

Report on the sanitary condition of the Hackney District for the year 1888.

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Board of Works for the Hackney District.

REPORT

ON THE

SANITARY CONDITION

OF THE

HACKNEY DISTRICT,

FOR THE YEAR 1888,

BY

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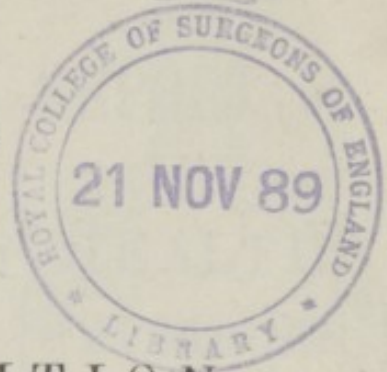
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1889.



Board of Health for the Haverhill District

REPORT

SANITARY COMMISSION

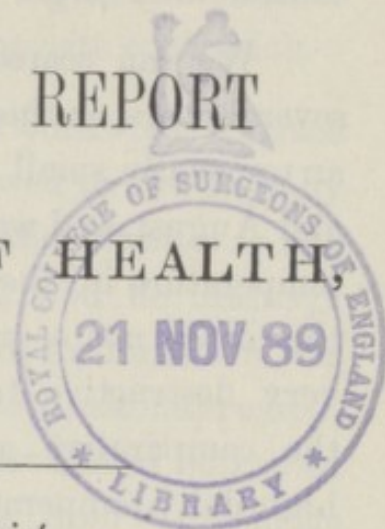
HACKNEY DISTRICT

FOR THE YEAR 1888

JOHN W. TRIFF, M.D.

Report of the Board of Health for the Haverhill District, Sanitary Commission, Hackney District, for the year 1888. The report details the sanitary conditions, mortality statistics, and public health measures taken during the year. It includes sections on the general state of the district, the number of deaths, and the measures adopted to improve the health of the community. The report is a comprehensive document that provides a detailed account of the public health situation in the Hackney District during the year 1888.

THIRTY-THIRD ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH,
BEING THAT FOR THE YEAR
1888.



To the Board of Works for the Hackney District.

GENTLEMEN,—

The death rate this year for the district (15·5 per 1,000 inhabitants) was the lowest for which we have reliable records, being smaller than that for 1887, which up to that time is the lowest (viz. 16·6), since the present system of registration was commenced in 1837. A low death rate was not confined to Hackney, but extended generally to England and Wales, and to most of the large cities, including London. The death rate for England and Wales, was subject to future revision, calculated at 18·8, and for London at 18·5 per 1,000 inhabitants, being considerably higher than for this district. The populations in England and in London were calculated to have increased in the same ratio as in 1871-81, but I have not assumed so high a ratio for this district, as there have not been proportionately so many new houses erected since 1881 as previously, and the percentage of "empties" has increased. I have taken the number of assessments in 1888, and multiplied them by the number of inhabitants to an assessment in 1881, which gives 234,516 inhabitants on July 1st, 1888, and believe therefore that I have not over-estimated the population, and consequently under-estimated the death rate. It is certain that the death rate must be smaller than in any year since 1883, two years after the census, as the total number of deaths was less in 1888 than in any year since 1883, although the

population has undoubtedly increased every year, and must be considerably larger now than five years ago.

We can scarcely expect so low a death rate again for several years, as the weather was such as ordinarily co-exists with an unusually small death rate, viz., cool and rainy in June, July, and August, and warm in November. It is true that the mean temperature in the four first months of the year was low, but this arose not so much from very low temperatures, which are very destructive to the very young and the very old, as from the comparative absence of sunshine and of corresponding high daily temperatures, which in ordinary years counterbalance low night temperatures.

The most prevalent zymotic disease was diphtheria, which occurred nearly all over the district, in various localities, and was epidemic for a short time in the vicinity of the Detmold Road Board Schools. It rarely attacked more than one family in a house, although in some instances as many as four suffered in one family. The Detmold Road Schools are situate on sloping ground on the south of Mount Pleasant Lane, and the outbreak was considered by several medical practitioners to have arisen from emanations given off by the disturbance of the soil in relaying, cleansing, or repairing drains and sewers in the locality. The soil on which many of the houses where the patients resided was made up several years ago with ashes and other refuse, covered over with dry rubbish. The foundations of the houses were laid on concrete, as well as all the area within the walls, and I examined them on many occasions while the houses were being built. When trenches were cut in the ground this year for drainage purposes, offensive emanations were given off, partly from the soil, but chiefly from drains and sewers repaired. It was these emanations to which, as well as those alleged to come from the newly disturbed soil, that the origin of the outbreak was attributed by some persons. This opinion was clearly erroneous, although perhaps the offensive smells might possibly have exercised some injurious effects in

the spread of existing disease. As precise dates are all important in an enquiry such as this, I now lay before you the facts I had in my mind for arriving at an opposite conclusion.

On April 22nd a death occurred in Southwold Terrace from diphtheria after a short illness, followed in two days by another death, both of children, in the same family. The source of infection could not be discovered, and no drainage defects were detected, although a very careful examination was made in this and all other houses in which the disease appeared. On May the 3rd another death after a short illness happened in Detmold Road, which was registered as from "cynanche maligna," but which the medical attendant informed me was almost certainly diphtheria. Cases of diphtheria also occurred in Inver Road, Aveley Road, and Stone's Buildings, before the 7th of May, which was the date of opening the ground in Inver Road for cleansing, repairing, and reconstructing a house drain. The head master of the Detmold Road School sent a list here on the 9th stating that several children had been away before that day owing to an attack of diphtheria, so that these cases could not have occurred from opening the ground, as the children were ill before this was done. It is also necessary to bear in mind that the disease was prevalent previously to the 7th in other parts of the district, at some distance from the Detmold Road Schools. Although there was no evidence to show that the disease up to that time had been spread through attendance at the schools. I requested the master to keep all children living in infected houses from attending the schools. He said that he had done this, not only as regards diphtheria, but all other infectious diseases; but he thought that the frequency with which the neighbours visited the sick, and even kissed them, had had something to do with the spread of the disease.

At the first meeting of the Board in June, I made the following report which bore the date of June 2nd: "During the month of May, 34 cases of diphtheria (10 in four

houses) were reported to me, and as the majority occurred amongst children attending the Detmold Road Board Schools, I made personal enquiries at the Schools and in the neighbourhood. From the information received I came to the conclusion that the disease might have been communicated from one child to another in the playground, as although children from houses in which the disease had occurred were not allowed to attend the schools, yet in some instances they went into the playground and mixed with other children. I therefore requested that the playground should be shut up, and the children sent home directly after dismissal; also that the Sunday School should be closed, which have been done. The Day Schools and playgrounds were closed from the 18th to the 28th of May for the Whitsuntide holidays, and the playgrounds were not opened for some time afterwards. A few cases continued to occur during the week amongst scholars living in the vicinity of earlier cases, so that the disease might have been spread in the street while the children were at play. The sanitary arrangements of the Schools are good, as I examined them last year without finding anything to complain of. The number of deaths amongst the children attending the schools, and of their relations, amounted to 7, against 7 in other parts of the district, making a total of 14 deaths in the month of May."

*(Extract from my Report for Fortnight ending June 16th, 1888—
dated June 7th.)*

"Since the date of my last report, only one case of diphtheria has been reported to me in connection with the Detmold Road Board Schools, and one death."

As it was necessary, in consequence of imperfections in the sewers, to continue the reconstruction from May 25th to the end of June, due precautions were used by means of disinfectants to prevent injury to health, and as the greatest number of cases occurred before the sewer work was commenced, it is evident that the disease could not have been caused by disturbance of the soil. The evidence points on the other hand

to direct infection in the playground, especially as a considerable proportion of the cases occurred amongst children attending the school, who lived in streets at some distance away. From the date of the closing of the schools for the holidays, and subsequent shutting up of the playground, the outbreak diminished, and soon ceased. I am by no means satisfied as regards diphtheria, that the shutting up of schools is advisable for protection of the scholars; but I am fully persuaded that the closing of the playground is important, and should always be adopted under similar circumstances. In several instances four cases of the disease occurred in one house, almost simultaneously, that is to say within a few days of the first case. In not one of these could the original source of infection be traced, and in all instances the disease was confined to one family, although other families were in the house. In one instance the wall of the room was damp in consequence of the rainwater pipe being stopped up; in one or two the drains were defective, but in most no defect in the drainage or other sanitary arrangements were found. The total number of cases reported to me during the year was 125, of deaths 72, the majority having occurred in the months of May and November. The removal of persons affected with the disease to the Metropolitan Hospitals, which was not then carried out, is likely to be very beneficial, and if it had been possible during the epidemic amongst the Detmold Road scholars, would probably have prevented many cases and some deaths.

The question of closing schools when infectious diseases are prevalent amongst the scholars is one concerning which much may be said both for and against. One reason against the closing is that children will play together in the streets if not attending school, so that those from infected houses may mix with others not infected. Speedy removal of the sick will, however, to a great extent remove this risk. In practice I find that closing the playgrounds and shutting out all children from infected houses, although there may not be disease in

more than one family living in the house, proves as effectual, if not more so, as regards diphtheria, than closing the schools. The Education Code of 1883 gives full power to sanitary authorities to shut up Board Schools, as "the Managers must comply with any notice of the sanitary authority of the district in which the School is situated, requiring them for a specified time either to close the school or exclude any scholars from attendance, subject to an appeal to the Educational Department, if the Managers consider the notice to be unreasonable."

The number of deaths from diphtheria in the district were greater than in any former year, as in 1882, when it was very prevalent, the mortality was only 51, which, allowing for difference in the number of residents, represents 58, against 72 in 1888. The mortality from diphtheria in London at large was also greater than before, as 1,268 deaths were registered in 1888, against 973 in 1884, 951 in 1883, and 961 in 1887.

Nuisances were found in 39 out of the 125 houses inspected; some were very trifling, and others of considerable importance. The worst were as follows:—

De Beauvoir Square—Bell traps, sink, and stack-pipes in direct communication with the drains, and also defective water supply apparatus. *Culford Road*—Bell traps, sink, and stack-pipes directly connected with the drains. *Colenso Road*—One closet was choked and nailed up, and the drain ventilator broken off near the first floor back room window. *Brett Road*—Drains choked, defective water apparatus to the closet, and sink waste directly connected with the drains. *Cassland Road*—Yard damp, paving imperfect, sink directly connected with the drains. *Manor Road*—Bath, lavatory, and sink pipes improperly connected with the drains, and paving required in the yard. *Wharf Road*—A choked stack pipe, with hopper-head near window, yard gully broken. *Seal Street*—Pool of stagnant water in the yard. *Ritson Road*—Sink and stack pipe connected directly with the drains, defective water apparatus to the closet, yard

unpaved, and fowls kept. In very few instances were the houses damp.

All these nuisances were speedily abated under the notices served by the officers of the Board. As these were the worst nuisances found on the premises occupied by the 125 cases reported to me, and as defective connections with the drains were not found in the other houses, the evidence in favour of defective means of drainage being the cause is not very strong, especially as in the majority of houses no sanitary defects were found after careful examination.

TABLE I.

Showing the Population, Marriages, Births, Deaths, and Density of Population per acre for the Year 1888 and Ten Years preceding.

CORRECTED GROSS NUMBERS.

The Year.	Estimated Population	Marriages	Registered Births	CORRECTED NUMBER OF DEATHS.			Density of Population per Acre.
				Total all Ages.	Under One Year.	Under Five Years.	
1888	234,516	1472	6511	3646	819	1493	59·6
1878	167,250	1441	5978	3392	858	1408	42·5
1879	174,350	1440	6207	3285	770	1298	44·5
1880	181,538	1425	6331	3321	918	1586	46·2
1881	188,240	1494	6377	3614	832	1543	47·8
1882	195,200	1488	6423	3505	768	1451	49·6
1883	200,200	1458	6502	3545	816	1402	51·1
1884	205,400	1433	*6827	3700	880	1510	52·3
1885	210,600	1496	6585	3682	897	1555	53·5
1886	217,600	1466	6666	3693			55·3
1887	226,010	1466	6715	3751	912	1577	57·4
Means for the 10 years 1878—87.	196,639	1461	6461	3549	765	1333	50·0

*Registered in 5 weeks.

	1871	1881.
Population at Census	124,951	186,400
No. of Inhabited Houses at Census.....	19,347	27,503
No. of Persons on an average in each Inhabited House at do.	6.46	6.78
Total No. of Acres	3,935	3,935
No. of Acres of Water and Open Spaces, chiefly on the borders of the District	568	568

NOTE.—The Deaths are corrected by adding on the Deaths of *Inhabitants* in the Small-pox and Fever Hospitals, in the German Hospital, which are situate in the Hackney District, and also the Deaths in other Metropolitan and the Asylums Board's Hospitals outside the District, and by taking out the deaths of all non-residents that have been registered in the District.

