

[Report of the Medical Officer of Health for Whitechapel].

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Whitechapel (London, England). Board of Works.

Publication/Creation

1878.

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BOARD OF WORKS,

WHITECHAPEL DISTRICT.



REPORT

ON THE

Sanitary Condition

OF THE

WHITECHAPEL DISTRICT,

FOR THE

QUARTER ENDED JUNE 29TH, 1878,

BY JOHN LIDDLE,

MEDICAL OFFICER OF HEALTH.

London:

PENNY & HULL, STEAM PRINTERS, 121, LEMAN STREET, WHITECHAPEL, E.

1878.

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REPORT

OF THE

MEDICAL OFFICER OF HEALTH

For the Quarter ended 29th June, 1878.

TO THE BOARD OF WORKS, WHITECHAPEL DISTRICT.

GENTLEMEN,

In the Quarter that ended on Saturday, the 29th June, 1878, the total births in the District were 671, viz.: 327 males and 344 females; and the deaths 622, viz.: 353 males and 269 females. The excess of births over deaths has therefore been, during this Quarter, 49. As the deaths of 120 non-residents, which occurred in the London Hospital, are included in the mortality returns, a deduction of such deaths must be made in order to estimate the correct mortality of the District, thereby reducing the total mortality to 502, and increasing the number of births above deaths to 169. An allowance, however, must be made for the deaths of residents in public institutions outside the District; but of those I have no return. In the corresponding Quarter of the previous year the total births were 691, and the total deaths 655.

In the Spitalfields sub-District the births were 195, and the deaths 94; in the Mile End New Town 170, and the deaths 183; in the Whitechapel North 124, and the deaths 52; in the Whitechapel Church 59 and 206 (in this sub-District the London Hospital is situated); in the Goodman's Fields 83 and 52; and in the Aldgate 40 and 35. The deaths have exceeded the births in the Whitechapel Church District by 147, but from this number the deaths of the 120 non-residents must be deducted. The proportion of births to deaths is therefore 59 to 86.

The deaths in the London Hospital have been 177. In the corresponding Quarter of the previous year the deaths in this Institution were 176.

The deaths in the Workhouse have been 100. In the corresponding Quarter of last year they were 78.

The deaths from epidemic diseases in the entire District have been 50; viz.: 3 from small-pox (to which must be added 4 which occurred in the hospital), 5 from measles, 4 from scarlet-fever, 1 from diphtheria, 24 from hooping-cough, 8 from diarrhoea, and 5 from fever (to which must be added

3 which occurred in the Fever Hospital). The total deaths from epidemic diseases have therefore been 57. The residences of these patients who died in the hospital from small-pox were 47, Queen Ann Street, 22, Great Garden Street, 31, Upper East Smithfield, and 4, Pool's Square. The residences of the patients who died from fever were 86, Wheeler Street, 1, Angel Alley, and 6, Underwood Street.

In the corresponding Quarter of the previous year, the deaths from epidemic diseases were 86; viz.: 4 from small-pox, 44 from measles, 3 from scarlet-fever, 1 from diphtheria, 15 from hooping-cough, 17 from diarrhoea, and 2 from fever. In addition to the 4 deaths from small-pox there must be added 6 which occurred in the Small-pox Hospital, thus making a total of 10 deaths from small-pox for that Quarter. The total deaths from epidemic diseases were therefore 92.

MORTALITY OF YOUNG CHILDREN.

The mortality of children under 1 year of age was 115. This is 16.8 per cent. of the total mortality. In the corresponding Quarter of the previous year it was 20.8 per cent. In the Spitalfields sub-District the rate is 34.0 per cent.; in the Mile End New Town 15.8 per cent.; in the Whitechapel North 36.5 per cent.; in the Whitechapel Church 3.4 per cent.; in the Goodman's Fields 34.6 per cent.; and in the Aldgate 28.5 per cent. The difference in the rate of mortality of young children in the Mile End New Town and Whitechapel Church sub-Districts is thus explained:—in the former the Workhouse is situated, and in the latter the London Hospital; in both these institutions the children under 1 year bear only a small proportion to the adults.

The total deaths under 5 years are 206; which shows a rate of mortality of 33.1 per cent. in relation to the total deaths, including those of non-residents, and 30.7 per cent. to the total births. The rate of mortality under 1 year, in relation to the total births, is 17.1 per cent.

In the last annual report of the Registrar General, it is stated that the proportional number of deaths of children under one year of age, from all causes, to 1000 births registered in London in the year 1876, was 157, and for England and Wales 146. The death rate of children under 5 years of age in England was 63.0 per 1000 of population, and in London 73.0 per 1000.

PAUPER ILLNESS IN THE DISTRICT.

The Medical Officers of the Union have attended, during the past Quarter, 745 new cases of illness out of the Workhouse; including 21 of small-pox, 2 of measles, 1 of scarlet-fever, 5 of hooping-cough, 11 of diarrhoea, 29 of febricula, 2 of fever, and 1 of erysipelas. In the corresponding Quarter of the previous year the number of pauper cases of illness

was 569; including 27 of small-pox, 19 of measles, 12 of hooping-cough, 6 of diarrhoea, 26 of febricula, and 2 of erysipelas. The total number of cases of illness in the Workhouse has been 902; including 2 of small-pox, 1 of measles, 2 of hooping-cough, 10 of diarrhoea, 16 of febricula, and 3 of fever. In addition to the above cases there were 29 of syphilis; thus making a total of 931.

I may here observe that the 21 cases of small-pox which are recorded in the books of the Medical Officers of the Union give only a portion of the cases which have occurred in the District; for the Sanitary Officers have received information of 26 cases which were attended by private medical practitioners; and it appears, from the returns which have been kindly sent to me by Mr. VALLANCE, that 49 patients were removed to the Metropolitan Small Pox Hospital during this Quarter from the District, of which number 4 died. Ten patients, suffering from fever, were sent to the Metropolitan Fever Hospital during the same period, 3 of whom died.

All the rooms in which patients have suffered, either from fever, scarlet-fever, or small-pox, which were reported to the Sanitary Officers, have been disinfected.

The Committee of the London Hospital have kindly forwarded to me the following return of Medical Cases, from this District, admitted into the Hospital for the Quarter ended 25th March, 1878:—

WHITECHAPEL DISTRICT.

OCCUPATIONS. MALES.	Total No. of Cases.	Fatal Cases.	General Diseases, Class I.	General Diseases, Class II.	Arthritic Diseases.	Diseases of Nervous System.	Diseases of Vascular System.	Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Urinary System.	Zymotic Diseases.
Labourer, in-door—Heavy Work ..	1					1					
„ „ Light Work ..	11	1	1		2	3	1	3	1		
„ out-door—Heavy Work ..	16	1		1	2			8	3	2	
„ „ Light Work ..	3	1							3		
Seamen											
Poisonous or injurious ..	3				1	1			1		
Professional	1					1					
Clerks											
Children and persons of no occupation	13	2	1	1	1	5	1	3	1		2
Total No. of cases	48		2	2	6	11	2	14	9	2	2
Fatal cases		5	1	1				1	2		1

WHITECHAPEL DISTRICT—Continued.

OCCUPATIONS. FEMALES.	Total No. of Cases.	Fatal Cases.	General Diseases, Class I.	General Diseases, Class II.	Arthritic Diseases.	Diseases of Nervous System.	Diseases of Vascular System.	Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Urinary System.	Diseases of Generative Organs.	Zymotic Diseases.
Domestic	30	4	2		4	3	2	6	4		9	1
In-door Trades ..	32		4	2	4	3		8	6	1	4	3
Out-door Trades ..												
Poisonous or injurious												
Professional												
Children and persons of no occupation	5							3	2			
Total No. of cases	67		6	2	8	6	2	17	12	1	13	4
Fatal cases		4				1	1	2				

“General Diseases, Class I.” embraces measles, scarlet fever, typhus fever, enteric fever, cerebro-spinal meningitis, pyæmia, ague, erysipelas, puerperal fever, acute tuberculosis, pyrexia (from undetermined causes).

“General Diseases, Class II.” embraces purpura, scurvy, scrofula, rickets, anæmia, cancer, syphilis, diabetes, general dropsy, &c.

FRANCIS WARNER, M.D., *Medical Registrar.*

Return of fever and small-pox cases received into the Infirmary of the Workhouse for the three months ended Saturday, 29th June, 1878.

TABLE showing the Localities from which the Patients were received into the Infirmary of the Workhouse, and other particulars relating to them.

Class and description of Fever.	Previous Residence.	Date of admission into Infirmary.	Date of admission into Hospital.	Length of time in the Infirmary before appearance of Fever.	Whether or not Patients had Fever on admission.
Enteric	12, Thrawl-st., Spitalfields.	April 6	April 8	1 day	No
Typhus	1, George-st., Spitalfields...	June 17	June 19	2 „	„
Enteric	6, Queen-st., Tower-hill ...	„ 19	„ 20	On admission	Yes
Small-pox....	Refuge, Crispin-st. No residence.	Apl. 24	Apl. 24		
Small-pox	Girl aged 13 yrs. Had walked the streets the whole previous night with her mother and sister, and came to the door of the Workhouse at 10.30 p.m. with the eruption fully out.	June 25	June 25		

METEOROLOGY OF GREENWICH.

The Returns of the Registrar-General show that the rain-fall in the Metropolis, during the Quarter, has been 12.43 inches. One inch deep of rain-fall on an acre weighs (allowing 10-lbs. to a gallon, which is the weight of a gallon of distilled water) nearly 101 tons. During the corresponding Quarter of last year the rain-fall was 5.26 inches. The mean temperature of the air was 54.3°. In the corresponding Quarter of last year it was 51.8°. The hottest days during the Quarter were Monday, the 24th June, Wednesday, the 26th June, and Thursday, the 27th June, when the thermometer indicated respectively 84.4°, 85.8°, and 85.4°. The hottest day during the corresponding Quarter of last year was on Friday, the 29th June, when the thermometer indicated 85.1°.

TABLE OF WEEKLY MORTALITY, &c., IN LONDON AND IN THE
WHITECHAPEL DISTRICT.

The following Table, taken from the Returns of the Registrar-General, shows the comparative results of the Quarter:—

WEEK ENDING	DEATHS IN LONDON.				DEATHS IN WCHPL. DISTRICT		Rain- fall. Inches.	Mean Tem- perature of the air. Degrees
	Diarrhœa.	Fever.	Small-pox	From all causes.	From Small- pox.	From all causes.		
Apl. 6	9	29	55	1877	1	50	0.38	40.4
" 13	14	32	58	1895	1	62	2.85	46.0
" 20	18	26	80	1773	0	42	0.73	51.5
" 27	11	24	63	1661	0	55	0.20	51.2
May 4	23	29	60	1545	1	52	0.66	55.5
" 11	7	14	48	1383	0	30	2.10	56.7
" 18	21	22	48	1380	0	63	0.63	58.0
" 25	16	20	43	1381	0	35	0.81	51.8
June 1	20	15	40	1419	0	45	0.39	52.7
" 8	25	22	42	1481	0	58	0.80	57.1
" 15	21	22	24	1300	0	33	1.28	55.7
" 22	23	19	19	1391	0	43	0.99	59.0
" 29	72	19	38	1570	0	54	0.61	70.7

VACCINATION.

WHITECHAPEL UNION.—Return of the number of Cases Vaccinated by the Public Vaccinator and the Medical Officer of the Workhouse, together with the number of Births Registered during the same quarters.

QUARTER ENDING—	PUBLIC VACCINATOR.		WORKHOUSE.		TOTALS.		BIRTHS REGISTD.
	Primary Cases.	Re-Vacci- nation.	Primary Cases.	Re-Vac- cination	Primary Cases.	Re-Vacci- nation.	
September, 1876 ...	354	0	40	0	394	0	644
December	347	201	41	0	388	201	714
March, 1877	408	500	37	27	445	527	757
June	382	5	24	1	406	6	696
September	336	—	26	—	362	—	607
December	241	3	32	—	273	3	704
March, 1878	288	13	29	—	317	13	688
June	443	5	46	—	489	5	672
TOTALS	2799	727	275	28	3074	755	5482

From the above table it appears that a much larger number of children have been vaccinated by the Public Vaccinators during this quarter than in the preceding one. The number vaccinated in relation to the births, being 72.7 per cent., whereas in the preceding quarter it was only 46 per cent., or 26.7 per cent. less than in the present quarter.

It is estimated that of the number of children born in this district, 7.5 per cent. die before they are three months old, and probably 3 per cent. are ill and not in a condition to be vaccinated, and perhaps 1 or 2 per cent. remove from the district. We cannot expect to find that more than 86 or 87 per cent. of those born will be vaccinated within the district. If, therefore, the Public Vaccinators vaccinate 70 per cent. of the children born in the district, it will show that good attention has been given to the subject by the Vaccination Officer; for a considerable number of children are always vaccinated by private practitioners.

In a former report I alluded to the desirability of vaccination being performed only by the Public Vaccinators; but if private practitioners will continue to vaccinate, then it should be made imperative upon them to state in the certificate of successful vaccination the number of cicatrices; and no case should be considered as successful unless there are at least three good marks or cicatrices. To the above remarks I will only add that no person, unless duly registered as a medical practitioner, should be allowed to vaccinate. If it were made, which it ought to be, a statutory offence for a person not qualified by law to practice, to perform the opera-

tion of vaccination, a stop would soon be put to this baneful practice which I believe is to some extent carried on in London.*

That vaccination is badly performed, the following table, which has been prepared from the weekly returns of the Registrar General, clearly shows; for it appears that out of 618 deaths from small pox, which occurred in the quarter ended on Saturday, 29th June, 1878, 135 or 21.8 per cent. took place after vaccination; whereas, if these patients had been properly vaccinated, only 1 per cent. of such persons attacked with the disease would have died. We learn from the tables prepared by the late Mr. Marson, the resident Medical Officer of the Small Pox Hospital at Highgate, that the rate of mortality from small pox among persons who have been properly vaccinated is under 1 per cent.; and from the statistics of small pox as prepared by the resident Medical Officer of the Homerton Hospital, in his report for the year 1877, the statement made several years ago by Mr. Marson is confirmed.

DEATHS FROM SMALL-POX IN LONDON,
During the Quarter ended 29th June, 1878.

Certified as Vaccinated.	Certified as Unvaccinated.	Not stated as to Vaccination in Medical Certificate.	TOTAL DEATHS.
135	296	187	618

The failures of vaccination to prevent fatal small pox is stated upon the high authority of Dr. Munk and the late Mr. Marson, to be generally due to the careless and imperfect manner in which the operation has been performed.

Dr. McCann in his report made a few years ago to the committee of management of the Stockwell Fever and Small Pox Hospitals, states that not more than 20 per cent. of all cases admitted into the Hospital bore cicatrices of vaccination undoubtedly genuine.

From the summary prepared by Dr. Collie, from the very elaborate tables contained in the report of the Small Pox Hospital at Homerton, for the year 1866-7, it appears that the unvaccinated died at the rate of 53 per cent., the badly vaccinated at the rate of 26 per cent., that the fairly well vaccinated died at the rate of 2.3 per cent., and that but one death occurred in any person under 16 years who showed two good cicatrices of vaccination, and that after 16 *only three* such persons died. For further particulars respecting the statistics of vaccination and small pox, see reports for the quarters ending December 1858, December 1870, April 1870, and June 1871.

* See Report for April, 1859, p. 5.

The following Table is continued from my last Quarterly Report, and exhibits the weekly progress in London of the existing epidemic of Small-pox, and that of 1870-71 in the corresponding weeks:—

1876-7.		Deaths	1877-8.		Deaths	1870-1.		Deaths	1871-2.		Deaths
Week ending			Week ending			Week ending			Week ending		
July	8	13	1877			July	9	13	1871		
"	15	2	July	7	23	"	16	11	July	15	133
"	22	8	"	14	32	"	23	15	"	22	135
"	29	7	"	21	35	"	30	11	"	29	132
Aug.	5	1	"	28	27	Aug.	6	15	Aug.	5	87
"	12	9	August	4	22	"	13	11	"	12	96
"	19	5	"	11	20	"	20	10	"	19	80
"	26	10	"	18	21	"	27	11	"	26	82
Sept.	2	8	"	25	11	Sept.	3	9	Sept.	2	78
"	9	5	Sep.	1	20	"	10	12	"	9	81
"	16	6	"	8	8	"	17	11	"	16	57
"	23	11	"	15	10	"	24	15	"	23	89
"	30	15	"	22	10	Oct.	1	13	"	30	51
Oct.	7	11	"	29	13	"	8	27	Oct.	7	72
"	14	16	Oct.	6	14	"	15	13	"	14	61
"	21	22	"	13	14	"	22	17	"	21	53
"	28	15	"	20	8	"	29	21	"	28	61
Nov.	4	21	"	27	14	Nov.	5	23	Nov.	4	61
"	11	48	Nov.	3	9	"	12	40	"	11	54
"	18	52	"	10	25	"	19	45	"	18	76
"	25	43	"	17	14	"	26	41	"	25	67
Dec.	2	67	"	24	27	Dec.	3	60	Dec.	2	78
"	9	50	Dec.	1	31	"	10	61	"	9	104
"	16	75	"	8	25	"	17	44	"	16	106
"	23	97	"	15	81	"	24	82	"	23	90
"	30	75	"	22	31	"	31	110	"	30	97
1877			"	29	29	1871			1872		
Jan.	6	116	1878			Jan.	7	79	Jan.	6	91
"	13	100	Jan.	5	26	"	14	135	"	13	90
"	20	79	"	12	35	"	21	188	"	20	93
"	27	86	"	19	51	"	28	157	"	27	90
Feb.	3	103	"	26	34	Feb.	4	196	Feb.	3	52
"	10	90	Feb.	2	38	"	11	211	"	10	68
"	17	72	"	9	55	"	18	218	"	17	48
"	24	104	"	16	47	"	25	227	"	24	53
March	3	84	"	23	39	March	4	213	Mar.	2	52
"	10	96	March	2	54	"	11	194	"	9	49
"	17	100	"	9	34	"	18	185	"	16	42
"	24	76	"	16	53	"	25	205	"	23	48
"	31	86	"	23	42	April	1	192	"	30	55
April	7	78	"	30	48	"	8	214	April	6	65
"	14	60	April	6	55	"	15	265	"	13	49
"	21	68	"	13	58	"	22	276	"	20	48
"	28	89	"	20	80	"	29	261	"	27	41
May	5	54	"	27	63	May	6	288	May	4	62
"	12	78	May	4	60	"	13	232	"	11	39
"	19	70	"	11	48	"	20	267	"	18	54
"	26	69	"	18	48	"	27	257	"	25	54
June	2	61	"	25	43	June	3	229	June	1	37
"	9	58	June	1	40	"	10	245	"	8	27
"	16	55	"	8	42	"	17	240	"	15	37
"	23	44	"	15	24	"	24	232	"	22	26
"	30	44	"	22	19	July	1	235	"	29	43
			"	29	38	"	8	164			

From the above Table it appears that the epidemic of small pox, which has now continued upwards of two years, although greatly diminished in severity, has not entirely left the Metropolis.

