

Report of the Medical Officer of Health for the year ending December 31st, 1898.

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BOARD OF WORKS,
HOLBORN DISTRICT.

METROPOLIS LOCAL MANAGEMENT ACT,
AND
PUBLIC HEALTH (LONDON) ACT.

Report
OF THE
MEDICAL OFFICER OF HEALTH,

For the Year ending December 31st, 1898.

LONDON :
PRINTED BY ORDER OF THE BOARD.

1899.

BOARD OF WORKS

HOBBY DISTRICT

MEMORANDUM FOR THE BOARD OF WORKS

FOR THE YEAR 1900

REPORT



MEDICAL OFFICER OF HEALTH

For the Year ending December 31st 1900

LONDON

PRINTED BY GEORGE ALLEN AND UNWIN

ANNUAL REPORT
ON THE
VITAL STATISTICS AND SANITARY CONDITION
OF THE HOLBORN DISTRICT,

For the Year 1898,

BY

WILLIAM ARTHUR BOND, M.A., M.D.,

B.C. AND D.P.H.CAMB., M.R.C.P.LOND.

Fellow and Member of Council of the Royal Institute of Public Health; Lecturer and Demonstrator of the Sanitary Institute; Fellow of the Society of Medical Officers of Health; Member of the Epidemiological Society, &c., &c.; Medical Officer of Health to the Board of Works for the St. Olave's District, Southwark, and

Medical Officer of Health

TO THE

BOARD OF WORKS FOR THE HOLBORN DISTRICT.

ANNUAL REPORT

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BY

WILLIAM ARTHUR BOND, M.A., M.D.,

R.C. and D.P.H.C. (LOND.), M.B. (LOND.),



Author and Member of Council of the Royal Institute of Public Health, London; Member of the Sanitary Institute, London; Member of the Society of Medical Officers of Health, London; Member of the Epidemiological Society, London; Member of the Board of Health for the City of London, London; and Member of the Board of Health for the County of London, London.

Medical Officer of Health

for the

BOARD OF WORKS FOR THE HOLBORN DISTRICT.

REPORT

RELATING TO THE

VITAL STATISTICS AND SANITARY CONDITION OF THE HOLBORN DISTRICT, LONDON.

FOR THE YEAR ENDED 31ST DECEMBER, 1898.

TO THE BOARD OF WORKS FOR THE HOLBORN
DISTRICT.

GENTLEMEN,

I have the honour to submit my Report for the year ending December 31st, 1898.

This Report will show that much work in the abating and removal of insanitary conditions has been carried out in the District during the past year.

An additional Sanitary Inspector was elected on the 21st March, and began his duties on the 13th April.

In connection with the re-arrangement of the duties of the Sanitary Inspectors, I reported as follows :—

“ I think the best re-arrangement will be the following :

“ The new Inspector to undertake the duties of registration of houses let in lodgings and their monthly inspection, the duties in connection with the bakehouses of the District and the Sale of Food and Drugs Acts. His time can thus be fully occupied.

“ Inspectors Bennett and Freeman, being relieved of the duties just mentioned, will be enabled to more thoroughly carry out their other duties under the Public Health Act, bye-laws, etc., including house-to-house inspection.

“ Inspector Billing to continue his duties of inspection of meat of all kinds in all parts of the District and the inspection of the two slaughterhouses and the cowhouse.

"I may mention another alternative—namely, for the District to be divided into three parts, Inspectors Bennett, Freeman, and the new one having each a district, Inspector Billing having the duties as mentioned above."

The Sanitary Committee preferred the latter alternative, and recommended the division of the District as follows :—

WESTERN DIVISION.—West of the Gray's Inn Road and north of Holborn.

CENTRAL DIVISION.—Between Gray's Inn Road and Leather Lane, and Back Hill; also the part of the District south of Holborn.

EASTERN DIVISION.—The part east of Leather Lane and Back Hill.

Under "The Food and Drugs Act" each Inspector is to take the whole District for a month alternately, and the Meat Inspector to continue his duties as before.

Three-fourths of the population live in tenements; so that there are very many houses in the District let in lodgings. I am glad to report that 25 additional houses have been registered and inspected monthly. The Board adjourned the registration of the houses in the "Italian Colony" as the owners had had the rooms measured and agreed to comply with our regulations.

The improvement in the condition of the Meat Market continues, for the amount of diseased meat "seized" was about one-half that of 1897, and less than one-fourth that "seized" in the *first quarter* of 1896, just after the appointment of the Meat Inspector.

The bacteriological examination of doubtful cases of diphtheria has been continued by the Jenner (late British) Institute of Preventive Medicine, at the expense of the Board. Of 104 such cases, the diphtheria bacillus was isolated in 49 of them. The majority of the cases were patients at the London Homœopathic Hospital. This does not include the examination of the doubtful cases that attend the Children's Hospital, which is carried out by their own staff.

The Metropolitan Asylums Board was able to receive all the cases of scarlet fever, diphtheria, and typhoid that required to be removed to their hospitals. Many of our cases of diphtheria were received at the Children's and Homœopathic Hospitals.

The treatment of diphtheria by antitoxic serum still continues to give satisfactory results.

The various mortality rates continue to be higher than the corresponding rates for London.

The number of notices received for the removal of dust was 849, rather more than for 1897, when the number was 802. In 1896 the number was 1,361, and in 1895, as many as 2,114.

Since the 25th March, 1896, the Board's contract has provided for the removal of house refuse at least once a week. Many of the notices that dust has not been removed show that the contract is not strictly carried out, and the Contractor's attention to the matter has frequently been requested by the Board. The Board is endeavouring to have this work and the cleansing of the streets, etc., more satisfactorily carried out by paying the Contractor a larger amount, and by the appointment of an Inspector of Cleansing in addition to the Street Inspector.

Arrangements were made with the Clerkenwell Vestry for articles to be disinfected in their new steam apparatus after June 24th, 1898.

The Board's Shelter (conjointly used by the Clerkenwell Vestry) was used by 17 families belonging to the District, who slept there during the disinfection of their rooms.

"The Vaccination Act, 1898," was passed on the 12th August, from which date the "Conscience Clause" came into operation, and the rest of the Act on the 1st January, 1899.