A decrease both of births and deaths occurred in 1888, which is very unusual, the births having been only 6,511, against 6,715 in 1887, 6,666 in 1886, 6,585 in 1885, and an average of 6,461 for the ten years 1878-87. The deaths were only 3,646, against 3,751 in 1887, 3,693 in 1886, 3,682 in 1885, and 3,700 in 1884; showing an absolute diminution in the number of deaths since 1883. This is very satisfactory, as during the year there was an unusual mortality from measles, diphtheria, and whooping cough, and especially when it is remembered that the density of population has increased every year. Thus 20 years ago the density was only equal to 33.7 persons per acre, in 1878 it was 42.5, and in 1888 no less than 59.6 persons per acre. This average includes 568 of open spaces and water, which cannot be built upon, out of a total of 3,935 acres in the district. The real density of the inhabited portions is much greater, as, excluding land not yet built upon, 14 per cent. of the whole surface of the district is not occupied by a resident population.

TABLE II.

HACKNEY DISTRICT.—*Showing the Annual Birth and Death Rates; Death Rates of Infants per 1,000 Births, and of Children per 1,000 Deaths, for the Year 1888, and each of the ten Years preceding.*

In Year.	Birth Rate per 1000 of the Population.		Corrected Death Rate per 1000 of the Population.		Deaths of Children under 1 year per 1000 of Registered Births.		Deaths of Children under 1 year, per 1000 of Total Deaths.		Deaths of Children under 5 years per 1000 of Total Deaths.	
	London	Hackney	Hackney	London.	Hackney	London.	Hackney	Hackney	Hackney	Hackney
1888	30.7	27.8	15.5	18.5	125	154	225	409		
1878	35.5	35.6	20.2	23.1	144	164	226	480		
1879	35.5	36.0	18.8	22.6	122	148	233	395		
1880	35.3	35.1	18.3	21.7	142	158	273	477		
1881	34.7	33.9	19.2	21.2	130	148	230	424		
1882	34.2	32.9	17.9	21.3	119	162	219	414		
1883	34.0	32.3	17.6	20.5	125	146	230	396		
1884	33.7	30.8	18.0	20.5	124	168	238	408		
1885	32.6	30.9	17.6	19.8	137	148	246	422		
1886	32.4	30.4	17.0	19.9	143	159	258	418		
1887	31.7	29.7	16.6	19.6	136	158	243	426		
Average of 10 years, 1878-87	33.9	32.8	18.1	21.0	132	156	240	425		
MEANS. 1871-80	35.9	34.7	19.6	22.5	142	158	247	392		
1861-70	35.4	33.8	20.4	24.4	143	162	—	—		
1851-60	33.6	31.8	19.1	23.7	128	155	—	—		

The diminution in the birth rates, not only in Hackney but for the whole of London since 1879, is shown in the above table not only to have been gradually accelerated year by year, but so far as Hackney District is concerned, to have progressed more rapidly in 1888. Thus the mean birth rate in each of the decennial periods since 1851 was 31.8 in 1851-60; 33.8 in 1861-70; and 34.7 in 1871-80. It reached as high as 36.0 in 1879, and then declined in the following years to 35.1,

33·9, 32·0, 32·3, 30·8, 30·9, 30·4, and 29·7; in 1888 it dwindled to 27·8 per 1,000 population. The birth rates for the whole of London in the same period, (1880-87), was 35·3, 34·7, 34·4, 34·0, 33·7, 32·6, 32·4, 31·7, and for 1888 only 30·7 per 1000 population. This reduction cannot depend on a proportionately decreased number of marriages, as during this period they have varied only a little, but probably to the later period of life in all London, and doubtless in this district, at which this ceremony is performed. It may also be that marriages have been less fertile of late than formerly.

I have already referred to the progressive decrease in the death rate for this district, which it is to be hoped, though scarcely to be expected, will continue to decrease without check to its lowest point. The comparatively even temperature during the year, except on a few occasions, and the greatly increased rainfall, as compared with the last few years, have been very favourable to health. Amongst the diseases with a low death rate this year may be mentioned diarrhœa, and this might have been expected, as the great factor of death from this disease is continuous dry, hot weather, as I pointed out nearly 30 years ago. The mean temperature of the Thames did not reach the height which always accompanies an epidemic of diarrhœa. The low mortality must not, therefore, be entirely placed to the better sanitary conditions of the district, for independently of these and the weather, better and more food, owing to its low price, have been obtainable for years past than formerly, and must have assisted in raising the standard of health amongst the working classes and their children, who constitute so large a proportion of the population of this country.

The death rate amongst the newly born, and all those under 1 year of age, has also been singularly small for similar reasons. The average death rate of children under 1 year to total births for the 10 years 1878-87 was 132 per 1,000 registered births, which is much below that for all London, viz., 156. In 1888 this death rate for the district was below

the mean of the last 10 years, having been only 125 per 1,000 births, against 132, and was also lower than for the 10 years 1851-60, when it was 128. This is very satisfactory, as at the present time there is greater density of population, and a larger proportion of poor to the other classes, than in 1851-60. The rate in all London in 1888 was 146 per 1,000 births. The number of deaths of children under 1 year to total deaths was also smaller than usual, as only 225 deaths out of 1,000 at all ages were registered against a decennial average of 240 and of 243 for 1887. The proportion under 5 years was also below the average, as it was 409 against 425, but it was rather larger than during the first year of life. The diminished mortality from diarrhœa was the chief cause of the reduction in the number of deaths amongst young children. This will be treated at greater length when the "Ages at death" are under discussion.

TABLE V.

Showing the Number of Deaths at all Ages in 1888, from certain groups of Diseases, and their Proportions to 1,000 of Population; and to 1,000 Deaths from all causes. Also the number of Deaths of Infants under One Year from other groups of Diseases, and their Proportions to 1,000 Deaths from all causes under One Year, and of Deaths to 1,000 Population.

HACKNEY DISTRICT.	Deaths from these Diseases, 1888.	Per milleage of Deaths to Total Deaths, 1888.	Deaths per 1000 population.				
			1884	1885	1886	1887	1888
1. Zymotic Diseases	530	145	3.99	2.75	2.74	2.34	2.26
2. Pulmonary (excluding Phthisis)	778	213	2.93	3.59	3.18	3.42	3.32
3. Tubercular	395	108	2.05	2.39	2.39	1.90	1.64
4. Wasting Diseases ..	281	77	1.06	1.23	1.47	1.43	1.19
5. Convulsive Diseases.								168	46	0.71	0.81	0.67	0.69	0.72
Totals	2152	589	10.74	10.77	10.45	9.78	9.13

3. Includes Phthisis, Scrofula, Rickets, Tabes Mesenterica, and deaths registered as being caused by Tubercular Meningitis in *persons more than 1 year old*.
4. Includes Atrophy and Debility, want of Breast Milk, and Premature Birth, in children *under 1 year*.
5. Includes Infantile Hydrocephalus, Meningitis, Convulsions and Teething, under 1 year.

This table shows that there were 530 deaths, including diarrhoea, from zymotic diseases, which gives 145 deaths in each 1,000 deaths from all causes. In 1887 there were 528 deaths from these diseases. There were 778 deaths from affections of the lungs, excluding consumption, against 774 in 1887, so that the mortality from these, the two most fatal groups of diseases, varied but little in the two years. The mortality from pulmonary affections depends to a great extent on the weather, as cold, damp, and especially foggy weather usually induces an excessive number of deaths from inflammatory diseases of the air passages, especially amongst the young, aged, and feeble. The deaths from tubercular affections, including consumption, were fewer than usual, 395 only having been registered this year, against 428 in 1887; and the mortality from wasting and convulsive diseases of children was smaller than for last year, having been 449, against 476 in 1887. The number of deaths per 1,000 population, which afford more definite information than the crude numbers, show that the lowest death rate from zymotic diseases during the last decade occurred in 1888, when it was only 2.26 per 1,000 inhabitants. The mortality per 1,000 population from pulmonary affections was 3.32; from tubercular affections 1.64; and from wasting and convulsive diseases of children 1.91. The table shows the variations that have occurred in each of this group of diseases since 1883, so that I need not dwell upon them in greater detail.

TABLE VI.

Showing the Number of Deaths from the principal Zymotic Diseases in the Hackney District during the 10 years, 1878 to 1887, and in the year 1888.

DISEASES.	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	Annual Average of 10 Years, 1879-1888	Proportion of Deaths to 1000 Deaths in 10 Years, 1879-1888	Proportion of Deaths to 1000 Deaths in 1888	Total Deaths in 1888			
	Small-pox	86	10	69	225	13	19	210	86	1	—	71·9	20·3	0	0		
Measles	31	81	21	149	43	117	55	168	88	115	81·8	24·5	35·1	128			
Scarlet Fever	123	70	81	118	144	63	72	29	70	55	82·5	23·2	15·9	58			
Diphtheria	23	19	14	1	51	43	39	47	46	35	31·8	8·9	19·7	72			
Whooping Cough	135	110	141	70	182	56	157	85	123	136	110·8	31·2	36·7	134			
Fevers. { Typhus	70	47	27	64	63	46	84	1	—	—	54·4	15·3	9·6	{ 27 }			
{ Enteric															37	53	46
{ Simple continued. }																		2	4	1
Diarrhoea	159	67	170	135	99	104	190	125	200	137	138·6	39·0	21·4	78			
Totals—Hackney	627	404	523	762	595	448	807	589	585	525	576·8	162·4	138·4	505			
Totals—London	14734	12256	13681	13811	13558	10801	13629	13074	11121	12684	12704	159·0	137·0	10803			

NOTE.—Previously to 1885 all kinds of continued Fever were grouped together as "Fevers."

I have again to report an entire absence of deaths from *small-pox* since 1885, with the exception of one in 1886, which occurred in the person of a tramp, who sickened on the night he was received into our casual ward. Although no death has been registered in the district, yet a few cases have occurred during these years; but most were imported, and no source of infection could be ascertained in the other two or three cases. There has not been such previous immunity from the disease since my appointment, as, although in 1858 no death was registered in the district, yet there were deaths in each year before and after it. Subsequent to the great epidemic of 1871-2, the deaths in the district were very few for a long time, as 9, 5, and 2 occurred respectively in the years 1873, 1874, and 1875, followed by the outbreak of 1876-8; but after the outbreaks of 1881 and 1884 there was not so marked a cessation of the disease. How far the earlier and more frequent re-vaccinations lately carried out have had to do with this I cannot say, but knowing, as I do, the almost perfect immunity from a subsequent attack furnished by successful re-vaccination, I attribute much of the entire absence of death from small-pox to this cause.

Measles.—The late epidemic of measles in 1887 and 1888 was unusually severe, as 115 deaths were registered in the former, and 128 in the latter year. The number of deaths did not, however, equal those in 1885, when the mortality reached 168 deaths, or in 1881, when 149 deaths were registered. The disease has in this district been unusually fatal since 1885, as in 1886 the mortality was large, viz., 88, so that the large number of deaths in 1887 and 1888 was contrary to the usual progress of the disease. Owing to the continuance of measles for so long a time, the Managers of the Metropolitan Asylums Board have been requested to receive cases into their hospitals, and have replied they have no power to do so. I am of opinion that it is not advisable they should adopt this proposal, as measles is probably more infectious than

small-pox, and the disease therefore would almost certainly spread from the hospital to the surrounding neighbourhood. The removal would also probably fail to have the intended effect, as measles is infectious before the rash appears; indeed, it is said, before the patient shows any special symptoms, so that those in the house liable to it would be infected before the removal could be effected. For the same reason it is useless to shut up a school on account of measles having broken out amongst the scholars, unless this is done at the commencement of the outbreak. In that case, that is to say as soon as a few cases have occurred, the school should be closed for at least three weeks if it be done at all. It is also possible that closing a school may cause an increased spread of the disease in the localities from which the children are drawn, by affording an opportunity for infected children mixing in the streets with the non-infected. The isolation of measles in hospitals appears to me to be too doubtful a proceeding for adoption until more is known about the mode and time of the spreading of this disease. Besides, measles, the same as scarlet fever, differs in the intensity of its virus in different years, so that in one epidemic it may be almost innocuous, whilst in others severe inflammations of the lungs rapidly destroy the patient. It is also another objection to the aggregation of a number of cases in a hospital, that we do not know how far an aggregation of cases in one large ward may aggravate the intensity of the virus both to those outside as well as inside the hospital.