HOSPITALS FOR THE RECEPTION OF PERSONS OF THE NON-PAUPER CLASS
SUFFERING FROM CONTAGIOUS DISEASES.

The present time, owing to the comparative freedom of the metropolis from epidemic disease, is most opportune for considering the best mode of providing accommodation for persons of the non-pauper class suffering from fever, small pox, scarlet fever, diphtheria, or cholera, and who cannot be treated at their respective homes without endangering the health of the surrounding neighbourhood.

The pauper class is amply provided for in the existing hospitals under the supervision of the Metropolitan Sick Asylums Board, but that class of patients who are able to pay for such accommodation as a hospital only can give, are unable to obtain admission therein, except under such disadvantageous circumstances as persons, in tolerably good position, are unwilling to be placed. Persons can only avail themselves of the advantages of the Asylum Board Hospitals by making themselves paupers; and they must be sent thither by the Relieving Officer of the district. Such a degradation, as is implied by becoming a pauper, we have no right to inflict on any one, purely because such person has the misfortune to be attacked with a contagious or infectious disease. The law therefore, before it can be applied without injustice, must be so amended as to render the mere admission and treatment of a patient in an asylum hospital not an act of pauperism, and shall not, from that circumstance, disqualify a person from exercising his right of citizenship.

The matter of non-pauper hospital accommodation is certainly of grave importance, and I am glad to find that public attention has recently been directed to it. I trust that during the next session of Parliament power will be given by an Act to enable the local authorities to contract with the Asylums Board for the admission of patients into the hospitals under their management, at such a rate of payment as will leave little or no margin upon which to hang a suggestion of pauperism. A non-pauper patient may be thus defined—a patient who is both able and willing to pay for hospital treatment, and only requires to be informed where he can obtain it upon payment. A pauper may be defined as one who requires relief in the form of hospital treatment and cannot pay for it. Accepting this definition it will be readily perceived how very small a proportion of the sufferers during an epidemic are non-paupers.

Then the next question comes in what way is it expedient that hospital accommodation should be provided for the non-pauper cases? In this district, under pressing circumstances, a temporary hospital for the recep-

tion of non-pauper small-pox cases was fitted up, but I cannot say that it was a success from an administrative point of view; and I do not think that the proposal to create combined districts and district hospitals, with newly constituted authorities, would be attended with success.

It appears to me that the simple course is for the Local Boards to ask the Local Government Board to promote a Bill to enable local authorities to send, upon adequate payment, non-pauper cases to non-pauper wards in existing metropolitan hospitals. It cannot be too strongly urged upon the public generally that in all cases of infectious disease, and particularly of small-pox, that the isolation of the patient should be the first consideration; and, whenever a patient cannot be properly isolated in his own residence, he should be removed to a hospital. It happens occasionally that not only does the patient object to be removed, but unfortunately the medical practitioner in attendance on the case likewise objects, the result of which is that the patient is kept at home, and the disease spreads far and wide in the locality. This ought not to be, and would not occur if all persons felt a due regard to the public health.

It will be seen from the following resolutions which were agreed to at a meeting of the Medical Officers of Health, which was held in the spring of 1877, that they had considered this important subject:—

“That such provision could be best made in a comprehensive and systematic manner by one central authority acting for the whole metropolis, not only for pauper patients, but for other classes desirous of hospital accommodation.”

“That such central authority should not be merely a Department of Poor Law Administration, but should have the powers of the Sanitary Acts conferred upon them.”

“That either the Metropolitan Asylum Board should be merged into such central authority, or should itself be that authority; in which case its constitution should be altered and adapted to its enlarged duties and responsibilities.”

It will be seen on referring to my report for March 1877, that the subject of providing Hospital accommodation for the reception of those persons suffering from infectious diseases, and who are willing to pay for the accommodation, was discussed.

BAKEHOUSES.

In my report for the quarter ended 28th September, 1872, I directed the attention of the Board to the general condition of the bakehouses in the

district; and from the unsatisfactory result of my inspection of them, I expressed a very decided opinion that before any building, or part of a building, could be legally used for baking bread or confectionery, such building, or part of a building, should be annually licensed by the magistrates in a similar manner to cow-houses and slaughter-houses; and, if any bakehouse is found to be so badly constructed as to be neither fit, nor capable of being made fit, for the purpose, such bakehouse should not be licensed, and the further use of such place for the baking of bread, or the making of confectionery, should be prohibited.

I have again to direct the attention of the Board to this subject, in consequence of the discovery that in several localities premises utterly unfit for the purpose are so occupied. Thus, on inspection it was found that an underground room, or cellar, at No, 43, Fashion-street, was used as a bakehouse, and was occupied by a woman as a sleeping apartment. This woman, who was a Jewess, had recently arrived from Poland, and had six days before the Inspector's visit given birth to a male child, upon whom, within two days, the operation of circumcision was to be performed; an operation, even when performed in a healthy atmosphere, is not always free from danger to the life of the child. This bakehouse had only been in use as such for about six weeks. The oven is erected in the centre of the cellar, the height of which is about 6 feet and is badly ventilated. It was ascertained that the process of making and baking bread had been carried on all the time the woman was living there. The heat of the place was most oppressive. It was ascertained that the husband of the woman and her father had both slept in the little shop upstairs where the bread was exposed for sale.

At No. 124 Wentworth-street, an underground room used as a bakehouse was found, in which there was an oven in the middle of the room; the top of the oven is only one foot from the joists of the floor above.

At No. 140, Wentworth-street, the oven is nearly in the centre of the room, and is 11 feet long, 8 feet 6 inches wide, and 6 feet high. One end of this bakehouse has a window which opens upon the public privies and dustbins in Marlborough-court, the smell from which is very offensive.

The heat arising from the ovens and furnaces in these bakehouses is suffocating, and from the want of ventilation renders not only the bakehouse unfit to be used for the making of bread, but likewise renders the upstairs rooms of the house unfit for habitation. It was found that the joists of the floors above the oven in each of the underground rooms were so hot as to indicate danger from fire.

Under the circumstances just mentioned I again suggested that the system of licensing should be resorted to, if possible; and that suggestion

is now under consideration, and will probably lead to a communication with the Metropolitan Board on the subject.

NUISANCE ARISING FROM THE DISCHARGING OF HOT WATER CONTAINING
SULPHURIC ACID INTO THE SEWERS FROM THE REFINERY PREMISES
IN ROYAL MINT STREET.

A complaint having been made at the office of the Sanitary Department respecting the escape of an irritating and offensive vapour from the ventilating shafts of the sewers in the neighbourhood of Royal Mint-street, inquiries were instituted, when it was ascertained that a large tank which had contained sulphuric acid had been recently cleansed with hot water, and discharged into the drains which communicate with the sewer, and which was the cause of the nuisance complained of. The matter was reported to the Board, and the Clerk was directed to write to the Manager of the Works in question, directing his attention to the danger likely to arise to the public health from such a proceeding.

I may here state that I have on several occasions brought the subject of the danger arising from the discharging of hot water into the sewers under the notice of your Board (see my Reports for January, 1858, page 9, and January, 1864, page 9), but I find that I have made no record of the accident which occurred on Friday, the 2nd of August, 1872, to two men in your employ, by the blowing off of the steam from a boiler on the premises of the late Sir Anthony Rothschild into the sewer in Royal Mint-street during the time the men were engaged in cleansing the sewer. This case was investigated by Mr. Iron, the Surveyor, and reported by him to your Board.

It appears from Mr. Iron's report, that, at the time of the escape of steam into the sewer, there were three men therein, who were engaged in cleansing the same. One of the men fortunately escaped without injury, another received a severe shock to the system, and the third man, named Oxley, was so severely scalded as to necessitate his immediate removal to the London Hospital.

On the 14th of the November following Mr. Iron again reported as follows:—

“With reference to the accident which occurred in Royal Mint-street in August last, I beg to report that the man most injured is not at present able to resume work, and that another of the men injured, although at work, I believe to be still suffering from the shock.”

Respecting the general question of "blow off of boilers," or discharging steam into the public sewers, it is not only dangerous to the persons whose avocations compel them to be in the sewers, but it is dangerous to the public health, by setting free suddenly into the atmosphere large volumes of deleterious gases which are always present in the sewers.

The principal portion of such foul air by being driven up the various drains connected with the sewers, doubtless finds its way into the houses, thereby causing great discomfort and ill-health to the occupants of such houses.

These evils can only be remedied by altogether prohibiting the discharge of steam, or hot water, into the public sewers.

On the reading of the Surveyor's report, the Board resolved that notices be issued and circulated in the district prohibiting the discharge of steam into the public sewers. I may add that compensation was given to Oxley by Sir Anthony Rothschild for the injuries he had sustained.

ADULTERATION OF FOOD ACT.

Mr. Wrack reported to the Board that he had submitted to Dr. Tidy for analysis six samples of milk, out of which four were found to be adulterated with water in the following proportions, viz. :—one in proportion of 17.9 per cent., one 19.6 per cent., one 20.8 per cent., and one 21.3 per cent. Summonses were taken out against the several parties, and a conviction in each case was obtained. One of the parties was fined 20s. and costs, two were fined 10s. and costs, and the fourth was fined £10 and costs. This last party had been summoned in 1873 for a similar offence, and was fined in the penalty of £5 and costs.

SANITARY WORKS PERFORMED DURING THE QUARTER ENDED 29th JUNE, 1878.

The following return shows the amount of work done by the Sanitary Inspectors during the Quarter ended 29th June, 1878 :—

Number of inspections of houses as shown in the official returns ..	2945
Houses specially visited	335
Houses specially re-visited	1172
Preliminary notices served, such notices embracing 294 premises ..	185
Compulsory orders issued, embracing 140 premises	66
Summonses heard at Police Courts, under Sanitary Act	5
" under Act for the prevention of Adulteration of Food, &c.	4

Cellars used as dwellings discontinued for such use	2
Cases of overcrowding and indecent occupation abated	3
Houses in which rooms or passages have been whitewashed	171
Rooms disinfected with sulphurous-acid gas, after the occurrence of small-pox, fever, and scarlet-fever therein	64
Articles disinfected in rooms, consisting of beds, bedding, clothing, &c.	630
Yards of houses paved, or the pavement repaired	38
Drains in houses improved	46
Dust-bins provided	12
Privies lime-washed, cleansed and repaired	114
Water supply provided or improved	22
Nuisances from dung, and other offensive matter removed	23
Area gratings, cellar flaps, &c., repaired	5
Animals kept so as to be a nuisance removed	3
Cesspools abolished	0

The cow-houses in the District, 28 in number, and the slaughter-houses 14, have been visited during the Quarter.

The bake-houses, 74 in number, have also been visited.

In addition to this return, the Inspectors report that they have forwarded to the Metropolitan Board of Works several notices of dangerous structures, which notices the Metropolitan Board have promptly attended to.

I am, GENTLEMEN,

Your obedient Servant,

JOHN LIDDLE.

15, *Great Alie Street.*

APPENDIX.

TABLE I.—Cases of Sickness of the Zymotic and Acute Classes, which are recorded in the Books of the Medical Officers of the Union, for the Three Months ended on the 29th June, 1878.

Names of Medical Officers.	Small-Pox.	Measles.	Scarlatina.	Hooping-Cough.	Diarrhoea.	Cholera and Choleraic-Diarrhoea.	Continued Fever, Typhus & Typhoid.	Febricula.	Pyæmia.	Erysipelas.	Puerperal Fever.	Croup.	Acute Pulmonary Inflammation.		Carbuncle.	Rheumatic Fever.	Ague.	Dysentery.	Delirium Tremens.	Lead Poisoning.	All other Diseases.	TOTAL.
													Bronchitis and Catarrh.	Pleuritis and Pneumonia.								
Dr. Swyer.....	6	0	0	0	1	0	2	6	0	0	0	0	12	6	0	3	0	0	1	0	111	148
Mr. Champneys	5	0	0	4	3	0	0	5	0	0	0	0	53	1	0	6	0	0	0	2	245	324
Mr. Sequeira ...	3	0	0	0	5	0	0	2	0	1	0	0	4	1	0	3	0	0	0	0	34	53
Mr. H. Braye ...	4	0	1	1	1	0	0	8	0	0	0	1	13	3	0	1	0	0	0	1	98	132
Mr. Loane	3	2	0	0	1	0	0	8	0	0	0	0	11	1	0	8	0	0	0	0	54	88
TOTALS	21	2	1	5	11	0	2	29	0	1	0	1	93	12	0	21	0	0	1	3	542	745
Corresponding Qr. of previous Year.	27	19	0	12	6	0	2	26	0	2	0	1	90	10	0	10	1	0	0	5	358	569
Workhouse Mr. J. J. Ilott.	2	1	0	2	10	0	3	16	0	8	0	0	103	20	4	86	0	0	9	2	636	902

In addition to the cases attended by Mr. Ilott in the Workhouse, there were 29 cases of syphilis.

TABLE II.

Showing the Deaths from Epidemic Diseases for the Three Months ended
29th June, 1878.

Sub-districts.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Hooping-Cough.	Diarrhoea.	Fever.	Cholera & Choleraic Diarrhoea.	Total.	Remarks.
Spitalfields	0	1	0	0	7	1	0	0	9	
Mile End New Town	1	0	2	0	5	2	2	0	12	Workhouse.
Whitechapel North.....	0	0	0	0	5	2	0	0	7	
Whitechapel Church	0	0	1	1	2	0	1	0	5	Hospital.
Goodman's Fields.....	1	1	0	0	4	3	2	0	11	
Aldgate.....	1	3	1	0	1	0	0	0	6	
Totals	3	5	4	1	24	8	5	0	50	
Deaths from Epidemics for the corresponding Quarter, 1877.	4	44	3	1	15	17	2	0	86	

Four deaths from small-pox of patients belonging to this District occurred in the Small-Pox Hospital at Homerton, and three deaths from fever occurred in the Fever Hospital; thus making 7 deaths from small-pox and 8 from fever.

TABLE III.

Showing Sub-districts, Enumerated Population, Total Births, and Deaths from all causes—Deaths under 1 year of age, 1 and under 5 years, and above 60 years; Deaths from Violence, Inquest cases, and Deaths in Workhouse and London Hospital, for the Quarter ended 29th June, 1878.

Sub-districts.	Enumerated Population in 1871.	Births.	Deaths.	Under 1 year of age.	1, and under 5 years.	Persons aged 60 years and upwards.	Violence.	Inquest cases.	Deaths in Public Institutions.
Spitalfields	22499	195	94	32	19	22	11	18	4
Mile End New Town	15550	170	183	29	20	34	5	19	100
Whitechapel North ..	11597	124	52	19	6	7	2	3	0
Whitechapel Church	7322	59	206	7	27	32	35	39	177
Goodman's Fields ...	10381	83	52	18	12	5	0	0	0
Aldgate	9224	40	35	10	7	7	3	5	0
Totals	76573	671	622	115	91	107	56	84	281

BOARD OF WORKS.

WHITECHAPEL DISTRICT.

REPORT

ON THE

Sanitary Condition

OF THE

WHITECHAPEL DISTRICT,

FOR THE

QUARTER ENDED SEPT. 28TH, 1878,

BY JOHN LIDDLE,

MEDICAL OFFICER OF HEALTH.

London:

PENNY & HULL, STEAM PRINTERS, 121, LEMAN STREET, WHITECHAPEL, E.

1878.

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REPORT

OF THE
MEDICAL OFFICER OF HEALTH

For the Quarter ended 28th Sept., 1878.

TO THE BOARD OF WORKS, WHITECHAPEL DISTRICT.

GENTLEMEN,

In the Quarter that ended on Saturday, the 28th Sept., 1878, the total births in the District were 644, viz.: 322 males and 322 females; and the deaths 566, viz.: 320 males and 246 females. The excess of births over deaths has therefore been, during this Quarter, 78. As the deaths of 125 non-residents, which occurred in the London Hospital, are included in the mortality returns, a deduction of such deaths must be made in order to estimate the correct mortality of the District, thereby reducing the total mortality to 441, and increasing the number of births above deaths to 203. An allowance, however, must be made for the deaths of residents in public institutions outside the District; but of those I have no return. In the corresponding Quarter of the previous year the total births were 609, and the total deaths 576.

The mortality for the present Quarter is much less than in that of the preceding one. This reduction in the rate of mortality is remarkable, and I believe that a similar reduction has taken place in most, if not in all, the Districts in the Metropolis. This rate of mortality, deducting the deaths of non-residents, is at the annual rate of only 23.0 per 1000, while the average rate of mortality for this District, during the last eleven years, is 26.8 per 1000. The rate of mortality in London, for the year 1877, was 21.9 per 1000, and varied in each Quarter from 23.6 to 19.4 per 1000.

In the week that ended August 10th, the local registrar records the death of a laborer at 12, Wood-street, Spitalfields, aged 103 years. He is said to have lived in the same house for nearly seventy years.

In the Spitalfields sub-District the births were 167, and the deaths 100; in the Mile End New Town 160, and the deaths 149; in the Whitechapel North 109, and the deaths 57; in the Whitechapel Church 58 and 183 (in this sub-District the London Hospital is situated); in the Goodman's Fields 94 and 37; and in the Aldgate 56 and 40. The deaths have exceeded the births in the Whitechapel Church District by 125, but from this number the deaths of the 125 non-residents must be deducted; the proportion of births to deaths is therefore 58 to 26.

The deaths in the London Hospital have been 151. In the corresponding Quarter of the previous year the deaths in this Institution were 168.

The deaths in the Workhouse have been 74. In the corresponding Quarter of last year they were 78.

The deaths from epidemic diseases in the entire District have been 104; viz.: 1 from small-pox (to which must be added 2 which occurred in the hospital), 5 from measles, 3 from scarlet-fever, 20 from hooping-cough, 71 from diarrhoea, and 4 from fever. The total deaths from epidemic diseases have therefore been 106. The residences of those patients who died in the hospital from small-pox were 19, Wagner's-buildings and 2, Farthing-hill.

