



ADMINISTRATION

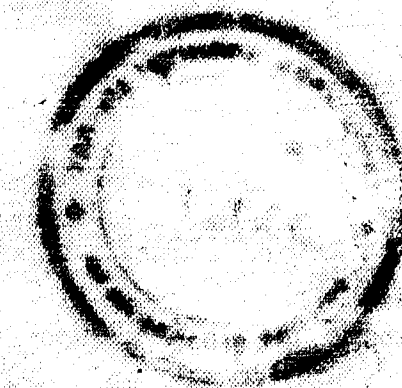
REPORT

OF THE

MADRAS MUNICIPALITY

FOR

1876-77.



MADRAS:

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POPHAM HOUSE.

1878.

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MADRAS MUNICIPALITY.

ADMINISTRATION REPORT FOR THE YEAR 1876-77.

CHAPTER I.

GENERAL.

Commission. The Commission consisted of:—

1st Division.

THE HONORABLE J. G. COLEMAN, re-appointed 8th November 1876.
P. PONNOOSAWMY CHETTIAR, Esq., do do
N. RAMALINGA PILLAY, Esq., do do
DR. W. J. VAN SOMEREN, resigned 8th July 1876.
CAPTAIN D. HEMING, appointed 28th October 1876.

2nd Division.

COWASJEE EDULJEE, Esq., Time expired on the 20th January 1877.
C. V. IYASAWMY MUDALIYAR, Esq., resigned 2nd November 1876.
V. KRISTNAMA CHARIAR, Esq., re-appointed 8th November 1876.
Y. VENKATARAMIAH, Esq., do do
P. S. RAMASAWMY MUDALIYAR, Esq., appointed 30th January 1877.
C. V. SESHACHELLA CHETTIAR, Esq., do do.

3rd Division.

G. KALLIASOONDRAM CHETTIAR, Esq., re-appointed 20th January 1877.
P. SOMASOONDRAM CHETTIAR, Esq., do 8th November 1876.
P. VEJIARUNGA MUDALIYAR, Esq., do 26th September 1876.
N. VENKATASOOROO CHETTIAR, Esq., appointed 24th October 1876.

4th Division.

CYRUS GRANT, Esq., re-appointed 8th November 1876.
DR. J. M. JOSEPH, resigned 23rd December 1876.
E. THEROOVENGADA MUDALIYAR, Esq.
V. VANCOGOPALA CHARIAR, Esq., re-appointed 8th November 1876.

5th Division.

THE COMMISSIONER OF POLICE, re-appointed 26th September 1876.
THE HONORABLE V. RAMIENGAR, C. S. I., re-appointed 22nd April 1876.
P. RUNGIAH NAIDOO, Esq.
THE HONORABLE H. S. CUNNINGHAM, appointed 8th August 1876.
P. G. R. BRANSON, Esq., resigned 17th June 1876.

CHAPTER I.

GENERAL.

6th Division.

G. HAMNETT, Esq., re-appointed 8th November 1876.

B. LOVERY, Esq.

J. P. NICHOLAS, Esq.

MAJOR C. C. SARGEANT, appointed 6th March 1877.

7th Division.

J. DESCHAMPS, Esq., re-appointed 18th June 1876 and resigned 17th March 1877.

MEER HOOSAIN ALLY KHAN, Esq., re-appointed 22nd April 1876.

HONORARY SURGEON MOIDEEN SHERIFF, do do

P. T. RAMANOOJOOLOO NAIDU, Esq., resigned 19th September 1876.

C. H. P. CHRISTIE, Esq., appointed 20th September 1876.

8th Division.

HYDER JUNG BAHADOOR, Esq., re-appointed 8th November 1876.

M. VENKATASAWMY NAIDU, Esq., appointed 12th June 1876.

THE REV. DR. J. M. STRACHAN, appointed 15th August 1876.

F. S. EVANS, Esq., do 24th October 1876.

R. K. PUCKLE, Esq., do 19th December 1876.

There were two vacancies at the end of the year, one in each of the 4th and 5th Divisions.

Executive Officers.

Mr. J. A. Jones, the newly appointed Executive Secy assumed charge of his office on the 15th January 1877.

General Meetings.

Ten General Meetings were held during the year, of two were Special and two Adjourned.

Sub-Committees.

The Sub-Committees were as follows:—

1.—APPOINTED PRIOR TO 1876-77.

Water Supply	...	Appointed 12th November 1867.
Educational Grants...	...	do 31st October 1871.
Drainage	...	do 14th November 1872.
Pensions	...	do 30th April 1873.
Budget of 1876-77	...	do 3th January 1876.

2.—APPOINTED IN 1876-77.

Budget of 1877-78.—Appointed 20th December 1876.

CHAPTER I.

GENERAL.

Meetings.

The number of Meetings held and the attendance of the Commissioners were as follows:—

Divisions.	NAME.	General, Special and Adjourned.	Water Supply.	Drainage.	Budget, 1876-77.	Educational Grants.	Budget, 1877-78.	Total.
		10	12	6	2	2	4	36
I	The Honorable J. G. Coleman	4	8	4	2	2	4	24
	P. Ponnosawmy Chettiar, Esq.	3	...	...	...	...	...	3
	N. Ramalinga Pillay, Esq.	2	...	...	...	...	...	2
	Dr. W. J. van Someren	...	...	...	...	...	...	...
	Captain D. Heming	2	...	...	...	...	...	2
II	Cowasjee Eduljee, Esq.	7	...	...	...	...	...	7
	C. V. Iyasawmy Mudaliyar, Esq.	...	...	...	...	...	...	...
	V. Kristnama Chariar, Esq.	10	9	5	1	2	...	27
	Y. Venkataramiah Esq.	8	10	1	1	1	3	24
	P. S. Ramasawmy Mudaliyar, Esq.	1	...	...	...	...	...	1
III	C. V. Seshachella Chettiar, Esq.	...	...	...	...	...	...	...
	C. Kallanasoondram Chettiar, Esq.	1	...	...	...	...	...	1
	P. Somasoodram Chettiar, Esq.	8	...	...	2	...	...	10
	P. Vejiarunga Mudaliyar, Esq.	7	12	...	1	2	3	25
	N. Venkatasooboo Chettiar, Esq.	1	...	...	...	...	...	1
IV	Cyrus Grant, Esq.	6	...	...	...	...	...	9
	Dr. J. M. Joseph	1	...	...	...	...	...	1
	B. Theroovengada Mudaliyar, Esq.	8	...	...	...	...	...	8
	V. Vanogopala Chariar, Esq.	10	8	...	2	...	1	21
	The Commissioner of Police	4	...	...	...	...	...	4
V	The Honorable V. Ramiengar, C. S. I.	1	6	...	...	...	...	7
	P. Rungiah Naidu, Esq.	7	...	...	...	...	3	10
	The Honorable H. S. Cunningham	3	1	4	...	...	...	8
	F. G. R. Branson, Esq.	...	...	...	...	...	...	...
	G. Hamnett, Esq.	2	...	1	...	...	...	3
VI	B. Lavery, Esq.	9	...	...	2	2	4	17
	J. P. Nicholas, Esq.	6	...	6	...	...	...	12
	Major C. C. Sargeant	...	...	...	...	...	...	...
	J. Deschamps, Esq.	5	...	...	...	...	...	5
	Meer Hoosain Ali Khan, Esq.	4	...	...	...	...	...	4
VII	Honorary Surgeon Moideen Sheriff	5	...	...	1	...	...	6
	P. T. Ramanoojooloo Naidu, Esq.	...	...	...	...	...	...	...
	C. H. P. Christie, Esq.	4	...	...	...	...	4	8
	Hyder Jung Bahadoor, Esq.	4	...	...	...	...	...	4
	M. Venkatasawmy Naidu, Esq.	...	...	...	...	...	...	...
VIII	The Rev. Dr. J. M. Strachan	3	...	...	...	...	...	3
	F. S. Evans, Esq.	3	...	...	...	...	...	3
	R. K. Puckle, Esq.	...	...	...	...	...	...	...

Mr. Venkatasawmy Naidu, a Commissioner of the 8th Division, died on the 12th June 1876 after having served on the Commission since 1867. A Native Gentleman of varied experience and unremitting energy, his opinions and advice in all matters of importance were respected, while his assistance was at all times readily and cheerfully given. The Commissioners could not but record his death with the expression of deep regret.

CHAPTER I.

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Apprehending the possible failure of the Red Hills Water supply as a consequence of the long continued draught, the Commissioners with the sanction of Government authorized a charge at the rate of 2 annas per thousand gallons being made for water used for other than domestic purposes. This charge was subsequently increased to 8 annas per thousand gallons, after it became necessary to raise the water by pumping. Although the revenue derived from this source was insignificant, being only Rupees 2,245, the imposition of the charge had a good effect in checking waste. A Special Meeting was held on the 24th April to consider the proceedings of the Water Supply Committee recommending that measures be at once taken for providing and setting up the necessary pumping apparatus at the head works. The Commissioners while adopting the suggestion of the Committee, and empowering the Acting President to take such measures as may be found necessary to prevent any failure in the supply of water from the Red Hills Tank unanimously adopted the following resolution:—

"That the Commissioners in reviewing the whole correspondence relating to the supply of the Red Hills Water to the Municipality, are of opinion that previous to the commencement of the works for which a loan of Rs. 14,30,000 has been contracted, there was an understanding that the Government would supply the Municipality with water from the Red Hills to any quantity not exceeding 32 millions of cubic yards at the rate of one Rupee per thousand cubic yards. They desire, therefore, that the Acting President in laying the correspondence before the Government, will appeal to their liberality to carry out this understanding by undertaking the cost of pumping, if it should become necessary to resort to that expedient."

As will appear in another part of this report the work of pumping was commenced by order of Government in August under the superintendence of the General Superintendent of the Government Workshops, the cost thereof being borne by Government.

Collection of taxes.

Certain changes in the method of collecting the Profession Tax and the Tax on Carriages and Animals were adopted on the recommendation of the Acting President. The collection of the former tax was put under the Assessor, and an increased establishment amounting to Rs. 203 per month was sanctioned. The effect of these arrangements has been very satisfactory as will be seen by a reference to Chapter II.

Improvement of the Water Supply.

The Water Supply Committee having been requested by the Commissioners to place themselves in communication with such professional gentlemen in the service of Government as may be able and willing to assist them and to report on the best means for improving the Water Supply, the Committee applied to Government for the assistance of an Engineer. The Government expressed willingness to assist the Committee but wished for information on certain points, the preparation of which, involving a considerable amount of labor and research was being attended to by the newly appointed Municipal Engineer.

CHAPTER I.

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The Honorable Mr. Cunningham, Commissioner for the 5th Municipal Division having drawn attention to the sanitary requirements of the Municipality, it was, agreed that the Drainage Committee be requested to consider and report on the following points:—

- (a.) The adequacy of the present Sanitary staff.
- (b.) The possibility of intercepting and defecating the sewage which now falls into the Cooum.
- (c.) The more effectual removal of sewage by carts, boats on Cochrane's Canal or the Tramway.
- (d.) The more extended use of sewage farms.
- (e.) The regular flushing of all drains.

and that they be empowered to invite Dr. Balfour, the Sanitary Commissioner, Mr. Dhanikote Rajoo, Captain Taylor, The Very Rev. J. Colgan, Mr. W. Robertson and any others whom they may consider it advisable to consult, to assist them in their deliberations, and that the Government be requested to direct a competent Engineering Officer to aid the Committee with professional advice.

The Government were not able to comply with the request of the Commissioners. The Committee, however, as above constituted met seven times but had not agreed upon a report before the close of the year. Enquiries were set on foot with a view to ascertaining the best means of getting the night soil and rubbish conveyed to a sufficient distance from the City either by Railway or Canal. The information received went to show that the removal by rail would be too costly, but that the Canals (more especially if the proposed Junction Canal were completed) afforded the best and cheapest means of removal. An experiment was made under the direction of the Committee to see how the removal of all faecal matter, liquid as well as solid, could best be accomplished—the necessary alterations in the drains, &c., being carried out in a few instances. Messrs. Cunningham and Dhanikote Rajoo undertook to conduct the experiment, but as their report has not been received, it may be convenient to place on record here the report of the Assistant Engineer of the South Range.

Report on the alteration to Private Privies.

On the recommendation of the Drainage Committee *vide* Proceedings dated 23rd September and 23rd November 1876, it was decided that the privies of the houses 41 in number in Alankatan Pillay Street, Triplicane should be altered as follows:—

The floors of all the privies were picked up and so relaid that all liquid matter falling on them runs into a receptacle and communication between the privy and house drain leading into the street drain intercepted. Each privy is provided with 2 buckets.

The privies were also roofed to prevent the rain water falling on the floor, and this was found necessary as the receptacles were made of dimensions calculated to contain urine only.

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In order to support the roof in some cases pillars were erected and in others walls were raised and in addition to these other petty necessary repairs were executed to the privies.

The cost of the alteration to these 41 privies was Rupees 903-0-4.

To remove the liquid matter from these privies a single bullock cart with bullock and driver is employed, also a Scavenger at a monthly cost of Rupees 15-11-0 equal to an annual cost of Rupees 188-4-0.

The above arrangements to the private privies were carried out with the intention of intercepting all urine and liquid faecal matter from flowing into the street drains, but this object, I regret to have to report has not been attained owing to the habits of the lower class natives who use their court yards and also the drain leading from it into the street drain as a urinal at all times of the day as well as night and consequently very little urine is found in the receptacles inside the privies.

The arrangements however prevent any solid or liquid faecal matter from the privies getting into the drains, but unless these people change their habits and a very strict watch is kept upon the interior conservancy arrangements of their houses I think it almost impossible to prevent faecal matter from flowing out of their houses into the street drains.

W. STEPHENSON.

From this report it may be concluded that any scheme for preventing urine from finding its way into the surface drains by altering the privies in houses, occupied by Hindus and Mahomedans would succeed only to a very limited extent.

The more pressing duties occasioned by the Famine which began to be severely felt about the end of November prevented the Members of the Drainage Committee from continuing their sittings.

The Commissioners having in their proceedings of the 14th September 1876, requested the Acting President to report what measures have already been adopted for improving the mode of collection of taxes, and what further measures he would propose to adopt with reference to a statement made by the Honorable Mr. Cunningham animadverting severely on the fluctuation and decrease observable in the receipts from certain taxes, the Acting President made a statement before the Commissioners at their next General Meeting in consequence of which the amalgamation of the Assessor's and Collector's Departments, and the retirement of the Collector at the end of the year was recommended and received the sanction of Government. At the same Meeting it was resolved to direct the Budget Committee to provide in the next year's Budget for an amalgamated Sanitary and Engineering Establishment in lieu of the two Departments under the Sanitary Inspector and Executive Engineer.

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GENERAL.

Education. The expenditure on account of Municipal Aided Schools was Rs. 14,168-8-7 being less than that of the previous year by Rupees 223-6-3 as follows:—

	In 1875-76.		In 1876-77.	
	Schools.	Amount.	Schools.	Amount.
Results Grants...	216	Rs. 12,055 7 7	205	Rs. 12,077 12 10
Salary do ...	2	255 0 0	Salary Grants discontinued	
Pay and Allowances to Inspecting Schoolmasters ...	...	2,064 7 9	...	2,022 1 2
Contingencies ...	...	16 15 9	...	68 10 7
	218	14,391 14 10	205	14,168 8 7
Budget Grant ...	...	15,000 0 0	...	12,000 0 0

The Inspecting Agency remained the same, being 1 Mahomedan and 2 Hindus whose salaries aggregate Rs. 170 a month. The Commissioners readily acknowledged the necessity for additional strength to this staff so frequently urged on their attention by the Inspector of Normal Schools and the Deputy Inspector, but felt they would not be justified in sanctioning a larger grant for education while measures of more urgent importance were very inadequately provided for in consequence of the low state of the Funds. The Report of the Deputy Inspector of Schools forms Appendix V.—(A) containing detailed information regarding schools aided by the Municipality. As compared with the preceding year there were

	In 1875-76.	In 1876-77.
Schools under inspection at the commencement of the year	249	284
do do close of	284	274
No. of boys at the commencement of	8,350	10,197
do do close of	10,197	10,030

Of these schools there were,—

English ...	4	4
Anglo-Vernacular ...	113	130
Vernacular ...	167	140

Aid of the Boys,—

Hindus ...	7,295	6,936
Mahomedans ...	1,563	1,760
Pariahs ...	764	720
Native Christians ...	851	404
East Indians ...	217	...
Europeans ...	7	18

The falling off in the number of schools and pupils is attributed to the Famine to some extent, but not so as to account for so large a reduction.

CHAPTER I.
GENERAL.

Looking at the results of the labors of the Elementary Schools it appears that the presentations at examinations were

Schools.		Boys	
For the 1st, 2nd, 3rd & 4th Standards	7	For the 4th Standard	62
1st, 2nd, & 3rd do	124	3rd do	903
1st & 2nd do	66	2nd do	1,661
1st or lowest do only	15	1st or lowest do	1,881
	212		4,510

Four cases of attempts on the part of the Managers of Schools to cheat the Municipality were discovered, and the offenders declared disqualified for receiving Municipal aid in future.

The schools and the grants paid to them are particularized in Appendix V.—(B), and the following Table shows their distribution among the Municipal Divisions:—

Divisions.	Amount paid.	Population.	Payments per 100 of the population.
1st	Rs. 1,038 0 0	65,547	Rs. 1 9 4
2nd	3,374 0 0	73,793	4 9 2
3rd	1,921 0 0	52,545	3 10 6
4th	130 0 0	9,791	1 3 3
5th	1,591 8 0	65,491	2 0 11
6th	384 0 0	19,990	1 10 5
7th	2,797 12 10	69,568	4 0 4
8th	841 8 0	41,482	2 0 5
Total.	12,077 12 10	3,07,552	3 0 7

It appears from the above that the 2nd Division, or the west half of Black Town which is almost entirely inhabited by Hindus, stands first in the order of advancement in Elementary Education; the 7th stands the second, and next comes the 3rd.

Vaccination. The Budget Grant for Vaccination was Rs. 5,670, and the amount paid was

For 3 Quarters to 31st December 1876	Rs. 4,252 8 0
Batia for Children's Arm lymph...	104 5 4
	4,356 13 4

The 4th Quarter's Instalment remained unpaid at the close of the year.

The Establishment was at the Depot	
3 Peons	245 0 0
1 Sweeper...	41 14 3
	286 14 3
Out-door Staff...	
1 Superintendent...	764 0 0
4 First Class Vaccinators	774 15 7
9 Second do	1,049 12 8
	2,588 12 3
	2,875 10 6

CHAPTER I.
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The following is the Statement of the operations during the year.

Operating Agency.	Months.	Under 1 Year.												Above 1 Year.											
		European & East Indians.			Hindus.			Mahomedans.			Total.			European & East Indians.			Hindus.			Mahomedans.			Total.		
		Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.	Males.		Females.
		Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.	Successful.	Unsuccessful.	Unknown.
Depot.	April 1876 to January 1877	13	10	7	7	7	1	16	13	31	15	6	5	103	91	1,304	146	123	2,063	1,554	2,274	40	1,293	1,029	
	February	1	3	1	1	1	1	5	6	6	5	7	46	26	72	45	28	243	519	14	7	1,396	549	1,947	
	March	16	13	7	7	7	1	31	15	6	5	53	34	37	...	...	...	...	...	19	10	1,873	531	2,404	
	Total.	7	7	1	1	1	1	23	7	6	6	66	45	65	1	48	26	17	818	605	45	47	883	569	1,452
	April	1	1	1	1	1	1	37	14	13	69	51	101	2	17	29	6	787	481	77	72	884	581	1,465	
	May	10	8	4	4	4	4	63	51	15	88	74	129	2	31	16	8	973	655	82	27	1,071	690	1,761	
	June	4	2	2	2	2	2	88	67	7	99	72	118	1	52	8	3	1,632	1,068	101	31	1,741	1,139	2,880	
	July	4	6	4	4	4	4	172	130	39	179	136	225	7	117	25	5	1,838	1,312	153	52	2,043	1,369	3,412	
	August	2	2	2	2	2	2	174	125	3	179	126	200	3	102	12	4	1,785	1,326	59	23	1,886	1,282	2,568	
	September	5	2	2	2	2	2	130	87	6	139	93	130	1	92	17	6	1,637	1,125	53	23	1,712	1,158	2,244	
	October	10	5	5	5	5	5	211	135	9	230	145	149	225	15	8	1,704	1,088	59	26	1,778	1,112	2,890		
	November	5	4	4	4	4	4	193	147	2	200	155	165	167	23	9	2,089	1,083	68	11	2,186	1,103	3,289		
December	7	9	7	7	7	7	146	121	2	155	133	188	100	64	87	2,625	1,889	37	18	2,738	1,494	4,232			
January	15	22	15	15	15	15	178	142	10	203	171	204	161	407	518	3,101	1,733	180	102	3,668	2,412	6,080			
February	39	35	33	33	33	33	333	285	62	436	336	580	177	495	263	6,157	4,046	420	298	7,072	4,606	11,678			
March	Total.	103	91	81	81	81	81	1,804	1,340	146	1,554	1,274	40	1,293	1,029	790	27,599	17,498	1,319	790	27,599	17,498	45,097		
Out door Staff.	Grand Total.	119	104	81	81	81	81	1,835	1,355	152	1,588	1,261	40	1,293	1,029	800	29,472	18,329	1,338	800	29,472	18,329	57,801		

CHAPTER I.
GENERAL.

The Statement may be abridged thus:—

	Under 1 year.			Above 1 year.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Europeans and Eurasians ...	119	104	223	1,339	939	2,278	1,358	1,093	2,451
Hindus ...	1,835	1,356	3,191	26,895	16,540	43,435	28,730	17,896	46,626
Mahomedans ...	152	128	280	1,338	800	2,138	1,490	928	2,418
Total...	2,106	1,588	3,694	29,472	18,329	47,801	31,578	19,917	51,495
Results: Successful ...	2,361			18,432			20,793		
Unsuccessful ...	40			1,029			1,069		
Unknown ...	1,293			28,340			29,633		

Although there was an excess of 2,132 operations over those of 1875-76, the working of the Department cannot be considered satisfactory, as it was still below that of 1874-75 by 14,029. With the Europeans and Eurasians there has been a steady improvement during the past two years, and an unexpected progress was made in last year among the Mahomedans, but the following Statements seem to indicate that Vaccination is losing ground with the Hindus, more particularly among their females, which is much to be regretted. Nearly one half of the whole number were vaccinated in the last three months of the year.

As compared with 1874-75.

	Europeans and Eurasians.			Hindus.			Mahomedans.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1874-75...	712	384	1,096	33,270	27,244	60,514	2,869	1,045	3,914	36,851	28,673	65,524
1876-77...	1,358	1,093	2,451	28,730	17,896	46,626	1,490	928	2,418	31,578	19,917	51,495
Increase in 76-77.	646	709	1,355	...	...	...	...	...	...	...	...	...
Decrease in 76-77.	...	...	...	4,540	9,348	13,888	1,379	117	1,496	5,273	8,756	14,029

CHAPTER I.
GENERAL.

As compared with 1875-76.

	Europeans and Eurasians.			Hindus.			Mahomedans.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1876-77...	1,358	1,093	2,451	28,730	17,896	46,626	1,490	928	2,418	31,578	19,917	51,495
1875-76...	375	224	599	28,250	19,301	47,551	856	357	1,213	29,481	19,832	49,313
Increase in 76-77.	983	869	1,852	480	...	...	634	571	1,205	2,097	85	2,132
Decrease in 76-77.	...	...	...	...	1,405	925	...	...	...	...	...	...

As to results the percentages to number Vaccinated were

	Under 1 year.	Above 1 year.	Total.
Successful ...	63.91	38.55	40.37
Unsuccessful ...	1.08	2.15	2.07
Unknown ...	35.00	59.28	57.54

With respect to these results too the working of the Department appears not more satisfactory than as to the number of operations remarked above. The past two years are almost on a par and compare very unfavourably with 1874-75 as their respective figures show.

In In In
1874-75. 1875-76. 1876-77.

Successful ...	72.34	39.66	40.37
Unsuccessful ...	1.22	2.29	2.07
Unknown ...	26.44	58.05	57.54

There has been some improvement in the number of European, Eurasian, and Mahomedan children vaccinated, still however, the ratio of the number vaccinated to the births was only a little over a third, and the increase over the preceding year was very trifling.

	Births.	Vaccinated.	Ratio.	Ratio in 1875-76.
Europeans & Eurasians...	464	223	48.06	35.84
Hindus ...	10,371	3,191	30.76	31.30
Mahomedans ...	1,020	280	27.45	14.73
Total.....	11,855	3,694	31.16	29.83

CHAPTER II.

FINANCIAL.

The following statement shows a comparison of the collections during the past year with the Budget Estimate, the actuals of 1875-76, and the average of 1873-74, 1874-75 and 1875-76:—

Heads.	Actual collections.		Average of three preceding years, inclusive of refunds.	Budget of 1876-77.
	1876-77, exclusive of refunds.	1875-76, inclusive of refunds.		
House and Land Rates	Rs. 2,68,934	Rs. 2,65,838	Rs. 2,41,905	Rs. 2,60,000
Ground Rents	4,326	2,943	1,704	2,000
Tax on Arts, &c.	1,05,013	76,996	66,352	1,20,000
Liquor License Tax	11,645	10,096	9,810	10,000
Tax on Carriages, &c.	40,901	38,400	39,324	43,000
Registration of Carts	15,078	12,469	12,448	12,600
Tolls	42,938	47,758	47,533	42,100
Total	4,88,830	4,54,500	4,19,146	4,89,600
Deduct Refunds	...	2,111	1,977	...
Remainder	...	4,52,389	4,17,169	...
Miscellaneous	82,131	1,06,097	92,989	79,400
Total	5,70,961	5,58,486	5,10,135	5,69,000

It will be observed that excluding Miscellaneous Receipts, the component parts of which vary considerably year by year, and which do not therefore admit of comparison, the total collections fall short of the Budget Estimate by Rupees 770. The Supplemental Estimates aggregating Rupees 33,000 from the Tax on Arts, &c., and the Carriage and Animal Tax although apparently justifiable at the time they were formed, have proved excessive owing in a great measure to the Famine which set in with much severity in November. There is however a large increase in the collections as compared with those of the previous year, and with the average of the three preceding years of Rupees 36,341 and Rupees 71,661 respectively. This gives an increase of 8 per cent. over the previous year's collections, and of 17 per cent. over the three years' average.

Including the Miscellaneous Receipts, the total income of the Municipality from budgetted sources was Rupees 1,961 in excess of the estimates.

FINANCIAL.

The following table affords a comparison of all such items under the head "Miscellaneous" as are regular annual receipts:—

HEADS.	Budget Estimate 1876-77.	Collec- tions in 1876-77.	Collec- tions in 1875-76.	Average Collec- tions of 1873-74, 1874-75, 1875-76.
	Rs.	Rs.	Rs.	Rs.
Rent of Market Stalls	10,400	10,156	10,404	9,386
Fees for Slaughter Houses	6,900	4,309	10,672	7,428
Strand Rents	300	2,490	161	280
Fees for Licenses for Dangerous and Offensive Trades	6,900	7,443	6,344	4,966
Permanent...	...	...	...	...
Temporary...	...	309	284	408
Proceeds of Sale of Rubbish	2,000	1,122	2,570	2,359
Peoples Park	3,700	1,878	2,470	3,239
Grazing and Avenues	3,500	2,642	2,972	3,083
Sewage Farms	2,500	4,046	1,929	2,086
Demand and Warrant Fees	5,000	5,761	6,184	4,970
Fines, Police	1,500	1,183	987	867
Do Contractors	1,200	1,808	1,823	786
Do Departments	1,200	406	985	1,480
Rent of Model Pancheries...	500	769	360	541
Total...	45,600	44,322	48,147	41,888

Compared with the Budget Estimates there appears an aggregate loss of Rupees 1,278. This loss is attributable to the deficiency under the head of "Fees for Slaughter Houses," which is thus explained by the Budget Committee in their report on the Annual Statement of Receipts and Disbursements. "In the middle of August 1875 the collection has been let to a Contractor who in that year paid an advance of Rupees 3,251 for 1876. To show the actual incomes for the years 1875-76 and 1876-77, this sum of Rupees 3,251 will have therefore to be subtracted from Rupees 10,672 of 1875 and added to Rupees 4,308 of 1876: when it will be seen that Rupees 7,421 and Rupees 7,559 represent the actual incomes for 1875-76 and 1876-77." The deficiency in the receipts from the sale of rubbish was caused by the stoppage of the sales at the Brick-kiln Rubbish Depot. The opening of the rubbish heaps being attended with a bad smell, and there being much sickness in that locality, it was thought advisable to stop the sales temporarily. The failure of the rains account for the other deficiencies observable. It is satisfactory to observe a marked increase in thereceipts from Sewage Farms.

CHAPTER II. FINANCIAL.

The following statement shows the particulars of the lands sold during the year :—

Extent of Land.		Locality.	Name of Purchaser.	Purchase Amount.	
Grounds.	Feet.			Rs.	A. P.
3	865	Trevelyan Basin Street No. 81	N. Naraina Iyer	126	3 5
	1740	Kilpank Branson's Garden.	Mr. Spring Branson	397	0 0
	187	Trevelyan Basin Road Black Town	Muniappa Mudali	27	4 11
	48	Mount Road.	H. H. the Rajah of Vencatagherry	21	10 10
	1527	Royapuram.	General Superintendent Spinning and Weaving Company	50	0 0
1	566	Isaac Street, John Pereiras	Sold by Auction by A Macartoom and Co.,	1,210	9 0
6	982	Ramanen Street.	Do	4,932	3 4
	860	Wall Tax Road.	Do	155	3 2
	615	Trevelyan Basin Road.	Do	122	3 6
	195	Tirupally Street.	Do	78	9 0
4	1771	Old Jail Street Black Town.	Do	1,071	13 9
Total...				8,192	12 11

The report of the Assessor and Collector on the working of the Revenue Department is a full, clear and very satisfactory statement. The following particulars respecting the various taxes are gathered from it :—

The demand for the year ending 30th April 1877 as shown in the Streetwari Register was Rupees 44,562, as 12, of which Rupees 39,529 were collected and brought to account within the year. A further sum of Rupees 1,438-4-0 was collected on account of arrears, making a total of Rupees 40,967-4-0, which is Rupees 1,573 in excess of the average of the three preceding years. The current collection was better by Rupees 5,326 than the average current collections of the three preceding years, which points to greater efficiency in the Collecting Establishment.

The receipts under this head amounting to Rupees 15,078-6-10, exceed the Budget Estimate by Rupees 2,578, and the three years average by Rupees 2,630. This increase is ascribed to the influx of country carts employed in conveying rice from the Beach to the Railway.

CHAPTER II. FINANCIAL.

These were let out as usual on contract for the highest bid which was Rupees 40,100. The receipts were in excess of this sum as shown in the Report of the Assessor and Collector in consequence of the last instalment due under the previous year's contract having been brought to account within the year.

The assessment of this tax is attended with much difficulty and uncertainty. The Act contains no provision under which persons liable to the Tax can be compelled to give the information necessary for a correct assessment. Consequently it happens that the demand has to be framed on very imperfect information, and is subject to considerable reductions and alterations. Out of 8,317 persons assessed, 2,221 objected to their classification. These objections were disposed of as follows :—

Confirmed.	Reduced.	Exempted.	
		Totally.	Partially.
574	407	385	855

involving a reduction of Rupees 16,298 against a total demand of Rupees 1,05,880, leaving a balance of Rupees 89,582. From this it is expected that a further sum of Rupees 9,000 will have to be set off for bad and irrecoverable debts.

The current collections including a sum of Rupees 5,824-11-6 paid before the Tax fell due and carried to account in 1875-76 amounted to Rupees 75,672, or about Rupees 28,300 in excess of the average current collections in the three preceding years. The Commissioners place great importance on the prompt realization of the current demand, and note this improvement with much satisfaction.

A sum of Rupees 35,561-14-9 was collected on account of arrears, making a total of Rupees 1,05,409. This is an increase of 97 per cent. on the collections of 1873-74, of 53 1/2 per cent. on the collections of 1874-75 and 37 per cent. on the collections of 1875-76, and is the largest sum ever collected in one year from the Tax.

504 Liquor shops were assessed to this tax. From the statement in the report of the Assessor and Collector it would appear that there is one shop to every 789 inhabitants throughout the whole town. In the 2nd division which represents one extreme, the proportion is 1 to 1,603, in the 8th division which represents the other, there is one shop to every 619 inhabitants. The demand for the year was Rupees 11,296, being Rupees 983 less than the average demand of the three preceding years.

CHAPTER II. FINANCIAL.

The decrease is accounted for by the Dows on which the Municipal Assessments are based, having been revised and modified by the Collector of Madras Rupees 11,645 were collected for arrears and current being Rupees 1,835 in excess of the average of the three preceding years. The Commissioners observe with regret that two defaulters owing as much as Rupees 635 on account of this tax who had evaded payment for a series of years, and succeeded in placing themselves beyond the reach of all coercive process, and who were after much labour on the part of the Municipal subordinates and the Police apprehended and committed to prison after enquiry by the Chief Magistrate, were released by the Government.

The demand for the year including additions on account of new and increased assessments and reductions on appeals amounted to Rupees 2,56,208-10 being the assessment of the rate at 7½ per cent. on 31,562 holdings estimated to yield an annual rental of Rupees 84,16,078. The number of holdings and the net assessment are slightly in excess of the figures of the three preceding years but not to such an extent as to require explanation.

Of the above sum of Rupees 2,56,208-12, Rupees 7,640,8-4 were remitted on notices of vacancy, and Rupees 2,41,283-10-6 were collected, leaving a balance of Rupees 7,412-13-2 uncollected, which is less than 3 per cent. of the demand. The arrears demand amounted to Rupees 37,811-2-1, of which Rupees 4,587-4-8 were remitted and Rupees 27,933-1-4 were collected, leaving a balance of Rupees 5,338-11-4 uncollected. The balances were reduced during the year from Rupees 37,844 to Rupees 12,751.

The total collection for arrears and current is compared below with the collections of the three preceding years.

1873-74	Rs. 2,26,361
1874-75	" 2,33,517
1875-76	" 2,65,838
	Total... 7,25,716
	Average... 2,41,905
1876-77	" 2,69,684

The improvement is very marked and can only be accounted for by the increased efficiency of the Collecting Staff.

Some curious facts are brought to light in the tabular statement given in the Report of the Assessor and Collector, showing the graduated scale of valuation of houses, buildings and lands. It appears that there are only 632 houses in

CHAPTER II. FINANCIAL.

Madras (including all Government buildings outside the Fort) which yield a rental of Rupees 50 per month or more. These houses are thus distributed:—

1st Division	...	...	...	54
2nd do.	...	...	...	30
3rd do.	...	...	...	116
4th do.	...	...	...	19
5th do.	...	...	...	118
6th do.	...	...	...	152
7th do.	...	...	...	59
8th do.	...	...	...	89
			Total...	632

Excluding huts of a less annual rental value than Rs. 14, there are in Madras

10,770 houses of an annual value of Rs. 30 and less.	
25,534 do.	do. „ 100 do.
29,228 do.	do. „ 200 do.
30,262 do.	do. „ 300 do.

There are 668 houses rented at between Rupees 300 and 600 per annum.

Excluding huts of less annual value than Rupees 14, the average rental on the 562 holdings was Rupees 108-23. In Bombay 22,458 holdings were valued at Rupees 1,12,75,710, giving an average of Rupees 502-08 per holding. The Calcutta reports do not give the particulars necessary for making a comparison.

It is ascertained that the demand on this account up to the 31st of March 1877 was as much as Rupees 16,277, of which only Rupees 4,325-9-3 have been realized. It is probable that a considerable proportion of the old arrears will be lost owing to the difficulty of tracing the parties indebted. The collections, however, are a great improvement on

former years.

1873-74	...	...	Rs. 1,250 4 8
1874-75	...	...	919 12 8
1875-76	...	...	2,943 3 3
		Total...	5,113 4 7
		Average	1,704 8 10
1876-77	...	...	4,325 9 8

CHAPTER II. FINANCIAL.

The following is a concise abstract of the receipts and disbursements prepared in accordance with the form prescribed by the Government of India.

Receipts.			Rs.	A.	P.	Rs.	A.	P.
Balance ...								
Tax on houses and lands ...			4,883	2	1			
Licenses on trades ...			2,68,933	18	4			
Taxes on spring-carriages and animals, and on carts and other vehicles without springs...			1,21,411	0	4			
Tolls ...			55,979	2	10			
Total Income from Taxation ...			42,933	5	4			
Ground and other Rents ...			4,92,257	5	10			
Fines and Fees ...			22,980	1	6			
Miscellaneous ...			9,158	14	6			
Payments for Municipal Services rendered to individuals—Water Supply—House Services			24,225	11	0			
Grants-in-aid from Provincial Funds...			9,110	5	11			
Total Income of year excluding Balance			34,470	0	0			
Deposits ...			5,92,182	6	9			
Advances Recovered ...			1,104	0	8			
Total including Balance...			56,062	13	5			
Disbursements.						6,54,232	6	11
Interest on debt ...								
Head Office Establishment...			51,323	0	1			
Conservancy and Cleansing ...			94,271	0	8			
Registration of Births and Deaths ...			1,43,761	5	2			
Lighting ...			4,265	9	2			
Construction and maintenance of Roads ...			18,636	7	0			
Watering Roads ...			1,05,129	1	7			
Drainage works ...			3,094	0	5			
Water Supply ...			6,511	5	2			
Buildings ...			18,328	8	10			
Other public works, including gardens and sanitary improvements ...			5,375	14	9			
Sanitary and Charitable Establishments (Hospitals, Vaccination and Contagious Diseases) ...			22,061	13	2			
Education ...			38,598	13	4			
Miscellaneous ...			14,168	8	7			
Payments for Municipal Services rendered to individuals—Water Supply—House Services			13,469	5	10			
Repayment of debt (Sinking Fund)...			25,571	4	1			
Refunds of Deposits ...			25,661	8	2			
Advances ...			155	8	8			
			60,225	10	7			
Total...			6,50,908	13				
Balance at close of year Rupees...			3,323	9				

It will be seen that the total income from taxation excluding Miscellaneous Receipts as shown in the first statement in this Chapter is Rs. 4,88,830, where the total income from taxation according to the above abstract is Rs. 4,92,257.

CHAPTER II. FINANCIAL.

The explanation of this discrepancy is as follows:—

	Rs.
Total as per first Statement ...	4,88,830
Deduct amount of Ground Rents ...	4,326
Remainder ...	4,84,504
Add amount collected as License Fees on certain Trades under Section 243 of the Act ...	7,752
Total as per Abstract ...	4,92,256

In the disbursements under the head of "Payments for Municipal Services rendered to individuals—Water Supply, House Services," is included a payment of Rupees 19,905 to Messrs. Oakes and Co. for materials supplied in the previous year. Explanation of this was given at page 18 of the Report for 1875-76. Had it not been for this payment which, properly speaking, belongs to the previous year, the account for this year would have shown a considerable gain to the Municipality.

The transactions shown in the Store Account being of the nature of advances, the sums disbursed and recovered on that account, have been included in the above abstract under the head of "Advances."

A careful statement and valuation of the various articles in the store yard at Trevelyan Bason was prepared in 1875-76, and the receipts and issues of stores have been correctly accounted for throughout the year. The following is an Abstract Statement of the Store Account.

	Rs.	A.	P.
Estimated value of Stores on the 31st March 1876 ...	53,189	15	7
Add			
Cost of Stores imported from England...	5,558	14	11
Purchase of Stores in local market ...	7,269	1	0
Stores issued and returned...	113	9	9
	12,941	9	9
	66,131	9	3
Deduct issues...	19,826	15	1
Balance ...	46,304	10	2

CHAPTER II.

FINANCIAL.

Unpaid Liabilities.

A sum of Rs. 74,949-13-5 due to Government the accounts particularized below remained unpaid at end of the year :—

Interest on Water Works Loan, due 31st December 1876 .. Rs. 43,134 6 10
Unpaid instalments on account of the following :—

Hospitals	9,217	0	0
Vaccination	1,417	8	0
Contagious Diseases	2,197	0	0
	12,831	8	0

Arrears on account of Red Hills Water.

For 1875	1,360	9	6
„ 1875-76	11,925	0	0
„ 1876-77	5,698	5	1

13,983 14 7

Rs. 74,949 13 5

The Budget having no separate allotment for the payment of unpaid Bills, the amounts due to Contractors for works executed during the preceding year have been met from the allotments in the current Budget to which they respectively belong.

The Water Works Loan.

The following statement shows the amount paid to the Sinking Fund for the redemption of the above Loan in 1876-77.

	Balance.		Receipts.		Total.		Payments.		Balance.	
	Govt. Securities.	Cash.	Govt. Securities.	Cash.	Govt. Securities.	Cash.	Govt. Securities.	Cash.	Govt. Securities.	Cash.
Municipality for Water Supply.	1,10,000	282-2-2	32,600	34,621-10-2	1,43,500	34,908-12-5	...	39,508-6-6	1,13,500	1,310-6-11

The amount of the loan is Rupees 14,90,000, bearing interest at 4 per cent. per annum. An additional payment at the rate of 2 per cent. is made to a Sinking Fund for the extinction of the loan.

CHAPTER III.

SANITARY AND ENGINEERING.

The working of the Sanitary and Engineering Departments continued throughout the year much the same as it was in 1875-76. The unhealthiness of the season, the scarcity gradually intensifying into famine, and the insufficiency and apprehended total failure of the water supply from the Red Hills, contributed to render the year one of unusual anxiety. In December the number of houseless poor in the streets and outskirts of Black Town had become so great owing to the influx of starving people from the Mofussil that it became necessary to make a large increase in the Conservancy staff for the purpose of keeping the Streets and Pacherries in and about the Town in a tolerably clean state. The Commissioners having expressed an opinion in favour of the amalgamation of the Sanitary and Engineering Departments, it was thought advisable to give immediate effect to this opinion and this was accordingly done. The Town was divided into twenty Wards, and an Overseer was placed in charge of each Ward and made responsible both for repairs of roads, &c., and for conservancy. Besides the ten Sanitary and seven Engineering Overseers, three new Overseers were appointed with the sanction of the Commissioners, the number of Peons was increased from 50 to 88, Scavengers and Drain-cleaners from 750 to 975, Carts and Trolleys from 310 to 358. These additions and alterations were carried out in January and February. The Municipality was divided into two ranges, each containing four of the Municipal Divisions, and ten of the newly established Wards. Mr. Stephenson, the Acting Executive Engineer was placed in charge of the South Range and Mr. Ross, the Sanitary Inspector in charge of the North, both being under the supervision of Mr. Jones, the Executive Engineer who took charge of his appointment on the 15th of January.

314,927 cart loads of dirt, filth and rubbish were removed from the Town, amounting to about 112,500 tons in weight. It was disposed of principally by reclaiming a low piece of ground to the North of the Madras Railway, between the Conger Choultry and the Railway Bridge, and another piece situated between the anchorage line to the Goods Station and the Basin Esplanade Road. The night soil of the 1st, 2nd and 3rd Divisions continued to be taken to Munnally in carts. That of the 4th, 5th and 6th Divisions was buried at the Brick-kila Depot and that of the 7th and 8th at Kistnampett. In addition to the two plots of ground above mentioned, several hollows and low places in lands belonging to private individuals were filled up and levelled with sweepings.

The nuisance most complained of was caused by persons easing themselves by the sides of the public roads and streets. The efforts of the Police to check the practice appeared to have no effect. Constant and regular cleaning up was the only feasible mode of dealing with the emergency and this was carried out in a fairly satisfactory manner.

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SANITARY AND ENGINEERING.

In addition to the 123 permanent public latrines there were 37 temporary latrines, or 160 latrines in all under the care of the Conservancy Department. Four permanent and twenty temporary latrines were erected during the year. Five urinals were erected in the 2nd Division with apparatus for keeping them constantly flushed with water from the pipes. They promised to be successful, but soon after completion, water was only available for a short time in the morning and evening, and it became necessary to close them as without a constant supply of water, they became a nuisance. A latrine, on what is called the Coimbatore plan, was erected at Teynampett in the 8th Division, and has proved the means of mitigating a nuisance which was much complained of by residents in the locality. The other permanent latrines erected during the year are merely walled enclosures.

The grant for new dust boxes was Rupees 2,000, of this only Rupees 1,193 including a small payment on account of the previous year was expended. The number of new dust boxes constructed during the year was 104, which together with those in existence previously, make up a total of 1,889. More dust boxes are still required in many of the streets.