By this Act the following changes are introduced :—

Vaccination is to be within *six* months after birth, instead of *three* months.

The Public Vaccinator of the District must, if required, vaccinate at the home of the child.

If the child is not vaccinated within four months after birth, the Public Vaccinator must visit the home of the child and offer to vaccinate the child with glycerinated calf lymph.

Vaccination may be postponed if it cannot safely be performed on account of the condition of the home, or the prevalence of infectious disease in the district.

Notice of the certificate of postponement must be forthwith given to the Medical Officer of Health for the district.

The method of procedure under the "Conscience Clause" is too well known to require any comment. For the first four months after the passing of the Act the certificate might be obtained for a child of any age, but now, only within four months of the birth of the child.

Provision is made against repeated penalties. A person imprisoned for non-compliance with the Vaccination Act must be treated as a first-class misdemeanant.

The Act is to continue in operation for five years, till the 1st January, 1904.

In April, 1898, was issued the Report of the Royal Commission on Tuberculosis, appointed to enquire into the administrative procedures for controlling danger to man through the use as food of the meat and milk of tuberculous animals.

On pages 22 and 23 I give an abstract of the recommendations of this Royal Commission.

CONSUMPTION AND OTHER TUBERCULAR DISEASES.

Although sanitary improvements have already done much, there are still about 60,000 deaths annually in England and Wales from consumption and other forms of tuberculosis, such as consumption of the bowels, or tabes mesenterica, diseases of the brain, glands, bones, and joints, the latter leading to hump-back, hip-joint disease, and other deformities.

It is now known that "this terrible waste of life, with all the protracted suffering attending it, and the distress, moral and material, which it involves, is in great measure preventable." I am, therefore, very glad that during the year much has been done to educate the public and arouse their interest in this most important subject. The National Association for the Prevention of Consumption and other Forms of Tuberculosis has been formed. For a subscription of five shillings anyone can become a member, or a life-member for a donation of five guineas. A leaflet and pamphlet have already been issued, and the Board gave its consent for copies of these to be sent to members of the Board. In my Annual Report for the year 1895 I mentioned that, for the prevention of consumption and allied diseases, it is necessary that there should be—

Good ventilation of houses and workshops, and their sanitary construction and arrangement so as to secure fresh air, good light, and dry walls.

No overcrowding.

Proper drainage of the soil.

Inspection of cowsheds, dairies, and cows, so as to insure good milk, free from the germs of tuberculosis.

Inspection of animals intended for food, and adequate supervision of them at the time of slaughter.

Disinfection of the sputum of phthisical patients, infected articles and rooms.

To these I will now add—

The bacteriological examination of sputum, so that cases may be detected in their earliest stage, when cure can be most easily effected.

The provision of sanatoria for the open-air treatment of consumption.

LONDON WATER SUPPLY.

The Board expressed the opinion to the Royal Commission on London Water Supply that there should be one authority for the management and control of the water undertakings.

I may here mention that the Royal Commission issued its first report the latter part of December, recommending the inter-connexion of the mains of the different Companies, and that, in order to be prepared for various accidents or exceptional drought, the Companies generally should provide additional storage reservoirs and filter beds.

In the event of the Companies' undertakings being amalgamated or purchased by one authority, such inter-connexions would be practically in continuous use, and would be available for more various purposes, such as the equitable distribution of water and the economical regulation of pressures throughout the whole water area.

DRAINAGE BYE-LAWS.

The Board approved of the London County Council making bye-laws respecting drainage for the use of the London Sanitary Authorities.

OUTWORKERS IN THE CLOTHING TRADES.

The Board considered that the lists for each sanitary district should be prepared by the Home Office.

PUBLIC ABATTOIRS FOR LONDON.

The Board expressed the opinion that it was opposed to the provision of public abattoirs in London.

I had the honour of opening a discussion on the subject at the Sanitary Institute, and shall be happy to let any Member of the Board have a printed copy of my paper and the discussion.

PROPOSED CASUAL WARDS ON THE SITE OF THE WORKHOUSE, GRAY'S INN ROAD.

My report on this subject was printed, and copies sent to Members of the Board, and also the Local Government Board and the London County

Council. At the request of the Holborn Board of Guardians copies were sent for the Members of that Board. It is not necessary therefore to include it in this Annual Report.

I am glad to learn that the site is to be used, as recommended by me, for dwellings for the working classes.

I thank the Members and Officers of the Board for the kindness, courtesy and co-operation that I have received.

I am, Gentlemen,

Your obedient servant,

W. A. BOND.

AREA, POPULATION, HOUSES.

The area of the District is 168 acres.

The population for 1898, estimated in the usual way to the middle of the year, is 30,263.

The number of inhabited houses in the District at the census of 1891 was 3,437. In 1881 the number was 3,244.

Although the resident population is diminishing, the "daily" population is increasing, on account of the increase in the number of factories, workshops, and offices.

Just half the population (49·8 per cent.), at the census of 1891 occupied tenements of only one or two rooms.

BIRTHS.

The total number of births registered during the 52 weeks ending December 31st, 1898, were 813, 396 being male and 417 female children; giving a birth-rate of 26·9 per thousand. The corresponding rate for the whole of Registration London was 29·5. This is the lowest London birth-rate on record.

DEATHS.

The total number of deaths of persons in the district, after making the usual corrections (*i.e.* excluding those of persons who died in public institutions, who did not belong to the district, and including those of persons who belong to the district, but died in public institutions outside the district), for

the 52 weeks was 739, giving a corrected death-rate of 24·5 per thousand. The corresponding rate for London was 18·3.

If correction be made for age and sex distribution, the death-rate of Holborn was 26·5 per 1000.

Further details are given in Tables I. and III.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE.

There were 178 deaths of children under one year of age; that is, the number of deaths of children under one year of age to 1,000 births was 219. The corresponding rate for London was 166 per 1000 births.

In the preceding three years, the numbers in Holborn were, 212 per 1000 births in 1895, 189 in 1896, and 181 in 1897.

The causes of these 178 deaths were :—

Premature birth and congenital defects	...	31
Malnutrition, marasmus and debility	...	19
Diarrhoea and gastro-enteritis	...	45
Tubercular diseases	...	11
Bronchitis	...	16
Pneumonia	...	16
Measles	...	10
Whooping cough	...	4
Diphtheria	...	2
Suffocation in bed	...	11
Convulsions	...	4
Congenital syphilis	...	3
Other diseases	...	6
		<hr/>
		178
		<hr/>

PHTHISIS OR CONSUMPTION.