Scarlet Fever.—In my last report I stated that in my opinion, if the various localities in this district were occupied by the same class of people and were equally densely inhabited, and if my figures gave an equal proportion of the attacks in all parts of the district, they would be decisive in regard to the question as to whether or not the hospital was a cause of spreading the disease. But as these suppositions do not agree with the reality, and as the results of the investigations are not alike for every year, too great weight must not be given to the

figures for 1887, when they were more adverse to the hospital than in other years. Besides this, there were many more beds occupied in the Homerton (Eastern) hospital in 1887 than formerly, so that the unfavorable statistics were most probably the result of the enormous aggregation of cases in 1887, when, for about a month, viz., from the middle of October to nearly the end of November, more than 400 cases were being treated at one time in the hospital, against about 250 in October and November, 1886, and about 200 in same period of 1882. I then said, page 10, and repeat now, "It is evident that the enquiry must be extended over a longer period in this and in other districts before a definite conclusion can be arrived at." The cases this year have scarcely been sufficiently numerous to re-open the enquiry, but I must again express my opinion that the cases of scarlet fever treated in the Metropolitan Asylums Board's Hospitals should be spread over as many buildings as possible instead of being concentrated chiefly in one or two, so as to avoid the risk to the health of the neighbourhood which might arise, arising out of an aggregation of more than 400 cases on one site as occurred in 1887, and the removal of so many infected persons through the district.

I have already stated in my fortnightly reports that a rather severe outbreak of *scarlet fever* occurred at Hackney Wick, especially during the months of September and October, when 59 cases were reported to me. I was by no means surprised at this, as the disease had not been epidemic there for some years, although other localities in the district had suffered severely. In consequence of the outbreak I deemed it advisable to have a special inspection made in all the houses there to ascertain if there were any accumulations of dust, choked or defective drains, defective paving or water supply apparatus, and had all the nuisances found during the inspection immediately abated. A large number of defective water supply apparatus were found, although the houses were examined and all such and other defects remedied during the latter part of the previous year.

There is great difficulty in keeping the apparatus for flushing the closets of tenement houses in good order, which is indeed one of the reasons for the regular inspections carried out in these and other houses in the poorest parts of the district.

Diphtheria.—I have already referred at some length to the outbreak of this disease in the middle of the year, and therefore have now chiefly to report its progress in the district as a whole. There were comparatively but few cases reported here in 1887 until October, when I received notice of 7; in November there were only 5, and in December, 6. In January, February and March, 1888, 7 were reported in each month, 9 in April, 27 in May, 12 in June, 5 in July, 11 for each month of August and September; 3 in October, 22 in November, and 4 in December, so that the disease was never absent during the year. In November 4 cases occurred in the *first week*, at one house in Windsor Road; 4 in the middle of the month in another house in Wharf Road, which is considerably more than a mile from Windsor Road; 4 cases in another house in Homer Road, South Hackney, at a distance from both, a few days later; and 3 cases in Seal Street, Shacklewell at the same time. No other cases occurred in the neighbourhood of these houses, and the cause of the infection could not be ascertained. The number of deaths in 1888 was 72, against 35, 46 and 47 in the three preceding years, the average for the 10 years 1878-87 being nearly 32 per annum. The sanitary defects discovered on inspection have already been mentioned.

Whooping Cough has for many years past caused a large number of deaths, the annual average for the 10 years 1878-87 being nearly 111, and in 1888 no fewer than 134 deaths were registered from this disease. Death, however, does not afford a satisfactory measure of the injury done by whooping cough, as it frequently leaves the patient with damaged lungs and in a very depressed state of health. The infection of whooping may be spread before the disease becomes sufficiently advanced

to decide whether it is an ordinary cough or not, and it also attacks children at a distance from the sufferer, so that a child with the disease in a railway carriage or other public conveyance may infect any person susceptible to it. Such exposure is by no means infrequent, and it would be well if some action were taken to punish those exposing infected children in this way. I have not had any such cases reported to me, and do not know of any proceedings being taken under these circumstances. The annual mortality from whooping cough has not been below 70 since 1878, and reached 136 in 1887.

Typhoid Fever.—The total number of cases reported to me during the year was 92, which included 27 deaths. All the premises on which these cases occurred were inspected, and all sanitary defects abated. These were not numerous, and do not require any special comment. The number of deaths was smaller than usual, as the decennial average is 54, and the disease has not reached this number since 1884, when the mortality amounted to 84. In the ordinary course of the disease an excess of the average might have been expected in 1888, as it has of late been prevalent once in every 4 years.

Diarrhœa.—The number of deaths from this disease was much below the average, as we had a cold and wet summer. The total deaths registered were 78, against the decennial average of 139. In 1886 as many as 200, and in 1887, 130 deaths were registered. The mortality amongst young children was much below the average.

The average annual number of deaths for the 10 years 1879-88 was 576·8 from zymotic diseases, or 162·4 deaths per 1,000 deaths from all causes for Hackney, and 159 for all London, but the rates for Hackney and London were closer in 1888 when they were 138·4 against 137·0, or almost the same, and it is probable, as but few cases of small pox will hereafter be treated in the Asylums Board's Hospitals in London, that our proportion of deaths from zymotic diseases will be reduced.

TABLE IX.

The Deaths Registered at different Ages from all causes during the Years 1878-88, the Deaths of Non-Residents in the Fever and Small Pox Hospitals being excluded, but of Inhabitants in Hospitals and other Public Institutions outside the District being included.

YEARS.	AGES AT DEATH.											Totals.	
	0 — 1	1 — 5	5 — 15	15 — 25	25 — 35	35 — 45	45 — 55	55 — 65	65 — 75	75 — 85	85 and upwards.		
1888	Totals ...	819	674	180	148	160	252	283	337	418	293	82	3646
	Per cents..	22.5	18.5	4.9	4.1	4.4	6.9	7.7	9.2	11.5	8.0	2.3	100
Per cents. 1887..		23.5	17.7	4.1	4.0	5.3	6.7	7.7	10.3	10.6	8.1	2.0	100
Ditto 1886..		25.8	16.0	4.4	4.7	5.5	6.8	7.2	9.0	10.5	7.9	2.2	100
Ditto 1885..		24.3	18.8	4.7	4.2	5.7	6.4	7.6	8.5	10.9	8.0	1.9	100
Ditto 1884..		23.8	17.0	6.3	5.9	6.9	6.8	7.6	8.9	8.2	6.7	1.9	100
Ditto 1883..		23.0	16.5	4.5	4.6	6.3	7.7	8.3	9.2	10.6	7.6	1.7	100
Ditto 1882..		21.2	19.5	6.6	4.3	6.0	7.5	7.8	8.3	9.3	6.7	2.1	100
Ditto 1881..		23.0	19.7	6.5	5.5	6.7	6.7	6.6	7.1	10.3	6.6	1.3	100
Ditto 1880..		27.7	17.1	4.1	4.6	6.7	7.2	6.6	8.1	9.0	7.0	1.9	100
Ditto 1879..		23.4	16.1	4.6	4.2	6.0	7.9	8.8	9.6	10.8	6.8	1.8	100
Ditto 1878..		25.3	16.2	4.9	5.7	5.8	7.5	7.3	8.9	9.5	7.0	1.9	100
Per cents. of deaths 1876-85		24.4	16.9	5.2	5.1	6.4	7.2	7.5	8.6	9.7	7.1	1.9	100
Ditto 1866-75		24.3	15.7	5.1	5.3	7.1	7.3	7.4	8.0	9.8	7.8	2.2	100
Ditto 1856-65		21.0	16.4	6.1	5.1	6.9	7.2	7.3	8.9	10.9	8.0	2.2	100

As the births have diminished, the proportion of deaths under 1 year of age has of course been smaller, so that the table shows a lower rate at this age period than for several years past. I do not intend to convey the idea that the death rate under 1 year varies only with the number of births; on the contrary, it depends very materially on the variations in the temperature, cold weather causing an excessive number of

deaths from inflammatory diseases of the lungs, and hot weather from diarrhoea. The increase, however, besides that arising from these variations also depends on the greater or less proportion of children of the well-to-do classes, as compared with those of the poor, because the mortality amongst children of the poor under 1 year is nearly double that amongst the former class.

The table shows that 22·5 per cent. of the deaths at all ages occurred amongst children under 1 year, against 23·5 in 1887, 25·8 in 1886, and an average of 24·4 in the years 1876-85. In 1856-65 the average was lower than in 1888, as at that time we had fewer poor in proportion to the whole population than at present. At the next age period of 1-5, *i.e.*, of children above 1 year old and under 5, the rate was in excess of the average, *viz.*, 18·5 per cent., against 16·9 in 1876-85, so that the death rate at 0-5, *i.e.*, under 5, reached 41·0, against 41·2 per cent. in 1887. The death rates during each subsequent decennium were as follows: at 5-15, 4·9 per cent.; at 15-25, 4·1; at 25-35, 4·4; at 35-45, 6·9; at 45-55, 7·7; at 55-65, 9·2; at 65-75, 11·5; at 75-85, 8·0; and above 85, 2·3 per cent. of the deaths at all ages.

As the percentages of deaths at different ages vary in proportion to the population living at each age period, as well as in different years according to the prevalent diseases, I have extended my calculations to a period of 38 years; the first decennium, for 1851-60, being that during which sanitary measures could have produced but little effect on the death rates generally; the second, 1861-70, when sanitary measures were being more actively carried out, but were not advanced sufficiently to influence the death rates to a decidedly appreciable extent; the third decennium, 1871-80, and the period 1881-88, when a more marked effect might fairly be expected. The death rates at all ages corresponded with my expectations, except for 1861-70, when they increased above those for 1851-60, the chief cause being the influx of a large number of poorer persons than those previously living here, and the

consequently greater mortality, especially of young children, amongst those classes. There were also comparatively fewer servants in 1861-70 than in 1851-60, which is the class amongst whom the lowest mortality prevails. The death rates for these years were 19.1 per 1,000 population in 1851-60; 20.4 in 1861-70; 19.6 in 1871-80; and only 17.4 in 1881-88. This reduction since 1861-70 is very striking, but it must not be entirely placed to sanitation, as other causes have been in operation to produce this result.

TABLE X.

HACKNEY.—NUMBER OF DEATHS AT DIFFERENT AGE PERIODS
TO 1,000 DEATHS AT ALL AGES, 1851-88.

Years.	0	5	15	25	35	45	55	65	75	85	All Ages.
	5	15	25	35	45	55	65	75	85		
1851-60	359	63	48	65	72	73	84	105	87	44	1000
1861-70	394	56	51	69	71	74	83	103	78	21	1000
1871-80	407	48	53	67	74	75	85	96	75	20	1000
1881-88	414	52	47	58	69	76	88	103	74	19	1000

The per centages of deaths at different ages to total deaths in this period of 1850-88, taken by themselves, do not indicate any very great improvement, as the proportionate mortality at the age period of 0-5, that is to say during the first five years of life, has increased in each decennium since 1851-60, and it is only by a reference to the Census that we obtain an explanation of the apparent riddle. We see that out of each 1,000 deaths from all causes and at all ages, 359 occurred at 0-5 years in 1851-60, 394 in 1861-70, 407 in 1871-80, and 414 in 1881-88. At the age period of 5-15 the numbers were as follows:—63 in 1851-60, 56 in 1861-70, 48 in 1871-80, and 52 in 1881-80, so that the largest mortality at 5-15, as might have been expected, occurred in 1851-60, when the proportionate mortality at 0-5 was lowest. The results for each decennium above 15 is scarcely marked sufficiently to continue the discussion of this table, and I will

therefore lay before you a table showing the number living at these ages per 1,000 population, which show that the same death rates at different age periods varied in the different ten year periods, and that therefore any deductions drawn exclusively from the comparative death rates in the preceding table, at different periods of life, would be misleading.

TABLE XI.

Hackney.—Census, 1851-81.—Number Living at Different Ages per 1,000 population.

Years.	0	5	15	25	35	45	55	65	75	85
	— 5	— 15	— 25	— 35	— 45	— 55	— 65	— 75	— 85	and above.
Hackney } 1851	126	214	191	161	119	87	58	32	10·4	1·6
1861	130	214	194	154	122	84	56	33·3	11·3	1·4
1871	129	211	204	158	115	87	53	30·4	11·0	1·6
1881	135	213	203	162	116	78	53	29	9·5	1·2

I have calculated from the Census Tables the number of persons at different ages living in the Hackney District in the years 1851, 1861, 1871 and 1881, to ascertain the changes that have taken place in our population as regards age during these 30 years. The table shows that at the Census of 1881 there was a considerable excess of children under 5 years of age as compared with 1851, and especially between 1871 and 1881, so that the increase in the mortality at that age period in 1881-88 as compared with other ages is fully accounted for. There was, however, a rapid jump in 1861-70, when as shown in the last table the death rate rose from 359 deaths per 1,000 at all ages in 1851-60, to 394 in 1861-70. This will be more fully discussed directly. At the age period of 5-15 the numbers remained practically unaltered, and also at 15-25 in 1871-81, but the proportion at this age was greater than in 1851-61. The numbers remained almost unchanged until the age period of 45-55 was reached, when the number living in 1881 was much diminished, viz.: from 87 in 1851 to 78 in 1881. The same remark applies in a less degree to the other periods of life.

TABLE XII.

Hackney.—Annual Death Rate at Different Ages per 1,000 Living.