In the corresponding Quarter of the previous year, the deaths from epidemic diseases were 110; viz.: 31 from measles, 9 from scarlet-fever, 1 from diphtheria, 7 from hooping-cough, 55 from diarrhoea, and 7 from fever. Four deaths from small-pox occurred in the Small-pox Hospital and 3 from fever in the Fever Hospital. The total deaths from epidemic diseases were therefore 117.

MORTALITY OF YOUNG CHILDREN.

The mortality of children under 1 year of age was 143. This is 25.2 per cent. of the total mortality. In the corresponding Quarter of the previous year it was 24.7 per cent. In the Spitalfields sub-District the rate is 45.0 per cent.; in the Mile End New Town 20.8 per cent.; in the Whitechapel North 38.6 per cent.; in the Whitechapel Church 11.4 per cent.; in the Goodman's Fields 27.0 per cent.; and in the Aldgate 35.0 per cent. The difference in the rate of mortality of young children in the Mile End New Town and Whitechapel Church sub-Districts is thus explained:—in the former the Workhouse is situated, and in the latter the London Hospital; in both these institutions the children under 1 year bear only a small proportion to the adults.

The total deaths under 5 years are 244; which shows a rate of mortality of 43.1 per cent. in relation to the total deaths, including those of non-residents, and 37.8 per cent. to the total births. The rate of mortality under 1 year, in relation to the total births, is 22.2 per cent.

PAUPER ILLNESS IN THE DISTRICT.

The Medical Officers of the Union have attended, during the past Quarter, 695 new cases of illness out of the Workhouse; including 4 of small-pox, 3 of measles, 1 of scarlet-fever, 1 of hooping-cough, 43 of diarrhoea, 15 of febricula, 3 of fever, 2 of choleraic-diarrhoea, and 2 of erysipelas. In the corresponding Quarter of the previous year the number of pauper cases of illness was 410; including 11 of small-pox, 15 of measles, 8 of

scarlet-fever, 1 of hooping-cough, 40 of diarrhoea, 23 of febricula, 1 of choleraic-diarrhoea, and 2 of erysipelas. The total number of cases of illness in the Workhouse has been 599; including 10 of hooping-cough, 24 of diarrhoea, and 11 of febricula. In addition to the above cases there were 28 of syphilis; thus making a total of 627.

UNCERTIFIED DEATHS.

The total number of uncertified deaths in this District for the year ended 29th June, 1878, was 23 or 0.93 per cent.; the total deaths being 2460. Of these, 6 were in the Spitalfields Sub-district; 7 in the Mile End New Town; 1 in the Whitechapel North; 1 in the Whitechapel Church; 5 in the Goodman's Fields; and 3 in the Aldgate Sub-district.

Upon the subject of uncertified deaths, the Registrar-General makes the following remarks:—

“The largest proportion of uncertified deaths consists of cases in which the deceased persons have been attended in their last illness by unqualified practitioners, practising either on their own account, or as assistants to registered practitioners; although, in some thinly populated parts of England and Wales, considerable numbers of persons die without any kind of medical attendance in their last illness.

“The proportion of uncertified causes of death showed a slight decline from that which prevailed in the first quarter of the year, and ranged from 1.3 per cent. in London, and 2.8 in the south-eastern division, to 6.7, 7.1, and 12.3 per cent. respectively, in the Yorkshire, Northern, and Welsh divisions. The proportion of uncertified causes of death showed a decline in each of the three last-mentioned divisions. As the Births and Deaths Registration Act imposes upon registered medical practitioners the duty of furnishing the certificates of the cause of death of patients attended during their last illness, the non-certification of a cause of death now affords evidence that the deceased person had not been attended during his or her last illness by a registered medical practitioner.

“In most uncertified cases, the deceased persons have been attended during their last illness by unqualified practitioners, practising either on their own account or as assistants to registered practitioners. This objectionable system really means a partnership between registered and unregistered medical practitioners, and is the main cause of a large proportion of uncertified causes of death in some localities.”

METEOROLOGY OF GREENWICH.

The Returns of the Registrar-General show that the rain-fall in the Metropolis, during the Quarter, has been 7.28 inches. One inch deep of rain-fall on an acre weighs (allowing 10-lbs. to a gallon, which is the weight of a gallon

of distilled water) nearly 101 tons. During the corresponding Quarter of last year the rain-fall was 5.25 inches. The mean temperature of the air was 60.9°. In the corresponding Quarter of last year it was 58.5°. The hottest days during the Quarter were Thursday, the 18th July, Friday, the 19th July, and Monday, the 22nd July, when the thermometer indicated respectively 84.4°, 84.6°, and 81.4°. The hottest day during the corresponding Quarter of last year was on Monday, the 30th July, when the thermometer indicated 88.2°.

In the previous Quarterly Report of the Registrar-General, dated 1st Aug., 1878, it is stated that "the measured rain-fall of the Quarter at Greenwich, was no less than 13.2 inches, and exceeded the average amount in the corresponding period of 63 years by 7.6 inches; 4.3 inches were measured both in April and May, and 4.6 inches in June. So far back as 1815, there is no record of so heavy a rain-fall as that measured last Quarter." Mr. GLAISHER reports that "on the 7th May, the rain-fall at Greenwich was 1.6 inches, of which one inch fell between 6 h. p.m. and 6 h. 50 min. p.m. On the 23rd June, a second almost unprecedented local fall of rain occurred in the London District, but it was chiefly confined to the north of London; 3.28 inches was measured as falling between 1 h. 32 min. p.m. and 3 h. 2 m. p.m."

TABLE OF WEEKLY MORTALITY, &c., IN LONDON AND IN THE WHITECHAPEL DISTRICT.

The following Table, taken from the Returns of the Registrar-General, shows the comparative results of the Quarter:—

WEEK ENDED	DEATHS IN LONDON.				DEATHS IN WCHPL. DISTRICT		Rain-fall. Inches.	Mean Temperature of the air. Degrees.
	Diarrhoea.	Fever.	Small-pox	From all causes.	From Small-pox.	From all causes.		
July 6	145	17	19	1511	0	46	0.94	60.1
„ 13	249	19	11	1569	0	55	0.02	61.9
„ 20	339	19	19	1787	0	41	0.00	66.8
„ 27	434	21	11	1792	0	46	0.21	65.2
Aug. 3	470	21	18	1877	0	51	0.25	60.5
„ 10	339	32	14	1694	0	48	2.22	65.9
„ 17	263	17	9	1517	0	44	1.08	62.2
„ 24	195	16	10	1433	1	38	0.71	61.5
„ 31	148	23	6	1365	0	42	1.15	61.8
Sept. 7	120	25	3	1260	0	45	0.00	61.2
„ 14	89	32	7	1259	0	43	0.02	59.1
„ 21	80	30	4	1250	0	39	0.49	54.4
„ 28	61	27	2	1355	0	28	0.19	52.2

VACCINATION.

WHITECHAPEL UNION.—Return of the number of Cases Vaccinated by the Public Vaccinator and the Medical Officer of the Workhouse, together with the number of Births Registered during the same quarters.

QUARTER ENDING—	PUBLIC VACCINATOR		WORKHOUSE.		TOTALS.		BIRTHS REGISTERD.
	Primary Cases.	Re-Vaccination.	Primary Cases.	Re-Vaccination.	Primary Cases.	Re-Vaccination.	
December, 1876... ..	347	201	41	0	388	201	714
March, 1877	403	500	37	27	445	527	757
June	382	5	24	1	406	6	696
September... ..	336	—	26	—	362	—	607
December	241	3	32	—	273	3	704
March, 1878	288	13	29	—	317	13	688
June	443	5	46	—	489	5	672
September... ..	480	5	30	1	510	6	644
TOTALS	2925	732	265	29	3190	761	5482

VACCINATION AND RE-VACCINATION.

The Local Government Board, in their reply to a communication of the Metropolitan Asylums Board, requesting them to hold an official inquiry into the causes of the recent epidemic of small-pox, remark that, the facts within their knowledge are quite sufficient to account for the serious mortality which has occurred from the disease, from October, 1876. The facts stated are “deficient amount of primary vaccination, inefficient vaccination of past time, and absence of re-vaccination.” I fully agree with the opinions as stated by the Local Government Board, in accounting for the fatality of small-pox; and it forcibly strikes me that the very knowledge of these facts affords the best reason for that Board instituting without delay the official inquiry asked for, in order to ascertain whether other regulations than those now in force could not be made, whereby primary vaccination and re-vaccination might be better performed and more generally enforced. If, however, the Local Government Board should decline to hold an official inquiry on the subject, the public will certainly expect that new rules and regulations will be issued, whereby greater security will be afforded to the people against the spreading of such a fatal disease. That the existing arrangements in London are unsatisfactory, is shown by the severity of the disease having been so much greater in the Metropolis than in other densely populated English cities and towns.

In the last Quarterly Report for England and Wales by the Registrar-General, it is stated that “only 179 deaths were referred to small-pox, against 716 and 825 in the two preceding Quarters; of these 179 fatal cases, 144 occurred in London and its outer ring of sub-urban Districts; indeed 163 occurred in the Metropolis, and in the three registration divisions containing the home counties, whereas but 16 fatal cases were recorded in the rest of England and Wales.”

The vaccination returns, as set forth in the preceding Table, show that for the Quarter ended Sept., 1878, the cases vaccinated by Mr. BLACKMAN, the public vaccinator, have exceeded in number those vaccinated by him in any of the previous Quarters, with the exception of that for the Quarter ended March, 1871, when the number of primary vaccinations performed by him were 727. In the same Quarter the resident medical officer of the Workhouse performed ten primary vaccinations; thus making a total of 737. In that Quarter the births were 747. We therefore find that the proportion of successful vaccinations by the public vaccinator to the total number of births registered is 98.6 per cent.

In the Quarter now under consideration, it appears that Mr. BLACKMAN has performed primary vaccination successfully on 480, and Mr. LOTT on 30, thus making a total of 510 persons. The births having been 644, the percentage of successful vaccination, in relation to the number of births, has been 79.1. This is a most favorable result, and is doubtless largely attributable to the course recently adopted by the Guardians in carrying out a house-to-house visitation. Four visitors were employed during several weeks; 8,826 dwellings were visited and 929 persons reported to be unvaccinated. But of the latter number, about one-half are stated to have been under the age of four months, and presumably already under the cognizance of the vaccination staff, and a still further number of cases of lawful postponement. If the Guardians should deem it expedient to continue their exertions in the same direction, whereby so large a number of children have been brought under the influence of vaccination, a very small number of unprotected children will be left for victims for the next epidemic of small-pox.

For the purpose of comparison the following Table is inserted:—

Return of the number of Primary Cases Vaccinated by the Public Vaccinator and the Resident Medical Officer of the Workhouse, for the under-mentioned Quarters.

QUARTER ENDING	Public Vaccintr. Primary Cases.	Work-house Primry. Cases.	TOTALS.	QUARTER ENDING	Public Vaccintr. Primary Cases.	Work-house Primry. Cases.	TOTALS.
March, 1871	727	10	737	March, 1875	292	44	336
June, ,,	357	21	378	June, ,,	376	26	402
Sept., ,,	186	35	221	Sept., ,,	350	35	385
Dec., ,,	134	27	161	Dec., ,,	178	23	201
March, 1872	219	43	262	March, 1876	236	25	261
June, ,,	289	32	321	June, ,,	369	36	405
Sept., ,,	306	26	332	Sept., ,,	354	40	394
Dec., ,,	263	23	286	Dec., ,,	347	41	388
March, 1873	290	23	313	March, 1877	408	37	445
June, ,,	331	17	348	June, ,,	382	24	406
Sept., ,,	266	36	302	Sept., ,,	336	26	362
Dec., ,,	256	39	295	Dec., ,,	241	32	273
March, 1874	335	37	372	March, 1878	288	29	317
June, ,,	411	30	441	June, ,,	443	46	489
Sept., ,,	320	30	350	Sept., ,,	480	30	510
Dec., ,,	185	31	216				

The following Table is continued from my last Quarterly Report, and exhibits the weekly progress in London of the existing epidemic of Small-pox, and that of 1870-71 in the corresponding weeks:—

1876-7.		Deaths	1877-8.		Deaths	1870-1.		Deaths	1871-2.		Deaths
Week ending			Week ending			Week ending			Week ending		
July	8	13	1877			July	9	13	1871		
"	15	2	Aug.	25	11	"	16	11	Aug.	26	82
"	22	8	Sep.	1	20	"	23	15	Sep.	2	78
"	29	7	"	8	8	"	30	11	"	9	81
Aug.	5	1	"	15	10	Aug.	6	15	"	16	57
"	12	9	"	22	10	"	13	11	"	23	89
"	19	5	"	29	13	"	20	10	"	30	51
"	26	10	Oct.	6	14	"	27	11	Oct.	7	72
Sept.	2	8	"	13	14	Sept.	3	9	"	14	61
"	9	5	"	20	8	"	10	12	"	21	53
"	16	6	"	27	14	"	17	11	"	28	61
"	23	11	Nov.	3	9	"	24	15	Nov.	4	61
"	30	15	"	10	25	Oct.	1	13	"	11	54
Oct.	7	11	"	17	14	"	8	27	"	18	76
"	14	16	"	24	27	"	15	13	"	25	67
"	21	22	Dec.	1	31	"	22	17	Dec.	2	78
"	28	15	"	8	25	"	29	21	"	9	104
Nov.	4	21	"	15	81	Nov.	5	23	"	16	106
"	11	48	"	22	31	"	12	40	"	23	90
"	18	52	"	29	29	"	19	45	"	30	97
"	25	43	1878			"	26	41	1872		
Dec.	2	67	Jan.	5	26	Dec.	3	60	Jan.	6	91
"	9	50	"	12	35	"	10	61	"	13	90
"	16	75	"	19	51	"	17	44	"	20	93
"	23	97	"	26	34	"	24	82	"	27	90
"	30	75	Feb.	2	38	"	31	110	Feb.	3	52
1877			"	9	55	1871			"	10	68
Jan.	6	116	"	16	47	Jan.	7	79	"	17	48
"	13	100	"	23	39	"	14	135	"	24	53
"	20	79	March	2	54	"	21	188	Mar.	2	52
"	27	86	"	9	34	"	28	157	"	9	49
Feb.	3	103	"	16	53	Feb.	4	196	"	16	42
"	10	90	"	23	42	"	11	211	"	23	48
"	17	72	"	30	48	"	18	218	"	30	55
"	24	104	April	6	55	"	25	227	April	6	65
March	3	84	"	13	58	March	4	213	"	13	49
"	10	96	"	20	80	"	11	194	"	20	48
"	17	100	"	27	63	"	18	185	"	27	41
"	24	76	May	4	60	"	25	205	May	4	62
"	31	86	"	11	48	April	1	192	"	11	39
April	7	78	"	18	48	"	8	214	"	18	54
"	14	60	"	25	43	"	15	265	"	25	54
"	21	68	June	1	40	"	22	276	June	1	37
"	28	89	"	8	42	"	29	261	"	8	27
May	5	54	"	15	24	May	6	288	"	15	37
"	12	78	"	22	19	"	13	232	"	22	26
"	19	70	"	29	38	"	20	267	"	29	43
"	26	69	July	6	19	"	27	257	July	6	35
June	2	61	"	13	11	June	3	229	"	13	26
"	9	58	"	20	19	"	10	245	"	20	29
"	16	55	"	27	11	"	17	240	"	27	33
"	23	44	August	3	18	"	24	232	August	3	23
"	30	44	"	10	14	July	1	235	"	10	15
July	7	23	"	17	9	"	8	164	"	17	16
"	14	32	"	24	10	"	15	133	"	24	15
"	21	35	"	31	6	"	22	135	"	31	8
"	28	27	Sept.	7	3	"	29	132	Sept.	7	6
August	4	22	"	14	7	Aug.	5	87	"	14	12
"	11	20	"	21	4	"	12	96	"	21	5
"	18	21	"	28	2	"	19	80	"	28	9

On looking over the Table showing the weekly progress in London of the deaths from small-pox during the present epidemic, and comparing it with that of the preceding one in 1871-2, it will be seen that, although the population has considerably increased since 1871-2, yet the mortality from small-pox has not been nearly to the same extent. This difference may be partially accounted for by the success of the means which have been adopted for averting the progress of the disease.

1. By the more prompt removal of the sick to the public hospitals, which has been greatly facilitated by the powers lately conferred by Act of Parliament, 38 and 39 Vic., cap. 55, section 124, giving compulsory powers to local authorities to remove, by order of the Police Magistrates, all such persons suffering from small-pox, who are not properly lodged or accommodated, to a hospital set apart for the reception of such patients. The value of this clause would have been greatly enhanced if the 64th clause of the Public Health (Metropolis) Bill, which was brought in by Mr. SCLATER-BOOTH and Mr. SALT, had passed; whereby power would have been conferred on the Managers of Metropolitan Asylum Districts to contract for the reception of persons suffering from infectious diseases. This desirable arrangement was advocated in my last Report, which, if carried into effect by an Act, would enable the local authority to pay for the expense incurred in the removal to, and maintenance in, a hospital, of persons afflicted with infectious diseases, and so remove all stigma of pauperism from the parties availing themselves of the accommodation. In all cases removed to such hospitals, whether voluntarily on the part of the patients, or compulsorily, the local authority might recover the expenses incurred from the persons benefitted by such removal and maintenance.

2. The importance of re-vaccination after the age of puberty being better understood, and more generally sought for. 3. The more thorough disinfecting of the houses and clothes of patients who have been attacked with the disease. 4. The more frequent visitation of the houses in the neighbourhood of small-pox patients, and the means taken to prevent overcrowding. 5. The inspection of schools and the preventing, as far as possible, of children from infected places attending schools, and the giving of information to the master or mistress of the school of those localities where small-pox prevails. 6. Careful inquiry by the Inspectors as to the children who have not been vaccinated, and urging upon the parents the necessity of taking such children without delay to the public vaccinator for vaccination.

Table showing the annual rate of mortality per 1000 living in England and Wales, at different ages, in 1848-72, and in 1876, and is taken from the last Annual Report of the Registrar-General (1878), page xxviii.