The number of deaths from phthisis during the year was 94, which is equivalent to a death-rate of 3·1 per 1000—the same rate as last year. The corresponding rate for London was 1·7 per 1000.

The number of deaths from other tubercular diseases was 28.

See introduction, p. 6, respecting the prevention of consumption and other tubercular diseases.

ZYMOTIC DISEASES.

During the year, the number of deaths from the principal zymotic diseases was 102, the rate being 3·38 per 1000. The corresponding rate for London was 2·77.

These rates are greater than the corresponding rates for last year. The chief cause of the increase was the epidemic of measles.

The deaths from diphtheria, unfortunately, continue to increase.

During the past four years the number of deaths was: from—

	1895.	1896.	1897.	1898.
Measles ...	45	32	8	36
Small-pox ...	0	1	0	0
Scarlet Fever ...	6	0	4	2
Diphtheria ...	7	9	17	21
Whooping Cough ...	8	26	19	12
Typhoid Fever ...	0	5	5	2
Typhus Fever ...	0	1	0	0
Diarrhoea ...	24	19	35	29
Totals ...	90	93	88	102

The number of deaths in London from these diseases have been for the past four years:—

	1895.	1896.	1897.	1898.
Measles...	2,633	3,697	1,929	3,075
Small-pox ...	55	9	16	1
Scarlet Fever ...	829	942	780	583
Diphtheria ...	2,316	2,683	2,261	1,772
Whooping Cough ...	1,483	2,937	1,842	2,160
Fever (Typhoid, etc.) ...	629	609	593	598
Diarrhoea ...	3,600	3,223	4,104	4,376
Totals ...	11,545	14,100	11,525	12,565

THE NOTIFICATION AND PREVENTION OF INFECTIOUS DISEASE.

During the year there were notified 283 cases of infectious disease: the corresponding number for 1895, 1896, and 1897 being 333, 280, and 339 respectively.

The numbers of the separate diseases were:—

	1895.	1896.	1897.	1898.
Small-pox	31	1	0	0
Scarlet Fever	160	114	114	96
Diphtheria and Membranous Croup	60	67	158	138
Puerperal Fever	1	2	0	2
Typhus Fever	0	1	0	0
Typhoid or Enteric Fever	20	29	25	9
Continued Fever	0	1	0	0
Erysipelas	61	65	42	38
Totals	<u>333</u>	<u>280</u>	<u>339</u>	<u>283</u>

For further details see Table II.

And in Registration London the notifications have been:—

	1895.	1896.	1897.	1898.
Small-pox	979	225	104	35
Scarlet Fever	19,757	25,647	22,848	16,917
Diphtheria	10,772	13,362	12,803	11,561
Membranous Croup	451	446	389	310
Enteric or Typhoid Fever	3,506	3,190	3,103	3,032
Typhus Fever	14	6	4	17
Other continued Fevers	108	106	68	55
Puerperal Fever	236	277	264	250
Cholera	29	13	38	23
Erysipelas	5,660	6,436	5,794	5,180
Totals	<u>41,512</u>	<u>49,708</u>	<u>45,415</u>	<u>37,380</u>

The "corrected" return for 1898 has not yet been received from the Metropolitan Asylums Board.

SCARLET FEVER.

Ninety-six cases were notified, and 81 of them were removed to hospitals of the Metropolitan Asylums Board or the London Fever Hospital.

This is the smallest number of notifications during the past four years.

The principal incidence of the disease was from the middle of September to the middle of November.

An Italian woman was fined 40s. and costs for wilfully permitting the exposure of her daughter in the streets while suffering from scarlet fever.

DIPHTHERIA.

The number of cases of diphtheria was 135, or 138, including 3 cases of membranous croup. Last year the number was 158. Of these, 123 were removed to hospitals for treatment, viz. :—

To the Hospitals of the Metropolitan Asylums Board.....	53
„ Children's Hospital.....	37
„ London Homœopathic Hospital	25
„ other general hospitals not in the District.....	8

For five weeks, from the 20th August, there was a small outbreak, limited to a small portion of the western part of the District, for, of 27 cases notified in the whole District in this period, 23 occurred in the small portion west of Lamb's Conduit Street, north of Theobald's Road, the northern boundary being formed by East Street, Boswell Court, and Gage Street. Of the remaining 4 cases, 2 occurred at houses near the small area just mentioned. In many cases the transfer of infection from person to person could be traced. Many of the children of the neighbourhood play together in the streets after school hours.

With the exception of these five weeks, the cases were sparsely scattered throughout the District, two or three cases sometimes occurring in the same house.

The number of deaths from diphtheria was 21, or a mortality of 15·2 per cent.

In London the number of cases notified was 11,871 (including 310 cases of membranous croup), and the number of deaths was 1772, or a mortality of 14·9 per cent.

The treatment of diphtheria by its antitoxin continues to give improved results, especially in laryngeal and tracheotomy cases, and those that come under the treatment within two or three days of the onset of the illness.

The bacteriological examination of material from doubtful cases of diphtheria has been continued by the Jenner (late British) Institute of Preventive Medicine. Of 104 such cases the diphtheria bacillus was isolated in 49, and the pseudo-diphtheria bacillus, which is non-virulent to animals, was isolated in 3 cases. In the remaining 52 cases it was not isolated. Most of the material was sent by the London Homœopathic Hospital. At the Hospital for Sick Children, where many cases of diphtheria are treated, the bacteriological examination is carried out by their own staff.

TYPHOID FEVER.

During the year the number of cases notified was only 9, in comparison with 20 in 1895, 29 in 1896, and 25 in 1897. One case was contracted while the patient was out of town for a holiday. In another case the cause may have been the consumption of infected oysters. Of the 9 cases 2 died. In London there were 3032 cases notified and 585 deaths.

MEASLES.

The epidemic which began the last quarter of 1897 was continued in this District and London generally during the first two quarters of the year. The number of deaths in this District during the year was 36, but all but one occurred in the first half of the year, and all but one were children under five years of age. The death-rate in Holborn from measles was nearly double the London rate. In London the number of deaths was 3075.