Years.	0	5	15	25	35	45	55	65	75	85
	— 5	— 15	— 25	— 35	— 45	— 55	— 65	— 75	— 85	and above.
1851-60	58·54	5·83	5·50	8·48	11·83	16·55	30·69	67·43	144·73	317·92
1861-70	63·67	5·48	5·73	9·46	12·94	18·60	32·77	71·23	150·82	290·36
1871-80	58·21	4·26	4·92	7·97	12·12	17·36	30·66	62·11	140·46	293·16

This table has been calculated on the populations obtained from the Census Tables for 1851, 1861, 1871, and 1881, whilst the numbers of deaths belonging to this district at the different ages during the 30 years 1851-80 have been taken chiefly from my own reports. This table cannot be continued until after next Census, probably not until 1895, so that the proportionate death rates at different periods of life since 1881 can only be suggested; but judging from the recorded deaths, the number of children living in this district under 5 years still continues to increase. It will be seen that during the 10 years 1851-60 the annual death rate at 0-5, *i.e.* under 5 years, per 1,000 population, was 58·54, in 1861-70 63·67, and in 1871-80 58·21, so that although the proportion of deaths at this age period was shown in the previous table to have increased when compared with deaths from all causes, yet in proportion to population it had considerably decreased in 1871-80. This number, 58·21 deaths per 1,000, is below the mean for all England in the same ten years, when it was 63·12, and 72·76 in all London. A greater reduction in the death rate for the age period 5-15 occurred in 1871-80, when it was as low in this district as 4·26 per 1,000 living, against 5·83 in 1851-60, 5·48 in 1861-70, and 5·06 for all England. At the next age period, 15-25 years, the improvement in the death rate was also very marked, as well as for the age period 25-35, as it was only 4·92 per 1,000 living during the former period, against 5·50 and 5·73 in the two preceding 10 year periods; and for 25-35 years it was 7·97 per 1,000 living in 1871-80 against 8·48 and 9·46 in 1851-60 and 1861-70, respectively. In all England the annual death rates at these age periods in 1871-80 were 5·06 and 6·18 respectively, showing a very decided advantage in favor of the

Hackney District. It is therefore evident that the mortality during the early periods of life, especially between 5 and 35, has been considerably reduced in proportion to population since 1870. At the other ages the differences in favour of the death rates in 1871-80 are not so marked, but they all tend to show the increasing healthfulness of the district. It is true that death rates alone are not a sufficient indication of the salubrity of a locality, for, as I have already pointed out, there are many social and other conditions which largely affect death rates, especially in the early periods of life. As, however, all conditions, except sanitary, including one very influential against low death rates, viz.; increased density of population, were not so favourable for 1871-80 as previously, we may congratulate ourselves on the satisfactory discussion of this important table. I would also add that the death rates for England and Wales during this decennium (1871-80) were larger at each period of life than in the Hackney District.

TABLE XIII.

Births in the Sub-Districts of Hackney, 1888—52 Weeks.

Quarters.	Stoke Newington	Stamford Hill.	West Hackney	Hackney	South Hackney	TOTALS.
First	192	110	299	741	346	1688
Second	190	95	318	694	344	1641
Third	217	104	258	700	321	1600
Fourth	162	109	286	687	338	1582
Total	761	418	1161	2822	1349	6511
Per cent. 1888.....	11·7	6·5	17·8	43·3	20·7	100
„ „ 1887.....	12·0	7·5	17·4	42·2	20·9	100
„ „ 1886.....	11·4	7·8	17·9	42·0	20·9	100
„ „ 1885... ..	12·4	6·4	17·9	42·7	20·6	100
„ „ 1884.....	12·0	6·6	19·0	41·3	21·1	100
„ „ 1883.....	11·9	5·4	20·0	41·2	21·5	100
„ „ 1882.....	12·2	5·4	19·6	40·6	22·2	100
„ „ 1881.....	12·2	5·2	20·2	40·8	21·6	100
„ „ 1871.....	7·6	4·9	23·4	38·2	25·9	100
Per cents. of } 1881.	12·2	4·9	20·2	41·2	21·5	100
Population } 1871.	7·9	5·3	22·4	40·1	24·3	100

The table shows a diminution in the proportion of births in Stoke Newington to total births in the district since 1885, and a smaller birth rate in proportion to total births in 1888, when it was 11·7, against 12·0 per 100 births in 1887. The absolute number of births in 1888 was smaller than in 1887, and only 1 above those registered in 1886. In Stamford Hill Sub-Registration District the number was smaller than in 1887, 1886, and 1885, which, considering the increased number of houses in this sub-division (including Upper Clapton) is somewhat peculiar; and the proportionate rate is also lower, viz., 6·5, against 7·5 per cent. in 1887. In West Hackney Sub-Registration District the numbers registered were nearly the same as in 1888, viz., 1,161, against 1,169; but in consequence of the decrease in other sub-divisions, the proportion is 17·8 against 17·4 per cent. of the total births. In Hackney Sub-Registration District 2,822 births were registered in 1888, against 2,830 in 1887, so that the per centage to total births is 43·3, against 42·2 in 1887. In South Hackney there was a decided falling off in the births, viz., 1,349, against 1,406 in 1887, and the per centage to total births was 20·7, against 20·9 in 1887. The total number of births registered in the district during the year was 6,511, against 6,715 in 1887, 6,666 in 1886, and 6,585 in 1885, so that it was smaller than in any year since 1884.

TABLE XIV.
Deaths in each Sub-District, 1881-86.

Year.	Stoke Newingt'n	Stamford Hill.	West Hackney.	Hackney.	South Hackney.	TOTALS.
1881.....	360	148	678	1728	700	3614
1882.....	379	175	625	1698	628	3505
1883.....	369	176	659	1646	695	3545
1884.....	361	172	645	1827	695	3700
1885.....	424	196	621	1759	650	3650
1886.....	374	250	652	1656	732	3670
1887.....	407	221	692	1710	721	3751
1888.....	398	220	620	1703	705	3646

I have not calculated the per centages of deaths in the sub-divisions, as there are difficulties, owing to the number of institutions in the Hackney Sub-Registration District, which includes the Hackney and City of London Workhouses and Infirmaries, the Small Pox and Fever Hospitals, and the German Hospital. I have restored, as far as possible, the deaths that have occurred in the various hospitals and establishments within and outside the district to the sub-districts to which they belonged; but there is a residuum consisting of inhabitants of the district who died without their proper addresses being known, and also of deaths from drowning and accidents of persons unknown, which I have been unable to distribute. These are all added to the deaths of the Hackney Sub-District, as the mortuary is in this sub-division and the deaths registered outside the district have often no other address than "Hackney." I have thought it best therefore to give the whole numbers as above without calculating any per centages. It will be seen that the deaths apportioned to Stoke Newington were fewer in 1888 than in 1887 or in 1885, but were more than in 1886; whilst in the Stamford Hill Registration Sub-District the number was below that for 1887 by 1 only, for 1886 by 30, but above that for preceding years. In West Hackney, although the population has increased, there was a smaller number than for any year since 1881; whilst in Hackney Sub-District there were 1,703 deaths, against 1,710 in 1887. As before mentioned, many deaths not belonging to this sub-division, as drowning cases, &c. (taken to the mortuary), when no former residence could be ascertained, have been placed to this district, including some that did not belong to the district at all. In South Hackney there were fewer deaths than in 1886 and 1887.

Disinfection.—The number of houses disinfected in 1888 was smaller than in any year since 1885, when small pox was prevalent, and 603 houses were disinfected, against 274 in 1888. More articles of bedding and clothing were, however,

disinfected than in 1886 and 1887. The number of beds disinfected was 121, against 110 in 1887, 95 in 1886, and 322 in 1885, and of mattresses 79, against 64 in the previous year. There were more bolsters, pillows, and blankets disinfected in 1888 than in 1887, but a smaller number of other articles. The houses were disinfected with sulphur, and the infected rooms were subsequently well ventilated, whitewashed, and cleansed. This action, with removal and disinfection of the infected clothing to the Board's disinfecting chamber, was successful in preventing the spreading of any infectious disease in or from these houses.

TABLE XV.

Articles Disinfected for the Years 1886 to 1888.

Years	Beds	Mattresses	Pallisasses	Bolsters	Pillows	Blankets	Sheets	Quilts	Other Articles	Totals	Houses Disinfected
1885	332	132	16	290	690	765	439	284	605	3553	603
1886	96	50	15	74	195	299	50	55	206	1040	381
1887	110	64	16	79	238	185	43	67	230	1032	367
1888	121	79	18	108	289	247	17	50	211	1140	274

Mortuary.—During this year the mortuary has been used to a greater extent than formerly, as the Coroner has had a number of persons, chiefly children, removed from the houses of the poor, and also several grown up persons upon whom it was necessary to make post mortem examinations. A larger number than usual of bodies have also been moved by the officers of the Board in consequence of there not being proper accommodation in the houses where the bodies were kept, in a few cases there being only one room for the living and the dead. The mortuary has been kept clean and in good order, so that I have not received any complaint during the year. Disinfectants of

several kinds have been freely provided according to requirements, and the additional supply of glass cases and glass covers to the coffins has been very useful as regards decency and the prevention of smell. No infectious corpse has been brought to the mortuary during the year, so that the air-tight receptacle has not been used. When it is proposed to deposit such a body in the mortuary, the coffin is first filled up with sawdust strongly impregnated with a disinfectant (a solution of corrosive sublimate being preferred) and screwed down, before being received, or immediately after its reception. The numbers of bodies brought there during the last 5 years were as follows: in 1884, 72; in 1885, 69; in 1886, 77; in 1887, 75; and in 1888 as many as 113. There have been as many as 6 bodies in the mortuary at one time.

River Lee—The water in the early part of the year was not complained of by any one, and was fairly good, but towards the middle of May some complaints of offensive smell were received. In my report for the three weeks ending June 2nd, I reported that the water of the river and the Tottenham effluent contained more ammonia than previously, indicating the necessity for the effluent being carried into our sewer early in May. I was also informed that a large number of fish were seen floating on the surface of the water on Whit Monday, but an examination of the samples of the water and of the effluent did not point out the cause. After the effluent was carried into the sewer on June 1st the water gradually improved, so that in September there was not any perceptible difference between the water above and below the Tottenham works. In my first report to the Board in October I stated that the Tottenham effluent had been run into the Lee on October 1st, and that on the evening of that day a large number of fish were seen floating in the river. On October 2nd a sample of the river water was taken at the boundary of this district, when it was found to be much deteriorated as compared with its condition before the effluent was poured in. Also that the sample of effluent was very bad, as it contained a

large amount of ammonia and chlorine and smelt strongly of urine. In my report for the fortnight ending October 13th, I stated that: "The condition of the river Lee is by no means satisfactory, as although the samples I have obtained at Spring Hill Bridge are not any worse than on the 2nd, they are no better, and I am informed that the river has smelt badly and more fish have died. The samples of effluent handed to me were better than at first, showing that more time had been allowed for undisturbed precipitation than previously. I am persuaded that sufficient care is not generally used in this matter. The large amount of chlorine and the lime in the effluent are doubtless the chief causes of the death of the fish. The quantity of ammonia in the effluent is somewhat less than on October 2nd, although the appearance of the river has become bad, being darker in color, with much scum floating on the surface." In my next report I stated that the river had improved, as on November 1st there was less ammonia and chlorine in the water, and the discoloration had diminished; but that the sample of effluent taken on that day contained a considerable quantity of suspended matter. I saw one or two fish on the surface of the river, but no scum except near the Tottenham outfall. From that time to the end of the year the water improved so that no complaint was received. I attended the Metropolitan Board of Works on November 2nd, when a memorial was presented to that Board asking for any extension of time during which the Tottenham effluent might be carried into that Board's system of sewers. The subject matter of the memorial was ably enforced by the Chairman of the Sanitary Committee, and an extension of time up to October 1st, 1889, was granted in accordance with the request of this Board. Some steps will soon have to be taken to obtain another extension of time from the London County Council, and it is to be hoped that they will obtain speedily an Act of Parliament for permanently carrying the Tottenham effluent water into their system of sewers and thus diverting it from the Lee.

Refuse Shoots.—These have not given so much trouble this year as usual, although gravel has been taken out in one or two localities and refuse shot therein. Complaints were also received here of offensive smells arising from the shoot at Gainsborough Road, to which reference was made in my last annual report. This must have been made in error, as the shoot is nearly all covered with grass, and some offensive deposits were discovered in the immediate neighbourhood to which I believe the complaints were attributable. A large hole on a piece of ground at the lower part of the Clapton Park Estate has also been excavated, the gravel carted away, and it is now being filled up with dry road sweepings. This is one of the matters upon which fresh legislation is required.

