Local & Munl. (1895-) Department.

MISCELLANEOUS.

G.O., No. 968 Pc

DATED 12th June 1895.

[Despatch Abstract.]

Inspection Notes.

Informing the Commissioners of the Madras Municipality that Government is not prepared to depart from the usual course of procedure and that it awaits a report from them as to what action they are prepared to take on the proposals of the Sani-tary 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.
a-	2536 M/95	Jo	1532 dt 7 7 95				

Enclosure No 2 to G. O. No 92

"Madras Times"
30. April 1895

MUNICIPALITY OF MADRAS.

A GENERAL MEETING of the Municipal Commissioners for the City of Madras was held at the Municipal Office yesterday at 5 P.M. Present:—Col. G. M. J. Moore, C.I.E., (President), Messrs. F. Rowlandson, P. Theagaroya Chetty Garu, R. N. Pragasa Mudaliar Avargal, S. Gurusawmy Chetty Garu, M. Venkataramiah Chetty Garu, C. Yetherajulu Nayadu Garu, P. M. Sivagnam Mudaliar Avargal, Cowasjee Eduljee, Haji Mahamad Abdul Hali Badsha Saheb, M. Varadarajulu Chetty Garu, G. Subbarayalu Chetty Garu, V. Mahomed Sheriff Khan Bahadur, J. DeCaster, V. Varadappa Nayudu Garu, the Hon'ble Mr. P. Rungiah Nayudu Garu, W. S Venkataramanjulu Nayudu Garu, N. Subrahmanyam, R. F. Grant, G. Subramania Iyer Avargal, Surgn.-Major J. Maitland, and R. Balajee Row Avargal.

The PRESIDENT in opening the proceedings said that he had to answer some questions sent by Dr. Vardappa Naidu.

QUESTIONS AND ANSWERS.

The following are the questions and answers.

WATER WORKS LOAN.

Q—Has the loan for 4 lakhs of Rupees advertised for the extension of water works of Madras been taken up by the public?

A—Yes.

Q—If so, kindly state the highest and lowest tender per hundred? What was the rate of the tender or tenders accepted? What was the total amount tendered? What was the amount of premium gained for 4 lakhs?

A—Highest—8¼ premium. Lowest—Par
Rate accepted—8¼ premium
Total—tendered—Rs 17.17 500
Premium gained—Rs.32,500

Q.—If the Commissioners agree and the Government sanction the raising of a loan for erecting a General Central Market, do you think that the public will take up the market loan just as they did the loan for water works?

A.—It is impossible for me to say; it entirely depends on the state of the money market. I see no reason why they should not.

BICYCLES AND TRICYCLES.

Q.—Will the President be pleased to state the total number of Bicycles and Tricycles assessed for the year 1894-1895 and the total amount of assessment collected for them during the same year?

A.—1st Half year 39 bicycles. 5 tricycles.
2nd " 72 " 14.
1st " Rs 108.
2nd " " 213.

Q.—Is any toll levied on a bicycle or tricycle at the Toll-gates?

A—No.

Q.—What would be the amount of loss that would be sustained by the Municipality if the tax on bicycles and tricycles were abolished?

A.—About Rs.400, more or less, as things stand at present, but bicycles are greatly on the increase.

WATER SUPPLY.

Q.—Is it not feasible to give a previous notice, at least of three hours, by tom-tom, to the inhabitants, whenever the water supply is to be cut off on account of repairs, as the sudden stoppage of the water supply on the 13th instant without previous notice had caused great inconvenience and hardship to the inhabitants?

A.—Due notice is always given whenever water is to be shut off. In this case no notice could be given as the stoppage was due to a sudden burst in the 42nd main.

ELECTION OF MEMBERS OF THE STANDING COMMITTEE.

Mr. M. VENKATRAMIAH CHETTY observed that before the Commissioners elected the members of the Standing Committee he wished to make a few remarks. He thought it would be a good plan if some system could be adopted in electing the members of the Standing Committee. There were seven members on the Committee, and it would be well if each Division could be properly represented on it. There were 6 Divisions in the whole city, in one of which the President lived, so that that particular Divisions need not be represented in the Standing Committee, as the President was an *ex officio* member of it. At the last Budget Meeting he found the Divisions in which the members of the Standing Committee resided had been most perfectly looked after while others had not been so dealt with.

In reply to a question from Mr. Rowlandson, the President replied that the retiring members of the Standing Committee were:—Mr. R. Balakistnama Chetty, Mr. W. S. Gantz, Mr. G. Subramania Iyer, Mr. N. Subramaniam, Mr. P. Theagoroya Chetty, Mr. W. S. Venkataramanjulu Naidu and Dr. Varadappa Naidu.

The Commissioners next proceeded to elect the members of the Standing Committee by a ballot.

The following seven gentlemen were duly elected:—

	No. of votes.
The Hon'ble P. Rungiah Naidu	... 14
R. Balajee Row	... 13
S. Gurusami Chetty	... 12
Dr. Varadappa Naidu	... 11
W. S. Venkatramanjulu Naidu	... 11
P. M. Sivagnana Mudali	... 10
P. Theagoroya Chetty	... 10

TRAMWAY RULES.

The PRESIDENT moved "That the Rules framed under Act XI. of 1886 (The Indian Tramways Act) as circulated to the Commissioners be adopted."

He said that in the Tramway Act, the local authority, that is the Municipality, should make certain rules, and publish them for a month.

Mr. J. DECASTER seconded the resolution, which, when put to the vote, was carried.

SANITARY COMMISSIONER'S INSPECTION NOTES.

The PRESIDENT said that the next subject was the consideration of the G. O. No. 18, M. Mis., dated 8th January, 1895, on the Sanitary Commissioner's [illegible] of the city of Madras, for 189[illegible]

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tion, must go on dying at the rate of 40 per 1,000 per annum, instead of 20 per 1,000 per annum, or, according to the population, about 20,000 per year, instead of 10,000 per year. In this connection it may be observed that a number of Burial grounds had to be closed, and new ones opened not many years ago, but these latter are all now getting so full that the President is at his wits' end to find suitable sites for others. Dr. Cook does not seem to question Dr. King's facts so much as his conclusions and recommendations. So far as the facts go, the truth appears to be that insanitary matters and conditions have been growing and hardening ever since Madras came into existence 255 years ago, till they have now attained such colossal proportions and strength as to be beyond all control, Municipal or otherwise. If anyone doubts this, let him pay a visit to Brick Kiln Road, Pursewalkum, where he will come upon a huge pile of rubbish, sewage, refuse, etc., of such enormous length, breadth, and height, as to look like a detached spur of the Eastern or Western Ghats, and if anyone wants to know more, let him walk along the banks of the Cooum, to the South-West of Chintadripet, between 7 and 8 A.M., when if he is not knocked down by the most terrible stench known to man, he may congratulate himself on his escape. Except the portion sunk on the soil and utilised in the grass farms the sewage has been run into the Cooum for 255 years as the most convenient place of storage for the benefit of posterity. The quantity which lies hidden there may be imagined when Dr. King says that about one million gallons pass into it daily at present. But, after all, Dr. King's notes show nothing more than what might be expected of a city of 466 700 souls without any regular system of sewerage or drainage, and without the ways or means of getting finally rid of all the ever accumulating insanitary matters. No one who studies the subject will think of blaming the Municipality for all this. It is well known that in the pre-municipal times, Madras was a very jungle of insanitation. When the Municipality made its appearance it was allowed to collect a certain amount of taxes and could only work within its income, and this was just enough to keep up appearances by removing insanitary matters out of the way and out of sight as far as possible, and to control insanitary conditions to a certain extent. But as already remarked, there never was the way or the means of finally getting rid of them, and this is why we are still surrounded by so vast and unmanageable an accumulation of human, animal, and vegetable remains in the forms of refuse, sewage rubbish, &c. Everyone knows that the Municipality has for years past made great and special efforts to fight insanitation, in which money raised as loans, &c., was spent on water supply, Black Town drainage, &c. But, the undiminished death rate recorded the futility of all such attempts. There are schemes, although yet only on paper, for drainage and sewerage and the incineration of rubbish. The Health Officer in the concluding part of his remarks advises us to stick to these. But as the Madrassee is in the position of the drowning man who will catch at straws, we might do well to take into further consideration all the more important of the measures recommended by the Sanitary Commissioner which may be found in any way to help us out of our difficulties. But after all the fight against so formidable an enemy as Madras Insanitation is a matter of money and plenty of it, and unless a paternal Government aid us with very liberal grants, Madras must continue to bear the odium of being, as Dr King says, the most notorious city except four in the world for the rapid killing of citizens, and Madrassees must go on dying at the rate shown above, or, if unwilling to die so fast, they must make up their minds to take kindly to greatly increased Municipal taxation.

Mr. G. SUBRAMANIA IYER, in speaking against the amendment, pointed out certain of the drawbacks in the Sanitary Commissioner's Notes, and said that in half a dozen instances, at least, there was absolute exaggeration. He then went into a few of the suggestions made by the Sanitary Commissioner, and pointed out how difficult it would be for the Commissioners to carry them out.

Dr. MAITLAND said that he did not see any reason for the appointment of the Committee at all. He quite agreed with Mr. Rowlandson that nothing more need be done at present than referring the subject again to Government.

The PRESIDENT thought that it would be practically useless to appoint a Committee in view of the fact that the report on the question of drainage and water-supply would soon be circulated amongst the Commissioners, and that the report on the Sanitary defects as noticed in the Administration Report was now under circulation among them.

Mr. R. N. PRAGASA MUDALI, with the consent of his seconder, withdrew his amendment.

The original proposition was then put to the vote and lost.

Mr. ROWLANDSON proposed "that the Commissioners respectfully desire to be favored with the views of the Government on the Inspection Notes of the Sanitary Commissioner as read with the Comments thereon of their Health Officer."

Mr. R. F. GRANT, seconded the proposition. The proposition was then put the vote and carried.

THE MUNICIPAL ENGINEER.

The PRESIDENT said that the next business was the G. O. No. 520, M, Mis, dated 22nd March 1895, requesting to get the consent of the Commissioners to Mr. R. E. Ellis, the Municipal Engineer, being granted leave without allowances for the period he acted as Sanitary Engineer, and to accept from him the Pensionary contribution.

The Government admitted that they had made a mistake and asked the Commissioners to do the only thing possibe to assist them in remedying the defect—that was to grant Mr. Ellis leave with retrospective effect from the 1st January 1894 to 1st January 1895. After some discussion on the subject the following resolution on the motion of Mr. M. Venkatramiah Chetty was carried.

"That the request of Government be acceded to."

MISCELLANEONS.

The PRESIDENT suggested that the propositions of Mr. R. N. Pragasa Mudali in regard to annual rent on plants and of Mr. M. Vencatramiah Chetty about bicycles might be deferred until test cases in them were disposed of by the Court. There is a probability of a test case cropping up in regard to Bicycles.

In reply to a query from Mr. Grant, the President observed that the Solicitor's opinion was that under a, ruling at Home bicycles were not taxable, However, under the Act, he

THE MADRAS MUNICIPALITY.