AGES.	25 years, 1848-72.		Year 1876.		Excess or Defect in 1876 over or under the average.	
	Cols. 1.	2.	3.	4.	5.	6.
	MALES.	FEMALES.	MALES.	FEMALES.	MALES.	FEMALES.
All Ages.	23.5	21.4	22.5	19.7	-1.0	-1.7
0	72.8	63.1	68.1	57.9	-4.7	-5.2
5	8.5	8.2	6.4	6.0	-2.1	-2.2
10	4.7	4.8	3.6	3.7	-1.1	-1.1
15	6.5	7.0	5.4	5.3	-1.1	-1.7
20	8.8	8.7	7.4	6.8	-1.4	-1.9
25	9.9	9.9	9.3	8.3	-.6	-1.6
35	13.3	12.1	14.0	11.7	+.7	-.4
45	18.6	15.6	19.4	15.2	+.8	-.4
55	32.0	28.2	34.4	28.3	+2.4	+.1
65	67.7	57.2	66.3	58.4	-1.4	+1.2
75	146.6	133.9	143.1	127.4	-3.5	-6.5
85 and upwards }	309.7	284.4	286.5	271.8	-23.2	-12.6

In the year ended December, 1876, the deaths of children under one month in this District were 110, or about four per cent. of the total births; 86 died at one and under three months, or about three per cent. of the births, and 98 at three months and under six months, or 3.3 per cent. of the registered births. The total deaths under 6 months were 294, or 10.6 per cent. of the registered births.

"The average deaths of males to females in England and Wales in the year is 104 to 100. A comparison of the death-rates at different ages in 1876, with the annual average rates in the 25 years 1848-72, shows that the reduction at all ages was mainly due to a much lower rate among children and among persons at ages under 35 and over 75 years."

"London," says the Registrar-General, at page 3, in his last Annual Summary, dated 20th May, 1878, "maintains its position as the healthiest city in the world. During the past year its prosperity was indicated by a birth-rate above the average of the preceding ten years, while a remarkably low death-rate bears testimony to the success which has attended the efforts that have been made during the last quarter of a century to promote the public

health and safety; much more, however, is still required to be done to improve the health of the people—drainage must be extended and the present system improved, very many of the crowded dwellings of the poor must be demolished, and better ventilated dwellings erected in their stead, and better means must be adopted for insuring a more satisfactory performance of vaccination.”

OVERCROWDING IN A SCHOOL ROOM.

The Inspector, Mr. WRACK, on visiting the houses in Miller's-court, Dorset-street, Spitalfields, on the 11th September, found that the ground-floor room of No. 6, was used as a school-room during the day and as a sleeping-room at night. At the time of his visit there were 19 persons in the room, namely, 17 children, all under 7 years of age, and the schoolmaster and his wife.

The dimensions of this room were $12 \times 12 \times 8$, giving only about 60 cubic feet for each person.

The court contains six houses, and is about 50 feet long, 5 feet 6 inches wide at the north end, and 7 feet 10 inches wide at the south end, and is approached by a covered entrance 26 feet 4 inches long and 2 feet 10 inches wide. At the north end of the court there are three public privies, and at the south end there is a public dust-bin, both of which are within a few feet of the school-room in question.

On the following day, accompanied by the Inspector, I visited the school, and informed the schoolmaster of the unfitness of the place for a school, and I intimated to him that the room could not be allowed to be so occupied; and I advised him to get a larger room in a healthier locality. The schoolmaster acted upon my advice and removed from the court two days afterwards.

I have had to bring under the notice of the Board, from time to time, several cases of school-rooms similarly overcrowded, and in no instance have I been obliged to take legal proceedings against the occupier, the nuisance being either abated by reducing the number of children attending the school, or by the occupier finding a larger and more commodious room.

NEW ACTS RELATING TO PUBLIC HEALTH WHICH WERE PASSED IN THE LATE SESSION OF PARLIAMENT.

Two Acts of importance to the public health have recently been added to the list of Statutes, viz., the Metropolis Management and Building Acts Amendment Act, and an Act to Consolidate and amend the Law relating to Factories and Workshops. As regards the first-named Act, it must be admitted that, so far as its provisions extend, it is a valuable addition to the existing Building Act; but its scope is exceedingly limited. The sanitary provisions of this Act are very few, and are contained in the second part of the Act. These provisions relate to the foundations of houses, buildings,

and other erections, and the sites of houses, buildings, and other erections to be constructed after the passing of this Act, and the mode in which the materials with which such foundations and sites shall be made, formed, excavated, filled up, prepared, and completed, for securing stability, the prevention of fires, and for purposes of health. The Metropolitan Board has power, under the 16th section, to make bye-laws with respect to sites and foundations. A restriction, however, is placed on the action to be taken by the Board, under their proposed bye-laws, to the effect that they shall not be valid until they are confirmed by one of Her Majesty's principal Secretaries of State, and not until the expiration of two months after a copy of the bye-laws has been published by the Board.

The Board has power, under the 11th section, in certain cases, to require proprietors of theatres and certain music halls, at the time of the passing of this Act, to remedy such structural defects as may occasion special danger from fire to the public frequenting the same.

The short-comings of this Act, to all persons interested in the promotion of public health, are most painfully manifest, and especially so when we consider that Bills for amending the present Building Act have, for several successive Sessions, been brought in by the Metropolitan Board of Works, which contained valuable provisions for providing adequate open spaces at the rear of dwelling-houses.* It is certainly much to be regretted that such provisions did not form a part of the new Act. The practice of building houses back-to-back, without providing any open space, either at the side or rear of each house whereon to erect suitable conveniences for the occupiers, may still be perpetuated. The omission of sections in this Act relating to open spaces at the rear of certain houses, is the more surprising, when the Local Government Board, in 1877, published a Code of Model Bye-Laws for the use of urban sanitary authorities, relating among other things to **NEW STREETS AND BUILDINGS**. The 54th clause in this series of Model Bye-laws, sets forth that, "every person who shall erect a new domestic building, shall provide in the rear of such building an open space exclusively belonging to such building, of an aggregate extent of not less than *one hundred and fifty* square feet, and free from any erection thereon, above the level of the ground, except a water-closet, earth-closet, or privy, and an ashpit.

He shall cause such open space to extend laterally, throughout the entire width of such building; and he shall cause the distance across such open space, from every part of such building, to the boundary of any lands or premises immediately opposite or adjoining the site of such buildings, to be not less, in any case, than *ten feet*.

* The 29th section of the Building Act, 1855, provides for an open space at the rear of a certain class of dwelling houses, but both the spirit and letter of this section are so frequently evaded by builders as to render the same nearly useless.

If the height of such building be *fifteen feet*, he shall cause such distance to be *fifteen feet* at the least. If the height of such building be *twenty-five feet*, he shall cause such distance to be *twenty feet* at the least. If the height of such building be *thirty-five feet* or exceed *thirty-five feet*, he shall cause such distance to be *twenty-five feet* at the least.

A person who shall make any alteration in, or addition to, such building, shall not, by such alteration or addition, diminish the aggregate extent of open space, provided in pursuance of this bye-law, in connexion with such building, or in any other respect fail to comply with any provision of this bye-law."

I have not heard that any of these Model Bye-Laws have been carried into effect, although they certainly commend themselves to all persons who are interested in the improvement of the public health.

Although the same amount of open space at the rear of new domestic buildings in the Metropolis, as is proposed by the Local Government Board for new domestic buildings in the urban districts generally, could not have been made applicable to London; yet, a section in the Metropolis Management and Building Acts Amendment Act, setting forth that adequate open spaces at the rear of all new domestic buildings should have been introduced for the purposes of providing efficient ventilation, the admission of sun-light, and for the erection of proper conveniences.

We may, however, hope that the Metropolitan Board of Works will bring in another Bill during the next Session of Parliament for further amendments in the Metropolitan Management and Building Acts Amendment Act, 1878.

The following is a copy of the subjects embraced by the

MODEL BYE-LAWS ISSUED BY

THE LOCAL GOVERNMENT BOARD,

For the use of

SANITARY AUTHORITIES.

1.

Cleansing of Footways and Pavements.

Removal of House Refuse.

Cleansing of Earth-closets, Privies, Ashpits and Cesspools.

2.

Prevention of Nuisances arising from snow, filth, dust, ashes and rubbish.

Prevention of the keeping of Animals on any premises so as to be injurious to health.

3

Common Lodging Houses.

4

New Streets and Buildings.

5

Markets.

Slaughter-houses.

Hackney Carriages.

Public Bathing.

Public Baths and Wash-houses and open Bathing Places.
Duties of the Officers and Servants.

The other important Act was passed to consolidate and amend the law relating to factories and workshops. This Act (41 Vic., cap. 16,) is intituled the Factory and Workshop Act, 1878, and will come into operation on the first day of January, 1879; by the provisions of which Act either the whole or parts of the 19 Acts relating to workshops or factories, which has been in force since the year 1802 to 1876, will be repealed. Among the Acts to be repealed, is the 26 and 27 Vic., c. 40, intituled the "Bakehouse Regulation Act, 1863." The principal sections of this Act are embodied in the Consolidated Act; and the bakehouses will, in future, be supervised by the factory inspectors, instead of, as at present, by the Sanitary Officers of the local Boards.

It appears, however, by the fourth section, that "where it appears to an Inspector under this Act that, any act, neglect, or default in relation to any drain, water-closet, earth-closet, privy, ash-pit, water supply, nuisance, or other matter in a factory or workshop, is punishable or remediable under the law relating to public health, but not under this Act, that Inspector shall give notice in writing of such act, neglect, or default, to the sanitary authority in whose district the factory is situate; and it shall be the duty of the sanitary authority to make such inquiry into the subject of the notice, and take such action thereon as to that authority may seem proper, for the purpose of enforcing the law."

In a note appended to this section by Mr. ALEXANDER REDGRAVE, Her Majesty's Inspector of Factories, it is stated that "where the insanitary condition is caused by faults of, or neglects in structural arrangements, it becomes the duty of the Inspector to give notice thereof to the sanitary authority, and it is the duty of the sanitary authority to act upon such notice. The Inspector may take a sanitary officer with him into a factory or workshop."

"The local authority has also power to enforce proper and sufficient privy accommodation for both sexes." Under the provisions of this section power is given to the local authorities to prevent the use of such under-

ground rooms in Wentworth-street and Fashion-street from being used as bakehouses, as I brought under your notice in my last two reports.*

So far as the regulation of bakehouses is concerned, it appears to me that it would have been better to have left the inspection of bakehouses to the supervision of the local authorities, and to have so amended the existing Act relating to bakehouses as to have compelled the several owners thereof to have taken out an annual license to be granted, if deemed fit, by the Magistrates

FACTS RELATING TO THE AREA, ELEVATION, &c., OF LONDON.

In the last annual summary of births and deaths, and causes of deaths in London, the Registrar-General informs the public "that the area of London (the registration division so called) is 78,080 acres, or 122 square miles, including 2,718 acres of the Thames. The length of the streets and roads is about 1,500 miles, and their area nearly 12 square miles. The area of London being 122 square miles is equal to a square of about 11 miles to the side. The sewers have a length of about 2,000 miles.

ELEVATION.—The population of London resides at a mean elevation of 39 feet above Trinity High Water Mark.

HOUSES.—At the Census in 1871 there were within this area 417,767 inhabited houses, containing an average of 7.8 persons to a house.

DENSITY (1871).—103 persons to a hectare; 42 persons to an acre; 26,674 to a square mile.

Annual rate of increase of population per cent... { 1851—61 ... 1.73
1861—71 ... 1.50

POPULATION.—Estimated to the { Males 1,653,841 }
middle of the year 1877 ... { Females, 1,879,643 } Total, 3,533,484.

BIRTHS ... { Males ... 65,122 }
... { Females... 62,135 } Total ... 127,257

Annual rate of Birth per 1000 of the population, 36.1.

DEATHS ... { Males ... 39,806 }
... { Females... 37,196 } Total ... 77,002

Annual rate of Mortality per 1000 { Males ... 24.2 }
{ Females... 19.9 } Total ... 21.9

Excess of registered Births over Deaths ... 50,255.

Estimated increase of Population ... 43,938."

* The bakehouse situated in the cellar of 43, Fashion-street, and mentioned at page 13 of my last Report, after the serving of a compulsory order on the owner of the house to discontinue the use of such bakehouse has been abolished, and a new one erected in the yard at the rear of the house.

SANITARY WORKS PERFORMED DURING THE QUARTER ENDED
28th SEPTEMBER, 1878.

The following return shows the amount of work done by the Sanitary Inspectors during the Quarter ended 28th Sept., 1878 :—

Number of inspections of houses as shown in the official returns ..	2621
Houses specially visited	293
Houses specially re-visited	935
Preliminary notices served, such notices embracing 226 premises ..	144
Compulsory orders issued, embracing 106 premises	49
Summonses heard at Police Courts, under Sanitary Act	1
„ under Act for the prevention of Adulteration of Food, &c.	0
Cellars used as dwellings discontinued for such use	2
Cases of overcrowding and indecent occupation abated	4
Houses in which rooms or passages have been whitewashed ..	117
Rooms disinfected with sulphurous-acid gas, after the occurrence of small-pox, fever, and scarlet-fever therein	12
Articles disinfected in rooms, consisting of beds, bedding, clothing, &c.	248
Yards of houses paved, or the pavement repaired	27
Drains in houses improved	32
Dust-bins provided	11
Privies lime-washed, cleansed and repaired	73
Water supply provided or improved	7
Nuisances from dung, and other offensive matter removed	25
Area gratings, cellar flaps, &c., repaired	5
Animals kept so as to be a nuisance removed	5
Cesspools abolished	0

I am, GENTLEMEN,

Your obedient Servant,

JOHN LIDDLE.

15, Great Alie Street.

APPENDIX.

TABLE I.—Cases of Sickness of the Zymotic and Acute Classes, which are recorded in the Books of the Medical Officers of the Union, for the Three Months ended on the 28th Sept., 1878.

Names of Medical Officers.	Small-Pox.	Measles.	Scarlatina.	Hooping-Cough.	Diarrhoea.	Cholera and Choleraic-Diarrhoea.	Continued Fever, Typhus & Typhoid.	Febricula.	Pyæmia.	Erysipelas.	Puerperal Fever.	Croup.	Acute Pulmonary Inflammation.		Carbuncle.	Rheumatic Fever.	Ague.	Dysentery.	Delirium Tremens.	Lead Poisoning.	All other Diseases.	TOTAL.
													Bronchitis and Catarrh.	Pleuritis and Pneumonia.								
Dr. Swyer.....	1	0	0	0	11	0	0	6	0	0	0	1	7	2	0	2	0	2	0	0	108	140
Mr. Champneys	0	2	0	1	15	0	0	3	0	1	0	0	38	0	0	6	0	0	2	1	228	297
Mr. Sequeira ...	2	0	0	0	4	0	3	3	0	0	0	0	5	2	0	0	0	0	0	0	58	77
Mr. H. Braye ...	0	1	0	0	9	1	0	1	0	1	0	0	12	2	1	2	0	0	0	2	87	119
Mr. Loane	1	0	1	0	4	1	0	2	0	0	0	0	4	0	0	1	0	0	1	0	47	62
TOTALS	4	3	1	1	43	2	3	15	0	2	0	1	65	6	1	11	0	2	3	3	528	695
Corresponding Qr. of previous Year.	11	15	8	1	40	1	3	23	0	5	0	0	25	6	0	10	0	0	2	3	257	410
Workhouse Mr. J. J. Hott.	0	0	0	10	24	0	0	11	0	2	0	0	49	18	2	66	0	0	3	5	409	599

In addition to the cases attended by Mr. Hott in the Workhouse, there were 28 cases of syphilis.

TABLE II.

Showing the Deaths from Epidemic Diseases for the Three Months ended
28th September, 1873.

Sub-districts.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Hooping-Cough.	Diarrhoea.	Fever.	Typhoid & Cholerae Diarrhoea.	Total.	Remarks.
Spitalfields	0	1	1	0	2	19	0	0	23	
Mile End New Town	0	1	0	0	10	18	0	0	29	Workhouse.
Whitechapel North.....	0	2	1	0	3	11	0	0	17	
Whitechapel Church	0	1	1	0	2	9	4	0	17	Hospital.
Goodman's Fields.....	1	0	0	0	2	7	0	0	10	
Aldgate.....	0	0	0	0	1	7	0	0	8	
Totals	1	5	3	0	20	71	4	0	104	
Deaths from Epidemics for the corresponding Quarter, 1877.	0	31	9	1	7	55	7	0	110	

Two deaths from small-pox of patients belonging to this District occurred in the Small-Pox Hospital at Homerton; thus making 3 deaths from small-pox. No deaths from fever occurred in the Fever Hospital.

TABLE III.

Showing Sub-districts, Enumerated Population, Total Births, and Deaths from all causes-- Deaths under 1 year of age, 1 and under 5 years, and above 60 years; Deaths from Violence, Inquest cases, and Deaths in Workhouse and London Hospital, for the Quarter ended 29th June, 1878.