Fairs.—These also have not caused so much annoyance to the sanitary staff as in former years; but, still, several places occupied for the use of swings, caravans, &c., have received attention. At one there was not any water supply to the closet, but this was provided after much trouble by the leaseholder of the ground. Fresh legislation is also required to enable the Board to take summary proceedings for the removal of such objectionable entertainments within the Metropolitan area.

Water Supply.—As rain fell to an unusual extent before the usual demand in summer, I have not received complaints as in many former years of the cessation of water supply during the night. The quantity of water used in this district is enormous, chiefly either from waste, or an excessive quantity being used for gardens. The Engineer to the East London Water Supply Company told me that the delivery often amounted to 40 gallons per head, partly owing to the water, both in winter and summer, being allowed to run all night at many houses. In Croydon, where an accurate account was kept, it was found that $7\frac{1}{2}$ gallons only per head were used. In the course of the ordinary inspection, and to a small extent from complaints, numerous houses were found to be without a water supply to the closets in consequence of

broken or defective water supply apparatus, so that 1,241 notices were served for repair of the same, and complied with by the owners; and there were also 103 closets discovered in fairly good houses, without any supply. This is a larger number than usual, and arose to a great extent from the slight structure of the flushing boxes and the insufficient way in which they were fixed up; and the 163 closets without supply were those provided for servants. The whole question of water supply and water supply apparatus requires reconsideration, as the Metropolitan Vestries and Boards of Works have no power to enforce a supply for domestic purposes, distinct from that to water closets, so that fresh legislation is urgently required to give such power. It would also be of much service to sanitary officials, if they were specifically empowered to enforce the regulations for water supply, now in force for the metropolis, as approved by the Board of Trade. An important decision has lately been given in the Court of Appeal in Westminster Sessions, enabling Water Companies to require cisterns in addition to flushing boxes to be provided for all houses. How far this decision will be acted upon it is impossible to say, but if generally carried out it will do much to prevent drinking water being drawn from a cistern which supplies a water-closet directly without the intervention of a flushing box. Something has been done in this direction by the inspectors during the year, as 104 flushing boxes have been provided in houses where the same cistern supplied water for drinking and water closet purposes, and 396 lengths of pipe were connected with the supply pipe to the house, and provided with a tap, to enable the occupiers to obtain water direct from the main. Of course all the last-named houses were on the constant supply.

Dust Removal for the Year 1888.—During the first quarter of the year Mr. Iszard removed 2,662 loads of dust from the A Division at 2s. 3d. per load; Mr. Potter, 2,660 loads from the B Division at 2s. per load; and Mr. Stevens 2,760 loads from the C Division at 2s. 6d. per load. On the 25th of March new contracts came in force at increased prices for all the

divisions, which were obtained by Mr. Abbott, whose tenders were the lowest. The prices were 2s. 9d. for the A Division, 2s. 2½d. for the B Division, and 2s. 9d. for the C Division. During the 9 months 7,780 loads have been removed from the A Division, 8,082 loads from the B Division, and 7,795 loads from the C Division, making a total of 10,442 loads from the A, 10,742 loads from the B, and 10,555 loads from the C Division, making a total of 31,739 loads during the year, against 30,088 loads in 1887, and 27,958 loads in 1886. The total amount paid to the contractors was £3,944 8s. 6d., against £3,378 11s. 3d. in 1887. Although this increase is considerable, yet the sum paid to the contractors in other parishes is much larger than in Hackney, considering the number of loads removed. In addition to the amount paid to the contractors there was a sum of £701 13s. 11d. paid to the men employed by the Board to assist the contractor in the removal of the dust to the carts, and £109 4s. 0d. to the Dust Inspector, making a total of £4,755 6s. 5d. for the year. There were not any other payments to the contractors for shoots, or for carrying the refuse out of the district, such as are paid by most other Vestries and Boards. The total cost for 1887 was £4,201 14s. 9d. Although the sum per load paid under the new contracts is larger than in 1885-8, yet as it averaged rather less than 2/6 load for the whole year, it was smaller than for 1873-6 when 2/11 per load was paid for the whole district, and for 1876-9 when 2/7 per load was paid for one half, and 2/10 for the other half. The size of each load, 60 cubic feet, was the same for all the contracts, but the division of the district into 3 portions for "dusting," enabling several contractors to get in, which, as well as the reduced price for forage, were apparently the causes of the reduction of the price in the years 1879-82 when the tenders were as low as 1/11 for the A division, 2/1 for the B division, and 2/- for the C division.

Cow Sheds and Slaughter Houses.—Eighty-five cow sheds, situated on 61 premises, were inspected during the year, as well as 42 slaughter houses. The slaughter houses were generally

in good condition, and few nuisances found ; but 37 cow sheds were deficient, either as regards paving inside and outside the sheds, or cleanliness or proper means of drainage inside the sheds. The defects, however, were not serious, and were all removed before the licensing day, except in the yard of Mr. Parson's premises, adjoining the shed, which was filthy and badly paved. The renewal of his license was opposed, and the application adjourned for the work to be carried out, which was eventually done to my satisfaction. In addition, the premises of Messrs. Abbot in Paradise Place, Mrs. Head in Frampton Park Rd. and Mr. Whitby in Bay Street, not being in proper order, were opposed, but with the exception of Mrs. Head's, where there was not any work done, the renewals were granted. The yards were repaired in 11, and the sheds whitewashed and cleansed in 18 instances. The other works were of a trifling character, and were all done in a short time after the Committee's visits.

From time to time a house to house inspection of the dust bins has been made in the poorer districts and all accumulations removed, although in many instances the inhabitants objected to the dust being taken away. In many instances the landlords have provided pails instead of dust bins for their poor tenants, but they have not been a success, as the pails were very frequently used for other purposes, such as coals, and in one instance as a corn bin for a pony. Many of the tenants also when they moved took the pails with them. The dustmen also from time to time knock at every house in the poorer streets and ask for the dust, so that I have received very few complaints of non-removal except from those who habitually write here instead of placing a D card in the window. The plan adopted in this district of a man being employed by the Board who accompanies every cart, and assists in the removal of the dust, as well as applies for it, acts in a very satisfactory manner.

Artizans' Dwellings.—There has not been any necessity to take action under the Artizans' Dwellings Acts during the year,

as all the owners of property did the repairs necessary to make the houses safe and habitable in accordance with notices served under the provisions of the Nuisances Removal Acts. Some time ago I visited all the houses which structurally might be brought under these Acts, and all were altered or pulled down, so that the periodical inspections made in accordance with the Sanitary Act, 1866, and the repairs carried out under the notices, have as a rule prevented the houses getting into such a condition as to require these Acts being put into force. There has also not been any necessity for action being taken under the regulations, as the ordinary procedure under the Nuisances Removal Acts and the Metropolitan Local Management Acts has sufficed to obtain the abatement of the nuisances found on the premises visited. Since this was written I have again inspected these houses and arranged for the necessary works being done.

During the ordinary course of the inspection of small houses, under the provisions of the Sanitary Act 1866, and the Regulations, 4,705 houses, chiefly occupied by the poor, were inspected; and 696 larger houses, not ordinarily inspected, were visited to ascertain whether or not the sink and the bath wastes were directly connected with the drains; also to obtain the removal of bell traps, and the substitution of yard gullies, and to disconnect rainwater pipes where the hopper heads were near to windows. There were also 274 houses visited in consequence of infectious diseases having appeared therein, making a total of 5,675 houses inspected without complaints being received here from their occupiers. In addition to these, there were 1,056 houses inspected in consequence of complaints received; 105 cow sheds and slaughter houses visited, all more than once; 145 greengrocers', as well as 73 poulterers' and fishmongers' yards visited; 127 bakehouses, and 86 urinals inspected; also three gut dressers, a most offensive business, removed from the district on receiving notice that unless they did so they would be summoned for newly establishing the business.

The number of choked drains cleansed and repaired or re-constructed, was nearly the same as in 1887, viz., 819, against 824; and of choked or broken water-closet pans, which were released, and, where necessary, replaced by new, was 118, against 95 in 1886; and the number of yards inefficiently drained numbered 91, against 76. The waste pipes from sinks and baths disconnected from the drains numbered 660, against 976 in 1886; and the number of new and more efficient traps provided was 780, which with three cesspools emptied and filled up, and 69 ventilating pipes affixed to water closet outlets, make 2,540 defects in drains and bad drainage arrangements removed during the year. The number of houses cleansed, whitewashed, and, where necessary, repaired, was considerably in excess of 1887, as it reached 1,921, against 1,602; but of yards newly paved, or new dust bins or other receptacles provided, the number was only 1,159, against 1,594 in 1887. In addition to these a supply of water was laid on to the closets (chiefly servants' closets in better-class property) in 163 houses; the water supply apparatus, almost entirely in houses occupied by the poor, was repaired on 1,246 premises, against 1,056 in 1887; water butts were removed and cisterns substituted in 18 houses; direct communications between water closets and the tap from which drinking water was drawn, were cut off in 202 houses, making up a total of 1,624 houses in which the arrangements for obtaining good drinking water, or for flushing closets, were improved. In addition to these, a large number of nuisances, not included under the above headings, were abated, making a total of 9,268 nuisances abated during the year, as well as 1,287 accumulations of various kinds removed. I attended 32 Sanitary Committee Meetings during the year; also 2 deputations to the Metropolitan Board of Works *re* the River Lee. I may also say that I am well satisfied with the amount of work done by the officers in my department.

Meteorology —The year was, as a whole, cold and rainy, the total rainfall having been above the average of late years,

although but little more than is registered for one year if a sufficiently long period be taken. The daily mean temperature was deficient in 10 out of the 12 months. In February this occurred to the extent of 4·5 degrees, in March of 3·6 degrees, in April of 2·6 degrees, and in the following months to a smaller extent until July was reached, when the mean daily

TABLE
Hackney Table of Temperature and Rainfall for 1888.

MONTHS.	Absolute Temperature.		Range.	Mean Temperature.	Difference from mean of 46 years.	Rainfall.	
	Highest.	Lowest.				TOTALS.	No. of Days
						Inches.	
January ..	52·2	25·4	26·8	37·8	-0·6	0·70	10
February	51·6	20·4	31·2	35·4	-4·5	0·66	12
March....	55·6	26·2	29·4	38·4	-3·6	2·91	22
April	65·4	28·4	37·0	43·6	-2·6	2·05	15
May.....	77·0	35·2	41·8	53·0	+0·5	0·93	6
June	85·8	45·4	40·4	58·0	-0·6	2·68	20
July	85·8	43·4	42·4	57·9	-4·4	4·56	25
August ..	85·0	47·0	38·0	59·1	-2·4	3·64	14
September	73·2	42·6	30·6	55·9	-1·3	0·83	11
October ..	68·2	30·0	38·2	46·0	-3·9	1·24	9
November	60·4	35·6	24·8	47·0	+3·6	3·58	17
December	58·0	27·2	30·8	40·8	-1·0	1·06	10
Means.	68·2	33·9	34·3	47·8	-1·7	TOTALS. *24·84in |	171

* The rain-gauge is placed on a wall, and therefore registers less than it would do on the ground, probably by 15 per cent., although it is well exposed.

deficiency amounted to 4·4 deg., in August to 2·4 deg., and in October to 3·9 deg., altogether almost an unexampled period of cold, especially when taken in conjunction with the low temperatures of 1887, which lasted from August to the end of

the year, so that the cold spell continued with the exception of May, 1888, for 14 months. The exception in May was but slight, as the mean daily temperature for that month was only 0·5 deg. in excess. The highest temperatures recorded were above 85 deg. in the months of June, July and August, so that occasionally there were warm "spells" for a short time; but the cold was otherwise so continuous that so low a mean temperature for three consecutive months had not occurred since 1845. The weather in July was remarkably cold and wet, the period of sunshine being small, and the rainfall at Greenwich greater than in any July since 1828. In August similar weather prevailed, except that the rainfall was less than in July. In September, fortunately, the weather was comparatively dry, the mean temperature not so much below the average as before, so that as there was more sunshine it was not so unpleasant as in the previous months.