A General Meeting of the Municipal Commissioners for the City of Madras, was held at the Municipal Office yesterday afternoon, to transact business of a miscellaneous nature.

There were present:—Colonel G. M. J. Moore, C.I.E., *(President)*, Mr. F. Rowlandson, Mr. P. Theagaroya Chetty, Mr. R. N. Pragasa Mudaliar, Mr. Salla Gurusawmy Chetty, Mr. M. Vencataramiah Chetty, Mr. C. Yetherajulu Nayudu, Mr. P. M. Sivagnga Mudaliar, Mr. Cowasjee Eduljee, Mr. Haji Mahamad Abdul Hali Badsha Sahib, Mr. M. Varadarajulu Chetty, Mr. G. Subbara[illegible]alu Chetty, V. Mahomed Sheriff, Khan Ba[illegible]ur, Mr. J. DeCaster, Mr. V. Varadappa Naidu, the Hon'ble P. Rangiah Naidu Garu, Mr. W. S. [illegible]ncataramanjulu Naidu, Mr. N. Subramanyam, M[illegible] R. F. Grant, Mr. G. Subramania Iyer, Surge[illegible]-Major J. Maitland and Mr. R. Balajee Row.

INTERROGATORIES.

The President in opening the proceedings said that the first business on the agenda was the election of the Standing Committee, but before going to that he had to answer some questions put by Dr. Varadappa Naidu.

The following are the questions and answers.

WATER WORKS LOAN.

Q.—Has the loan for 4 lakhs of Rupees advertised for the extension of water works of Madras been taken up by the public.

A.—Yes.

Q.—If so, kindly state the highest and lowest tender per hundred? What was the rate of the tender or tenders accepted? What was the total amount tendered? What was the amount of premium gained for 4 lakhs?

A.—Highest—8¼ premium. Lowest—Par.
Rate accepted—8¼ premium
Total tendered—Rs.17,17,500
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Q.—If the Commissioners agree and the Government sanction the raising of a loan for erecting a General Central Market, do you think that the public will take up the market loan just as they did the loan for water works?

A.—It is impossible for me to say; it entirely depends on the state of the money market. I see no reason why they should not.

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Q.—What would be the amount of loss that would be sustained by the Municipality if the tax on bicycles and tricycles were abolished?

A.—About Rs. 400, more or less, as things stand at present, but bicycles are greatly on the increase.

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Q.—Is it not feasible to give a previous notice, at least of three hours, by tom-tom, to the inhabitants, whenever the water supply is to be cut off on account of repairs, as the sudden stoppage of the water supply on the 13th instant without previous notice had caused great inconvenience and hardship to the inhabitants?

A.—Due notice is always given whenever water is to be shut off. In this case no notice could be given as the stoppage was due to a sudden burst in the 42nd main.

THE STANDING COMMITTEE.

The President:—Now we proceed to the election of the Standing Committee. You have got to elect seven members:—

Mr. M. Venkatramiah Chetty said that before the Commissioners proceeded to elect the members of the Standing Committee he wished to make a few remarks. From the last Budget, it was clear that those Divisions in which the members of the Standing Committee resided, received most attention from the Municipality, while those Divisions wherein no member of the Standing Committee resided were neglected. He did not make a complaint, but the largeness of the town was such that its wants could not be ascertained. He therefore, thought it would be a good plan if some system could be adopted in electing the members of the Standing Committee. There were seven members on the Committee, and it would be well if each Division could be properly represented on it. There were 8 Divisions in all: in one of which the President resided so that that particular Division need not be represented on the Standing Committee, as the President was an *ex officio* member of it. As regards 8th January, 1895, on the Sanitary Commissioner's Inspection Notes of the City of Madras, for 1894.

Mr. Vardappa Naidu said:—"I beg to propose that the Commissioners, while greatly appreciating the Inspection notes and diagrams compiled by the Sanitary Commissioner, regret that, in the present state of their finances, they cannot attempt to carry out all his proposals, and have been already doing their best to remedy some of the sanitary defects, consistent with their limited finances." I have to thank Dr. King for the deep interest evinced by him in the welfare of the City of Madras by presenting us with these Inspection notes illustrated by diagrams. There is no doubt that he must have spent a great deal of his time and labour in their compilation. By a careful perusal of these notes a vast amount of information may be gathered and opportunity is given for us to rectify the defects. The remedial measures suggested by Dr. King are the very ideals that require a vast amount of money to carry them out. But our finances, at present, are very poor, and we cannot even attempt to carry all of them out. But we have not been idle during the past year. We had been doing several things in regard to the drainage and water supply according to the means we have at our disposal. We have appointed local committees with the object of rectifying our most needed wants. The Committee, appointed to report on the sanitary defects of Madras, had five sittings and had circulated its report to the Commissioners. They have suggested several important matters in connection with the defects complained of. The Committee for the disposal of rubbish of the City had recommended incinerators as the most effectual method of getting rid of the rubbish. The question is sent to Government for their approval. There is another Committee deliberating over the Cousin's scheme, and in the course of a few days, several valuable suggestions will be forthcoming in regard to the Drainage and Water Supply of the town. There is also a Market Committee who, I am told, have selected a very central site in the People's Park: when effect is given to all these suggestions, many of the defects complained of by the Sanitary Commissioner will be remedied.

Mr. Venkataramiah seconded the proposition.

Mr. G. Subramania Iyer supported the resolution. He himself had intended to move a resolution to that effect, but he was glad his friend Mr. Vardappa Naidu had done it. He (the speaker) had read with some attention these "notes," and he must say that most of the remarks and suggestions made by the Sanitary Commissioner were impracticable and required unlimited resources which the Municipality could ill-afford at present. The Sanitary Commissioner had in his mind probably a new town to be laid out with a fresh colony of people and with subsoil conditions perfect in every aspect. Having such a situation in mind, the Sanitary Commissioner had made his suggestions which were quite impossible of being realised. He did not for a moment deny that the Sanitary Commissioner had made some suggestions which were entitled to their respect and consideration, but most of his suggestions were such as were impossible to carry out in the present state of the finances of the Municipality. Their Health Officer had traversed the whole report and had reviewed the suggestions made by the Sanitary Commissioner and pointed out the suggestions that were impracticable. In regard to two of the most important suggestions namely—drainage and water supply—they had the recommendations of an expert sent for from England, and they had been considered by Government and are about to receive effect in a somewhat modified form by the Commissioners. Those that made suggestions for the improvement of the city should calculate the resources of the rate-payers and of the Municipality which unfortunately were not unlimited. None the less, he thanked the Sanitary Commissioner for the help he had given them. It was also his duty to recognise the great ability and trouble that their Health Officer had shown in reviewing the suggestions made by the Sanitary Commissioner and pointing out what suggestions of his were practicable and what were not. His service deserved full acknowledgment from the Commissioners.

Mr. R. N. Pragasa Mudali said that he regretted very much that by one stroke of the pen they proposed to set aside a most valuable paper prepared by a sanitary officer. There could be no doubt there were points suggested which were impracticable, and because some of them could not be given effect to at once, it was unfair and detrimental to the interests of the Municipality to set aside the whole of the suggestions. He had looked very carefuly into the notes and thought that several of the suggestions could be attended to. He would, therefore, propose that the following words be added to the resolution, "but that the Sanitary Commissioner's Inspection Notes be referred to

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MADURANTAKAM TEMPLE.—A Correspondent writes:—The interference of the Tahsildar, Mr. Arumugam Pillay, in the management of the Hindu High School of this place and in the conviction of the two Brahmin boys have embittered the feelings of the people here. On Friday the 19th instant, when this gentleman and many other officials went to the temple as worshippers, all on a sudden he called the Durmakartha and wanted him to dismiss a *Dasi* for what reasons God knows. The Durmakartha refused and the Rai Bahadur Tahsildar began to pour words of abuse on the innocent Durmakartha. A few days after a petition was received by him from some Tengalai Sudras who are utterly unconnected with the temple, stating that a new stone cut Vadagalai namam is put up at the entrance of the temple. The Taluq Magistrate enquired into the case for four days and passed an *ex parte* order under Section 144 of Criminal Procedure Code to remove the namam within 24 hours as its existence was likely to cause immediate danger and riot!! The Durmakartha thereupon put in a petition to the District Magistrate to set aside the *ex parte* order of this Taluq Magistrate pending appeal which was granted. I may add that this place is a strong hold of the Vadagalai sect, and within the memory of any living being here there never was any dispute in this temple between these two sects!

LALGUDY TEMPLE CASE.—A Correspondent writes:—After the hearing of the case on the 13th instant, Mr. E. C. Rawson, the Acting District Magistrate of Trichinopoly, passed a proceedings declining interference with the order of the Deputy Magistrate and discharging his *ad interim* order. He says "To sum up. Rightly or wrongly the counterpetitioners were dismissed. Rightly or wrongly, they remained in possession and no serious steps have been taken by the Committee or by the petitioners to recover possession from them. The Committee have no power to dismiss the counterpetitioners, except for good and sufficient cause, the burden of proving which lies on them. No presumption can be made therefore that the dismissal of the counter-petitioners was legal and right or that their retention of possession was wrong." He remarks in another place "Nor can I see why a Temple Committee should be put in a different position from any one else who seeks to recover possessson of property wrongfully held by another." In reply to the orders of Government, as contained in para. 2 of the Board's Standing Order, No. 140, to the effect that "Government can only recognise those servants or Trustees of the Pagoda who are recognised as such by the committee," he says, "This order, however, merely refers to the payment of allowances for temple services and is clearly not intended to apply to questions arising under Section 144 of the C. P. C." Rules applying to receiving money are not applicable to expending the same!!!

COURT FEES IN PAUPER SUITS.—An interesting appeal came on for hearing yesterday before J. W. Best and S. Subramany Iyer J. J. a son filed a suit *informa* a pauperisin the DistrictCourt of Chingleput against his father for his half share of the family property and for a declaration that the alienations made by his father were not binding on him. The District Court as well as the High Couat in appeal held that the alienations were binding and gave a decree to the son for his half share subject to the alienations made. They also declared that the Court fees payable by the plaint in the case to Government should be a first charge against the subject matter of the suit. Shortly after one of the alienees sued the father on the mortgage of his property in the Court of the District Munsiff of Chingleput obtained a decree and sold the property the proceeds of which were lodged in Court as Government had put in their claim for the Court fees due and contended as already held this should first be discharged before the alienees claim was met from such proceeds. Hence the present appeal. Mr. Seshagiri Iyer for the appellant contended that the word subject matter of the suit referred only to the plaintiffs equity of redemption of his half share and cited several cases on the subject. Mr. E. B. Powell, the Government Pleader, on behalf ofthe State held that theCrown had a priority to all claims. Their Lordships held that the Government had no priority over the mortgagee in respect to rights which had been created to the latter prior to the institution of the suit on which date the rights of the State came into existence. They therefore reversed the decree of the Lower Court.

THE CALICUT MUNICIPALITY.