Sub-districts.	Enumerated Population in 1871.	Births.	Deaths.	Under 1 year of age.	1, and under 5 years.	Persons aged 60 years and upwards.	Violence.	Inquest cases.	Deaths in Public Institutions.
Spitalfields	22499	167	100	45	16	12	3	8	1
Mile End New Town	15550	160	149	31	32	32	3	13	74
Whitechapel North ..	11597	109	57	22	14	6	1	5	0
Whitechapel Church	7322	58	183	21	25	30	44	45	151
Goodman's Fields ...	10381	94	37	10	8	5	0	1	0
Aldgate	9224	56	40	14	6	4	5	6	0
Totals	76573	644	566	143	101	89	56	78	226

TABLE I
Showing the Deaths from Epidemic Typhus in the Town of New York
1915

Name	Age	Sex	Race	Occupation	Date of Death		Cause of Death
					Month	Day	
John Doe	35	M	W	Teacher	Jan	15	Epidemic Typhus
Mrs. Jane Smith	42	F	W	Homemaker	Jan	20	Epidemic Typhus
William Jones	28	M	W	Merchant	Jan	25	Epidemic Typhus
Elizabeth White	55	F	W	Widow	Jan	30	Epidemic Typhus
Robert Brown	30	M	W	Engineer	Jan	31	Epidemic Typhus
Anna Taylor	60	F	W	Widow	Feb	5	Epidemic Typhus
Thomas Wilson	45	M	W	Lawyer	Feb	10	Epidemic Typhus
Elizabeth Adams	70	F	W	Widow	Feb	15	Epidemic Typhus
James Miller	25	M	W	Student	Feb	20	Epidemic Typhus
John Davis	50	M	W	Merchant	Feb	25	Epidemic Typhus
Mary Clark	38	F	W	Homemaker	Feb	30	Epidemic Typhus
Richard King	65	M	W	Widow	Mar	5	Epidemic Typhus
Elizabeth Green	40	F	W	Homemaker	Mar	10	Epidemic Typhus
William Scott	32	M	W	Engineer	Mar	15	Epidemic Typhus
Anna Lee	58	F	W	Widow	Mar	20	Epidemic Typhus
Thomas Hall	48	M	W	Lawyer	Mar	25	Epidemic Typhus
Elizabeth Young	72	F	W	Widow	Mar	30	Epidemic Typhus
James King	28	M	W	Student	Mar	31	Epidemic Typhus
John White	52	M	W	Merchant	Apr	5	Epidemic Typhus
Mary Black	35	F	W	Homemaker	Apr	10	Epidemic Typhus
Richard Gray	62	M	W	Widow	Apr	15	Epidemic Typhus
Elizabeth Brown	45	F	W	Homemaker	Apr	20	Epidemic Typhus
William Green	30	M	W	Engineer	Apr	25	Epidemic Typhus
Anna White	60	F	W	Widow	Apr	30	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	May	5	Epidemic Typhus
Elizabeth Gray	70	F	W	Widow	May	10	Epidemic Typhus
James White	25	M	W	Student	May	15	Epidemic Typhus
John Black	50	M	W	Merchant	May	20	Epidemic Typhus
Mary Gray	38	F	W	Homemaker	May	25	Epidemic Typhus
Richard White	65	M	W	Widow	May	30	Epidemic Typhus
Elizabeth Black	40	F	W	Homemaker	Jun	5	Epidemic Typhus
William Gray	32	M	W	Engineer	Jun	10	Epidemic Typhus
Anna White	58	F	W	Widow	Jun	15	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	Jun	20	Epidemic Typhus
Elizabeth Gray	72	F	W	Widow	Jun	25	Epidemic Typhus
James White	28	M	W	Student	Jun	30	Epidemic Typhus
John Black	52	M	W	Merchant	Jul	5	Epidemic Typhus
Mary Gray	35	F	W	Homemaker	Jul	10	Epidemic Typhus
Richard White	62	M	W	Widow	Jul	15	Epidemic Typhus
Elizabeth Black	45	F	W	Homemaker	Jul	20	Epidemic Typhus
William Gray	30	M	W	Engineer	Jul	25	Epidemic Typhus
Anna White	60	F	W	Widow	Jul	30	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	Aug	5	Epidemic Typhus
Elizabeth Gray	70	F	W	Widow	Aug	10	Epidemic Typhus
James White	25	M	W	Student	Aug	15	Epidemic Typhus
John Black	50	M	W	Merchant	Aug	20	Epidemic Typhus
Mary Gray	38	F	W	Homemaker	Aug	25	Epidemic Typhus
Richard White	65	M	W	Widow	Aug	30	Epidemic Typhus
Elizabeth Black	40	F	W	Homemaker	Sep	5	Epidemic Typhus
William Gray	32	M	W	Engineer	Sep	10	Epidemic Typhus
Anna White	58	F	W	Widow	Sep	15	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	Sep	20	Epidemic Typhus
Elizabeth Gray	72	F	W	Widow	Sep	25	Epidemic Typhus
James White	28	M	W	Student	Sep	30	Epidemic Typhus
John Black	52	M	W	Merchant	Oct	5	Epidemic Typhus
Mary Gray	35	F	W	Homemaker	Oct	10	Epidemic Typhus
Richard White	62	M	W	Widow	Oct	15	Epidemic Typhus
Elizabeth Black	45	F	W	Homemaker	Oct	20	Epidemic Typhus
William Gray	30	M	W	Engineer	Oct	25	Epidemic Typhus
Anna White	60	F	W	Widow	Oct	30	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	Nov	5	Epidemic Typhus
Elizabeth Gray	70	F	W	Widow	Nov	10	Epidemic Typhus
James White	25	M	W	Student	Nov	15	Epidemic Typhus
John Black	50	M	W	Merchant	Nov	20	Epidemic Typhus
Mary Gray	38	F	W	Homemaker	Nov	25	Epidemic Typhus
Richard White	65	M	W	Widow	Nov	30	Epidemic Typhus
Elizabeth Black	40	F	W	Homemaker	Dec	5	Epidemic Typhus
William Gray	32	M	W	Engineer	Dec	10	Epidemic Typhus
Anna White	58	F	W	Widow	Dec	15	Epidemic Typhus
Thomas Black	48	M	W	Lawyer	Dec	20	Epidemic Typhus
Elizabeth Gray	72	F	W	Widow	Dec	25	Epidemic Typhus
James White	28	M	W	Student	Dec	30	Epidemic Typhus

The following table shows the names of the persons who died from epidemic typhus in the town of New York during the year 1915. The names are arranged in the order in which they died.

TABLE II
Showing the Deaths from Epidemic Typhus in the Town of New York during the year 1915, by month and sex.

Month	Sex	No. of Deaths
Jan	M	15
Jan	F	10
Feb	M	12
Feb	F	8
Mar	M	10
Mar	F	7
Apr	M	8
Apr	F	5
May	M	6
May	F	4
Jun	M	5
Jun	F	3
Jul	M	4
Jul	F	2
Aug	M	3
Aug	F	2
Sep	M	2
Sep	F	1
Oct	M	2
Oct	F	1
Nov	M	1
Nov	F	1
Dec	M	1
Dec	F	1
Total	M	150
Total	F	100

BOARD OF WORKS.

WHITECHAPEL DISTRICT.

REPORT

ON THE

Sanitary Condition

OF THE

WHITECHAPEL DISTRICT.

FOR THE

QUARTER ENDED DEC. 28TH, 1878,

BY JOHN LIDDLE,

MEDICAL OFFICER OF HEALTH.

London:

PENNY & HULL, STEAM PRINTERS, 121, LEMAN STREET, WHITECHAPEL, E.

1879.



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REPORT

OF THE

MEDICAL OFFICER OF HEALTH

For the Quarter ended 28th Dec., 1878.

TO THE BOARD OF WORKS, WHITECHAPEL DISTRICT.

GENTLEMEN,

In the Quarter that ended on Saturday, the 28th Dec., 1878, the total births in the District were 638, viz.: 316 males and 322 females; and the deaths 593, viz.: 332 males and 261 females. The excess of births over deaths has therefore been, during this Quarter, 45. As the deaths of 112 non-residents, which occurred in the London Hospital, are included in the mortality returns, a deduction of such deaths must be made in order to estimate the correct mortality of the District, thereby reducing the total mortality to 481, and increasing the number of births above deaths to 157. An allowance, however, must be made for the deaths of residents in public institutions outside the District; but of those I have no return. In the corresponding Quarter of the previous year the total births were 684, and the total deaths 613.

In the Spitalfields sub-District the births were 180, and the deaths 107; in the Mile End New Town 166, and the deaths 163; in the Whitechapel North 97, and the deaths 48; in the Whitechapel Church 65 and the deaths 208 (in this sub-District the London Hospital is situated); in the Goodman's Fields 83 and the deaths 40; and in the Aldgate 47 and the deaths 27. The deaths have exceeded the births in the Whitechapel Church District by 143, but from this number the deaths of the 112 non-residents must be deducted; the proportion of births to deaths is therefore 65 to 96.

The deaths in the London Hospital have been 168. In the corresponding Quarter of the previous year the deaths in this Institution were 204.

The deaths in the Workhouse have been 97. In the corresponding Quarter of last year they were 61.

The deaths from epidemic diseases in the entire District have been 42; viz.: 13 from measles, 5 from scarlet-fever, 3 from diphtheria, 5 from hooping-cough, 5 from diarrhoea, and 11 from fever.

In the corresponding Quarter of the previous year, the deaths from epidemic diseases were 48; viz.: 3 from small-pox, 10 from measles, 8 from scarlet-fever, 4 from hooping-cough, 12 from diarrhoea, and 11 from fever. Three deaths from small-pox occurred in the Small-pox Hospital. No deaths occurred in the Fever Hospital. The total deaths from epidemic diseases were therefore 51.

MORTALITY OF YOUNG CHILDREN.

The mortality of children under 1 year of age was 104. This is 17.5 per cent. of the total mortality. In the corresponding Quarter of the previous year it was 19.7 per cent. In the Spitalfields sub-District the rate is 29.0 per cent.; in the Mile End New Town 15.3 per cent.; in the Whitechapel North 39.5 per cent.; in the Whitechapel Church 3.3 per cent.; in the Goodman's Fields 47.5 per cent.; and in the Aldgate 11.1 per cent. The difference in the rate of mortality of young children in the Mile End New Town and Whitechapel Church sub-Districts is thus explained:—in the former the Workhouse is situated, and in the latter the London Hospital; in both these institutions the children under 1 year bear only a small proportion to the adults.

The total deaths under 5 years are 176; which shows a rate of mortality of 29.6 per cent. in relation to the total deaths, including those of non-residents, and 27.5 per cent. to the total births. The rate of mortality under 1 year, in relation to the total births, is 16.3 per cent.

PAUPER ILLNESS IN THE DISTRICT.

The Medical Officers of the Union have attended, during the past Quarter, 877 new cases of illness out of the Workhouse; including 5 of measles, 4 of scarlet-fever, 16 of diarrhoea, 11 of febricula, 9 of fever, and 7

of erysipelas. In the corresponding Quarter of the previous year the number of pauper cases of illness was 444; including 18 of small-pox, 13 of measles, 2 of hooping-cough, 4 of diarrhoea, 12 of febricula, 12 of fever, and 4 of erysipelas. The total number of cases of illness in the Workhouse has been 749; including 2 of hooping-cough, 9 of diarrhoea, 12 of erysipelas, and 8 of febricula. In addition to the above cases there were 41 of syphilis; thus making a total of 790.

PATIENTS FROM THIS DISTRICT WHO HAVE BEEN ADMITTED INTO THE
MEDICAL WARDS OF THE LONDON HOSPITAL.

The number of patients who have been admitted into the Medical Wards of the London Hospital for the quarter ended December 28th, 1878, has been 70 (including 5 who were suffering from zymotic diseases), of which number 34 were males and 36 females. The deaths were 9; of these 6 were of males and 3 of females. Included in the total number were 14 children.

UNCERTIFIED DEATHS.

The total number of uncertified deaths in this District for the year ended 28th Dec., 1878, was 23 or 0.94 per cent.; the total deaths being 2,430. Of these, 6 were in the Spitalfields Sub-district; 9 in the Mile End New Town; 2 in the Whitechapel North; 4 in the Goodman's Fields; and 2 in the Aldgate Sub-district.

METEOROLOGY OF GREENWICH.

The Returns of the Registrar-General show that the rain-fall in the Metropolis, during the Quarter, has been 6.05 inches. One inch deep of rain-fall on an acre weighs (allowing 10-lbs. to a gallon, which is the weight of a gallon of distilled water) nearly 101 tons. During the corresponding Quarter of last year the rain-fall was 6.73 inches. The mean temperature of the air was 61.7°. In the corresponding Quarter of last year it was 45.0°. The coldest days during the Quarter were Sunday, the 15th December, Tuesday, the 24th December, and Wednesday, the 25th December, when the thermometer indicated respectively 21.3°, 13.4°, and 12.2°. The coldest day during the corresponding Quarter of last year was on Thursday, the 18th October, when the thermometer indicated 28.2°, and the lowest temperature on any day in December was 28.9°. The mean temperature of the air in December, 1877, varied during each week from 37.8° to 43.4°, while in each week for December, 1878, it varied from 28.4° to 36.3°

TABLE OF WEEKLY MORTALITY, &c., IN LONDON AND IN THE
WHITECHAPEL DISTRICT.

The following Table, taken from the Returns of the Registrar-General,
shows the comparative results of the Quarter:—

WEEK ENDED	DEATHS IN LONDON.				DEATHS IN WCHPL. DISTRICT		Rain- fall. Inches.	Mean Tem- perature of the air. Degrees
	Diarrhœa.	Fever.	Small-pox	From all causes.	From Small- pox.	From all causes.		
Oct. 5	45	28	4	1355	0	38	0.13	55.8
„ 12	37	34	5	1418	0	33	0.54	56.9
„ 19	36	30	5	1369	0	44	0.00	51.9
„ 26	30	20	4	1446	0	48	0.98	50.3
Nov. 2	21	34	3	1386	0	43	0.14	41.0
„ 9	26	36	9	1590	0	49	0.10	38.8
„ 16	11	37	16	1665	0	30	1.74	39.8
„ 23	15	24	7	1547	0	49	0.12	40.6
„ 30	14	52	8	1624	0	41	1.48	39.0
Dec. 7	9	29	4	2016	0	62	0.23	36.3
„ 14	11	33	17	1698	0	50	0.00	28.4
„ 21	14	23	14	2133	0	50	0.09	31.2
„ 28	10	24	13	1900	0	56	0.50	32.7

VACCINATION.

WHITECHAPEL UNION.—Return of the number of Cases Vaccinated by the Public
Vaccinator and the Medical Officer of the Workhouse, together with the number of
Births Registered during the same quarters.

QUARTER ENDING—	PUBLIC VACCINATOR		WORKHOUSE.		TOTALS.		BIRTHS REGISTD.
	Primary Cases.	Re-Vac- cination.	Primary Cases.	Re-Vac- cination	Primary Cases.	Re-Vac- cination.	
March, 1877	408	500	37	27	445	527	757
June	382	5	24	1	406	6	696
September	336	—	26	—	362	—	607
December	241	3	32	—	273	3	704
March, 1878	288	13	29	—	317	13	688
June	443	5	46	—	489	5	672
September	480	5	30	1	510	6	644
December, 1878	258	4	26	—	284	4	638
TOTALS	2836	535	250	29	3086	564	5406

The following Table is continued from my last Quarterly Report, and exhibits the weekly progress in London of the existing epidemic of Small-pox, and that of 1870-71 in the corresponding weeks:—

1876-7.	Deaths	1877-8.	Deaths	1870-1.	Deaths	1871-2.	Deaths
Week ending		Week ending		Week ending		Week ending	
July 8	13	Oct. 6	14	July 9	13	Oct. 7	72
" 15	2	" 13	14	" 16	11	" 14	61
" 22	8	" 20	8	" 23	15	" 21	53
" 29	7	" 27	14	" 30	11	" 28	61
Aug. 5	1	Nov. 3	9	Aug. 6	15	Nov. 4	61
" 12	9	" 10	25	" 13	11	" 11	54
" 19	5	" 17	14	" 20	10	" 18	76
" 26	10	" 24	27	" 27	11	" 25	67
Sept. 2	8	Dec. 1	31	Sept. 3	9	Dec. 2	78
" 9	5	" 8	25	" 10	12	" 9	104
" 16	6	" 15	81	" 17	11	" 16	106
" 23	11	" 22	31	" 24	15	" 23	90
" 30	15	" 29	29	Oct. 1	13	" 30	97
Oct. 7	11	1878		" 8	27	1872	
" 14	16	Jan. 5	26	" 15	13	Jan. 6	91
" 21	22	" 12	35	" 22	17	" 13	90
" 28	15	" 19	51	" 29	21	" 20	93
Nov. 4	21	" 26	34	Nov. 5	23	" 27	90
" 11	48	Feb. 2	38	" 12	40	Feb. 3	52
" 18	52	" 9	55	" 19	45	" 10	68
" 25	43	" 16	47	" 26	41	" 17	48
Dec. 2	67	" 23	39	Dec. 3	60	" 24	53
" 9	50	March 2	54	" 10	61	Mar. 2	52
" 16	75	" 9	34	" 17	44	" 9	49
" 23	97	" 16	53	" 24	82	" 16	42
" 30	75	" 23	42	" 31	110	" 23	48
1877		" 30	48	1871		" 30	55
Jan. 6	116	April 6	55	Jan. 7	79	April 6	65
" 13	100	" 13	58	" 14	135	" 13	49
" 20	79	" 20	80	" 21	188	" 20	48
" 27	86	" 27	63	" 28	157	" 27	41
Feb. 3	103	May 4	60	Feb. 4	196	May 4	62
" 10	90	" 11	48	" 11	211	" 11	39
" 17	72	" 18	48	" 18	218	" 18	54
" 24	104	" 25	43	" 25	227	" 25	54
March 3	84	June 1	40	March 4	213	June 1	37
" 10	96	" 8	42	" 11	194	" 8	27
" 17	100	" 15	24	" 18	185	" 15	37
" 24	76	" 22	19	" 25	205	" 22	26
" 31	86	" 29	38	April 1	192	" 29	43
April 7	78	July 6	19	" 8	214	July 6	35
" 14	60	" 13	11	" 15	265	" 13	26
" 21	68	" 20	19	" 22	276	" 20	29
" 28	89	" 27	11	" 29	261	" 27	33
May 5	54	August 3	18	May 6	288	August 3	28
" 12	78	" 10	14	" 13	232	" 10	15
" 19	70	" 17	9	" 20	267	" 17	16
" 26	69	" 24	10	" 27	257	" 24	15
June 2	61	" 31	6	June 3	229	" 31	8
" 9	58	Sept. 7	3	" 10	245	Sept. 7	6
" 16	55	" 14	7	" 17	240	" 14	12
" 23	44	" 21	4	" 24	232	" 21	5
" 30	44	" 28	2	July 1	235	" 28	9
July 7	23	Oct. 5	4	" 8	164	Oct. 5	10
" 14	32	" 12	5	" 15	133	" 12	7
" 21	35	" 19	5	" 22	135	" 19	17
" 28	27	" 26	4	" 29	132	" 26	6
August 4	22	Nov. 2	3	Aug. 5	87	Nov. 2	14
" 11	20	" 9	9	" 12	96	" 9	15
" 18	21	" 16	16	" 19	80	" 16	13
" 25	11	" 23	7	" 26	82	" 23	13
Sept. 1	20	" 30	8	Sept. 2	78	" 30	8
" 8	8	Dec. 7	4	" 9	81	Dec. 7	8
" 15	10	" 14	17	" 16	57	" 14	5
" 22	10	" 21	14	" 23	89	" 21	5
" 29	13	" 28	13	" 30	51	" 28	10

FEVER AND SMALL POX.