Disinfection is carried out when possible in those cases that come to my knowledge, by obtaining the addresses of patients attended by the District Medical Officers; also in the cases where death has occurred, as returned by the Registrar, and in the very few cases reported by the teachers of schools. *All* absences from schools on account of illness ought to be reported to the Medical Officer of Health of the District, and other children in infected houses prohibited from attending schools. As mentioned in other reports, notification by the head of the family ought to be compulsory.

WHOOPIING COUGH.

The death-rate in Holborn from whooping cough was rather less than in London. The number of deaths in Holborn was 12, much the smallest number of the past three years. All the deaths were of children under five years of age. The number of deaths in London were 2160.

The remarks as to disinfection, &c., after measles, apply also to whooping cough.

DIARRHŒA.

The number of deaths assigned to diarrhœa was 29, of which 27 were of children under five years of age, the great majority being infants under one year of age, and took place in the third or summer quarter.

Of 4376 deaths assigned to diarrhœa in London, 3588 took place in the third quarter, and 3461 were of children under one year of age.

Dr. Klein has found the bacillus enteriditis sporogenes associated with many cases of diarrhœa, also in many samples of milk. He states that "amongst the sources of this bacillus are the evacuations of cases of diarrhœa, sewage, water, soil, and dust polluted with sewage; as also horses' dung." The spores are highly resistant, and have a wide distribution in nature, so that there is ample opportunity for them to gain access to milk and other articles of food.

DISINFECTION.

During the year ending December, 1898—

322 rooms were fumigated and cleansed. The rooms were also stripped and lime-whited when necessary.

2262 articles were disinfected by steam:—

192 Beds.	466 Pieces of wearing apparel.
91 Mattresses.	23 Curtains.
127 Bolsters.	18 Rugs.
344 Pillows.	21 Shawls.
283 Blankets.	14 Books.
262 Sheets.	113 Sundries.
187 Quilts.	
74 Pillow cases.	<hr/> 2262 <hr/>
47 Cushions.	

Arrangements were made with the Clerkenwell Vestry for articles to be disinfected in their new steam apparatus after the 24th June, 1898. Prior to this the articles were disinfected by Messrs. Armfield & Sons.

The shelter at 47, Northampton Road (conjointly used by the Clerkenwell

Vestry) was used for sleeping accommodation, &c., by 17 families from this District during the disinfection of their rooms.

THE MEAT MARKET.

During the past three years the amount of meat "seized," *offal excluded* was :—

1896.				Diseased.		Decomposed.		Total.	
				st.	lbs.	st.	lbs.	st.	lbs.
1st Quarter...	...	...	...	4,069	3	378	4	4,447	7
2nd "...	...	...	...	710	1	1,215	4	1,925	5
3rd "...	...	...	...	653	6	3,476	4	4,130	2
4th "...	...	...	...	1,701	5	311	3	2,013	0
Total for year 1896				7,134	7	5,381	7	12,516	6
1897.									
1st Quarter...	...	...	...	912	3	209	3	1,121	6
2nd "...	...	...	...	192	0	877	5	1,069	5
3rd "...	...	...	...	376	2	727	1	1,103	3
4th "...	...	...	...	400	5	516	7	917	4
Total for year 1897				1,881	2	2,331	0	4,212	2
1898.									
1st Quarter...	...	...	...	377	2	537	7½	915	1½
2nd "...	...	...	...	316	4	818	0	1,134	4
3rd "...	...	...	...	53	0	1,071	7	1,124	7
4th "...	...	...	...	266	0	888	3	1,154	3
Total for year 1898				1,012	6	3,316	1½	4,328	7½

These figures show the marked change that has been effected in the Meat Market; the amount of diseased meat "seized" in 1897 being little more than a quarter of that of the previous year, and last year the amount was less than one-fourth of that "seized" in the *first quarter* of 1896.

In 1896, 80 tubercular carcasses of beef and 6 of pork were "seized."

In 1897, 16 " " " " " "

In 1898, 6 " " and 2 top pieces of beef " "

The average weight of the 6 tubercular carcasses of beef was only 39½ stone, or 316 lbs., all being also much emaciated.

A large proportion of the *decomposed* meat and offal was *foreign* (principally Dutch), and was also diseased.

DISEASED MEAT AND OFFAL SEIZED DURING 1898.

64 quarters of beef.	48 pairs of bullocks' lungs.
2 pieces of beef.	4 bullocks' kidneys.
11 carcasses of mutton.	1 bullock's head and tongue.
14 carcasses of pork.	1 bullock's pluck.
4 carcasses of veal.	1 bullock's tripe.
4 carcasses of stirks.	4 pigs' plucks.
3983 sheep's livers.	1 pig's liver.
32 pairs of sheeps' lungs.	2 tubercular Dutch fowls.
93 bullocks' livers.	

Total weight (less offal) 1012 st. 2 lbs.

DECOMPOSED MEAT AND OFFAL SEIZED DURING 1898.

26 quarters of beef.	102 barrels of pigs' kidneys.
342 pieces of beef.	3 barrels of pigs' livers.
6 carcasses of mutton.	10 barrels of pigs' feet (about 16 cwt.)
56 pieces of mutton.	5 hampers of calves' plucks.
12 carcasses of pork.	23 parcels of mixed offal.
37 pieces of pork.	3 van loads of mixed offal.
31 cases of pork (American, frozen).	2 barrels of ox heels.
130 carcasses of veal.	12 bags and one barrel of sausage casings (25 cwt.)
13 pieces of veal.	2 parcels of sweetbreads.
2 carcasses of stirks.	2 cases of cheese (112 st.).
1094 sheeps' heads.	8 cases of Russian geese.
904 sheeps' plucks.	1 hamper of fowls.
1395 sheeps' kidneys.	16 fowls.
2 stones of kidneys.	25 cases of rabbits.
879 sheeps' livers.	18 rabbits.
200 pairs of sheep's lungs.	14 turkeys.
12 stirks' plucks.	12 hares.
682 bullocks' livers.	10 lbs. of eels.
894 pairs of bullocks' lungs.	600 tins of salmon.
250 bullocks' melts.	2 cases of unsmoked bacon.
215 bullocks' tripes.	1 case of tomatoes.
17 barrels of bullocks' tripes.	1 case of eggs.
28 bullocks' tails.	2 pieces of bacon.
8 bullocks' heads.	
48 stones of bullocks' kidneys.	
3 bullocks' tongues.	