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TELEGRAMS.

INDIAN TELEGRAMS.

(FROM OUR OWN CORRESPONDENTS.)

THE CHITRAL EXPEDITION.

SHERAFZUL CAPTURED.

ALLAHABAD, *April* 29.

Sher Afzul, his brothers and 300 followers, were captured and brought to Chitral by the Khan of Dir's men. They are all confined in the fort.

ANOTHER CHIEF CAPTURED.

The Beg of Turikho was also captured. The party had 81 Martinis and Sniders.

CONGRATULATIONS.

The Duke of Cambridge and the Secretary of State congratulate the Commander-in-Chief and Officers and men on the relief of Chitral.

TELEGRAM FROM COLONEL KELLY.

A telegram from Colonel Kelly dated 20th April states that the enemy were mining towards South Western tower, commencing from a walled enclosure at 80 yards distance and approached to 5 yards when they were detected. They also constructed a Sangar within 200 yards of the fort.

A MURDEROUS GAZI.

A Ghazi shot Private Cooper in broad daylight. He has been arrested.

THE AMEER'S SON.

Sardar Nasrulla is detained at Bombay. So he cannot reach London to meet Her Majesty.

A JAPANESE CONSULATE IN CALCUTTA.

A Japanese high official arrived at Simla. The object is said to be the establishment of Japanese Consulate in Calcutta.

THE MADANAPALLE CONVERSION CASE.

MADANAPALLE, *April* 29.

In the Madanapalle Conversion Case, Judgment was delivered. The decree is for plaintiffs with costs. The boy is to be made over to the guardians. But the boy is at Cuddapah with Receiver Mr. Chellayya Pillay. The Court is of opinion that the boy is influenced by Missionaries.

REUTER'S AGENCY.

[FROM THE "TIMES."]

A TERRIBLE DISASTER.

LONDON, *April* 29.

Further details received from South America regarding the bursting of the reservoir at Bonsoy, near Espinal, show that the magnitude of the disaster is appalling. As far as it can be ascertained, 140 people were drowned. Reports continue to arrive of immense destruction of property and casualties of every description; several hundreds of people have been rendered houseless and are encamped in pestilent marshes.

GREAT BRITAIN AND NICARAGUA.

LONDON, *April* 29.

Intelligence from Granada states that Nicaragua has formally protested against the landing and occupation of the town of Corinto by the British. She characterises the action of the British as an outrage. To seize an unowed sum by force of arms is, she declares, contrary to all international laws as well as to the common dictates of right, justice and equity. The feeling against the British in the Republic is intense. Senor Jose Santos Zelaya, the President, has urged the Minister for Foreign Affairs to hand the British Minister at Mangua his passports. A mob paraded the streets, yelling and shouting, "down with English tyrants," and tried to remove the British escutcheon at the Legation.

LONDON, *April* 29.

Later telegraphic despatches from Nicaragua report the situation at Corinto unchanged. The neighbouring Republics are …

Enclosure No 4 to G. I. No 92

Inspection Notes of the Sanitary Commissioner for Madras.

MADRAS MUNICIPALITY, 1894.

Remarks by the Health Officer of the Madras Municipality.

1. 2. The elevations above M. S. L. given by Surgeon-Lt.-Col. King are lower than those given by other authorities. Mr. Cousins gives the elevation at from 2 to 24 feet and the average at about 9 or 10 feet. Major Tulloch, R. E., writes, "The town stands on a sandy plain, the lowest parts being 2 to 6 feet and the highest 16 to 24 feet above mean sea level. The average level of the whole of Madras may be taken at 8 to 12 feet above the *datum*."

3. The tanks mentioned are dry during a great part of the year. At the time of the heaviest mortality, the third quarter, they have generally been dry for at least 4 or 5 months. So that any influence they might exercise during or subsequent to periods of heavy rainfall must have entirely disappeared. With one exception they are situated in sparsely inhabited parts of the town specially devoted to cultivation and in years of good rainfall enable water to be stored just long enough to irrigate the cold weather crops. Their abolition would cause considerable depreciation in the value of land over an extensive area and equally wide-spread discontent. According to Sir Auckland Colvin, (Journal of the Society of Arts, May 11th 1894), "it is better that the rural population should live in an insanitary condition than in a condition of acute irritation and discontent arising from efforts, (especially if such efforts at the best must be very partial of success), to improve sanitary surroundings." From the cultivator's point of view the retention of surface water for irrigation is of vital necessity, and in my opinion the economic advantages entirely outweigh the very problematical improvement in the public health to be derived from the abolition of such tanks and of cultivation generally in the sparsely inhabited areas of the Municipality. On more than one occasion the question of stopping wet cultivation in the neighbourhood of habitations has been brought before Government, but it has always been negatived, the last occasion being in the G. O. on the Sanitary Commissioner's report for 1893. Though I do not concur with the general proposition that tanks should be abolished and irrigation stopped in the places mentioned in the report, I would, however, recommend that an exception be made in the case of the Spur Tank. The area irrigated by this tank is not large and is situated in the more populous district of Egmore. The tank could easily be drained into the Cooum river which runs close by, and the bed could be let or sold at a high price for building houses of a superior class, for which there is a considerable demand in the neighbourhood, and the land now irrigated from it is so centrally situated that it could be utilized for other purposes and would not be likely to depreciate much in value. The tank is the property of Government, so the Commissioners could only recommend that action be taken in the matter.

4—14. These paras mostly deal with defects due to the want of a proper system of sewerage which I consider the first requirement for the proper sanitation of the town. I believe the Commissioners could not do better than carry out Mr. Cousins' drainage scheme or as much of it as funds permit.

As regards the filling of tanks with refuse, I have always been opposed to it in principle and have only recommended its adoption in exceptional cases when no other method was practicable for the disposal of rubbish. The inference would naturally be drawn from the report that I had recommended the present rubbish depot near D'Mellow's Road Farm, which is admittedly insanitary, through ignorance or indifference. As a matter of fact I spent several mornings with the Sanitary Inspector trying to find a better place not too far away for our carts, and what influenced me more than anything else in my selection was the notoriously insanitary character of the place, which was a low swampy ground with stagnant pools of green slime where pigs and pariah children wallowed and messed. It was a choice of evils and I preferred to introduce a nuisance in a place where one already existed rather than in one where the existing state of things was comparatively healthy. The President came round and inspected this site and others and approved my selection.

Taking into consideration the fact that people differ widely in their habits and consequently in their production of house refuse, I do not think it fair to a town to condemn it on the ground that the rubbish collected and removed does not come up to the average of a large number of towns taken collectively. If Surgeon-Lt.-Col. King's reasoning process be applied to London we get the following results:—

[The figures are taken from a paper read at the Sanitary Institute, 2nd March, 1894, by Charles Mason, Assoc. M. Inst. C. E., A. R. I. B. A.]

The refuse collected in English towns is about 8 cwt. per annum per head of the population, or about 1 ton per 1000 inhabitants daily.

In London about 4 cwt. per head per annum is removed.

∴ 4 cwt. or $\frac{1}{5}$ ton per head remains unremoved.

Taking the population of London at 4,000,000 we get $\frac{4,000,000}{5}$ = 800,000 tons annually left unremoved.

In 30 years this would amount to 24 million tons or 840 million cubic feet.

In towns like Madras the amount of rubbish contributed by different classes of the people living in different localities varies considerably. It will be seen from the table given in the report that more than Surgeon-Lt.-Col. King's estimate is removed in some divisions. Yet he apparently recommends the Commissioners to distribute their carts according to the numerical population in the different divisions entirely disregarding the habits of the people occupying them. For example, in some parts of the town most of the people eat off leaf plates, in others off crockery: this one item by itself makes a considerable difference when it comes to thousands of people eating two meals a day. In the London 4 cwt. per head we find great variations, Bermondsey contributing 1·17 and St. Luke's 14 cwt. per head.

Their Vestries employ scavenging carts as experience shows they are required and not on an estimated numerical basis.

The Commissioners are well aware that their present methods for the removal and disposal of night-soil and refuse are defective. For some years past the matter has been engaging their attention. The results of their deliberations with regard to the disposal of refuse by incineration have been forwarded to Government and referred to the Sanitary Board. Action has likewise been taken for the extension and improvement of the house service, which has most unfortunately been hindered by the difficulty experienced in obtaining toties for the purpose. If the Gargantuan hyperbole of a column of filth a million feet high was intended to draw their attention to these matters, it was uncalled for. Moreover, it conveys the false impression that night-soil remains unaltered for 30 years, whereas in that time its constituent elements might pass through several cycles of mineral, vegetable and animal existence. It may also be mentioned as regards half holidays that the sanitary staff works longer hours on those and the following mornings, so the work does not suffer to anything like the extent alleged.

15. Reading this with para. 93 it would appear that the Commissioners are advised to flush their 3 million square yards of road and clean them with sweeping machines. The yearly cost of washing the streets of London once a day is about 1 shilling and $4\frac{3}{4}$ pence per square yard. If it be estimated at 1 rupee per square yard in Madras, the total expenditure on this one sanitary work will amount to 3 million rupees, or considerably more than double the total revenue of the Municipality. Apart from this it would first be necessary to make roads that were suitable for this treatment at a cost of some millions. A considerable part of the road cleaning in Madras consists in sweeping up and removing leaves, &c., around the trees by the road side on very irregular ground. I cannot imagine a more unsuitable appliance for this purpose than the revolving road cleaner drawn by bullocks.

I cannot admit that the systematic removal of the droppings of animals is an unknown thing in Madras, for I constantly see women and children in the streets attending to it. When an animal drops its dung there is often a race for the spoils. The dung thus collected is dried in the sun in the form of bratties and used as fuel. This is not the European system but the Indian one, and I see no reason on sanitary grounds why the Commissioners should supersede it by a paid Municipal agency, that might not remove the dung as thoroughly as the volunteer collectors do at present.

With a metalled road and a tropical sun most of the water of urine passed by animals evaporates and the nitrogenous part splits up into ammonia and carbon dioxide gas, so that little is left except chlorides and phosphates which are not likely to seriously affect the public health. Most of these are probably dissolved and washed away periodically by the monsoon rains.

16-17. It is generally acknowledged that sub-soil water plays an important part in the production of disease, though the mode of its action is still a subject for controversy. An accurate record of its height in different parts of the town at different seasons of the year and of its fluctuations would be of great interest,

LONDON, *April* 29.

and when compared with the vital statistics of the town might afford material assistance in the elucidation of the causes of disease. For this purpose I would suggest the boring of a small tube well in each of the divisions and the fitting of it with a simple recording apparatus. The records could be kept by the Sanitary Inspectors. A record of the soil temperatures would also be of considerable value, as they have been found to have a close relation with diarrhœa and other diseases.

20-21. I should interpret the figures given by the Sanitary Commissioner as merely showing a well accepted fact, that the population of a country has a tendency to drift from the rural districts to large towns. I do not think this tendency is specially marked in the case of Madras. It is certainly much less so than in the case of Calcutta as shown by the following comparison :

Age constitution per 1,000 of population.