A considerable stride in the development of the Sewage farms was effected during the year. By the erection of three new Picottahs and the improvement of the old ones at Kistnampett, the raising of the whole of the sewage which was brought down by the Kistnampett Nullah was rendered possible, and the old standing nuisance near the Bridge on the South Beach Road was got rid of. A new farm with three Picottahs was started at Triplicane on a piece of waste land belonging to the Trustees of the Triplicane Pagoda. The whole of the sewage of the large drain which formerly used to discharge itself on to the low ground near the South Beach Road, causing a most offensive and sickening smell was stopped and raised by Picottahs on to beds planted with *Harryali* grass. Although no profit has been made the result from a pecuniary point of view is on the whole encouraging. A great sanitary improvement has been effected at a small cost, the whole of which will in all probability be more than recouped in 1877-78. The Statements in the Engineer's Report show that while in the Kistnampett and Triplicane Farms the result is a net disbursement of Rupees 2,487-8-11, there was a net receipt of Rupees 233-13-8 from the Egmore and DeMellow's Road Farms. The net expenditure in all the farms therefore Rupees 2,253-11-3.

If the value of the extensions made to the farms be set against this, it will be seen that the money has been well expended. The area under Sewage cultivation has increased as follows since 1874-75.

	1874-75.	Extent.	1876-77.
Triplicane Farm	...	Not in existence.	8½ Acres.
Kistnampett "	...	8½ Acres.	7½ "
DeMellow's Road Farm	...	4½ "	5½ "
Egmore	...	Not in existence.	½ "
Total...	...	8½ Acres.	16½ Acres.

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The small patch of cultivation at Egmore replaces a most offensive cesspool which was much complained of by the Directors of the Male Asylum. It has been a complete success, and pays for itself.

984 Notices were served on parties under the Conservancy Sections of the Act, of which, all but 23 were complied with. There were 464 prosecutions, of which 249 resulted in convictions, 31 were dismissed and 184 were withdrawn. Only a very small number of cases were referred by the Police under Section 252 of the Act, in compliance with the application of the Acting President. It may be said, in fact, that this Section is inoperative.

About one-fourth of the whole length of metalled roads within the Municipality was reformed with metalling, varying from 2 to 6 inches thick. The different thicknesses were in the following proportions:—

Roads and Road Watering.	per cent.
2 inches.	78
3 "	12.72
4 "	84.67
5 "	98
6 "	85
Total...	100.00

The length of roads thus reformed was 44 miles, 2 furlongs, 159 yards out of 176 miles, the total length of metalled roads. The amount expended including the cost of emergent repairs Rupees 14,173, and the amount of unpaid bills Rupees 1,033, was Rupees 1,04,116-8-0.

The roads in the 5th, 6th, 7th and 8th Divisions were put and kept in very good order, but in the other Divisions many roads and streets were in want of repair. The unusual dryness of the atmosphere and the exceptionally heavy traffic were very much against the roads. It is the unanimous opinion of the Executive Officers that watering (especially with sea water) adds very much to the durability of granite roads. In support of this opinion, it is pointed out that the portion of the Mount Road which is watered twice a day, is wearing much better than the portion (across the Island) which is not watered. The China Bazaar Esplanade and the China Bazaar Street which are not watered, are already worn out by the excessive traffic, whereas the North Beach Road where the traffic is, if any thing, heavier is in better condition, although it was reformed more than a year previous to the other two roads.

The example given in the report of the Sanitary and Engineering Department, shows that the liability system is not too costly, considering the advantages secured by it. It must be confessed, however, that there is great difficulty in keeping contractors to their engagements when any unforeseen circumstance occurs affecting their roads injuriously. A re-classification of the roads is required as pointed out in the Engineer's report.

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The Mount Road from the Body Guard Road to Neil's Statue was watered 1 a day; for the watering of the North Beach Road, Popham's Broadway and a portion of General Hospital Road, a moiety of the cost was contributed by residents. A three miles of road was watered. Deducting the sum recovered from private parties the amount spent under this head was Rupees 2,736-5-2, of which Rupees 862- was for new carts and repairs to carts.

Owing to the failure of the Monsoon rains in 1875-76, the level of the Red I tank had sunk so low in August that it became necessary to raise the water by pumping. The cost of this work was undertaken by Government and carried out under the supervision of the General Superintendent of the Government Work Shops. The analysis given in the Engineer's Report, Appendix III, shows how bad the water was in quality. Nevertheless it was generally preferred for domestic purposes to the brackish water obtainable from the wells. Eleven stand pipes and cisterns were erected in different parts of the Town; the 21 inch main was carried over the General Hospital Bridge, and a 4 inch branch pipe was extended up the Egmore High Road distance of 243 feet. The piping throughout Madras and all valves and hydrants were maintained in good order. No bursts or leaks occurred.

The total lengths of pipes laid up to the close of the year are as under:—

Of	42 inch pipes	
" 36	"	1505 yards.
" 30	"	1234 "
" 27	"	824 "
" 24	"	3706 "
" 22	"	2037 "
" 21	"	1659 "
" 20	"	1508 "
" 18	"	957 "
" 16	"	2111 "
" 15	"	264 "
" 14	"	732 "
" 12	"	4053 "
" 10	"	5350 "
" 9	"	1627 "
" 8	"	3128 "
" 7	"	1019 "
" 6	"	18,948 "
" 5	"	8041 "
" 4	"	3947 "
		7266 "

Total... 69,916 " equal to

39 miles, 1,276 yards.

In the five months ending with August, the quantity of water received in the Town from the pipes was 5,077,236 cubic yards; in the seven months during which pumping was carried on, the quantity was only 1,229,435 cubic yards. During the

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latter period, wells were largely resorted to, and no effect was spared to put them in as good condition as possible. With the personal assistance of several of the Commissioners 367 public and 105 private wells were cleaned and repaired, and 22 new ones were sunk.

Notwithstanding the scarcity and bad quality of the pipe-water, 39 houses were connected with the mains on the application and at the expense of the owners.

The work done under this head is shown in the Engineering and Sanitary Report given in Appendix III. Pending the settlement of the point at issue between the Commissioners and the Municipality, of which mention was made in last year's report, it was not possible for the Municipality to take any decided course in the matter of drainage works.

Full particulars are given in the report of the Engineering and Sanitary Departments. The burners in use are of the smallest size and give a very poor light. On the other hand, the cost of lighting was small, being only 12½ annas per lamp per Lunar month; the contractor moreover was responsible for breakages, and for keeping the lanterns in repair.

CHAPTER IV.

THE FAMINE.

The scarcity which had long been felt, began to assume a severe character in October. The price of rice had been steadily rising and by this time stood at 4½ measures to 6 measures the Rupee, according to quality. The poorest laborers were already in distress for want of sufficient food. Large numbers of agricultural laborers accompanied by their families began to flock into the Town from the surrounding districts in search of food and employment. Rumours prevailed that bazaars were to be looted. On the 15th and 20th of the month the Police interfered and dispersed threatening mobs in the principal grain bazaar. About this time several charitable persons (the names of some of whom are given in the margin) commenced a daily distribution

List of Persons who opened Feeding Houses about the month of October 1876.

Division.	Locality.	Name of person.
First.	Arnachaleeswarampettah, Trivatore High Road, Sanjeevarayenpettah, Gol-lavar, Agalakam Street, Baba Madali Street.	N. Ramalinga Pillay, aided by local subscriptions. C. V. Chinniah Chetty.
Second.	Varda Muttappan Street, Cope Venkataswala Agar Street, Gundamwamy Corral Nine-appan Nalk Street, Varda Muttappan Street, Do, Do, Govindappa Nalk Street.	P. Muniammi Chetty. P. S. Ramasami Madali, Mgr. Venkataswami Chetty, aided by local subscriptions. The local Bazaar-keepers. D. Ranganathan Chetty, T. Ranganath Chetty, G. Venkataswami Chetty, Narayana Chetty.
Third.	St. Xavier Street, Corral Merchant Street, North Beach Road.	G. Ramasamy Deen, G. Mahadeva Chetty, The rice merchants on the Beach.
Fourth.	Varda Muttappan Street, Ninesappan Street.	V. Thakiah Chetty, aided by local subscriptions. Mahadeva Madali.
Fifth.	Comaleeswaran Corral.	W. S. Venkateswami Chetty, aided by local subscriptions.
Eighth.	St. Thomas.	Local subscriptions.

been largely increased by the Famine. It is to be feared that this accretion of population will continue to make itself felt for a long time.

As the Monsoon rains usual at this period continued to hold off, it became apparent during November that Famine of a severe type was impending throughout Southern India. The importation of rice and other food grains now commenced.

From an average of less than 10,000 tons for the nine months ending September, the imports rose to 18,809 tons in October, 39,673 tons in November, 56,186 tons in December, 75,969 tons in January, 69,057 tons in February, 48, tons in March. The Beach from the North Groyne of the new Harbour Work-

far as the Fort was covered with heaps of rice bags. Thousands of coolies were engaged in transporting these into godowns and to the Goods' Station of the Madras Railway, and thousands of others mingled with the workers for the purpose of collecting the scattered grains, and pilfering handfuls from the bags whenever opportunity offered. The Beach north of the Fort, the topes and Parcherries to the east and west of the Town, the vacant grounds, out-houses and street-pials within the Town itself were occupied by houseless poor. In the mornings between seven and nine the main streets were crowded to excess with these people, so that it was impossible for vehicles to make their way. It was clear to persons acquainted with the appearance of the streets in ordinary times that the population had been largely increased, though it was difficult to form an estimate of the numbers who had come to the Town. It is, however, no exaggeration to affirm that the population of Madras increased by not less than 50 per cent., or in the ratio of 2 to 3 during the period commencing with October 1876 and ending with January 1877. When it is considered that at least 200,000 utterly destitute persons must have come into Madras in this period there is no ground for surprise at the sudden and rapid increase of mortality which began to manifest itself in November and December. The wonder is rather that the deaths were not more numerous.

On the 4th of December the Government issued the following order:—

FINANCIAL DEPARTMENT.

Proceedings of the Madras Government, dated 4th December 1876, No. 2183.

The number of distressed persons now coming into Madras from the neighbouring districts having within the last few days become considerable, and there being among these many who, from age and weakness are unable to avail themselves of the Public Works in progress, His Grace the Governor in Council resolves to authorize the Commissioner of Police to arrange for opening places where cooked food can be daily provided for the suffering poor.

2. A considerable relief in this form is ordinarily given at the Monegar Choultry, where there is a complete organization admitting of extension. His Grace the Governor in Council does not doubt that the gentlemen who already give their services in aid of this charity will be willing to assist the Commissioner of Police in establishing at the cost of Government and in the immediate vicinity of the Choultry a Depot where cooked food can be distributed to about 2,000 persons if necessary.

3. The wants of Triplicane and its neighbourhood have been brought prominently to notice, and His Grace the Governor in Council sanctions a similar Depot being opened in the premises known as Goolam Moortaza Khan's Garden. Here arrangements should be made for feeding 2,500 persons daily if required.

4. At what is known as the Lungar Khana, food is distributed to limited numbers. Arrangements will be here made which will allow of cooked food being distributed if necessary to 1,000 persons daily.

5. His Grace in Council has observed with much satisfaction the efforts made by all classes to relieve by private charity the existing distress among their fellow

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nsmen, conspicuous among these efforts are those of the Friend-in-Need Society and of the Native gentlemen marginally noted, and H Grace the Governor in Council resolves to grant to Friend-in-Need Society a monthly donation, equal to special collections for relieving the poor, and to request gentlemen above mentioned to accept for distribution a monthly sum equal to the sum expended by them in feeding the poor on condition appended to these grants being that the money distributed by Government shall be applied to feeding those only who by age and infirmity are incapable of laboring for their livelihood, and that the establishment for the poor are fed shall be open to the inspection of an officer deputed by Government.

(Signed) W. HUDLESTON,
Chief Secretary.

Prompt action was taken on this order by Colonel Drever, the Commissioner of Police. By the 9th of December 1,473 paupers were housed and fed at the Moneg Choultry Camp and 1,995 others were receiving one meal daily in that and other relief places. By the end of the month the numbers were 7,473 non-residents receiving one meal daily and 8,757 housed and fed.

On the 13th of December an advance of Rupees 5,000 was placed at the disposal of the President of the Municipal Commission for Famine Relief and Works. relief camp was opened at Sathangad, a village about six miles to the north of the Central Station on Cochrane's Canal, for the purpose of intercepting persons coming from the North. By the 21st accommodation had been provided for hutting and feeding 1,000 persons. Two small relief works were also commenced in the Town, giving employment to about 600 men and women. Contrary to expectation the relief offered at Sathangad was only availed of by a comparatively small number of persons. The daily number fed in December averaged 526 and about 368 others were employed on labor. The proximity of the Town of Madras in which relief was distributed on a liberal scale and where the destitute, had moreover the supplementary resources of begging from door to door, picking up rice on the beach and in the track of the grain carts, and of pilfering from the rice bags proved an attraction too strong to be counteracted by the Relief Camps. Nothing short of actual physical restraint would have sufficed to detain the destitute wanderers more than day or two.

The average daily number of persons fed and employed out of food advanced to the Acting President were as follows :—

Months.	Fed gratuitously at Sathangad.	Employed at	
		Sathangad.	Madras.
December	526	368	629
January	944	300	428
February	435	1,589	989
March	846	3,406	2,396

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From the published reports of the Commissioner of Police, it is ascertained that the average daily number of persons fed gratuitously at the Government Relief Camps were as follows :—

	Resident in Camps.	Non-resident.
December	5,149	4,829
January	11,789	9,136
February	11,737	8,133
March	10,301	11,350

But in addition to the relief above recorded, and greatly surpassing it in extent, was the relief afforded to the hungry crowds by the scatterings and pilferings from the grain bags on their way from the boats to the Railway wagons. Merchants obtaining sea-borne rice at Bellary via Madras found that it was necessary to make an allowance for a loss of weight in transit of as much as ten per cent. Complaints of the depredations on the Beach were very numerous, and notwithstanding the exertions of the Police it was found impossible to prevent them. It may be stated without fear of exaggeration that at least 1 per cent. of the grain landed from December to March found its way into the mouths of the houseless poor. During that period 239,562 tons were landed which gives a daily average of nearly 2,000 tons, one per cent. of which is 20 tons or 44,800 lbs. The crowds attracted to the Town in the first instance by the liberal distributions of food by private persons remained for the sake of what they could pick up on the Beach, their numbers showing no signs of decrease, but rather the reverse.

The state of the streets, &c., in which the famine immigrants located themselves rendered it necessary to increase the Conservancy Force of the Municipality. This was done in January by the Acting President, whose arrangements received the sanction of the Commissioners at their next General Meeting in February.

The following is a statement of the additional Force employed :—

	Number.	Monthly cost.		
		RS.	A.	P.
Overseers	3	75	0	0
Peons	36	252	0	0
Carts with Bullocks and Drivers	43	989	0	0
Scavengers	188	668	7	0
Total	...	1,984	7	0

SPECIAL HEALTH DEPARTMENT.

Under the orders of Government a Special Health Department was organized in January. Sixteen junior medical officers were stationed at different parts of the Town and provided with a suitable staff of servants and medicines and appliances for making a house-to-house visitation. The Department was placed under Dr. Stan-ough and was in full working at the close of the year. An account of its operations can more conveniently find a place in next year's report.

CHAPTER V.

VITAL STATISTICS.

Tables I to IX of Appendix VI relate to Births.
" X to XXXII " " " to Deaths.

The number of Births registered was 12,261, of which 11,855 were "Born alive," and 406 "Still-born." These figures show an improvement over those of the preceding year 1875-76, in which the results were "Born-alive" 10,084; "Still-born" 389—together 10,473. Better registration more nearly to the probable average, (viz. $\frac{12,261}{12} = 1,177$ a month,) seems to promise success, the monthly average for the six months, from July to December, having risen to 1,130. This progress was unfortunately checked by the heavy mortality which commenced in December. The time and attention of the Mortuary Conicopillays were, of course, to a greater extent occupied in collecting the particulars of the largely increased number of deaths and, consequently, the registration of births again began to fall. Two additional Conicopillays were appointed about the middle of January; but as the deaths continued to increase, their appointment proved merely a prop to prevent further decline in the registration of births and failed to restore it to the more favorable position it had attained.

Table I.

The following is a condensed view of the Statistics contained in Table I, as compared with the preceding year:—

	Population.	Born-alive.			Still born.			Total Births.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Europeans	3,613	50	68	118	...	3	3	50	71	121
Eurasians	12,013	171	175	346	7	8	15	178	183	361
Native Christians	21,441	255	254	509	10	—	10	265	260	525
Hindus	3,09,521	5,353	4,509	9,862	—	154	315	5,514	4,663	10,177
Mahomedans	50,964	540	480	1,020	33	24	57	573	504	1,077
Total...	3,97,552	6,389	5,486	11,855	211	195	406	6,580	5,081	11,661
In 1875-76	...	5,280	4,804	10,084	226	163	389	5,506	4,967	10,473
Increase in 1876-77.	...	1,089	682	1,771	...	32	17	1,074	714	1,788
Decrease	...	...	...	...	15	...	...	...	...	...

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Comparing the foregoing with the births of the previous year as to the different races, it will be seen that the bulk of the increase appears in favor of the Hindus.

	In 1876-77.	In 1875-76.	In 1876-77.	
			Increase.	Decrease.
Europeans	121	102	19	...
Eurasians	361	356	5	...
Native Christians	525	537	...	12
Hindus	10,177	8,405	1,772	...
Mahomedans	1,077	1,073	4	...
Total	12,261	10,473	1,788	...

The increase is due in part to the greater activity of the agency employed for collecting information and in part to the necessity of registering births having become more generally known.

There were 6,580 Boys and 5,081 Girls born—the proportion being 7 Boys to 5 Girls.

The ratio of births to the Population was 30.8 per 1000 as against 26.3 in 1875-76, showing a slight increase of 4.5 due mainly to the Europeans and Hindus follows:—

	Population.	In 1876-77.		In 1875-76.	Increase in 1876-77.	Decrease in 1876-77.
		Births.	Ratio.			
Europeans	3,613	121	33.4	28.1	5.3	...
Eurasians	12,013	361	29.9	29.5	0.4	...
Native Christians	21,441	525	24.4	24.9	...	0.5
Hindus	3,09,521	1,0177	32.9	27.0	5.9	...
Mahomedans	50,964	1,077	21.1	20.8	0.3	...
Total	3,97,552	12,261	30.8	26.3	4.5	...

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The average of births for the eight years ended 1875-76 was 8,157. This however cannot be taken as a correct average, as the registration during the earlier years was notably very imperfect. Looking at the steady, though gradual rise observable in the totals of the later years, there can be no doubt that the difficulties attending the registration of births are beginning to give way, and that before long something like perfection will be attained.

Tables III to VIII.

Tables III to VIII show the births according to nationality sex and months in each village of the several Municipal Division and Table VIII is an abstract of these five Tables. Looking at the abstract, Eggr necessarily exhibits the largest ratio, 153.3, as in it is located the Lyng-in-Hosp which returned 1,461 births during the year. The other villages in which the bi have exceeded the total average 30.8 are

Perambore	...	...	51.6
Meersaibpettah	...	...	49.2
Poodoopett	...	...	45.0
Royapooram	...	...	40.6
Purawalkam	...	...	40.0
St. Thome	...	...	38.2
Alwarpett	...	...	38.2
Royapett	...	...	35.5
Chintadripett	...	...	35.4
Poodoopaukam	...	...	35.4
Tondiarpett	...	...	32.9
Washermenpett	...	...	32.9

The order in which the Divisions stand is:—

5th Division	...	...	49.5
4th do.	...	...	36.7
8th do.	...	...	33.6
1st do.	...	...	31.7
7th do.	...	...	27.8
3rd do.	...	...	23.8
2nd do.	...	...	22.6
6th do.	...	...	16.4

The last three Divisions occupied similarly low positions in the preceding

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The following Table shows the ratios of each class in the several Divisions in the foregoing order:—

Divisions.	Europeans.			Hindus.			Eurasians.			Native Christians.			Mahomedans.			Total.		
	Population.	Births.	Ratio.	Population.	Births.	Ratio.	Population.	Births.	Ratio.	Population.	Births.	Ratio.	Population.	Births.	Ratio.	Population.	Births.	Ratio.
5th ...	785	37	47.1	50,535	2,653	52.4	3,850	179	46.4	5,568	257	46.1	4,753	116	24.4	65,491	3,242	49.5
4th ...	73	0	12.2	8,323	254	34.1	154	9	58.4	145	10	68.9	1,991	48	43.9	9,791	360	36.7
8th ...	318	9	28.3	31,569	1,149	36.3	839	18	21.4	2,863	75	26.1	5,893	146	24.7	41,482	1,397	33.6
1st ...	201	11	54.7	53,041	1,850	34.8	812	25	30.7	5,524	80	14.4	5,969	113	18.9	63,547	2,073	31.7
7th ...	180	4	22.2	43,975	1,415	32.8	1,171	21	20.4	1,808	19	10.5	22,431	416	19.8	69,568	1,393	27.8
3rd ...	1,367	33	28.6	37,984	941	24.7	2,685	58	21.6	2,637	45	17.0	7,872	172	21.8	52,545	1,255	23.6
2nd ...	229	1	4.3	68,567	1,562	22.7	1,865	46	24.2	1,502	31	20.6	1,545	32	20.7	73,738	1,672	22.6
6th ...	460	11	23.9	15,522	293	18.8	607	2	3.2	1,394	8	5.7	1,407	—	—	19,330	318	16.4
Total...	3,613	121	33.4	5,09,521	10,177	32.9	12,013	261	30.0	21,411	525	24.4	50,981	1,077	21.1	8,97,552	12,261	30.8

In connection with the high birth-rate observable in Perambore, Meersaib, Pootapet, Royapooram, Pursowalkam, St Thomé and Royapett, it should be mentioned that for several years the death-rate in these suburbs has been observed to be excessive. The want of drainage and other causes connected with sanitation have generally been assigned for the excess of mortality in these places with the exception of Perambore, in respect of which no satisfactory reason could be given. It seems pretty clear, however, now that the registered births also are in excess of the normal proportion, that the population is larger than the number given in the Census Report of 1871, and consequently that the rates per mille of births and deaths given in the Municipal Returns are in excess of the true rates.

In Table IX, the births are distributed among the weeks of the year from Saturday to Friday. The weekly average was nearly 21 against 201 in 1875-76; the minimum 141 against 134, : maximum, 347 against 265.

It is perhaps scarcely necessary to premise that the branch of the Vital Statistics now about to be reviewed is weighted with inordinately heavy returns of mortality. The famine, with attendant diseases resulting from starvation, numbered its victims by thousands among the poorer classes of the population in spite of the most strenuous efforts put forth by the Government to avert the serious consequences of so dire a calamity. The forebodings of October and November that a famine was imminent, consequent on the failure of the rains, were but too speedily realized in December. Cholera and Small-pox soon appeared in its trail, while Fever, Dysentery, and Diarrhea continued unabated.

Before proceeding to review the Tables in Appendix VI, it is necessary to preface the remark that, in all the calculations, the population of 1871 has been taken. There was, an influx of paupers from the Mofussil; but, in the absence of any authoritative and reliable estimate of the increased population, the substitution of figures suggested by mere conjecture or surmise for those of the Census of 1871, did not appear justifiable.

It must be admitted that the influx of starving people from the surrounding districts has completely falsified the numbers given in the last Census Report. It is, however, impossible to frame an estimate with any claim to accuracy of what the increase is. Judging from the appearance of the streets, the general over-crowdedness of the poorer class of houses, it is thought that it has not have been less than 50 per cent. of the local population at the end of January.

But this immigration must have been going on for several months before January, though there are no means of ascertaining at what time it commenced. It was not attracted notice until October, but in so extensive an area as that covered by the Municipality, it probably did go on to some extent long before it attracted attention. Seeing that there is no possibility of obtaining really accurate figures for calculating the rates of mortality, it is thought advisable to retain the Census figures as the basis of the calculations leaving them to be corrected hereafter, when any satisfactory estimate of the increase to be made in them shall have been adopted.

The deaths amounted to 25,000 against 14,415 in 1875-76, the increase being no less than 10,585 or 73·4 per cent. The causes of death were :—

Table X.

	In 1876-77.	In 1875-76.	Increase in 1876-77.
I. General Diseases...	12,700	5,244	7,456
II. Local do ...	9,745	7,026	2,719
III. Conditions, &c. ...	2,192	1,976	216
IV. Poisons ...	8	4	4
V. Injuries ...	353	165	188
VI. Surgical operations ...	2	...	2
Total...	25,000	14,415	10,585

It will be seen from the following Abstract of Table X that every section of the community suffered from the general prevalence of the concomitant evils of the famine which unhappily overtook the city. The Hindus, in particular, lost at the rate of nearly 66 per 1,000, while the Mahomedans lost 58.

	Europeans.		East Indians.		Native Christians.		Hindus.		Mahomedans.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
I. General Diseases.	36	18	115	12	246	278	5,230	5,114	735	804	6,362	6,338
II. Local do ...	45	19	105	102	188	224	4,276	3,678	513	595	5,127	4,618
III. Conditions, &c. ...	7	4	20	22	27	47	733	1,030	125	177	912	1,280
IV. Poisons ...	2	...	1	...	...	...	2	2	1	...	6	2
V. Injuries ...	3	...	5	...	4	1	200	129	9	2	2	1
VI. Surgical operations ...	...	...	...	...	...	...	1	1	...	...	1	1
Total...	93	41	246	248	465	550	10,442	9,954	1,383	1,578	12,629	12,371
Total Males & Females	134		494		1,015		20,396		2,961		25,000	
Population...	3,613		12,013		21,441		3,09,521		50,961		3,97,552	
Ratio per mille...	37·0		41·1		47·3		65·9		58·1		62·8	
Do. in 1875-76	33·4		33·0		36·5		31·9		44·5		36·2	
Increase in 1876-77	3·6		5·1		10·8		31·0		13·6		26·6	

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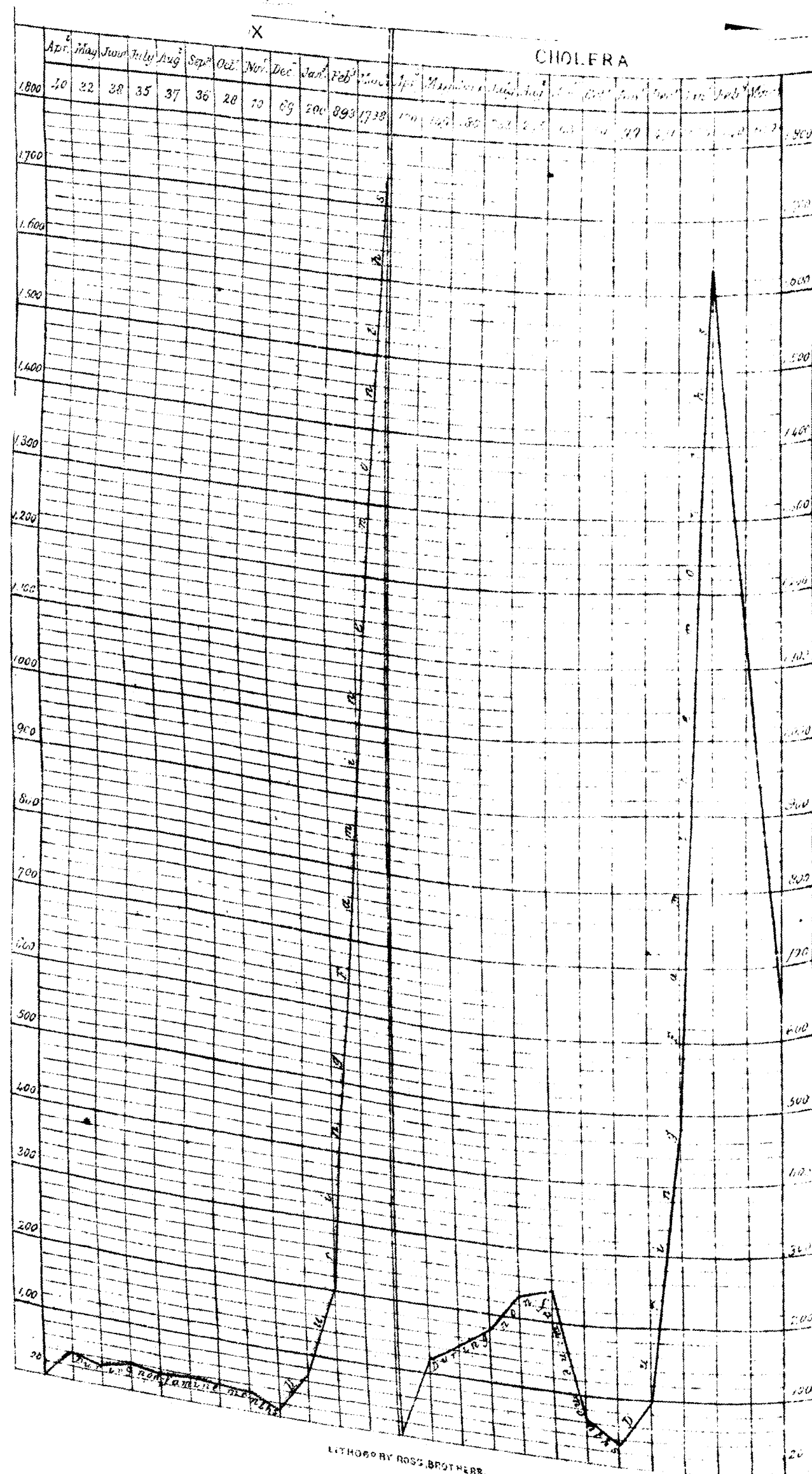
Table XI is an exhibit of deaths for 15 years from 1861-62, for the purposes of comparison. The year under review, of course, stands last in the order of salubrity. The Table also introduces to view the special diseases to which the deaths are due. It appears that out of the 25,000 deaths, Cholera and Small-pox numbered 8,171, and Fevers, Dysentery and Diarrhoea scored 7,499, making 15,670 from these diseases alone. Without a single exception, the deaths in 1876-77 under each special disease were in excess of the averages of the previous 15 years, Cholera alone having exceeded by 3,919 and Small-pox by 2,724.

The deaths which were occasioned by the special and other diseases are tabulated in greater detail in Tables XII to XVII, which show the number that occurred among the several classes and in each month. The following is a collection of the ratios per 1,000 of population.

	Small-pox.	Measles.	Fevers.	Dysentery.	Diarrhoea.	Cholera.	Injuries.	Other Diseases.	Total.
Table XII. Europeans	1.1	1.1	1.6	2.4	3.0	6.9	1.1	19.6	37.0
" XIII. Eurasians	3.3	0.4	3.6	2.0	3.7	9.0	0.4	17.6	41.2
" XIV. Native Christians	4.5	0.1	7.2	4.3	3.1	8.4	0.1	19.2	47.3
" XV. Hindus	9.0	0.1	8.0	6.3	6.0	12.5	1.0	22.6	65.9
" XVI. Mahomedans	4.0	0.05	5.4	4.6	3.8	15.8	0.2	23.9	58.1
" XVII. Abstract	7.9	0.1	7.5	5.8	5.4	12.6	0.9	22.4	62.8

The severity with which the Hindus suffered is here apparent, and Cholera proved most fatal to the Mahomedans.

Looking at the Abstract Table XVII, there appears a clear line of demarcation between the first eight and the last four months of the year. A normal average was maintained during the former; but from December, the month in which the Famine completely invested the city, the mortality rapidly rose from 1,193 in November to 2,071 in December, 3,743 in January, 4,401 in February and 5,024 in March; the monthly averages of the two periods of the year being 1,220 and 3,810 severally.



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The principal diseases to which this excessive mortality is due, are :—

	Non-Famine months, April to November 1876, 8 months.			Famine months, December 1876 to March 1877, 4 months.			The whole year.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Small pox ...	122	134	256	1,429	1,471	2,900	1,551	1,605	3,156
Fevers ...	708	767	1,475	757	755	1,512	1,465	1,522	2,987
Dysentery ...	389	421	810	769	735	1,504	1,178	1,156	2,334
Diarrhoea ...	259	277	536	935	707	1,642	1,194	984	2,178
Cholera ...	557	562	1,119	2,011	1,885	3,896	2,568	2,447	5,015
Total...	2,035	2,161	4,196	5,921	5,553	11,474	7,956	7,714	15,670

These are shown to have occurred amongst the Classes as follows :—

	Non-Famine months, April to November 1876, 8 months.						Famine months, December 1876 to March 1877, 4 months.						The whole year.					
	Small pox.	Fevers.	Dysentery.	Diarrhoea.	Cholera.	Total.	Small pox.	Fevers.	Dysentery.	Diarrhoea.	Cholera.	Total.	Small pox.	Fevers.	Dysentery.	Diarrhoea.	Cholera.	Total.
Europeans ...	4	6	10	9	29	58	4	12	5	1	16	36	4	6	9	11	25	55
East Indians ...	1	27	13	23	21	85	40	17	12	22	95	186	41	44	25	45	116	271
Native Christians ...	7	87	48	33	45	220	90	68	45	35	137	375	97	155	93	68	182	595
Hindus ...	224	1,230	642	412	936	3,444	2,583	1,273	1,328	1,448	2,949	9,581	2,807	2,502	1,970	1,860	3,885	13,025
Mahomedans ...	24	127	101	58	108	418	153	152	136	136	699	1,306	207	279	237	191	607	1,724
Total...	61	1,475	810	536	1,119	4,196	2,900	1,512	1,524	1,642	3,896	11,474	3,156	2,987	2,334	2,178	5,015	15,670

It will be seen from the accompanying Diagram that Small Pox, which was on the decrease in November increased slowly during the following two months and with the most alarming rapidity in February and March. Cholera rose steadily until the end of August, when it began to decline so rapidly that hopes were entertained that it would disappear entirely. These hopes, however, were doomed to disappointment. In November it again commenced an upward course, which was continued with great rapidity up to the end of January when there was a sudden fall which continued until the close of the year.

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it very seldom becomes the duty of the chronicler of Vital Statistics to draw a Diagram indicating, in such marked outlines, the decimating character of these two diseases assumed. Cholera culminated in January with a maximum of 35 deaths, and Small Pox in March with 1,738.

Of six Tables XVIII to XXIII that follow, show in what Divisions and Districts, or rather villages, the deaths occurred. The 6th Division maintained its position as first in the order of deaths it had done in the previous year. As compared with 1875-76, the statement shows that every Division suffered from the unhealthfulness so generally prevalent:—

	Ratio per 1,000 of Population.	
	In 1875-76.	In 1876-77.
1st Division.		
2nd do.	40.2	96.5
3rd do.	30.0	61.7
4th do.	30.3	54.7
5th do.	46.5	70.3
6th do.	42.7	61.5
7th do.	20.8	22.4
8th do.	37.7	56.1
	46.4	52.5
Total...	36.2	62.8

The 1st Division appears very prominently the unhealthiest, but it is accounted for by the fact that three Relief Camps were located in it, viz., the Monegar Choultry, Tondiarpett and Manally Relief Camps. So also in the 2nd and 4th Divisions the Salt Cotaur and Perambore Camps were severally located; the deaths in the former are included in the 3,662 of Peddoo Naick's Pettah, and of the latter 666 of Perambore.

The following table has been compiled from information supplied to the Commissioner of Police for three of the five Relief Camps in Madras. It shows the number of deaths at these Relief Camps up to the 31st of March.

Name of Camps.	Number of Deaths.			
	Men.	Women.	Children.	Total.
Royapettah ...	59	48	42	149
Salt Cotaur ...	183	114	114	411
Monegar Choultry ...	334	251	333	918
Total...	576	417	489	1,482

The figures for the Tondiarpett and Manally Camps are not available. Of the Districts, or villages, Royapooram, Meersaibpett, Perambore and Tondiarpett proved to be the unhealthiest.

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Omitting the Villages in which Hospitals are situated, viz:—

1st Division	Monegar Choultry having the Native Infirmary.
2nd do.	John Pereira's Gardens, ... General Hospital.
5th do.	Pursewaukum, ... Hospital for Women and Children.
	Egmore, ... Lying-in-Hospital.
8th do.	Royapettah, ... Royapettah Hospital.

the order in which the other villages stand, according to their ratios is here given:—

Below the average 62.8, Ratio per 1,000 of population.

Gun Powder Mills...	3.1
Chetput...	13.7
Kilpauk	16.8
Fort St. George	17.6
Vepery ...	22.2
Teynampett	23.4
Teroovatteeswarenpett	23.7
Nungumbaukum	26.4
Mackay's Garden	27.8
Paraimettoo and New Town	30.3
Veysirpaudy	34.5
Kistnampett	37.9
Cassinode	42.1
Chooay ...	50.7
St. Thomas and Alwarpett	51.9
Chintadripett	52.8
Peddoo Naickspett	55.7
Moothalpett and Uttapollium	55.8
Narasingapoorum	61.0

Above the average 62.8,

Big Paraherry	62.9
Poodoopaukum	64.5
Poodoopett	67.3
Triplicane	67.4

CHAPTER V. VITAL STATISTICS.

Tondiarpett and Washermenpett	...	85.8
Perambore	...	100.1
Meersaibpett	...	102.4
Royapooram	...	112.7

The Special Diseases, viz, Small-Pox, Fevers, Dysentery, Diarrhoea, and Cholera, from which the villages suffered, are recorded in Tables XXIV to XXVIII. The following statement shows how very generally these Special Diseases prevailed, as almost without exception every village (in the above list) was in a greater or less degree brought under their influence.

	Population.	DEATHS FROM SPECIAL DISEASES.					Ratio per 1,000 of Population.	Ratio of Total Deaths, Table VIII.	Difference of Deaths from other Diseases.
		SMALL-POX, Table XXIV.	FEVERS, Table XXV.	DYSENTERY, Table XXVI.	DIARRHOEA, Table XXVII.	CHOLERA, Table XXVIII.			
Gun Powder Mills	...	...	...	...	...	...	...	...	...
Chetput	641	...	...	...	...	...	1.5	...	1.6
Koilpakk	2,811	...	...	...	...	...	1.7	...	7.2
Fort Saint George	5,222	...	...	...	...	...	6.5	13.7	10.7
Vepery	1,588	...	...	...	...	...	8.1	17.6	9.5
Teynampett	4,500	...	...	...	...	...	11.3	22.2	7.3
Teroovateeswarenpett	1,246	...	...	...	...	...	12.8	23.1	9.6
Nungambakkam	12,057	...	...	...	...	...	13.8	23.7	12.3
Mackay's Garden	7,734	...	...	...	...	...	11.6	25.1	14.6
Parametoo and New Town	3,853	...	...	...	...	...	14.2	27.8	13.3
Veyyurpandy	11,275	...	...	...	...	...	18.4	30.3	11.9
Kistnampett	3,500	...	...	...	...	...	25.7	31.5	8.8
Cassimode	5,183	...	...	...	...	...	21.1	31.9	10.7
Choolay	12,893	...	...	...	...	...	24.2	32.1	13.9
St. Thome and Alwarpett	15,000	...	...	...	...	...	32.1	50.7	18.6
Clintadrepett	21,738	...	...	...	...	...	27.1	51.0	24.8
Paidoonackapett	15,120	...	...	...	...	...	27.8	52.8	25.0
Moothanpett and Uttampolliam	65,620	...	...	...	...	...	36.6	55.7	22.1
Narasingsapuram	59,957	...	...	...	...	...	21.6	55.8	21.2
Big Paricherry	3,046	...	...	...	...	...	11.7	37.7	23.3
Poodoopankam	5,179	...	...	...	...	...	2.8	49.8	13.1
Poodoopett...	6,087	...	...	...	...	...	36.1	61.5	25.4
Triplicane	3,774	...	...	...	...	...	38.9	67.2	28.4
Tondiarpett and Washermenpett	33,258	...	...	...	...	...	1.7	37.3	30.1
Perambore	41,640	...	...	...	...	...	2.8	62.7	22.1
Meersaibpett	5,650	...	...	...	...	...	37.0	65.4	31.7
Royapuram	2,030	...	...	...	...	...	11.5	16.1	13.3
	11,089	...	...	...	...	...	37.6	112.7	39.1

A recapitulation of the results contained in the Tables hitherto reviewed is contained in Table XXIX and obviates the necessity for further remarks, except that the ages are for the last time

CHAPTER V.

VITAL STATISTICS.

introduced here. The ages at which the deaths occurred and the ratio per 1,000 of population are:—

	Deaths.			Ratio per 1,000 of Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
Born-dead	211	195	406	0.5	0.4	1.0
Not exceeding 1 year	2,689	2,265	4,954	6.7	5.6	12.4
1 to 6 years	2,623	2,673	5,296	6.5	6.7	13.3
6 to 12	1,228	1,210	2,438	3.0	3.0	6.1
12 to 20	714	932	1,646	1.7	2.3	4.1
20 to 30	1,213	1,893	2,606	3.0	3.5	6.3
30 to 40	950	849	1,799	2.3	2.1	4.5
40 to 50	870	607	1,477	2.1	1.5	3.7
50 to 60	860	724	1,584	2.1	1.8	3.9
Exceeding 60 years	1,271	1,523	2,794	3.1	3.8	7.0
Total...	12,629	12,371	25,000	31.7	31.1	62.8

In this year again, as in the Report for 1875-76, it has to be remarked that children under six years suffered most. 41.00 per cent of the total deaths occurred amongst them—of boys 21.25 and girls 19.75. In the preceding year, the proportions were boys 21.65, girls 19.83 and total 41.48. But looking at the ratio of deaths to the population of each sex, it appears, that with the exception of ages 12 to 30 and exceeding 60, the mortality among males predominated; the population of males being 1,93,669, and females 2,03,883, the ratios per 1,000 are:—

	Males.	Females.
Born-dead	1.0	0.9
Not exceeding 1 year	13.8	11.1
1 to 6 years	13.5	13.1
6 to 12	6.3	5.9
12 to 20	3.6	4.5
20 to 30	6.2	6.8
30 to 40	4.9	4.1
40 to 50	4.4	2.9
50 to 60	4.4	3.5
Exceeding 60 years	6.5	7.4
Total...	65.2	60.6

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Of the 2,794 deaths of ages exceeding 60, the particulars are :—

	60 to 70		70 to 80		80 to 90		90 to 95		95		97		98		99		Total		Total of Males and Females
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Europeans	3	2	4	...	1	...	...	...	...	...	...	...	...	...	...	...	8	2	10
East Indians	7	12	13	9	4	3	2	...	1	...	...	...	...	...	...	...	27	25	52
Native Christians	23	44	23	32	15	12	...	1	...	...	...	...	...	...	...	...	61	92	153
Hindus	439	481	332	396	121	177	3	4	17	32	...	...	...	...	...	...	313	351	664
Mahomedans	115	198	83	109	41	39	10	8	6	11	...	...	...	...	...	...	155	235	390
Total	587	677	455	546	182	231	15	8	24	44	...	...	...	...	...	...	1,271	1,523	2,794

Tables XXX to XXXII need no remarks, as the particulars contained in them have already been noticed. Table XXX shows the deaths by the week; the following Table XXXI exhibits the average of deaths during corresponding weeks for 10 previous years; and Table XXXII collects in one view both births and deaths of each village and of each month comparing the ratios of both branches of Vital Statistics.

The following table shows at a glance the increase of mortality over and above the average of the preceding ten years for the eight months in which there was scarcity and for the four months of famine.

Months of scarcity.	Previous 10 years.		1876-77.	Increase.
	Total.	Average.		
April...	10,242	1,024.2	1,097	72.8
May...	10,765	1,076.5	1,216	139.5
June...	10,581	1,058.1	1,259	200.9
July...	11,289	1,128.9	1,253	124.1
August...	11,760	1,176.0	1,376	200.0
September...	11,344	1,134.4	1,168	33.6
October...	11,012	1,101.2	1,199	97.8
November...	10,630	1,063.0	1,193	130.0
Total...	87,623	8,762.3	9,761	998.7
Ratio per mille per annum...	330.6	33.0	36.8	3.8
Months of Famine.				
December...	11,457	1,145.7	2,071	925.3
January...	12,176	1,217.6	3,743	2,525.4
February...	10,581	1,058.1	4,401	3,342.9
March...	11,196	1,119.6	5,024	3,904.4
Total...	45,410	4,541.0	15,239	10,698.0
Ratio per mille per annum...	342.6	34.2	114.9	80.7

In the eight months of scarcity which preceded the famine, there was an increase over and above the ten years average of 998.7 deaths, and in the four famine months the increase was 10,698, the total increase due to scarcity and famine being 11,696. The death rate rose from an average of 33.0 to 36.8 in the months of scarcity, and from 34.2 to 114.9 in the months of famine. For the whole year the rise in the death rate was from an average of 33.4 to 62.8.

MUNICIPAL COMMISSIONER'S OFFICE,
MADRAS, January 1878.

L. R. BURROWS,
Acting President, Municipal Commission.

APPENDIX I.

STATEMENT OF RECEIPTS AND DISBURSEMENTS 1876-77.