One hundred and forty-eight stones of mutton damaged by fire and water.

A large proportion of the above was foreign meat and offal, and was also diseased.

Total weight (less offal) **3316** st. $1\frac{1}{2}$ lbs.

Diseased and decomposed meat, total weight (less offal) **4328** st. $7\frac{1}{2}$ lbs.

The butchers' shops, stalls, slaughter-houses, and also the provision warehouses, &c., were regularly inspected by the Meat Inspector.

FACTORIES AND WORKSHOPS.

There is a large and increasing number of factories and workshops in the District.

Many more of these have this year been inspected, and the sanitary defects have been remedied.

The Factory Inspectors of the Home Office have supplied us with information concerning a few of these.

In the Eastern Division 850 workrooms of these premises received attention.

HOUSES CLOSED VOLUNTARILY, DEMOLISHED, REBUILT, &c.

88, 89, High Holborn, rebuilt.

5, 6, and 7, Gray's Inn Passage, demolished.

Richbell Place, all demolished. (Closing orders were obtained for Nos. 2, 3, 4, and 5 in 1897.)

Emerald Street, Nos. 9 and 11, adjoining Richbell Place, also demolished, and warehouses being erected on the site.

"Red Lion and Ball," public house, and 1, Red Lion Passage, demolished and rebuilt.

6, 7, and 8, Boswell Court, closed and demolished; also Nos. 2, 3, 4, and 5 demolished the earlier part of 1899.

"Old Red Lion," public house, Red Lion Street, rebuilt.

"King's Arms," Little James Street and John Street, demolished and rebuilt.

33 and 33A, Red Lion Square, and 11, Old North Street, demolished, and residential flats, known as "Ashbourne House," erected on the site.

"Holborn," public house, 4, High Holborn, demolished and rebuilt.

Dalmeny Mansions, Theobald's Road and Drake Street, being erected.
 Alexandra Hospital, Queen Square, rebuilt.
 Italian Hospital, Queen Square, being rebuilt.
 83, 84, Leather Lane, demolished and rebuilt.
 10, Beauchamp Street, partially rebuilt.
 Crown Court, new workshop built.
 Prudential Assurance Company, Limited, new buildings in progress.
 Birkbeck Bank, new buildings in progress.
 St. John Street, corner of St. John's Lane, three new warehouses erected.
 Black Horse Yard, workshop built.
 "Sutton Arms," 6, Carthusian Street, new premises.
 Greenhill's Rents: Link's stables built.
 32, Leather Lane, rebuilt.
 "White Bear," St. John Street, rebuilt.
 16 and 17, Charles Street, demolished, and new business premises built on the site.
 "Rose," public house, 58, Hatton Garden, rebuilt.
 38, Charles Street, Messrs. Wallis & Co.'s stables rebuilt.
 55, Hatton Garden, rebuilt.
 Great Saffron Hill, east of Hatton Yard, new warehouses built.
 "Hat and Tun," public house, Hatton Wall, rebuilt.
 Glasshouse Yard, Messrs. Pickford's warehouses reconstructed.

HOUSE TO HOUSE INSPECTION.

Boswell Court.	Half-Moon Court.
Emerald Street.	Union Terrace and Buildings.
Fulwood's Rents.	Italian Colony (all).
Hand Court.	Mitre Court.
Eagle Street (greater part).	Hat and Mitre Court.
Gloucester Street (part).	Benjamin Street.
Devonshire Street (part).	Peter's Lane.
Portpool Lane.	Pump Court.
Verulam Street.	White Horse Alley.
Baldwin's Place.	Glasshouse Yard (greater part).

HOUSES LET IN LODGINGS.

The following is a list of the houses in lodgings that have been registered, and the number of tenements in each :—

Leather Lane Buildings ...	48	2, Baldwin's Place ...	4
14, Emerald Street ...	6	3, Do.	4
16, Do. ...	6	4, Do. ...	4
18, Do. ...	4	5, Do. ...	7
20, Do. ...	1	6, Do. ...	4
22, Do. ...	6	7, Do. ...	7
24, Do. ...	1	8, Do. ...	4
22, Princeton Street ...	4	28, Eagle Street ...	7
24, Do. ...	1	17, Verulam Street ...	3
11 and 12, Peter's Lane ...	13	18, Do. ...	6
58, Red Lion Street ...	5	19, Do. ...	5
53, Eagle Street ...	7	15, Do. ...	4
1, Mitre Court ...	6	16, Do. ...	5
2, Do. ...	3	20, Do. ...	6
3, Do. ...	3	21, Do. ...	6
4, Do. ...	3	46, Eagle Street ...	11
26, Red Lion Street ...	5	45, Do. ...	7
2, New North Street ...	6	6, Half Moon Court ...	5
4A, Charles Street ...	5	7, Do. ...	9
5, Castle Court ...	7	8, Do. ...	8
6, Do. ...	6	9, Do. ...	10
21, Fulwood's Rents ...	7	19 and 21, Portpool Lane ...	13
Evelyn Buildings ...	47	9, Eagle Street ...	11
63, Mount Pleasant ...	4		
1, Baldwin's Place ...	6	Total	260

The last 25 of these houses were ordered to be registered during 1898, and the registration is now completed.

These premises are inspected monthly.

COMMON LODGING HOUSES.

18, Fulwood's Rents, Holborn ...	50 lodgers.
20, Fulwood's Rents, " ...	114 " "
40, Eagle Street, " ...	50 " "
7, Castle Street, " ...	57 " "
12, Took's Court, " ...	70 " "
13, Took's Court, " ...	61 " "
19, Fulwood's Rents, " ...	32 " "

4, Greville Street, Holborn	...	...	...	55 lodgers.
7, Little Saffron Hill, "	...	...	...	12 "
65, Mount Pleasant, "	...	...	...	9 "
39, Hatton Wall, "	...	...	...	101 "
28, Red Lion Square, "	...	...	...	70 "

These are under the supervision of the London County Council.

SICKNESS RETURNS.