	Madras.	Calcutta.
0	30	14
1-4	91	59
5-9	116	70
10-19	184	156
20-39	343	386
40-59	174	229
60 and upwards	62	86

Unfortunately for the purpose of comparison the Calcutta statistics have no age period ending at 15. From the sequence they might be expected to run.

	Madras.	Calcutta.
10-14	97	70
15-19	87	86

Calcutta catching up Madras about the 17th or 18th year and going 43 per 1,000 ahead of her between the ages of 20 and 39, by which time of life most of the immigrants have come up and found work.

22. The immigrants into Madras are not as a rule healthy young adults, the best of their class, whose ambition leads them to leave their homes like the British immigrants to Africa, Australia and America. Many of them are the poorest and meanest of the rural population, who are driven by scarcity and privation to leave their homes because life there is insupportable, bringing with them their aged and their children. Others who are of favourable age are of the Tinnevelly paddy boiling class, which outrages the laws of health and dies like flies, as shown by the high mortality in the settlement. The effect such immigrants have upon the mortality is no doubt partly if not wholly compensated by the soldiers, students and coolies who add to the town population but do not as a rule die there.

23. In the report we read " The truth is that *ceteris paribus* the climate of Madras would lend itself infinitely better towards securing a decrease of the death-rate than that of England." If Surgeon-Lt.-Col. King means that the present death-rate of Madras, which is about 40 per 1,000, is capable of greater reduction than the present death-rate of London, which is about 20, I fully agree with him; but if he means that a low lying tropical town like Madras should have a lower death-rate than a temperate town like London 150 feet or so above the sea if the sanitation were

equally good in both places, I think his opinion is contrary to accepted notions. It is difficult to separate the effect of climate *per se* from the effect of sanitary evils under its influence, climate being taken as the sum of the meteorological conditions. The temperature and humidity of the air in a town like Madras are not in themselves fatal influences, but they are highly favourable to decompositions of all kinds ; and the effluvia from an impure soil and the putrescent changes going on in it are partly neutralised by cold but greatly aggravated by heat. The enormous reduction in the mortality of British troops serving in India brought about by improved hygienic conditions should encourage us in our endeavour to bring the blessings of health within reach of the people of India, yet, though sanitation may do much in the way of rendering a tropical town more salubrious, it appears to me extremely improbable that it can make it as healthy as a temperate one. The fact that London in the middle ages was a more unhealthy place than Madras is now is no argument that the climate is less healthy, but rather indicates that the death-rate of Madras if the sanitation were as bad as it used to be in London would be far higher than it is at present.

24-25-26. In the Government Reports on Mofussil Municipalities it is frequently urged upon the Chairmen and Councils that their registration is very defective, whereas it is generally admitted that the registration of deaths in Madras town is now practically complete. If the registration of deaths in the one is more complete than in the other, a comparison between the death-rates of Madras and the Mofussil Municipalities is hardly fair to the former. Apart from this, other things being equal, the mortality in large towns is generally higher than that in small ones, where there is less aggregation and the difficulties to contend with are much less.

In ascribing the diseases intimately connected with foul soil to imperfect conservancy, it appears to me that by far the most potent cause, namely, defective drainage has been lost sight of. I do not think the conservancy of the town is so imperfect as to influence the death-rate to any considerable extent. Major Tulloch wrote in his report, "the abominable smells in all parts of Madras are not produced as is generally supposed by the excreta of the population, but by defective drainage. It is the refuse water in the houses and in the streets into which all manner of garbage is thrown to ferment and generate foul gases that creates the dreadful nuisances so much complained of." The imperfect state of registration as regards the nomenclature and classification of disease is due to the fact that most of the people die without being seen by a medical man and the causes of death are given by the relatives, whereas in England a certificate of death from a qualified medical practitioner is required. This can only be gradually improved by the increase of medical education and of confidence in rational medicine among the people.

I have not had the advantage of Surgeon-Lt.-Col. King's hospital experience in Madras, so I am not in a position to question his statement that a very great deal of the so-called 'fever' from which persons die in Madras is due to phthisis—this fatal disease being very frequent among the poorer classes,—but I receive comparatively few reports of deaths from this cause from hospitals. Last

year only 4 were returned from the General Hospital. So I am inclined to believe that though the disease is undoubtedly prevalent it is not very fatal in consequence of the mild and equable climate of Madras. It would probably be appreciably diminished by the drainage of the town site, as dampness is one of the principal predisposing causes.

27—31. Whilst fully admitting that a close relation exists between sub-soil water and more especially the fluctuations of sub-soil water and disease, I find myself unable to accept as conclusive the evidence adduced in support of the elaborate theory of the *modus operandi* given in the report. It is alleged that the period of the greatest cholera prevalence in Madras is in August and September, because the sub-soil water is at its lowest ebb, but that in other districts chiefly influenced by the North-East monsoon it is in December and January, when the water level is comparatively high. As Madras is chiefly influenced by the North-East monsoon the fluctuations of its sub-soil water should be more or less synchronous with those of the districts alluded to, and yet we have the greatest prevalence of cholera preceding the monsoon in the one and following it in the other. Some evidence as to water-supply might throw light upon the subject. It may be that the inhabitants of these districts are dependent on tanks and wells replenished with water that has washed over or percolated through a polluted soil and that it takes some little time for the germs to develop in an active form, and that Madras getting a good supply of water at that season from Red Hills to a great extent escapes the winter outbreak, being more affected in August and September when the soil is moistened with showers but not washed with flood water and the Red Hills water is pumped, at its worst and less abundant, so that the people finding the pipes empty are more liable to fall back on the wells. At the same time there is a comparatively high degree of humidity and a low velocity of wind.

As regards diarrhœa, whilst it is generally accepted that it is especially a disease of cities having a polluted soil from imperfect drainage or other causes, and that it is promoted by warmth, especially of the soil, and that a certain amount of moisture of the soil is favourable to its development, there is so far as I am aware but little evidence to directly connect it with the sub-soil water. The present tendency is rather to connect it with the temperature of the soil. "Dr. Ballard has recently pointed out that there is a very considerable correspondence between the prevalence of diarrhœa epidemics and the temperature of the earth at a distance of 4 feet from the surface." ("Influence of the soil on Health," Moncton Copeman). In English cities this is not until the end of July or the beginning of August when a sudden and marked rise occurs in the diarrhœal mortality. It is partly to test these conclusions that I suggested a record of soil temperature being kept in Madras.

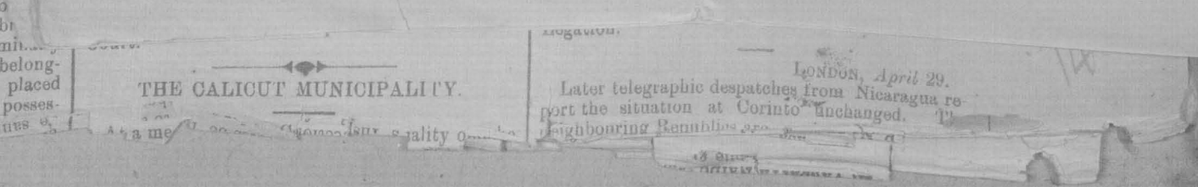
I do not consider the evidence of the failure of the North-East monsoon in 1890-91 being followed by epidemic cholera, diarrhœa and fever to be conclusive of the direct connection between the occurrence of these diseases and a low level of sub-soil water, for the year 1871, when the sub-soil water was maintained at a much higher level than usual and these diseases were unusually fatal during the summer months, has been quoted by a Madras Sanitary Officer as evidence of their connection with a high level.

The influence of meteorological conditions on disease is most obscure and whilst I have read with the greatest interest what Surgeon-Lt.-Col. King had to say about them in connection with the public health of Madras I do not think that he has by any means solved the difficult problems involved. The influence of the price of food in Madras I have always believed to be much more direct than would be inferred from the report. If in ordinary times there is just enough food for everybody, in times of scarcity when the price goes up the poorest must go without, or eat food of very inferior quality, or eat less food and that of inferior quality. I should say the parcherry people in Madras could not dispense with luxuries in times of sickness, because they never had them to dispense with. In normal times milk is rarely used in sickness even by the comparatively well-to-do working classes, the chief aliments being congee water and if they can eat it a little boiled rice and pepper water. Many of them hold the opinion that sick people don't want feeding, a belief that was once held by many people in Europe.

32. I hardly think the water level in a disused well at the "Seven Wells" is a reliable test of the general water level of Madras Town. From a conversation I had with the Superintendent I gathered that the water was believed to come from the North in a stratum of sand and was not to any great extent drawn from the surrounding soil as is ordinarily the case in fairly deep surface wells. Moreover the level in it might be influenced by the particular wells that were being used at the time. The Chart J. referred to also, I think, shows that the records of sub-soil water level, though doubtless the best available, are not altogether reliable. In 1890 for instance in February, March, April and May there was not more than 0·17" of rain, yet the sub-soil water kept its level unaltered, but in June and July when 13·4 inches of rain fell the water level fell about 2·5 feet. It is not customary in Madras to pay wages in ragi but in money, and rice is the food of the people though some ragi is consumed, but this is not of much importance as there is a general correspondence in the rise and fall of prices amongst all grain foods. That there is a general correspondence between drought, lowering of water level, rise of prices and increased mortality, I should be the last to deny, but that a *complete connection* has been established between water level and mortality does not appear to me satisfactorily proven.

33. The Municipality had nothing to do with the appointment of Mr. Cousins, which was made by the Secretary of State at the instance of the Madras Government. I have already gone into the question of sewage farming in Madras at some length in connection with a reference from Government on the Annual Report of the Sanitary Commissioner. The recommendation to keep the channels free from sludge I consider impracticable, unless masonry channels are made at great cost, as the sludge acts as a lining and if it were removed the channels being mostly of sand would be constantly eaten away by the flow of sewage through them and would have to be constantly remade.

34—42. As Mr. Cousins' scheme is being separately considered by the Commissioners, I think it is unnecessary for me to discuss it at length in my remarks on this report. The suggestion to replace the punkah cooly in Madras by water under pressure requires to be set out at greater length and the cost estimated before it


belong-
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posses-

THE CALICUT MUNICIPALITY.

LONDON, *April* 29.
Later telegraphic despatches from Nicaragua re
port the situation at Corinto unchanged.

comes within the range of practical administration. The statement that the City "has not a really efficient fire-engine to its name" is I think unwarranted. To my knowledge there are eight steam fire engines in the town besides a number of manuals. My experience of Madras fires has been that it was not so much engines as water that was wanting. It will be time enough to decide upon the details of house connections, street drains and latrines when the main sewers are laid down, and I fully agree with the opinion expressed that the best forms for the purpose can be best decided by practical experiments.