APPENDIX

STATEMENT OF RECEIPTS AND DISBURSEMENTS

STATEMENT OF RECEIPTS AND DISBURSEMENTS												
Receipts in the corresponding period of 1875-76.		RECEIPTS.		Budget Estimates for 1876-77.		Total of Budget Estimates under Major Heads.		Total Receipts.		Total Receipts under Major Heads.		REMARKS.
Rs.	A.P.			Rs.	A.P.	Rs.	A.P.	Rs.	A.P.	Rs.	A.P.	
		Brought forward				4,14,500	0 0			4,14,500	0 0	
12,468	11 2	TOLLS ON CARRIAGES AND ANIMALS ENTERING THE TOWN.								12,468	11 2	
47,758	5 4	Farm. ...				40,100	0 0	42,933	5 4			
1,181	8 0	Composition.						971	0 0	12,468	11 2	
		MISCELLANEOUS.								971	0 0	Accountable to the Farmer of Tolls.
34,997	0 0	Government Contribution towards maintenance of Roads.		24,450	0 0							
10,404	7 5	Rent of Market Stalls		10,400	0 0			10,156	8 3			
10,672	4 2	Fees for Slaughter Houses		6,900	0 0			1,398	12 0			
161	2 1	Sewage Rates		200	0 0			2,180	0 6			
		Rent of Cart Stands		1,300	0 0			5,300	10 6			
		Fees for Licenses for Dangerous and Offensive Trades.										
6,314	8 2	Permanent.										
284	1 2	Temporary.										
2,564	11 0	Proceeds of sale of Rab-bish		6,300	0 0			7,113	7 7			
		Proceeds of sale of Hay and Grass		2,000	0 0			3,220	2 0			
783	12 2	Tiger Collections		1,500	0 0			1,122	4 9			
1,176	0 0	Swimming Bath		1,500	0 0			614	6 1			
141	9 3	Miscellaneous		200	0 0			913	2 0			
368	7 0	Grazing and Avenues		500	0 0			111	7 0			
2,972	4 1	Sewage Farms		3,500	0 0			205	8 7			
1,929	0 6	Demand and Warrant Fees		2,500	0 0			2,642	2 0			
6,153	9 9	Less refund Rs. 4-10-0		5,000	0 0			4,046	5 3			
987	4 0	Fines, Police										
1,825	0 0	Do. on Contractors		1,500	0 0			5,700	15 5			
981	8 9	Do. on Departments		1,200	0 0			1,183	6 0			
1,510	4 7	Less refund Rs. 25-8-0		1,200	0 0			1,898	5 4			
251	11 9	Sale proceeds of Lands, &c. of old Stores		2,750	0 0			406	3 11			
360	4 8	Rent of model Parochies.		300	0 0			8,192	12 11			
1,605	5 8	Napier Park		500	0 0			7,311	9 9			
2,318	14 4	Other Items.		2,000	0 0			768	11 0			
		Water Supply		3,000	0 0			1,614	14 4			
8	4 10	Watering Mount Road, &c.				79,400	0 0	1,824	14 7	82,436	10 5	
51	3 3	Pensions and Gratuities						2,245	9 5			a. Cont. Contributions.
43	0 0	Conservancy out-door						357	11 3			b. Proportion of Pension payable by Government to Mr. Cur-daan.
161	6 0	Lighting Maintenance						61	8 3			c. Refund of amount overdrawn.
26	4 0	Law Charges						9	2 0			d. Refund of amount account of damage done to lamp.
		Establishment						31	8 2			e. Refunds.
		Department						112	0 6			f. Refund of amount overdrawn.
10,342	3 4	Deposit Account										g. For Cont.
46,568	2 0	House Services						87	0 6			
		Government grant for restoration of wells						138	0 8			
16,136	5 0	Advances recovered						19,826	13 1			
		Carried forward				5,34,000	0 0	8,752	19 8	77,800	10 10	
								10,000	0 0	6,49,772	10 8 8	
								36,235	14 4			

FROM 1st APRIL 1876 TO 31st MARCH 1877.

Disbursements in the corresponding period of 1875-76.		DISBURSEMENTS.		Budget Grants for 1876-77.		Total of Budget Grants under Major Heads.		Total Disbursements.		Total Disbursements under Major Heads.		REMARKS.
Rs.	A. P.			Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
		Brought forward...		4,200	0 0	2,41,615	0 0	6,660	8 1	2,41,933	13 2	
		<i>Drains.</i>										
1,889	5 7	Constructing New Drains ...		5,000	0 0	9,200	0 0	2,469	0 4	9,069	8 5	The grant for drains was partially appropriated for Burial and Burning Grounds Improvements, which were urgently required. No excess under Major Head.
		<i>Repairs--Buildings.</i>										
410	7	Repairing Slaughter Houses...		500	0 0			a.	533	2 3		a. Excess unavoidable
183	10 10	Do. General Market ...		500	0 0			b.	617	4 8		b. Do. do.
368	10 10	Do. Latrines ...		500	0 0			c.	624	7 8		c. Do. do.
287	7 9	Do. Office Premises ...		300	0 0			d.	538	12 9		d. It was found necessary to build a new shed to the Store-rooms, and the repairs to the Office being more extensive, hence the excess.
49	0 11	Do. Public Wells ...		50	0 0			e.	246	13 7		e. It was found advisable to attend to some of the wells seeing the precarious supply of Red-Hills water.
43	0 8	Do. Dust Bins ...		300	0 0			f.	24	12 6		f. Excess unavoidable.
40	13 1	Do. Walls on Road sides ...		300	0 0			g.	590	0 1		g. Do. do.
32	0 10	Do. Toll Gates ...		100	0 0				76	5 3		
506	12 9	Do. Model Parcheries ...		500	0 0			g.	577	14 11		
		<i>Roads.</i>										
5,871	11 9	Maintenance of Roads, 1st Division.							5,124	9 4		
7,921	4 2	Do. do. 2nd do.							7,974	2 3		
12,117	14 11	Do. do. 3rd do.							16,231	2 1		
3,917	1 11	Do. do. 4th do.	1,00,000	0 0					4,791	2 3		
7,271	11 1	Do. do. 5th do.							17,566	11 9		
7,257	11 11	Do. do. 6th do.							13,388	11 8		
4,553	9 6	Do. do. 7th do.							25,354	1 10		
5,592	4 4	Do. do. 8th do.							13,642	15 2		
53,006	4 7	Repairing Wooden Railings in Roads		1,000	0 0				1,04,118	8 4		
223	15 0	Do. Street Boards		50	0 0				331	6 11		
315	9 0	Do. Removing Prickly Pears		100	0 0				283	0		
26	8 5	Watering Mount Road, Poyham's Broadway, General Hospital Road and North Beach Road		1,600	0 0				174	2 6		
1,055	9 5	Numbering Doors		400	0 0				3,094	0 5		
		<i>Drains.</i>							386	7 10		
4,868	2 4	Repairing and rebuilding Masonry Drains		4,000	0 0				2,597	1 2		
184	4 1	Do. Scrow Pile Drain		1,000	0 0				1,049	6 3		
		<i>Miscellaneous.</i>										
5,326	0 0	Planting Avenue		4,000	0 3				4,594	15 9		
2,717	0 0	Planting Esplanade and maintaining Wire Fence		300	0 0				973	11 8		
		Maintaining South Beach Band Stand		200	0 0							
		Carried forward...				1,15,700	0 0			1,21,162	3 6	
						3,66,415	0 0			3,72,165	9 1	

APPEND

STATEMENT OF RECEIPTS AND DISBURSEMENTS

Receipts in the corresponding period of 1875-76.		RECEIPTS.		Budget Estimates for 1876-77.		Total of Budget Estimates under Major Heads.		Total Receipts.		Total Receipts under Major Heads.		REMARKS.
Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
		Brought forward...				5,34,000	0 0			6,49,772	10	
		Carried forward...				5,34,000	0 0			6,49,772	10	

DIX I.

FROM 1st APRIL 1876 TO 31st MARCH 1877.

Disbursements in the corresponding period of 1875-76.		DISBURSEMENTS.		Budget Grants for 1876-77.		Total of Budget Grants under Major Heads.		Total Disbursements.		Total Disbursements under Major Heads.		REMARKS.
Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	
		Brought forward...				3,66,417	0 0			3,72,165	9 1	
		WATER WORKS.										
1,872	5 10	Maintenance of Delivery Channel		2,000	0 0			2,130	13 2			Excess unavoidable.
3,055	0 10	Repairs to Fountains		2,000	0 0			3,516	11 11			Do. do.
2,635	3 2	Maintenance of system of Pipes		2,000	0 0			2,124	15 3			Do. do.
459	3 1	Pipe laying extension		5,000	0 0			3,046	5 3			Rupees 3,000 was advanced out of this grant towards the completion of the Maharajah of Vizianagaram's Fountain.
2,057	0 11	Construction of extra Fountains						4,806	12 5			The contribution of the Maharajah of Rs. 10,868 for this purpose having been carried to account.
391	9 1	Stationery, Printing and Contingent Charges		300	0 0			89	4 10			
		Construction of two Bungalows for Watchmen on Delivery Channel		500	0 0			380	8 9			
		Laying Pipes and fixing Cocks for Flushing Drains		2,000	0 0			33	8 4	16,126	15 11	
37,093	0 0	Hospitals and Dispensaries		37,168	0 0	13,800	0 0	27,951	0 0	27,951	0 0	
5,820	0 0	Vaccination		5,670	0 0	5,670	0 0	4,356	13 4	4,356	13 4	The instalments payable in January, February & March were not paid.
8,788	0 0	Contagious Diseases' Act		8,788	0 0	8,788	0 0	6,591	0 0	6,591	0 0	
14,401	14 10	Educational Grants		12,000	0 0	12,000	0 0	14,168	8 7	14,168	8 7	Excess unavoidable.
		LIGHTING.										
23,787	12 3	Maintenance		17,600	0 0			17,871	14 3			
2,332	4 8	Addition		1,930	0 0	18,600	0 0	796	0 11	18,607	15 2	
54,556	4 3	Interest on Loan on Water Works						51,323	0 1			
27,278	2 1	Sinking Fund for Liquidation of the Water Works Loan		85,800	0 0			25,661	8 2			
		MISCELLANEOUS.										
16,186	5 2	People's Park		11,128	0 0			11,100	5 3			Is made up as follows:-
1,237	6 7	Napier Park		1,223	0 0			1,216	8 11			Balance due to 31st Dec. 1875; for which there was no provision. Rs. 32,705-9-2
643	13 10	Fire Engine Maintenance and Repairs		2,128	0 0			2,298	9 3			Instalment due to 30th June 76 Rs. 42,665-9-2
						14,484	0 0			14,615	7 5	Compound Interest. Rs. 1,613-5-5.
		CONTINGENT.										
1,305	6 9	Stationery		1,600	0 0			a. 1,801	0 10			a. Excess unavoidable.
2,178	1 8	Printing Charges		2,300	0 0			b. 3,803	10 10			b. The cost of printing two Administration Reports this year and the printing of the several Committee's Reports, as also the introduction of several new forms, has tended to swell this expenditure.
1,036	1 6	Advertising Charges		1,200	0 0			679	9 7			c. Excess unavoidable.
2,696	2 6	Law Charges including Stamp Duty		1,500	0 0			c. 1,618	7 0			
		Carried forward...		6,600	0 0	5,62,725	0 0	7,902	12 3	5,51,629	13 9	

STATEMENT OF RECEIPTS AND DISBURSEMENTS

STATEMENT OF RECEIPTS AND DISBURSEMENTS													
Receipts in the corresponding period of 1875-76.		RECEIPTS.		Budget Estimates for 1876-77.		Total of Budget Estimates under Major Heads.		Total Receipts.		Total Receipts under Major Heads.		REMARKS.	
Rs.	A. P.			Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.		
Brought forward...													
				5,34,000	0 0					6,49,772	19 5		

MUNICIPAL COMMISSIONERS' OFFICE,
Madras, 1st April 1877.

DIX I.

FROM 1ST APRIL 1876 TO 31ST MARCH 1877.

Disbursements in the corresponding period of 1875-76.		DISBURSEMENTS.		Budget Grants for 1876-77.		Total of Budget Grants under Major Heads.		Total Disbursements.		Total Disbursements under Major Heads.		REMARKS.	
Rs.	A. P.												
		Brought forward...		6,600	0	0	5,62,725	0	0	7,902	12	3	
		CONTINGENT.											
125	0	Insurance on Office Premises, &c.		125	0	0				125	0	0	
220	13	Office Furniture		100	0	0				185	4	10	
2,722	4	Pensions and Gratuities		3,000	0	0				1,637	11	9	d Excess unavoidable
1,002	0	Miscellaneous... ..		950	0	0				1,433	3	0	e Do. do.
		Government for Red Hills Water		6,000	0	0	10,775	0	0				
							6,000	0	0				
		Refund of sale of Rubbish ...								113	11	2	To be set off against receipts.
		Refund of Proceeds of Sewage Farms ...								20	13	3	To be set off against receipts.
		Preparation of Drainage Map.								323	10	5	Vide sanction of Commissioner on 31st October 1876
		Deposit Account ...								133	0	8	For Contra.
1,209	8	Tolls on Carriages and Animals entering the Town (Composition) ...								23	8	0	To be set off against receipts.
		Water Supply ...								35	0	0	Do. do
		Government grant for Restoration of wells ...								1	0	4	
13,606	9	Stores ...								12,941	9	8	
7,756	4	House Services ...								25,571	4	1	
		Centrifugal pump from Bombay ...								1,916	11	0	
12,220	5	Advances recoverable ...								47,284	0	11	
		Closing Balance...					5,79,500	0	0				6,51,332 3 1
													3,323 9 8
		Rupces...					5,79,500	0	0				6,54,655 12 9

W. H. AXELBY,
Manager and Book-keeper.

L. R. BURROWS,
Acting President of the Municipal Commission.

APPENDIX I.
GOVERNMENT OF MADRAS.
FINANCIAL DEPARTMENT.

13th September 1877, No. 2303.

Municipal—Accounts.

Read the following paper:—

No. 94. From E. J. FIRTH, Esq., Auditor of Accounts of the Madras Municipality, to the Chief Secretary to Government, dated Madras, 7th September 1877.

I have the honor to report that, agreeably to the instructions contained in the Proceedings of Government, No. 1825, of the 3rd July 1877, I have audited the accounts of the Municipality for the year 1876-77.

2. I pursued the same course of examination as reported last year in my letter,* dated 4th November 1876, and found all in order.

* Paragraph 2.

3. I then verified the entries in the annual statement enclosed, which tally with those in the Municipal balance sheet.

4. The above statement and those marked B and C accompanying exhibit the operations of the year contrasted with those of that immediately preceding.

5. The receipts of the year amounted to Rupees 6,49,772-10-8, and the disbursements to Rupees 6,51,332-3-1.

6. The year opened with a cash balance of Rupees 4,883-2-1; thus there was a balance of Rupees 3,323-9-8 at the credit of the Municipality on the 31st March 1877, which, after adding the amount of cheques issued (seven) but not cashed by the Bank on that date, Rupees 1,640-14-0 agrees with the balance shown in the Bank's Pass Book, Rupees 4,964-7-8.

7. The following comparison between the actuals for 1875-76 shown in the statement of receipts and disbursements from 1st April 1875 to 31st March 1876 and that accompanying shows:—

That the total receipts for the year, less items aggregating Rupees 78,811-10-10 not included in the estimate, amounted to Rupees 5,70,960-15-10, the amount estimated to Rupees 5,34,000, showing an increase in the former over the latter of Rupees 36,960-15-10; as compared with the actuals of last year there is an increase of Rupees 9,613-14-10.

8. The disbursements amounted to Rupees 6,51,332-3-1, and are in excess of the estimate by Rupees 71,832-3-1 and more than the actuals of last year by Rupees 15,974-15-6.

9. A reference to Statements B and C accompanying will show what heads of account are affected by the differences above pointed out.

10. In conclusion I beg to tender my thanks to Mr. Ramasawmy Chettiar and Mr. Axelby for the ready assistance they afforded me during my audit.

No. 95. ORDER THEREON, 13th September 1877, No. 2303.

Mr. Firth's report will be considered with the Annual Administration Report of the Madras Municipality for the year concerned, 1876-77.

2. The payment from the funds of the Municipality to Mr. Firth of the usual fee of Rupees 500 is sanctioned.

(True Extract.)

D. F. CARMICHAEL,
Chief Secretary.

APPENDIX II.
ASSESSMENT AND COLLECTION OF TAXES.

REVENUE DEPARTMENT,
MUNICIPAL COMMISSIONERS' OFFICE,
MADRAS, 30th June 1877.

From

P. RAMASAWMY CHETTY,

Assessor and Collector of

Municipal Taxes and Rates,

Madras.

To

J. R. BURROWS, ESQ., M. C. S.,

Acting President of the

Municipal Commission,

Madras.

SIR,

The duty of reporting upon the Administration during the official year 1876-77, which ended on the 31st of March last, of the Assessment as well as the Collection Departments of this office, having devolved upon me by reason of the retirement of the late Collector on that date, and of the amalgamation of those departments since then under my control, I do myself the honor of performing that duty.

2. There is hardly anything of a general nature with which this report can be premised, except that, for several months before the amalgamation, the Assessment Department had the entire working of the Profession and Liquor Taxes, the Collector being relieved of it altogether for an improved system of Collection under me.

3. I will advert to the Taxes in the order in which they are treated of in the Act constituting this office.

4. 1st. Tax on Carriages on Springs and Animals under Sections 36 to 43 of the Act.

This Tax is leviable for the half years ending the 30th of April and 31st of October respectively, as soon as a vehicle or animal has been kept for sixty days in the half year. The gross demand for the two half years ending respectively on the

APPENDIX II.
ASSESSMENT AND COLLECTION OF TAXES.

31st of October and 30th of April last comprised in the year under report, consist of the following particulars, viz :—

	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	Total Amount.
For the half year ending 31st October 1876.	214	1,926	1,403	6,313	1,196	3,663	1,471	6,619	1,150	1,725	1	12	286	118	3,510	1,625	30	15	60	15	664	332	22,816
Dc. 30th April 1877.	230	2,070	1,412	6,864	1,115	3,345	1,518	6,831	1,135	1,702	1	12	241	120	2,968	1,404	11	7	49	124	597	2984	22,216 12
Total...	444	3,996	2,815	12,667	2,311	6,990	2,989	13,450	2,285	3,427	2	24	527	238	6,478	3,029	41	22	109	271	1,261	6304	44,562 12

ASSESSMENT AND COLLECTION OF TAXES.

Subject to reduction by about 1,500 Rupees for over assessments and remissions of all kinds.

all kinds.

5. The sums collected on account of such demand during the year were as follows, viz :—

--	--	--	--	--	--	--	--

[illegible]

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

This result is not, perhaps, what could be desired or wished; and may be said to be owing, in some measure, to the famished condition of the Town and especially to the prevailing want of harmony on the part of Tax-payers, and their generally evasive character; yet, working, as the department did, with seven Conicopillays headed by an Inspector, under the improved system organized by you, (whereby a departmental measure under Section 238 of the Act, preparatory to the adoption of Magisterial proceedings, was instituted, with the two-fold object of alleviating annoyance and inconvenience to the public, and, at the same time, gaining our end in a more summary manner, and which measure afforded better means of scrutiny than the subordinate detective agency was capable of exercising,) the collection compares favorably with the average of the corresponding operations of the 3 previous years as hereunder shown.

Collection during 1873-74 on account of the half-years ending 31st October 1873 and 30th April 1874	Rs.	35,447	4	0
Collection during 1874-75 on account of the half years ending 31st October 1874 and 30th April 1875	"	32,854	12	0
Collection during 1875-76 on account of the half-years ending 31st October 1875 and 30th April 1876	"	34,307	4	0
Total	"	102,609	4	0
Average	"	34,203	0	0
Collection during the year under report as above shown	"	39,529	0	0
Increase	"	5,326	0	0

6. The demand above stated consisted of 7,480 cases of Assessment; in no less than 1,576 of such cases, the parties, having failed to heed to several warnings given them to make their returns and take out Licenses, were summoned under Section 238 of the Act; and in 180 of this number, Magisterial proceedings instituted, the result being that 147 of the parties so prosecuted entered into compromise with us by payment of their respective Taxes before hearing, and the remaining were tried and convicted and sentenced to pay, in addition to the taxes referred to in the last preceding para, penalties amounting in the aggregate to Rs. 44, all of which have been realized and form part of the revenue shewn under the head of Police fines and stoppages.

7. The following sums were also collected in the course of the year for arrears, viz:—

For the half-year ending 31st October 1874	Rs.	9	0	0
do. 30th April 1875	"	59	0	0
do. 31st October 1875	"	171	8	0
do. 30th April 1876	"	1,198	12	0
		1,370	4	0
	Rs.	1,438	4	0

which, with the sum of Rs. 39,529 collected on account of the current demand as already shown, makes an aggregate of Rs. 40,967-4-0 against Rs. 40,000 budgeted for

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

the year. Taking the year's operations with respect to the current demand and arrears as a whole, the result contrasts favorably with the average of the three preceding years; for, I find that we collected

In 1873-74	Rs.	43,231	against a budget grant of Rs.	46,000
" 1874-75	"	36,640	do	" 46,000
" 1875-76	"	38,810	do	" 45,000
		1,18,181	do	" 1,37,000
making a total of	"	39,394	do	" 45,667
and an average of	"			

thus exhibiting an increase in the past year's collection, of Rs. 1,573 and a decrease in budget grant of Rs. 5667.

8. It occurs to me that, were it not for the levy of Tolls, our proceedings for realization of this Tax would be attended with a much larger share of coercive measures. As it is, our work is almost redoubled and involves a deal of enquiry not only by reason of parties omitting to make any returns at all for evading the Tax, but also in consequence of returns being made of less number and of inferior class of carriages and animals than those kept, with a fraudulent motive.

9. 2ndly. Fees for Registration of Carts and other Vehicles without springs under Sections 45 to 47 of the Act.

These fees are payable for the half years ending the 30th of June and 31st of December, as soon as a cart has been kept for 15 days in the half year. They are worked by a couple of Hurkarahs, upon whose energies and integrity in detecting, seizing and bringing to book unregistered vehicles, depends almost entirely our success in collection, since their ownership, possession and station are unfixed. Hence no demand of a reliable nature could be formed.

10. A sum of Rupees 15,078-6-10 was realized under this head representing, as it does, the registration

For the 1st half of 1875, of 5 carts on payment of Rs.	10	0	0
do 2nd do, of 12	do	24	0 0
do 1st do of 1876, of 344	do	686	4 6
do 2nd do of 1876, of 3439	do	6,876	10 4
and do 1st do of 1877, of 3705	do	7,410	0 0
and of Transfers	do	71	8 0
Total Rs.		15078	6 10

The fractional sums arose from proceeds of sale of distress in which no further distress could be had to make up the full fees due.

11. For the purposes of comparison, I give below the sums collected during

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

the 3 years preceeding that under report, the average whereof is exceeded by the result of this year, owing to an influx of country carts which have found ready occupation in the famine rice operations.

	Budget.	Collection.
During the year 1873-74 Rs.	12,000	Rs. 12,775 11 4
do 1874-75 Rs.	12,000	„ 12,101 0 11
do 1875-76 Rs.	12,500	„ 12,468 11 2
Total Rs...	36,500	„ 37,345 7 5
Average Rs...	12,166 10 8	„ 12,448 7 10
During the year 1876-77 Rs...	12,500	Rs. 15,078 6 10
Increase Rs...	333 5 4	Rs. 2,629 15 0

12. 3rdly. Tolls on Carriages and Animals entering the Town under Sections 49 to 55 of the Act.

There is scarcely any departmental process to report in connection with this part of the Municipal Revenue, beyond the fact that the Tolls were farmed out as usual, on receipt of tenders, for Rs. 40,100, the highest sum offered for the year and that, in accordance with the arrangement for the payment thereof by 12 monthly instalments in arrear, 11 of such instalments, amounting in the aggregate to Rupees 38,591-10-8 were realized, which, with the last instalment for the previous year falling due in the first month of the year under report, viz., Rs. 4,341-10-8, formed the total recovery of Rs. 42,933-5-4 against Rs. 40,100, budgeted for the year. In 1873-74 the Tolls gave us Rs. 50,500, in 1874-75 Rs. 40,000 and in 1875-76 Rupees 52,100, making an average of Rs. 47,533, of which the last year's lease fell short by Rs. 7,000, and upwards. This shortcoming was owing probably to the continued drought by reason whereof the mofussil traffic was supposed to be limited.

13. For the convenience of Tax-payers and on same terms on which we license carriages and animals within the Town, we have compounded Tolls on behalf of the Lessees with parties resident out of our jurisdiction, to the extent of Rs. 971, which will, of course go to the Lessees.

14. 4thly. Tax on Arts, Professions, Trades and Callings under Sections 57 and 59 to 62 of the Act.

This Tax is leviable for the Calendar year by half yearly instalments, as soon as an Art, Profession, Trade or Calling, has been exercised for two months in the half year, and worked by a set of men composed of 4 Inspectors and 15 Conicopillays.

15. The current demand of the year under report was assessed at Rs. 1,05,880

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

against Rs. 1,00,000 budgeted; and the following statement will particularize such assessment and budget classwise and divisionally.

Division.	Classified Assessment.								Total.	Budget.
	I. A.	I. B.	I. C.	II.	III.	IV.	V.	VI.		
1	1,400	...	...	800	600	850	768	1,864	6,282	5,200
2	...	...	750	2,500	3,250	4,600	5,052	5,120	21,272	22,000
3	3,150	400	1,800	11,500	11,800	9,425	6,324	7,624	52,023	48,000
4	...	...	...	100	100	275	228	320	1,023	1,000
5	350	...	150	1,400	1,350	1,975	900	8,088	9,213	7,000
6	...	...	150	700	1,650	500	420	416	3,836	3,800
7	...	...	450	2,300	2,300	800	1,080	3,404	10,334	10,000
8	...	...	...	500	250	175	132	840	1,897	3,000
Rs...	4,900	400	3,300	19,800	21,300	18,600	14,904	22,676	1,05,880	1,00,000

This demand is less by Rupees 6,442 than the average of the 3 previous years as will be observed from the Comparative Statement given below:—

Division.	Assessment for			Total.	Average.	Assessment for 1876.
	1873.	1874.	1875.			
1	4,532	5,646	5,88	16,061	5,354	6,282
2	23,285	24,779	24,773	72,837	24,279	21,272
3	53,343	53,745	54,513	1,61,601	53,867	52,023
4	1,063	1,088	1,318	3,469	1,157	1,023
5	9,312	7,824	7,833	24,969	8,323	9,213
6	3,740	3,451	4,174	11,365	3,789	3,836
7	12,565	13,040	12,513	38,118	12,705	10,334
8	2,660	3,673	2,212	8,545	2,849	1,897
Total Rs...	1,10,560	1,13,246	1,13,219	3,36,965	1,12,322	1,05,880

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

The following statement will shew the number of persons assessed in each division under each class as compared with 1873, 1874, and 1875,

Division.	No. of persons classified for 1876.						Total.	Total for 1873.	Total for 1874.	Total for 1875.	Average of the last 3 years.
	I. A.	I. B.	I. C.	II.	III.	IV.					
1	4	...	...	8	12	34	64	166	583	630	630
2	...	...	5	25	65	184	421	1280	1,980	2,231	2,253
3	9	2	12	115	236	377	627	1906	3,184	3,073	3,164
4	...	...	...	1	2	11	19	89	113	128	132
5	1	...	1	14	27	79	75	772	969	602	699
6	...	...	1	7	33	20	35	101	200	174	182
7	...	...	3	23	46	32	90	851	1,045	1,155	1,337
8	...	...	...	5	5	7	11	210	233	336	549
Total Rs.	14	2	22	193	426	744	1242	5669	8,317	8,329	9,175
										8,885	8,790

that given below exhibiting divisionally the number of Hindus and Mahomedans, distinguished from persons of other nationality and Joint Stock Companies, comprised in the assessment above given for the past year.

Division.	Hindus.	Mahomedans.	Others.	Joint Stock Companies.				
				I A.	I B.	I C.	III	IV
1	473	23	85	4	1	1	...	1
2	1,831	47	40	...	...	1	...	11
3	2,151	366	645	9	1	6	4	3
4	76	15	22	...	...	...	...	...
5	756	86	117	1	...	1	...	8
6	36	24	88	...	...	...	1	1
7	640	246	156	...	...	...	...	3
8	180	31	26	...	...	...	...	1
Total...	6243	838	1179	14	2	8	5	28

16. From the very nature of the Tax and the numerous technical and practical objections to which the dubious provisions of the Act and its Schedule generally

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

give rise on the part of Tax-payers, it is impossible to frame a demand without being open to several appeals or objections. In the year under report, no less than 2,221 cases of the current demand were revised as follows :—

Confirmed.	Reduced.	Exempted.	
		Totally.	Partially.
574	407	238	855

the result being that a sum of Rs. 16,298 had to be set off against the demand in the following divisional proportions, viz :—

1st Division	...	...	Rupees	1,242	0	0
2nd do.	...	...	"	3,618	0	0
3rd do.	...	...	"	5,920	0	0
4th do.	...	...	"	253	0	0
5th do.	...	...	"	2,524	8	0
6th do.	...	...	"	642	8	0
7th do.	...	...	"	1,798	0	0
8th do.	...	...	"	300	0	0

A further set off of Rupees 9,000 or thereabouts is not improbable for bad and irrecoverable dues. These two sums constitute an allowance of between 20 and 25 per cent of the assessed demand, for reductions, remissions, bad debts and other causes, thus reducing the realizable demand to about Rupees 80,000 in confirmation of your conviction as expressed in your Report for 1874-75.

There was one appeal to the Magistrates under Section 83 of the Act, which was dismissed, the appellant being adjudged to pay the costs of our Attorney and Counsel.

17. On account of the current demand, a sum of Rupees 5,824-11-6 was realized during the latter part of 1875-76, and Rupees 69,847-8-0 during the year under report, making an aggregate of Rupees 75,672-3-6, which contrasts favourably with the corresponding operations of the three prior years as appears below :—

Collections for 1873, up to the end of 1873-74	Rupees...	43,510	0	0
1874 do.	1874-75 „	46,541	0	0
1875 do.	1875-76 „	52,068	0	0

Total Rs.... 1,42,119 0 0

Average Rs... 47,373 0 0

Collections for 1876, up to the end of 1876-77 Rupees... 75,672 0 0

The receipts during the last quarter of the official year for the Calendar year

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

then current, which consist almost wholly of voluntary payments on the part of tax-payers are not very prosperous, as the following figures will illustrate :—

Receipts for 1874 during the last quarter of 1873-74 Rupees...	5,205
Do. 1875 do. 1874-75 "	4,673
Do. 1876 do. 1875-76 "	5,825
Do. 1877 do. 1876-77 "	1,635

18. The total sum of Rupees 1,05,409-6-9 realized under this head against Rupees 90,000 budgeted, represents, besides the Rupees 69,847-8-0 referred to in the last para., Rupees 33,927-6-9 for arrears of former years, and Rupees 1,634-8-0 received in advance for 1877 as shewn below :—

For and the periods anterior to 1872 Rupees...	709	4	5
For 1873 "	4,977	14	0
" 1874 "	8,957	7	6
" 1875 "	19,282	12	10
" 1877 "	1,634	8	0
Rupees...	35,561	14	9

It will be observed that the anticipations with regard to arrears, which were estimated at Rupees 29,000, have been more than realized; for, not only has such estimate been exceeded by upwards of Rupees 5,000 in the actuals, but also there were further realizable outstandings at the end of the year under report, included in the current year's Budget.

The recovery of such arrears involved much trouble from their age and the innumerable appeals (other than those mentioned in para. 16 of this report) preferred at any time and at any stage of proceedings, of which a comparatively small proportion remained undisposed of at the end of the year. To avoid hardship to tax-payers, the arrears prior to 1873 have been generally written off.

The gross collection is the largest sum got in any year, besides being far in excess of the realizations of the 3 preceding years and of their average as will appear from the comparative statement given below :—

	In 1873-74.	In 1874-75.	In 1875-76.	Total.	Average.
Collection ... Rupees.	53,510	68,550	76,996	1,99,056	66,352
Do. in 1876-77 ... "	1,05,409	1,05,409	1,05,409	3,16,227	1,05,409
Excess Rupees...	51,899	36,859	28,413	1,17,171	39,057

19. In the realization of the current demand and in consequence of failure on the part of Tax-payers to pay their liabilities within seven days after presentation of

ASSESSMENT AND COLLECTION OF TAXES.

bill or demand, recourse was had to Magisterial proceedings under Section 62 of the Act in no less than 3,333 cases, in 10 of which convictions were obtained, involving penalties, (exclusive of tax) amounting to Rupees 19-8-0; 3,167 were withdrawn by arrangement out of the Court and from other causes; 1 case was dismissed, and the remaining 155 stood over for want of appearance of the defendants. To all parties against whom Magisterial proceedings were instituted, that indulgence which is sanctioned by the Act for payment of the 2nd half year's instalment at a future time and which, they had a right to enjoy, had they met the demand in due course was generally disallowed for a compromise out of Court, and such disallowance has tended to a wholesome effect upon collection.

20. For the recovery of the 2nd half year's instalments, as in the case of the arrears, we have had to exercise the summary procedure provided by Sections 88 to 93.

21. We had to take advantage of the provisions of the 95th Section of the Act by suing the British India Steam Navigation Company in our High Court for the arrears of tax due from them from 1871 inclusive, and the payment whereof their Madras Agents, Messrs. Binny and Co., strenuously opposed upon various grounds. The result was a judgment for the Municipality, which, upon appeal by the Company to our High Court in its appellate jurisdiction, was confirmed; an appeal to Her Majesty was in contemplation, but the success of it remains to be seen.

22. 5thly.—Tax on places used for retail sale of Spirituous and Intoxicating Liquors under Sections 58 to 62 of the Act.

This tax is also payable for the Calendar year in respect of every place that has been so as aforesaid used for two months.

23. For the year 1876, 504 places were assessed to this tax, whereof a divisional classified list, exhibiting the population of each division according to the last Census and the ratio they bear to each in each division is given below.

Division.	Puttai Arrack Shops.					Colombo Arrack Shops.					Beer, Wine and Spirits Shops.					Toddy Shops.					Total.					Population.	Ratio of Population to each Shop.
	Class.					Class.					Class.					Class.											
	1	2	3	4	Total.	1	2	3	4	Total.	1	2	3	4	Total.	1	2	3	4	Total.	1	2	3	4	Total.		
1st		1	2	5	8	1		2		3		1	2	3		16	63	79	1	1	21	70	93	65547	705		
2nd		1	1	4	6	3	5			10			1	10	11	20		20	626	5	10	47	75326	1603			
3rd		2	2	3	7	1	4	7	1	13	4	1	14	30	49	27		27	534	23	34	96	50957	531			
4th			1	1	2			1		1						1	13	14		3	14	17	9791	576			
5th			6	5	11		5	5	1	11			15	15	217	31	50		7	28	52	67	65491	753			
6th			2		2								8	8		3	7	10		5	15	20	19390	970			
7th				1	10	11		5	3	1	9		3	2	6	11		9	9	31	46	14	15	48	77	69568	904
8th				8	8		2			2			4	4			53	53		2		65	67	41482	619		
Total	1	4	18	32	55	7	21	18	3	49	4	4	18	75	101	55	46	198	299	1281	100	308	504	397552	789		

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The following statement will show the average number of shops of each description assessed during the three years preceding as compared with 1876:—

	Beer, Wine and Spirits Shops.	Puttai Arrack Shops.	Columbo Arrack Shops.	Toddy Shops.	Total Shops.
1873	81	53	48	300	482
1874	78	53	48	300	479
1875	91	53	47	296	487
Total	250	159	143	896	1,451
Average...	84	53	48	299	484
For 1876...	101	55	49	299	504
Increase...	17	2	1	...	20

24. The shops thus assessed for the year under report, constituted a demand of Rupees 11,296 as per particulars given below:—

Description of Shops.	Class.				Total.	Amount.		
	1	2	3	4				
Puttai Arrack ...	1	4	18	32	55	1,109	0	0
Columbo Arrack ...	7	21	18	3	49	2,061	0	0
Beer, Wine and Spirit...	4	4	18	75	101	1,850	0	0
Toddy ...	...	55	46	198	299	6,276	0	0
Total...	12	84	100	308	504	11,296	0	0

This demand, embracing, as it does, the reductions made on 4 appeals, does not compare favorably with the average of the assessments for the three years preceding, as will be seen from the following figures, viz:—

For 1873	Rupees...	11,771
" 1874	"	13,225
" 1875	"	11,690
Total Rupees...		36,686
Average	"	12,229
*For 1876	"	11,296
Decrease Rupees...		933

Such decrease, however, is owing to the revision of the Dows granted by the

APPENDIX II.

ASSESSMENT AND COLLECTION OF TAXES.

Collector of Madras, and upon which the assessment of the Municipal tax is chiefly based, upon a lower scale than in former years.

25. Of the demand for the year under report, Rupees 788 were received during the first quarter of the year 1866, and consequently carried to the account of 1875-76; Rupees 9,280 were realized in the year under report, and the balance left unrecovered at the close of the year, viz., Rupees 1,228, was due in respect of the 37 shops, which, with the ratio they bear to the total number of shops in existence, are particularized below:—

Division.	Aggregate No. of Shops.	Description of Shops, in respect whereof the Tax remains unpaid.				Total.	Ratio of Shops in arrear to total number of Shops.
		Puttai Arrack.	Columbo Arrack.	Beer, Wine and Spirits.	Toddy.		
1st ...	93	...	...	...	9	9	10
2nd ...	47	...	3	...	4	7	15
3rd ...	96	...	...	1	5	6	6
4th ...	17	...	...	...	3	3	18
5th ...	87	...	1	...	2	3	3
6th ...	20	...	...	1	...	1	5
7th ...	77	...	...	...	3	3	4
8th ...	67	...	...	1	4	5	7
Total...	504	...	4	3	30	37	7

From the definite nature of this tax, its assessment is the least objectionable; but, owing to the generally evasive character of the persons licensed to sell liquors, more than once brought to your notice, its recovery has been always slow and troublesome. Hence, we are not without heavy arrears at the end of each year, though, in the year under report, we have been more fortunate in that respect than in previous years. The result of the operations of the year on the whole, therefore, contrasts favorably with the average of the three years preceding, as will be observed from the following figures, viz:—

Amount collected in 1873-74	...	...	...	Rupees.	9,738	0	0
do. 1874-75	...	...	...	"	9,595	0	0
do. 1875-76	...	...	...	"	10,096	0	0
Total Rupees.					29,429	0	0
Average Rupees.					9,810	0	0
Amount collected in 1876-77	...	...	...	"	11,645	0	0
Increase Rupees.					1,835	0	0

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26. The aggregate sum of Rupees 11,645 realized under this head against Rupees 10,000 budgeted, consists, besides the Rupees 9,230 for current demand mentioned in the last para., of Rupees 951 for arrears of former years as follows, viz:—

For 1873 Rupees.	108
" 1874 "	309
" 1875 "	534
	67
as also for 1877 "	1,414
making together Rupees.	2,365

27. In no less than four-fifths of the number of assessments, composing the current demand, I was obliged to have recourse to Magisterial proceedings, which, with all the trouble, delay and expense attendant thereon, seem to be the only means of realizations, short of the measure formerly proposed by me, of employing the agency of the Deputy Collector of Madras for that purpose. The following table contains the divisional arrangement of cases, shewing likewise the proportion of the total number subject to such proceedings:—

Division.	Total No. of Cases.	Total No. of Prosecuted.	Percentage of Prosecution to total No. of Cases.
1st	93	90	97
2nd	47	47	100
3rd	96	53	55
4th	17	13	76
5th	87	74	85
6th	20	18	90
7th	77	65	84
8th	67	42	63
Total	504	402	80

Of these, 365 cases were compromised, 7 defaulters tried and convicted and sentenced to pay fines, exclusive of Tax, to the amount of Rs. 50, and the remaining 30 cases stood over for want of appearance of parties.

The collection of arrears involved the prosecution before the Magistrates of 26 cases, which had stood over from time to time, and in the disposal whereof fines aggregating Rs. 12, in addition to the Taxes, were levied.

28. Two of the defaulters, who had evaded payment of this Tax for a series of years, and succeeded in placing themselves beyond the reach of all coercive process, by conducting their business through the agency of others, owed us between them as much as Rupees 638; after immense labour on the part of our subordinate agency and the Police, they were apprehended, convicted and fined Rupees 650 to cover all demands; and, on default being made in payment thereof, committed to Jail; as well before as after their committal, they were in treaty with me for the gradual liquidation of the amount; and had it not been for their release from the penitentiary under an order of His Grace the Governor in Council in the exercise of the prerogative conferred by the Criminal Procedure Code, the Municipality would probably not have lost the whole money they have.

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29. 6thly.—Rates on Houses, Buildings and Lands under Sections 69 to 82 of the Act.

This tax, leviable for the Calendar year after the expiry of the first quarter, was budgeted for the year 1876 at Rs. 2,58,400, whilst the demand netted as appears below, Rs. 2,56,208-12-0, being $7\frac{1}{2}$ per cent. on Rs. 34,16,078-8-0 representing the assessed annual value of 31,562 rateable Holdings.

The net demand of 1875, representing 31,277 Holdings, was... Rs. 2,56,003-6-3

In the course of the revision of assessments for the year 1876, 215 Holdings

were newly rated at an aggregate of ... Rs. 2,103 12 2

The Rates of 637 Holdings were increased on account of improvements,

&c., such increase amounting in the aggregate to Rs. 1,953 15 6

making a total accretion of Rs. 4,057 11 8

In 169 cases the rates were wholly removed, and in 236 others, reductions allowed, the sums thus written off

amounting together to Rs. 2,433 10 5

which reduces the accretion to... .. Rs. 1,624 1 3

This added to the net demand of 1875,

makes the demand of 1876 Rs. 2,57,627 7 6

against which reductions made on

appeals caused a set off of Rs. 1,418 11 6

which reduces the demand to the net

sum abovenamed of Rs. 2,56,208 12 0

The following abstract will shew the extent of assessments comprised in each of the Municipal Divisions, as made and ultimately settled on appeals; also the area and population of each Division according to the last Census, the number of Holdings

APPENDIX II.

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in each Division (other than the Fort) enjoying freedom from House Tax, under Sections 69 and 70 and the ratio of the population to the gross number of Holdings.

Abstract shewing Valuation and Rates assessed on Houses, Buildings and Lands for the Calendar year 1876.

Division.	Area in square miles.	No. of premises not liable to rate and therefor not assessed.	No. of rateable houses, buildings and lands.	Population.	Ratio of Population to Holdings.	Original assessment of rateable houses, &c.	No. of appeals preferred against such assessment.	No. of such appeals admitted and heard.	Reduction allowed on disposal of appeals.	Net assessment after allowing such reduction.	Budget.													
						Valuation.			Valuation.															
						Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rate at 7½ per cent.	Rate at 7½ per cent.								
1	5.31	902	8,478	65,547	14.96	3,09,497	8	23,212	13	6	95	43	5,263	0	394	11	3	3,04,234	8	22,818	2	3	22,600	0
2	1.02	661	6,818	75,326	10.07	6,57,184	8	49,288	15	1	198	101	1,560	0	115	15	11	6,55,634	8	49,171	15	2	49,000	0
3	0.91	694	5,469	50,957	8.26	8,41,742	12	63,130	12	9	157	89	6,658	8	499	5	6	8,35,084	4	62,631	7	3	64,000	0
4	3.88	322	557	9,791	11.13	91,116	8	6,933	15	0	27	13	299	0	22	7	0	90,817	3	6,811	8	0	6,700	0
5	2.81	1,166	4,789	65,491	10.99	4,86,128	4	36,460	3	7	160	81	1,770	0	132	12	0	4,84,358	4	36,327	7	7	37,000	0
6	4.16	450	1,172	19,390	11.95	3,14,027	4	23,552	4	10	65	22	1,122	0	84	2	5	3,12,905	4	23,468	2	5	23,600	0
7	2.19	1,381	5,805	69,568	9.68	4,41,851	4	33,139	6	4	172	77	1,578	4	118	5	8	4,40,273	0	33,021	0	8	33,500	0
8	6.54	1,214	3,476	41,482	8.84	2,93,447	12	22,009	0	5	111	55	666	8	49	15	9	2,92,781	4	21,959	0	8	22,000	0
Total.	26.82	6,790	31,562	3,97,552	10.36	34,995	12	2,57,627	7	6	985	481	18,917	4	1,418	11	6	34,16,078	8	2,56,208	12	0	2,58,400	0

ASSESSMENT AND COLLECTION OF TAXES.