The number of cases of sickness under the care of the District Medical Officers was 1614, or a few more than in 1897, when the number was 1572. Details of these are given in Table IV.

SANITARY WORK.

The following is an abstract of nuisances abated and sanitary work accomplished during the year ending December 31st, 1898:—

	Western Division, Mr. Bennett.	Central Division, Mr. McQuinn. (9 months.)	Eastern Division, Mr. Freeman.	TOTAL.
Written complaints received attention...	76	18	39	133
Premises inspected and re-inspected	3607	1964	2079	7650
Preliminary notices have been served for the abatement of nuisances	160	78	63	301
Statutory notices ditto	33	15	12	60
Houses have been cleansed, repaired, lime-whited, &c.	271	240	260	771
Houses have had their over-crowding abated...	44	67	25	136
Underground rooms illegally and separately occupied have been closed	12	1	0	13
Rooms disinfected and cleansed after infectious disease	155	106	61	322
New drains have been laid	133	65	113	311
Drains repaired, ventilated, &c.	40	27	20	87
Cesspools filled up	12	0	10	22
Water-closets re-constructed	166	218	149	533
New water-closets constructed	117	20	215	352
Water-closets cleansed and repaired	65	87	45	197
Water-closets supplied with water	396	140	315	851
Houses supplied with water for domestic purposes after water being cut off	4	1	0	5
Yards re-paved and repaired	132	15	20	167
Dustbins repaired and provided	39	16	27	82
Accumulations of offensive refuse have been removed	24	4	18	46
Bakehouses inspected twice during the year	14	5	3	22
Notices have been received for the removal of dust	...	...	...	849
Houses registered as "Houses let in lodgings," inspected monthly	19	25	7	51

Also a considerable amount of sanitary work has been done in the district (such as new buildings, etc.) without notices being served.

UN SOUND FOOD, ETC.

Details of diseased and decomposed meat "seized" during the year are given on pages 15, 16, and 17.

SMOKE INSPECTION.

The Smoke Inspector, Mr. Thomas Madden, reports that there are 67 furnaces and boilers on the register, and that he makes periodical inspection of them to see that they are in a proper working order, and consume their own smoke. There are 11 kinds of smoke consumers in the District, which are as follows:—

Ventilated Doors	...	...	...	...	...	...	14
Martin's Patent	...	...	...	...	...	...	5
Dr. Annan's Patent	...	...	...	..	...	...	4
Nicholson's	„	...	...	...	...	...	4
Caddy's	„	Bars	...	...	...	...	2
Juke's	„	...	...	...	...	...	2
Galloway's	„	...	...	...	...	...	4
Hyde's	„	Revolving Bars	...	...	...	...	2
Watt's	„	...	...	...	...	...	1
Gregory and Veal's Patent	...	...	...	...	...	...	1
Gosling's Patent	...	...	...	...	...	...	2
Total of Smoke Consumers							41

The number of furnaces and boilers without smoke consumers is 26, There has, therefore, been an increase of 2 smoke consumers during the year. Twelve notices were served during the year, 11 of which have been complied with. Three statutory notices were served, two of which were complied with. There were 10 summonses served upon the Central London Railway Company and their engine-drivers. The summonses were heard at the Clerkenwell Police Court on the 31st of June. The magistrate considered that the furnaces were sufficiently well constructed for their particular kind of work, and that owing to the coal strike they were unable to get smokeless coal. Two of the neighbouring inhabitants gave evidence as to the great nuisance that was caused. The magistrate dismissed the summonses; the Company to pay their costs. The nuisance was never so bad after the proceedings were taken. They burnt more coke, and gradually removed the engines and travelling crane, until now there is only one, which is in good working order.

THE MORTUARY.

There were 161 bodies brought into the mortuary from 1st January to December 31st, 1898.

Coroner's inquests were held on 49 of these.

The verdicts were :—

Natural causes	...	...	...	...	31
Accidental Death	...	...	...	...	3
Suffocation	...	...	...	...	13
Suicide	...	...	...	...	1
Starvation	...	...	...	...	1
Total					49

METEOROLOGY.

Details are given in Table V.

The mean temperature for the year was 51.3° F., or 2.6° F. above the mean of the preceding 127 years. The rainfall was 18.85 inches, being 6.07 inches below the average of the preceding 83 years.

ABSTRACT OF THE RECOMMENDATIONS IN THE REPORT OF THE ROYAL COMMISSION ON TUBERCULOSIS

Appointed to enquire into the administrative procedures for controlling danger to man through the use as food of the meat and milk of tuberculous animals.

1. MEAT.—It appears desirable that in London the provision of public in substitution for private slaughter-houses should be considered in respect to the needs of London as a whole, and in determining their positions regard must be had for the convenient conveyance of animals by railway from the markets beyond the limits of London, as well as from the Islington market, to the public slaughter-houses which should be provided. At the present time no administrative authority has statutory power authorizing it to provide public slaughter-houses other than for the slaughter of foreign cattle at the port of debarcation.

Also the general recommendations for Great Britain and Ireland, which may be thus briefly summarized.

When any local authority has provided a public slaughter-house power should be conferred on it to prohibit slaughter in any other place, except that a period of *three* years be allowed to the owners of existing registered private slaughter-houses to apply their premises to other purposes; also to require *all meat* brought into the district to be inspected, and reasonable charges made for this inspection. Also that the joints of all carcases passed as sound shall be *stamped*; and that it shall not be lawful to offer for sale the meat of any animal which has not been killed in a duly licensed slaughter-house.

No person is to be permitted to act as a meat inspector until he has passed a qualifying examination; and that the Local Government Board should issue instructions for the guidance of meat inspectors as to the seizure of a carcase or a part thereof.

2. MILK.—That notification of every disease in the udder of cows shall be made compulsory. That powers should be given to Local Authorities for the purpose of excluding from their districts the milk of cows suffering from tuberculosis of the udder, or exhibiting clinical symptoms of the disease, and to slaughter any such cow; and if it appears that the cow was not so suffering, the Local Authority should pay the full value of the cow immediately before slaughter.

Also that Local Authorities should have powers for making analyses for tubercle bacilli in milk sold in their districts, and in foreign milk at the port of entry.

That the Local Government Board should be empowered to require Local Authorities to adopt regulations as to dairies, cow sheds, and milk shops, where it is not already done.