43-44. I fully concur in the view expressed, that after the introduction of a correct sewerage scheme the water carriage system of removing the night-soil should be adopted : also that the pail depot system is suited to the general requirements of the town, the public latrines, public institutions and in course of time perhaps the better class of houses being connected with the drains. I wrote to this effect in a paper read at a meeting of the South Indian Branch of the British Medical Association, a copy of which I submitted to the President. I think the suggestion to remove the Black Town excreta on the Shone system, if the present sewers are retained, is a good one. Two depots would probably be found sufficient, one for the 2nd and one for the 3rd Division. If Royapuram and the Tinnevelly Settlement were included, a third would be necessary. A suitable place for the disposal works would be near the Kathiavakum Rubbish Depot. As much night-soil as was wanted might be sold to the ryots for use outside the town and the remainder mixed with sulphuric acid, desiccated, milled and bagged for transmission to planters. I believe the desiccator patented by Sir James Farmer & Sons of Salford is the best for the purpose. Mr. Christiansen of Messrs. Garlic & Co., Bombay, has also patented one, of which he kindly showed me the plans, but as yet I have seen no independent testimony to its success. It is a matter of general experience that trenching and cropping, though suitable for small towns, do not work satisfactorily as a means of disposing of the night-soil of large cities. In Madras, though it is much less offensive than the old pit system, it is found that the night-soil has to be buried in too large quantities to get thoroughly mixed with the soil, and crops are very apt to die as soon as their roots strike down and reach this manurial stratum, even several months after it is buried.

Personally I am in favour of the adoption of the *halicore* system, though I apprehend difficulties in introducing it. The Commissioners rejected it in 1891, when the question of a scavenging cess was referred to them by Government. They recommended a Labour Law, however, which was not sanctioned by Government. Matters are now coming to a climax. The scavengers are few in number for the work that has to be done and can always get employment, often on higher wages, elsewhere. They are aware of their power and strike work when they want anything. The question of building them comfortable lines and then tying them down by a Labour Law is at present I understand engaging the attention of a Committee of the Commissioners. I know of no other measure which offers equal probabilities of getting them in good working order, but it appears to me to be necessary for efficient conservancy that all the scavengers in the town should be in the service of the Commissioners.

48. As regards public latrines I think that for the present the Commissioners cannot do better than continue their policy of spending the funds available in replacing the old sanded enclosures with latrines constructed on a better principle and building new ones. As all the latrines now constructed have impervious floors, I think the question of roofing can be left until the more urgent want of providing latrines that permit no soakage into the ground is satisfied.

With regard to the suggestion, that, if Madras toties would not live close to their latrines and give their whole time to them, it would pay the Municipality to import toties from Indore, I wrote to make inquiries, as we are badly in want of toties for Madras and have been unable to obtain them after sending an Overseer on special duty to Nellore for the purpose. Surgeon-Lt.-Col. R. Caldecott, Civil Administrative Medical Officer for Central India, informed me "that neither latrine men nor women are obtainable in Indore for service in Madras."

57. The number of tanks requiring to be filled with clean material is estimated at nearly 1,000. The cost of filling a tank of very moderate dimensions is Rs. 5,000. The total cost would therefore approximate Rs. 5,000,000. I do not know how the low marsh lands between Perambore and Pursewalkam are to be drained, as they are so low. Sub-soil drainage would entail pumping. If trees could be got to grow there they might have a good effect in drying the ground, and planting them would not involve any very considerable outlay. I am informed by Mr. Eliis that it would be possible to drain these lands into the sewage well in the People's Park recommended by Mr. Cousins and to pump the water with the town sewage.

64. I shall be happy to inspect and report upon the bed of the Cortelliar river if desired to do so. At the same time, taking into consideration the fact that the country through which it runs is sparsely inhabited, the distance the water has to travel from the anicut to Kilpauk, about 22 miles, the time allowed it to settle in the two tanks of Cholaveram and Red Hills and the great self-purificatory power of water due to the oxygen dissolved in it, exposure to the atmosphere and the influence of animal and vegetable life, I think the risk to life from pollution of the water-supply at its source is so small that it may be disregarded,—at any rate until the more important sanitary requirements of town have been attended to. At the same time I think the villages on the shores of the Red Hills tank should be removed to a safe distance and cattle more effectually kept away from it, and have recommended it in the part contributed by me to more than one Annual Administration Report.

67. I think the suggestion that taps for household supply be placed in front of the houses where they would be seen and inspected by the Water Works Overseers might with advantage be adopted.

68. The filth adhering to the bottom and sides of a Madras drain is often so adhesive that it would not be washed away even by the flow of water from a cistern. I have on several occasions shown the side coolies how to flush the drains by stopping them in sections, filling them with water and then working their drain cleaners along the bottom and sides. But they will not take the trouble to do it when they are not being watched, and the water used for flushing them does not as a rule carry down the silt.

69. There is a well in nearly every house in the town. But in the majority of houses a large vessel is filled in the morning with pipe water for drinking and cooking. Vessels are frequently washed with well water, but this though unsafe is not very dangerous if they are thoroughly dried before they are used. I have not recommended the closing of these wells, with a few exceptions where special reasons existed, on account of the inadequate supply of pipe water, as I believed such action would in many cases prevent the washing of latrines, floors, drains, &c., &c., and throw great difficulties in the way of personal ablutions, and that this would entail great hardship on the people and more than counterbalance any good that might result from closing the wells. After the water-supply has been increased sufficiently to provide for all domestic purposes, it will doubtless be expedient to close and fill up the wells.

74. The water pipes are corroded in some parts of the town, but I am unable to do more than surmise that it is due to an acid condition of the soil.

75. I have asked for an estimate of the cost of the "sentry box" dust-bin recommended in the report. If the rain does not drive in at the sides it would form a shelter for the houseless poor. I don't think people would be any more likely to throw their sweepings into it than into our present more open one. If the sweeper lost his key or sold it for a glass of toddy, it would be awkward to empty it. The small rubbish receptacles recommended for the better parts of the town would be apt to be stolen. The sweepings are generally fairly dry and I don't think much contamination of the soil occurs. Night-soil is not unfrequently thrown into dust-bins by lazy toties, but they are generally caught and prosecuted and the Magistrates fine them severely. On the whole I consider the dust-bin now used to be fairly well adapted to the requirements of the town and do not think sufficient reason has been shown for its abolition.

77. The greatest difficulty in the transport of rubb ish of late has been to make the Contractors supply good bullocks. I don't think this will be entirely got over so long as the contract system is continued. The present practice of hiring the carts from one Contractor and the bullocks from another does not work well, as the drivers who are under the bullock Contractor do not care what happens to the carts and the cart Contractor does not pay proper attention to his axles, wheel boxes and lynch pins, as the carts don't have to be drawn by his bullocks. If incinerators were introduced into several parts of the town, I think the present number of carts and bullocks would be sufficient, but that they should be the property of the Commissioners and kept in good order. A covered cart would either have the lid kept open or hinder the work of loading.

No cases have come to my notice of country carts loaded with *fresh* fecal matter being driven through the streets, or I should have taken action. The removal of night-soil buried for a year or more has been stopped in several depots on account of the nuisance complained of.

78-79. After considerable inquiry the Commissioners have decided to try incineration for the disposal of rubbish. The matter has been referred by Government to the Sanitary Board.

As regards the net-work of light tramway suggested for the transport of rubbish, I do not think it is suited to Madras. The cheap light tramways I have seen have the rails laid above the surface of the road, so the space occupied by them would be entirely cut off from traffic. A large proportion of the Madras streets are so narrow, that if 4 or 5 feet were cut off for the tramway, there would not be enough room for two carts or carriages to pass. On the Sanitary Commissioner's estimate the cost of the line and rolling stock would be between 30 and 40 lakhs.

84-85-86. Whilst fully concurring with the opinion that the ordinary type of Madras house is bad as bad can be, I do not see how it is to be made good without pulling down all the houses, rearranging the sites, which are many of them too long and narrow to admit of anything that could be called a house being built upon them, and rebuilding on improved plans with wider streets and an improved type of dwelling. At the same time a Building Act would effect some good by preventing any rooms being built less than a certain size, &c. I think it would also be a good thing to have two or three standard plans for latrines, to one of which any one building a house would have to conform. As it is a large proportion of the plans submitted are referred back for alteration, mostly on the ground of insufficient ventilation, the principle generally insisted on being that there must be a tolerably straight passage for air through the building from end to end. As far as possible we insist on the latrine being near the entrance so as to avoid the pollution of the site by urine, &c., escaping from an imperfect drain running under or through the house and require the latrine to be constructed with an impervious floor.

We are told that we should make people pull down the front and back walls of their houses. No doubt the ventilation would be improved by such a measure, but I doubt whether any human executive could make the Madrassee comply with such a requirement. The question of introducing a Lodging House Act has already been before the Commissioners. In Calcutta they license common lodging houses, common lodging houses being only for tramps and outcasts who want a night's lodging,—the "doss houses" of the East end of London. I am not aware of a lodging house act being in force in any Eastern town. Surgeon-Lt.-Col. Weir, the Health Officer of Bombay, to whom I wrote replied, "We have no bye-laws for the licensing and regulation of tenement houses, and I do not understand how such bye-laws could be framed and made applicable to towns in India. With the exception of private bungalows and residences all houses in Bombay are tenement houses,—*i. e.*, houses occupied by more than one tenant or family." This is also the case in Madras. So that nearly every house would have to be frequently inspected and would require a license, which in most cases could hardly be given unless the house were pulled down and rebuilt. An army corps of Inspectors would be required of a high class who would not be likely to abuse their powers of entry, there would be much friction, especially in dealing with the houses of gosha people, and I do not think the good that would result would be commensurate. The people would be prosecuted again and again rather than comply with the requirements, and it is not easy to prosecute a whole city. A house to house inspection is at the present time being carried out, and action is being taken for the abatement of nuisances, &c., where it is most urgently required.

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87. I think the opening out of the town is the most important sanitary measure next to drainage and water-supply, but to be in any way effective it will cost more than these two together. Two or three wide streets through Black Town from the Beach Road to Wall Tax Road would be of inestimable benefit and Triplicane might be improved in a similar manner. I think the old ramp might with advantage be removed, though it might be as well to leave a small portion as a screen to the cart depot. I do not think its removal would have much effect on the perflation of the town, as it is only for a short time that the wind is in the North and then it is generally so powerful as to sweep over it with a fair degree of force. I do not think that much could be expected in Madras from "betterment," unless there were a commensurate increase in trade and in the material prosperity of the people. I can say this for native houses in Madras that though the arrangements, for ventilation and perflation are in many cases manifestly inadequate and in spite of the smallness of the rooms and the general tendency to overcrowding, though I have frequently inspected such houses in the early morning I have rarely noticed that peculiar odour, which strikes any one coming from outside into a room where the air has become foul through being insufficient for the people breathing it. In a few cases action for overcrowding has been taken under section 324 of the Municipal Act and the Magistrates have passed orders to abate such overcrowding, but no real benefit is likely to accrue unless better provision is made for the housing of the poor either by public or private agencies. This has been proved again and again in London and other large towns. At a recent International Sanitary Congress it was considered advisable that Governments should build houses for the poor.