The net Demand arrived at for the year does not show so great an improvement over the previous year as in the two years preceding it, as will be seen from the comparative statement hereunder given:—

Statement of Valuation and Rates on Houses, Buildings and Lands for the Calendar year 1876 as compared with the Assessment of the three years preceding.

[illegible]

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ASSESSMENT AND COLLECTION OF TAXES.

30. The number of appeals given in the above abstract forms but a small proportion of the correspondence passed during the year.

Of the 481 appeals (or 607 cases) admitted and heard, 20 cases were against fresh assessments, 148 against increased assessments and the remaining 439 against standing Rates. In 240 of these cases, the assessments appealed against were confirmed and in the residue reductions allowed, there having been 11 Sittings for their disposal. There has been no appeal to the Magistracy.

I submit in the following Table the number of fresh and increased assessments, the extent to which they and standing assessments were appealed against, and the number and result of such of them as were admitted and heard during the previous three years as compared with the last year.

	Fresh Assessment.	Increased Assessment.	Appeals received.	Appeals admitted.	Result of Appeals.					
					Confirmed.			Reduction allowed.		
	Fresh Assessment.	Increased Assessment.	Standing Assessment.	Fresh Assessment.	Increased Assessment.	Standing Assessment.	Fresh Assessment.	Increased Assessment.	Standing Assessment.	
1873	171	247	591	480	15	35	166	4	13	333
1874	272	481	657	408	20	41	57	10	30	273
1875	290	732	968	439	22	84	141	10	70	251
Total...	733	1,460	2,216	1,347	57	760	364	24	113	857
Average...	244	487	739	449	19	53	121	8	38	286
1876	215	637	985	481	19	64	157	9	69	290

31. At the beginning of the year, there were outstanding arrears of previous years to the extent of ...
 which with the net demand for 1876, viz... Rs. 37,811 2 1
 made an aggregate of ... 2,56,208 12 0
 Remissions were allowed to the extent of ... 2,94,019 14 1
 which reduced the demand to ... 12,227 13 0
 We collected ... 2,81,792 1 1
 and had a balance left uncollected at the close of the year of ... 2,69,040 8 7
 12,751 8 6

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ASSESSMENT AND COLLECTION OF TAXES.

I give below a statement exhibiting how the Demand, Remission, Collection and Balance above shewn affect each division of the Municipality.

Statement showing the Demand, Remission, Collection and Balance, on account of House and Land Rates for the Official year 1876-77.

	1st Division.	2nd Division.	3rd Division.	4th Division.	5th Division.	6th Division.	7th Division.	8th Division.	Total.
DEMAND.									
Arrears of and anterior to 1875...	Rs. 707 9 3	Rs. 3,514 3 1	Rs. 5,514 13 1	Rs. 9,381 11 1	Rs. 4,838 6 11	Rs. 9,543 7 8	Rs. 3,524 14 1	Rs. 6,106 0 1	Rs. 37,811 2 1
For the year 1876...	22,818 2 3	49,171 15 5	62,631 7 3	6,811 8 0	35,327 7 7	23,468 2 5	33,921 0 8	21,959 0 8	2,56,208 12 0
Total...	23,525 11 6	52,786 2 3	69,146 4 4	7,770 3 11	41,165 14 6	33,016 10 1	38,445 14 9	28,065 0 9	2,94,019 14 1
REMISSION.									
Arrears of and anterior to 1875...	220 0 10	123 3 9	562 11 2	162 6 1	402 14 8	1,226 2 11	671 1 6	1,218 11 9	4,587 4 8
For the year 1876...	602 12 1	436 4 8	2,201 9 9	236 8 8	990 6 7	1,593 4 2	664 14 6	909 11 11	7,640 8 4
Total...	822 12 11	559 8 5	2,764 4 11	398 14 9	1,393 5 3	2,824 7 1	1,336 0 0	2,128 7 8	12,227 13 0
COLLECTION.									
Arrears of and anterior to 1875...	462 10 2	2,441 1 1	5,773 14 11	699 3 5	3,385 0 9	7,697 12 11	3,011 14 11	3,965 7 2	27,938 1 4
For the year 1876...	21,984 2 2	47,543 5 2	59,794 12 6	6,433 4 0	33,890 9 6	21,535 3 7	30,628 12 6	19,533 9 1	2,41,283 10 6
Total...	22,396 12 4	49,984 6 3	65,568 11 5	7,132 7 5	37,775 10 3	29,232 0 6	33,649 11 5	23,500 0 3	2,69,221 11 10
Deduct over-payments...	17 1 1	...	42 9 6	...	10 12 9	19 12 9	...	90 15 2	181 3 3
Total...	22,379 11 3	49,984 6 3	65,526 1 11	7,132 7 5	37,764 13 6	29,203 3 9	33,640 11 5	23,409 1 1	2,69,040 8 7
BALANCE.									
Arrears of and anterior to 1875...	32 8 1	1,049 14 3	220 12 6	97 2 5	559 7 6	626 4 7	1,839 13 8	921 12 4	5,338 11 4
For the year 1876...	290 11 3	1,592 5 4	635 1 0	141 11 4	1,457 4 3	362 10 8	1,727 5 8	1,605 11 8	7,412 13 2
Total...	323 3 4	2,642 3 7	855 13 6	238 13 9	2,007 11 9	988 15 3	3,567 3 4	2,527 8 0	12,751 8 6

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ASSESSMENT AND COLLECTION OF TAXES.

and add hereunder statements of the Demands, Remissions, Collections and Balances of the three preceding years compared with the operations of the past year.

As to Current Demand.

Years.	Demands.			Remissions.			Collections.			Balances.		
1873-74	2,53,911	12	8	2,629	12	10	2,12,702	7	1	38,579	8	9
1874-75	2,53,995	6	8	1,413	14	4	2,06,865	6	5	45,716	1	11
1875-76	2,56,003	6	3	4,693	10	5	2,22,451	13	4	28,857	14	6
Total	7,63,910	9	7	8,737	5	7	6,42,019	10	10	1,13,153	9	2
Average	2,54,636	13	10	2,912	7	2	2,14,006	8	11	37,717	13	9
1876-77	2,56,208	12	0	7,610	8	4	2,41,155	6	6	7,412	13	2
Increase	1,571	14	2	4,728	1	2	27,148	13	7	...	...	...
Decrease	...	...	...	...	...	...	...	...	...	30,305	...	7

As to Arrear Demand.

Years.	Demands.			Remissions.			Collections.			Balances.		
1873-74	17,753	0	11	368	4	4	13,596	6	9	3,788	5	10
1874-75	42,367	14	7	4,461	15	3	26,600	0	5	11,299	14	11
1875-76	57,016	0	10	4,728	13	4	43,331	0	10	8,950	2	8
Total	1,17,137	0	4	9,557	0	11	83,527	8	0	24,044	7	5
Average	39,045	10	9	3,186	5	8	27,844	8	0	8,014	13	2

32. The realization of this Tax involved the issue of Notices of Demand in 13,656, and Warrants in 4,670 Cases. Of the latter, 3,834 were executed and such of the goods distrained as were not redeemed by payment, were disposed of by auction held on 46 several occasions, for an aggregate sum of Rupees 1,430-8-2.

The 4,670 Warrants abovementioned were issued in respect of property of the undermentioned annual values, viz:—

393 Cases of 14 Rupees annual value.

1,075	do.	of the annual value of above 14 Rs. but not exceeding 24 Rs.			
1,336	do.	do.	do.	24 "	do.
1,085	do.	do.	do.	48 "	do.
480	do.	do.	do.	96 "	do.
191	do.	do.	do.	192 "	do.
70	do.	do.	do.	384 "	do.
27	do.	do.	do.	768 "	do.
12	do.	do.	do.	1,536 "	do.
1	do.	do.	do.	3,072 "	do.
				6,144 "	

33. The graduated scale given below of the valuation of Houses, Buildings and Lands assessed for the year 1876 will be interesting.

Graduated Scale of Valuation of Houses, Buildings and Lands assessed for the 1876.

[illegible]

APPENDIX II.
ASSESSMENT AND COLLECTION OF TAXES.

Ground Rents.

34. 7thly.—This part of the Revenue consists of Rents assessed upon such parts of Municipal lands, Roads and Streets as are occupied by tradesmen and others. The outstanding balance at the beginning of the year was composed of:—

Rupees 1,098 0 0	For arrears of the latter half of 1872.	
" 3,391 0 0	do. of 1873.	
" 2,892 0 0	do. of the 2nd half of 1875.	
making a total of ...		Rupees 7,381 0 0
to which have been added the following demands, viz:—		
for the first half of 1876	...	" 3,691 0 0
do. 2nd do. do.	...	" 3,380 0 0
do. 1st Quarter of 1877	...	" 1,825 0 0
Forming an aggregate of ...		Rupees 16,277 0 0

Towards which Rs. 4,325-9-3 have been realized as follows, viz:—

On account of 2nd half of 1872	...	Rs. 159 4 0
do. 1873	...	" 730 0 0
do. of 2nd half of 1875	...	" 1,274 13 0
do. 1st half of 1876	...	" 1,958 11 9
do. 2nd do.	...	" 202 12 6

leaving a balance of Rs. 11,951 to be collected in the ensuing year.

35. It has been thought desirable in the interests of the Municipality to assess these places quarterly instead of half yearly as heretofore. Hence there would be 4 instead of 2 sets of Bills in the year.

36. There were 2,407 Notices of Demand and 690 Warrants issued in respect of these Rents. Of the latter, 374 were enforced, of which 367 were adjusted before sale, and the distress in the remaining 7 cases was realized by sale effected at an auction held on the 12th March 1877, and resulting in net proceeds of Rs. 8-8-1.

37. And lastly—Miscellaneous. These receipts are shewn by the Account Current and would speak for themselves. I would not trouble you with their details since the Engineer's report will, doubtless, dwell upon them at large, beyond drawing a comparison between the sum collected for Notice of Demand, and Warrant fees during the year under report, viz., Rs. 5,761 and those realized in the 3 years preceding, which are as follow, viz., Rs. 3,030 in 1873-74, Rs. 5,696 in 1874-75 and Rs. 6,184 in 1875-76, averaging Rs. 4,970 per year.

38. In conclusion. I beg to observe that, of all Municipal Taxes, the one imposed on Arts, Trades, Professions and Callings, affecting, as it directly does, but a small proportion of the population of the Town, has been the least popular and the most difficult to collect. The visitation and continuance of Famine of a virulent type, and the consequent depression of general trade, from the effects of which the country has been suffering for several months past, whilst, in some measure, paralysing our efforts for collection, have tended to encourage the idea, even in those who seemed at first opposed to the measure, that the substitution of Town Duties on food grains and such

APPENDIX II.
ASSESSMENT AND COLLECTION OF TAXES.

23

like articles, with the experience Bombay and the North-Western Provinces have had of their satisfactory working, would be preferred, inasmuch as it would spread the incidence of the Tax over the whole population in a manner least felt, and, therefore the least oppressive (such duties being but a flea-bite, compared with the extraordinarily fabulous prices of provisions to which the privileges of free trade, combined with the heavy charges and loss of all kinds incurred in shipping, landing, storing and carriage have from time to time subjected them) and while materially improving the Municipal resources, might be the means of some relief to those who feel the burden of the House Tax at its *maximum* rate. The introduction of the Income Tax in contemplation for imperial purposes will probably put the Profession Tax in worse odour.

39. The transfer of the entire working of the Profession Tax and of the supervision of the Wheel Tax to the Assessment Department, added immensely to its ordinary duties, in the energetic performance of which the Head Clerk took material part, without remuneration, and the whole Department, working at extra hours, strained every nerve towards a successful result.

40. A Conicopillay of the House and Land Rates and another of the Profession Tax Branch were prosecuted before the Magistrates for Criminal Breach of Trust and Misappropriation of moneys come to their hands on behalf of the Municipality, and, on conviction, sentenced the former to 6 months' imprisonment, and to 2 months' further imprisonment in default of payment of a fine of 50 Rupees, and the latter to 3 months' imprisonment and to 3 months' further imprisonment in default of payment of a fine of Rupees 200.

41. I trust that the Municipal law now under revision by the Local Legislature, will be so improved as to render the machinery for its working more perfect and practical than it at present is.

42. Tendering to you my warmest thanks for the cordial help and advice you have afforded me in the discharge of my onerous, though by no means agreeable duties.

APPENDIX III.

ENGINEERING AND SANITARY.

The report of the Engineering and Sanitary Departments for the year 1876-77 has been arranged under the following headings:—

I. ESTABLISHMENT. { In-door.
Out-door.

II. ENGINEERING.

1. Road Coolies.
2. Roads and Communications.
3. The Liability System.
4. Buildings.
5. Water Supply, Red Hills Water Works, Wells, &c.
6. Drainage.

III. CONSERVANCY.

1. Labour.
2. Carts.
3. Cleansing of Drains.
4. Latrines and Urinals.
5. Dust Bins.
6. Sewage Farms.
7. Rubbish Depôts.
8. Slaughter Houses.
9. Markets.
10. Cart Stands.
11. Parcherries.
12. Burial and Burning Grounds.
13. Esplanades.

IV. LIGHTING.

Lamps, &c.

V. MISCELLANEOUS.

1. Fire Engines.
2. Notices.
3. Prosecutions.

I. ESTABLISHMENT.

1. In-door.

In the Budget Estimate for 1876-77, a grant of Rupees 4,614 per annum was allotted for the Engineering and Sanitary Departments on the above account, and which sum has not been exceeded.

APPENDIX III.

ENGINEERING AND SANITARY.

Previous to the amalgamation of the two Departments, the In-door establishments of each were as follows:—

I.

Establishment as it stood before Amalgamation.

No.					Rs.	A.	P.
<i>Executive Engineer's Department, In-door.</i>							
1	Head Clerk	...	...	...	...	...	...
1	Estimator	...	...	...	60	0	0
1	Draftsman	...	...	...	50	0	0
1	Clerk	...	...	...	30	0	0
1	"	...	...	...	35	0	0
1	Attender	...	...	...	25	0	0
1	"	...	...	...	8	0	0
1	Clerk for Water Works	...	...	...	7	0	0
1	Attender	...	...	...	40	0	0
		...	...	...	7	0	0
<i>Sanitary Department, In-door.</i>							
1	Head Clerk	...	...	...	45	0	0
1	Clerk	...	...	...	25	0	0
1	"	...	...	...	20	0	0
2	Peons @ 7 Rupees	...	...	...	15	0	0
1	Punka Puller	...	...	...	14	0	0
		...	...	...	8	8	0
<i>Mortuary Department, In-door.</i>							
1	Clerk	...	...	...	40	0	0

II.

After Amalgamation.

No.					Rs.	A.	P.
<i>Head Office.</i>							
1	Head Clerk	...	...	...	...	...	...
1	Estimator	...	...	...	60	0	0
1	Draftsman	...	...	...	50	0	0
1	Clerk	...	...	...	30	0	0
1	"	...	...	...	25	0	0
1	Duffadar	...	...	...	20	0	0
1	Attender	...	...	...	8	0	0
1	Punka Puller	...	...	...	7	0	0
1	Clerk for Water Works	...	...	...	3	8	0
1	Attender	...	...	...	40	0	0
		...	...	...	7	0	0
<i>North Range.</i>							
1	Head Clerk	...	...	...	45	0	0
1	Clerk	...	...	...	15	0	0
1	Attender	...	...	...	7	0	0
1	Conicopillay	...	...	...	14	0	0
1	Lascar...	...	...	...	6	0	0
<i>South Range.</i>							
1	2nd Clerk	...	...	...	35	0	0
1	Clerk	...	...	...	25	0	0
1	Attender	...	...	...	7	0	0
1	Lascar	...	...	...	6	0	0

APPENDIX III.
ENGINEERING AND SANITARY.

It is thought that the establishment thus allotted is fully sufficient for the despatch of the business which comes within the province of this Department. It has been thought well to introduce a few new systems in the mode of carrying out the work, and these, it is believed, will tend to the greater efficiency of the Department.

2. Out-door.

Before the amalgamation there were two out-door establishments of Overseers, one belonging to the Engineering Department and a second to the Sanitary Department.

		per mensem.
		Rs. A. P.
The allotments were for Engineering Overseers.	...	305 0 0
" " Sanitary do	...	395 0 0

The amalgamation though originally intended to be introduced from the commencement of the year 1877-78 was in fact brought into operation before the close of the year under review. It consisted merely in dividing the Municipality into twenty wards and placing an Overseer in charge of each ward for both Sanitary and Engineering works. The entertainment of the extra Overseers was sanctioned by the Commissioners in their Proceedings of the 28th of February.

The establishments on account of Water Works, Fire Engines, Lighting and the Mortuary Establishment remain as they were formerly, directly under the Executive Engineer, the General Market Establishment is under the Assistant Engineer of the North Range, and the Establishment of the Sewage Farms and Rubbish Depôts are under the Overseers of the Wards in which they are situated.

The Overseers have been graded as follows:—

1st Grade.	Five Overseers.	Highest pay of Grade Rs. 50
2nd "	do	do 40
3rd "	do	do 35
4th "	do	do 25

In order to avoid reduction of deserving Overseers, one Overseer in the first and one in second grade receive an extra allowance of five Rupees a month in excess of the pay of their grade.

II. ENGINEERING.

1. Road Coolies.

The following table gives the average number of coolies employed in each ward during the year. Latterly, the number of coolies has been above the average,

APPENDIX III.
ENGINEERING AND SANITARY.

and on account of the want of moisture and the road so easily breaking up, the number of coolies is likely to remain above the average for some time.

		Coolies.				Coolies.	
		Men.	Women.			Men.	Women.
1st Division...	{ East ward... Centre do... West do...	2 2 2	2 2 2	5th Division...	{ North ward... Centre do... South do...	2 2 2	2 2 2
2nd do. ...	{ North do... Centre do... South do...	2 2 2	2 2 2	6th do. ...	{ North do... South do...	2 2	2 2
3rd do. ...	{ North do... Centre do... South do...	2 2 2	2 2 2	7th do. ...	{ North do... Centre do... South do...	2 2 2	2 2 2
4th do. ...	North and South	3	3	8th do. ...	{ North do... South do...	3 3	3 3
	Total...	21	21		Total...	22	22
					Grand Total...	43	43

2. Roads and Communication.

The state of the roads during the past year except in the Town Divisions has been generally good. In those Divisions the roads have been much damaged by the Famine Traffic and were generally in a bad state although every endeavour was made to keep them in good repair. The excessive drought also told unfavourably on the roads.

The following table shows the number of squares and length of roads reformed in 1876-77.

Thickness.	No. of squares of 100 square feet.	Length.		
		Miles.	Fur- longs.	Yards.
2	329.60	0	1	175
3	5,390.65	5	7	10
4	35,864.74	37	4	66
5	415.56	0	4	27
6	356.90	0	1	101
Total...	42,357.45	44	2	159

APPENDIX III.
ENGINEERING AND SANITARY.

The details of above road work are given in Statements IV and V annexed to this report. The amount of the Bills passed during the year for work completed under the head of Reform was Rupees 99,552-8-4, of which Rupees 80,910-2-2 was paid during the year. The amount spent on emergent repairs is as follows for the 8 Divisions:—

	Rs.	A.	P.
1st Division	1,808	15	6
2nd "	1,714	4	6
3rd "	2,274	7	7
4th "	888	9	7
5th "	1,061	1	0
6th "	2,525	12	10
7th "	2,903	5	5
8th "	996	9	9

Rupees... 14,173 1 10

The amount paid for Bills remaining unpaid from 1875-76 was Rupees 9,033-4-0.

The total amount paid is therefore as follows:—

	Rs.	A.	P.
For roads reformed during 1876-77.	80,910	2	2
" emergent repairs	14,173	1	10
" unpaid Bills	9,033	4	0

Total Rupees... 1,04,116 8 0

The aggregate mileage of roads within the Municipal limits is 271 miles, but only 175 are metalled roads. Their maintenance, including repairs and reforms for the last year having been 1,04,116 Rs. (this includes repairing foot path in South Beach and the up-keep of the Band-stand) the cost has been about Rs. 671 per mile, as against Rupees 348 per mile last year, but 44½ miles have been reformed as against 19½ for 1875-76.

The road work was given on contract for two years at the commencement of 1876-77, the lowest tenders having been accepted. The rates are on the whole more favorable than those accepted in the previous biennial contract which expired the end of the year 1875-76.

The junction between river side Road West and Poonamallee Road has been closed by the operations of the South Indian Railway, and they have formed a new Road joining near Law's Bridge in place of this.

As the up-keep of the Band-stands is charged to the heading "Maintenance of Roads," they may be mentioned here.

The northern-most stand has been maintained in good order, and a second Band-stand has been formed opposite the Marine Villa, which has been a great improvement.

The cost of the maintenance of these places has been Rupees 290-15-1.

APPENDIX III.

ENGINEERING AND SANITARY.

The following repairs were executed to fences and walls along roads, &c.

Cost.

	Rs.	A.	P.
Basin Esplanade road side walls	275	7	3
Do. do. North do.	304	8	10
Perambore Railings near Railway Station...	101	4	10
Yerookencherry road railings	49	4	1
Coom road Palmyrah railings	113	14	0
Do. do. do.	220	6	3
Spur Tank road do.	82	6	0
South of St. Andrew's Bridge railings	46	14	0
Petty repairs to several side walls, &c. of roads in 7th Division	20	2	0
Brick kiln road, side walls,	20	0	11
Coom road railings near the Bridge	21	12	0

The roads watered during the year and the cost of same were:—

North Beach Road...	...	...	...	Cost.
Popham's Broadway	...	...	...	
Mount Road	...	...	...	
General Hospital Road	...	...	...	
				Rs. 3,094 0 5

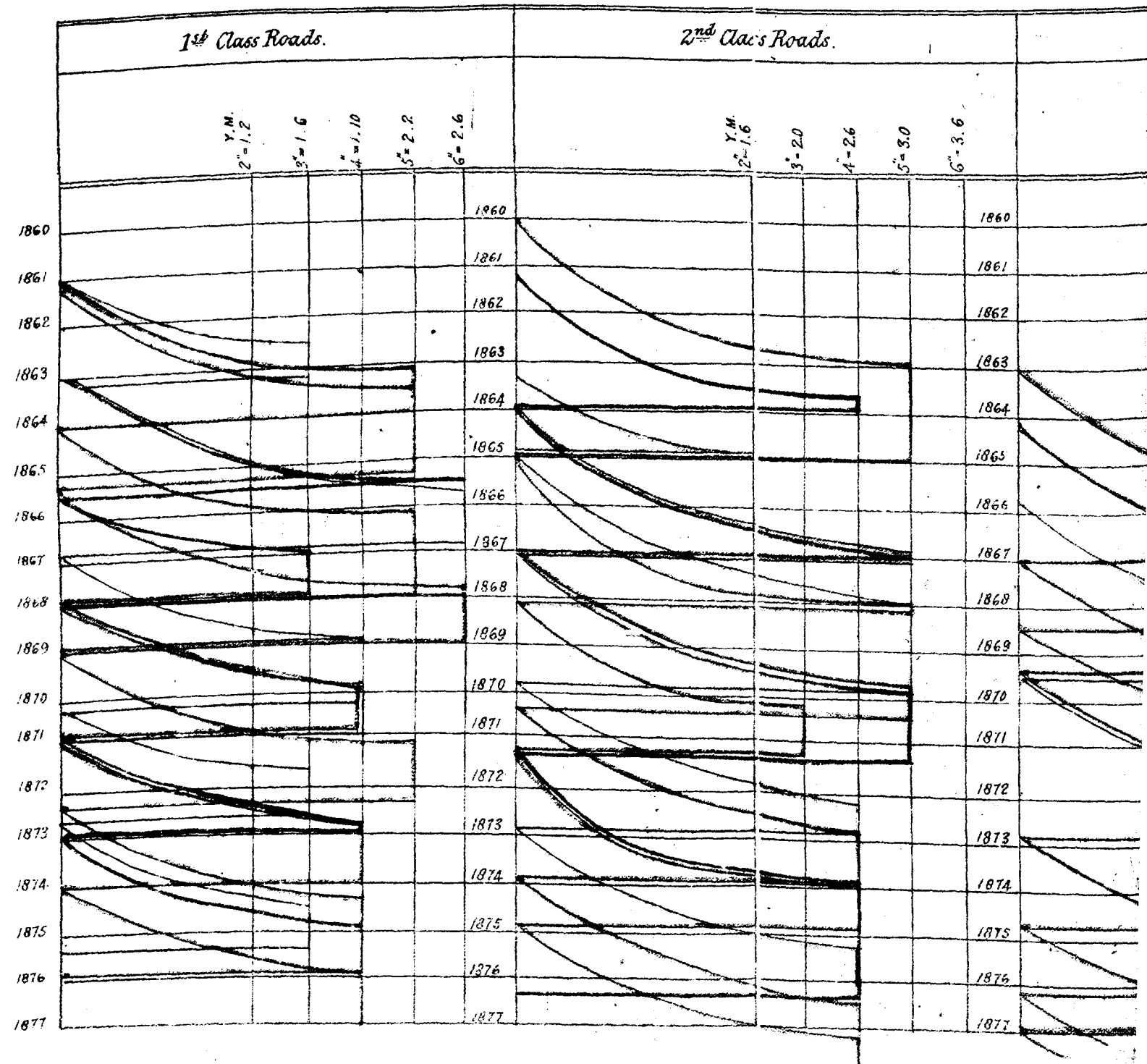
3. The Liability System.

The following table shows the length of time which a road metalled with a certain given thickness of laterite or granite is supposed to last, and during which the Contractor remains liable for keeping it in repair. The roads are classified with reference to their traffic, but it is high time that this classification was revised, as the traffic on many roads has considerably altered since they were originally classified.

Thickness. Inches.	DURATION OF LIABILITY.							
	1st Class Roads.		2nd Class Roads.		3rd Class Roads.		4th Class Roads.	
	Granite.	Laterite.	Granite.	Laterite.	Granite.	Laterite.	Granite.	Laterite.
	Y. M.	Y. M.	Y. M.	Y. M.	Y. M.	Y. M.	Y. M.	Y. M.
2	1 2	1 2	1 6	1 6	2 0	2 0	2 4	2 4
3	1 6	1 6	2 0	2 0	2 8	2 8	3 2	3 2
4	1 10	1 10	2 6	2 6	3 4	3 4	4 0	4 0
5	2 2	2 2	3 0	3 0	4 0	4 0	4 10	4 10
6	2 6	2 6	3 6	3 6	4 8	4 8	5 8	5 8

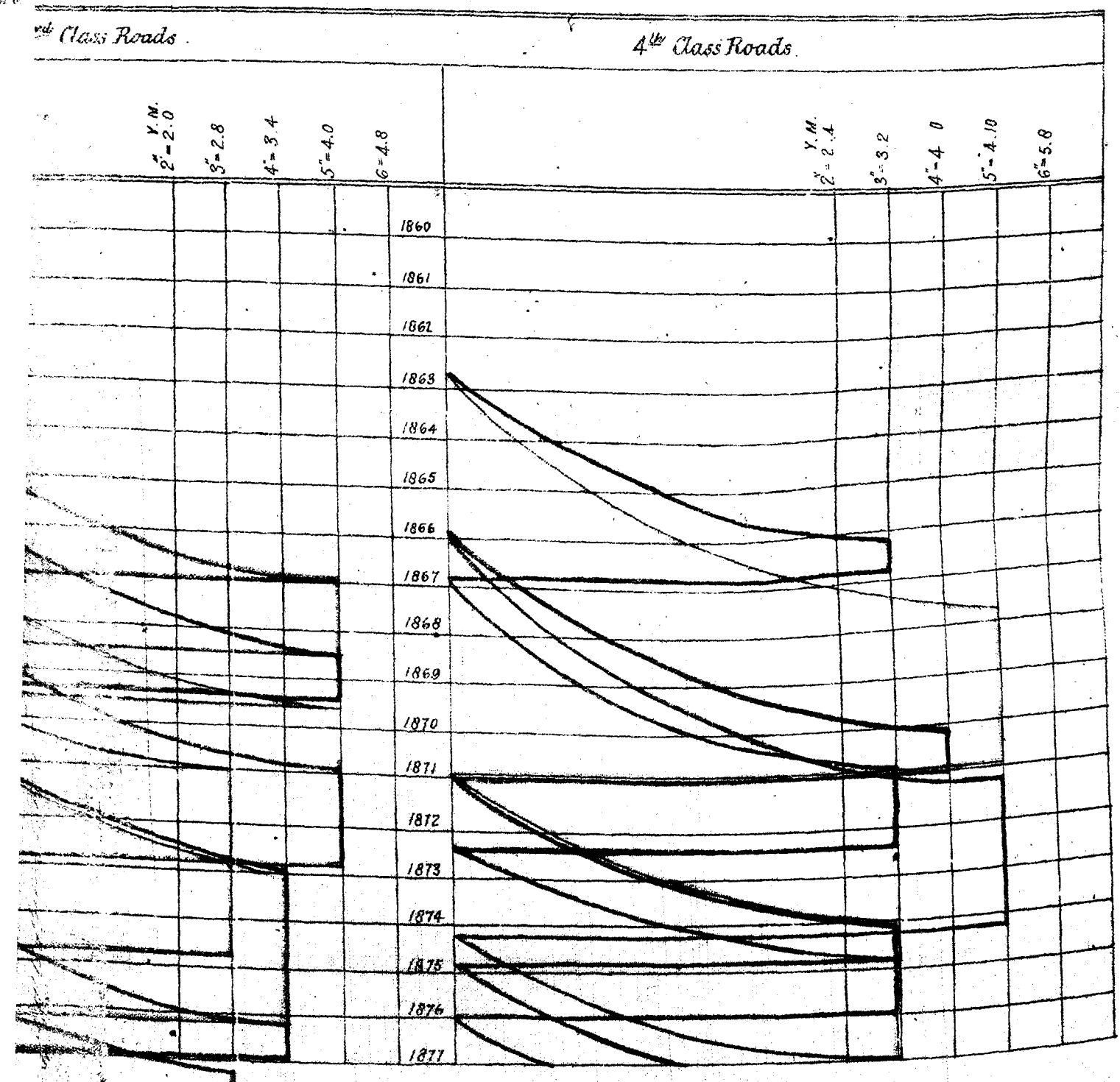
DIAGRAMS

Shewing dates on which certain Roads were reformed, the thickness of Metal laid down, the time they were under liability the time they lasted after the liability ceased, and time of next reformation



Perumalloor Road
Koww. Esp. do
North Beach do
Popham's Broadway

Govindappa Natch Street
Panthoor Road
Annah Pally Street
Thumboo Chetty do



Caruappah Moodally Street
Andersons Street
Lunatic Hospital Road
Pullichappan Street

From the records of this office has been produced a Diagram showing the repairs of some of the roads from 1860 down to the present time.

Referring to this Diagram under first class roads, it will be seen that the North Beach Road was reformed in the beginning of 1861 with 3 inches of metal, that the Contractor remained liable for its maintenance for $1\frac{1}{2}$ years, the period during which a first class road reformed with that thickness of metal is calculated to last in good order, and after the expiration of which its reform is generally considered to be necessary. Although the "period of liability" terminated in the middle of 1862, the road was not reformed until about the end of the first Quarter of 1863, when it was coated with six inches of metal, calculated to last in good order for $2\frac{1}{2}$ years or until the last Quarter of 1865. The road, however, was not reformed until about the end of 1866, when it received a metalling of four inches calculated to last one year and ten months, or up to about the end of 1868. It was next reformed about the end of the first Quarter of 1870 with three inches, calculated to last one year and six months or up to the end of third Quarter of 1871, but was not reformed again until the middle of 1872, when it was again metalled with three inches which should have carried it on to the end of 1873. It was not however reformed again until the end of the first Quarter of 1875.

It is thus seen that the North Beach Road since the first reform in 1861 up to the present time has been reformed six times, and that there were intervals preceding its last five reforms of 9 months, 1 year and 3 months, 1 year and 3 months, 9 months, and 1 year and 3 months respectively or $5\frac{1}{4}$ years in the aggregate, during which the road was not under liability and must have been more or less in a state of disrepair.

Again, take for example Govindappa Naik Street, a second class road. It was reformed five times in the period of 16 years ending with 1875, and for about $4\frac{1}{2}$ years out of that period it was not under liability. It should have been reformed seven times according to the requirements of the liability system. This shows roughly that the actual expenditure was to the required expenditure as five to seven.

The same particulars can be seen of the several other roads shown in the Diagram.

It is clearly shown that if the liability system were worked up to, roads generally would require more frequent reforms, and a proportionately larger grant for their maintenance than they actually obtain in practice. As shown above, the North Beach Road was reformed six times in a period of $17\frac{1}{4}$ years, and was not under liability for $5\frac{1}{4}$ years out of that period. The average thickness of the six reforms was $3\frac{3}{4}$ inches which, according to the liability table for first class roads would last for about 1 year and 9 months.

To cover the whole non-liability period, three extra reforms were required in the period of $17\frac{1}{4}$ years, so that instead of six reforms there should have been nine. Taking the liability system as a correct estimate of the requirements of a first class

APPENDIX III. ENGINEERING AND SANITARY.

road, the actual expenditure on the North Beach Road may be said to bear to the required expenditure the ratio of 6 to 9.

The cost of the liability system may be shown by the following example. The estimated cost of a square of road surface reformed with laterite, gravel and clay 4 inches thick is as follows in the 1st, 2nd, 3rd, 4th and 5th Divisions.

Materials...	Rs. 1 8 8½
Labour (one man and one woman) ...	0 5 6
Total Rupees...	1 14 2½

The Contractor's rate which includes the liability for maintaining it in good order, for if a 1st class road 1 year and 10 months, if a 2nd class road 2 years and 6 months, if a 3rd class road 3 years and 4 months, if a 4th class road 4 years is only two Rupees per square. Last year in the 1st, 2nd, 3rd, 4th and 5th Divisions 14,631½ squares were done by Contractors at a cost of Rupees 29,268 as against Rupees 27,662 which would have been the cost departmentally according to the estimate, leaving a difference of Rupees 1,601, which represents the allowance for maintenance during the season of liability of 17 miles, 2 furlongs and 173 yards which was the length of road actually reformed.

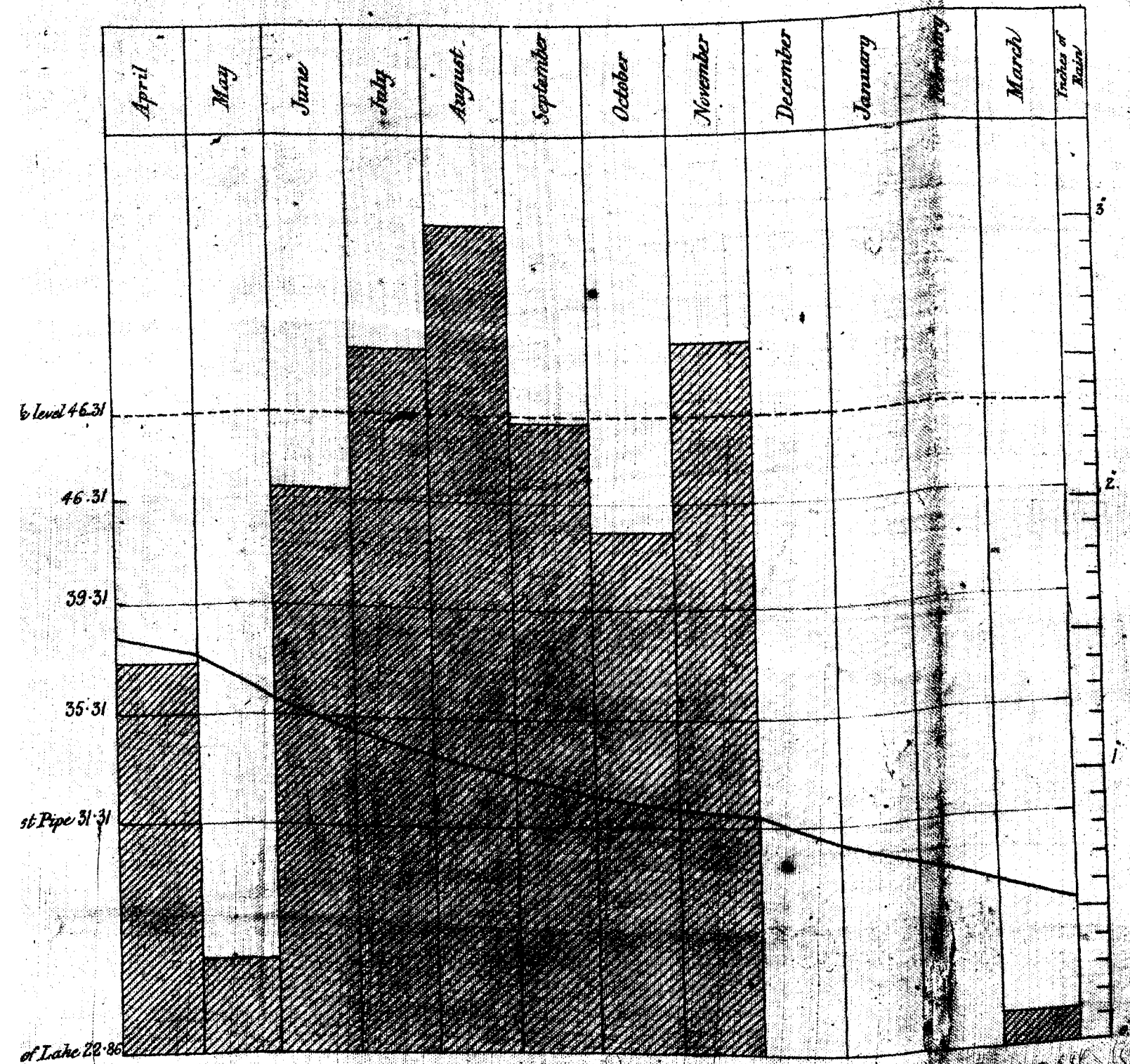
Although as regards liability, experience has decided that a laterite road will in general last as long as a granite road, it is thought that when there is a preponderance of heavy cart traffic the granite road is the more durable. The old system of having granite metalling on the sides for cart traffic, seems to prove that granite metalling has always been considered the best for that kind of traffic.

4. Buildings.

The following table shows the number of applications received for permission to erect buildings, permanent and temporary and for other purposes :-

Description	Applications received.	Permission granted.	Remarks.
Buildings...			
Tiled sheds and verandahs ... permanent	515	351	
Huts ... do	161	168	
Wooden sun-shades ... do	212	211	
Compound walls ... do	5	5	
Wedding Pandals within pavement ... temporary	84	31	
Pandals for religious purposes, &c. ... do	583	583	
Pandals for one year ... do	827	698	
Repairs to houses, alterations, additions, &c. ... do	2	63*	*61 renewed.
Digging wells ...	783	657	
Wedding Pandals for which fees were received ...	12	12	
Scaffolding ...		53	
Arches ...		13	
Swines ...		2	
For depositing materials, &c. ...		1	
		7	

TABLE SHOWING RAIN FALL.



APPENDIX III.
ENGINEERING AND SANITARY.

5. Water Supply.

The annexed diagram shews the amount of Rain-fall and the level of the Red Hills Lake during each month of the year.

In consequence of the low level of the water, pumping was commenced in August. The water was raised by two Engines, each working a centrifugal pump, and discharged through No. 3 pipe into the Municipal channel. The work was carried out by the D. P. W., under the orders of Government.

The quantity of water drawn off from the Red Hills Reservoir was as follows:—

	CUBIC YARDS.	
April 1876.	813,443.20	
May „	1,238,413.60	
June „	682,336.52	
July „	1,278,053.44	
August „	1,064,989.34	
September „	208,789.20	} Raised by pumping.
October „	246,626.48	
November „	207,132.76	
December „	169,608.60	
January 1877 „	140,321.04	
February „	122,776.44	
March „	134,180.70	
	6,806,671.32	

The channel leading from the deep part of the lake to the pump was deepened four times by the Municipality, but as the water thus obtained was found to be of a very inferior quality, a new channel direct to the Municipal valves was proposed and submitted for sanction to Government. Government did not, however, approve of the plan, and a second plan was furnished shewing a parallel channel to the present one:

It having become necessary to shift the Engines and Pumps from their original position, the supply of water to Madras was cut off during the 25th, 26th and 27th of January, advantage being taken to clean the delivery channel of weeds, &c.

Since the month of August, and during the continuance of pumping, the supply to Madras has been intermittent. As the quantity sent down, the channel was not sufficient to supply the town during 24 hours, the time of supply was reduced to

APPENDIX III.

ENGINEERING AND SANITARY

6 hours daily viz., 6 to 9 morning and 3 to 6 evening, the water being stored in the channel meantime to give a greater head and allow of the water reaching the higher fountains, &c., in the town.

During the year the water has been shut off from Madras five times, in addition to the hours mentioned above, for the purpose of weeding the channel. The number of hours each time was 36. During this period a portion of Black Town was supplied from the stored water in the Trevelyan Reservoir.

In the delivery channel during the year there were two leaks, one at the culvert at No. 2 mile and one at No. 2 under bridge. The channel banks on 5th and 6th miles slightly settled causing cracks. These were carefully watched and repaired; the whole channel was kept as far as possible in order, including all valves, flood gates, &c., &c.

The Walkmen's cottages on the delivery channel, except No. 3, were found to be in a dangerous state, and they had to be repaired. At No. 1 cottage, the north and east walls cracked, and in consequence the roof of this cottage had to be protected by five buttresses. During their erection, it was found that insufficient foundation had been allowed for the cottage.

No. 2 cottage was very bad, and the upper-rooms had to be removed and the lower rooms put in thorough repair. No. 4 cottage had also to be thoroughly repaired. The cottages except No. 1 are now in fair order.

The old thatched shed near the Masonry shaft has crumbled away and a more substantial one is being substituted with brick walls and tiled roof.

The piping throughout Madras has been maintained in good order throughout the year, and no bursts or leaks have occurred. All valves and hydrants are in good working order and are tested once a week.

The extension of the system of pipes has been insignificant this past year. The 21 inch main was connected over the General Hospital bridge (length 156 feet) and a 4 inch branch pipe extended up the Egmore high road, a distance of 243 feet.

In addition to these a 2 inch branch of stone-ware pipes was laid from the cistern fountain in Farren's road to the tank in Stephenson's road, a distance of 1,800 feet.

ENGINEERING AND SANITARY

The following is a list of the fountains now in Madras; those marked thus* were erected during the year.