3. ELIMINATION OF BOVINE TUBERCULOSIS.—That funds should be placed at the disposal of the Board of Agriculture in England and Scotland, and of the Veterinary Department of the Privy Council in Ireland, for the preparation of tuberculin, and that the gratuitous services of a veterinary surgeon should be offered to stock-owners on condition that the reacting animals are isolated from the healthy ones, and are kept under satisfactory sanitary conditions.

That Agricultural Societies should distribute leaflets giving information respecting the above.

PROCEEDINGS UNDER PUBLIC HEALTH (LONDON) ACT, 1891, SECTION 47.
DISEASED AND UNSOUND MEAT.

24

MEDICAL OFFICER'S REPORT.

DATE.	NAME.	ADDRESS.	OFFENCE CHARGED.	RESULTS.	INSPECTOR.
1898.					
January 18th...	William J. Haynes	Milton, Derbyshire...	Depositing for sale at 111, Charterhouse Street two quarters of beef	Three month's imprisonment without option of a fine	Billing.
February 11th...	James Murdy ...	Upper Charmwood Street, Leicester	Depositing for Sale at 111, Charterhouse Street two sides of beef	Fined £7 and £3 3s. costs. ...	Do.
March 11th...	Wm. Hy. Eustace	Cranleigh, Surrey ...	Depositing for sale at 93, Charterhouse Street four quarters of beef	Fined £15 and 2s. costs ...	Do.
„ 22nd..	Joseph Lincoln Henson	97, Charterhouse Street ...	Exposing for sale at 97, Charterhouse Street two pairs of bullock's lungs and one bullock's liver	Ordered to pay £2 2s. costs ..	Do.
April 19th...	Albert Williams..	Bridge Street, Leominster...	Depositing for sale at 111, Charterhouse Street four quarters of beef	Fined £15	Do.
May 3rd...	Stephen Hagger..	Wenden, Essex	Depositing for sale at 111, Charterhouse Street a carcase of veal	Case dismissed	Do.
„ 3rd...	Robert Turner ...	Cattle Market, Deptford ...	Depositing for sale at 97, Charterhouse St. 34 sheep's livers	Ordered to pay £2 2s. costs ...	Do.
October 4th...	S. Oppenheimer & Co., Ltd.	St. John Street, West Smithfield	Depositing for sale at John Street 10 bags and one barrel of sausage casings	Case dismissed	Do.
„ 11th...	Edward Wright...	66 & 67, Red Lion Street, Holborn	Depositing for sale at 66 & 67, Red Lion Street 70 pieces of meat	Fined £2 2s.	Do.
November 22nd...	David Longley ...	Angleside, Lingfield, Surrey	Depositing for sale at 93, Cowcross Street two pieces of beef and one head and tongue	Fined £50	Do.

DISEASED AND UNSOUND MEAT—*continued.*

DATE.	NAME.	ADDRESS.	OFFENCE CHARGED.	RESULTS.	INSPECTOR.
1898. December 6th...	Thomas E. Harris	Forda, Thornbury, Devon...	Depositing for sale at 93, Cowcross Street two sides of beef	Fined £50	Billing.
„ 13th...	Reginald Dymond	Knapp Farm, Sidbury, Devon	Depositing for sale at 47, Red Lion Street a carcass of mutton	Fined £50	Do.
„ 16th...	Hubert Selby ...	Woodbury, Devon	Depositing for sale at 95, Cha te house Street two quarters of beef, and at 111, Charterhouse Street two quarters of beef	Fined £20	Do.
„ 23rd..	James Stone ...	72, Crayford Road, Holloway	Depositing for sale at 101, Charterhouse St. 10 sheep's livers and four pairs of sheep's lungs	Fined £10	Do.
„ 30th...	Walter Fisher ...	Constitution Hill, Sprowston, Norwich	Depositing for sale at 93, Cowcross Street four quarters of beef	Case dismissed	Do.

LEGAL PROCEEDINGS UNDER PUBLIC HEALTH (LONDON) ACT, 1891.

NUISANCE CASES.

DATE.	NAME.	ADDRESS.	OFFENCE.	RESULT.	INSPECTOR.
1898.					
January 4th...	D. Elsegood ...	108, Theobald's Road ...	Underground room illegally occupied	20s. fine and 2s. costs ...	Bennett.
„ 7th...	R. Newman ...	20, Millman Street...	Depositing mattresses in public street	10s. „ „ 2s. „ „ ...	Do.
November 1st...	F. X. Bussinger...	60, Red Lion Street ...	Defective sink waste and dirty state of walls and ceilings of rooms and staircase	Abatement order within 7 days	Do.
„ ...	H. Busby ...	14, 16, 18, and 22, Emerald Street	Contravention of Board's Regulations for "Houses let in lodgings."	Fined 40s. on first case, and 2s. costs on each of other three summonses; total 48s.	Do.
„ 29th...	A. J. Walke ...	Evelyn Buildings ...	Overcrowding at Evelyn Buildings	£2 2s. od. costs, and abatement order	McQuinn.
February 18th...	L. Marson ...	31, Ely Place ...	Defective closets and drains ...	Withdrawn on payment of £1 3s. od. costs	Freeman.
March 16th...	D. G. Staight ...	35, Kirby Street ...	Defective closets and drains ...	Adjournd for work to be done	Do.
„ 16th...	Owners ...	Cavendish Buildings ...	Do. do. ...	Do. do. ...	Do.
May 31st...	„ ...	68, Hatton Garden ...	Do. do. ...	Withdrawn on payment of costs, 6s.	Do.
June 7th and 21st	E. J. Kyd ...	23, Cow Cross Street ...	Defective traps to drains and not ventilated	Adjournd for work to be done	Do.
„ 31st...	Central London Railway Co. and their stokers	Chancery Lane Station, High Holborn	Smoke nuisances ...	Dismissed, but the Company to pay their own costs	Madden.

PROCEEDINGS UNDER THE SALE OF FOOD AND DRUGS ACTS.