The highest temperature recorded in *January* was 52·2 degrees, and the lowest 25·4 degrees, giving a range of 26·8 degrees, and the rainfall was 70·70 inches. In *February* the highest temperature was 51·6 degrees, and the lowest 20·4, affording a range of 31·2 degrees, with a rainfall of 0·66 inches. In *March* the highest temperature was 55·6 degrees, and the lowest 26·2 degrees, giving a range of 29·4 degrees, with the much larger rainfall of 2·91 inches. The weather in January was generally fine and dry although cold; in February cold and dry with little sunshine; in March cold and wet with a rainfall of 1·24 inches in excess of the mean. From the middle of February to March 6th the cold was unusual, the mean temperature having been 31·5 degrees, which is lower than for any corresponding period since 1814. In *April* the highest temperature recorded was 65·4 degrees, and the lowest 28·4 degrees, giving a range of 37·0 degrees, with a rainfall of 2·05 inches. In *May* the highest temperature was 77·0 degrees, and the lowest 35·2 degrees, affording a range of 41·8 degrees, the rainfall amounting to 0·93 inches only. In *June* the highest

temperature was 85·8 degrees, and the lowest 45·4 degrees, giving a range of 40·4 degrees; the rainfall was 2·68 inches, or 1·39 inches in excess. Although the weather was cold in April, yet it was for the greater part fine, and the same may be said of May; but for a considerable proportion of June there was but little sunshine, and much rain and cloud. As I have already spoken of the weather in July, August, and September, I need not do so again, except to state the highest and lowest temperatures. In *July* the highest temperature recorded was, as in June, 85·8 degrees, and the lowest 43·4 degrees, giving a range of 42·4 degrees, with the large rainfall of 4·56 inches, being nearly 3 inches above the average. In *August* the highest temperature was 85·0 deg., and the lowest 47·0, affording a range of 38·0 deg., with a rainfall of 3·64 inches, which was 1·30 inches in excess of the mean. In *September* the highest temperature recorded was 73·2 deg., and the lowest 42·6 deg., indicating a range of 30·6 deg., whilst the rainfall was only 0·83 inches. In *October* the highest temperature was 68·2 deg., and the lowest 30·0 deg., giving a range of 38·2 deg. In *November* the highest temperature recorded was 60·4 deg., and the lowest 35·6 deg., indicating a range of 24·8 deg. In *December* the highest temperature reached was 58·0 deg., and the lowest 27·2 deg., giving a range of 30·8 deg. The weather generally was very cold, the mean temperature having been minus 3·9 deg.; but there were a few unusually warm days near the end, when the maximum temperature for the month was recorded, the mean temperature for one day being 13 deg. in excess. November was a cloudy, wet, warm month, having a daily excess of 3·6 deg. above the mean; and December in the early part presented the same characteristics, with frequent fog and cold in the middle of the month. The mean of the highest monthly temperatures was 68·2 deg., and of the lowest 33·9 deg., whilst the average of the mean temperatures for each month was 47·8 deg., being 1·7 deg. below the average of 20 years. The total rainfall registered at my house was 24·84 inches, which fell on 171 days.

As the floods of August 2nd were very heavy, and affected this district to a slight extent, I think it may be interesting to quote some paragraphs from Symons' "Meteorological Magazine":

"At Erith the sewers were unable to carry off the water, and it washed away a portion of the road and carried about 100 tons of earth on to the South Eastern Railway, which was soon flooded to the depth of several feet. The 10.30 a.m. down train, after leaving Erith Station, ran off the rails where the accumulation of earth and water blocked the line."

"Owing to the immense amount of rain, the Ravensbourne and Quaggy are overflowing at Newcross, Deptford, and Lewisham, and many houses are flooded in their basements. In the Isle of Dogs one of the large open fields at the back of the West Ferry Road is a veritable lake, with four feet of water at one end and two at the other. In the lane leading from the Midland Railway Dock to Manchester Road the water rushed over the pavement into the front areas of the houses with such force that the gardens were swept down into the front rooms."

"Plaistow and Stratford are in much the same condition. A house in Grafton Road, Plaistow, had six feet of water in the cellars. The fields abutting on the Great Eastern from Bow to Stratford are more or less under water, and so are many portions of Epping Forest. Across Hackney Marshes and round about Temple Mills, all the houses in the hollows are flooded, and the same applies to the lower parts of Tottenham, and a few houses at Lower Clapton. The condition of the poor people living around Victoria Dock is deplorable, many streets being impassable. The basements of the houses in Barking Road and several adjoining streets are inundated, and the West Ham fire engines and gangs of men are employed pumping the water out."

Fortunately only the rear of the storm clouds passed over the inhabited parts of this district, so that the damage done here was confined to a few houses.

I remain, Gentlemen,

Yours obediently,

JOHN W. TRIPE, M.D.,

Medical Officer of Health.

March 21st, 1889.

Ordered that this Report be Received, Printed, and Circulated in the usual manner.

RICHARD MARTIN,

Chairman.

March 27th, 1889.

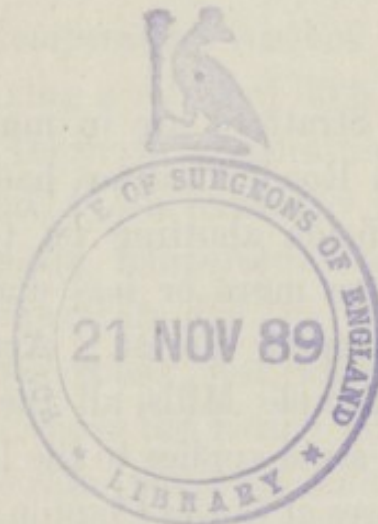


TABLE OF DEATHS

Of Inhabitants of the Hackney District between 1st. Jan. and 31st Dec., 1888.

AGES	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and upwards.	Totals.	
Small-pox. { Vaccinated..	..	..	..	..	..	..	..	..	..	..	..	..
{ Unvaccinated	..	..	..	..	..	..	..	..	..	..	..	..
{ Vaccn doubtfl	..	..	..	..	..	..	..	..	..	..	..	..
Measles	18	101	8	1	..	..	..	..	..	..	..	128
Scarlet Fever.....	1	27	26	2	1	..	1	..	..	..	..	58
Typhus Fever .....	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough....	51	76	7	..	..	..	..	..	..	..	..	134
Diphtheria	4	38	26	2	..	1	1	..	..	..	..	72
Simple Fever .....	..	..	..	5	3	..	..	..	..	..	..	8
Enteric Fever.....	..	2	9	..	8	4	3	1	..	..	..	27
Other Miasmatic Diseases .....	..	..	..	..	..	..	..	..	..	..	..	..
Simple Cholera	2	..	..	..	..	..	..	..	..	..	..	2
Diarrhœa, Dysentery.	50	19	2	..	1	1	..	1	3	..	1	78	
Ague, Remittent Fever	2	..	1	..	..	..	..	..	..	..	..	3
Hydrophobia.....	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis &c.,	5	..	..	1	..	..	..	..	1	..	..	7
Erysipelas	2	..	..	..	..	1	1	..	2	..	..	6
Pyæmia	1	..	..	1	2	..	1	..	..	..	..	5
Puerperal Fever ....	..	..	..	..	1	1	..	..	..	..	..	2
Thrush, Vege Parasites	3	1	..	..	..	..	..	..	..	..	..	4
Worms, Hydatids....	..	..	..	..	..	..	..	..	..	..	..	..
Want of Breast Milk..	2	..	..	..	..	..	..	..	..	..	..	2
Alcoholism.....	..	..	..	..	1	3	1	1	..	..	..	6
												542	
CONSTITUTIONAL DISEASES.													
Rheumatic Fever ....	..	..	..	3	3	2	..	2	..	..	..	10
Rheumatism .....	..	..	1	..	..	1	..	..	..	..	..	2
Gout .....	..	..	..	..	..	..	1	3	4	..	..	8
Rickets	1	2	..	..	..	..	..	..	..	..	..	3
Cancer.....	..	..	..	2	2	23	36	35	32	8	2	140
Tabes Mesenterica ..	44	28	3	2	1	..	..	..	..	..	..	78
Tubercular Meningitis	16	24	7	1	1	..	..	1	..	..	..	50
Phthisis	3	11	8	42	59	75	48	22	10	1	..	279	
Scrofula, Tuberculosis	13	14	7	5	1	1	2	2	..	..	..	45
Purpura Hæmoriga..	..	1	1	..	..	..	..	..	..	..	..	2
Anæmia, Leucocytha ..	..	1	..	..	..	..	..	2	1	..	..	4
Diabetes .....	..	..	1	1	1	..	5	2	7	..	..	17
Other Constitutional Diseases .....	..	1	..	..	..	..	..	..	..	..	..	1
												639	
DEVELOPMENTAL.													
Premature Birth	103	..	..	..	..	..	..	..	..	..	..	103
Malformations	16	..	..	..	..	..	..	..	6	..	12	34
Old Age .....	..	..	..	..	..	..	..	1	27	91	37	156
												293	
Carried forward..	337	346	107	68	85	113	100	73	93	100	52	1474	1474

TABLE OF DEATHS.—Continued.

AGES	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and upwards.	Totals.	
Brought forward..	337	346	107	68	85	113	100	73	93	100	52	1474	1474
NERVOUS DISEASES.													
Inflammation of Brain or Membranes	24	32	5	4	3	7	7	3	11	3	1	100	
Apoplexy, Hemiplegia Insanity, General	..	1	..	1	2	9	20	41	47	35	..	156	
Paralysis . . . . .	..	..	..	..	6	10	5	12	16	11	2	62	
Epilepsy . . . . .	..	1	1	2	2	7	1	6	2	1	..	23	
Convulsions	113	24	1	..	..	..	..	..	..	..	..	138	
LaryngismusStridulus	6	8	1	..	..	1	..	..	..	..	..	16	
Diseases of Spinal Cord	2	..	1	..	1	2	..	3	2	..	..	11	
Paraplegia . . . . .	..	..	..	..	..	..	..	..	..	1	..	1	
OtherNervousDiseases	..	..	..	3	..	1	3	3	1	3	..	14	
													521
DISEASES OF CIRCULAT- ING ORGANS.													
Peri andEndo-Carditis	..	1	2	1	1	..	2	..	..	..	1	7	
Valvular Disease of Heart	1	..	1	2	3	..	4	6	5	3	..	25	
OtherDiseases ofHeart	..	..	5	11	10	14	30	49	64	25	8	216	
Aneurism . . . . .	..	..	1	4	4	9	2	3	..	1	..	24	
													272
RESPIRATORY ORGANS.													
Laryngitis	2	11	1	..	..	..	..	..	..	..	..	14	
Croup	2	11	5	..	..	..	..	..	..	..	..	18	
Asthma	3	..	..	..	..	1	3	3	2	2	..	14	
Bronchitis	90	118	12	5	4	12	25	58	88	65	15	492	
Pneumonia	42	55	7	9	5	16	25	16	19	10	1	205	
Pleurisy . . . . .	..	2	..	3	4	5	3	2	3	..	..	22	
Other Respiratory Dis.	1	1	1	..	1	1	4	3	..	..	1	13	
													778
DISEASES DIGESTIVE SYSTEM													
Dentition	15	23	1	..	..	..	..	..	..	..	..	39	
Quinsy, Sore Throat	2	4	..	1	..	..	..	..	..	..	..	7	
Disease of Stomach ..	..	1	..	1	..	3	1	2	2	2	..	12	
„ of Bowels	1	..	1	2	..	..	..	..	1	3	..	8	
Enteritis	2	3	2	..	2	1	..	3	3	..	..	16	
Obstruction of Intes- tines	5	2	2	2	..	3	4	5	6	3	..	32	
Peritonitis . . . . .	..	1	1	6	2	..	2	2	..	..	..	14	
Spleen . . . . .	..	..	..	..	1	..	..	..	..	..	..	1	
Jaundice, LiverDisease	..	..	..	2	4	7	14	14	13	4	..	58	
													187
DISEASES OF URINARY SYSTEM.													
Kidney Disease . . . . .	..	..	2	..	2	3	2	2	..	1	..	12	
Nephritis	1	1	2	4	2	3	2	1	1	2	..	19	
Bright's Disease . . . .	..	2	1	..	1	3	9	5	11	4	..	36	
Other Kidney Diseases	..	..	..	..	1	1	1	2	3	..	..	8	
Bladder and Prostate	..	..	..	..	..	..	..	3	7	4	..	14	
													89
Carried forward..	649	648	163	131	146	232	269	320	400	283	80	3321	3321

TABLE OF DEATHS—Continued.