89. *Roads.*—I consider that wooden blocks make by far the best pavement that I am acquainted with for the comfort and well being of man and beast. Such a pavement if well laid with a proper curve and a good concrete foundation will withstand the wear and tear of heavy traffic for a very considerable length of time. On your suggestion that a part of Mount Road should be paved with wood from Government House to Wallajah Road as an experimental measure, I made inquiries of Messrs. Arbuthnot & Co. at what price they could supply blocks of Pyingadoo, a Burmese wood of great hardness which has been successfully used in Rangoon. They sent me sample blocks which appeared excellent in quality and informed me that they could supply them at the rate of Rs. 70 per ton, which would be sufficient to pave 100 square feet. This portion of Mount Road is about 1,800 × 60 feet=108,000 square feet. It would therefore cost Rs. 75,500 to pave it with wood exclusive of the concrete foundation and labour. In Kurrachee, where the babool (Acacia Arabica) grown in the Sind forests is used, the paving is done by contract complete with concrete underneath at As. 12 per square foot. At this rate the above mentioned portion of Mount Road would cost Rs. 81,000 to pave. To metal the same amount with granite would cost about Rs. 3,500, or about one twenty-third of the price. So for wood paving to prove advantageous economically, it would have to last more than 23 times as long as granite metal. It is therefore difficult to understand on what ground the Sanitary Commissioner speaks of the *cheapness* of such pavements and says that "it would pay the Commissioners well to make them." I certainly cannot recommend any such lavish expenditure on roads, when the drainage and water-supply schemes are still in abeyance for want of funds.

94. *Open space.*—I think this suggestion might with advantage be adopted.

95. I don't think the ground gets much contaminated through the semi-liquid sludge from the side drains being deposited on the road side pending the arrival of the cart. When we get some sewers in the town and our side drains can be constructed with a better gradient most of this silt will not be deposited. A good deal of the water from the sludge, if it is left for an hour or so before removal, either runs back into the drain or evaporates. What gets into the ground must be infinitesimal when compared with the escape from a leaky sewer or drain. The wire netting receptacles suggested for its reception would not hold it and would not last long.

Markets.—I gather from the reports of their meetings that the Commissioners are desirous of building a good general market for Madras but have been delayed in carrying out the project by the difficulties they have experienced in obtaining a suitable site. The private markets do not come up to a high standard, but I do not think they are as a rule dangerously insanitary. A good deal has been done for their improvement by stopping their licenses until the owners abated nuisances and carried out repairs and improvements. The largest Triplicane Market, the Jendah, is about to be enlarged and entirely rebuilt on an improved plan which has been submitted to the Municipality for approval. I think it would be better if every private market of any size were under a Municipal Superintendent paid by the owner of the market, whose duty it would be to see that it was kept clean, that the conditions under which the license was granted were observed, and that no unwholesome articles were sold there. On the whole I think the people are fairly satisfied with their markets, and they would have to pay more for their food if they bought it off porcelain or marble counters with fountains of water and other modern refinements.

I think the question of food is much more important. As I have pointed out before we have no Adulteration Act and no laboratory for the examination of articles of food and drink. I have very little doubt that a considerable proportion of the ghee sold in Madras is not a product of the cow, but there is no place for its examination, nor law for the punishment of the vendor, except the Penal Code which can only be invoked if it can be proved that the article sold is noxious. A Sanitary Officer cannot swear that mutton fat or gingelly oil, or even ground-nut oil, is likely to do serious harm to persons partaking of it. This affects the native community much more than the Europeans, who owing to the difficulty of getting good butter in Madras mostly get it from Bombay or Bangalore or have it made in their own houses.

Surgeon-Lt.-Col. King appears to be under a misapprehension about the latrine arrangements of the General Market. The latrines are kept locked and only stall holders admitted up to 9 or 9-30 A. M., after which the attendance of the public is very small. I can vouch for this from my own frequent inspections and from indignant complaints I have received from Ramasawmy butler and others who have been refused admittance. The latrines are I admit far from being satisfactory, but in plans made by Mr. Ellis, the Municipal Engineer, for the improvement of the market, in consultation with myself in this particular, improved latrines have been

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provided outside the market. I am by no means certain that a ventilated cesspit for the reception of the sewage from the market might not prove a greater nuisance than the present standard latrines with closed iron receptacles in which the night-soil is kept pending removal.

97. *Slaughter Houses.*—Whilst fully admitting that the slower method of drawing water from a tap is preferable to dipping a bucket in a trough, I beg to point out that water is constantly flowing into the troughs and that they are emptied and cleaned twice a day when the floor is flushed. So they are not likely to get very filthy. Water, as a rule, flows very slowly from Madras taps and does not flow at all during part of the day, so that a stock of water of some sort is necessary. This might be got over by having a closed cistern with taps. Moreover the carcases are not likely to be contaminated, as they are not as a rule touched with water, only the guts and some internal organs being washed, and I think that it is in the highest degree improbable that any anthrax bacillus accidentally deposited on the surface of a carcass would survive cooking when the consumption of animals whose whole bodies were teeming with such bacilli has rarely been proved to give the disease, though such meat is frequently eaten in many places. The usual practice is to slaughter the sheep over a drain, then, after making certain incisions and slightly separating the skin from the hind limbs to hang the carcass up by the hind legs, to peel off the skin like a glove, open the abdomen and gut the carcass, the guts being taken away by women employed for the purpose to another part of the slaughter house to be washed and cleaned for sale. A good deal of offal falls on the stone floor of the slaughter house when the stomachs are opened, but it does not touch the carcases. I do not think any arrangement of separate rooms specially designed and special carts would work on account of the large number of animals slaughtered and the hurry and bustle that prevails through the butchers having to get their work done against time. An impervious stone floor that is well flushed twice a day appears to me sufficient to meet the requirements of safety, but it would be better if the women carried away the stomachs unopened to the part of the slaughter house where they wash them, and emptied their contents direct into buckets placed there for the purpose, as then the part of the slaughter house devoted to the preparation of the carcases would be kept much cleaner during working hours. A bath room where the butchers could wash their bodies and clothes is much wanted in the Monegar Choultry slaughter house. There is plenty of room for it in the North-West corner. If that were provided they could be prevented from using the water intended for the washing of guts, &c.

It may be the case that many animals were found to be suffering from hydatid disease at the time of Surgeon-Lt.-Col. King's inspection, but it is not common in Madras. Perhaps a flock of sheep had been brought into the town for slaughter from some particular locality where the disease was common. I think I should be aware of it if the disease were as common as would be gathered from the report, as the cysts often grow to a considerable size in the liver and lungs and are easily discernible. I may mention that medical officers from the hospital have accompanied me to the slaughter houses with jars of spirit for specimens of diseased tissues or organs, but that no hydatids have been discovered by them. There is

an order prohibiting the admission of dogs to slaughter houses and markets, but I do not think anything short of keeping dog killers there will prevent these places being overrun with them. The dogs are often large and fierce and not easy to keep out.

Whilst concurring with the opinion expressed that a latrine and a conservancy cart depot are objectionable in the vicinity of a slaughter house and believing that it would be much better if all slaughtering were done outside the town, I do not see how any other arrangement can be made at present unless the Commissioners have a considerable sum of money to spare for the purpose. I think there is much more urgency for the rebuilding of the Chulay slaughter house which is not only in an insanitary locality but also in a dilapidated condition. Plans for this work have been prepared by the Acting Engineer on my suggestion to provide for the animal to go in at one end and the dressed carcass to be taken out at the other, the entrails, skins, filth, &c., branching off in other directions and having separate exits.

98. The protection of the milk supply is doubtless an important measure and I should like to see model *gowleekhanas* and dairies with cream separators and other modern improvements, though the initiation of model dairy work appears to me hardly to come within the scope of the Municipal Commission. For the protection of the milk supply as of the food supply generally an Adulteration Act and laboratory are indispensible. The Civil Veterinary Department will doubtless take up the prevention of cattle disease in the town and not solely confine its attention to Mofussil districts.

From my own personal observation I should say that tuberculosis is by no means common amongst Madras cattle. I have also consulted Vety. Capt. Hazelton and Mr. Benson of the Department of Agriculture on the point and they both confirm my opinion. The emaciated condition of the cattle hardly appears to me a sufficient ground for jumping to the conclusion that they are suffering from tuberculosis, as it may be produced by a variety of other causes, the simplest of all being insufficient food.

100. I consider the provision of washing places for dhobies an important measure. They should be near good drains and provided with an abundance of pipe water, having an impervious floor to prevent soakage. I believe the dhobies would willingly pay something for the use of them. Surgeon-Lt.-Col. King states that he failed to find a single case in which arrangements had been made to separate the filthy clothing from the clean. With regard to the better class of clothing I believe it is the case that after washing it does not as a rule go back to the washing dhobies' houses at all but to the starching and ironing dhobie to be got up. He also states that it had not been laid down that such and such a water-supply should be used. In the license applications sent to ~~you~~ for signature the water-supply is almost invariably specified.

101. *Bake-houses.*—It would be easy for me to draw up a set of rules for bake-houses, but it would be practically impossible to get them carried out. I believe I inspected every bake-house in Madras this year before the license was granted and many inspections were made by the Sanitary Inspectors and Overseers.

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Some licenses were refused altogether and others withheld until nuisances were abated or improvements carried out. I think this line of action is more likely to raise the sanitary standard than a hard and fast set of rules, which could not be enforced in the poorer localities where the bakers could not provide tables and other appurtenances of a particular kind.

103. The heading of the last column of the statement is wrong and should be "Ratio of successful vaccination to total births per cent." In the statement sent by Sanitary Commissioner "*Unaccounted for*" includes 135 not found births after verification, these births having occurred in parcherries, hutting grounds and gardens in which there were no door numbers to facilitate the tracing of births after the age of six months, 59 cases who not having complied with the notices were prosecuted and were pending before the Magistrate at the time when the statement was prepared and sent to the Sanitary Commissioner and 968 cases on whom notices were served that did not get their children vaccinated. These three figures put together make the total 1,162 cases (unaccounted for) as there were no separate columns in the statement sent by Sanitary Commissioner to explain them in detail.

The number of cases actually postponed at the depots was 300. In 843 the children were too ill to be carried to the depots for inspection. They were seen by the vaccination staff at their homes and were found to be unfit for vaccination. This makes up the total 1,143. I think it better that vaccination should be postponed in doubtful cases, as on account of the anti-vaccination movement there is a tendency to ascribe any malady occurring in a child after vaccination to the operation it has undergone.

Parents to bring their children after vaccination to depôts for inspection. When the Compulsory Act was brought in force this was originally provided for in the bye-laws, but the Commissioners in the revised bye-laws changed it as they considered it a hardship. As the Vaccinators often have to make several visits to induce people to get their children vaccinated, I believe it is a saving of labour for them to pay one visit to the house to verify the result. Moreover, it enables them to see the result at the proper time to judge it with the greatest degree of accuracy. It is laborious work, but it has the further advantage of saving a lot of prosecution.