According to the weekly returns of the Registrar-General it appears that the deaths from fever are on the increase in London, and that the deaths from small-pox have increased from the week ended November 2nd, when they were only 3, to the week ended December 28th, when they were 13; and since that date to the time of the printing of this Report they have still further increased. As regards the prevention of the latter disease, the isolation of the patients and the perfect vaccination of all infants and re-vaccination of all persons at the age of puberty will, if not entirely prevent its occurrence, greatly diminish its extent and severity; and as to the prevention of fever (typhus, typhoid and continued fever), cleanliness in house and person, good drainage, pure water, pure air and good ventilation, and the prevention of overcrowding, are the chief remedies to be relied on. Filth, in all its forms, and particularly in the excremental pollution of the atmosphere and of the water used for domestic and drinking purposes, are now well known to be the main causes of fever. It is therefore to the prevention of accumulations of all kinds of filth that the energies of the Sanitary Officers must be directed, if we earnestly desire to prevent the invasion and progress of this disease. The streets and footpaths should be cleansed daily, the sewers should be frequently flushed, so as to prevent the accumulation of offensive matter therein, and the dust-bins, both private and public, should be daily emptied.

I am induced to bring this matter under the notice of your Board at this time in consequence of the increase in the number of deaths from fever in the Metropolis. It appears that during the last six months there have been recorded 713 deaths from fever, viz.: 299 for the Quarter ended on the 28th September, and 414 for the Quarter ended on the 28th December last, showing an increase of 115 in the number of deaths in the present quarter over that of the preceding one.

The increase in the number of deaths from fever at the present time, when so many deaths from fever are being recorded in the east of Europe, calls for additional attention on the part of the public authorities to the sanitary condition of their respective districts; for, although the improved sanitary condition of London may prevent so fatal a disease from becoming epidemic, yet it is necessary at the present time to use increased vigilance, especially as regards the localities of the poorer districts.

At the present time, when the subject of small-pox hospitals is being agitated, it may perhaps be interesting to the several Local Boards to be acquainted with the opinions of several eminent medical men on the subject of contagion. These opinions are set forth in the Report of the General Board of Health on Quarantine in 1849. At page 52 in the Report just mentioned, it is stated that—

“The London Fever Hospital is separated from the Small-pox Hospital only by the space of between thirty and forty feet, and the windows of the wards of both establishments are immediately opposite each other; yet there is no instance of the communication of small-pox to the typhus patients, nor of typhus to the small-pox patients; nor of either disease to the convalescent or to the official inmates of the adjoining establishment. There does not appear to be a single instance on record in any country, of the extension of infection beyond the walls of a hospital, or even of a lazar-house, so as to injure, in any manner, the nearest inhabitants.”

Such high authorities as Drs. Haygarth, Percival, Ferrier, Carmichael Smith, Currie, Russell, Roberts, Arnott, Christison, and many others, deny that exhalations from the living body are capable of permanent suspension in the atmosphere, or that they can be conveyed unchanged through pure air to great distances. These authorities are of opinion that the property which is possessed by the air to neutralize and destroy these exhalations is a provision of nature for our well-being.

In investigating cases of small-pox with the view of tracing from person to person the links of contagion, one fact must always be distinctly proved, and that is the length of time which has elapsed since the alleged cause of the contagion and the outbreak of the disease in the person attacked. The period of incubation of small-pox appears to be well ascertained. So, if a person attacked with small-pox assert that he caught the disease by his having come in contact with a person suffering from that disease at any period less than eleven days, it may be said with confidence that he did not take the disease at the time alleged, but must have had the germs of it in his body before he came in contact with that particular person.

EXTENSION OF THE SEWERAGE OF THE DISTRICT.

During the twenty-three years that your Board has been in existence it will be observed, on looking over my 90 Quarterly Reports, and the several special Reports which have been published, that a large amount of work has been done, and that a considerable expenditure of money has taken place in carrying out sanitary improvements. Thus, it appears by the report for the Quarter ending December, 1867, that 20,599 feet of new sewers had been constructed in the District. The localities of these sewers and dimensions of them are given in a table published at page 14 of the said report. In my report for the quarter ended March, 1872, two additional sewers are recorded as having been constructed, viz.: one in Mount Street, a 12-inch pipe of 330 feet in length, and the other in Tenter Street North, and Alie Place, a 15-inch pipe of 456 feet in length. Total length of new sewers constructed in this District up to March, 1872, at the public cost, 21,345 feet, or upwards of four miles.

I have been favoured by Mr. S. W. IRON, the Surveyor to the Board, with the following further report on the sewers in this District up to December, 1878:—

“In Old Castle Street, Whitechapel, and in Grey Eagle Street, Spitalfields, the old and defective brick sewers have been broken up and pipe sewers substituted. In Paternoster Row, Spitalfields, the old and defective sewer was taken up and an 18-inch pipe sewer laid at a lower level. In Church Passage, Norton Folgate, a new pipe sewer was laid, about 166 feet in length. The defective parts of the southern end of the sewer in Burr Street, Aldgate, have been made good, a brick invert substituted for the old defective flat wood bottom, and the sewer for a considerable distance rendered in cement. In Goulston Street, Whitechapel, a length of about 230 feet of 15-inch pipe was laid; also a new 18-inch pipe sewer was laid in West Street, Spitalfields, about 110 feet in length. An old and defective brick drain at the rear of premises in Corbett’s Court, from Grey Eagle Street to Little Pearl Street, was broken up, and 210 feet of 18-inch pipe sewer substituted. In Grey Eagle Street, Spitalfields, the old brick sewer was broken up and about 180 feet of respectively 18 and 15-inch new pipe sewer was laid. In Rupert Street, Whitechapel, a new pipe sewer, 15 inches diameter, and about 200 feet in length was laid. About 180 feet of new 9-inch pipe was laid in Underwood Street, Mile End New Town, for an improved outlet to the gullies at the western end of that street. About 40 feet of similar pipe was put in, in Newcastle Place (western end), for a similar purpose.

Considerable drainage works have also been done under the superintendence of the Surveyor to the Board, by and at the expense of private owners in the following places:—Eastman’s Court, Spitalfields Market, Union Court, Mill Yard, Gower’s Place, &c.

In addition to these works, a new sewer has been formed by the Metropolitan Board of Works through the entire length of Lower East Smithfield, and important alterations have been made to the Irongate sewer on Tower Hill, and to the sewer in Nightingale Lane.

Extensive works were also carried out by the Surveyor to the Board, at the expense of the East London Railway Company, in forming a new sewer and breaking up the old sewer in the Whitechapel Road, from the New Road to East Mount Street; also in constructing new sewers respectively in East Mount Street, Raven Street, Cotton Street, and Little North Street.

Alterations have also been recently made to the sewers on Tower Hill, &c., consequent upon the operations of the Metropolitan Railway Company.

In Commercial Street, Leman Street, Great Alie Street, Mansell Street, and in other parts of the District, a considerable number of the old-fashioned gullies, which were large receptacles for offensive matter, have been broken up, and new and improved gullies formed and properly trapped."

It appears that the sum expended on sewers from 1856 to 1878 was—

For construction.....	£9672	1	0
Repairs and alterations	6159	12	2
Cleansing.....	10312	7	2
		<hr/>	
TOTAL	£27,144	0	4
		<hr/> <hr/>	

BENEFITS RESULTING FROM SANITARY IMPROVEMENTS.

It may fairly be asked what the ratepayers have gained by the carrying out of the extensive sanitary improvements in this District, a portion only of which I have here recorded. In the first place it will be perceived on looking over the table published on page 12 of my report for the Quarter ended on Saturday, the 31st March, 1877, that the rate of mortality in this District has considerably decreased. Thus in 1838, which was a very unhealthy year owing to a severe epidemic of fever, the rate of mortality was 44.2 per 1000; in the following year it was 35.2 per 1000; while in 1876 it was 23.9 per 1000. In 1877 it rose to 25.2, and in 1878 it was 25.6 per 1000; or 1 in 39 of all living. It has, however, been alleged that the rate of mortality in the whole of London has not been lessened since 1840, when the Registrar-General's returns show that the death rate in that year was 24.0 per 1000, and in 1878 it was 23.5 per 1000—a difference of only 0.5 per 1000. There is no denying the facts tabulated year by year by the Registrar-General; but, if the returns are carefully analyzed, it will be found that in those districts where the population was spread over a large area, the rate of mortality was comparatively low; whilst in the more densely populated districts it was proportionately high. Where, owing to the increase of population in the whole of London the formerly sparse districts became more densely populated, the rate of mortality from that cause increased; while in those districts in which there was very little space for new dwelling houses to be erected the death-rate decreased, owing to the improved sanitary works which have been carried out in them; for, other things being equal, density of population tends to increase the rate of sickness and mortality. This seems to be, as is shown by the Registrar-General, a universal law; and hence it is found that villages as they become populous or grow into towns, assimilate to the latter in the frequency of diseases and a higher death rate.

The public are deeply indebted to the Registrar-General for publishing year by year and quarter by quarter, and in London week by week, the returns of deaths; while in the very fatal and severe epidemics of cholera, the returns were published day by day together with some valuable remarks respecting the deaths in each locality. By pursuing such inquiries, year after year, not only many of the causes that induce sickness and destroy life have been discovered, but observations of the same kind have shown that their removal has been followed by health and longer life, and the economic value of the population of several towns has been increased by sanitary measures. The Registrar-General further remarks that "the mean life-time by the English life-table is 40.86 years; by the healthy life-table it is 49.0 years, which is attainable in every well organized state. It is fair to assume, that if a fifth part be added to the mean life-time, at least a fifth part will be added to the worth of a living and labouring population. For further information on the subject of a diminished death-rate following the carrying out of sanitary improvements, I refer the reader to pages 19, 20 and 21 of my Quarterly Report for March, 1877.

In my evidence given before the Royal Commission, which was appointed in 1864 for inquiring into the state of large towns and populous districts, a table is printed, showing that the average age at death in the Whitechapel District in the year 1839 was, including children, 26 years, and the proportionate number of deaths to population was 1 in 31. In my report for December, 1877, the number of deaths to population was 1 in 39.0. If the laws of health were well known and universally followed, it is highly probable that nearly all the causes of death which are now annually registered might be prevented, and that the only cause of death which our mortality tables would show would be "*old age*," or "decay of nature;" and instead of the numerous early deaths which now occur, the words of the prophet might be literally fulfilled—"The child shall die a hundred years old (the meaning of which probably is men shall die at the age of a hundred years); there shall be no more untimely deaths seen." Whether or not such an event, circumstanced as society is at present, would add to the sum of human happiness or would advance the welfare of the community, is one which I have no inclination to discuss; but I may draw your attention to the fact recorded at page 65 of the Registrar-General's Report for 1876, where a table is given of the deaths of 69 persons (16 males and 53 females), returned as aged 100 years and upwards in England and Wales during the year 1874, six of which deaths are stated to have occurred at the advanced age of 104. In this District several persons have died whose ages have been upwards of 100. One of these deaths was that of the widow of a labourer, whose death at 102 years was registered

by the late Mr. Hodson, the Registrar for the sub-district of Norton Folgate, who stated that he had good reason to believe the age was correctly entered. For further particulars respecting this death I refer the reader to page 8 of my report for the quarter ended June, 1861; and more recently the death of a man, aged 103, was registered in the Spitalfields sub-district. This man was said to have lived 70 years in the same house. Although some of these very aged persons may not have known their age, and may have supposed themselves to have been older than they really were; still it is difficult to believe that all the 69 persons recorded in the table above alluded to have been under delusion as regarded their respective ages. It appears that nine of these old people died in London, and the remaining 60 in different parts of the country.

Not only have the labours of your Board resulted in a decrease in the rate of mortality, as is shown above, but the number of sick paupers has diminished from 17,417 cases, which is the number recorded by the Medical Officers of the Union in the year 1867, to 2060 in 1877, which however increased last year to 3107. This increase in the number of sick paupers is accounted for by the numerous cases of destitution which occurred in the Registered Lodging Houses. I do not attribute this very large diminution of pauper cases of sickness entirely to the improved sanitary condition of the District, although it must have some influence in reducing the number of sick poor. This satisfactory result is largely attributable to the judicious arrangements for medical and general relief made by the Board of Guardians; particulars of which will be found in a 'Memorandum,' with which I was furnished by Mr. Vallance, Clerk to the Guardians, at page 10 of my report for the Quarter ended 30th December, 1871. In addition to these satisfactory results the comfort of the poorer inhabitants has been considerably increased by the demolition of about 3450 cesspools; the removal of the business of bone-boilers and other similarly offensive factories; the removal of innumerable nuisances; the diminution of overcrowding in the houses of the poor and in the Registered Lodging Houses, 300 cubic feet being now the space allotted to each bed in every room. The full particulars regarding each lodging house in the District are set forth in my reports for January, 1876; April, 1876; July, 1876; and October, 1876; where it will be seen that at the time these rooms were visited more than one-half of them contained a less space for each occupant of a bed than 300 cubic feet. Some were found to allow only 151 cubic feet.

There will also be found greater cleanliness in the houses of the poor, better paving, draining and cleanliness of the back yards, the demolition of some of the houses which were unfit for habitation, and the carrying out

of such structural alterations in others as to render them more healthy, the providing the inhabitants generally with a better supply of water on the constant service, without the intervention of butts or cisterns, the opening of new thoroughfares and the formation of new parks and recreation grounds, whereby the convenience of traffic is extended and a better circulation of air afforded to the people.

I may here state that it was owing to the provisions of the 35th section of the Sanitary Act, 1866, that I was enabled to procure for the poorer localities of this District a water supply on the constant service system. Although there were not many houses which were registered under the above named Act; yet the dislike which landlords entertained in having their houses which were let out in tenements placed on the register, whereby they became subject to your Bye Laws, induced them to comply with the request of your Medical Officer, rather than be placed in the category of lodging-house keepers.

The improved condition of the slaughter-houses and cow-houses, and the better cleansing of the streets, also contribute to the comfort and well-being of the inhabitants of the District. I cannot, however, help feeling and expressing great regret that success has not attended the labours of your Medical Officer of Health, in his desire to see the entire abolition of private slaughter-houses in the metropolis as now established, which although as above stated are somewhat improved, yet they are not creditable to the enlightenment of the latter part of the nineteenth century. Public slaughter-houses ought to be erected in suitable places by the Metropolitan Board of Works and by the Sanitary Authority in the City of London; and the use of all private slaughter-houses in London should be prohibited.

I have also to regret that a Mortuary has not been erected in this District. Notwithstanding the numerous occasions on which I have brought this important subject under the notice of your Board, I have failed to impress them sufficiently with its importance as a means of preventing the extension of contagious diseases, and of adding materially to the comfort of those poor people who occupy only a single room in which the entire family take their food, nurse their sick, and coffin their dead. In this single room it is sometimes found that a corpse has been kept for 12 or 14 days, the delay of burial being in some instances occasioned by the desire to raise the necessary funds among their acquaintances for defraying the expenses of the funeral. The danger of retaining a corpse in a room occupied by a family is greatly increased if the person has died from small-pox; for in such a case the emanations from the corpse will tend to spread the disease to all persons occupying the room, and to all other persons living in

the house. Every article of bedding, clothing, &c., in the room in which a person has died of small-pox, or other infectious or contagious disease should be disinfected with sulphurous acid gas, and it should remain for some time exposed to the atmosphere before the same is again occupied by another person. How far the mourning coaches, which among the poor are frequently employed for conveying the corpse to the cemetery, and which in many instances are filled with the relatives of the deceased, may be a cause of contagion, is a subject well worthy of investigation.

The vaults underneath the Churches of Whitechapel, Spitalfields, Trinity, Minories, the German Church in Little Alie Street, the Lutheran Church in Hooper Square, and the Danish Church in Wellclose Square have been properly secured, and no nuisance from the numerous dead bodies which were buried in them can now arise therefrom.

In addition to the substantial benefits above enumerated which have accrued to this District since the formation of your Board, the District has partaken in an equal degree with other parts of the Metropolis of the benefits derived from the compulsory education of children, as is seen in the diminution of juvenile crime. The valuable assistance which Sanitary Boards have derived from the energies of the School Board officers in visiting the residences of many of those children who are compelled to attend school is a matter to be acknowledged. The co-operation of the sanitary officers with the School Board officers is most important, for it will be found that the physical health of the children will keep pace with their advancement in knowledge and their improvement in moral health. The teaching of children merely to read, write and cipher, will do very little towards making them think; and unless children are taught to think they will not become useful members of society, nor acquire a feeling of self-respect and a respect for others. Habits of industry must be instilled into children at an early age, so that when they leave school they may feel pleasure in performing useful labours. As the maintenance of health is all important to their success in life, the elements of physiology should be taught in every school.

The advantages which the public has derived by the exertions of the several Boards and local authorities are also seen in the last annual report of the Registrar-General. At page IX. in this report, it is stated that "in 1837 not more than 58 in 100 men and women possessed the art of reading and writing; but there has been progress, and I have year by year assiduously noted the increase in these numbers in the 39 years, so that I am now able to report that instead of 58, eighty-one in a hundred write their names in the marriage registers"

"The economic value of a population depends very much on their command over the powers of nature which they acquire by education, but

there are other elements on which the economic value of the working population depends; and foremost among them stand health and long life." It will be found that intellectual improvement will keep pace with physical improvement, and the scenes of brutality and violence which thirty years ago were of such frequent occurrence in the streets and public houses in London are now comparatively rare.

PUBLIC TRAFFIC IMPROVEMENT *versus* PUBLIC HEALTH IMPROVEMENT.

The following schemes which succeed each other, and are set forth on page 873 of the Minutes of the Metropolitan Board of Works, and dated 20th December, 1878, show in the first table the amount proposed to be expended for health purposes, and in the second the amount required for affording greater facilities for traffic. The net cost of the one, by which all London will be benefitted, is estimated at £584,487; while the other, by which comparatively few persons will be benefitted, amounts to £1,615,460. Both these schemes, I may add, have been made compulsory on the Metropolitan Board of Works, under Acts of the Legislature, to carry out. With regard to the Act relating to the improvement of the dwellings of the labouring classes, I regret that the Metropolitan Board of Works were not among its most active promoters, for no measure that they have carried into effect is likely to prove of so much benefit to the public in a moral, physical, and, I may add, educational point of view, as that for the providing of better habitations for the poorer classes. Mr. Cross' Act will form an important event in the history of sanitary science.

The public is deeply indebted to the Home Secretary for his exertions in thus endeavouring to benefit the public health. It must not, however, be forgotten that much of the labour of obtaining the requisite information respecting the practicability of such a scheme is due to the Special Dwellings Committee, which was appointed by the Charity Organisation Society. This Committee held several meetings, at each of which I was present, which were most ably presided over by Lord Napier and Ettrick, whose name should always be associated with this Act.

DWELLING HOUSE IMPROVEMENT FUND.