AGES.....	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 and upwards.	Totals.		
Brought forward ..	649	648	163	131	146	232	269	320	400	283	80	3321	3321	
Disease of Uterus....	..	..	..	..	..	..	..	2	..	..	..	2	
Abortion, Flooding ..	..	..	..	2	4	5	..	..	..	..	..	11	
Puerperal Convulsions	..	..	..	2	..	1	..	..	..	..	..	3	
Ovarian Dropsy .....	..	..	..	1	2	1	2	4	..	..	..	10	26
BONES AND JOINTS, &c.														
Caries, Necrosis	1	2	5	6	2	..	1	1	3	..	..	21	
Arthritis, Ostitis ...	..	..	..	..	..	..	..	1	1	..	..	2	
Carbuncle, Phlegmon	..	..	..	..	..	..	..	..	..	..	..	..
Other Skin Diseases..	2	..	..	..	..	..	..	..	1	..	..	3	26
VIOLENCE.														
Accidents and Violence	29	13	11	2	4	8	4	6	3	6	2	88		
Homicide	2	..	..	..	..	..	..	..	..	..	..	2	
Suicide .....	..	..	..	3	2	5	5	1	2	..	..	18	108
ILL-DEFINED CAUSES.														
Dropsy .....	..	..	..	..	..	..	..	1	2	1	..	4	
Debility and Atrophy	132	8	..	..	..	..	..	..	..	..	..	140	
Mortification .....	..	1	..	..	..	..	..	1	4	3	..	9	
Tumour .....	..	..	1	1	..	..	1	..	..	..	..	3	
Abscess	2	1	..	..	..	..	..	..	1	..	..	4	
Hæmorrhage .....	..	..	..	..	..	..	1	..	1	..	..	2	
Sudden Deaths (doubt- ful) .....	..	1	..	..	..	..	..	..	..	..	..	1	
Causes not Specified..	2	..	..	..	..	..	..	..	..	..	..	2	165
Totals	819	674	180	148	160	252	283	337	418	293	82	3646	3646	
Per ceutage ..	22.5	18.5	4.9	4.1	4.4	6.9	7.7	9.2	11.5	8.0	2.3	100		

Streets and other Places Inspected in 1888.			Number of Cases of Epidemic Diseases.				
Name of Street or Road.	Number of Houses Inspected.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Typhus.
Ada street	40	21	..	..	..	..	..
Amherst terrace	9	8	..	..	..	..	..
Anderson road	26	13	..	..	1	..	..
Andrews road	15	12	..	..	..	..	..
April street	21	8	..	..	..	..	..
Arcola street	47	36	..	..	..	..	..
Ash grove	59	34	..	..	..	1	..
Ashton cottages	2	..	..	..	..	..	..
Aveley road.....	22	21	..	1	1	..	..
Antwerp street	27	17	..	..	..	..	..
Bath row	23	19	..	2	..	..	..
Bay street	31	18	..	..	..	..	..
Balcorne street	77	38	..	6	1	..	..
Bentley road	15	14	..	..	..	..	..
Berger road.....	47	22	..	2	..	..	..
Bloomfield street	69	45	..	..	..	..	..
Bower road	22	16	..	7	..	..	..
Bremen street	20	16	..	4	..	..	..
Brett road	17	17	..	..	3	..	..
Brown's place.....	20	18	..	1	..	..	..
Bridge street	24	9	..	1	..	..	..
Caroline cottage.....	15	13	..	..	1	..	..
Caroline street	32	30	..	..	1	..	..
Casterton street	44	6	..	..	..	..	..
Chapman road.....	55	55	..	15	..	..	..
Chalgrove road	90	57	..	8	..	2	..
Church road, Homerton	80	41	..	..	..	..	..
Churchill road.....	60	26	..	..	..	..	..
College lane.....	9	4	..	..	..	..	..
College place	13	7	..	..	..	..	..
College street	49	20	..	2	..	..	..
Comberton road	11	11	..	..	..	..	..
Comberton terrace	12	12	..	..	..	..	..
Clarence cottages	8	2	..	..	..	..	..
Conduit street.....	27	17	..	..	2	..	..
Crescent cottages	6	4	..	..	..	..	..
Crozier terrace	65	26	..	4	..	..	..
Daintry street.....	8	8	..	..	..	..	..
Daley street.....	4	1	..	..	..	..	..
De Beauvoir crescent	43	28	..	..	..	..	..
De Beauvoir square	30	38	..	..	4	..	..
Derby road	34	28	..	..	..	..	..
Detmold road	35	35	..	1	1	..	..
Devonshire place	6	1	..	..	1	..	..
Digby road	86	53	..	2	..	1	..
Dudlington terrace.....	20	8	..	..	..	..	..
Dum's place and cottages	3	3	..	..	..	..	..
Carried forward	1478	936		56	16	4	

Streets and other Places Inspected in 1888.			Number of Cases of Epidemic Diseases.				
Name of Street or Road.	Number of Houses Inspected.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Typhus.
Brought forward	1478	936		56	16	14	
Dunn street	35	29	..	..	..	..	..
Duncan road	32	17	..	..	..	..	..
Duncan square	48	18	..	2	..	1	..
Duncan street	40	34	..	..	..	..	..
Dysell street	26	21	..	2	..	..	..
Essex street	47	22	..	..	..	..	..
Exmouth place	24	15	..	..	..	..	..
Falcon court	7	9	..	..	..	..	..
Felstead street	20	19	..	2	..	..	..
Fenn street	9	2	..	2	..	..	..
Francis terrace	24	5	..	..	1	..	..
Frederick place	6	6	..	..	..	..	..
Gainsborough road	37	37	..	4	1	..	..
Glynn road	134	117	..	1	5	1	..
Goring street	44	32	..	..	..	..	..
Hamburg street	15	7	..	..	..	..	..
Helmsley street	15	9	..	..	1	..	..
Helmsley place	14	12	..	1	..	..	..
Helmsley terrace	15	12	..	..	..	..	..
Hertford road	136	109	..	..	..	..	..
High street, Homerton	154	41	..	..	..	1	..
Hindle street	33	29	..	..	..	..	..
Holly street	125	84	..	2	..	..	..
Homfray street	17	17	..	6	..	..	..
Homerton terrace	40	25	..	..	..	..	..
Hope cottages	2	2	..	..	..	..	..
Isabella road	10	7	..	..	..	..	..
James place, Shacklewell	5	5	..	..	..	..	..
John street	22	12	..	..	..	..	..
Lamb lane	40	14	..	..	..	..	..
Landfield street	41	32	..	4	..	..	..
Larke row	10	5	..	..	..	..	..
Laurel street	19	15	..	..	..	..	..
Lauriston road	126	85	..	1	..	..	..
London place	15	13	..	..	..	..	..
Mallard street	25	25	..	7	..	..	..
Marian street	27	17	..	..	..	..	..
Marlow road	57	31	..	..	..	..	..
Marsh hill	7	7	..	..	..	..	..
Mason's court	3	1	..	..	..	..	..
Carried forward	2984	1935		89	25	8	

Streets and other Places Inspected in 1888.			Number of Cases of Epidemic Diseases.				
Name of Street or Road.	Number of Houses Inspected.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Typhus.
Brought forward	2984	1935		89	25	8	
Mason's place	7	6	..	..	..	..	..
Mayfield road	123	76	..	1	..	..	..
Mehetable road	41	31	..	..	..	..	..
Middle street	5	5	..	..	..	..	..
Millington street	31	27	..	..	..	..	..
Mundford road	20	20	..	..	..	..	..
Montague terrace	14	14	..	1	..	..	..
Montague road	34	34	..	..	1	..	..
Mount pleasant lane	4	4	..	..	..	..	..
Mowlem street	2	2	..	..	..	..	..
Myrtle street	34	14	..	..	..	..	..
New Windsor road	12	12	..	..	..	..	..
Nesbit street	78	46	..	..	..	2	..
North street	76	41	..	1	..	..	..
Northwold road	122	94	..	2	3	..	..
Old Tyssen street	19	18	..	..	..	..	..
Orchard place	46	32	..	..	..	1	..
Osborn road	36	36	..	..	..	1	..
Ottaway street	40	33	..	..	..	..	..
Overbury street	4	..	..	1	..	1	..
Pedro street	28	28	..	3	..	2	..
Perch street	25	17	..	..	..	..	..
Percy terrace	24	24	..	3	..	..	..
Pigwell path	11	8	..	..	..	..	..
Plough lane	7	3	..	..	..	..	..
Prince Edward road	28	27	..	6	..	..	..
Queen's road	163	155	..	1	..	1	..
Red Lion court	2	1	..	..	..	..	..
Rigby's buildings	3	3	..	..	..	..	..
Rosina cottages	19	17	..	..	..	..	..
Rosina street	20	15	..	..	..	..	..
Roseberry place	31	25	..	..	..	..	..
Rochester place	6	1	..	..	..	..	..
Sandford cottages	6	5	..	..	..	..	..
Sandford street	19	14	..	..	..	6	..
Seal street	31	16	..	..	3	..	..
Sedgwick street	47	27	..	..	..	1	..
Shacklewell lane	125	81	..	..	..	6	..
Shacklewell row	37	22	..	..	..	..	..
Sheep lane	64	37	..	1	..	..	..
Shrubland grove	7	4	..	1	1	1	..
Southwold road	69	69	..	..	..	..	..
Carried forward	4504	3079		110	33	30	

Streets and other Places Inspected in 1888.			Number of Cases of Epidemic Diseases.				
Name of Street or Road.	Number of Houses Inspected.	No. of Houses in which Nuisances were found.	Small Pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Typhus.
Brought forward.....	4504	3079	—	110	33	30	—
Southwold terrace	17	5	..	..	2	..	..
Stellman street	22	17	..	..	..	..	..
Stone's buildings	21	9	..	..	3	..	..
Sutton place	6	5	..	..	..	..	..
Suther street	10	7	..	..	..	..	..
Swiss cottages	12	5	..	..	..	..	..
Sydney road	82	39	..	..	..	..	..
Taylor's buildings	1	1	..	..	..	..	..
Templar road	84	44	..	8	1	1	..
Temple street, Dalston	24	20	..	..	..	..	..
Theydon road	25	8	..	..	..	..	..
Tottenham road	95	66	..	..	..	..	..
Tottenham square	7	5	..	..	..	..	..
Trelawney road	39	2	..	..	..	..	..
Triangle road	29	13	..	..	..	..	..
Triangle place	5	2	..	..	..	..	..
Twemlow terrace	9	3	..	..	..	..	..
Tyssen place, Dalston	8	7	..	2	..	..	..
Tyssen passage	15	14	..	..	..	..	..
Tyssen street	8	5	..	..	..	..	..
Urban place	17	9	..	..	..	..	..
Urswick road	3	3	..	..	..	..	..
Victoria road	43	42	..	20	..	1	..
Vyner street	66	44	..	3	..	..	..
Wallis road	13	8	..	1	..	..	..
Warburton road	31	18	..	4	..	..	..
Warburton square	36	32	..	..	..	..	..
Warburton street	6	4	..	..	..	..	..
Wayland avenue	23	23	..	1	..	..	..
Webber's place	3	3	..	..	..	..	..
West street	21	12	..	..	..	..	..
Wharf road	16	6	..	1	4	..	..
White Post lane	11	8	..	1	..	..	..
Wilmot terrace	10	10	..	..	..	1	..
Woodland street	79	64	..	..	..	..	..
Totals	5401	3642	—	151	43	33	—

SUPPLEMENTAL LIST OF STREETS IN WHICH CASES OF
INFECTIOUS DISEASES, OCCURRED IN 1888.

Name of Street or Road.	Number of Houses Inspected.	Small-Pox.	Scarlet Fever	Diphtheria.	Typhoid.	Typhus.
Brought Forward.....	5401	..	151	43	33	—
Albion Road, Dalston	2	..	1	2	1	..
Albion Road, Stoke Newington	1	..	..	..	2	..
Abersham Road	1	..	1	..	..	..
Albion Grove... ..	1	..	1	..	..	..
Alkham Road	2	..	1	1	..	..
Almack Road	2	..	1	1	..	..
Alvington Crescent	2	..	3	..	..	..
Arthur Street	1	..	..	..	2	..
Amhurst Road, Hackney	4	..	6	..	..	..
Ashwin Street	1	..	1	..	..	..
Aspland Grove	1	..	1	..	..	..
Avenue Road, Stoke Newington	1	..	3	..	..	..
Ballance Road	4	..	3	2	1	..
Barretts Grove	2	..	4	1	..	..
Bartrip Street	5	..	9	..	1	..
Benn Street, Hackney Wick	1	..	1	..	..	..
Bentham Road	1	..	..	1	..	..
Blanchard Road	1	..	1	..	..	..
Blanchard Street	1	..	4	..	..	..
Benyon Road.....	2	..	1	..	1	..
Bodney Road.....	1	..	..	..	1	..
Beechholme Road.....	1	..	..	2	..	..
Blurton Road	1	..	1	..	..	..
Bouverie Road	1	..	1	..	..	..
Brook Road	4	..	4	..	2	..
Brunswick Street	2	..	1	1	..	..
Bushberry Road	3	..	5	..	..	..
Cross Street, South Hackney.....	1	..	..	..	1	..
Clapton Square	2	..	1	..	1	..
Clifden Road.....	1	..	..	..	1	..
Clarence Road	2	..	..	..	2	..
Churchyard, Hackney.....	1	..	..	..	1	..
Culford Road	4	..	3	1	..	..
Colenzo Road	1	..	..	3	..	..
Chesholm Road.....	2	..	3	1	..	..
Conduit Place	1	..	..	1	..	..
Clapton Common	1	..	..	1	..	..
Cassland Road	2	..	1	1	..	..
Chatsworth Road.....	1	..	6	1	..	..
Carlton Road	1	..	1	..	..	..
Cannon Street	1	..	1	..	..	..
Church Crescent	1	..	1	..	..	..
Carried forward	5472	0	222	63	50	—

