII. (26) *Registration.*—One Registrar on a salary of Rs. 8 (!) is employed. Instead of directing persons to register births and deaths at the office, the municipality relies upon members of its staff ascertaining that a birth or death has occurred; it then sends a *notice* to the persons concerned, that it is their business to register. This is a most undesirable interpretation of the compulsory clauses of Act IV of 1884. As the law stands all inhabitants are bound to register at such places as the municipality appoints, and it should be the business of the municipality to prosecute all such as fail to carry this order out. The defective results secured by this mode may be *estimated* by the following figures :—

Census population of 1891.	Estimated population on 31st December 1893.	Population on 31st December 1893 according to registration results.
14,242	14,542	13,992

The following is an abstract from the statistics gathered during the last three years up to date :—

The procedure adopted by the council was simply to obviate the escape of cases from registration especially as many of the inhabitants are illiterate. Further, the instructions to its staff in serving on the parties concerned notices requiring them to register such cases within the prescribed time otherwise they would be criminally liable to punishment, was simply intended as a check over the staff itself for calling upon it to account for omission, if any, of the above cases and also to serve as a precaution to the parties to do their duty with promptitude. The council would, however, take the matter into deep consideration and make necessary amends. It may be noted that the existing forms are stated to have been read over to Dr. Laing, the then Sanitary Commissioner, and that he raised no objection to their adoption.

Inspection Notes.

Chairman's Remarks.

Year.	Birth rate per mille of the estimated population.	Death rate per mille of the estimated population.	Ratio per cent. of deaths.						Ratio per mille of deaths among children under one year of age to registered births in the preceding year.
			Cholera.	Small-pox.	Fevers.	Dysentery and Diarrhœa.	Injuries.	Other causes.	
1891	26·8	30·5	16·5	1·3	28·1	10·8	1·6	41·7	219·4
1892	22·0	29·2	3·8	3·5	41·7	10·2	1·2	39·6	223·4
1893	28·3	35·8	6·2	11·2	31·2	15·2	4·1	32·1	293·3
1894	27·0	33 6	4·9	2·4	31 7	7·4	2·4	51·2	233·6

IX. (27) *Sanitary Administration.*—The municipality is well aware of the special reasons why sanitation should receive at their hands very careful attention, having regard to the town being an important point of pilgrimage. The sanitation of pilgrim houses should, therefore, be at all times an object of special care. The Act they administer gives very full powers for the retention of all dwellings in a cleanly condition, and it but requires an effort on the part of the municipality to enforce it. It is essential that defœcation in the streets, as now pursued with apparently no fear of the legal consequences by the inhabitants, *cease absolutely*. The District Magistrate has notified his intention of fully supporting the municipality in putting a stop to this disgusting and unsafe practice, and it now rests with the municipality to show they are in earnest on this subject. Such sights as were found by myself and the District Magistrate in the vicinity of the Pentah drain, ought to be an impossibility in the case of a council administering Act No. IV of 1884. During the whole of 1893, only 134 cases were prosecuted by the Police. This number itself shows that very little attention is paid to the working of the Town Nuisances Act by the Police. But this apathy, doubtless, would not be exhibited had the municipality vigorously protested on the subject.

The attention of the Police in abating the commission of nuisances in public streets has been so very often called upon, but the result turned out bespeaks for itself without any comment on the subject.

(28) Both the staff of toties and sweepers should be strengthened, as soon as the necessary plant for removal of rubbish and night-soil has been acquired. I would advice that the Sanitary Inspector be required to devote his time as strictly to sanitary matters as possible; *e.g.*, bill collection should form no part of his duties. I would also advise that this man be mounted, to enable him to perform his duties correctly and, for that purpose, an allowance of Rs. 15 per mensem would seem but equitable; the present allowance of Rs. 8 is inadequate; a man on his slender pay cannot be expected to support an animal, and take the risk of its break down on this sum.

Due consideration will be given in the ensuing budget in this respect. It has been remarked that the Sanitary Inspector should be free from collection duty. This man is, in addition to his conservancy duties, entrusted with the collection of private scavenging fees alone and nothing else. As contemplated in paragraph 16 of Mr. Stokes' memorandum of municipal accounts embodied in G.O., No. 1059, Financial, dated 29th May 1883, it is clear that the said business should be done by that officer alone for obvious reasons. Further, in many municipalities, I understand that this duty is done by Sanitary Inspectors themselves. The Sanitary Inspector of this town has been given two assistants styled "maistries" for immediate charge of the supervision of the conservancy. In these circumstances, the council could not see any reason why Government Order referred to above should be disregarded. The Sanitary Inspector is now paid Rs. 15 as salary *plus* Rs. 5 as horse allowance. He is paid in addition an allowance of Rs. 5 for the supervision of the private scavenging. The object of the council in allowing the said extra allowance to the Sanitary Inspector was simply to give encouragement to him in the shape of promotion. The council considers to keep in abeyance for some time to come the question of increasing the horse allowance from Rs. 5 to 15 which is just equal to his pay.

FORT ST. GEORGE,
12*th September* 1894.

(Signed) W. G. KING, Surgeon-Lieut.-Col.,
Ag. Sany. Commr., Madras.

No. — .

Forwarded.

14*th September* 1894.

(Signed) G. F. T. POWER,
Acting Collector.

No. 2413.

Forwarded.

17*th September* 1894.

(Signed) R. F. GRIMLEY,
Ag. Head Asst. Collector.

EXTRACT from the Minutes of Proceedings of the Municipal Council, Tirupati, passed at its general meeting held on the 8th December 1894.

* * * * *

1. Read inspection notes of the Sanitary Commissioner for Madras, on the Municipal town of Tirupati and the replies of the Chairman thereto.

Resolved that the same be approved of and submitted to Government.

* * * * *

Forwarded.

17*th December* 1894. (Signed) R. F. GRIMLEY,
Ag. Head Asst. Collector.

Forwarded.

20*th December* 1894. (Signed) G. F. T. POWER,
Acting Collector.

ORDER—dated 26th February 1895, No. 303 M., Local and Municipal.

Recorded with the following remarks:—

(1) The Sanitary Engineer's attention will be drawn to Dr. King's remarks regarding water-supply in paragraph III (4) of his notes.

(2) The Municipal Council will be requested to reconsider, with reference to the Collector's remarks on the subject, its proposal to open a vegetable market of its own, and to report the result of its deliberations to Government.

(3) The attention of the Inspector-General of Police will be drawn in the Judicial Department, to the Chairman's remarks on paragraph IX (27) of the notes.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Chairman, Municipal Council, Tirupati.
" Collector of North Arcot.
" Sanitary Commissioner.
" " Engineer.
" Judicial Department.
Editors' Table.

Exd. Shaik Karim.

Govt. of {1895} Madras.

LOCAL AND MUNICIPAL.

Issued

Recd. *Encl.*

G.O., 26th Feb. 1895, No. 303 M.

FEBRUARY.

Inspection Notes.

Recording, with remarks, Sanitary Commissioner's — on the Tirupati Municipality.

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