"*The amount of inspection work as shown in the statement opposite each individual's name cannot be considered good.*" More than 50 per cent. of the total number of cases vaccinated were examined by the inspecting agencies. The Municipal Deputy Inspector has many things to do which a District Deputy Inspector as a rule has not. In Madras the Deputy has to attend to official correspondence, the conduct of animal vaccination and its supervision, the instruction of classes of medical students, the instruction of vaccinators from the Moffussil, the regulation of the supply of a considerable number of calves for operation, the preparation and distribution of preserved animal lymph, &c., combined with his inspection of Jails and the Natal Emigration Depot to verify the result of operations, his inspection of cases in the Divisions before taking out summonses, his visits to Vaccination Depots where vaccinated children are inspected and sickly cases postponed.

The Assistant Deputy Inspectors not only inspect vaccinated cases in their respective Divisions but also check the Vaccinators' work, (the notices served on the unprotected), verify the Birth Counterfoils which are returned by vaccinators as "not found," remind people who have not complied with notices before taking out prosecution, file charge sheets before the Magistrate after sanction of the President, attend Courts on the days fixed for the hearing and conduct prosecutions.

"*The Vaccine rate of success in Madras has always been phenomenal, &c.*" I myself personally inspected at their houses all the cases vaccinated at the Poolibone Bazaar Depot in the month of January 1895 and verified the results. Out of 147 cases, 3 were absent, one had died after it had been verified by the Vaccinator as successful, 1 was successful after 2 operations and 142 were verified by me as successful. One of them had been reported as unsuccessful by the Vaccinator but had subsequently taken in one place at a later date than usual. Most of them took in from 4 to 6 places. Surgeon-Lt.-Col. Laing made a similar inspection in 1882 accompanied by Vaccinators and expressed himself satisfied with the accuracy of the returns. In a crowded district even after previous notice had been given to the people to be ready for me, the most I could verify was 15 cases an hour. In an ordinary way I should think that 10·6 cases a day would mean about one and a half hours work and 2½ to 3 miles walking. It must be remembered that the Deputy and Assistant Deputy Inspectors have many other duties to perform.

I cannot admit that a high rate of success in the revaccination of adults reflects on the efficacy of primary vaccination in childhood, for old small pox cases may often be successfully vaccinated and no one doubts that the protective power of a previous attack is considerable. In one morning at the Penitentiary out of 34 cases of revaccination inspected by me, 5 who were unmistakably marked with small pox which they had had in childhood had been successfully vaccinated though two of them had not taken well.

The following figures taken from one of the Indian Medical Journals, show that 20 out of 29 cases protected by an attack of small pox were successfully vaccinated:—

—	Number vaccinated.	Result.			Remarks.
		Successful.	Unsuccessful.	Not known.	
Unprotected	12	10	1	1	83·33 per cent.
Protected by Vaccination	98	61	35	2	62·24 „ „
Protected by inoculation...	93	69	22	2	74·19 „ „
Protected by an attack of Small Pox ...	29	20	8	1	

The attention of the Sanitary Commissioner, Surgeon-Lt.-Col. Laing, was drawn to the results of our revaccination by the Army Sanitary Commission,

and he visited the Penitentiary and verified them. I have heard that Surgeon-Major Bannerman, the Inspector of Vaccination, also lately visited the jail and inspected the vaccinated cases. There will doubtless be a record of his inspection in the Sanitary Commissioner's Office.

There was a ruling in the old Vaccination Code which I believe is still in force that if the first operation failed and the second operation within the month proved successful, the case should be entered in the returns as successful. If the first operation failed and the case underwent a second operation in the succeeding month after the submission of the monthly return, it should be re-entered in the book and the result whether successful or unsuccessful be recorded. There are very few cases of this kind in Madras, for we endeavour to get the failed cases successfully vaccinated within the month and before the submission of the returns. The same practice obtains throughout the Presidency and I am informed that there is a similar rule in England. Besides we must have a record to show under bye-law 7 that the cases have been three times unsuccessfully vaccinated, so as to enable us to give insu scep tible certificates. I have noticed two things which conduce to the high rate of success in this country. One is that many of the children wear little or no clothing, so that there is less likelihood of the lymph being rubbed off after operation, in addition to which they are generally kept under observation in the depots until the punctures are quite dry, the other is that the natives seem to be constitutionally susceptible to good vaccination results with much less tendency to inflammatory sequelæ than I have found in English children both at home and in India. Some of our Municipal Vaccinators are quite equal in the manual dexterity of their operations to the best English operators.

No doubt an inoculated calf with a wider area in the abdomen shaved might yield enough lymph for 400 cases, but the difficulty is that people do not assemble in such large numbers at the depots, so the extra lymph available would be wasted.

The Magistrates are dealing more severely with the vaccination cases than they used to do, and so far as I can judge the fines inflicted are sufficiently severe, as the majority of the people prosecuted are very poor and many of them have to be detained at the Court in consequence of their inability to pay the fines.

Other Inspecting Officers have reported favourably on the cleanliness of our depots and instruments and they are no less clean now than they were formerly, so I can only conclude that Surgeon-Lt.-Col. King sees defects where others would not. What he describes as urine on the floor of the Chintadripet Depot was, I am informed, water which had been spilt when the scarifications of a calf were being moistened previous to the extraction of pulp for the manufacture of glycerine paste.

The calf table generally used is of the pattern obtained from Bombay in 1879, and it is easier to work with it in lifting the calf on to the table and getting it down than the moving tilting table; two men are sufficient for the former and three are required for the latter. The moving table is costly; the Public Works Department charged for the one in Chintadripet Depot Rs. 47-8-0. We can however obtain them for Rs. 35-0-0. The disadvantage in working with the moving table

is that it is so low that the operator has to stoop considerably in order to operate, which is very tiring in long operations such as the extraction of the pulp for the manufacture of vaccine paste. If the moving table is to be adopted for the 9 vaccine depots, 12 tables will be required at a cost of 12×35=Rs. 420. The present tables which have been in use for the past 16 years cost 12×15=Rs. 180. Arrangements can be made in the present table for receiving excreta and urine, but they will not answer the purpose if both male and female calves of various sizes are used for operation. It is noted that the operated calves in the Chintadripet Depot are so arranged that urine from the upper row must pass over the portion of the pavement where the lower row are tied to reach the drain. I think it would be an advantage to have a small drain constructed between the two rows of calves. The bandages of the animals are washed daily at the depot, but are not sent to the dhoby. I have ordered a gross of white towels for use in the depots.

The suggestion that we should buy calves in the Chingleput District and sell them after operation, or feed them up for the supply of British troops, would require a special staff costing at least Rs. 20 per mensem, and I very much doubt whether it would be found to pay. In 1885 the Municipality undertook to buy calves, graze them in the Park and after inoculation sell them by auction, but it was found that the people were not inclined to buy calves that had been inoculated as the skins were damaged in consequence of the operation. The present system of hiring was found more economical, so Surgeon-Major Davies, the Health Officer, adopted it.

105. Personally I am of opinion that in Madras at the present time the Health Officer should personally attend to a good deal of work that would be left entirely to Sanitary Inspectors in England as the Inspectors procurable in Madras on the pay offered by the Commission are distinctly of a lower grade as regards scientific training and general capacity, and I also believe that in India it gives the people confidence to find a senior officer personally investigating their complaints and advising them in their sanitary difficulties. But at the same time as pointed out by the Sanitary Commissioner a certain amount of my work both in and out-of-doors could be performed by a man of average capacity without scientific training. Last year on my suggestion the Commissioners recommended that the services of the Professor of Hygiene should be placed at their disposal for the analysis of food and water, &c. This recommendation however did not receive the sanction of Government. The Sanitary Commissioner now recommends that I should do this work. I beg to point out that I have only had a general training in chemistry and that this a special branch of the subject and requires a special course of training which I could not get in India. It is generally held by medical men that a residence of 10 years in the plains of India is as much as an average European can stand without a change to a colder climate without deterioration of his health and capacity for work. This is now my tenth year in the country and from the increased difficulty which I experience in getting through my work and the increased frequency with which I get derangements of the liver and bowels I conclude that I am no exception to the general rule. As this is only my fifth year in the service of the Municipality I am not entitled to furlough. I would suggest therefore that instead of waiting until I break down in my work and have to be invalided home, the Commissioners

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should make the recommendation to Government to grant me a year's leave on half pay for the purpose of undergoing a course of analytical chemistry and bacteriology at the Sanitary Institute and studying sanitary works and organization in Europe. I believe that such a course would make my services far more valuable than they are at present, as it is of the greatest importance that a Sanitary Officer should be up to date in his scientific knowledge, and much of this cannot be acquired from books. In his address at the recent Medical Congress at Calcutta Dr. Ernest Hart said in his suggestions for improving the medical work of this country :—" I would give at the public expense to deserving and suitable medical men an opportunity to return occasionally to Europe for a year or two to brush themselves up in medical matters and to familiarize themselves with new methods." If it is required I believe that a Medical Board would certify that leave to Europe is essential for the preservation of my health.

106. On the 6th April 1892, I wrote on a reference from the Surgeon-General about the erection of a small pox hospital and recommended the construction of 6 or 8 sheds in different parts of the town for the reception of cases of cholera and other dangerous infectious disease. On the 13th April the President addressed Government to that effect. On the 11th May Government requested to be furnished with a list of the sites selected and a sketch showing their position (G. O. No. 327 M.) A map was submitted showing the sites and on the 28th June, 1892, Government approved of them and recommended the Commissioners to acquire them (G.O. No. 438 M.). So the whole question was settled, though not carried out on account of difficulties that arose in acquiring the sites, when the Sanitary Commissioner wrote and made his recommendation in 1893 for two small infectious disease hospitals in connection with the two railways for the prevention of importation of disease by rail. This has been adopted. Sites have been acquired at Perambore and Chetput and sheds will shortly be erected. I recommended the adoption of the plan of the sheds at the General Hospital which will I understand be followed.

107. There are covered dhoolies at the hospitals which can be obtained for the removal of patients suffering from infectious diseases. They are frequently employed in cholera epidemics. I think the patients would travel more easily if they were on wheels instead of carried by hand, as the coolies employed as bearers do not understand how to march with a stretcher so as to prevent it swinging. The number might also be increased with advantage.

108. In 1893 on a reference from the Sanitary Commissioner (G. O. 27th October, No. 1489 M.), I got out papers from England on disinfecting apparatus and entered into correspondence on the subject with Dr. Simpson, the Health Officer of Calcutta. The prime cost of a Lyon's disinfector delivered there was Rs. 2,561, and the cost of up-keep is about Rs. 1,500 per annum. The Standing Committee of the Commissioners after considering the subject decided to await further information. Personally, though I have a high opinion of Lyon's apparatus, I do not think it is much wanted in Madras. It is principally used in England for the disinfection of the clothes, &c., in cases of scarlet fever, measles, &c., which are notified there but not here, and not in diseases of such a dangerous character as cholera, in which it is usual in European practice to burn the soiled clothes as is

done here. The clothes worn by the people here are for the most part so cheap that it is much more economical for the Municipality to burn them and give them compensation than to keep up a costly apparatus, and it is rather more certain of being efficacious, as if the apparatus is left to subordinates, there is no certainty of the necessary pressure of steam being kept up.