SUPPLEMENTAL LIST OF STREETS, &c., 1888—*continued.*

Name of Street or Road.	Number of Houses Inspected.	Small-Pox.	Scarlet Fever	Diphtheria.	Typhoid.	Typhus.
Brought forward.....	5472	0	222	63	50	—
Cricketfield Road	1	..	1	..	..	..
Church Street, Stoke Newington	1	..	1	..	..	..
Charnock Road.....	1	..	1	..	..	..
Cadogan Terrace	2	..	3	..	..	..
Cleveland Street	1	..	1	..	..	..
Cazenove Road	1	..	2	..	..	..
Christie Road	1	..	1	..	..	..
Clonbrook Road	1	..	1	..	..	..
Cressington Road.....	1	..	1	..	..	..
College Avenue.....	1	..	1	..	..	..
Dagmar Road	3	..	3	..	1	..
De Beauvoir Road	2	..	1	1	..	..
Dalston Lane	1	..	..	..	2	..
Dunlace Road	5	..	5	3	..	..
Durrington Road.....	2	..	1	2	..	..
Darenth Road	1	..	2	..	..	..
Dumont Road	1	..	2	..	..	..
De Foe Road.....	1	..	3	..	..	..
Downs Park Road	1	..	1	..	..	..
Eaton Place	2	..	1	..	1	..
Elderfield Road.....	3	..	4	..	..	..
Elm Terrace, St. Andrews Road	1	..	1	..	..	..
Evering Road	3	..	3	3	..	..
Elmfield House, Clapton	1	..	1	..	..	..
Englefield Road	1	..	1	..	..	..
Fever Hospital, Homerton.....	1	..	..	..	1	..
Fassett Square	1	..	1	..	..	..
Foulden Road	2	..	3	..	..	..
Fleetwood Street	1	..	1	..	..	..
Frederick Terrace.....	1	..	..	1	..	..
Fairholt Road	1	..	1	..	..	..
Fassett Road.....	1	..	1	..	..	..
Forest Road	1	..	1	..	..	..
Gate House, Hackney Marshes.....	1	..	..	..	2	..
Gransden Avenue.....	2	..	2	..	1	..
Greenwood Road	1	..	1	..	..	..
Groomsbridge Road	1	..	1	..	..	..
Glenarm Road.....	5	..	3	3	..	..
Green Lanes	1	..	2	..	..	..
Carried forward.....	5531	0	281	76	58	--

SUPPLEMENTAL LIST OF STREETS, &c., 1888—*continued.*

Name of Street or Road.	Number of Houses Inspected.	Small-Pox.	Scarlet Fever	Diphtheria.	Typhoid.	Typhus.
Brought forward.....	5531	0	281	76	58	—
Gillett Street.....	5	..	12	..	..	..
Grove Passage.....	1	..	1	..	..	..
Gainsborough Cottages.....	4	..	7	..	..	..
Hammond Cottages.....	1	..	..	1	..	..
High Road, Upper Clapton.....	2	..	..	4	..	..
Homer Road.....	1	..	2	4	..	..
Haggerston Road.....	1	..	..	..	1	..
Halidon Street.....	1	..	..	..	1	..
Havelock Road.....	1	..	5	..	..	..
High Street, Stoke Newington.....	1	..	1	..	..	..
Homerton Row.....	1	..	2	..	..	..
Hedgers Grove.....	2	..	2	..	..	..
Hollies, The, Upper Clapton.....	1	..	2	..	..	..
Heathland Road.....	1	..	1	..	..	..
High Street, Kingsland.....	1	..	1	..	..	..
Harcombe Road.....	1	..	1	..	..	..
Ickburgh Road.....	1	..	1	..	..	..
Inver Road.....	2	..	..	2	..	..
Ivy Terrace, Harrington Hill.....	1	..	..	1	..	..
Kynaston Road.....	2	..	1	1	..	..
King Edward Road.....	1	..	1	..	..	..
Knebworth Road.....	1	..	1	..	..	..
Kingsland Road.....	2	..	1	..	1	..
Kenninghall Road.....	1	..	..	1	..	..
Lea Bridge.....	1	..	..	..	1	..
Lavers Road.....	1	..	..	..	1	..
Lordship Road.....	1	..	3	..	..	..
Listria Park, Stoke Newington.....	1	..	2	..	..	..
Linthorpe Road.....	1	..	1	..	..	..
Lansdowne Road.....	1	..	3	..	..	..
Lawley Street.....	1	..	1	..	..	..
Linscott Road.....	1	..	3	..	..	..
Laura Place.....	1	..	..	1	..	..
Maiwand Street.....	2	..	1	..	1	..
Millfield Road.....	2	..	1	..	1	..
McLaren Street.....	2	..	2	..	4	..
Mayola Road.....	1	..	..	1	..	..
Carried forward.....	5583	0	340	92	69	—

SUPPLEMENTAL LIST OF STREETS, &c., 1888—*continued.*

Name of Street or Road.	Number of Houses Inspected.	Small-Pox.	Scarlet Fever	Diphtheria.	Typhoid.	Typhus.
Brought forward.....	5583	0	340	92	69	—
Middlesex Road	1	..	..	1	..	..
Manor Road	2	..	1	2	..	..
Middleton Road	1	..	..	1	..	..
Montague Place, Hackney Wick	1	..	2	..	1	..
Mare Street	1	..	1	..	..	..
Morning Lane	2	..	2	..	..	..
Mandeville Street.....	1	..	1	..	..	..
Median Road	1	..	2	..	..	..
Nevil Road	1	..	2	..	..	..
Osbaldeston Road.....	2	..	3	..	1	..
Old Windsor Road	1	..	2	1	..	..
Olinda Road	1	..	2	..	..	..
Oldfield Road	1	..	2	..	..	..
Oswald Street	1	..	1	..	..	..
Osborne Road	4	..	4	..	..	..
Ottley Terrace	1	..	..	4	..	..
Ottaway Cottages	1	..	..	1	..	..
Pemberton Place	1	..	..	..	1	..
Pembury Grove.....	1	..	..	..	1	..
Poole Road	2	..	..	..	3	..
Prince of Wales Terrace, Lea Bridge	1	..	..	..	1	..
Parkholme Road	1	..	..	..	1	..
Prout Road	1	..	..	2	..	..
Percy Road	2	..	2	..	..	..
Paget Road	2	..	3	..	..	..
Portland Place	2	..	4	..	..	..
Queen Elizabeth's Avenue.....	1	..	2	..	..	..
Queen's Down Road	1	..	2	1	..	..
Retreat Place	3	..	2	1	1	..
Rossington Street.....	2	..	..	3	..	..
Rushmore Road	6	..	9	1	1	..
Richmond Road	3	..	1	2	1	..
Reighton Road.....	3	..	3	2	..	..
Ritson Road	1	..	..	1	..	..
Rayner Street	1	..	2	..	..	..
Roseberry Road	1	..	1	..	..	..
Ridley Road	1	..	1	..	..	..
Carried forward	5642	0	397	115	81	—

SUPPLEMENTAL LIST OF STREETS, &c., 1888—continued.

Name of Street or Road.	Number of Houses Inspected.	Small-Pox.	Scarlet Fever	Diphtheria.	Typhoid.	Typhus.
Brought forward.....	5642	—	397	115	81	—
Rendlesham Road	1	..	1	..	..	..
Rischolme Street	2	..	3	..	..	..
Stockmar Road.....	2	..	1	..	1	..
St. Andrews' Road	1	..	1	..	..	..
Stoke Newington Road	1	..	2	..	..	..
Spurstowe Terrace	1	..	1	..	..	..
Smalley Road	2	..	2	..	1	..
Sandringham Road	2	1	1	..	..	..
Sach Road	2	..	2	1	..	..
Stamford Hill	1	..	4	..	..	..
Summer House Road	1	..	1	..	..	..
Sigdon Road	1	..	..	..	1	..
Southside Terrace	1	..	..	..	1	..
Sydney terrace	1	..	..	3	..	..
Tudor Grove.....	2	..	..	..	3	..
Tudor Place	1	..	1	..	..	..
Tyssen Road.....	1	..	1	..	..	..
Trumans Place	1	..	1	..	..	..
Urswick Road	1	..	1	..	..	..
Ufton Road	1	..	1	..	..	..
Union Road	1	..	..	..	1	..
Upper Kyverdale Road	1	..	1	..	..	..
Victoria Street	1	..	..	..	1	..
Wick Road	2	..	4	..	..	..
Woodberry Down, Stoke Newington	1	..	2	..	..	..
Warwick Villas	1	..	1	..	..	..
West Bank, Stamford Hill.....	1	..	2	..	..	..
Woodland Road	1	..	1	..	..	..
Williams Cottages	1	..	..	..	1	..
Well Street.....	1	..	..	..	1	..
Windsor Road	9	..	10	5	..	..
Winslade Road.....	1	..	..	2	..	..
TOTALS	5689	..	442	126	92	—

NUISANCES ABATED IN 1888.

Cesspools emptied and filled up	3
Choked drains cleansed, repaired or reconstructed ...	819
Number of Premises in which choked Water-closet Pans were released, or broken Pans removed ...	118
Number of Premises in which Yards were drained...	91
Number of Premises in which new Traps were provided	780
Number of Premises in which Sinks were disconnected from the drains	496
Number of Premises in which Stack Pipes were cut off from drains	164
Number of Houses in which the Ventilation of soil pipes has been improved	69
Total number of Nuisances from defective means of drainage abated	2540
Number of Premises in which Yards were newly paved or the paving relaid	524
Number of Premises in which Dust Bins were provided, or old Dust Bins repaired	635
Number of Houses repaired, whitewashed, &c. ...	1921
	<hr/> 3080
	<hr/> 5620
	<hr/> <hr/>
Number of Water-closets to which a supply of water has been given	163
Number of Houses supplied by Closet-cistern in which a Flushing-box was provided	21
Number of Houses supplied by butt only, and Cistern substituted	18
Number of Closets in which defective apparatus was repaired	1241
Number of Screw-down Taps and lengths of Pipe provided to enable occupiers to draw water from the main supply pipe of the house	181
Total number of Nuisances from defects in houses	1624
	<hr/> 7244
	<hr/> <hr/>
Carried forward	7244

	Brought forward	7244
Number of Houses disinfected		274
„ „ Cases of overcrowding abated		29
„ „ Premises from which Pigs and other animals were removed		3
„ „ Premises from which stable dung and other refuse were removed (excluding dust)		63
„ „ Filthy places cleansed		5
„ „ Other Nuisances removed (not included under other headings)	1650	
	—	2024
Total number of Nuisances abated in 1888		9268

Number of Accumulations of Dust specially removed	1287*
„ „ Preliminary Notices served	3387
„ „ Peremptory „ „	1516
„ „ Statutory „ „	486
„ „ Letters sent out	2093
„ „ Persons Summoned before a Magistrate	9
„ „ Copies of Summonses and Orders made out	27
„ „ Bodies deposited and taken to the Mortuary	113
„ „ Houses from which Bedding, &c., was removed to be disinfected at the Board's apparatus	274
Articles disinfected at the Board's apparatus ..	1140
Disinfectants supplied to the Poor ..	(pkts.) { 906
	(botts.) { 133
Fish Condemned unfit for human food (pads) ..	23

* Many persons send requests here for removal of dust instead of placing the D cards in the window. All these, as well as complaints of non-removal, are included in the above.

PREMISES INSPECTED DURING THE YEAR 1888.

Number of Houses inspected under the Sanitary Act, 1866, and Nuisances Removal Acts	...	5401
„ „ Houses visited in which infectious diseases had appeared	.. .. .	288*
„ „ Premises inspected from complaints received		1056
„ „ Cowsheds inspected—(premises)	.. ..	61
„ „ „ „ (sheds)	.. ..	85
„ „ Slaughter-houses inspected..	.. ..	42
„ „ Greengrocers' yards inspected	.. ..	145
„ „ Fishmongers' and Poulterers' yards inspected	.. .. .	73
„ „ Bake-houses inspected	.. .. .	127
„ „ Urinals inspected	.. .. .	86
„ „ Gut Dressers removed	.. .. .	3

* There were 433 cases of various diseases in the 288 premises.

NUMBER OF NUISANCES ABATED

IN THE FOLLOWING YEARS:

In 1856	...	1567	In 1873	...	5406
1857	...	1789	1874	...	6110
1858	...	2515	1875	...	6262
1859	...	1224	1876	...	6445
1860	...	1267	1877	...	6257
1861	...	2481	1878	...	5912
1862	...	1235	1879	...	5468
1863	...	1996	1880	...	5720
1864	...	1410	1881	...	12055
1865	...	1512	1882	...	13753
1866	...	4260	1883	..	11054
1867	...	5811	1884	...	11837
1868	...	3923	1885	...	10651
1869	...	4354	1886	...	9047
1870	...	4240	1887	...	9698
1871	...	5180	1888	...	9268
1872	...	3099			

THE HISTORY OF THE CITY OF LONDON

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NUMBER OF YEARS IN THE FOLLOWING YEARS:

1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100
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