Division	No.	Name of Road or Street.	Description of Fountain.
BLACK TOWN.			
Second.	1	Paroomall Chetty Street John Pereira's	Cistern 5 Tap.
do	2	Vanga Chetty Street	Wall 2 do
do	3	Evening Bazaar Road back of Ordnance Lines	Stand Pipe 4 do
do	4	Bungarumall Street	Wall 3 do
do	5	Ramanen Street	Do. do
do	6	Caulapa Anchary Street	Do. 2 do
do	7	Rassappa Chetty Street	* Dip Well 2 do
do	8	Nineapa Naik Street	Do. 1 do
do	9	Yagambaraswarer Agraram Tank	Cistern 3 do
do	10	China Bazaar Road, (West) back of Pagoda	Do. 4 do
do	11	Do. (East) near Tannah	Stand Pipe 4 do
do	12	Ponnapa Alley, Edapolliem	Cistern Lamp Post and Bathing.
do	13	Kistnappa Maistry Street	Stand Pipe 4 do
do	14	Veerapen Street	Wall 1 do
do	15	Pallipen Street	Wall 4 do
do	16	Andopen Naik Street	Cistern
do	17	Mint Street, (South) in pavement	Stand Pipe
do	18	Cop Venkatachella Iyer Street	Wall 2 do
do	19	Narrain Moodelly Street	Do. do
do	20	Strattan Moothiah Moodelly Street	Stand Pipe 4 do
do	21	Annapillay Street	Stand Pipe 1 do
do	22	Tada Mootenappen Street (West)	Stand Pipe 4 do
do	23	Mint Street Junction Tada Mootenappen Street	Open Cistern
do	24	Sattani Sreenivasa Iyah Street	Stand Pipe
do	25	Portuguese Chapel Street	* Wall 2 do
do	26	Govindappa Naik Street	Bathing and Cistern 6 do
do	27	Do. do. (North)	Wall 2 do
do	28	Moola Saib Street	Cistern 5 do
do	29	Mint Street (North)	Lamp Post 1 do
do	30	Soobramany Moodelly Street	Cistern 4 do
do	31	Ummen Pagoda Street (West)	Cistern 4 do
do	32	Even Well's Street (North)	Stand Pipe 4 do
do	33	Do. do. (West)	Do. do
do	34	Kistnappa Naik Agraram Street	Wall 4 do
do	35	Peddo Naik's Street	* Cistern 5 do
do	36	Trevelyan Water Works	Open Cistern 3 do
Third.	1	China Bazaar at crossing of Popham's Broadway	{ Cattle Trough and Drinking Fountain.
do	2	Popham's Broadway	Stand Pipe 4 do
do	3	Anderson's Street, near Emmanuel's Church	Wall 3 do
do	4	Stringer's Street	Stand Pipe 1 do
do	5	General Market, Black Town	Drinking Fountain
do	6	Davidson's Street	Wall 2 do
do	7	Francis Joseph's Street, back of Madras Bank	Do. 3 do
do	8	Armenian Street, near the Roman Catholic Cathedral	Cistern 4 do
do	9	Do. back of Callesummen Covel	Wall 4 do
do	10	Errabulco Chetty Street	Stand Pipe 2 do
do	11	Thumboo Chetty Street (North)	Do. 1 do

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Division.	No.	Name of Road or Street.	Description of Fountain.
BLACK TOWN.			
Third	12	Thumboo Chetty Street (North) ...	2 Stand Pipes, each for flushing drain and drawing water. 2 Tap
do	13	Do. do. ...	Wall 2 do
do	14	Moocur Nullamootoo Chetty Street, (East) ...	Stand Pipe 2 do
do	15	Cutchaleeswarar Agrarum Tank ...	Cistern 3 do
do	16	Do. do. ...	Wall 1 do
do	17	Acharapen Street (South) ...	Do. 4 do
do	18	Do. do. (North) ...	Do. 4 do
do	19	Taudamootteappen Street (East) ...	Wall 3 do
do	20	Jones' Street ...	Stand Pipe 4 do
do	21	Sembhoodoss Street, back of Look Hospital ...	Wall 4 do
do	22	Ummen Pagoda Street, near St. Xavier's Parcherry, (South) ...	Stand Pipe 4 do
do	23	Thaypoo Moodelly's Lane ...	Wall 4 do
do	24	Mahapen Street ...	Do. 5 do
do	25	Ramasawmy Street (South) ...	Wall 2 do
do	26	Do. do. (North) ...	Do. 2 do
do	27	Odacall Street, St. Xavier's Parcherry (North) ...	Do. 2 do
do	28	Black Town Church Street ...	Cistern 3 do
do	29	Salay Venoyager Street ...	Wall 3 do
do	30	Linga Chetty Street ...	Do. 4 do
do	31	Narraina Naik Street, back of Small Cause Court ...	Do. 9 do
do	32	North Beach Road, near Clive's Redoubt ...	Wall 2 do
do	33	North Beach Road, opposite to the High Court ...	Open Cistern 2 do
do	34	Onkapa Naik Street (Mosque) ...	Cistern 3 do
do	35	Do. do. ...	2 Stand Pipes, each for flushing drain and drawing water. 2 do
do	36	Do. (North) ...	Wall 4 do
do	37	Mercar Lubbay Street ...	Wall 4 do
Fourth	1	Perambore (Sepoy Lines), Right Wing ...	Cistern 5 do
do	2	Do. do. ...	Pillar 1 do
do	3	Perambore (Sepoy Lines), Left Wing ...	Cistern 5 do
do	4	Do. do. ...	Pillar 2 do
do	5	Sheep Slaughter House ...	Stand Pipe 1 do
PURSEYAU KUM.			
Fifth	1	Brick-klin Road, Gramam Parcherry ...	Stand Pipe 4 Tap
do	2	Venitheertha Moodelly Street ...	Do. 1 do
do	3	Pursevankum High Road, near Tank ...	Do. 1 do
do	4	Pathala Ponnammen Covil Road ...	Cistern 6 do
do	5	Cundapah Moodelly High Road, (North) ...	Stand Pipe 4 do
do	6	Pressana Venoyager Street ...	Pillar 2 do
do	7	Do. do. ...	Lamp Post 1 do
do	8	Perambore Barracks Road ...	Stand Pipe 1 do
do	9	Poodos Street, Comapetta ...	Cistern 5 do

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Division.	No.	Name of Road or Street.	Description of Fountain.
CHOO LAY.			
Fifth	1	Astaboojum Road, (East) ...	Stand Pipe 4 Tap
do	2	Vijia Vignaswarer Covil Road, near Pe-roomall Covil Tank ...	Do do
do	3	Totticala Comarappah Moodelly Street ...	Do do
do	4	Vencatachella Moodelly Street ...	2 Do do
VEPERY.			
do	1	Doveton College Fountain ...	Cistern, 8 Tap
do	2	Hunter's Road at the junction of Rundall's Road ...	Lamp Post 1 do
do	3	Do. Calatheappah Moodelly Street ...	Stand Pipe 4 do
do	4	General Cullen's Road ...	Do do
do	5	Vepery High Road, (East) ...	Do do
do	6	Poonamallee Road, near St. Andrew's Kirk ...	Lamp Post 1 do
do	7	People's Park ...	Drinking Fountain
PAREAMUTOO.			
do	1	Cooum River side at junction with Poonamallee Road ...	Stand Pipe 4 do
do	2	Cantoor Sediappah Moodelly Street ...	Cistern 6 do
do	3	Sydenham's Road ...	Lamp Post 1 do
do	4	Naval Hospital Road ...	Cistern 6 do
EGMORE.			
do	1	Egmore High Road ...	Coffee Pot
do	2	Egmore Parcherry ...	* Stand Pipe 4 Tap
do	3	Do. Police Court ...	* Do do
do	4	Pantheon Road ...	Drinking Fountain
do	5	Lang's Garden Parcherry ...	Stand Pipe 4 do
COMALESWARAPETTAH.			
do	1	Harris' Road, near Covil ...	Stand Pipe 4 Tap
do	2	Do. near Parcherry ...	Wall 4 do
do	3	Marshall's Road ...	Stand Pipe 1 do
do	4	Do. near Pilliar Covil ...	Wall 3 do
do	5	Do. do. ...	* Open Cistern
KILPAUK.			
Sixth	1	Kelly's Fountain ...	Cistern 4 Tap
do	2	Harley's Road ...	Lamp Post 1 do
MOUNT ROAD.			
do	1	Neill's Statue Tannah ...	Lamp Post 1 Tap
do	2	Mount Road, opposite Waller's Stable ...	Wall 1 do
do	3	Mackey's Parcherry ...	Stand Pipe 1 do
do	4	Thousand Lights ...	Ransome's Patent Filtering
do	5	Wood's Road, back of Tannah ...	Wall 3 Tap
do	6	Thousand Lights ...	Stand Pipe 1 do

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Division.	No.	Name of Road or Street.	Description of Fountain.
		MOUNT ROAD.	
Sixth.	7	Opposite Victoria Hotel ...	Stand Pipe 1 Tap
do	8	Do. Asylum Press ...	Do 1 do
do	9	Teynampet Parcherry ...	Do 4 do
		CHINTADRIPETTAH.	
Seventh.	1	Colonel Law's Bridge, Parcherry ...	Cistern 5 Tap
do	2	Venkatasa Graminy Street ...	Wall 3 do
do	3	Balakistnapathy Street... ..	Stand Pipe 4 do
do	4	Cox's Street, near Portuguese Church.	Wall 8 do
do	5	Agraharum Lane	Do 3 do
do	6	Sawmy Naik Street	Cistern 4 do
do	7	Gooroovappen Chetty Street ...	Do do
do	8	Mount Road, near Governor's Bridge...	Stand Pipe for Carts
do	9	Narasasingapuram Street ...	Wall 2 do
do	10	Nagatha Covil	Stand Pipe 1 do
do	11	Round Tannah	Coffee Pot
do	12	Napier Park	Stand Pipe
		TRIPLICANE.	
do	1	Wallajah Road	Stand Pipe 4 Tap
do	2	Moothearoon Nesa Begum Street ...	Stand Pipe 4 do
do	3	Jummah Musjid	Do do
do	4	Venkatasa Naik Street	Do do
do	5	Nagapalar Street, near Tank ...	Cistern 5 do
do	6	Coopoomootoo Street	Stand Pipe for Carts
do	7	Chinnathumby Moodelly Street ...	Wall 3 do
do	8	Veerangavah Moodelly Street...	Cistern 4 do
do	9	Do. do opposite to Mosque ...	Stand Pipe 1 do
do	10	Triplacane High Road at the junction of Pycroft's Road ...	Lamp Post 1 do
do	11	Pycroft's Road (East)	Stand Pipe 1 do
do	12	Do. (West)	Masonry Work Pillar 4 do
do	13	Mootocanlathy Chetty Street...	Stand Pipe 1 do
do	14	Singaperoomall Covil Street ...	Cistern 4 do
do	15	Devarajooloo Moodelly Street ...	Cistern 4 do
do	16	Venkatasa Naik Road	Stand Pipe 4 do
do	17	Chellupilliar Covil Street ...	Stand Pipe 4 do
do	18	Chengalroya Moodelly Street...	Cistern 5 do
do	19	Cingala Chariar Street	Wall 1 do
do	20	Venkatta Runga Pillay Street...	Cistern 4 do
do	21	Do. do	Stand Pipe 1 do
do	22	Tholasingaperoomall Street ...	Open Cistern
do	23	Do. do	Stand Pipe 1 do
do	24	Ice House Road, near Tannah...	Stand Pipe 4 do
do	25	Ramasamy Maistry Street ...	Cistern 5 do
do	26	Jahany Jahn Khan's Road ...	Do 4 do
do	27	Thyjoonkhan Bahadoor Street ...	Stand Pipe for Carts.
do	28	Tharady Street	Open Cistern
do	29	Do. do	Filtering 2 do
do	30	Pycroft's Road (East)	Stand Pipe.

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Division.	No.	Name of Road or Street.	Description of Fountain.
		ROYAPETTAH.	
Eighth.	1	Royapettah, Leonard's Road ...	Stand Pipe, 4 Tap
do	2	Do. Bazaar Road, near Tannah	Lamp Post, 1 do
do	3	Do. Hospital	2 Stand Pipe 2 do
		MYLAPORE.	
do	1	Erasappa Gramany Street ...	Cistern 4 do
do	2	Cornaeswarer Covil Street ...	Stand Pipe 4 do
do	3	Cutcherry Road	Stand Pipe 4 do
do	4	New Street	Do 4 do
do	5	Barber's Bridge, near Tannah	Stand Pipe 1 do
do	6	St. Lazarus' Chapel	Lamp Post 1 do

The Workshop under the direction of Mr. Loane, the Water Works Foreman is efficiently managed. The various works executed in it from time to time are charged off to the several Budget heads, and any works done here are therefore enumerated under these headings.

One stand Pipe for flushing the drain near the Royapettah Hospital was erected in Peter's Road. Patent self-acting Urinals were put up in the following streets:—

Streets.	Number.
Iya Pillay Street.	2
Nyneappa Naik Street.	2
China Bazaar Street.	1

The Chepauk Water Works were completed, and some additions and alterations made to the Service Pipes of Government House, the Custom House, to the Egmore Police Court.

The following Service Pipes were laid for houses under noted.

Division.	Name of Street.	Names of Parties.	House No.
2nd Division.	Mint Street	Narayana Chetty	39
	Rasappa Chetty Street ...	Gopaul Chetty	187
	Narayana Moodelly Street ...	T. Parthasarathy Chetty ...	99
	Nyneappa Naik Street	Vadavaloo Chary	72
	Andeuppan Naik Street ...	Sany Subroya Street	...
	Mint Street	Sashachella Moodelly ...	194
	"	Thandveroya Moodelly ...	200
	"	Soondra Moorthy	201
	"	T. Parthasarathy Chetty ...	14
	Strotten Moothia Moodelly Street.	Mathava Chetty	...

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Division.	Name of Street.	Name of Parties.	House No.
3rd Division.	Ramasawmy Street	Moorgappah Chetty	7
"	Thumboo Chetty Street	Soobraya Chetty	12 & 13
"	Jones' Street	Mr. S. Samuel	10
"	Sembodoss Street	Aga Mahomed Jaffer Saib	41
"	Jones' Street	Rev. Simeon	...
"	Unkappah Naik Street	Mosque	...
"	Armenian Street Roman Catholic Cathedral... ..	Bishop Fennelly	...
4th Division.	Elephant Gate Road	Madras Railway Salt-Cotaur	...
5th Division.	Sydenham's Road... ..	Mosque	...
"	Marshall's Road	Ramalingum Pillay	...
"	Egmore	St. John's Church... ..	...
"	"	Hon. J. G. Coleman	...
"	"	Civil Orphan Asylum	...
"	"	Col. Searle	...
"	Perambore Barracks Road	Anuntherya Butter	...
"	Purseyalkum	Rev. K. Ihlefeld	...
"	Poonamallee Road... ..	South Indian Railway	...
"	Vepery	Mr. W. Joyes	...
"	Pathala Ponnunnen Civil Road... ..	Mr. J. Higginbotham	...
6th Division.	Thousand Lights	Goolam Nabiboolasaib	...
"	Wood's Road	Madras Club	...
"	Mount Road	Ajee Homed Hoosain Khan	...
7th Division.	Singala Charry Street	Jevoo Ummall	...
"	Pycroft's Road	Raja Eswara Doss	...
"	Royapettah	Prince of Arcot's Palace	4
"	Sevaramiah Street... ..	Ponnangany Chetty	...
"	Mount Road	Messrs. Taylor & Co.	...
"	"	Lawrence Asylum Press	...
8th Division.	Barber's Bridge Road	Shaib Abdool Ryman	...

Dip wells were erected for watering roads and young avenue trees in the following places.

	No.	Localities.
2nd Division.	2	General Hospital Road.
3rd "	1	Popham's Esplanade Road.
5th "	2	Pantheon Road.
6th "	2	Harris' Road.
7th "	3	Mount Road.
7th "	1	South Beach Band stand.

The following table furnished by Dr. King gives analysis of the pipe water taken on the 22nd of March 1877. In parallel columns are also exhibited analysis

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taken in July 1875 and July 1876. The water analysed in 1875 was taken from the masonry shaft and that analysed in 1876 from the fountain at Clives, Redoubt.

	22nd March 1877.		(Macrae) 23rd July 1875.	(Porter) 19th July 1876.
	End of delivery channel.	Open cistern in Cenotaph.		
Total solids Gramme per litre...	0.540	0.520	0.450	0.363
Volatile do. do do...	0.130	0.110	0.170	0.119
Sodium ... do. do. ...	0.251	0.243	0.094	0.013
Total hardness	5.885	5.895	5.89	4.89
Permanent do.	1.810	1.805	4.82	4.82
Free ammonia Millegramme per litre...	0.60	1.04	0.38	0.16
Albuminoid do. do. do. ...	2.88	2.64	1.60	2.40
Nitric Acid do. do. ...	1.05	1.05	...	1.22

It will be seen from the above table that the water which in 1875 was bad had become much worse in 1877. This deterioration is doubtless due to the low level of the water in the Red Hills Tank. It was pointed out in the last administration report that the quality of the water received in Madras improved or deteriorated as that level rose or fell.

Foreseeing the possibility of a total failure of the Red Hills supply, attention was directed in the early part of the year to the state of the public wells and tanks. Reports were received in August of the condition of 293 wells. Those containing good water and which appeared to be most urgently required were repaired and cleaned. In February, the Government recognizing the imperative necessity for the repair and cleansing of all good water wells whether public or private (provided the latter were made available for public use) and for sinking new wells wherever necessary, authorized an advance of Rs. 10,000 to the Municipality for the above purpose. As at this time the conservancy of the town was taxing to the utmost the energies of the Municipal Executive Officers, the following gentlemen undertook to supervise the repairs and cleansing of wells within the Divisions in which they resided.

- 1st Mr. Ramalingum Pillay.
- 2nd " Kistnamah Chariar.
- 3rd " Somasoondrum Chettiar.
- 4th " Vanugopaul Chariar.
- 5th " Rungiah Naidoo.
- 7th " { Venkataramanjulu Naidoo.
- " { P. T. Ramanjulu Naidoo
- 8th " { F. T. Evans.
- " { Dr. Strachan.

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The following is a statement of the public and private wells repaired and cleansed under the supervision of the above gentlemen, and the Engineer's Department. This statement includes some wells which were repaired subsequent to the close of the official year, but which for convenience sake are included in this report:—

	Number of wells cleaned and repaired.		No. of new wells.	Expenditure.	
	Public.	Private.			
1st Division	32	...	1	415	4
2nd do.	87	6	4	476	7
3rd do.	65	...	...	530	0
4th do.	6	5	1	145	8
5th do.	58	23	13	420	10
6th do.	4	20	...	270	13
7th do.	42	25	...	308	8
8th do.	73	26	3	801	7
Contingencies	...	...	...	178	3
Total...	367	105	22	3,547	1

6. Drainage.

The Main Drain was cleared of silt along its whole length at a cost of Rupee 2,305-15-7. The remainder of the expenditure under this head was for cleaning in 1875-76.

The allotment in the Budget for the maintenance and repair of the scrow drain was Rs. 1,500. An attempt was made to put this drain in working order. The old piles which were displaced were taken out, and screwed in again perpendicular, and three lengths of the old 12 inch pipe were taken up and five lengths of nine inch pipe were fixed in lieu thereof at a proper level. By this means the pipes were extended to just within the water's edge at low water. On attempting to work the engine, it was found that the boiler was not capable of keeping up sufficient pressure of steam, to work it properly. Moreover the discharge of sewage into the sea being effected above water, a bad smell was caused.

The cost as shown in the accounts is as follows:—

	Rs.	A.	P.
Maintenance (Sanitary)	455	13	5
Repairs (Public Works)	1,049	6	3

Total... 1,505 3 8

or Rupees 5-3-8 in excess of the Budget Grant. This however, includes a debit Rs. 447-13-2 for pipes, &c. issued from the stores.

A new plan was prepared at the close of the year for working the drain, but the work was not carried out in the year, a description thereof would be of place in this report.

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The following new drains were constructed at a cost of Rs. 4,454-15-7 against the budget allotment of Rs. 5,000.

Description of Drain.	Length	Street.	Amount.			Total.		
	Feet.		Rs.	A.	P.	Rs.	A.	P.
Tile Drain.	840	Tippoo Saib Street	171	3	1			
		Do. do. small cesspits at ends	214	0				
		Water course	215	9				
Do.	48	Cross Drain	57	9	2			
Do.	769	Mootchiaroonisa Begum Street	166	13	6			
Do.	278	Wallajah Lane No. 1	66	11	2			
Do.	256	Do. do No. 2	46	14	9			
Do.	13	Cross Drain behind the Triplicane High Road Market	4	1	4			
Do.	150	Valaya Parcherry Chetty's Garden	30	9	2			
	1676	Matha Church Road	535	7	6			
Do.	713	Thanappa Chetty Street	186	9	6			
Do.	714	Vanean Street	145	8	2			
Do.	1532	Soorappa Moodelly Street	312	3	8			
Do.	508	Agathi Mutteyan Street	103	7	5			
Do.	595	Ramasawmy Street	121	6	1			
Do.	367	Coom river Street	70	4	2			
Do.	266	Veerasawmy Pillay Street	54	3	1			
Do.	380	Nullathamby Chetty Street	77	7	2			
Total...	9237					2,136	4	11
Cross Tunnel	23	Channu Reddy Street Egmore	38	0	0			
Do.	31	Vaneththa Moodelly Street Purasavakum	30	10	11			
Do.	28	Veerasawmy Moodelly Street Egmore	51	9	2			
Do.	48	Agappen Street Comaleswarempettah	55	10	8			
Do.	86	Astaboojum Road and Vigia Vignaswarer Road	145	11	1			
Total...	216					321	9	10
Cross Drain	30	Avedanum Ramasawmy Iyer Street Trivatoor High Road	34	0	1			
Do.	30	Do.	18	1	9			
Total...	60					52	1	10
Branch Drain	8	China Bazaar Esplanade Road	20	11	1			
Do.	32	Ramalinga Street Royapettah	18	9	2			
Do.	52	Catoor Sydeappen Street	17	11	10			
Do.	350	Yagathaummen Covil Street	183	3	8			
Total...	442					240	3	9
Side Drain	20	Vellala Tenampet				89	3	11
Pipe Drain	520	Burghall's Stable Napier Park				325	9	6
						3,165	1	9
		Materials issued from stores				1,289	13	10
		Grand Total...				4,454	15	7

The pipe drain through the garden at the back of Burghall's stables was laid for the purpose of conducting the sewage of the Triplicane Main drain to a well in the Napier Park, from whence it is raised by two Picottahs for irrigating grass beds. The pipes for the drain were got from the stores and are included in the item of materials issued from stores.

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Rs. 4,000 was allotted for the maintenance of Drains, and the following Table shews in what manner this was spent :—

Description of Drain.	Street.	Cost.		
		Rs.	A.	P.
Cross Drain	Poonamallee Road ...	25	11	11
Parapet wall of Drain	Cook's Road ...	10	1	2
Do.	Coom Road ...	11	3	8
Drain	Parama Moodelly Street ...	10	4	9
Parapet wall of Drain	DeMellow's Road ...	10	15	1
Drain	Triplicane ...	15	1	4
Cistern for Drain	Dam Road ...	11	5	10
Cesspit	Junction of Bangaru Naick Street ...	29	12	2
Cesspool door	Peter's Road ...	35	12	10
Cesspit	Singana Naick Street ...	11	5	9
Do.	Annapillay Street ...	12	3	10
Drain	Chinn Bazaar Road ...	104	13	4
Do.	Sami Naick Street ...	22	12	5
Fixing stench trap	Burgahall Street ...	18	13	1
Drain	Singana Chetty Street Chintadripettah ...	10	3	7
Tile Drain	General Patter's Road ...	155	6	5
Masonry Pier & slide door to the nullah	Coopum Triplicane ...	58	8	7
Main Drain fixing trap door	Near Round Tannah ...	15	11	1
Drain	Muthiya Moodelly Street ...	10	11	6
Cesspit cover	General Hospital Gate Road ...	17	11	0
Side Drain	Ungalammen Covil Road ...	25	5	3
Do.	Unkapa Naick Street ...	224	4	9
Centre Drain	Parumal Covil Garden Street and Palliappen Street ...	106	2	3
Centre Drain	Tatha Moothiappen Street ...	113	10	10
Cross Tunnel	At the Junction of Padavatahummen Covil Street and Mookoo Chetty Street ...	28	8	10
Drain	Tucker's lane ...	139	10	6
Do.	Popham's Broadway ...	32	4	8
Do.	Murugappa Moodelly Street ...	49	7	5
Do.	Cundappa Moodelly Street ...	75	1	0
Do.	Nalanah Moodelly Street and Cassim Saib Street ...	92	4	0
Do.	Andeappah Gramany Street ...	119	8	0
Cross Drain	Mutta Street ...	20	11	4
Parapet wall of Drain	Singana Naick Street ...	59	1	2
	Wall Tax Drain ...	67	5	9
	Mount Road ...	54	13	8
	Protecting mouth of the Main Drain Royapooram when the sea was encroaching ...	66	10	0
Cross Drain	Mathotsawmy Maintry Street and Streenevassa Iyengar Street ...	11	0	0
Cross Drain	Venatarungam Pillay Street ...	38	0	0
Fixing picottah and erecting cistern	Edgar's Mosque ...	57	10	5
Cesspit	De Mellow's Road ...	54	5	9
Do.	Sydenham's ...	90	13	0
Drain	Wall Tax Road ...	16	4	1
Drain and cesspool	Coom Road ...	266	12	0
Drain	McLean Street and Unkappa Naik Street ...	49	2	0
	Value of stink traps, ventilating tubes and other articles ...	306	9	10
	Petty repairs to several drains, fixing cesspool covers and gratings, &c., &c. ...	735	4	8
	Total...	3,454	3	8

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Most of the street drains urgently require repair. The brick seems originally to have been of an inferior class, and the action of the sewage and also their proximity to the sea have greatly acceded to their deterioration. Most of these require plastering both for the purpose of giving them a smooth surface to which sewage cannot adhere and also of preventing further chemical action upon them.

Some new form of drain requires to be adopted for any future street drains.

Glazed tiles would undoubtedly be a move in the right direction for the invert at the bottom, and with cement and plaster on the sides the flow would be very greatly increased.

III. CONSERVANCY.

The Municipality spend more than one-fourth of their income on Conservancy. The establishment is large but no more than is required by the work, which must certainly be double or even treble that required for keeping clean any English or Continental Town of a similar population, and yet Madras is not clean.

The want of a water carriage system for taking off the faecal and other solid refuse matter of the population naturally points to a larger establishment being required than where such system exists.

In Calcutta and Bombay where systems of water carriage do exist, the following sums are expended under the heading of Conservancy. As shown in the annexed table 1875.

	Income.	Expenditure on Conservancy.	
Bombay ...	35,00,000	6,22,000	16 per cent.
Calcutta ...	24,00,000	1,52,000	6 per cent.
Madras ...	5,07,000	1,88,000	32 per cent.

So that Madras expended in 1874-75 on Conservancy in proportion to her income twice as much as Bombay and five times as much as Calcutta. In 1875-76 Madras expended 50 per cent. of its income on this head.

Notwithstanding all the efforts made against the practice of depositing night soil in dust bins, it still obtains to a considerable extent, as also the practice of throwing dust and rubbish into the streets.

In some cities which have not a water carriage system, what is called the pail system was adopted; something like this was done in Madras in 1874-75, by finding separate carts for the conveyance of night soil; In the better parts of the city this plan might perhaps be worked with advantage. The system is that each house is provided (most people would be glad to provide themselves with them) with two or more iron or wooden pails in which all excreta and night soil are placed ready for the specially constructed Carts to convey them away at stated times. These pails are constructed so as to be almost air tight and never become a nuisance.

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In the poorer parts of the city this plan would certainly not answer, as probably the inhabitants could or would not afford the expense, but a plan, which would answer if it could be adopted, would be to have Municipal Scavengers for a certain number of houses under proper regulation, and the night soil would be removed by men at certain stated times, and carts could then be specially allotted for this duty. Fees for this work should of course be exacted from the people.

1.—Labour.

The following table shews the numbers of the various persons, carts, bullocks, &c. as they stood at the beginning of 1876-77 and the numbers at the end of 1876-77.

	As in April 1876.
	No.
Peons	40
Side Coolies	204
Sweepers	190
Box Cartmen	92
Cesspool Boys	66
Latrine men	80
do Women	53
do Boys and Girls	22
Beach Superintendent	...
do Coolies	3
Trolleys	3
Rubbish Carts	182
Sewage do	95
Latrine do	30
Burial and Burning Ground Peons	3
Bullock, Pairs	309
Do Drivers	310
Slaughter House Carts	2
Extra Carts with Bullocks	...

The additions were due to the large influx of country people driven in by the Famine. Many extra carts, &c., were employed in Relief Camps and with the Health Inspectors, &c., besides those required for extra Municipal work.

The contract rate for Bullocks with Drivers was Rupees 16-6-0 per month.	
For Scavengers	4-18-6 do
Extra cart with Bullocks and Drivers	23-0-0 do

Owing to the Famine the rates originally agreed on with the Bullock Contractor were increased by Rupees 2-8-0 for each pair of bullocks from November 1876 to March 1877. The total cost of this increase was Rupees 3,918-0-0. The Bullock Contractor asks a further increase, but this has still to be decided by the Commissioners.

2.—Carts.

The Carts were in a very bad state, and it was only by incessant complaints and warnings to the Contractor that they have been kept in a state at all fit for use.

There is power under the agreement to stop any Cart from working, and to supply another in its place, if the Contractor fails to do so, but this clause of the agreement has been found most difficult to work, as there were no reserves of Carts for this purpose in the hands of the Commissioners.

It is the opinion of the Executive Engineer, that the Municipality are placed at a disadvantage by the Carts belonging to a Contractor, and that were the Carts the property of the Commissioners, they would not be in the wretched state they at present are, and sewage would not fall from them over the street as it at present does.

Improvements on the Carts are much needed and will be made as opportunity offers.

3.—Cleansing of Drains.

The imperfect construction of the Drains and the small amount of water available for flushing them have, during the past year more than any other rendered an efficient cleansing difficult.

Only one flushing pipe was fixed during the year in Peter's Road, Royapettah.

To some extent it may be said the main Drain is flushed by being made to back up for 12 hours at the south end and then allowed to discharge, which it does at a good velocity. The north end of the main Drain is allowed to discharge at low tide during the night, but since it has been decided that it is more deleterious to open the south end at night when people are asleep, it would be well if the north end were open during the day also instead of at night.

The backing up of these Drains naturally causes them to deposit silt to a considerable extent which is very little affected by the velocity of the after discharge.

As long as every sort of filth is allowed to run into open Drains, they will never be in a sanitary condition. The Municipality requires the public to help them in this matter by seeing that such an amount of refuse and other solid matter is otherwise disposed of. At present, people put all kinds of matter into the Drains for which they were never intended at serious cost to themselves, their neighbours and the general public.

4.—Latrines and Urinals.

The following Statement shows the present number of Latrines in each division of the Municipality. Those marked thus * were erected during 1876-77.

Divisions.				Permanent.				Temporary.				Remarks.
				Male.		Female.		Male.		Female.		
1st Division	...	...	...	11	...	8	...	2	2*	6	2*	These have been sanded and cleaned in the usual man- ner.
2nd do	...	...	...	2	...	2	...	...	2*	...	2*	
3rd do	...	...	...	2	...	1	...	...	3*	...	2*	
4th do	...	...	...	8	...	2	...	1	3*	...	3*	
5th do	...	...	...	22	...	10	...	...	1*	...	1*	
6th do	...	...	...	6	1*	5	...	6	...	7	...	
7th do	...	...	...	18	...	9	1*	2	...	3	...	
8th do	...	...	...	18	1*	10	1*	4	...	6	...	
Total...				76	2	47	2*	15	11*	22	10*	

The present Latrines are of a most simple construction, 4 dead walls in fact. They are used only by the very lowest classes. Many do not care to enter these places and commit nuisances in the neighbourhood of their villages where a little more privacy can be procured. An improved Latrine would greatly tend to decrease such a class of nuisance. More strict supervision on the part of the Police is necessary to stop this practice.

The following is the number of Urinals. Those marked thus * were put up during the year. A great nuisance could be decreased by an increased supply.

Popham's Esplanade Road	2	...
Junction of Venkataswella Moodelly	...	...
Street and Rassappah Chetty Street...	2	...
Iyapillay Street	...	2*
Nynappa Naick Street	...	2*
Chinna Bazar Street	...	1*

the more crowded main streets of the town, some lamp urinals might be whenever extra light is required. These are in extensive use on the Conti-might be introduced with advantage into Madras.

5.—Dust Bins.

	Previous Number.	Erected during 1876-77.
1st Division	81	...
2nd do	457	...
3rd do	428	42
4th do	17	...
5th do	185	40
6th do	79	...
7th do	440	20
8th do	98	2

Cost of New Dust Bin and repairs has been Rupees 1,178-11-10. There is a great want of Dust Bins in Madras, and a large grant is very necessary to provide new ones, but to remove useless ones and to repair and old ones.

6.—Sewage Farms.

Madras is able to shew three Sewage Farms four, if a very small one in Egmore led, these are:—

	Acreage under Cultivation.	
	Acres.	Sqr. feet.
At Triplicane	3	30,715
At Kistnampett... ..	7	17,242
At DeMellow's Road	5	9,619
At Egmore Farm... ..	0	10,561

The number of Picottahs at each farm is:—

Triplicane	3
Kistnampett	6
DeMellow's Road... ..	4
Egmore Farm	1

Triplicane Farm was commenced in October 1876, and Egmore in September the other two farms were being used throughout the year.

Triplicane and Egmore Sewage Farms were not regularly irrigated and cut previous to the end of the year.

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The following Returns show the amount expended on the cultivation of Farms and the return from them :—

Kistnampett and Triplicane Farms.

Weight of Grass.	Weight of Hay.	Receipt.	Amount.	Disbursement.
T. lbs.				
10	...	Hay sold ...	794 1 2	Cost of erecting and repairing picottahs ...
138	2,190	Grass sold ...	972 13 7	Levelling and preparing beds, &c....
	112	Balance of Hay in stock.	4 0 0	Drain tiles and articles, &c.
		Value of tools, articles, &c. debited against Farms and still in stock ...	110 8 0	Salaries of Superintendents.
				Labour ...
				Masonry weir ...
				Compensation for land or Triplicane farm ...
		Rupees... 1,881 6 9		Cleaning tanks do ...
		Met from Municipal Fund. 2,487 8 11		Sundries ...
		Total Rupees... 4,369 15 8		Total Rupees...

A similar table is annexed for DeMellow's Road and Egmore.

Weight of Grass.	Weight of Hay.	Receipt.	Amount.	Disbursement.
lbs.	T. lbs.			
8	...	By Hay sold ...	649	Cost of erecting and repairing picottah ...
2,83,763	...	do. Grass do ...	894 5 3	Levelling and preparing bed
1,050 3 1	...	do. Balance of Hay & Grass in stock ...	283 4 6	Drain tiles & erecting a shed
		Value of tools, articles, &c. against Farm and still in stock ...	77	Articles ...
				Salary of Superintendent..
				Labour ...
				Rent for land ...
				Sundries ...
				Balance in favour...
		Total Rupees... 1,903 9 9		Total Rupees...

The average extent of land irrigated and the extent cut daily was

	Irrigated.	Out.
	Sqr. feet.	Sqr. feet.
Triplicane ...	14,400	2,400
Kistnampett ...	18,208	9,908
DeMellow's Road ...	9,600	8,600
Egmore ...	1,000	"

Note.—Triplicane and Egmore Sewage Farms were not regularly irrigated and cut previous to the end of

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So that the total area cut during the above period was at

	Irrigated.	Out.
	Acres.	Acres.
Triplicane ...	...	...
Kistnampett ...	115 705 sq. yds.	81 760 yds.
DeMellow's Road ...	83 3,883 "	31 185 "
Egmore ...	" "	" "

7.—Rubbish Depots.

places at which Rubbish was principally deposited were :—

1. Brick Kiln Depot.
2. Kistnampett do.
3. DeMellow's Road Do. (East of Salt Cotaar.)
4. Near Monegar Choultry, Cemetery Road, do.
5. Munnally.

Nos. 3 and 4 are not considered Depôts and no night soil is buried at these two places. The cost of the maintenance of Depôts 1, 2 and 5 amounted for the year to Rupees* 473-6-6. Munnally Depot was let out in February and March for Rupees 188, and the amount from April 1876 to January 1877 received departmentally was 180-7-9. The manure from the Depôts at Kistnampett and Brick Kiln Road realized Rupees 361-2-0 and Rupees 227-6-0 respectively.

The quantity of Rubbish collected and removed by the Municipality during the year amounted to 3,14,927 cart loads.†

8.—Slaughter Houses.

Of these there are four :—

Perambore for Bullocks.
Choolay
Monegar Choultry } For Sheep.
Triplicane

* For repair	500-0-0
do Establishment	2,810-0-0
	3,310-0-0
† Establishment for Superintendents	1,118-12-0
Labour	1,108-13-0
Cost of repair, &c.	658-14-10
do of Cart	10-19-6
	2,894-2-1

The budgeted amount of expenditure was Rupees 2,810,* while the amount expended was Rupees + 2,894-2-1. The amount let on contract was Rupees 6,240-0-0, showing a balance to credit of the Slaughter Houses of Rupees 3,345-13-11 which is satisfactory. The usual attention was paid to their supervision and cleanliness.

† Note.—This is probably about 1,12,500 Tons.

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9.—Markets.

The General Market had a Revenue of Rupees 10,874-12-0 for the year, and the daily average number of stalls held was 139.

The cost of the Establishment was Rupees 1,140 and the cost of repairs 628-0-4 or a total expenditure of Rupees 1,768-0-4. This shows a balance of Rupees 9,106-11-8 in favor of the Market.

The Market has been kept clean and tidy, and reflects great credit on the officer in charge. The stalls are low and not well ventilated, but it would be expensive to improve them. Did the Market require enlarging, other stalls could well be built over the present ones.

The following shows the private Markets at present licensed under Section 185 of the Municipal Act.

Divisions.	Localities.	Known as
1st Division.	Trivettor High Road ...	Washermenpettah Market
do	Pathala Vignosvarer Covil Road ...	do
do	Gouso Moideenpettah Road ...	do
do	Narainapah Naick Street ...	do
do	Munnarsawmy Covil Street ...	do
do	Adam Saib Street ...	do
do	Casumoda Cooriam ...	do
do	Nattoo Pillai Covil Street ...	do
2nd Division.	Govindapah Naick Street ...	Chengum Bazar
do	Munnarcov Street ...	do
do	Mint Street ...	do
do	Parish Venkatachella Iyer Street ...	do
3rd Division.	Andeappah Naick Street ...	do
do	Uncapah Naick Street ...	do
do	Choolay Bazar Road ...	do
do	Pursewalkum Bazar Road ...	do
5th Division.	Narraina Chetty Street ...	do
do	Seyala Moodelly Street ...	do
do	Avadanum Paupier Road ...	do
6th Division.	Mount Road ...	do
do	Pycroft's Road ...	do
do	Triplicane High Road ...	do
7th Division.	Do ...	do
do	Aroonachella Naick Road ...	do
do	Royapettah High Road ...	do
do	Mundavelly Street ...	do
do	Mount Road ...	do
do	Venkatachella Moodelly Street ...	do
do	Bazar Road, Mylapore ...	do
do	Moothosawmy Moodelly Street ...	do
do	Presinavenoyager Street ...	do

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10.—Cart Stands.

The following is a list of the Cart Stands at present existing. They have been carefully attended to during the year. The cost of repairs to the Municipal Cart Stands was Rs.* 1,352-10-8, and its Revenue 1,107-6-3 (this includes the Revenue of Wall Tax Road Cart Stand).

*This is owing to laying pipes and erecting troughs, &c. for supplying Red Hills water to Stephenson's Road Cart Stand.

Division.	Locality.	No.	Remarks.
1st Division.	Trivettor High Road ...	1	Private.
2nd Division.	Mint Street ...	2	
4th Division.	Stephenson's Road ...	1	
5th Division.	Sydenham's Road ...	1	
do.	Strachan's Road ...	1	
do.	Vathear Conda Pillay Street ...	1	Municipal.
do.	Poonamallee Road ...	1	
do.	Lang's Garden Road ...	1	
6th Division.	Codumbankum Road ...	1	
do.	Poonamallee Road ...	1	
7th Division.	Coorn Road, Chintadripett ...	1	Private.
do.	Andeappah Chetty Street ...	1	
do.	Triplicane High Road ...	1	
8th Division.	Peter's Road ...	1	
do.	Cabalusivara Pagoda, East Madah Church Street ...	1	
do.	Mount Road ...	1	

11.—Parcherries.

What to do with or for Parcherries may be considered one of the problems in the sanitation of Madras. They are usually a crowded collection of huts placed in such a manner that they can neither be well drained nor ventilated, in fact in some cases the Parcherry is so much below the level of the adjoining land, that it cannot be drained. The people who inhabit them are of the lowest class, and to live in dirt seems to be their natural state of existence.

Every endeavour is being made to improve their condition by drainage and by improving the ventilation by removing some of the huts and opening new streets through them. To ventilate some of these properly would mean removing half the Parcherry. They are the hot-beds of disease.

To remove them totally and place them in other localities under regulation would benefit Madras immensely. One Parcherry was removed totally, viz., the Lubbay Parcherry, and the inhabitants were paid for their huts and sent to other Parcherries properly lined in streets and with latrine accommodation.

But this in all cases cannot be accomplished on account of the expense, and the people are so poor that the rent derivable from new buildings put up for them in other places would never give a fair return for the outlay. The Municipality have evidence of this in Cox's Model Parcherry.

Many of these Parcherries are placed however on valuable building sites, and in this case it might pay to remove them as the rent derived from the huts must be

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very inconsiderable. It is not only in Madras that they have been found a nuisance. In Calcutta great attention was paid to the subject, and the remedies proposed were similar to those recommended above, viz., "roads, ventilation, drainage, improved huts, a better system of conservancy, coupled with the construction of suitable latrines," and they then ask "who is to pay for this," "and come to the conclusion that the owner or farmer of the Parcherry is the proper person." In case the owner cannot from any reason make the improvement himself, it would not be unfair to ask him to surrender the rents or mortgage the property to the Municipality until the cost of such improvements is paid.

During the last few weeks of the year a special staff has been organized for the purpose of keeping Parcheries clean. They are in gangs of ten and they thoroughly clean out a Parcherry, dig a hole and bury the rubbish and they go on to another Parcherry.

A great improvement has been effected in the Parcheries by this means. The number of Parcheries now in Madras is about 180.

12.—Burial and Burning Grounds.

The following table shows the Burial and Burning Grounds in each division of Madras.

Divisions.	Christians.		Mahomedans.		Hindoos.		Jaffergoes.		Chinsoos.		Parsoos.		Total.	
	Private.	Public.	Private.	Public.	Private.	Public.	Private.	Public.	Private.	Public.	Private.	Public.	Private.	Public.
1st Division	...	...	...	...	...	...	...	...	...	...	...	...	5	1
2nd	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3rd	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4th	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5th	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6th	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7th	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8th	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	32	216	21	22	35	1	...	...	1	...	...	...	269	...

Great care has been taken to see that bodies were interred to a proper depth and that bodies burnt were thoroughly burnt.

Several additional Peons have been appointed to watch the various burial grounds. The grant under this head was Rupees 2,000 and Rupees 3,069-8-11* expended.

A new wire fence was put round the Washmenpettah Esplanade Hindu Burial Ground at a cost of Rupees 1,735-12-0†.

13.—Esplanades.

The Esplanades have been carefully looked after as usual. They were let for 1876-77 and 1877-78 at the rates noted in the accompanying table.

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The latter end of 1875-76 was most unfavorable for the growth of the grass. The Monument and Light-house Esplanades were not let for 1877-78, as it was expected they would be required for the storage of rice.

	Let for	
	1876-77.	1877-78.
Body Guard Esplanade	85	100
Light-house and Monument Esplanades	102	...
Fort Saint George do.	237	330
Memorial Hall do.	190	175
Patcheappah's do.	110	210
Leper Hospital and Monegar Choultry Esplanades	61	300
Basin Esplanade	155	290

IV.—LIGHTING.

No change has occurred in the manner of lighting the town during the past year. The contractors for the lighting were P. Soondra Naik and Moonesawmy Chetty who were paid for each lamp lit 0-12-6 per mensem, and they had to keep the lamps in repair at this rate.

Portions of the lamps are inspected each night on which they are lit.

The number of days in each month on which lamps were lit are shown in the following table (No. 1) and the 2nd table shows the number of lamps in each division of the town.

TABLE I.

Month.	No. of days.	Remarks.
1876.	18	11th to 28th.
April	...	...
May	19	11th to 28th.
June	20	8th to 26th.
July	19	8th to 26th.
August	20	7th to 26th.
September	20	5th to 24th.
October	20	5th to 24th.
November	20	3rd to 23rd.
December	20	3rd to 23rd.
1877.	21	1st to 21st.
January	...	...
February	13	1st to 19th.
March	20	1st to 20th.

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STATEMENT I.

Table showing the number of Markets, Offensive trades, &c., and amount received for Licenses.

Description.	No.	Income from License.		
		RS.	A.	P.
Markets...	32	858	7	10
Meat stalls	53	61	12	11
Saltfish...		16	12	0
Hack stables	202	751	2	8
Cattle yards	7	56	0	0
Chunam Kiln	10	266	15	8
Brick Kiln	12	233	0	0
Pottery Kiln	1	10	0	0
Indigo dyeing yard	13	121	1	0
Tannery...	2	40	10	0
Oil boiling houses	6	46	14	8
Oil mills...	22	251	10	8
Slaughter houses...	2	150	...	0
Sheep pens	3	170	1	2
Bone Depôts	2	100	0	0
Blood and Bone do	1	50	0	0
Firewood and Brushwood Depôts	91	756	14	3
Palmyrah Depôts...	3	62	8	0
Redwood do	1	12	8	0
Bamboo do	3	35	0	0
Timber do	9	151	15	4
Charcoal do	14	75	9	11
Straw do	1	10	0	0
Cart Stands	17	337	0	1
Retaining parapet walls	1	5	0	7
Temporary pandals erected on the esplanades for plays, &c.	2	128	0	0
Wedding pandals	53	257	0	5
Scaffoldings	13	30	15	7
Arches	2	3	0	0
Swing	1	5	0	0
Depositing materials, &c.	7	18	12	0
Total...		5,073	11	9

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Statement showing the number of Notices served under various Sections of the Madras Municipal Act IX of 1867, distinguishing those complied with, from those not complied with during the year ending 31st March 1877.