APPENDIX.

Miscellaneous petty notes on Sanitation.

I do not think it would serve any useful purpose if I discussed these matters *seriatim*. I have inspected the places alluded to and action will be taken departmentally to remedy the defects pointed out wherever such action is practicable. The names given for some of the streets are not the official names, which caused some difficulty in identifying them. On page 69, para. 2, the Commissioner writes,—" Fœcal matter lines the ward ; a cart is expected to go round and remove simultaneously the rubbish and fœces. Two carts fulfilling these combined functions only are allowed in the whole of the North ward of the 6th division." I do not know where Surgeon-Lt.-Colonel King obtained this information, but it is most certainly incorrect, for 6 rubbish carts, 5 iron single bullock carts and 1 wooden latrine cart are employed in the Ward. If he would apply to me for information in such matters there would be less likelihood of his being misinformed.

General.—On looking over my remarks I find that I have differed from the Sanitary Commissioner in nearly every recommendation he has made. I regret that this should be so and that I find myself unable to adopt his views. However, it will perhaps not be altogether a disadvantage for the Municipal Commissioners to have before them both sides of the questions raised when they take them into consideration and pass resolutions upon them. For my own part I think they cannot do better than stick to the drainage and water-supply of the town and the incineration of refuse and practically lay on one side every other suggestion entailing heavy expenditure until these are satisfactorily carried out. I would however make an exception in favour of a New General Market, which would, I believe, pay its way. Of minor schemes I think making washing places for dhobies in places where water pipes and drains are available is one of the most important and might also be made self-supporting. The gradual improvement of parcherries, conversion of latrines, increase in the number of dust-bins, &c., could, however, be carried out as is being done at present. An Adulteration Act is, I consider, urgently required, and until it is obtained but little action can be taken for the protection of the food supplies of the town. The system of contracting for carts, bullocks and drivers for conservancy work has not in my experience worked well either here or elsewhere. I think the removal of refuse would be much more efficiently performed if the Commissioners kept their own carts and bullocks and engaged drivers departmentally. The labour question is one of the most urgent, the supply of coolies being insufficient for our requirements and the coolies inclined to strike work on any real or fancied grievance. The housing of them in comfortable lines near the depots and a Labour Law to enable us to punish them if they refuse to do their work might bring about a better state of efficiency in the department. The matter is, I understand, under consideration by a Committee of the Commissioners.

J. NIELD COOK,
Health Officer.

Genl. Dept.
9

G. No. 92

MUNICIPALITY OF MADRAS,
General Department.
Madras, 30 April 1895.

Local & Municipal Dept.
Received No. 1460/95

From

LIEUT.-COL. G. M. J. MOORE, C. I. E.,
President, Municipal Commission.

To

The Chief Secretary to Government,
Fort Saint George.

SIR,

Enclosures
4.

With reference to G.O. No. 18 M. dated 8 January 1895, I have the honor to forward an Extract from the Proceedings of a General Meeting of the Commissioners held on 29 April 1895.

2. I also forward a proof slip of the full report of the Proceedings which appears in this morning's issue of the Madras Times for the information of Government.

3. Report of the Proceedings from the Hindu of this evening is also forwarded as it gives a fuller report of the remarks made by the Commissioners on the subject.

I have the honor to be,
Sir,
Your most Obedt. Servt.
G. M. Moore
President, Munl. Comn.

4/1460 to 95

Enclosure No 1 to G. No 92

V5

Extract referred to.

G.O. No 18 Ml. Mis, dated 8 January 1875, on the Sanitary Commissioner's Inspection notes of the City of Madras for 1874.

Proposed by MRRy V. Varadappa Nayaon Garu and seconded by MRRy M. Venkataramiah Chetty Garu-

"That the Commissioners while greatly appreciating the Inspection notes and diagrams compiled by the Sanitary Commissioner regret that in the present state of their finances, they cannot attempt to carry out all his proposals and have been already doing their best to remedy some of the Sanitary defects consistent with their limited finances."

To this is an amendment MRRy R.N. Pragasa Mudaliar avargal proposed and MRRy Salla Gurusawmy Chetty Garu seconded-

"That the following words be added to the original resolution-

'but that the Sanitary Commissioner's Inspection notes be referred to a Committee composed as follows-

The President.

Surgeon Major J. Maitland.

MRRy G. Subramania Iyer avargal.

—"— W.S. Venkataraman pelu Nayaon Garu.

The Honble P. Rungiah Nayaon Garu.

THE CALICUT MUNICIPALITY.

Later telegraphic despatches from ... port the situation at Corinto unchanged. The neighbouring Republics are ...

with power to add to their number for any
views they may have to submit to the Com-
missioners on the subject."

MRRy R.t Pragasa Mudaliar Avargal
with the consent of the seconder and of
the Commissioners withdraws his amendment.

The original proposition was then put
to the meeting and lost.

Proposed by Mr. Rowlandson and
seconded by Mr. Grant-

"That the Commissioners respectfully
desire to be favored with the views of the
Government on the Inspection Notes of the
Sanitary Commissioner as read with the
Comments thereon of their Health Officer"

Carried.

1/Feb/1905

Genl. Deptt.
12.

1895. 1460

Madras Municipality.

From

The President,

Municipal Commission,

MADRAS.

To

The Chief Secretary
to Government
Fort Saint George

G. No. 92

Dated 30th April

Despd 2nd May 1895.

Recd.

Enc. 4.

SUBJECT.

Forwarding an extract from the Proceedings of a meeting of the Commissioners held on 29th April 1895 together with reports of their remarks on the Sanitary Commissioner's Inspection notes for 1894 from the "Finco" and the "Hindu".

D C No. 29/4

Binneys Gardens
Kilpauk. 2/5/95.

Dear Mr Price,

As you will, I presume, shortly deal with my Inspection Notes of Madras, I should be obliged if you would hold in mind, that in the debate by the Municipality on this subject certain very absurd statements were made by one of the Speakers - G. Subramania Iyer - Editor of the "Hindu." For example, I was stated to have recommended to cut down all the horse fronts in Madras; whereas, the cutting of the common entrance hall only was suggested, in blocks of buildings built in Spreares, where a license would be requisite

[G/9]
2,000—23-1-95.

Current No. 294

DEPARTMENT.

From

Dr. W. G. King

No.

Dated 2. May 1895

Received 3d ——— o ———

Regd 4" ——— o ———

Enclosures

SUBJECT.

Forwarding certain statements made by S. Subramania Iyer to deal along with his inspection notes of Madras

Office

Send this up with the inspection notes

4/V.

R/S Attention 11/6/95

300—28-5-94.

DEPARTMENT.

Nos 1460 M. and 1509 M and dio. no 294A.

From The President Municipal Commission Madras and the Sanitary Commissioner.

Dated 30th April, 4th May and 2nd May 1895.

FOR ORDERS.

The Sanitary Commissioner inspected the City of M[illegible] on various occasions during 1894 and sent in a report to the Commissioners on the 1st instant. He sent a copy of this to Government and the Commissioners were told in G.O. no [illegible] that Government awaited their remarks.

2. On April 29th 1895 they discussed the report together with a memorandum thereon by their Health Officer. At this meeting they first proposed to shelve the S.C's notes altogether, next to appoint a committee to consider them and finally decided to ask for the views of Government upon them. In c no 1460 on the President forwards a copy of this resolution together with one of the Health officer's memorandum.

3. In d.o. no 294A 2.V.95. and c. no 1509 M. Dr King first points out the absurdity of some of Mr. S. Subramania Iyer's remarks at the meeting disposing of the notes and secondly asks that the Health Officer's memorandum may be communicated to him for remarks before orders are passed.

4. This course seems to be undesirable. So also does the suggestion of the Commissioners. From the debate on the notes it appears that the remark of the Health Officer at the close of his memorandum that he has disagreed with almost every one of the recommendations of the Sanitary Commissioner has frightened them and that what they really desire is the appointment of a committee of experts to go into the merits of the conflicting reports. But as a matter of fact the Health Officer has done nothing

of the sort. The only point on which he has regularly joined issue with Dr King and on which the opinions of experts would be desirable is the necessity for a system of sub-soil drainage advocated in para 42 of the notes, but this does not belong to the inspection notes proper but rather to the discussion on the Commrs' scheme and may be dealt with when the Commissioners' proposals for adopting a modified form of that scheme come on. For the rest, Dr King's proposals for the most part show what ought to be done if unlimited funds were available, Dr Heild Cook's memorandum shows what can be done with present means. There seems no reason whatever why the Commissioners should not state at once what they are prepared to do on each of Dr King's practical proposals as read with Dr Cook's remarks. There is no need for them to go into the proposals which are acknowledged by Dr King to be at present impracticable or into the discussions on the Commrs' scheme etc which have been wrongly introduced into these notes, unless they wish.

5. It is therefore submitted that the notes may be returned with the remark that Government is not prepared to depart from the usual course of procedure and awaits a report from the Commissioners as to what action they are prepared to take on Dr King's proposals.

25.V.

This matter of sanitation in Madras has unfortunately degenerated into a personal controversy between Dr King & Heild Cook and the Commrs should not double the saying "Who shall decide where doctors disagree" with "Shuffle what is that brings on to Government". I have spent a considerable time reading the papers and Dr King in his long wordy dissertation has told the Commrs nothing of what everyone knew before. Dr the usual thing with Dr King - suggestions, theoretically in accordance with the most advanced

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Sanitary Commissioner's Inspection notes
Madras.

H.M.

(for ad interim order)

[P. G. 25.]
600—7-5-95.

32

DEPARTMENT.

C. No.

FOR ORDERS.

Head of Sanitary Science has practically impossible on the score of expense.
Dr. H. Cook has shown the absolute impossibility of - on financial grounds - carrying out some of the more important of his proposals.
I submit that he should not be allowed to continue his discussions with Dr. Cook - nothing can come of it beyond another avalanche of writing and the waste by both Dr King & Dr. Cook of time which could be more advantageously devoted to both attending to their legitimate duties.
The order suggested by the S of S appears to be an appropriate one.

21/6/95.

PR.
Order d/12-6-95 No 968 mmi

The Commissioners will be informed that Government is not prepared to depart from the usual course of procedure and awaits a report from them as to what action they are prepared to take on the proposals of the Sanitary Commissioner

(from notes)

S.H. Desp'd 17/6/95
A/o
The President & Members

18/6/95.

37

By

FOR ORDERS.

Hw 9682

C. S.

(from orders)

...ven given for copying ____
...ven copied ____
...ven examined ____
...ven signed ____
} 189 .

...AD AGAIN G.O., No. DATED
189 ,

CURRENT No.

...NCLOSURES TO C. No.

ORDER OF GOVERNMENT	A	A	A	A	A	A	A	
LETTER OF GOVERNMENT.								
STATEMENT WITH DITTO.								
PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL.								

N.B.—
A = Copy in full.
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...ming posses... ...Neighbouring Remnities...