"Under the Artizans' and Labourers' Dwellings Improvement Act of 1875 (38 & 39 Vic., cap. 36), it is obligatory upon the Board to establish this Fund, to which all receipts under the Act shall be carried and all expenses charged. The money required to establish the fund and any deficiency arising from time to time are to be supplied either by money borrowed or 'local rate;' and the 'local rate' is not the Board's Consolidated Rate, but a distinct portion of the Board's Consolidated Rate to which the City of London is not liable."

SCHEME.	CONFIRMING ACT.	Estimate of Cost.		Amount Borrowed.		Deficiency chargeable on Local Rate (Interest and Sinking Fund of Money borrowed.)		
		Gross.	Nett.	Year.	Amount.	Amount expended to Sept. 30, 1878.	1878.	1879.
Whitechapel and Limehouse	39-40 V., c. 200	£ 110,500	£ 54,400	1877	£ 110,500	£ 98,724	£ 5992	£ 5918
Whitechapel (Goulston-street and Flower and Dean-street	40-41 V., c. 103	287,629	147,773	1878	100,000	1457	...	5461
St. George-the-Martyr, Southwark.....	40-41 V., c. 103	59,760	33,353	...	...	661	...	2730
St. Martin-in-the-Fields & Strand District (Bedfordbury)	40-41 V., c. 103	86,535	63,995	1878	50,000	32,556	...	2730
St. Giles-in-the-Fields (No. 1), Great Wild-street	40-41 V., c. 133	87,575	49,540	1878	50,000	22,236	...	2730
Clerkenwell (Pear Tree-court)... ..	40-41 V., c. 133	19,560	5050	...	...	578	...	546
St. Luke's (Whitecross-street).....	40-41 V., c. 133	275,236	98,786	1878	50,000	1249	...	2730
Islington (No. 1), High-street	40-41 V., c. 133	22,265	7960	...	...	770	...	546
Westminster (Old Pye-street)	40-41 V., c. 133	64,900	5830	1878	50,000	13,854	...	2730
St. Marylebone (Bowman's buildings)	41-42 V., c. 112	55,700	40,700	...	...	190	...	2730
Islington (Essex-road)	41-42 V., c. 112	120,600	77,100	...	...	...	...	2730
Expended on Schemes generally, to be apportioned hereafter .....	... ..	...	...	...	...	3863	...	...
		£1,190,260	£584,487	...	£410,500	£176,138	£5992	£31,581

BRIDGE EXPENSES.

"These arise under the operation of the Metropolis Toll Bridges' Act of 1877 (40 and 41 Vic., cap. 99.)

By Sec. 26, the Board may borrow money not exceeding £1,500,000, to compensate the owners of Toll Bridges crossing the river Thames, in the metropolitan area, for relinquishing their rights in the bridges, and thereupon the bridges are thrown open free of toll. The expense of maintaining the bridges and the roads over them, and of compensating officers, also devolves upon the Board; but the counties of Middlesex and Surrey will pay towards the Board's expenses the sum of £1200 a year each respectively from the date of the free opening of all the bridges used for horse and carriage traffic.

By Sec. 16, bridges in a division are to be opened free simultaneously, and the divisions are—1st, Waterloo and the foot-bridges at Charing Cross and Cannon Street; 2nd, Lambeth, Vauxhall, Chelsea, Albert and Battersea; 3rd, Wandsworth, Fulham or Putney, and Hammersmith.

By Sec. 29, "Bridge Expenses" are to be raised as a General, not a Sewers Rate.

Waterloo and Charing Cross Bridges are freed. The claims in respect of others are either settled or under investigation."

BRIDGE.		CLAIM.	AWARD.	Other expenses to Sep. 30, 1878.
		£	£	£
1	Waterloo	750,000	475,000	4902
	Charing Cross.....	150,000	98,540	405
2	Lambeth	100,000	36,059	1217
	Vauxhall	395,460	255,230	1035
	Chelsea	120,000	...	69
	Albert and Battersea	300,000	...	172
3	Wandsworth	150,000	...	51
	Fulham	100,000	...	62
	Hammersmith .....	...	...	87
4	Deptford Creek	70,635	...	37
	General Expenses .....	...	...	1959
	Expenditure chargeable to Loan .....	... ..	£864,829	£9996
			1879	1878
	Amount to be carried to the Consolidated Loans Fund, for Dividends		£ 35,000	£ 17,500
	Ditto ditto Sinking Fund		19,608	...
	Other expenses and Pensions to Officers		3000	...
	Estimated Expenses chargeable to Rate		£57,608	£17,500

PROPERTY *versus* HEALTH.

We have a striking instance of the great interest that is shown in the protection of property, and the comparatively little value that is attached to the health of the people in the recent Act, intituled "The Contagious Diseases Animals Act, 1878." As regards the laws which are in force for the protection of the health of cattle, which may be looked upon as property, I have nothing to complain; but as a health officer, I may express my surprise that similar laws to those which are now in force respecting disease in cattle, are not enacted to prevent the spreading of infectious and contagious diseases among the people. At present there is no general law in force to compel persons who may become acquainted with the existence of an infectious disease in a dwelling house to give notice of the same to the Sanitary authority of the district, so that prompt measures may be adopted, with the concurrence of the medical attendant of the patient, to prevent the extension of the disease; nevertheless, as the subject has now been brought under the notice of Government, it is to be hoped that the question will be duly considered during the present session of Parliament. Surely it is more important to protect the lives of the people than to protect from loss the dealers in cattle; but until the care of public health is considered to be of more importance than the care of property, little improvement in the laws relating to health can be expected. Although the advantages of studying the science of public health have been for upwards of forty-five years prominently placed before the public by intelligent and experienced men, it yet appears that preventive medicine is only in its infancy. The State, however, has not been unmindful of the protection it affords to the preservation of the public health, as is seen by the numerous statutes in existence for that purpose, and all that is now needed, with perhaps a few new clauses, is a consolidation.

In my report for the Quarter ended 30th March last, the danger resulting from my not being made early acquainted with the first case of small pox, which occurred in Spring-gardens, is strikingly illustrated. On the 9th January last, from a private communication received at the office, a case of fever was discovered at No. 7, Buck's-row. The Inspector, Mr. Wrack, immediately visited the house, and there learnt that a boy 16 years old was lying in bed suffering from typhoid fever. The mother informed the Inspector that the whole family, six in number, had very recently been ill with the same disease, and that their medical attendant had prescribed at different times during their illness, and yet no information of the circumstance was forwarded to this office. On the recovery of the boy, all the bedding, &c., was removed and disinfected, the house was disinfected with sulphurous acid gas, and the walls and ceilings of the hous-

were thoroughly cleansed. No further case of fever occurred in the neighbourhood, and had similar steps been taken when the first case was treated, it is not improbable that the disease would have been arrested, and instead of six cases there would have been only one. The preference which is given by our law makers to the protection of the supposed vested rights of property above that of public health, is likewise shown by the

REJECTION OF THE SEVERAL BUILDING BILLS,

which have been from time to time brought in by the Metropolitan Board of Works, for the amendment of the Building Act; valuable as they were in a sanitary point of view. These several Bills contained very valuable suggestions for the proper arrangement of the number of square feet which was necessary to be provided at the rear of dwelling houses. The opinion of the House appeared to prevail that "a man has a right to do what he likes with his own," as regards the building of as many houses as can possibly be packed together on his own land without taking into consideration the health of the people who are to inhabit them, or the health of those in the immediate neighbourhood. So long as the Building Act, as regards open spaces at the rear of houses, remains unaltered, so long will unhealthy houses continue to be built; and if such are condemned under the authority of Local Boards as unfit for habitation, they will have to be taken down at the public expense, and compensation given to the owners. It does appear to be a very unwise proceeding to pull down unhealthy houses in some localities, and at the same time allow similarly unhealthy ones to be erected elsewhere. Although some improvement was effected by the last Building Act, which was brought in by the Metropolitan Board of Works, yet a general Building Act for the whole of England is required, and the Local Boards should be empowered to make bye-laws for regulating the building of houses; which however, before being acted on, should be approved by a Secretary of State. With a similar restriction, the Metropolitan Board of Works might be empowered to make bye-laws for buildings in the Metropolis. It would perhaps be better to embody in the Building Act all that is essential to the sanitary condition of houses, and so obviate the necessity for making bye-laws in each district.

THE METROPOLIS MANAGEMENT AND BUILDING ACTS'

AMENDMENT ACT.

In my last report, while speaking of the statutes relating to sanitary subjects which were passed during the last session of Parliament, I referred to the unfortunate omission of a clause determining the amount of

open space to be required at the rear of each house, so as to afford a thorough ventilation of all the rooms therein. The best plan for the sanitary officers to adopt under existing circumstances will be to inspect the ground plans of all houses in course of construction, and where the Medical Officer of Health shall be of opinion that the proposed new houses will not be sufficiently ventilated, or that the conveniences of the houses are improperly placed or arranged, to give notice in writing to the builder or owner so to alter his plans as to insure a proper ventilation of the house or houses, and a freedom from nuisance. If it should then happen that such house or houses when completed is or are not fit for habitation, they should be brought under the notice of the sanitary authority, and if by them the Medical Officer's report be approved, the house or houses should be condemned, and proceedings taken to have such house or houses closed.

THE ARTIZANS' AND LABOURERS' DWELLINGS IMPROVEMENT ACT, 1875.

This Act has now been in existence nearly four years, and although twelve schemes have been prepared by the Metropolitan Board and approved by the Secretary of State, the sites for building new houses for the working classes in this District have only been very recently, and this to a limited extent only, cleared for the purpose. Under the restrictive provisions of the Act it is very doubtful whether public companies will be induced to purchase the land, as the expense of purchasing the ground and of erecting thereon suitable dwellings for the accommodation of at least as many persons of the working class as may be displaced in the same area will not only be very great, but it will be extremely difficult to provide for proper sanitary arrangements.

The fifth section of this Act appears to me to be very objectionable from a sanitary point of view, for in the first place it is rendered compulsory on the purchasers of the land to provide house accommodation for the same number of the class of persons who shall have been displaced by the pulling-down of their habitations. Now, it so happens that in the official representations respecting the unhealthy localities, great stress has been laid upon the overcrowding, whilst the unhealthiness of the locality has been largely ascribed to that cause, and yet it is rendered imperative on the local authority to adapt their plans for the accommodation of *the same number* of persons as may have been displaced from *an overcrowded area*. Then, in order to comply with this provision of the Act, very high houses must necessarily be built. If this be enforced, I do not see how "proper sanitary arrangements" can, in accordance with this section of the Act, be provided. Some of the new streets to be formed on the site will be much too narrow

to admit the rays of the sun into each room, seeing that the height of the proposed buildings will greatly exceed the width of the new streets; and as the free access of the sun's rays is most essential to health and ventilation, the "proper sanitary arrangements" required by the Act cannot be secured. Had the Act been so framed as to require the provision of accommodation for only half or even two-thirds of the people who may be displaced, it would have been looked on by Medical Officers of Health as a great public advantage.

Whilst I freely admit that the pulling down of the numerous unhealthy rookeries, and even the erection of such lofty buildings on the site as proposed, will be a great improvement upon the existing state of things, yet it may happen that the crowding of so many persons under one roof during a period of epidemic disease will be a source of danger, unless the most ample means are afforded for efficient ventilation.

In my opinion, it will be found almost impracticable to thoroughly ventilate such proposed large buildings, unless such houses are built in large open spaces and surrounded by pure air; but the proposal to locate the same number of persons as have been displaced from a limited area in an equally small area, where the surroundings may not be so healthy as are required, is a mistake: I have not the slightest fear that inconvenience to any appreciable extent will be suffered by the people who will be displaced under the provisions of this statute. The entire displacement of so many people from the limited areas proposed to be dealt with will be an incalculable benefit to the health of this overgrown metropolis.

Surely the suburbs of London, in view of existing facilities for cheap railway travelling, will be found in every way as well adapted to the accommodation of the working classes as the present crowded localities in London. I find from inquiry that when the Victoria Docks were built, some of the working classes, who were residing in the courts about Royal Mint-street, walked to the new docks and back daily, a distance of upwards of eight miles. This daily walk, in addition to the men's work at the docks, is now saved by their being able to obtain house accommodation nearer to their place of work at the Victoria Docks.

If these proposed new buildings were to be erected in the cottage or detached form, with a good space between each, in a manner somewhat similar to that of St. Thomas' Hospital, they would be rendered much more healthy. Although the rate of mortality in the several buildings which have recently been erected by the Trustees of the Peabody Fund, and by the Association for erecting Improved Dwellings for the working

classes, is much lower than in the wretched places where so many of the poor now reside, yet in drawing a comparison between the rate of mortality in these new buildings and that in many of the courts and confined places, it must be borne in mind that into these improved dwellings the better class, both morally and physically, of the operatives, can alone obtain admission. It may be different when a lower class occupy these buildings.

The subject of providing better homes in more healthy localities for the accommodation of the working classes has been fully discussed by writers and speakers on public health, and has been most prominently put before the public during the last 40 years; and the subject has not only been fully approved by large audiences and numerous readers, but has been the theme of valuable leading articles in the public press.

This being so, the ratepayers cannot consistently and, I am sure, will not grudge the expense of carrying out the provisions of Mr. Cross' Act, the same being the first attempt on the part of the legislature to carry out the wishes of the people upon this matter; and, so far from its being a pecuniary loss to them, it will prove to be a great gain by the saving which will result in their having to pay a less sum for sickness occurring in their own families and a greatly diminished poor rate. It may be asserted, without fear of contradiction, that all money laid out for the improvement of the public health will secure an ample dividend.

It will be observed, on reference to the table on page 17, comprising the Improvement Schemes which the Metropolitan Board propose to carry out, that only twelve of the whole which have been proposed by the Medical Officers of Health have been selected. If London, after the lapse of four years from the passing of Mr. Cross' Act is to be dealt with in this slow and fragmentary manner, it will indeed be very many years before this great metropolis will become so renowned for health, as the intelligence, wealth, and industry of its inhabitants entitle them to expect. The sum required for the demolition of the numerous unhealthy localities in London is large; but however large it may be, it is of comparatively little importance when health and social improvement are the objects to be gained, and in which all classes will participate.

As similar provisions to those contained in this beneficent Act have for many years been urged upon the notice of the respective Governments, it may be emphatically called the PEOPLE'S ACT, and every ratepayer ought earnestly to desire to see it carried out with all possible speed. I may be excused if I here express my deep regret that two unhealthy areas which I

officially represented to the Metropolitan Board, have not been included among those which are proposed to be dealt with immediately. One of these areas, called the "Bell Lane Scheme," is simply an extension of the "Goulston Street" area, and consists of a similarly bad class of property. (A description will be found in my report for the quarter ended September, 1877). To leave this portion of the area standing, while the adjoining or southern portion is improved, will be to render the same more hideous by the contrast, and its hideousness will be more apparent when the Improvement Scheme of the Commissioners of Sewers for the City of London, on the west side, is carried out.

NOXIOUS VAPOURS COMMISSION.

In the Report of the Royal Commission on Noxious Vapours, at page 25, the following statement appears:—

"The only remaining evidence affecting the Metropolis which requires notice here, is that of Mr. Roberts, the Chemist to the Mint, with respect to gold refining. It appears that a certain amount of nuisance and of damage to such things as brass work and window curtains is occasioned by the sulphurous and sulphuric acid fumes proceeding from the refinery of Mr. Alfred de Rothschild, near the Mint. Mr. Roberts was of opinion that the escape of sulphuric acid might be to a considerable extent prevented; but having regard to the fact that there are only four refinery firms in London, and that the details of the processes are kept secret, we are not prepared to suggest any legislation affecting them."

I make no comment on the reasons assigned for not recommending legislative action to abate the nuisance, but merely say, so much the worse for the inhabitants living near these premises.

In my evidence given before the Royal Commission on the 8th March, 1877, I stated in reference to the nuisance arising from the Refinery Premises in Royal Mint Street, that I had complained of it to your Board no less than fourteen times; but I also stated that the nuisance was not then so bad as it had been. If the nuisance should again arise I imagine, after the opinion of the Royal Commission as given in the above extract from their report, that we must bear with it. These works are exempted from the provisions of the Nuisances' Removal Act, so that if it should at any time become necessary to take legal proceedings against the owner, it can only be done by the expensive process of indictment.

SANITARY WORKS PERFORMED DURING THE QUARTER ENDED
28th DECEMBER, 1878.

The following return shows the amount of work done by the Sanitary Inspectors during the Quarter ended 28th Dec., 1878 :—

Number of inspections of houses as shown in the official returns ..	3026
Houses specially visited	260
Houses specially re-visited	910
Preliminary notices served, such notices embracing 338 premises ..	221
Compulsory orders issued, embracing 101 premises	57
Summonses heard at Police Courts, under Sanitary Act	0
„ under Act for the prevention of Adulteration of Food, &c.	0
Cellars used as dwellings discontinued for such use	2
Cases of overcrowding and indecent occupation abated	4
Houses in which rooms or passages have been whitewashed ..	148
Rooms disinfected with sulphurous-acid gas, after the occurrence of small-pox, fever, and scarlet-fever therein	43
Articles disinfected in rooms, consisting of beds, bedding, clothing, &c.	230
Yards of houses paved, or the pavement repaired	74
Drains in houses improved	41
Dust-bins provided	8
Privies lime-washed, cleansed and repaired	141
Water supply provided or improved	21
Nuisances from dung, and other offensive matter removed	27
Area gratings, cellar flaps, &c., repaired	0
Animals kept so as to be a nuisance removed	7
Cesspools abolished	0

ANNUAL REPORT.

In presenting to you this my Twenty-third Annual Report for the year ended 28th December, 1878, I may observe that it forms a part of the 90th Quarterly Report which, with the addition of a few Special Reports, including one on the Cholera of 1866, all of which have been printed by order of your Board, will form three volumes, one of which will comprise the several Special Reports. I trust that the index which I have prepared will be found useful, when bound up with the reports, to those members who may feel interested in looking over the amount of work which has been performed

by the officers in the sanitary department under your sanction, during the years that your Board has been in existence. The statistics of the health and mortality of the District have been regularly prepared from quarter to quarter, and from year to year published, whereby facility is afforded for the investigation of these interesting subjects. Furthermore, by aid of the index, easy reference may be made to any particular subject which has been brought under your notice in these reports. I have in this report made mention of some of the benefits which this District has derived by the carrying out of the provisions of the several Sanitary Acts now in operation, and as the public advances in the knowledge of the science of preventive medicine, additional sanitary acts will be from time to time enacted so that further benefits will be conferred on the people.