Requirement of Sections.	No. of Sections.	Complied with.	Not complied with.	Total.
For requiring parties to deposit dust, dirt and ashes, &c., in the dust boxes provided for same	109	1	...	1
" depositing rubbish in the streets	110	116	...	116
" neglecting to remove obstructions or encroachments on streets	117	5	...	5
" do. to put up proper troughs and pipes for catching the water from the roof	129	5	...	5
" do. to remove projections, &c.	130	14	1	15
" do. to remove old projections, &c.	131	16	...	16
" do. do. roof of inflammable materials	133	97	...	97
" do. to repair, take down or secure dangerous buildings.	134-5	98	...	98
" do. to enclose deserted buildings and lands	136	35	...	35
" do. to remove nuisances and noxious vegetation	138	236	2	238
" do. to lime wash and cleanse buildings after 8 days' notice.	139	...	1	1
" allowing a building to be so overcrowded as to be dangerous to the health of the inhabitants	140	7	...	7
" neglecting to trim hedges	141	26	...	26
" do. to erect a branch drain to connect with some sewer or drain	150	29	4	33
" do. to give notice to the President for buildings, &c.	153	14	...	14
" do. to enclose and roof private privies	160	21	...	21
" do. to keep branch drains and privies in order	161	11	...	11
" constructing drains, privy or cesspool without the consent and contrary to the orders of the President	162	1	...	1
" neglecting to clean or drain private tanks	175	8	...	8
" depositing buildings, materials, &c., on the streets without a license from the President	183	13	5	18
" neglecting to repair or enclose dangerous places	184	153	3	156
" using a place as slaughter-house and market without a license from the President	185	2	...	2
" neglecting to drain, &c. markets and slaughter-houses	187	7	1	8
" carrying on offensive and dangerous trades without license from the President	193	12	...	12
" neglecting to carry out certain works	198	7	2	9
Regarding the regulations of markets and slaughter-houses, burial and burning grounds, offensive and dangerous trades, latrines and urinals and order of public thoroughfares, &c.,	Bye-laws	53	1	54
For keeping Livery or Hack stables, &c., without license	142	17	1	18
" allowing sewage to flow in streets	111	...	1	1
" not providing Latrines	158	6	1	7
" not setting up Hoards during repairs	181	1	...	1
Total...	...	...	...	934

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STATEMENT IV.—Continued.
Works completed during 1876-77 on estimates shown below for reforming Roads.

Estimate Number.	Division.	Names of Roads.	Amount of Estimate.	Amount of Bill.	Amount passed and paid during the Year.	Amount of Bill passed before the end of official year, but not paid.	Mileage.
37	Third Division.	Brought over	13,840 3 11	13,734 13 2	11,173 6 2	2,581 7 0	1 1 133
38		Centre of Market Road South from Popham's Broadway to Umpherson's Street	113 13 10	113 13 0	113 12 10		1 1 94
44		Do Davidson's Street from Annapillay Street to Mootiappen Street	252 0 0	252 0 10	252 0 0		1 1 90
45		Do of Thieving Place Esplanade Road from China Bazaar Road to Benfield Esplanade Road	444 0 0	444 0 0	444 0 0		2 0 20
59		Do of Errabandoo Chetty Street from Candapah Chetty Street to Popham's Broadway	91 0 0	91 0 0	91 0 0		2 0 92
60		Do Unkappah Naick Street from China Bazaar Road to China Bazaar Esplanade Road	645 9 0	645 9 0	645 9 0		4 17 17
63		Do do from Marany Street to Ebramjee Saib Street	528 0 0	528 0 0	528 0 0		3 73 73
156		Do Umpherson's Street from China Bazaar Esplanade Road to Annapillay Street	267 0 0	267 0 0	267 0 0		1 137 137
68		Do of Thieving Bazaar Esplanade Road from Benfield Esplanade Road to Light House Esplanade	1,459 9 4	1,459 9 4		1,159 9 4	5 56 56
79		Do of China Bazaar Esplanade Road from Popham's Broadway to North Beach Road	1,440 7 4	1,440 7 4	1,140 7 4		2 166 166
106		Do Hospital Esplanade Road from Benfield Bridge to China Bazaar Road	300 0 0	300 0 0	300 0 0		2 0 20
107		Do Narainappa Naick Street from North Beach Road to Thumboo Chetty Street	494 5 9	494 5 9	494 5 9		1 167 167
114		Do Mocoollamoccho Street from Popham's Broadway to Junction Street	556 0 0	556 0 0	556 0 0		1 150 150
115		Do of Errabandoo Chetty Street from Sembodoo Street to North Beach Road	465 0 0	465 0 0	465 0 0		2 77 77
116		Do Ancharappen Street from Annapillay Street to Umman Corral Street	1,048 3 7	663 2 10	663 2 10		5 190 190
121		Do Coral Merchant Street from Munnady Street to Ebramjee Saib Street	670 6 1	1,048 6 1	1,048 6 1		3 158 158
125		Do Band-practice Road from Victoria Bridge to Fort Beach Road	1,408 0 0	1,408 0 0	1,408 0 0		3 158 158
129		Do of Light house Esplanade Road from North Beach Road to Thieving Bazaar Esplanade Road	1,206 1 1	1,206 1 1	1,206 1 1		2 22 22
		Carried over...	25,946 10 11	25,834 3 5	21,813 3 1	4,021 0 4	6 108 108

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ENGINEERING AND SANITARY.

STATEMENT IV.—Continued.

Works completed during 1876-77 on estimates shown below for reforming Roads.

Estimate Number.	Division.	Names of Roads.	Amount of Estimate.	Amount of Bill.	Amount passed and paid during the Year.	Amount of Bill passed before the end of official year but not paid.	Mileage.
130	Third Division.	Brought over	25,946 10 11	25,834 3 5	21,813 3 1	4,021 0 4	11 5 108
131		Centre of Thumboo Chetty's Street from Munnady to China Bazaar Esplanade Road	864 0 0	864 0 0	864 0 0		4 47 47
132		Do Peltzer Corral Street from Umman Corral to old Jail Street	762 0 0	762 0 0	762 0 0		3 173 173
133		Do Butcher Lane from North Beach Road to Kissen Corral Street	179 3 4	179 3 4	179 3 4		0 133 133
134		Do Vurchapoo Lane from North Beach Road to Tanjapah Station	154 5 0	151 5 0	154 5 0		0 139 139
138	Fourth Division.	Do General Chetty Lane from North Beach Road to 4th Line Beach	123 9 6	123 9 6	123 9 6		0 90 90
139		Do China Bazaar Esplanade Road from Popham's Broadway to Junction Street	809 11 7	804 9 7	804 9 7		1 160 160
4		Do Annal Pillay Street from Popham's Broadway to Ucharappen Street	356 7 7	356 7 7	356 7 7		1 67 67
5		Do Cook's Road from Strahan's Bridge to General Farren's Road	450 0 0	450 0 0	450 0 0		1 80 80
45		Do of DeMellow's Road from Popham's gate Esplanade Road to the Culvert Ercogoodrum Road	380 0 0	380 0 0	380 0 0		1 96 96
47	Fifth Division.	Do Perambore Tank Road from Toll Gate to the limit	340 0 0	340 0 0	340 0 0		1 63 63
51		Do Barrack Road from Strahan's Road to General Farren's Road	329 11 7	326 4 8	326 4 8		1 189 189
72		Do DeMellow's Road from Basin Esplanade Road to Gantz Road	282 0 0	282 0 0	282 0 0		1 10 10
103		Do Ekkeberry Road from Basin Bridge to Expense Magazine Road	1,151 0 3	1,147 0 0	1,147 0 0		5 155 155
104		Do do from Toll Gate to do	977 4 0	977 4 0	977 4 0		4 200 200
137	Fifth Division.	Do Elephant Gate Esplanade Road from west approach of the Bridge Road of Wooden railings	586 1 6	585 12 5	585 12 5		0 160 160
143		Do Perambore High Road from the Wooden railings of the Railway crossing to Cook's Road	870 0 0	858 14 6	858 14 6		3 140 140
144		Do Macdonald Road from Toll Gate to Perambore Toll Gate	864 0 0	857 14 2	857 14 2		4 73 73
145		Do Perambore High Road from Toll Gate to the Wooden railings	348 0 0	345 8 2	345 8 2		1 147 147
10		Do of Panamunnen Corral Road from St. Andrew's Bridge to Whannel's Road	178 3 2	178 3 2	178 3 2		4 73 73
11	Fifth Division.	Do of VVianrel's Road from Pannimunnen Corral Road to Pannimunnen Road	472 0 0	471 12 9	471 12 9		2 12 12
16		Do Police Commissioner's Office Road from Male Asylum Road to Potamallao Road	566 0 0	566 0 0	566 0 0		2 141 141
		Carried over...	37,980 4 51	37,835 0 3	27,795 11 8	10,039 4 7	18 0 100

STATEMENT IV.—Continued.
Works completed during 1876-77 on Estimates shown below for reforming Roads.

Estimate Number.	Division.	Names of Roads.	Amount of Estimate.	Amount of Bill.	Amount passed and paid during the year.	Amount of Bill passed and submitted before the end of official year but not paid.	Mileage.
							M. F. Yds.
23		Brought over...	37,980	37,835	27,795	10,039	0 18 100
24		Centre of Colonel Law's Bridge Road, from Bridge to Poonamallee Road.	216	214	314	...	0 1 135
25		Do Round Band Street People's Park	378	377	377	...	0 1 173
26		Do Choolay Bazaar Road from Hunter's Road to Sydenham's Road	726	715	715	...	0 1 100
27		Do Police Commissioner's Road from Poonamallee Road to Gungadraswarar Civil Road	327	327	327	...	0 1 150
28		Do Male Asylum Road from Wharrell's Road to Male Asylum East Gate	372	372	372	...	0 1 193
29		Do Perambore Barrack Road from Astaboojium Road to Struchan's Road	588	588	588	...	0 3 35
30		Do do from Purswalkum High Road to Astaboojium Road	774	774	774	...	0 3 130
31		Do Sydenham's Road from Elephant Gate Bridge to Rottingengoo	1,133	1,133	1,133	...	0 3 40
32		Do Therooverengoda Modelly Street	1,043	1,041	1,041	...	0 3 11
33		Do Coom river side Road from Marshall's Road to Harris' Road	577	577	577	...	0 1 130
34		Do Sydenham's Road from Rottingengoo Therooverengoda Modelly's Street to Vepery High Road	750	750	750	...	0 2 67
35		Do do from Vepery High Road to General Hospital Bridge Road	203	202	202	...	0 1 127
36		Do Thotricala Comanaply Modelly's Street from Vignignaswarar Civil Road to A. V. Sirenevasa Iyer Street	832	832	832	...	0 3 19
37		Do Ritherdan Road from Purswalkum High Road to De'Coset's Gate	565	565	565	...	0 3 116
38		Do Jeremiah's Road from Vepery High Road to Purswalkum High Road	600	600	600	...	0 3 7
39		Do Hunter's Road from Purswalkum High Road to Rundall's Road	674	673	673	...	0 1 210
40		Do West river side Road from Panticon Road to Jordan's Road	435	435	435	...	0 2 161
41		Do General Hospital Bridge Road from Wall Tax Road to Sydenham's Road exclusive of Road over Bridge.	604	604	604	...	0 2 130
42		Do do Paid by Government.	355	355	355	...	0 1 136
43		Do Pathala Poonumunnen Civil Road from Police Commissioner's Office Road to Flower's Road	484	484	484	...	0 3 73
44		Do Gengareddy Road from Castmajor's Road to Egmore High Road	...	...	...	...	...
45		Do Gengareddy Road from Poonamallee Road to Egmore High road	...	...	...	...	...
46		Carried over...	49,484	49,484	29,447	10,039	1 24 136

APPENDIX III.
ENGINEERING AND SANITARY.

APPENDIX III
ENGINEERING AND SANITARY.

STATEMENT IV.—Continued.
Works completed during 1876-77 on estimates shown below for reforming Roads.

Estimate Number.	Division.	Names of Roads.	Amount of Estimate.	Amount of Bill.	Amount passed and paid during the year.	Amount of Bill passed and submitted before the end of official year, but not paid.	Mileage.
							M. F. Yds.
118	Fifth Division.	Centre of Rundall's Road from Vepery High Road to Hunter's Road	49,649	49,486	39,447	10,039	24 1 126
119		Do do from Poonamallee Road to Vepery High Road	378	377	377	...	0 1 168
120		Do Hunter's Road from Rundall's Road to Choolay Bazaar Road	648	648	...	648	0 3 87
121		Do Purswalkum High Road from Gengadraswarar Civil Road to Poonamallee Barracks Road	360	356	...	356	0 1 214
122		Do do from do from Gengadraswarar Civil Road to Poonamallee Barracks Road	450	450	450	...	0 2 67
123		Do do from do from Gengadraswarar Civil Road to Poonamallee Barracks Road	450	450	450	...	0 2 60
124		Do do from do from Gengadraswarar Civil Road to Poonamallee Barracks Road	962	962	962	...	0 3 190
61		Do of Flower's Road from Pothalopunnumnen Civil Road to Poonamallee Road	338	338	338	...	0 2 82
62		Do of Anderson's Road from Gream's to More's Road	282	261	261	...	0 1 130
63		Do of More's Road from Anderson's Road to College Bridge	362	362	362	...	0 1 100
64		Do of White's Road from Pattaloes to Mount Road	874	874	874	...	0 3 100
65		Do do from do from do to Westcot's do	421	421	421	...	0 1 147
66		Do do from do from do to Westcot's do	188	188	188	...	0 0 100
67		Do do from do from do to Westcot's do	873	870	870	...	0 5 86
68		Do do from do from do to Westcot's do	2,113	2,113	2,113	...	0 4 53
69		Do do from do from do to Westcot's do	754	754	754	...	0 1 113
70		Do do from do from do to Westcot's do	1,094	1,094	1,094	...	0 2 49
71		Do do from do from do to Westcot's do	1,559	1,559	1,559	...	0 6 46
72		Do do from do from do to Westcot's do	3,150	3,150	3,150	...	0 4 211
73		Do do from do from do to Westcot's do	300	300	300	...	0 0 139
74		Do do from do from do to Westcot's do	1,091	1,091	1,091	...	0 3 63
75		Do do from do from do to Westcot's do	815	815	815	...	0 2 106
76		Do do from do from do to Westcot's do	1,398	1,398	1,398	...	0 4 46
77		Do do from do from do to Westcot's do	1,675	1,675	1,675	...	0 5 154
78		Do do from do from do to Westcot's do	306	306	306	...	0 0 94
79		Do do from do from do to Westcot's do	157	157	157	...	0 0 104
80		Do do from do from do to Westcot's do	588	588	588	...	0 1 150
81		Do do from do from do to Westcot's do	452	452	452	...	0 1 91
82		Do do from do from do to Westcot's do	2,139	2,139	2,139	...	0 2 183
83		Do do from do from do to Westcot's do	1,300	1,300	1,300	...	0 2 58
84		Do do from do from do to Westcot's do	981	981	981	...	0 3 207
85		Do do from do from do to Westcot's do	76,969	75,814	63,241	12,603	4 34 206
86		Carried over...	...	...	...	...	...

APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT.

Table showing particulars of the prosecutions instituted against parties for breaches of the Conserancy Laws.

	No. of Sec- tion.	No. of cases instituted.	Committed.	Dismissed.	Withdrawn
For depositing ashes, &c., in streets ...	109	13	11	1	1
Do. rubbish on the public streets ...	110	11	11	...	...
For allowing sewage to flow in streets ...	111	1	...	...	1
Do. night soil do. ...	112	1	1	...	...
Do. encroachments on do. ...	117	10	6	...	4
Obstruction and building houses with inflammable mate- rials ...	117 & 133	5	1	...	4
For allowing projections ...	130	1	1	...	...
„ neglecting to remove buildings of inflammable mate- rials ...	133	20	6	...	14
„ noxious Vegetation ...	133	86	52	2	32
„ allowing to overcrowd... ...	140	2	...	1	1
„ neglecting to trim hedges, &c., ...	141	1	...	...	1
„ keeping back stables, &c., without license ...	142	39	5	...	34
„ do swine ...	143	1	...	...	1
„ neglecting to obtain sanction for making drains, &c.	148	1	...	...	1
„ do. to give notice, &c., to President for building ...	153	12	7	...	5
„ keeping a latrine in a filthy state ...	158	2	...	...	2
„ neglecting to enclose or roof a private privy ...	160	2	...	...	2
„ not keeping guards during repairs ...	181	1	...	...	1
„ to remove dangerous buildings ...	184	6	...	...	6
„ using a place as slaughter-house without license ...	185	3	1	...	2
„ selling unwholesome food, &c. ...	189	7	...	7	...
„ exposing unwholesome food for sale ...	190	1	1	...	...
„ not registering trades, &c., depots of offensive and dangerous character... ...	191	1	...	1	...
„ carrying on offensive and dangerous trades without license ...	198	87	18	6	63
„ committing nuisance ...	214	1	1	...	...
„ damages to the Municipality property ...	239	1	...	...	1
„ offences against the Indian Penal Code ...	379	1	...	...	1
Do ...	426	1	1	...	...
Bye-laws ...	426	1	1	...	...

APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT VII.

Statement showing the Names of Street and Roads the Lights are put up.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
First	Trivatoor High Road ...	5	1	6	...
do	Soobooraya Naik Street ...	...	1	...	...
do	Moothiah Moodelly Street ...	1	...	...	...
do	Tholasingum Street ...	...	1	...	...
do	Tholasingum Gramney Street ...	...	1	...	...
do	Yellarama Covil Street ...	...	1	...	...
do	Sallas Garden Street ...	2	...	...	...
do	Soendrayanoygar Street ...	1	...	...	...
do	Mooniapen Moodelly Street ...	1	...	...	...
do	Mint Soobooraya Naidoo Street ...	3	...	...	...
do	Durmaraja Covil Street ...	2	...	...	...
do	Arnee Gunganun Street ...	1	...	...	...
do	Busavian Street ...	1	...	...	...
do	Yagapen Naiken Street ...	1	...	...	...
do	Armoeegum Moodelly Street ...	...	...	1	...
do	Mooniapa Moodelliar Street ...	1	...	...	...
do	Corakapettah Yagapen Naiken Street ...	1	...	...	...
do	Durmaraja Covil Street ...	3	...	2	...
do	Yelliah Moodelly Street ...	1	3	...	...
do	Ramanja Iyer Street ...	...	...	1	...
do	Corakapettah Railway Road ...	1	...	1	...
do	Pulliar Covil Street ...	2	...	...	...
do	Bauloo Moodelliar's Street ...	1	...	...	...
do	Baulah Arumachellam Chetty Street ...	1	...	...	...
do	Davanoyagapooram Street ...	1	...	...	...
do	Coonda Gooravapah Chetty Street ...	1	...	...	...
do	Jendra Pulliar Covil Street ...	1	...	...	...
do	Parumbaulloo Chetty Street ...	4	...	...	...
do	do. do. Lane ...	...	1	...	...
do	Numasevoya Chetty Lane ...	...	2	...	...
do	Monegar Choulry Road ...	4	1	7	...
do	Narrainapah Naiken Street ...	1	...	...	...
do	Sanda Suriah Street ...	1	...	...	...
do	Gouse Moideen Pettah Road ...	...	1	2	...
do	Thanga Chetty Street ...	...	1	...	...
do	Vencatachellum Naiken Street ...	...	1	...	...
do	Barber's Lane ...	...	2	...	...
do	Andiapah Moodelly Street ...	...	1	...	...
do	Soorianarrainapah Chetty Street ...	4	...	1	...
do	Andiapa Gramney Street ...	...	...	1	...
do	Pathala Vijiah Vignesevaram Covil Street ...	2	1	...	...
do	Arathoon Road ...	...	2	...	...
do	Mandah Church Street ...	6	3	1	...
do	Mandah Church do. South... ..	...	2	...	...
do	Murraydoss Street ...	3	1	2	...
do	Manda Covil Main Road ...	...	1	...	...
do	Royapooram Main Road ...	6	...	...	...
do	Royapooram Railway Bridge ...	...	...	...	2
do	do. do. Slope ...	6	...	1	...
do	North Beach Road ...	...	...	1	...
do	Royapooram Slaughter House ...	...	...	1	...
do	Moochatholam Road Napier Foundry ...	1	...	...	...
do	Basin Bridge Slope ...	...	...	...	...

APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Second.	Paramaundah Moodelly Street	1	1	1	...
do	Veerasawmy Pillay Street	1	...	...	...
do	Pullipen Street	...	...	...	...
do	Barracks Street	...	...	1	...
do	Seven Well Street	...	...	1	...
do	Mungamall Lane	...	2	...	...
do	Aucker Juzzae Lane	...	1	...	...
do	Pariana Moodelly Street	...	1	...	...
do	Senevassen Iyer Street	1	...	...	...
do	Thandavamoorthoo Street	1	...	...	...
do	Mootta Maistry Street	...	1	1	...
do	Chetty Maistry Street	...	1	...	...
do	Mathalancherry Street	...	2	...	...
do	Marhasi Maistry Street	...	...	...	...
do	Comarapa Moodelly Street	1	...	...	...
do	Big Paricherry Street	1	...	1	...
do	St. Xavier Street	2	1	...	...
do	Thandavahroya Pillay Street	...	4	...	...
do	Narrainnen Street	1	2	...	...
do	Vurtha Iyer Street	1	...	...	...
do	2nd Narrainnen Street	...	1	...	...
do	Ebram Saib Street	1	...	1	...
do	Peddoo Naiken Lane	2	...	...	...
do	Venkar Street	3	1	...	...
do	Cooplayer Street	1	...	...	...
do	Venkataram Street	1	1	1	...
do	Kistananama Naidoo Agrarum Street	2	1	1	...
do	Tylor Moothia Moodelly Street	...	...	1	...
do	Kistananama Naik Tank Street	1	...	...	...
do	Ummen Covil Street	2	...	...	...
do	Washerman Lane	4	2	2	...
do	Vadamallay Maistry Street	...	1	2	...
do	Juggernathen Moodelly Street	1	...	...	...
do	Namalwar Street	2	1	...	...
do	Thirupally Street	...	...	1	...
do	Muhapa Maistry Lane	5	...	...	...
do	Numboolan Street	...	...	1	...
do	Mulla Saib Street	1	...	...	...
do	Venoyaga Maistry Street	4	...	1	...
do	Arnachellum Street	...	1	...	...
do	Thandavarooyen Pillay Street	1	...	1	...
do	Pornat Covil Garden Street	1	...	...	...
do	Nallunay Moodelly Street	1	...	1	...
do	Vythenthah Moodelly Street	...	1	1	...
do	Nattu Palliar Covil Street	1	1	...	...
do	Souboramanya Moodelly Street	1	...	...	...
do	Puttoo Rassapah Moodelly Lane	2	...	1	...
do	Nagamny Garden Street	1	...	...	...
do	Sambha Street	2	...	...	...
do	Ramakistna Street	4	...	...	...
do	Armoogum Street	2	...	...	...
do	Curpannen Street	...	1	1	...
do	Soomoosoonndrum Moodelly Street	...	1	...	...
do	Senn Moodelly Street	1	...	...	...
do	Munngunda Moodelly Lane	1	...	...	...

APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Second.	Tatha Moothiapien Street	...	...	...	...
do	Anna Pillay Street	3	1	1	...
do	Chinatomby Moodelly Street	7	2	3	...
do	Comarapa Maistry Street	1	1	...	...
do	Govinthapa Naiken Street	1	...	...	...
do	do. do. Bathing Fountain	10	...	2	...
do	Evening Bazaar Road	3	...	...	...
do	General Hospital Road	3	...	1	...
do	General Hospital Bridge	5	...	1	...
do	Memorial Hall, Esplanade, (Foot Path)	6	...	...	...
do	Appia Moottoo Street	1	...	...	...
do	Chembader Pulliar Covil Street	2	...	...	...
do	Issac Street	2	3	1	...
do	Arrack Godown Street	1	2	...	...
do	Nyneapa Maistry Street	1	1	...	...
do	Anthony Street	1	...	...	...
do	Chellan Street	...	...	1	...
do	Munnar Street	...	1	1	...
do	Kalapacharry Street	1	...	1	...
do	Bungarummen Street	1	1	...	...
do	Bummoo Chetty Street	1	1	...	...
do	Purmasova Chetty Street	...	1	...	...
do	Venga Chetty Street	...	...	1	...
do	Peddanaiken Street	...	1	...	...
do	Teroomullay Lane	...	3	...	...
do	Rassapahetty Street	2	...	...	...
do	Vencatachellum Moodelly Street	...	2	...	...
do	Davaroya Moodelly Street	2	...	1	...
do	Moorthoo Lane	...	2	...	...
do	Souboonarrainen Street	1	2	...	...
do	Mathavakhan Lane	1	3	...	...
do	Vencatachellum Street	2	...	...	...
do	Iyah Moodelly Street	3	...	...	...
do	Nyneapen Naiken Street	2	1	1	...
do	Ragoonaicoloo Street	1	...	1	...
do	Mint Street	19	3	5	...
do	Narnina Chetty Lane	...	1	...	...
do	Casava Iyer Street	1	...	...	...
do	Yagamisparam Agrahaum	...	1	...	...
do	Ponapascherry Street	1	1	1	...
do	Sevaram Sastry Street	1	...	...	...
do	Pulliar Covil Street	1	...	...	...
do	Nunnian Street	1	...	...	...
do	Adapaullum Street	3	...	1	...
do	Vuthara Moodelly Lane	...	1	...	...
do	Singaren Street	1	...	1	...
do	Unnamuntharoyen Street	...	1	...	...
do	Vencatasawmy Lane	1	...	...	...
do	Hoossain Sahib Street	...	...	...	...
do	Kistnapa Maistry Street	...	1	1	...
do	Budriah Garden Street	2	...	...	...
do	Vencataroya Street	...	1	1	...
do	do Lane	...	1	...	...
do	Cundapah Moodelly Street	...	2	...	...
do	Moorgapen Street	1	...	...	...

APPENDIX III.

ENGINEERING AND SANITARY.

STATEMENT VI—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post	Wall Brackets	Wooden Lamp Post	Globes of Lamp Oil.
Second.	Wall Tax Road ...	3	1	1	...
do	Elephant Gate Bridge ...	4	...	...	...
do	do Street ...	...	...	...	...
do	Ramanen Street ...	3	...	1	...
do	Alunagaper Street ...	12	...	...	...
do	Chinnayygar Street ...	...	...	1	...
do	Venapan Street ...	1	1	...	...
do	Ramanjan Iyer Street ...	1	...	...	...
do	Vannaygar Moodelly Street ...	1	...	...	...
do	Chinnayygar Moodelly Street ...	1	...	...	...
do	Trevelyan Water Works East Road ...	1	...	...	...
do	do do South Road ...	1	...	...	...
do	Iyah Moodelly Street ...	1	...	...	...
do	Pullipai Lane ...	...	...	2	...
do	Perumal Moodelly Street ...	2	1	...	...
do	Audiyappan Naicken Street ...	4	1	3	...
do	Bathara Veerasawmy Lane ...	...	1	...	...
do	Narayanadasary Street ...	1	...	...	...
do	Samathara Moodelly Street ...	2	...	...	...
do	Gungoorum Ram Street ...	...	1	...	...
do	Soubbarayaloo Naicken Lane ...	...	1	...	...
do	Pumehaven Lane ...	1	...	...	...
do	Naraina Moodelly Street ...	2	...	...	...
do	Moonipen Lane ...	1	...	...	...
do	Moothipa Moodelly Street ...	1	1	...	...
do	Kistnasawmy Iyer Lane ...	...	2	1	...
do	Cassay Chetty Street ...	2	...	...	...
Third	Appasawmy Lane ...	...	1	...	...
do	China Bazaar Road ...	1	4	5	...
do	Davidson Street ...	1	...	...	...
do	Umpherson Street ...	1	2	...	...
do	Stringer Street ...	...	2	...	...
do	Anderson Street ...	...	2	...	...
do	Malapermai Street ...	1	3	...	...
do	Olemico Lane ...	1	1	2	...
do	Goorouvepan Street ...	2	...	...	...
do	Munnarsawmy Civil Street ...	1	...	...	...
do	do do Lane North ...	...	2	...	...
do	do do do South ...	...	1	...	...
do	Toddyman Street ...	1	...	...	...
do	Cuppalpool Chetty Street ...	2	...	...	...
do	Muthaichan Garden Street ...	...	...	...	...
do	Parish Venkatachellam Iyer Street ...	2	1	1	...
do	Balakisteen Lane ...	...	1	...	...
do	Aucherappen Street ...	1	1	1	...
do	Appo Maistry Street ...	...	1	...	...
do	Mylia Paranthumby Street ...	...	...	1	...
do	Cossa Saib Lane ...	...	...	1	...
do	Varthamothipen Street ...	6	...	1	...
do	Venestanon Naick Street ...	1	...	1	...
do	Muthurayyasan Street ...	1	1	...	...
do	Padarey Iyer Civil Lane ...	2	...	1	...
do	Shunmoogayyan Street ...	...	...	...	...
do	Neuvevasen Pillay Street ...	...	1	...	...
do	Thyapen Moodelly Street ...	...	1	...	...

APPENDIX III.

ENGINEERING AND SANITARY.

STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post	Wall Brackets	Wooden Lamp Post	Globes of Lamp Oil.
Third.	Padarey Ummon Civil Street ...	4	...	2	...
do	Black Town Chapel, Back Lane ...	...	3	...	...
do	Portuguese Church Street ...	2	...	1	...
do	Catwal Bazaar Agraharam Lane ...	...	...	1	...
do	General Market ...	...	5	...	...
do	Popham Esplanade Road ...	10	...	2	...
do	Wallajah Bridge ...	12	...	...	...
do	Band Practice Road ...	1	...	...	...
do	Band Stand Road ...	25	...	...	...
do	Victoria Bridge ...	12	...	...	...
do	Syva Moothia Moodelly Street ...	1	2	...	...
do	Venkata Iyer Street ...	...	2	...	...
do	Salayyanoynger Civil Street ...	1	...	1	...
do	Chengayaney Pulliar Civil Street ...	1	1	1	...
do	Ramasawmy Street ...	3	...	2	...
do	Geils Street ...	2	...	...	...
do	Coral Merchant Street ...	4	...	1	...
do	Nyneapen Street ...	1	1	...	...
do	Chowry Moothoo Street ...	...	1	1	...
do	Myliapen Street ...	1	1	...	...
do	Jones Street ...	...	2	...	...
do	Jones Lane ...	2	2	...	...
do	Semboos Doss Street ...	...	1	...	...
do	Venkata Maistry Street ...	...	...	1	...
do	Iyapen Street ...	...	...	...	...
do	Odacaren Street ...	...	2	...	...
do	Mc. Lean Street ...	...	2	...	...
do	Gomes Street ...	...	2	...	...
do	Phillips Street ...	...	4	...	...
do	Bakers Street ...	...	2	...	...
do	Francis Joseph Street ...	...	1	...	...
do	Soonkarama Street ...	...	1	...	...
do	Armenian Street ...	1	2	...	...
do	Singana Naick Street ...	...	1	...	...
do	Mookur Nallamoothoo Chetty Street ...	1	8	...	...
do	Catchalesparam Agraharam Civil Street ...	2	...	...	...
do	Erbabalu Chetty Street ...	...	5	1	...
do	Thumboo Chetty Street ...	10	2	...	...
do	Linga Chetty Street ...	8	2	...	...
do	Myhispooram Civil Street ...	1	...	...	...
do	Andiapanthum Street ...	1	...	...	...
do	Ebram Saib Street ...	3	...	...	...
do	Ungapa Naick Street ...	4	2	...	...
do	Mootacaram Street ...	1	...	...	...
do	Ebramjee Lane ...	...	1	...	...
do	Ebramjee Sheriff Street ...	...	1	...	...
do	4th Line Beach ...	...	1	...	...
do	3rd Line Beach ...	7	4	1	...
do	North Beach Road ...	1	...	...	...
do	Naraina Syrang Garden Street ...	1	...	...	...
do	Soothan Street ...	2	...	...	...
do	Merca Lubbay Street ...	2	...	1	...
do	Kistnasawmy Civil Street ...	...	...	...	...

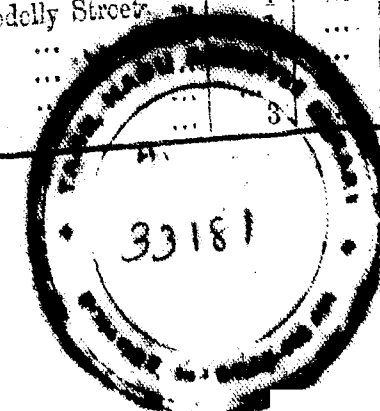
APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Third	Narraina Naick Street	...	2	...	...
do	Moor Street	...	1	2	...
do	Puttoo Saib Street	...	1	...	...
do	Ungapa Naick 1st Lane	...	1	...	...
do	do do 2nd do	...	1	...	...
do	do do 3rd do	...	1	...	...
do	2nd Line Beach Lane	...	1	...	...
do	do do Street	...	6	...	...
do	Pophams Broadway	...	6	13	...
do	China Bazaar Road	...	1	...	...
do	Evening Bazaar Esplanade Road	...	3	...	...
Fourth	Basin Bridge	...	2	...	...
do	Yercaucherry Road	...	6	...	...
do	Vasaraudy Railway Crossing	...	...	2	...
do	Pullianthope Road	...	3	...	...
do	Stephenson Road...	...	...	1	...
do	do do (Cart Depot)	...	5	...	...
do	Perambore High Road	...	3	2	...
do	Madavaram Road	...	3	1	...
do	Cundahpillay Street	...	1	...	...
do	Perambore Barracks Road	...	2	...	...
do	Coonoor North Road	...	3	...	...
do	Chengul Choolay Road	...	2	...	...
do	Pervis Road	...	...	3	1
do	Kalithiappah Moodelly Street	...	...	2	...
do	Vichoor Moothoo Moodelly Street	...	...	1	...
do	Vijeeah Vignesparan Covil Street	...	1	3	...
do	Woothacatummen Covil Street	...	1	...	...
do	Choolay Venuthiher Venayger Covil Street	...	1	...	...
do	Choolay Barracks Road	...	2	...	...
do	Vijeeah Vignesparan Lane	...	1	...	...
do	Aurymootoo Maistry Street	...	2	...	...
do	Avady Senevassa Iyer Street	...	...	4	...
do	Alathoor Soobraminya Aucherry Street	...	1	...	...
do	Andipen Naiken Street	...	1	...	...
do	Suttana Naiken Street	...	3	...	...
do	Thotycalay Comarapah Moodelly Street	...	1	...	1
do	Choolay Bazar Road	...	1	...	...
Fifth	Jeremiah's Road	...	2	2	...
do	Avathanum Paupier Street	...	3	1	...
do	do do Lane	...	2	...	...
do	River side Road...	...	5	...	...
do	Longs Road	...	3	...	...
do	Scottsigreas Road	...	1	...	...
do	Whannell's Road...	...	1	1	...
do	Gungoo Reddy Road	...	2	1	...
do	Egmore High Road	...	4	1	...
do	Narrainathasary Street	...	1	...	...
do	Sammy Reddy Street	...	1	...	...
do	Halls Road	...	1	1	...
do	Latchmanen Marrainen Street	...	1	...	...
do	Poosalgungoo Reddy Street	...	2	...	...
do	Veerasawmy Pillay Street	...	2	...	...
do	Senevasa Pillay Street	...	1	...	...
do	Vengoo Pillay Street	...	1	...	...

ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Fifth	Iyasawmy Pillay Street	...	2	...	...
do	Police Commissioner's Office Road	...	...	...	...
do	Narraina Naiken Street	...	3	...	...
do	do do Lane	...	1	...	...
do	Vencatachella Aucherry Lane	...	1	...	...
do	Vencatachella Naiken Lane...	...	1	...	...
do	Conjevaram Puchiappa Moodelly Street.	...	2	...	...
do	Moonia Pillay Street	...	1	...	...
do	Nagamany Syrang Lane	...	2	...	...
do	Nagappa Moodelly Street	...	1	...	...
do	Sawmy Chetty Street	...	...	1	...
do	Comelishwaram Pettah River side Street...	...	1	...	...
do	do do Cocum Road...	...	4	...	...
do	Marshall's Road...	...	2	...	...
do	Thoolasingan Street	...	1	...	...
do	Shcallya Moodelly Street	...	1	1	...
do	Teroovengadam Naicken Street	...	1	...	...
do	Valantha Chetty Street	...	...	1	...
do	Casamajor Road	...	4	1	...
do	Pantheon Road	...	2	...	...
do	Montieth's Road...	...	3	1	...
do	Commander-in-Chief's Road...	...	6	...	...
do	do do Bridge	...	4	...	...
do	Binny's Road	...	3	1	...
do	Sydnam's Road	...	...	2	...
do	Yellaveram Veerasawmy Chetty Lane	...	1	...	...
do	Sutheevenayager Covil Street...	...	1	2	...
do	Kurpooram Moodelly Street...	...	...	3	...
do	Nuthur Sing Street	...	1	2	...
do	Lalla Coottay Street...	...	1	1	...
do	Ramiah Pillay Street	...	2	...	...
do	Comarapah Chetty Street	...	5	1	1
do	Vepary High Road...	...	1	...	...
do	Yagambaram Comaragocroo Street	...	1	...	...
do	Sawmy Moodelly Street	...	1	...	...
do	Mahabar Lane	...	1	...	...
do	Cattoor Sadiapen Street	...	2	...	...
do	Veerasawmy Pillay Street	...	1	1	...
do	Woothocatummen Street	...	1	1	...
do	Matucara Veerabuthern Street.	...	...	1	...
do	Teroovengadam Moodelly Street	...	...	1	...
do	Cuddapah Rungia Chetty Street	...	2	...	...
do	Naval Hospital Street	...	1	...	...
do	Stringers Street	...	...	2	...
do	Atkins Road	...	...	...	...
do	Rundal's Road	...	1	...	1
do	Arians Lane	...	1	...	...
do	Jugerdains Sally Road	...	1	...	1
do	General Collins Road	...	1	...	1
do	First Salay Street	...	...	...	...
do	Rottugeddengoo Theruvengadam Moodelly Street.	...	...	...	...
do	Cundapah Moodelly Street	...	...	1	...
do	Arnee Moothia Moodelly Street	...	3	1	...
do	Vythear Cundapilly Street	...	...	...	...
do	Bathala Poniammen Covil Road	...	...	...	...

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APPENDIX III.
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post	Wall Brackets	Wooden Lamp Post	Globes of Lamp Oil.
Fifth.	Andeappah Moodelly Lane	...	1	...	...
do	do do Street	...	...	1	...
do	Vanatheertha Moodelly Street	...	...	1	...
do	Moothialoo Chetty Street	...	...	1	...
do	Seeboorancee Moodelly Lane	...	1	...	...
do	Soondrapillay Street	...	1	2	...
do	Gangatharasparan Covil Road	...	1	1	...
do	Lawder's Gate Road	...	...	...	...
do	Poonamallee Road & Flowers Road	...	2	3	2
do	Gundappah Gramney Street	...	1	...	...
do	Thandavai Ancherry Street	...	1	...	...
do	Solayammur Street	...	1	...	...
do	Chellappa Gramney Lane	...	1	...	...
do	Gundappah Moodelly High Road	...	2	1	...
do	Persuvaukum High Road	...	8	2	...
do	Poniappah Moodelly Street	...	1	...	...
do	Moorgappah Moodelly Street	...	1	...	...
do	Presannah Venoyager Road	...	1	...	...
do	Moonthal Road	...	...	1	...
do	Kurriyappa Moodelly Street	...	1	2	...
do	Vadamullay Maistry Street	...	1	...	...
do	Vencatasam Puthen Street	...	3	...	...
do	Vakilaven Street	...	1	1	2
do	Perambore Barracks Road	...	4	1	...
do	Ritharden High Road	...	1	...	...
do	Rottler's Road	...	1	...	...
do	Andrews Road	...	1	...	...
do	Vepery Church Road	...	1	1	...
Sixth.	Kilpaak Garden Street	...	2	...	...
do	Balfour's Road	...	1	...	...
do	Harris Road	...	2	...	...
do	Orme's Road	...	2	...	...
do	Barnaby's Road	...	2	...	...
do	Poonamallee Road	...	4	1	...
do	College Bridge	...	6	...	...
do	College do. Slope	...	2	...	...
do	College Road	...	8	...	...
do	Grames Road	...	8	...	...
do	Nungumbakum High Road	...	8	...	...
do	Neer Vocraswiny Iyer Street	...	1	...	...
do	Nungumbakum Village Road	...	1	...	...
do	Haddows Road	...	3	...	...
do	Kistnamamacherry Street at Nungumbakum	...	1	...	...
do	Munro's Bridge	...	6	...	...
do	Mc Nichol's Road	...	1	...	...
do	Bimby's Road	...	1	...	...
Seventh.	Mount Esplanade Road	...	18*	...	...
do	St. Mary's Bridge	...	4	...	...
do	Body Guard Road	...	2	...	...
do	Government Bridge	...	22	...	...
do	Napier Park Roads	...	1†	...	...
do	Mo... house upto Thousand lights	...	59	2	2
do	Cl... House Road Gate	...	2	...	...
do	General Neill's Statue	...	4	...	...

* 2 Posts with double Lanterns.
† Ornamental with 6 Lanterns.

APPENDIX III
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post	Wall Brackets	Wooden Lamp Post	Globes of Lamp Oil.
Seventh	Napier Park Roads	13*	...	...	...
do	Do do River side Road	1	...	...	...
do	Law's Bridge	8	...	...	...
do	Anderson Bridge	...	...	...	12
do	Harris' Bridge	2	...	...	...
do	Do do Road	8	...	...	...
do	Vencatasen Gramney Street	1	...	...	...
do	Chindatrapettah Barracks Street	1	...	...	...
do	Sawmy Naicken Street	4	...	1	...
do	Iyah Moodelly Street	1	1	...	...
do	Culavah Chetty Street	1	...	3	...
do	Olagaia Maistry Street	1	1	...	...
do	Chindatrapettah Mava Vythee (Road)	1	...	2	...
do	Arnachellum Naicken Street	3	2	...	...
do	Sawmy Pandaram Street	1	1	1	...
do	Nyneapen Naicken Street	...	1	...	...
do	Gooroovapa Chetty Street	1	...	...	...
do	Rajagopaul Naicken Street	1	...	...	...
do	Kistapah Chetty Street	1	...	1	...
do	Chindatrapettah River side	1	...	...	...
do	Do Agraharam Street	1	1	...	...
do	Blacker's Road	3	...	...	...
do	Wallace Road	1	...	...	...
do	Ritchie Street	1	...	...	...
do	Mugamahomed Hoossain Street	1	...	...	...
do	Pooliam Parcherry Street	10	2	...	...
do	Wallaja Road	9	...	...	...
do	South Beach Road	2	...	...	...
do	Chepauk Roads	2	...	...	...
do	Pycroft's Gate	2	...	...	...
do	South Beach Road, 1st Bridge	2	...	...	...
do	Pycroft's Road	11	1	...	...
do	Vencatarunga Pillay Street	2	2	...	...
do	Kyarar Street	1	...	...	...
do	Unnamunthagaroyen Covil Street	1	...	...	...
do	Parthasarathy Covil Tank	3	...	...	...
do	Thaveydy Street	1	...	...	...
do	Jeparadoss Lallah Street	...	1	...	...
do	Nullathumby Moodelly Street	...	1	...	...
do	Notiapengole Street	1	1	1	...
do	Sydiagopacherry Street	1	1	...	...
do	Tholsingapermanil Street	1	...	...	...
do	Payalwar Covil Street	1	2	...	...
do	Thondavaraya Moodelly Street	1	...	...	...
do	Chenglevaraya Moodelly Street	2	...	...	...
do	Olagaia Chetty Street	...	1	...	...
do	Soondravayager Covil Street	...	1	...	...
do	Chingapermal Lane	6	3	...	...
do	Triplacane High Road	...	1	...	...
do	Majapersing Bahadoor Saib Pettah	5	...	1	...
do	Veraragava Moodelly Street	1	...	...	...
do	Iyahpillay Street	2	...	...	...
do	Syed Ogee Street	...	1	...	...
do	Office Vencatachella Moodelly Street	2	...	...	...
do	Small Mosque Street	...	...	...	...

* 3 Posts with double Lanterns.

APPENDIX III

ENGINEERING AND SANITARY.

STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Seventh	Kistapah Maistry Street	1	...	...	...
do	Triplicane Evening Bazar	2	...	...	...
do	Arunachellum Ancherry	1	...	...	...
do	Chepauk Road	2	...	...	...
do	Soorapah Moodelly Street	2	...	...	...
do	Davaraya Moodelly Street	1	...	...	...
do	General Sawmy Naiken Street	1	1	...	...
do	Thotharappa Moodelly Street	...	2	...	...
do	Oilmonger Street	...	1	...	...
do	Barber's Street	1	...	...	...
do	Cannapurothar Street	...	1	...	...
do	Tipookhan Street	...	2	...	...
do	Chuckerdeen Bahadoorkhan Street	...	1	...	...
do	Moronoguly Saib Street	...	1	...	...
do	Howlay Saib Street	...	1	...	...
do	Moorthoshan Saib Street	1	...	...	...
do	Nullathumby Chetty Street	...	2	...	...
do	Royapettah High Road	2	1	...	...
do	Woods' Road	4	2	...	...
do	General Patter's Road	3	...	...	...
do	Permanul Moodelly Street	1	...	...	...
do	Thylary Street	1	...	...	...
do	Veeraperma Moodelly Street	...	1	...	...
do	Namasavaya Moodelly Street	...	2	...	...
do	Paroja Saib Street	...	1	...	...
do	Dasaymootoo Parcherry	1	...	...	...
do	Vencatachellum Moodelly Street	3	...	...	...
do	Culber Saib Street	...	1	...	...
do	Jaumb Bazar Street	...	1	1	...
do	Hoossain Mooluk Street	1	1	...	...
do	Bangaroo Naiken Street	1	1	...	...
do	Pulliar Covil Street	1	...	1	...
do	Packer Saib Street	1	1	...	...
do	Kurumber Lane	...	...	1	...
do	Thirsempeppah Coopoomoothoo Street	...	...	1	...
do	Chinatomby Moodelly Street	1	1	...	...
do	Iyer Saib Street	2	...	...	...
do	Nagapa Iyer Street	...	1	...	...
do	Tirnosampettay Tank	...	1	...	...
do	Parayamundavum Street	...	1	...	...
do	Band Beach Cupids Row	13*	...	...	...
do	South Beach Marine Villa	2†	...	...	...
Eighth	Arunachalapillay Street	...	1	...	...
do	Moothoo Moodelly Street	...	2	...	...
do	Royapettah Ummen Covil Street	1	...	...	...
do	Ummiappa Moodelly Street	...	3	...	...
do	Patter's Road	5	...	...	...
do	Ice House Road	6	...	1	...
do	Cebanda Saib Street	...	2	...	...
do	Vathiar Chiniapillay Street	...	1	...	...
do	Mustra Bagum Ohawada Street	...	1	...	...
do	do do Saib Street	...	1	...	...
do	Bagum Saiba Street	...	1	...	...
do	Meer Saib Pettah Slaughter House Lane	...	1	...	...
do	Moubray's Road	1	...	...	...

* Ornamental 5 with 4 Lanterns and 8 with 3 Lanterns to each.
† Do with 5 Lanterns to each.

APPENDIX III

ENGINEERING AND SANITARY.

STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
Eighth	Brodie's Road	1	...	...	...
do	Vencatachellum Moodelly Street	2	1	...	...
do	Barber's Bridge...	2	...	...	...
do	do do Road	3	1	1	...
do	Cundapah Moodelly Street	1	...	...	...
do	Ersapah Gramney Street	...	1	...	...
do	Vencatrungampillay Street	2	...	...	...
do	South Beach Road	2	...	...	...
do	do do 2nd Bridge	2	...	...	...
do	do do 3rd do	2	...	...	...
do	Karneeswarer Covil Road	...	1	1	...
do	do do Street	1	...	...	...
do	Presanavenoyager Covil Road	1	3	...	...
do	Saint Thomé Bazar Road	1	...	...	...
do	Veroopache Iswaram Covil Street	2	...	...	...
do	Valoyisparam Covil Street	...	1	...	...
do	Saint Thomé Bazar Lane	...	2	...	...
do	Mathavaperomaul Covil Street	...	1	...	...
do	Chellavenoyager Covil Street	...	1	...	...
do	Mathavapermal Covil Lane	...	1	...	...
do	Nattoovierchy Moodelly Street	...	2	...	...
do	Natcheappah Chetty Street	...	2	...	...
do	Vudago Aydear Street	1	3	...	...
do	Paroopooranavenoyager Covil Street	...	3	2	...
do	Catcherry Road...	2	...	1	...
do	Luz Church Road	...	2	...	...
do	Thausampet Latrine	2	1	...	...
do	Vurachitheyvanayagar Covil Street	...	2	...	...
do	Moothia Moodelly Street	...	1	...	...
do	Parthasarady Pettah	...	...	...	...
do	Thousand Light to (Cenotaph)	10	...	...	...
do	Saint George's Cathedral Road	5	...	...	...
do	Edward Elliot's Road	2	...	...	...
do	Moubray's Road	6	...	...	...
do	Ganapathy Moothoo Moodelly Street	1	...	...	...
do	Royapettah Bazar Road	3	2	...	...
do	Nallanak Moodelly Street	...	4	...	...
do	Cassim Saib Street	...	1	...	...
do	Ramalingum Street	...	1	...	...
do	Aundy Street	5	2	2	...
do	Royapettah High Road	...	...	1	...
do	Luz Cossapet Road	1	...	...	...
do	Maury Chetty Street	...	1	...	...
do	Sydsapah Moodelliar's Lane	...	1	...	...
do	Robinsonpettah Lane	...	1	...	...
do	Naraina Chetty Lane	...	...	...	8
do	Elphinstone Bridge	...	1	...	...
do	do do Road	3	1	1	...
do	Broadie's Road...	4	4	1	...
do	Saint Thomé High Road	4	...	...	...
do	do do College Road Small Bridge	1	1	...	...
do	Sullivan's Road...	...	...	1	...
do	Moothoo Gramney Street	1	...	...	...
do	Domingo Coopum Gramney Street	1	...	...	...
do	Thandavaroyen Gramney Street	...	...	...	...

APPENDIX III
ENGINEERING AND SANITARY.
STATEMENT VII—LIGHTS.

Municipal Division.	Names of Streets.	Cast Iron Lamp Post.	Wall Brackets.	Wooden Lamp Post.	Globes of Lamp Oil.
High	Arolapa Nauken Street	1	1	...	...
do	Vasapunnoday Street	...	...	1	...
do	Mauda Covil Street	...	3	...	...
do	Aberam Moodelly Street	...	1	...	...
do	Poodootharooroo	...	1	...	...
do	Thachearunachellum Moodelly Street	...	1	...	...
do	Salay Street	...	1	...	...
do	Shaikol Moolk Dalerjung Bahadeer Street	...	1	...	...
do	Cabalispam Covil East Madaveethee Street	...	1	...	...
do	do do North	...	...	1	...
do	do do South	3	...	...	...
do	do do West	1	...	1	...
do	Seliapen Moodelly Street	...	1	...	...
do	Oilmonger's Street	1	1	...	...
do	Casaveperoomal Covil East Madaveethee...	...	2	...	...
do	Chitracolum Round Tank at Mylapore	...	...	4	...
do	Andar Nyncappah Naik Street...	...	1	...	...

APPENDIX IV.

PARKS AND AVENUES.

No. 1.—PEOPLE'S PARK.

Owing to the great want of rain, the Park has presented during the year a dry and parched appearance. It was not possible, on account of the drought to effect any improvement as regards planting with the exception of a few ornamental beds which have been laid out round the Band Stand.

The income derived by the sale of grass amounts to only Rs. 614-6-1, as the dry weather prevailing throughout the year checked its growth altogether.

Of the 11 tanks in the Park, 9 became perfectly dry in the course of the year. Advantage was taken of the opportunity thus afforded to employ famine relief coolies for the purpose of deepening these tanks, and 6 of them had been deepened and cleaned out before the end of the official year; the work of the other two was also in progress but was not completed.

The following buildings were repaired and painted during the year. The farm-house situated on the north of the Park and the Serjeant's quarters near the West Gate were repaired; also the large circular cage for pigeons, situated on the North-East of the Band Stand, was painted and repaired.

ZOOLOGICAL COLLECTION.—The receipts under this head during the year have fallen off to a great extent. This resulted from the privilege conceded to the public of being permitted on two days in the week to visit the animals free of all charge. As a natural consequence the largest number of visitors came to the Park on both these free days.

The average attendance per day on free days was, 1,020.

Do. do. on other days 96.

At the beginning of the official year, one of the Cheetahs got out of its cage by removing one of the iron bars from the roof, and climbed up a tree close to the zinc enclosure; it was shot by Serjeant Slater of the Madras Police, who was rewarded with Rs. 100 by the Commissioners.

The following additions were made to the Zoological collections during the year:—

2 Tiger cubs	presented by the Commissioner of the Nilgherries.
2 Bears	do. Dr. J. Shortt.
2 Wolves	do. do.
1 Malayan Bear	do. Colonel Magrath.
1 Saras Crane	do. Hon'ble J. G. Coleman.
1 Antelope	do. Rev. Dr. Strachan.
2 Spotted Deer	do. Hon'ble J. G. Coleman, J. Storrs, Esq.
1 Rangoon do.	purchased.

- 2 Young Samburs presented by Colonel Cloete.
 1 Pacific Gull purchased.
 4 Brown headed Gulls do.
 4 Rose Hill Parakeets do.
 4 Little Lorikeets do.
 4 Green Parakeets do.
 2 Cheetah Cubs, born 13th October 1876.

SWIMMING BATH.—The income derived from this source during the year was very small, as, owing to the low level of the water at the Red Hills lake, it was not possible to fill the bath frequently, and ultimately it had to be closed on the 28th January 1877 for the remaining portion of the official year.

THE BAND STAND.—From the 1st April 1876 to the close of that year, Band played at the Band Stand on 3 days in the week, viz., 10th Regiment N. 1. on Wednesdays, 37th Grenadiers on Fridays and Volunteer Band on Saturdays.

During the month of April the Band of Her Majesty's 67th Regiment stationed in Fort Saint George played at the Park on Saturdays in the place of the Volunteer Band, which was prevented playing in public, owing to a reduction in its strength; and from May the Volunteer Band resumed its playing as usual; but since the departure from Madras of the 27th Grenadiers N. I., the Band of which Regiment played on Friday, there has been music only twice a week at the Park, viz., on Wednesdays and Saturdays. Five Police Constables have always been in attendance on Band evenings to preserve order amongst the visitors' carriages, on Saturday evenings the assistance of a European Police Serjeant was allowed in addition to the 5 Constables, as the unusually large number of visitors that attend the Park on Saturdays required an increased Police staff to preserve order and regularity.

C. JAMES HAY ELLIS,
Superintendent People's Park.

Statement of Receipts and Disbursements on account of the Payee's Park for 1876-77.

Receipts.	Amount.			Disbursements.	Amount.		
	Rs.	A.	P.		Rs.	A.	P.
Proceeds of sale of hay and grass	...	614	6	1	...	4,774	13
Tiger Collections	...	983	2	0	...	74	0
Swimming Bath	...	113	7	9	...	114	0
Miscellaneous	...	256	2	7	...	614	15
	...	1,877	8	5	...	3,889	6
Met from the Municipal Fund...	...	9,222	12	10	...	184	7
							8

C. JAMES HAY ELLIS,
Superintendent People's Park.

APPENDIX IV.

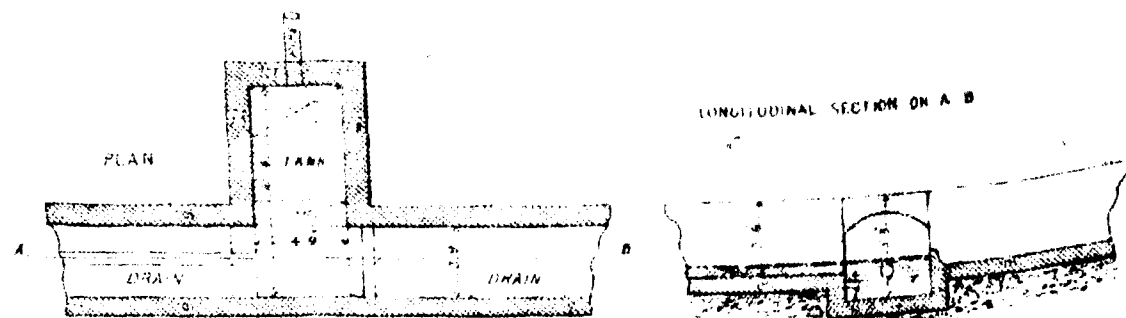
PARKS AND AVENUES, NO. 2.—NAPIER PARK.

The season during the year under review has been an abnormally dry one, and yet nearly the whole of this Park has throughout even such a season always borne a green and pleasing appearance attributable to two causes, viz. —to a portion of it being irrigated by Red Hills water from a stand pipe at the foot of Government Bridge so long as water was available without pumping at the Red Hills being resorted to, and to another portion being irrigated from a well situated at the South-east end of the Park and back of Bughall's Stables.

During the year, the two Islands in the Park were cleared of overgrown vegetation. Flower and grass beds were laid out as well as walks, and the general appearance of these Islands very much improved.

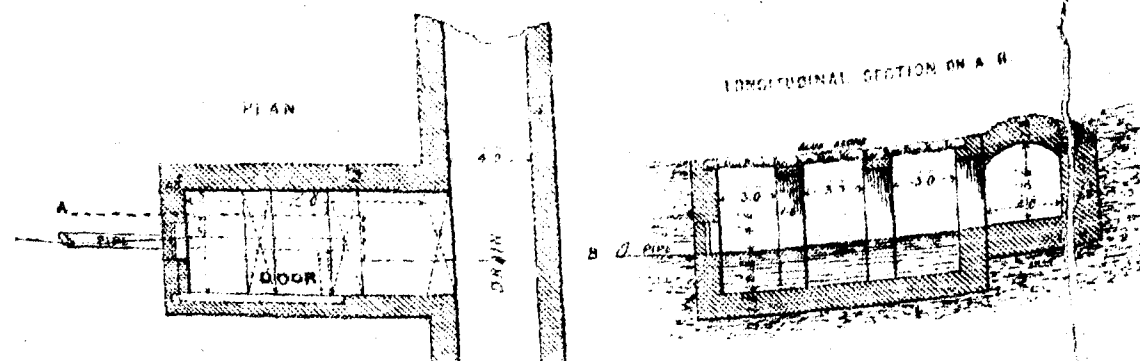
The income from the sale of grass during the year was Rupees 1,182-1-4.

On Government Order, dated 3rd August 1876, No. 1,992, the District Engineer, Madras Presidency, constructed two settling tanks, one across the Chintadrepettah main drain and the other across the Triplicane main drain. These tanks which are nothing more than ordinary silt traps are of the following dimensions. The one in Chintadrepettah is 10 feet, 8 in. long by 4 feet, 9 in. broad and 1 foot, 9 in. deep into which the solid matter from the drains settles and the liquid allowed to flow on into the river. This arrangement does not in any way defecate the sewage, before it reaches the river, nor is the quality of the sewage in any way improved. The following is a sketch of the settling tanks as it is called:—



It was to intercept this sewage flowing into the Cooum that the arrangements hereinafter mentioned were made, but had to be abandoned for reasons given.

The settling tank in the Triplicane main sewer was commenced after the Municipality had commenced their work for intercepting the sewage; so arrangements were made to have this tank or rather silt trap at the junction of the pipe with the drain as will be seen by the sketch given below which shows the size of the tank or trap and other arrangements:—



In September 1876 the main drain from Triplicane was intercepted by a dam and the sewage diverted into the large well in Napier Park by means of stone-ware pipes at a cost of Rs. 325-9-6. The sewage here is diluted with water and lifted by means of two picottahs, and a large portion of the Park is daily irrigated from this well which has occasioned no nuisance whatever to the neighbourhood. By this means, since 29th September 1876, the whole of the sewage that came down the Triplicane main drain was being disposed of, and which, were it allowed to go into the river, would have, during the abnormally dry season, added very much to the impurity of the Cooum. A large portion of the Park has benefitted by the above arrangement, and an income derived by the Municipality as is shown by the statement. The portion of this Park irrigated by the diluted sewage has frequently been visited by the Sanitary Commissioner and other Medical men, and there does not appear to be any instance of a complaint being made of its being a nuisance. Cheered with the success attended by the interception of the Triplicane main sewer and its results, an attempt was made in the latter end of January 1877 to intercept the Chintadrepettah main drain in the same manner as the Triplicane drain. A well with double picottahs was constructed, pipes laid, and all arrangements got ready for working, when the inhabitants of Chintadrepettah represented to the Government that the arrangements made for the interception and disposal of the sewage would prove a great nuisance, and prejudicial to health; whereupon orders were issued to stop all proceedings. The spring water only from this well has been utilized for watering a portion of the grass in the Park, cost of this work Rs. 454-14-0.

The following statement shows the receipts and expenditure during the year, by which it will be seen that it has yielded a clear profit of Rs. 398-5-5.

Statement showing the Receipts and Disbursements during the year 1876-77.

Receipts.	Amount.			Disbursements.	Amount.		
	Rs.	A.	P.		Rs.	A.	P.
Proceeds of sale of hay and grass	1,614	14	4	To Establishment	476	14	1
				Cutting and Weeding	299	8	0
				Quit-rent (this includes a Bill of last year of Rs. 200)	400	0	0
				Expense incurred in catching cattle and conveying them to the pound	6	0	0
				Sundries	34	2	10
				Total Expenditure	1,216	8	11
				Balance in favour of the Park	398	5	5
Total Rupees	1,614	14	4	Total Rupees	1,614	14	4

W. STEPHENSON,

Assistant Engineer.

APPENDIX.—IV.
PARKS AND AVENUES, No. 3.—AVENUES.

The following statement shows the number, locality, and description of young trees planted in previous years and which having been watered and protected throughout the year remained in good condition at its close.

Name of Road.	Number of Trees.	Description.
In front of the General Hospital ...	9	Narrow leaf banian.
Mount Road Island ...	181	Broad leaf banian.
Do from Government Bridge to Neil's Statue ...	8	Peepul.
Do do do ...	12	Neem.
Do from Neil's Statue to Toll Gate ...	367	Broad leaf banian.
Do do do ...	37	Peepul.
Cathedral Road ...	111	Narrow leaf banian.
Edward Elliot's Road ...	175	Broad leaf banian.
Pycroft's Road ...	57	Broad leaf banian.
Pantheon Road ...	170	Peepul.
Marshall's Road ...	11	Neem.
Monteith's Road ...	67	Peepul.
Harris' Road ...	157	Peepul.
Coom River Road ...	18	Neem.
Commander-in-Chief's Road ...	1	Neem.
Anderson's Road ...	40	Peepul.
College Road ...	33	Tamarind.
Grouns' Road ...	128	Narrow leaf banian.
Spur Tank Road ...	200	Peepul.
Scotch Kirk Road ...	12	Peepul.
General Pater's Road ...	23	Acacia.
Near the Fountain at the junction of Harris' Road and Pantheon Road ...	3	Broad leaf banian.
Do do do ...	4	Narrow leaf banian.
Do do do ...	5	Peepul.
Binny's Road ...	3	Neem.
Komaldeewaripettah round the latrine ...	17	Acacia.
Mount Road Entrance to Napier Park ...	9	Neem.
In front of Jemadar's Tannah, Chintadri-pettah ...	11	Peepul.
Do do do ...	1	Acacia.
Total number of trees ...	1,919	

Besides the above, which is the number of young trees remaining at the end of the year, 310 trees died on the roads above mentioned; and 95 trees on the Light House Esplanade Road were abandoned as it was found that their growth was checked by the prevalence of the sea breeze.

APPENDIX.—IV.

PARKS AND AVENUES, No. 3.—AVENUES.

The following statement shows the progress made in planting with the locality, number and description of trees planted.

Month.	Locality.	Number of Trees.	Description.
May	Napier Park ...	48	Neem.
"	Do ...	67	Peepul.
"	Do ...	4	Acacia.
"	Esplanade Roads ...	28	Broad leaf banian.
"	General Market ...	4	Neem.
June	Esplanade Roads ...	188	Broad leaf banian.
July	Do ...	140	Broad leaf banian.
August	Marshall's Road ...	2	Neem.
"	Female Asylum Road ...	11	Baniam.
"	Coom River Road ...	17	Neem.
September	Esplanade Roads ...	97	Broad leaf banian.
"	Napier Park ...	8	Peepul.
October	Esplanade Roads ...	142	Broad leaf banian.
"	De Mellow's Road Burial Ground ...	62	Broad leaf banian.
November	Coom River Road ...	32	Neem.
"	Pycroft's Road ...	16	Neem.
December	Harris' Road ...	12	Peepul.
	Total number of trees...	878	

The total number of young trees under care at the end of the year including those planted during the year was 2,797. The esplanade roads with the exception of those bordering on the beach have all been planted, and it is hoped that in a few years the trees will afford a grateful relief from the heat and glare which at present are so much felt on the esplanades during the hot months.

1,177 Tree-fences of bamboo thorns have been put up during the year.

The expenses incurred were as follows:—	Rs.	A.	P.
Superintendent's Salary ...	600	0	0
Watching Peons and Coolies ...	2,248	5	1
New Carts ...	603	8	9
Repairing Carts ...	142	8	9
Fencing Materials ...	344	11	0
Sundries ...	655	14	2

Total Rupees...4,594 15 9

The Budget allotment was Rupees 4,000 and the charges are therefore Rupees 594 15-9 in excess, from this must be deducted the cost of 6 new water carts supplied to the Famine Relief Camp at Monegar Choultry, the cost of which Rupees 330 has been recovered subsequent to the close of the year. The sundries include the cost of eleven dip-wells which it was found necessary to construct near the pipes on certain roads, as there was not sufficient pressure of water to fill the carts by means of the hose in the ordinary way. Had it not been for this unforeseen expenditure the small excess noticeable would have been avoided.

L. R. BURROWS,
Acting President.

APPENDIX V.—(A.)

REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS ON ELEMENTARY EDUCATION.

No. 246.

MADRAS, 29th May 1877.

FROM

P. VEJIARUNGA MUDALIYAR,

Deputy Inspector of Schools, Madras.

TO

GEORGE DUNCAN, Esq.,

Acting Inspector of Schools, Presidency Division.

SIR,

I have the honor to submit my report upon the schools connected with the Municipality of Madras for the official year 1876-77.

2. **Inspecting Schoolmasters.**—The number of Inspecting Schoolmasters under me remained the same at the end of the year as at the beginning. All the endeavours of the Inspector and of myself to induce the Municipal Commissioners of Madras to increase it proved fruitless. There were only three such officers for such an important Town as Madras. I give below their names and salaries and the ranges or circles assigned to them:—

NAME.	Examination passed.	Salary including batta of Rupees 10.	RANGES.
M. Jaffer Hussain Sahib	Matriculation.	80 0 0	The whole of the Municipality.
P. Parthasaradi Aiyangar	Old 7th Grade.	45 0 0	1st, 2nd & 3rd Municipal Divisions.
A. V. Parasuramiah	Matriculation.	45 0 0	4th, 5th, 6th, 7th & 8th do.

These officers have had charge of the ranges entered against their names ever since their appointment to their present posts. In my report for the year 1875-76, I wrote as follows:—"I intended to have recommended a re-distribution of the ranges of the Inspecting Schoolmasters in the Municipality; but the sudden indisposition of one of them prevented me from doing so. I shall make the necessary recommendation at an early date." I am sorry that the same cause should have prevented me, during the year under report, from making the promised recommendation. The indisposition alluded to was that of Parthasaradi Aiyangar. This Inspecting Schoolmaster became all on a sudden mentally deranged in the month of January 1876 and was absent on sick leave during the succeeding two months. He had a relapse in the beginning of August and was obliged to absent himself from his duties for three months more. When he returned to duty in November last, it was thought that he was completely cured, and that he would perform his duties to the satisfaction of his superiors. But unfortunately the Inspector and myself were

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REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS
ON ELEMENTARY EDUCATION.

disappointed in our expectations; and Parthasaradi Aiyangar had pretty frequent attacks of the same mental disease during the year, though for short periods only on each occasion. The manner in which he performed his duties was found to be unsatisfactory; and at the close of the year when he had one of these attacks, the Inspector recommended to the President of the Municipal Commission that he should be made to retire from active service. M. A. Janakiramiah has been appointed to succeed Parthasaradi Aiyangar, and he has, since the close of the official year, assumed charge of Parthasaradi Aiyangar's duties. I intend to recommend that Parasuramiah should have charge of the 1st, 2nd, 3rd and 4th Municipal Divisions, and that Janakiramiah should be entrusted with the charge of the remaining or the 5th, 6th, 7th and 8th Divisions.

3. Government having in the previous year undertaken the payment, from Provincial Funds, of all grants on account of Female Education in the Presidency, the Madras Municipality had charge, during the year under report, of Lower Class Schools for Boys only; and all expenditure on account of education was confined to payment of grants on account of boys whether they were in purely Boys' schools or in mixed ones, and to charges connected with the supervision of these schools. Unlike the several Local Fund Boards and Municipalities in the Mofussil, the Madras Municipality had no schools of its own; it also absolutely refused to pay any salary grant whatever. Consequently all Lower Class Schools for boys in the town were worked exclusively on the "Payment of Results" system. The year under report began with 284 schools under the Municipality, giving instruction to 10,197 boys; and it closed with 274 schools and 10,030 boys; showing a decrease during the year of 10 schools and 167 boys. This decrease in the number both of schools and of pupils is much to be regretted. It occurred principally in the range of the Inspecting Schoolmaster A. V. Parasuramiah. The annexed table shows the distribution of these schools among the different agencies at work at the beginning and end of the year:—

Agencies.	Number of Schools on the		Increase or decrease during the year.
	1st April 1876.	31st March 1877.	
Mission Agencies ...	34	34	"
M. Jaffer Hussain Sahib.	57	58	+ 1
P. Parthasaradi Aiyangar	107	111	+ 4
A. V. Parasuramiah ...	86	71	- 15
Total...	284	274	- 10

Under Mission Agencies the number remained the same at the end of the year as at the beginning; under Jaffer Hussain Sahib and Parthasaradi Aiyangar, the numbers increased by 1 and 4 respectively; while under Parasuramiah, the number de-

REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS
ON ELEMENTARY EDUCATION.

creased by no less than 15. The last named Inspecting Schoolmaster attributes the decrease of schools under him to *famine*. Some schools were closed because the pupils were not able to pay the teachers, and the teachers were not able in consequence to support themselves. No less than 27 teachers closed their schools during the last quarter of the official year. I may mention that Parasuramiah's Returns for the first three quarters of the year showed improvement equally with those of the other Inspecting Schoolmasters; and on the 31st December, the last day of the third quarter, there was an increase of 37 schools over the number on the 1st April preceding or the beginning of the year. Parasuramiah's range borders upon the Chingleput District and not a few of the inhabitants are agriculturists. Making due allowance for all these circumstances, I do not think that Parasuramiah is altogether free from blame.

4. Of the 274 schools under inspection on the 31st March last:—

4 were English,
130 Anglo-Vernacular,
140 Vernacular;

that is to say, in 4 schools English only was taught; in 130, English and one or more Vernacular languages were taught; and in the remaining 140 schools, one or more Vernacular languages only were taught. Arranging them differently, that is, according to the number of languages taught, we had,

92 schools in which one language only was taught;
107 schools in which two languages were taught;
72 schools in which three languages were taught;
2 schools in which four languages were taught;
1 school in which no less than five languages were taught.

5. When arranged according to the different languages taught, we had the following results:—

In 4 schools English only was taught;
„ 40 schools Tamil only was taught;
„ 37 schools Telugu only was taught;
„ 11 schools Hindustani only was taught;
„ 50 schools English and Tamil were taught;
„ 23 schools English and Telugu were taught;
„ 6 schools Tamil and Telugu were taught;
„ 28 schools Hindustani and Persian were taught;
„ 55 schools English, Tamil and Telugu were taught;
„ 1 school English, Tamil and Hindustani were taught;
„ 2 schools English, Hindustani and Persian were taught;
„ 14 schools Hindustani, Persian and Arabic were taught;
„ 1 school English, Tamil, Hindustani and Arabic were taught;
„ 1 school English, Hindustani, Persian and Arabic were taught;
„ 1 school English, Tamil, Hindustani, Persian and Arabic were taught.

APPENDIX V.—(A.)
REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS
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6. 187 of these schools were for boys and the remaining 87 were mixed ones, that is, for boys and girls taught together. Of the boys' schools, 17 were under Mission Agencies and 170 were started by the teachers themselves for their own benefit. Similarly, among the mixed schools, 17 were mission and 70 non-mission. It may be mentioned that many of the *Mixed* schools change into boys' schools and boys' schools into mixed ones through mere accidents; and consequently, a school sometimes changes from the one into the other more than once during the course of a single year. On this account, some schools which were mixed when they were examined for grants, became purely boys' schools at the end of the year; while others which were examined as boys' schools had to be transferred to the list of mixed ones. In many cases the distinction was almost nominal; in 11 of these mixed schools there was but one girl; in 10 of them only 2; in 6, only 3; and in 6 more, only 4 in each. In 59 or more than three-fourths of them, the number of girls in each at the end of the year was less than 10.

7. Of the 10,030 pupils under inspection on the 31st March last, 7,129 belonged to boys' schools and the remaining 2,901 to mixed ones. These figures give an average attendance of 38 boys in Institutions for boys only, of 33 in these for boys and girls, and of 37 in all. The largest number in any boys' school was 288 and the smallest 7; and the largest number of boys in any mixed school was 60 and the smallest 11.

8. Classifying the boys according to the different nationalities to which they belonged, there were,

6,936 Hindus,
1,760 Mahomedans,
720 Pariahs,
404 Native Christians,
197 East Indians,
13 Europeans.

9. Taking the different languages taught, it was found that

4,895 boys learnt Tamil,
3,990 boys learnt English,
3,435 boys learnt Telugu,
1,612 boys learnt Hindustani,
397 boys learnt Persian,
149 boys learnt Arabic.

It must be mentioned that generally the same boys learnt more than one language and had therefore been counted in each of the languages learnt.

10. It was ascertained that of the 10,030 boys, 455 received their substantive instruction through the English language and 9,575 through the Vernaculars.

11. Of the 274 schools under inspection on the last day of the official year, 191 giving instruction to 8,126 boys, were aided and the remaining 83 schools with 1,904

REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS
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boys were unaided. Besides the 193 schools aided during the year, 21 more were examined for grants, but were either closed before the end of the year or were struck off the list for fraud practised by the teachers. The number of schools which were actually aided during the year including those that were closed was 206. One of these schools having been ranked in the middle class received its grant from Government; 205 schools were therefore aided during the year by the Municipality with an aggregate grant of Rupees 12,077-12-10. This gives an average grant of Rupees 58-14-8 for each school. The largest grant paid to any school was Rupees 232-8-0 and the smallest Rupees 4. Adding to this sum the amount spent on the salaries, &c. of the three Inspecting Schoolmasters, the total sum expended by the Municipality on lower class Education in the year 1876-77, amounted to Rupees 14,168-8-7. It may be mentioned, however, that the Municipality refused to pay all grants on account of the 4th standard when schools presenting boys for that standard did not fulfil the conditions laid down for middle class schools and were therefore ranked in the lower class. The sum thus disallowed amounted to Rupees 406.

12. Among the Lower Class Schools examined, 7 presented boys for all the four standards under the Results Grant Rules, 124 for three, 66 for two, and 15 for one or the lowest standard only. The total number of boys presented for examination was 4,510; of these 62 appeared for the 4th standard, 903 for the 3rd, 1,664 for the 2nd, and 1,881 for the 1st or lowest.

13. During the year under report, four cases of fraud were detected. One Gulam Khador, a Mahomedan teacher at Triplicane, presented a few of the Madrissa boys as his own under different names from those by which they were known in that school. This teacher has been declared disqualified for any future grant. Another teacher M. Padmanaba Naidu presented some girls from the Free Church Mission Balica Patasala and has been similarly declared disqualified for all future grants. A. Arumuga Mudali and C. Bungaru Naidu, the managers and teachers of another Results School presented for examination some new boys who could not be examined for want of the necessary attendance, with the names of other boys who actually left their school. The Municipal President attempted to prosecute these two teachers. They evaded the summons of the Magistrate, and when warrants were issued for their arrest, they disappeared altogether. They are still at large and the warrants for their apprehension are in the hands of the Police. The fourth case is that of one Ramasawmy Naidu who attempted to cheat the Municipality in the same way as Arumuga Mudali and Bungaru Naidu. This teacher died immediately after the fraud committed by him was discovered. In a town like Madras where there are nearly 600 Lower Class or Pial Schools, it is very difficult to discover frauds like those committed by the abovementioned teachers; and it is a great pity that when they are discovered, the culprits could not be criminally punished. As however, steps have been taken to make known among all the other teachers, the few cases discovered, they cannot fail to have the desired effect upon the generality of them.

14. The annexed table shows what progress the system of improving Indigen-

APPENDIX V.—(B.)

7

STATEMENT OF EDUCATIONAL GRANTS PAID TO THE SCHOOLS AIDED BY THE MUNICIPALITY DURING THE YEAR 1876-77.

APPENDIX V.—(A.)

REPORT OF THE DEPUTY INSPECTOR OF SCHOOLS
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our schools has made in the several Divisions of the Municipality and what still remains to be done:—

Municipal Division.	Population.	Number of schools.			Percentage of schools.	
		According to the Census of 1871.	Taken under inspection.	Remaining to be taken under inspection.	Taken under inspection.	Remaining to be taken under inspection.
I	65,547	71	24	50	32	68
II	75,326	139	72	67	52	48
III	50,957	83	40	43	48	52
IV	9,791	13	4	9	31	69
V	65,491	78	41	37	53	47
VI	19,390	20	7	13	35	65
VII	69,568	88	60	23	63	32
VIII	41,482	56	26	30	46	54
Total...	397,552	551	274	277	50	50

15. Year after year I reiterate, without any effect, the necessity for the appointment of additional Inspecting Schoolmasters for the town of Madras, and the Municipality takes no steps to supply the want. Unless two more Inspecting Schoolmasters are employed, no further progress can be made in improving the Indigenous Prial Schools. The Mahomedan Inspecting Schoolmaster has brought under inspection 60 Hindustani schools; these are almost all in the town, and he has enough of work with them. The other two Inspecting Schoolmasters have between them 138 schools under inspection and more than what they can inspect and keep under efficient supervision. There are still more than 250 schools to be brought under inspection. There is an impression among the majority of the Municipal Commissioners that education is not a legitimate charge upon the Corporation; and it is my decided opinion that Elementary Education in the town of Madras is not likely to make much progress as long as it is in charge of the Municipality.

I have the honor to be,

Sir,

Your most obedient servant,
P. VEJIARUNGA MUDALIYAR,
Deputy Inspector of Schools, Madras.

DEPUTY INSPECTOR'S OFFICE,
MADRAS, 29th May 1877.

School.	Locality.	No. of Pupils examined.	Amount paid.		
For 1875-76.			Rs.	A.	P.
Adicasava Pillay's M.	... Triplicane	10	10	12	10
S. P. G. Mission	... Saint Thomé	18	23	0	0
Do.	... Sullivan's Garden	21	14	0	0
For 1876-77.			Rs.	A.	P.
Abdul Gaffar Sahib's	... Parish Venkatachellier's Street	22	36	0	0
Abdul Kader Sahib's	... Adam's Street	27	118	0	0
Adinarayana Iyah's V.	... Linga Chetty Street	35	65	8	0
Adisesiah's M.	... Seven Wells Street	20	72	8	0
Ananda Vaththiar's	... Tiroovatteeswarenpett	14	35	0	0
Andrew's A.	... New Town	53	125	0	0
Annamalay Mudaly's M.	... Mylapore	16	39	8	0
Appiah's R.	... Varada Moothiappen Street	10	22	8	0
Arimoothoo Naicker's P.	... Goorooappa Chetty Street	22	65	0	0
Aroomooga Mudaly's V.	... Iyah Mudaly's Street	14	34	8	0
Aroomooga Pillay's P.	... Otthavaday Street	15	32	8	0
Aroonachella Pillay's P.	... Choolay	4	4	0	0
Aroonachelliah's M.	... Thumboo Chetty's Street	16	86	0	0
Balajee Row's T.	... Washermenpett	32	140	8	0
Balasoondra Mudaly's C.	... Sengalaneer Pilliar Covil Street	13	14	0	0
Balasoondra Mudaly's M.	... Meer Sahibpettah	13	47	0	0
Basaviah's A.	... Peroomaul Mudaly's Street	14	28	8	0
Bashiakarlah's C.	... Veerappan's Street	14	35	8	0
Casavaleo Naidoo's D.	... Chintadripett	95	232	8	0
Chinniah Mudaly's A.	... Parsewalkam	8	23	0	0
Chokalinga Chetty's R.	... Ponnappa Chetty Street	33	61	0	0
Church Mission Society's	... Black Town	12	17	0	0
Do.	... Cassemode	16	22	8	0
Do.	... Chetpett	20	38	8	0
Do.	... Chintadripett	25	83	8	0
Do.	Do. Bazaar	33	73	8	0
Do.	... Egmore	19	43	0	0
Do.	... John Pereira's	14	43	0	0
Do.	... Kalimancherry	20	34	8	0
Do.	... Kalmandabam	10	18	8	0
Do.	... Keilpauk	28	99	8	0
Do.	... Kondetope	11	34	8	0
Do.	... Meenatchiammenpett	7	17	8	0
Do.	... Nullamparchetty	11	23	0	0
Do.	... Poodoopett	36	49	0	0
Do.	... Royapett	24	70	0	0
Do.	... Royapuram	35	93	0	0
Do.	... Seven Wells Street	29	69	0	0
Do.	... Taylor's Road	20	70	0	0
Do.	... Teynampett	4	10	0	0
Do.	... Thousand Lights	25	48	8	0
Carried over...		938	2,328	12	10

APPENDIX V.—(B.)

STATEMENT OF EDUCATIONAL GRANTS PAID TO THE SCHOOLS AIDED BY THE
MUNICIPALITY DURING THE YEAR 1876-77.—(Continued.)

School.	Locality.	No. of Pupils examined.	Amount paid.		
			RS.	A.	P.
	Brought forward...	938	2,328	12	10
Church Mission Society's	... Tinnevely Settlement	26	100	8	0
Church of Scotland Mission Branch	... Washermenpett	35	80	8	0
Comaragooroo Iyer's T.	... Pursewalkam	18	53	8	0
Coopiah's	... Mylapore	29	72	0	0
Cundasawmy Vaththiar's P.	... Do.	23	64	0	0
Darmalinga Chetty's P.	... Triplicane	23	61	8	0
Deivanayaga Mudaly's S.	... Pursewalkam	14	43	0	0
Egmore Anglo-Vernacular	... Egmore	20	59	0	0
Egmore Primary	... Do.	15	77	0	0
Emanuel Church	... Black Town	16	50	0	0
Emperumanar Iyah's P.	... Minjur Appavoo Mudaly's Street	9	16	0	0
Emperumanar Iyah's T.	... Kristnappa Naidoo's Agraram	13	19	0	0
Ethirajaloo Naidoo's D.	... Perianet	28	98	0	0
Free Church Mission Poor Boys'	... Portugese Church Street	24	93	0	0
Ganapathy Naicker's, S. R.	... Sunjeevaroyenpett	17	38	8	0
Goolam Ghonse Sahib's	... Triplicane	19	63	8	0
Goolam Jelany Khan Sahib's	... Do.	20	71	0	0
Govindoo Naidoo's M.	... Peddoo Naick's Street	36	109	0	0
Gungadra Mudaly's or N. Pathmanaba Sastry	... Nungambaukam	38	64	0	0
Hafiz Abdul Rahim Sahib's	... Poodoopaukam	17	73	8	0
Hanuman Singh's	... Pursewalkam	21	32	8	0
Hindu Association	... Govindappa Naick's Street	47	175	8	0
Hindu National	... Varada Moothyappen's Street	16	73	8	0
Hindu Union	... Davaraya Mudaly's Street	53	236	0	0
Jeeriah's K.	... Native Regiment Vepery	26	79	8	0
Jeeriah's R.	... Mullah Street	24	55	0	0
Jegganada Pillay's T.	... Pursewalkam	23	67	8	0
Juvenile Anglo-Vernacular	... Mint Street	42	210	8	0
Kakala Charin's P. S.	... Govindappa Naick's Street	9	23	0	0
Kanthiah's P.	... Nattoo Pilliar Covil Street	19	55	8	0
Kasava Mudaly's C.	... Tiroovallteeswarenpett	23	53	0	0
Kauder Hoossain Sahib's	... Perambore	21	42	8	0
Kauder Sheriff Sahib's	... Washermenpett	11	35	0	0
Kesaviah's U.	... Do.	18	43	0	0
Komarasawmy Mudaly's M. C.	... Mullah Street	35	88	0	0
Komarasawmy Pillay's N.	... Mint Street	18	44	8	0
Kristnaramanjiah's K.	... Reddy Raman Street	8	30	0	0
Kristnasawmy Iyer's G.	... Komaleeswarenpett	33	74	8	0
Kristnasawmy Iyer's P. C.	... Pursewalkam	18	65	8	0
Kristniah's	... Triplicane	53	141	8	0
Kristniah's C.	... Royapuram	18	27	0	0
Kristniah's P.	... Govindappa Naick's Street	18	55	0	0
Kutbudeen Sahib's	... Triplicane	23	75	8	0
Lutchmana Mudaly's P.	... Jegganada Mudaly's Street	15	23	8	0
Madras Anglo-Vernacular	... Mint Street	33	109	0	0
Madras Native Seminary	... Govindappa Naick's Street	37	101	8	0
Madras Youth's Training	... Nynceappen Street	42	101	0	0
Mahomed Abdul Ally Sahib's	... Triplicane	21	68	0	0
	Carried over...	2,101	5,824	12	10

APPENDIX V.—(B.)

STATEMENT OF EDUCATIONAL GRANTS PAID TO THE SCHOOLS AIDED BY THE
MUNICIPALITY DURING THE YEAR 1876-77.—(Continued.)

School.	Locality.	No. of Pupils examined.	Amount paid.		
			Rs.	A.	P.
	Brought forward ...	2,101	5,824	12	10
Mahomed Ally Sahib's	... Triplicane	21	80	0	0
Mahomed Azeezudeen Sahib's	... Vathoo Marakoyar Street	49	137	8	0
Mahomed Hamed Sahib Talib's	... Triplicane	37	163	8	0
Mahomed Hamedodeen Sahib's	... Unkappa Naick's Street	31	92	8	0
Mahomed Omer Sahib's	... Poodoopankam	20	106	0	0
Manavaliah's N.	... Govindappa Naick's Street...	39	108	0	0
Manicka Mudaly's P.	... Venoyaga Muistry's Street	24	43	8	0
Manicka Mudaly's V.	... Acharappen's Lane	20	53	0	0
Masillamony Mudaly's T.	... Court Ranganada Mudaly's Street	13	26	0	0
Masillamony Mudaly's V.	... Linga Chetty's Street	9	22	8	0
Moonisawmy Naidoo's S.	... Veerasawmy Pillay's Street...	10	15	8	0
Moonisawmy Pillay's P.	... Vycunta Vaththiar's Street	10	18	0	0
Moonisawmy Pillay's S.	... Thiroopally Street	50	133	8	0
Moonisawmy Thaver's	... Budriah's Street	10	25	8	0
Mooreogasa Mudaly's A.	... Nungambaukam	17	41	0	0
Mooreogasa Naicker's C.	... Chintadripett	26	73	8	0
Moothosawmy Mudaly's P.	... Royapett	15	38	0	0
Moothosawmy Mudaly's P. and A. Seshachellier's	... G. Aroonachella Mudaly's Street	18	37	0	0
Nadamony Iyah's S.	... Straton Moothiah Mudaly's Street	24	87	8	0
Nammalwariah's N.	... Washermenpett	25	97	0	0
Namperumaniyah's T.	... Acharappen Street	39	162	8	0
Narasiah's T.	... Seven Wells Street	16	48	8	0
Narasasingapuram Mahomedan's	... Waller's Road	34	122	0	0
Narasasingapuram Poor	... Narasingapuram	22	57	0	0
Narayanasawmy Mudaly's P.	... Mint Street	12	28	8	0
Narayanasawmy Naidoo's B.	... Acharapen Street	11	20	8	0
New Town Poor Boys'	... New Town	19	55	8	0
Oomapatthy Mudaly's M.	... Chintadripett	20	34	0	0
Parthasarathy Naidoo's T.	... Kappal Pole Chetty's Street.	11	29	0	0
Parthasarathy Pillay's M.	... Washermenpett	15	32	0	0
Perumaul Rajoo's K.	... Periana Mudaly's Street	37	37	0	0
Ponnoosawmy Mudaly's T.	... Manangappen Street	29	51	0	0
Ragava Pillay's P.	... Thumboo Chetty's Street	30	48	0	0
Ragaviah's B.	... Malaperumal's Street	19	62	8	0
Ragaviah's K.	... Coral Merchants' Street	20	21	8	0
Ragaviah's R.	... Budriah's Street	17	47	0	0
Ragaviah's T.	... Gollapauliam	13	31	8	0
Ragaviah's T.	... Thyappa Mudaly's Street	13	19	8	0
Ramalinga Chetty's M.	... Mylapore	16	37	0	0
Ramalinga Mudaly's M.	... Choolay	14	32	8	0
Ramanja Charry's T.	... Mylapore	18	63	8	0
Ramanjiah's P. T.	... Kambam Ramasawmy's Street	22	62	8	0
Ramanjiah's T.	... Narayana Mudaly's Street...	17	44	0	0
Ramasawmy Chetty's Ch.	... Varada Moothyappen Street.	15	16	0	0
Ramasawmy Naidoo's T.	... Triplicane	91	303	0	0
Ramiyah's B.	... Varada Moothyappen Street.	9	22	0	0
	Carried over...	3,148	8,711	12	10

APPENDIX V.—(B.)