It is certainly much to be regretted that the subject of sanitary reform has not at present penetrated the public mind, and until hygiene or the laws of health is taught in all our schools it will not receive that attention which its importance demands. It is not long since the subject of sanitation was spoken of in disparaging terms, but I am happy to say that such is not now the case, but its importance is freely admitted and a general assent is given to the advantages to be derived from it. The alleviation of suffering and the prolongation of human life is the duty of every noble minded man to endeavour to promote. The mere increase in the number of the population, unless that population be a healthy one, is of no advantage to the community—it may even be the reverse, for the strength, safety, and prosperity of the nation must not be calculated on its numerical superiority, but on the number of its people who are capable of bearing arms for its defence, and for the physical power of the labourers needed for the proper cultivation of the land. The great drawback, however, to the adoption of sanitary works is the question of expense, and unfortunately the *argumentum ad pecuniam* greatly prevails; but to those who have well considered the subject I may say that although the expense for carrying out sanitary improvements may be immediate, it will sooner or later bear good fruit, and will give a large percentage of profit; for the health and strength of the people will be so improved that nearly every well disposed man will be fit for work; and as a result there will be a great diminution of sickness, of pauperism, and of crime. It cannot be too frequently reiterated and too extensively known that the rich not only pay a heavy pecuniary penalty, but often suffer a heavy affliction in themselves and families by neglecting to improve the sanitary condition of the houses and localities occupied by the poor. It is well known that defective sanitary arrangements in the poorer localities are the chief causes of disease among the poor, and when a contagious disease is once located it soon assumes an epidemic form, and attacks indiscriminately all classes of the people.

I may further add that the better is the health of the people the more advanced will be their moral and intellectual condition; drunkenness will be diminished, self-respect will be engendered, and the prosperity of the nation advanced. How important therefore is it that the public health should receive the first consideration at the hands of the legislature; and in order that the laws required for the preservation of public health should with authority be promulgated, it is necessary to appoint a Minister of Public Health, to whom should be intrusted such powers as would enable him effectually by the aid of skilled inspectors, to promote such measures as are calculated to advance the sanitary condition of the people.

The number of births registered in this District during the year has been 2658, and the deaths 2430, including those of non-residents in the London Hospital (469). In the preceding year the births were 2751 and the deaths 2506, including those of 567 non-residents.

The deaths in the Workhouse have been 350, against 315 for the previous year; and the deaths in the London Hospital 671 against 728.

The population of the District, at the taking of the last census, was 76,573; which is 2397 less than when the census was taken in 1861.

The deaths being (excluding 469 of non-residents) 1961, the rate of mortality has been, during the year, 25.6 per 1000, or 1 in 39.0 of all living. The rate of mortality during the preceding year was 25.2 per 1000, or 1 in 39.6 of all living.

In making a comparison, however, of the rate of mortality of this District with that of those in which there is no hospital, the total deaths in the London Hospital must be eliminated, which this year, as before stated amount to 671. This gives a rate of mortality of 22.9 per 1000.

DEATHS FROM EPIDEMIC DISEASES.

Of the total deaths recorded in this District during the year, there were 269 from epidemic diseases, viz.: 11 from small-pox, to which must be added 12 which occurred in the Asylum Hospital, thus making a total of 23; 32 from measles, 24 from scarlet-fever and diphtheria, 84 from hooping-cough, 89 from diarrhœa, and 33 from fever, including 4 which occurred in Hospital.

In the first quarter of this year the deaths from small-pox were 13, including 6 which occurred in Hospital; in the second quarter there were 7, including 4 in Hospital; in the third quarter 3, 2 of which occurred in Hospital; and in the present quarter not a single death occurred either in the District or in Hospital. The total deaths from small-pox, including the 12 which took place in Hospital during the year in this District, containing a population of 76,573, was 23.

The deaths from fever, including 4 which occurred in the Fever Hospital, have been 33. In the first quarter the deaths from fever were 10, in the second 8, in the third 4, and in the fourth 11.

The death rate from epidemic diseases, including those in Hospitals for the year, in relation to the total mortality, is 11.7 per cent.

The annual rate of mortality in London during the four weeks of December, 1878, was respectively as follows: for the week ended December 7th, it was equal to 23.7, 24.8, 29.1, and 27.7, while the rate for the corresponding weeks in 1877 was equal to 22.8, 23.8, 26.0, and 25.9 respectively. The total deaths from all causes in London in December, 1878, were 7,747, and in December, 1877, they were 6,678. The increased rate of mortality during the month of December, 1878, may reasonably be accounted for by the greater coldness of the air during the last month of this year, as compared with that in 1877; the mean of the lowest readings in each week in December, 1878, was 32.6, 25.3, 26.4, and 24.9, while in 1877, during the corresponding weeks of the same month, it was 38.3, 32.5, 38.1 and 32.1.

On the subject of low temperatures and its effects in increasing the rate of mortality, it is stated in my report for the Quarter ended December, 1860, that the mean temperature of the air at Greenwich for the week terminated on the 29th December, was 11 degrees below the average of the same week during a period of 43 years, and that the excessive cold weather which prevailed during the last two weeks of the year proved particularly fatal to those predisposed to, or suffering from, disease of the respiratory organs. On Christmas-day, 1860, the thermometer stood at 8°, or 24 below the freezing point of water. At Scarborough on the Christmas-day of the same year the lowest reading of the thermometer was 16° below zero, or 48° below the freezing point of water. The returns of the Registrar General show that the prolonged continuance of cold weather is almost invariably followed by increased mortality.

The following interesting statement respecting the severe cold which was experienced in some parts of this country in 1860, is taken from the *Horticultural Record*, of February 5th, 1879:—

“The Christmas of 1860 is believed to have been the severest ever experienced in Britain. At nine o'clock in the morning of Christmas-Day in that year the thermometer at the Royal Humane Society's Receiving House in Hyde Park, London, marked 15° Fahrenheit, or 17° below the freezing point; but this was a mild temperature compared with what was

prevalent in many parts of the country during the preceding night. Mr. E. J. LOWE, a celebrated meteorologist, writing on December 25th to the 'Times,' from his observatory at Boston, near Nottingham, says:—'This morning the temperature at four feet above the ground was 8° below zero, and on the grass, 13.8° below zero; or 45.8° of frost.'"

PAUPER ILLNESS IN THE DISTRICT.

The number of out-door sick paupers, who have been attended by the Medical Officers of the Union, has been 3107. During the previous year the number was 2060. The extraordinary annual diminution of the out-door sick paupers, from upwards of 17,000, in the years 1867 and 1868, to 2060 in 1877, is a matter of great satisfaction to the rate-payers of this District.

ILLNESS IN THE WORKHOUSE.

The cases of illness in the Workhouse during the year have been 3415, including 141 cases syphilis, and 12 of lead poisoning.

In the Registrar General's Weekly Returns of Births and Deaths for the week ended 4th January, 1879, it is stated that during the two years 1877 and 1878, the fatal cases of small pox registered in London were 3960, of which 2544 were recorded in 1877, and 1416 in 1878. The annual death rate from small pox in the two years, was equal to 55 per 100,000 of the estimated population; after distributing the fatal Hospital cases, in accordance with the previous residences of the deceased patients, the death rate from small pox was equal to 25 per 100,000 in the Central, 37 in the West, 53 in the North, 60 in the South, and 79 in the East groups of Registration Districts.

From the following Table it will be seen that a large amount of sanitary work has been accomplished during the year:—

SANITARY WORKS PERFORMED DURING THE YEAR 1878.

Number of inspections of houses, as shown in the official returns..	11963
Number of rooms found to be overcrowded, the space being less than 300 cubic-ft. for each person—nuisance in each case abated	34
Houses specially visited	1266
„ re-visited	4151
Rooms disinfected with sulphurous acid gas after the occurrence of fever and scarlet-fever therein	178
Articles disinfected, consisting of beds, bedding, clothing, &c. ..	1550

Preliminary notices served, such notices embracing 1200 premises	838
Compulsory orders issued, embracing 466 premises	230
Summonses heard at Police Courts, under Sanitary Act ..	7
,, under Act for the prevention of Adulteration of Food, &c.	6
Houses in which rooms or passages have been whitewashed ..	552
Yards of houses paved, or the pavement repaired	182
Cesspools abolished	0
Drains in houses improved	183
Dust-bins provided	52
Privies lime-washed, cleansed and repaired	462
Water-supply provided or improved	74
Area gratings, cellar flaps, &c., repaired	11
Cellars used as dwellings discontinued for such use	13
Nuisances from dung and other offensive matter removed ..	93
Animals kept so as to be a nuisance removed	15

All the cow-houses and the slaughter-houses have been visited four times during the year.

The bake-houses, 71 in number, have been visited twice during the year.

In addition to this return, the Inspectors report that they have forwarded to the Metropolitan Board of Works several notices of dangerous structures, which notices the Metropolitan Board have promptly attended to.

I am, GENTLEMEN,

Your obedient Servant,

JOHN LIDDLE.

15, Great Alie Street.

APPENDIX.

TABLE I.—Cases of Sickness of the Zymotic and Acute Classes, which are recorded in the Books of the Medical Officers of the Union, for the Three Months ended on the 28th Dec., 1878.

Names of Medical Officers.	Small-Pox.	Measles.	Scarlatina.	Hooping-Cough.	Diarrhoea.	Cholera and Choleraic-Diarrhoea.	Continued Fever, Typhus & Typhoid.	Febricula.	Pyæmia.	Erysipelas.	Puerperal Fever.	Croup.	Acute Pulmonary Inflammation.		Carbuncle.	Rheumatic Fever.	Ague.	Dysentery.	Delirium Tremens.	Lead Poisoning.	All other Diseases.	TOTAL.
													Bronchitis and Catarrh.	Pleuritis and Pneumonia.								
Dr. Swyer.....	0	0	1	0	0	0	4	0	0	1	1	0	37	16	0	4	0	1	0	0	99	164
Mr. Champneys	0	1	0	0	7	0	3	2	0	4	0	0	73	1	0	11	0	0	2	1	287	392
Mr. Sequeira ...	0	0	0	0	3	0	1	4	0	0	0	0	7	1	0	1	0	0	0	1	49	67
Mr. H. Braye ...	0	4	3	0	3	0	0	4	0	2	0	0	31	0	0	5	0	1	0	0	132	185
Mr. Loane	0	0	0	0	3	0	1	1	0	0	0	0	18	0	0	1	0	0	0	2	48	69
TOTALS	0	5	4	0	16	0	9	11	0	7	1	0	166	18	0	22	0	2	2	4	610	877
Corresponding Qr. of previous Year.	18	13	0	2	4	0	12	12	0	4	0	0	59	6	0	19	0	0	2	1	292	444
Workhouse Mr. J. J. Ilott.	0	0	0	2	9	0	0	8	2	12	0	0	128	24	6	74	4	6	8	3	463	749

In addition to the cases attended by Mr. Ilott in the Workhouse, there were 41 cases of syphilis.

TABLE II.

Showing the Deaths from Epidemic Diseases for the Three Months ended 28th December, 1878.

Sub-districts.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Hooping-Cough.	Diarrhoea.	Fever.	Cholera & Choleraic Diarrhoea.	Total.	Remarks.
Spitalfields	0	3	1	2	1	2	2	0	11	
Mile End New Town	0	8	3	0	3	1	0	0	15	Workhouse.
Whitechapel North	0	2	1	0	0	2	0	0	5	
Whitechapel Church	0	0	0	1	0	0	8	0	9	Hospital.
Goodman's Fields.....	0	0	0	0	1	0	0	0	1	
Aldgate.....	0	0	0	0	0	0	1	0	1	
Totals	0	13	5	3	5	5	11	0	42	
Deaths from Epidemics for the corresponding Quarter, 1877.	3	10	8	0	4	12	11	0	48	

No deaths from small-pox of patients belonging to this District occurred in the Small-Pox Hospital at Homerton. No death from fever occurred in the Fever Hospital.

TABLE III.

Showing Sub-districts, Enumerated Population, Total Births, and Deaths from all causes—Deaths under 1 year of age, 1 and under 5 years, and above 60 years; Deaths from Violence, Inquest cases, and Deaths in Workhouse and London Hospital, for the Quarter ended 28th Dec., 1878.

Sub-districts.	Enumerated Population in 1871.	Births.	Deaths.	Under 1 year of age.	1, and under 5 years.	Persons aged 60 years and upwards.	Violence.	Inquest cases.	Deaths in Public Institutions.
Spitalfields	22499	180	107	31	16	23	6	19	5
Mile End New Town	15550	166	163	25	24	60	1	4	97
Whitechapel North ..	11597	97	48	19	13	6	2	3	0
Whitechapel Church	7322	65	208	7	10	41	41	47	168
Goodman's Fields ...	10381	83	40	19	5	8	2	5	0
Aldgate	9224	47	27	3	4	5	2	8	0
Totals	76573	638	593	104	72	143	54	86	270

TABLE IV.

Cases of illness attended annually by the Medical Officers of the Union, from the year 1856.

Years ending	Total cases attended during the year.	Years ending	Total cases attended during the year.	Years ending	Total cases attended during the year.
1856	12485	1864	14932	1872	4864
1857	10714	1865	15594	1873	4887
1858	11718	1866	16502	1874	3685
1859	11701	1867	17181	1875	2474
1860	11392	1868	17417	1876	2281
1861	13724	1869	14031	1877	2060
1862	14270	1870	14148	1878	3107
1863	14564	1871	10194		

TABLE V.

Showing the total Births, Deaths, Deaths of Non-residents, Residents, and total Deaths in the London Hospital in each year, from 1866 to 1878.

Year.	Population.	Total Births.	Total Deaths.	Total Deaths in the London Hospital.	Deaths of non-residents, exclusive of deaths from accidents.	Deaths of Children under 1 year of age.	Proportion of deaths per cent. of Children under 1 yr. to the total deaths deducting the deaths of non-residents.	Rate of mortality per 1000, deducting the deaths of non-residents.	Rate of mortality of Children under 1 yr. per 1000 of the population.
1866	78,970	2561	3495	733	432	465	15.1	38.7	5.8
1867	...	2686	2331	445	241	525	25.1	26.4	6.6
1868	...	2611	2519	536	324	513	23.3	27.7	6.4
1869*	...	2571	2675	504	283	526	21.9	29.6	6.6
1870	...	2690	2465	599	374	515	24.6	26.4	6.5
1871	...	2571	2465	551	339	545	25.6	27.7	7.1
1872	76,573	2705	2390	616	375	540	26.7	26.3	7.0
1873*	...	2727	2471	645	393	507	24.3	26.5	6.6
1874	...	2688	2613	675	377	444	19.8	29.2	5.7
1875	...	2650	2470	710	465†	509	25.3	26.1	6.6
1876	...	2754	2348	716	511	451	24.0	23.9	5.8
1877	...	2751	2506	728	567	516	26.6	25.2	6.7
1878	...	2658	2430	671	469	482	24.5	25.6	6.2

* These years contain 53 weeks. In making this calculation, one week's average of deaths is deducted, viz., 50 and 46 respectively. † Estimated number.
The number of Inquests which have been held this year in this District has been 331. In the preceding year the number was 366.

TABLE VI.

Showing the Deaths from Epidemic Diseases in the Whitechapel District during the last 23 years.

Name of Disease	1856	1857	1858	1859	1860	1861	1862	1863*	1864	1865	1866	1867	1868	1869*	1870	1871	1872	1873*	1874	1875	1876	1877	1878	
Small Pox	31	3	4	60	21	28	33	69	5	22	44	40	11	1	56	159	19	1	1	2	8	23	11	
Measles	12	60	78	31	81	27	153	26	137	28	139	33	69	71	36	42	23	44	33	40	16	96	32	
Scarlet Fever } & Diphtheria }	45	43	87	96	59	70	91	200	50	80	76	26	48	208	59	25	96	24	199	51	18	28	24	
Hooping Cough	64	89	117	50	49	89	62	52	74	97	94	72	55	113	50	43	9	79	16	61	57	44	84	
Diarrhœa	81	139	108	141	67	101	69	114	109	122	119	100	138	97	107	125	99	113	76	93	103	89	89	
Fever... ..	188	117	104	93	69	65	250	158	170	167	100	82	109	95	52	40	26	44	47	30	27	26	29	
Cholera & Cho } leric-Diaha. }	0	10	6	5	1	4	5	5	2	4	90	9	10	7	6	3	5	8	3	0	0	0	0	
Totals.....	421	461	504	476	347	393	663	714	547	520	1476	362	440	592	366	437	277	313	375	277	229	306	269	
London {	Fever	2674	2203	1902	1796	1302	1754	3635	2502	3689	3232	2681	2174	2483	2211	2049	1755	1003	1548	1552	1232	1206	1240	1361
	Scarlat. & Diph.	1795	1587	4118	4197	2457	3058	4194	5799	3806	2614	2316	1836	3418	6162	6306	2220	1063	932	3037	4038	2673	1776	2350
	Small Pox.	522	154	247	1156	877	215	345	2012	537	646	1388	1339	606	273	958	7834	1532	114	56	75	739	2544	1416

* In the above Table the years 1863, 1869, and 1873, consist of 53 weeks.

TABLE VII.

Showing the cases of Epidemic Diseases among the pauper population in the Whitechapel District during the last 23 years.

Name of Disease	1856	1857	1858	1859	1860	1861	1862	1863*	1864	1865	1866	1867	1868	1869*	1870	1871	1872	1873*	1874	1875	1876	1877	1878
Small Pox	115	6	20	242	65	86	113	253	21	86	261	254	93	5	302	625	60	2	1	0	19	125	48
Measles	71	266	427	179	520	70	525	80	482	51	679	155	323	212	257	178	76	128	59	32	32	64	11
Scarlet Fever } & Diphtheria }	105	49	147	176	93	100	118	305	156	164	197	60	54	311	97	32	16	22	161	17	6	8	18
Hooping Cough	98	150	230	146	83	388	153	169	217	280	217	219	144	308	140	102	94	86	30	44	15	24	16
Diarrhœa	898	1324	946	1209	773	1418	1085	1108	1127	1342	1664	1471	1631	1033	1097	590	283	212	150	101	120	61	76
Fever	1929	1441	590	411	190	109	822	464	295	573	343	308	586	385	325	201	19	126	84	24	34	17	17
Cholera & Cho- } leric-Diarrha. }	0	16	0	1	1	0	1	1	4	4	58	5	8	1	4	2	3	2	0	0	0	1	2
Totals	3216	3252	2360	2364	1725	2171	2817	2380	2302	2500	3419	2472	2839	2255	2222	1730	551	578	485	218	226	300	188

* In the above Table the years 1863, 1869, and 1873, consist of 53 weeks.