STATEMENT OF EDUCATIONAL GRANTS PAID TO THE SCHOOLS AIDED BY THE MUNICIPALITY DURING THE YEAR 1876-77.—(CONTINUED.)

School.	Locality.	No. of Pupils examined.	Amount paid.		
			Rs.	A.	P.
	Brought forward...	3,148	8,711	12	10
Ramiah's C.	... Mylapore	16	47	8	0
Rangiah's C.	... Coral Merchants' Street	37	108	0	0
Rangiah's C.	... Goorovappan Street	12	20	8	0
Rangiah's K.	... Choolay	11	17	8	0
Rangiah's S.	... Kappal Pole Chetty's Street	15	35	0	0
Sabapathy's T.	... Perambore	17	66	0	0
Sabapathy Mudaly's A.	... Pursewalkam	10	24	8	0
Sabapathy Sastry's B. S.	... Linga Chetty's Street	7	21	0	0
Saint Antony's	... Poodoopett	30	80	8	0
Saint John's	... Pantheon Road, Egmore	21	45	8	0
Saint Matthias's	... New Town	24	72	8	0
Saadava Pillay's A.	... Seven Wells Street	16	33	0	0
Saravana Vutthiar's P.	... Moothialpettah	40	88	0	0
Seetharamiah's K.	... Budriah's Garden Street	21	37	8	0
Seetharamiah's N.	... Theagaraya Mudaly's Street	16	14	8	0
Seetharamiah's P.	... Choolay	7	13	0	0
Sen Tamil	... Ramakristnan's Street	15	43	0	0
Seshachelliah's A.	... Mint Street	10	17	8	0
Seshiah's P.	... Yakambarceswarer Agrarum	20	52	8	0
Shaik Hoosain Sahib's	... Choolay	41	122	0	0
Shaik Imam Sahib's	... Washermenpett	8	31	8	0
Shunmooga Mudaly's K.	... Coral Merchants' Street	20	52	0	0
Somascondra Mudaly's P.	... Perambore	15	21	8	0
Soobiah's P.	... Acharappan Street	10	10	0	0
Soobiah's T.	... Annah Pillay Street	13	29	0	0
Soobramiah's C.	... Veerappen Street	10	20	8	0
Soobramiah's V.	... Cassi Chetty's Street	11	50	0	0
Soobroya Mudaly's C.	... Kanakalapettah	27	38	8	0
Soondra Pillay's U.	... Sunjeevaroyenpett	12	17	8	0
Soorianaravaniak's S.	... Govindadappa Naick's Street	19	67	0	0
S. P. G. Mission	... Nungumbaukum	27	71	0	0
Do.	... Saint Thomé	15	42	8	0
Do.	... Sullivan's Garden	29	62	8	0
Streeviva Iyengar's M.	... Mint Street	14	33	8	0
Streeviva Row's T.	... Chepauk	17	48	0	0
Streeviva Sastrulu's Ch.	... Washermenpett	20	54	0	0
Sultan Moideen Sahib's	... Coolycarar's Street	11	24	8	0
Syed Bathroodeen Sahib's	... Mylapore	13	33	0	0
Syed Mahomed Sahib's	... Triplicane	39	146	8	0
Syed Shabudeen Sahib's	... Do.	10	58	8	0
Syed Tipka Sahib's	... Do.	16	55	8	0
Teagaroya Mudaly's K.	... Washermenpett	23	67	0	0
Teyperumaniah's A.	... Pedari Covil Street	17	55	0	0
Teyperumaniah's B.	... Washermenpett	12	22	8	0
Thanappa Mudaly's C.	... Royapett	18	46	0	0
Theroovengadathaniah's A.	... Davaroya Mudaly's Street	23	63	8	0
Theroovengadathaniah's A. M.	... Samoothra Mudaly's Street	8	8	8	0
Theroovengadathaniah's R.	... China Bazaar Street	18	55	8	0
Theroovengadiah's P.	... Eroongoontramp	19	74	8	0
Thiagiah's M.	... Linga Chetty Street	11	21	0	0
	Carried over...	4,033	11,049	12	10

APPENDIX V.—(B.)

STATEMENT OF EDUCATIONAL GRANTS PAID TO THE SCHOOLS AIDED BY THE MUNICIPALITY DURING THE YEAR 1876-77.—(CONTINUED.)

School.	Locality.	No. of Pupils examined.	Amount paid.		
			Rs.	A.	P.
	Brought forward...	4,033	11,049	12	10
Tholasinga Mudaly's P.	... Poodoopaukam	8	23	8	0
Tiroonarayaniak's A.	... Ramasawmy's Street	5	16	8	0
Training Anglo-Vernacular	... Goorovappan Street	23	103	8	0
Triplicane Primary	... Veerangaya Mudaly's Street	35	317	0	0
Vadivaloo Mudaly's M.	... Mylapore	34	69	8	0
Valoo Mudaly's C.	... Pedari Covil Street	21	74	8	0
Varada Charry's T.	... Andiappa Naick's Street	15	40	0	0
Vasoodava Pillay's P.	... Poodoopett	13	44	8	0
Veerasawmy Chetty's M.	... Sembada Pilliar Covil Street	7	8	8	0
Venkata Charry's P.	... Washermenpett	9	18	0	0
Venkata Charry's V.	... Perumal Covil Thotam Street	15	33	8	0
Venkatanarasiah's I.	... Iyah Mudaly's Street	14	15	0	0
Venkatasawmy Naickor's C. G.	... Komaleeswarenpett	14	35	0	0
Venkatasawmy Naideo's P.	... Washermenpett	14	38	8	0
Venkatasoobiah's K.	... Andiappa Naick's Street	39	63	0	0
Venkiah's P.	... Triplicane	19	54	8	0
Vepory Mission	... Vepory	62	77	0	0
	Total...	4,437	12,977	12	10

TABLE I.—BIRDS.

[illegible]

TABLE II.—BIRTHS.

[illegible]

Return showing the average of Births in Madras for 8 previous years ending 1875-76 as contrasted with the Births of the year 1890-91.

APPENDIX.—VI.
VITAL STATISTICS.

TABLE XI. DEATHS.

Return shewing the average deaths in Madras for 15 previous years ending 1875-76 as contrasted with the Mortality of the year 1876-77.

Year.	Deaths from Special Diseases.							Deaths from other Diseases.	Grand Total.	Order of Sanitary.
	Small Pox.	Measles.	Fever.	Dysentery.	Diarrhoea.	Cholera.	Total.			
1861-62	996	27	2132	1307	1048	3751	9310	5162	14473	12
1862-63	522	19	2213	1230	1065	3768	8847	5755	14602	13
1863-64	187	8	2264	1252	865	754	5270	5930	11200	2
1864-65	71	5	1916	1025	923	472	4412	5166	9878	1
1865-66	66	1	2287	1224	1083	1018	5679	5903	11582	5
1866-67	173	6	2412	1465	957	3263	8276	6360	14636	14
1867-68	897	87	2289	1241	790	25	5323	6349	11672	6
1868-69	443	38	2184	904	687	2	4268	7258	11526	3
1869-70	24	4	2147	924	716	639	4444	7083	11527	4
1870-71	77	48	2370	922	706	844	4967	7355	12322	7
1871-72	313	68	2379	964	1051	454	5243	7926	13215	8
1872-73	821	20	2894	885	1114	1	5774	8631	14405	9
1873-74	1148	4	2672	1117	1049	5	5995	8912	14907	15
1874-75	504	11	2601	1131	1042	...	5289	9119	14408	10
1875-76	199	2	2418	1137	847	1450	6053	8302	14415	11
Total...	6471	387	35192	16728	13983	16436	89197	105571	194768	...
Average...	431.4	25.8	2346.1	1115.2	932.2	1095.7	5946.4	7038.1	12984.5	...
1876-77	3156	57	2987	2334	2178	1915	15727	9273	25000	16
Increase	2724.6	31.2	640.9	1218.8	1245.8	3919.3	9780.6	2234.9	12015.5	...
Decrease	...	...	...	...	...	...	...	...	...	...

APPENDIX.—VI.
VITAL STATISTICS.

TABLE XII.—DEATHS.

Return shewing the deaths from special and other diseases among Europeans for the year 1876-77, arranged according to months.

Population.			3,613.														Total of Males and Females.				
Months.			Cause of death.																		
			Small Pox.		Measles.		Fever.		Dysentery.		Diarrhoea.		Cholera.		Injuries.			Other diseases.		Total.	
			M	F	M	F	M	F	M	F	M	F	M	F	M	F		M	F	M	F
April	1876	...					1		1	3	2	3	1			4	1	10	6	16	
May	"	...			1					1		1				7	2	9	3	12	
June	"	...			1		1	1				2	1	2		3	1	9	3	12	
July	"	...						1		1						5	2	7	2	9	
August	"	...												1		7		8		8	
September	...	...						1			1					3	1	4	2	6	
October	"	...					1				2					3	1	6	1	7	
November	"	...						1	2				1			2	1	5	2	7	
December	"	...								1						4	3	4	4	8	
January	1877	...					1		1			5	2	1		5		13	2	15	
February	"	...		1	1						1	4	3			8	4	13	9	22	
March	"	...		1	1		2	1		1			1	1		1	3	5	7	12	
Total...			2	2	1	3	3	3	7	2	7	4	7	8		52	19	93	41	134	
Total of Males and Females...			4	4	6	9	11	25	4							71		134			
Ratio per 1,000 of Population...			1.1	1.1	1.6	2.4	3.0	6.9	1.1							19.6		37.0			

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APPENDIX.—VI.
VITAL STATISTICS.

TABLE XIII.—DEATHS.

Return showing the deaths from special and other diseases among East Indians for the year 1876-77, arranged according to months.

Population.					12,013														Total of Males and Females.			
Months.					Cause of Death.																	
					Small Pox.	Measles.	Fever.	Dysentery.	Diarrhoea.	Cholera.	Injury.	Other Diseases.		Total.								
												M	F	M	F							
April	1876	...	...	...	1	2	1				7	2	9	4	13							
May	"	...	...	...	1	2	1	2	2	1	9	9	14	13	27							
June	"	...	...	...		3	4	2	1	3	3	2	11	11	20	27	47					
July	"	...	...	...		1	1	1	1	1	13	4	18	6	24							
August	"	...	...	...		3	1		3	1	2	3	1	12	12	24	17	38				
September	"	...	...	...		2	2	3	2	3	1	1		7	3	12	11	23				
October	"	...	...	...			2	1	1	2	1		1	11	10	15	14	29				
November	"	...	...	...			3	2	3	2		6	6	11	10			21				
December	"	...	...	...	2				3	1	3	3		9	7	13	16	29				
January	1877	...	...	...	1	4		1		4	2	10	13	1	7	15	33	34	67			
February	"	...	...	...	5	3		3	2	1	2	1	3	14	20	1	13	14	34	44	82	
March	"	...	...	...	9	16	3	1	5	6	2	4	5	6	7	13	1	10	4	42	52	94
Total...					1520	4	1232	21	916	2223	1264	6	113	97	246	213	494					
Total of Males and Females...					41	5	44	25	45	116	6	212	494	...								
Ratio per 1,000 of Population...					3.3	0.4	3.6	2.0	3.7	9.6	0.1	17.6	41.1	...								

APPENDIX.—VI.

VITAL STATISTICS.

TABLE XIV.—DEATHS.

Return showing the deaths from special and other diseases among Native Christians for the year 1876-77, arranged according to months.

Population.				21,111.														Total of Males and Females.					
Months.				Cause of Death.																			
				Small Pox.	Measles.		Fever.		Dysentery.		Diarrhoea.		Cholera.		Injury.		Other Diseases.			Total.			
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F						
April	1876	...	...	...	...	1	...	1	3	1	2	4	2	3	5	5	...	1	14	14	26	30	56
May	"	...	...	...	...	1	2	1	1	13	11	2	5	1	3	1	1	...	18	15	37	38	75
June	"	...	...	...	...	2	...	...	6	1	2	1	2	4	5	1	...	20	23	32	40	72	
July	"	...	...	...	...	...	...	2	4	4	4	1	1	5	4	...	...	11	20	23	33	56	
August	"	...	...	...	...	...	...	6	4	2	5	1	4	5	2	...	...	21	12	35	27	62	
September	"	...	...	...	...	...	...	4	11	5	3	4	2	2	3	1	...	12	26	28	45	73	
October	"	...	...	...	...	1	...	...	6	4	5	1	1	2	...	1	...	19	21	32	29	61	
November	"	...	...	...	...	...	...	3	4	2	1	...	5	1	1	...	...	8	19	14	30	44	
December	"	...	...	...	...	...	...	7	3	2	2	3	5	10	5	1	...	9	21	32	36	68	
January	1877	...	...	...	...	2	2	...	7	8	7	4	7	5	21	28	...	13	14	57	61	118	
February	"	...	...	...	...	18	17	...	6	13	3	11	2	3	27	32	...	21	16	77	92	169	
March	"	...	...	...	...	28	23	...	1	9	15	6	10	4	6	5	9	...	20	25	72	89	161
Total				...	50	47	1	3	71	84	41	52	27	41	36	96	8	1	186	226	465	550	1,015
Total of Males and Females				...	97	4	155	93	68	182	4	412	1,015	...									
Ratio per 1,000 of Population				...	4.5	0.1	7.2	4.3	3.1	8.4	0.1	19.2	47.3	...									

APPENDIX.—VI.
VITAL STATISTICS.

TABLE XV.—DEATHS.

TABLE XV.--DEATHS.
Return showing the deaths from special and other diseases among Hindoos for the year 1876-77
arranged according to months.

Population.		30,521																				Total of Males and Females.	
		Cause of Death.																					
		Small Pox.		Measles.		Fever.		Dysentery.		Diarrhoea.		Cholera.		Injury.		Other Diseases.		Total.					
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.				
April	1876	14	17	1	3	85	61	21	49	12	23	30	51	11	6	24	235	431	431	862			
May	"	12	13			60	72	43	31	22	24	72	61	11	3	2	21	320	359	679			
June	"	17	19			63	82	44	34	23	24	67	76	7	7	220	244	513	499	1013			
July	"	18	12			56	61	34	66	27	25	113	83	5	5	253	261	509	569	1079			
August	"	21	13			63	65	46	47	36	37	162	107	5	4	263	277	536	533	1069			
September	"	14	18			87	101	33	59	25	25	54	25	8	6	246	251	410	436	846			
October	"	8	19			76	107	40	36	22	26	11	15	9	4	279	312	415	519	934			
November	"	4	6			93	96	42	31	23	24	42	43	12	1	291	291	512	455	967			
December	"	36	35			112	120	69	63	154	122	232	191	17	10	312	366	566	833	1400			
January	1877	50	92			136	124	123	108	190	154	634	559	33	13	313	343	1350	1384	2734			
February	"	389	393	7	4	170	158	227	210	268	171	412	369	57	40	336	336	1865	1671	3536			
March	"	778	787	16	10	219	248	271	237	237	152	230	250	29	26	366	412	2206	2172	4378			
Total...		1834	1423	24	17	1226	1277	996	974	1056	804	2059	1846	204	130	3513	3493	10442	9854	20396			
Total of Males and Females		2807	41			2503	1970			1860		3855		334		6996		20396		...			
Ratio per 1,000 of Population		9.0	0.1			8.0	6.3			6.0		12.5		1.0		22.6		65.9		...			

APPENDIX.—VI.
VITAL STATISTICS.

TABLE XVI.—DEATHS.

Return shewing the Deaths from Special and ether Diseases among Mahomedans for the year 1876-77, arranged according to months.

Population.		50,964																		Total of Males and Females.
Months.	Cause of death.																			
	Small Pox.		Measles.		Fevers.		Dysentery.		Diarrhoea.		Cholera.		Injury.		Other diseases.		Total.			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
April 1876 ...	6	2			7	4	5	5	1	3	5	11	2		36	63	62	88	150	
May „ ...	1	3			11	12	7	3	2	6	5	8			42	52	68	84	152	
June „ ...					6	6	6	5	4	3	7	6	2		27	53	52	73	125	
July „ ...	3	2			10	8	5	14	2	2	14	11	1		39	44	74	81	155	
August „ ...	1	2			4	5	5	7	4	8	10	14			50	69	74	105	179	
September „ ...	1	3			9	7	7	3	4	7	2	4	1		37	55	61	79	140	
October „ ...					10	15	7	4	4	3		3	1		40	51	62	76	138	
November „ ...					5	8	7	11	1	4	5	3			32	48	50	74	124	
December „ ...		2			8	9	7	7	9	9	14	12			50	50	88	89	177	
January 1877 ...	10	9			22	14	13	11	38	46	180	183			64	60	327	323	650	
February „ ...	29	38	1		27	23	22	20	7	14	114	154	2	1	68	72	270	322	592	
March „ ...	49	46		2	23	26	34	22	6	7	18	24	1	1	64	56	195	184	379	
Total ...	100	107	1	2	142	137	125	112	82	112	374	433	10	2	549	673	1383	1578	2961	
Total of Males and Females..	207		3		279		237		194		307		12		1,222		2,961		...	
Ratio per 1,000 of Population..	4.0		0.05		5.4		4.6		3.8		15.8		0.2		23.9		58.1		...	

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[illegible]

Months.		DIVISION	CLASS.												CAUSE OF DEATH.																															
			Europeans.				East Indians.				Native Christians.				Hindous.				Malamedans.				Small-pox.				Measles.				Fever.				Dysentery.				Diarrhea.				Cholera.			
			M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.												
April 1876.	1st Division	1	1	1	1	14	15	79	78	3	10	3	1	23	9	9	13	3	4	7	14	15	17	18	19	20	21	22	23	24	25	26	27	28	29	30										
	2nd do	6	1	2	8	1	1	42	41	5	18	2	2	12	7	3	5	3	3	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18										
	3rd do	1	2	3	4	1	1	12	11	9	1	1	1	1	12	7	3	3	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18											
	4th do	2	1	2	3	3	4	86	74	2	1	1	1	24	17	4	12	5	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16											
	5th do	...	...	...	...	1	1	1	1	3	79	58	25	38	7	6	1	13	6	4	6	2	4	4	6	2	4	4	6	2	4	4	6	2	4											
	6th do	...	...	...	...	1	1	1	1	3	79	58	25	38	7	6	1	13	6	4	6	2	4	4	6	2	4	4	6	2	4	4	6	2	4											
	7th do	...	...	...	...	1	1	1	1	3	79	58	25	38	7	6	1	13	6	4	6	2	4	4	6	2	4	4	6	2	4	4	6	2	4											
	May 1876.	1st Division	1	1	1	1	9	7	112	74	11	18	3	5	16	13	14	7	7	10	35	20	18	19	20	21	22	23	24	25	26	27	28	29	30											
2nd do		4	2	3	4	4	4	57	53	1	1	1	1	21	18	9	1	3	2	9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22											
3rd do		2	...	4	1	4	4	13	12	3	4	4	2	1	17	21	6	13	8	9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22											
4th do		3	...	4	6	5	10	91	99	6	4	4	2	1	17	21	6	13	8	9	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22											
5th do		...	...	...	...	3	5	12	12	...	...	...	...	3	9	4	1	4	2	3	6	8	9	10	11	12	13	14	15	16	17	18	19	20	21											
6th do		...	...	2	1	3	5	77	51	33	36	9	1	4	10	9	7	15	8	7	4	2	8	8	9	10	11	12	13	14	15	16	17	18	19											
7th do		...	...	...	...	1	8	5	68	62	38	9	1	4	10	9	7	15	8	7	4	2	8	8	9	10	11	12	13	14	15	16	17	18	19											
8th do		...	...	...	...	1	8	5	68	62	38	9	1	4	10	9	7	15	8	7	4	2	8	8	9	10	11	12	13	14	15	16	17	18	19											
June 1876.	1st Division	1	1	5	8	8	10	111	99	5	13	3	7	16	13	10	7	6	5	33	35	36	37	38																						

APPENDIX.—VI.
VITAL STATISTICS.

TABLE XXIX.—(Continued.)

Return shewing the Deaths from Special and other Diseases among all Classes for the year 1876-77, arranged according to Age and Division.

[illegible]

VITAL STATISTICS.

TABLE XXIX. DEATHS.—(Continued.)

*Return showing the Deaths from Special and other Diseases among all Classes,
for the year 1876-77, arranged according to Age and Division.*

Division.		CAUSE OF DEATH.														Total.	Total of Males and Females.
		Injuries.										All other Causes.		Total.			
		Suicide.		Wounds.		Accidents.		Snake bites.		Killed by Wild Animal.							
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
October 1876.	1st Division	1	1	...	...	1	...	...	1	...	...	...	51	63	107	121	228
	2nd do	...	...	...	...	3	...	...	...	...	...	...	50	63	113	96	209
	3rd do	...	...	...	...	...	...	...	...	...	...	...	39	43	82	69	151
	4th do	...	...	...	...	...	...	...	...	...	...	...	7	11	18	14	32
	5th do	...	...	...	...	3	...	...	...	...	...	...	71	91	162	145	307
	6th do	1	...	...	...	1	...	...	...	...	...	...	17	14	31	16	47
	7th do	...	1	...	...	1	...	1	...	...	...	...	66	62	128	167	295
	8th do	...	...	...	...	1	...	1	...	...	...	...	41	42	83	61	144
	Total.	2	2	...	...	9	1	...	1	...	...	...	352	392	744	689	1,433
November 1876.	1st Division	1	...	...	...	3	...	...	...	...	...	...	55	58	113	118	231
	2nd do	1	...	...	...	4	...	...	...	...	...	...	71	58	129	81	210
	3rd do	...	1	...	...	2	...	...	...	...	...	...	28	36	64	67	131
	4th do	...	...	...	...	...	...	...	...	...	...	...	11	8	19	16	35
	5th do	...	...	...	...	...	...	...	...	...	...	...	62	72	134	173	307
	6th do	...	...	...	...	...	...	...	...	...	...	...	15	16	31	18	49
	7th do	...	...	...	...	1	...	...	...	...	...	...	60	69	129	164	293
	8th do	...	...	...	...	...	...	...	...	...	...	...	37	40	77	82	159
	Total.	2	1	...	...	10	...	...	...	...	...	...	359	365	724	801	1,525
December 1876.	1st Division	...	1	...	...	7	2	...	...	...	...	...	79	84	163	181	344
	2nd do	...	...	...	...	...	1	...	...	...	...	...	78	92	170	128	298
	3rd do	...	...	...	...	...	...	...	...	...	...	...	46	49	95	101	196
	4th do	...	...	...	...	...	...	...	...	...	...	...	15	11	26	22	48
	5th do	...	1	...	...	1	2	...	...	...	...	...	52	68	120	171	291
	6th do	...	...	...	...	2	3	...	...	...	...	...	13	8	21	16	37
	7th do	...	...	...	...	...	...	...	...	...	...	...	84	82	166	183	349
	8th do	...	...	...	...	...	...	...	...	...	...	...	44	42	86	75	161
	Total.	1	2	...	...	17	8	...	...	...	...	...	414	437	851	978	1,829
January 1877.	1st Division	...	...	...	...	11	10	...	...	...	...	...	85	82	167	182	349
	2nd do	...	...	...	...	16	2	...	...	...	...	...	91	74	165	24	210
	3rd do	1	...	...	...	4	1	...	...	...	...	...	47	66	113	106	219
	4th do	...	...	...	...	...	...	...	...	...	...	...	7	6	13	23	36
	5th do	...	...	...	...	1	...	...	...	...	...	...	43	79	122	165	287
	6th do	...	...	...	...	...	...	...	...	...	...	...	7	11	18	24	42
	7th do	...	...	...	...	1	...	...	...	...	...	...	82	90	172	182	354
	8th do	...	...	...	...	1	...	...	...	...	...	...	54	43	97	156	253
	Total.	1	...	...	...	34	13	...	...	...	...	...	402	432	1,993	1,894	3,887
February 1877.	1st Division	...	...	...	...	11	7	...	...	...	...	...	76	82	158	160	318
	2nd do	1	...	...	...	46	23	...	...	...	...	...	129	52	181	282	461
	3rd do	...	...	...	...	...	4	...	...	...	...	...	59	58	117	260	377
	4th do	1	...	...	...	...	1	...	...	...	...	...	7	19	26	68	95
	5th do	2	...	...	...	2	...	...	...	...	...	...	59	68	127	245	372
	6th do	...	...	...	...	...	...	...	...	...	...	...	11	6	17	28	45
	7th do	...	...	...	...	...	...	...	...	...	...	...	53	30	83	371	454
	8th do	...	...	...	...	...	...	...	...	...	...	...	41	43	84	145	229
	Total.	4	...	...	...	66	41	...	...	...	...	...	416	441	2,263	2,136	4,400
March 1877.	1st Division	...	...	...	...	3	1	...	...	...	...	...	106	99	205	204	409
	2nd do	...	...	...	...	10	17	...	...	...	...	...	195	91	286	566	1,171
	3rd do	...	...	...	...	2	1	...	...	...	...	...	45	61	106	218	324
	4th do	...	...	...	...	5	1	...	...	...	...	...	10	7	17	39	56
	5th do	...	...	...	...	10	6	...	...	...	...	...	55	104	159	423	582
	6th do	...	...	...	...	...	...	...	...	...	...	...	4	6	10	23	33
	7th do	1	...	...	...	...	1	...	...	...	...	...	84	60	144	282	426
	8th do	...	...	...	...	...	...	...	...	...	...	...	52	47	99	145	244
	Total.	1	...	...	...	30	27	...	...	...	...	...	481	500	2,629	2,691	5,320
Grand Total.		19	19	...	...	206	118	...	2	2	...	...	4,415	4,498	12,629	12,377	25,006

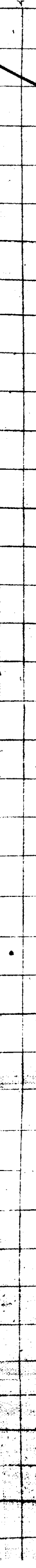
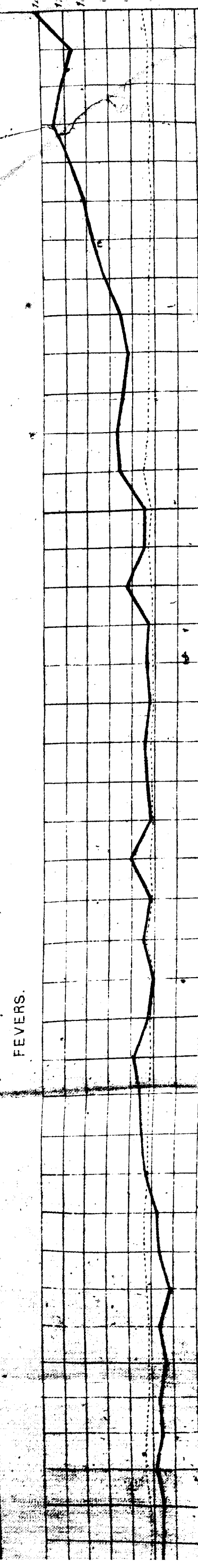
APPENDIX.—VI.
VITAL STATISTICS.

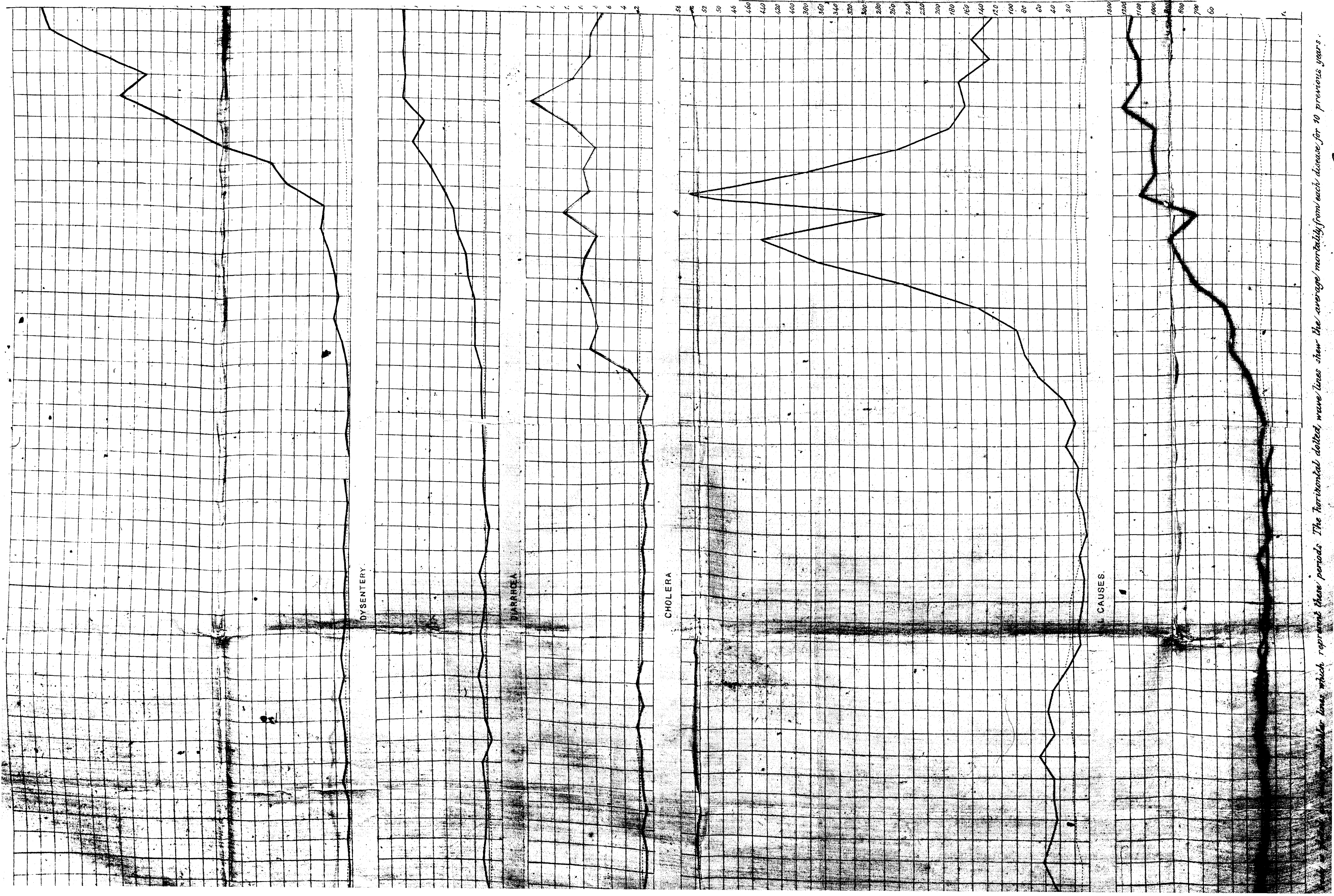
TABLE XXXI.—DEATHS.

Return shewing the average deaths in the town of Madras for 10 previous years arranged according to weeks.

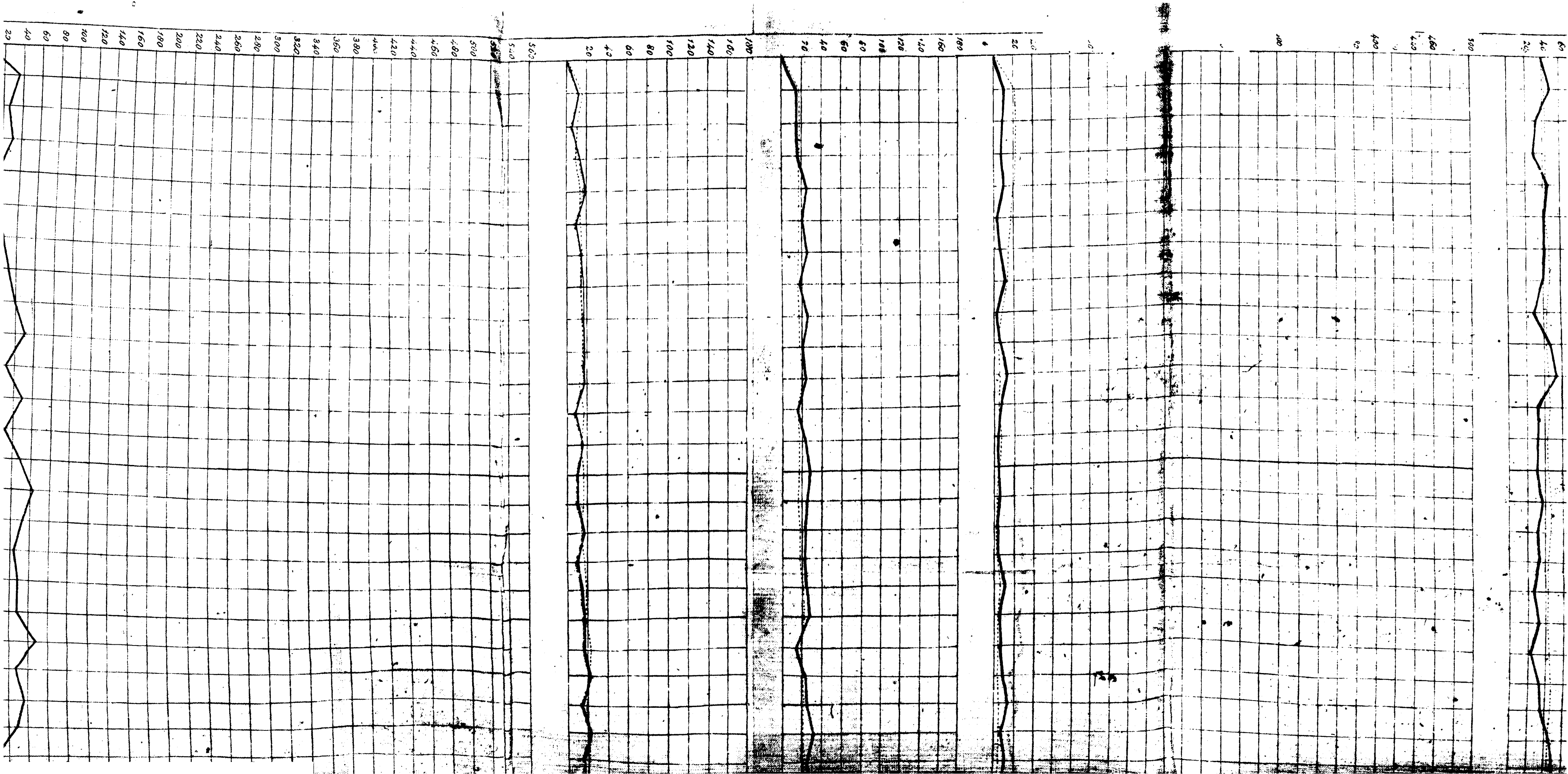
WEEKS	DEATHS FROM							Total.	Rate per 1000
	Small Pox.	Measles.	Fever.	Dysentery.	Diarrhoea.	Cholera.	Other diseases.		
1st to 7th April 1876	9.4	1.6	41.3	16.5	16.1	4.7	131.2	232.3	30.4
8th to 14th "	23.2	1.5	43.6	15.5	14.9	2.6	120.8	232.5	30.4
15th to 21st "	23.5	1.4	44.2	16.2	12.6	4.9	140.7	242.5	31.7
22nd to 28th "	20.6	1.5	45.7	16.3	15.6	2.7	145.0	246.8	32.2
29th to 5th May	17.3	0.5	43.6	17.9	15.4	3.9	141.0	239.3	31.3
6th to 12th "	15.7	1.2	47.1	16.8	15.2	7.3	144.0	245.2	32.0
13th to 19th "	11.1	1.3	47.9	11.6	15.6	9.6	143.1	251.2	32.8
20th to 26th "	9.9	0.3	45.0	16.7	16.9	7.4	139.3	236.7	30.9
27th to 3d June	9.6	0.4	46.8	15.7	17.1	9.5	147.8	249.8	32.6
4th to 10th "	8.9	0.5	40.2	21.3	14.0	15.5	132.8	260.2	34.0
11th to 17th "	7.3	0.6	48.2	16.6	17.3	20.0	142.1	252.1	32.9
18th to 24th "	8.1	0.6	42.7	17.7	18.0	14.5	141.6	241.5	31.5
25th to 31st "	7.4	0.2	44.3	18.8	16.9	9.7	137.4	244.7	32.0
1st to 7th July	6.8	0.4	48.7	16.3	17.9	9.9	138.9	238.8	31.2
8th to 14th "	4.1	0.3	47.2	18.6	15.5	18.9	147.0	251.9	32.9
15th to 21st "	5.2	0.3	45.7	18.4	17.5	19.5	150.8	248.1	33.7
22nd to 28th "	4.3	0.2	43.5	20.8	19.6	22.7	151.3	266.5	35.6
29th to 5th Aug.	6.9	0.3	42.6	20.2	17.1	21.6	147.5	254.9	33.3
6th to 12th "	5.9	0.2	45.5	19.6	23.1	19.9	147.4	265.9	34.7
13th to 19th "	4.8	...	47.8	20.2	20.5	24.8	147.7	273.0	35.7
20th to 26th "	7.6	0.2	48.8	20.2	19.0	22.6	144.6	273.0	35.7
27th to 3d Sept.	5.1	...	45.6	21.1	21.0	28.3	143.9	264.9	34.6
4th to 10th "	5.4	0.3	45.3	22.2	20.8	31.4	149.3	274.7	35.9
11th to 17th "	4.7	0.1	45.8	24.6	16.8	24.7	133.5	270.3	35.3
18th to 24th "	3.0	0.4	43.1	21.4	18.3	24.6	148.5	262.3	34.8
25th to 31st "	2.6	0.2	45.7	23.1	17.2	23.1	148.9	260.7	34.1
1st to 7th Oct.	4.0	0.5	43.2	23.8	19.0	17.4	153.2	261.1	34.1
8th to 14th "	4.1	0.4	51.3	18.9	17.6	12.5	143.3	248.4	32.4
15th to 21st "	2.7	0.3	46.1	21.7	17.3	11.0	152.0	251.4	32.8
22nd to 28th "	3.1	0.2	44.3	20.6	16.6	13.1	144.9	242.8	31.7
29th to 5th Nov.	2.5	0.2	41.1	20.6	18.5	9.1	145.6	247.6	31.9
6th to 12th "	4.7	0.3	43.2	21.3	16.8	8.3	152.5	247.1	32.3
13th to 19th "	2.8	0.4	45.2	19.4	18.6	5.1	151.0	246.4	32.2
20th to 26th "	2.3	0.5	42.4	20.0	19.1	5.3	157.8	247.7	32.3
27th to 3d Dec.	4.2	0.8	41.0	21.7	17.2	7.9	159.1	251.9	32.9
4th to 10th "	3.5	0.7	45.5	23.0	18.4	9.1	160.0	256.8	34.1
11th to 17th "	3.6	0.2	43.3	23.5	17.0	10.4	156.2	254.2	33.2
18th to 24th "	1.9	0.3	46.9	23.2	16.5	11.1	158.6	263.5	34.1
25th to 31st "	8.1	0.6	45.6	22.3	14.8	11.5	154.4	252.6	33.0
1st to 7th Jan. 1877	5.0	0.2	53.6	25.7	15.4	13.5	159.6	273.0	35.7
8th to 14th "	4.8	0.7	51.5	24.3	18.7	10.4	155.6	276.1	36.3
15th to 21st "	5.7	0.7	51.1	23.3	17.0	13.1	169.4	281.4	36.8
22nd to 28th "	9.1	0.6	50.7	22.7	17.9	17.6	164.3	282.9	37.9
29th to 5th Feb.	8.6	0.5	50.3	23.4	20.3	12.5	156.8	272.7	35.4
6th to 12th "	9.8	0.9	48.3	22.8	20.9	11.9	147.1	260.8	34.1
13th to 19th "	12.7	0.9	47.6	21.6	15.5	13.5	162.3	264.4	34.5
20th to 26th "	13.6	1.6	45.2	21.4	16.1	7.8	147.8	262.9	34.0
27th to 5th Mar.	14.1	1.3	47.5	23.7	16.1	9.4	149.1	261.8	34.2
6th to 12th "	19.1	1.4	43.1	22.5	15.9	7.4	141.7	251.1	32.8
13th to 19th "	15.0	1.4	48.7	20.3	18.1	1.7	145.9	255.1	33.3
20th to 26th "	17.9	1.1	45.6	18.8	14.5	2.9	143.4	244.2	31.9
27th to 3d Apr.	23.7	1.1	48.6	19.9	17.4	3.2	142.6	243.5	33.5
General Total	459.1	32.8	2396.2	1065.5	897.9	665.6	7734.7	13261.8	1737.9

REVIEWING THE MORTALITY FROM SPECIAL AND ALL DISEASES IN THE TOWN OF MADRAS DURING THE FOUR QUARTERS OF 1876, 77.

[illegible]



The horizontal dotted line, which represents these periods. The wavy line, which shows the average mortality from each disease for 10 previous years.



APPENDIX.—VI

VITAL STATISTICS.

TABLE XXXII.—BIRTHS AND DEATHS.

Return shewing the Total of monthly Registration of Births and Deaths in the Town of Madras for the year 1876-1877 arranged according to Division.

Municipal Divisions.	NAMES OF VILLAGES.	Population.	April.		May.		June.		July.	
			Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
1	Tondiarpettah	35,240	23	21	12	22	12	15	25	43
	Washerman's Pettah	6,409	92	81	89	105	90	148	94	120
	Monegar Choultry	426	...	14	...	20	...	18	...	22
	Royapuram	11,689	25	48	31	48	47	58	44	61
	Cashmode	12,383	14	39	18	40	10	15	15	48
	Total...	65,547	154	203	150	235	159	254	178	234
2	Peddoo Naick's Pettah	65,629	109	154	94	134	92	157	186	162
	Big Paroherry	5,179	6	7	7	21	3	15	2	6
	John Pereira's Garden...	2,930	...	15	...	30	...	21	...	14
	Total...	73,738	115	176	101	185	95	193	188	182
3	Moothealpettah	32,062	53	108	64	123	72	151	124	120
	Uttapanium	18,895	2	7	2	18	2	6	...	6
	Fort Saint George	1,588	1	3	...	4	1	5	4	3
	Total...	52,545	56	118	66	145	75	164	128	129
4	Gunpowder Mills	641	...	...	...	...	...	...	...	...
	Terambore	5,650	40	22	49	24	29	25	29	35
	Viasarapady	3,500	10	8	10	10	12	14	9	4
	Total...	9,791	50	30	59	34	41	39	38	39
5	Choolay	15,000	20	25	23	32	26	30	24	37
	Puraseowalkum	19,006	50	96	70	118	76	113	80	92
	Pariametoo	11,275	5	10	8	21	15	15	11	9
	New Town	4,500	...	1	...	4	...	3	2	7
	Vepery	3,774	20	9	7	20	15	23	10	12
	Poodoopettah	4,392	101	29	132	21	133	45	167	47
	Egmore	7,544	10	6	12	10	9	7	20	10
	Comaleeswarapuram	...	...	...	...	...	...	...	...	...
	Total...	65,491	208	182	255	227	274	239	315	217
	Kilpawkam	5,222	5	3	2	4	4	5	6	3
6	Cheetput	2,611	...	3	1	...	...	...	6	4
	Nungambawkam	7,764	7	15	7	19	20	18	24	12
	Makay's Garden	3,853	3	4	1	9	2	12	5	10
	Total...	19,390	15	25	11	32	26	35	41	29
7	Poodoopawkam	6,087	17	27	21	28	16	32	22	27
	Chintadripettah	15,120	25	35	43	31	47	42	66	42
	Narasingapuram	8,046	6	5	2	20	7	10	4	10
	Triplacane	33,258	65	117	74	112	74	116	109	120
	Theroovateeswarenpettah	12,057	15	18	4	17	16	20	11	24
	Total...	69,568	128	197	144	206	160	220	213	223
8	Saint Thome	20,575	43	89	38	87	53	7	80	68
	Alwarpettah	1,168	5	3	4	1	5	3	4	9
	Royapettah	6,255	10	41	22	30	14	19	17	26
	Mew Saib's Pettah	2,030	4	6	3	9	7	14	13	17
	Kistnampettah	5,193	4	13	7	11	8	15	13	21
	Thanampettah	7,246	7	13	5	12	7	7	11	21
	Total...	41,482	73	166	77	150	99	115	138	150
General Total...		3,77,52	797	1,097	863	1,216	929	1,259	1,269	1,253