DATE.	NAME.	ADDRESS.	OFFENCE CHARGED.	REMARKS.	INSPECTOR.
1898.					
January 4th...	W. H. Jones ...	73, Mount Pleasant	... Selling adulterated milk 15'2 per cent. added water	Fined 40s. & 12s. 6d. costs.	Bennett.
" " ...	P. Verioni ...	19, Eyre Street Hill	.. Selling vinegar adulterated with water to the extent of 13 per cent.	" 10s. ,, 12s. 6d. "	Freeman.
March 30th...	P. Lewis ...	19a, Charles Street...	... Selling butter adulterated with at least 80 per cent. foreign fat	" 20s. ,, 12s. 6d. "	Do.
" " ...	E. Pearce ...	39c, Leather Lane ...	... Selling milk adulterated by the addition of 9'7 per cent. water	" costs 12s. 6d. ...	Do.
April 22nd...	J. E. Shannon ...	3, Devonshire Street	.. Selling adulterated butter 45 per cent. foreign fat	" 20s. & 12s. 6d. costs.	Bennett.
May 24th...	T. Couldrey ...	14, Peter's Lane ...	... Selling milk with 24 per cent. abstracted cream	" 10s. ,, 12s. 6d. "	McQuinn.
" " ...	K. Evans ...	19, Fann Street ...	... Selling butter adulterated by 75 per cent. foreign fat	" costs 12s. 6d. ...	Do.
July 6th...	J. Lewis ..	15, Gt. Bath Street	... Selling adulterated milk 7'1 per cent. added water	" 20s. and 2s. costs ...	Bennett.
" " ...	Jenkins Bros. ...	6, Aylesbury Street	... Selling milk from which 16 per cent. of the cream had been abstracted (sample sent to Somerset House)	Fined costs of summons, 12s. 6d.	Do.
" " ...	Jones Bros. ...	122, St. John Street	... Selling adulterated milk 5'4 per cent. added water	Fined 18s. and 2s. costs ...	Do.
" " ...	J. Evans ...	22, Rosoman Street	... Selling adulterated milk 9 per cent. added water	" 10s. ,, 2s. " ...	Do.
" " ...	The Farmers and Cleveland Dairy Coy.	12, East Street, Gifford Street, N.	Selling adulterated milk 8 per cent. added water	Case dismissed. Warranty proved	Do.
August 25th...	J. Evans ...	32, Rosoman Street	... Selling milk adulterated by the addition of 12 per cent. added water	Fined £1 and 12s. 6d. costs	Freeman.

TABLE OF DEATHS during the Year 1898 (for the 52 weeks ending 31st December, 1898), in the Holborn (London, W.C.) District, classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

TABLE II. (as required by the Local Government Board).

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health during the year 1898, in the Holborn (London, W.C.) District; classified according to DISEASES, AGES, AND LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.	POPULATION AT ALL AGES.				NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN HOSPITAL.												
	Census 1896.	Estimated to middle of 1898.	Registered Births.	Aged under 5 or over 5.	1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	FEVERS.					Cholera.	Erysipelas.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	FEVERS.					Cholera.	Erysipelas.	
										Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Enteric or Typhoid.									Continued.	Relapsing.	Puerperal.					
(a)	(b)	(c)	(d)	(e)																										
St. George the Martyr.....	30,540	29,612	808	Under 5	...	12	33	...	...	...	...	...	...	1	2	...	...	...	10	33	...	...	...	...	...	...	1	2	...	...
St. Andrew Eastern				5 upwds.	...	30	42	6	1	...	18	30	38	3	...
Glasshouse Yard.....	668	651	5	Under 5	...	2	1	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...
Children's Hospital .....	...	...	...	5 upwds.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
London Homœopathic Hospital..	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
National Homœopathic Hospital	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Italian Hospital .....	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. John and Elizabeth Hospital	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Alexandra Hospital .....	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Orthopædic Hospital .....	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
St. Marylebone Workhouse .....	...	...	...	Under 5	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
TOTALS .....	...	...	...	Under 5	...	24	54	1	...	9	...	...	...	2	1	2	...	...	20	50	1	...	...	...	...	1	1	2	...	...
				5 upwds.	...	72	81	2	...	...	...	...	...	...	36	...	...	...	61	70	2	...	...	...	...	1	...	13	...	...

TABLE III.

DEATHS OF PERSONS BELONGING TO THE DISTRICT
IN OUTLYING INSTITUTIONS, ETC., 1898.

Holborn Workhouse, Hoxton	52	Middlesex Hospital ...	4
" " Mitcham	13	French " ...	1
Holborn Infirmary ...	96	Hospital for Women, Euston Road ...	1
City " ...	1	Caterham Asylum ...	8
Strand Workhouse ...	1	Leavesden " ...	7
St. Olave's " ...	1	Banstead " ...	1
Royal Free Hospital ...	9	Hanwell " ...	2
Brompton " ...	2	Ilford " ...	1
St. Bartholomew's Hospital ...	22	Peckham House Asylum ...	1
North West London " ...	1	St. Luke's " " ...	2
North Western Fever " ...	9	Colney Hatch " ...	1
Fountain Fever Hospital ...	1	Central London Sick Asylum	2
London " " ...	1	Aged Blind Home ...	1
Metropolitan " ...	1	St. Pelagias's Crèche ...	1
King's College " ...	13	H.M. Prison, Wormwood Scrubbs ...	1
Evelina " ...	1	River Thames... ...	1
University College " ...	4	Hampstead Heath Ponds ...	1
Guy's " ...	1		
Royal Chest " ...	2		
Samaritan Free " ...	1		
Charing Cross " ...	3		
St. George's " ...	1		
		Total	272

TABLE IV.	
INFECTIOUS DISEASES RETURN for 52 weeks ending December, 1898.	

[illegible]

TABLE V.

CASES OF SICKNESS under the care of the District Medical Officers during the 52 weeks ending 24th December, 1898.

Names of the Medical Officers.	Small Pox.	Chicken Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	Diarrhoea and Dysentery.	Cholera.	Continued Fever. (Typhus and Typhoid).	Erysipelas.	Influenza.	Puerperal Fever.	Carbuncle.	Acute Pulmonary Inflammation.			Rheumatic Fever.	Ague.	Delirium Tremens.	Insanity.	Syphilis.	Congenital Syphilis.	Lead Poison.	Other Diseases.	Total.
														Bronchitis and Catarrh.	Pleurisy.	Pneumonia.									
Dr. Gabe (for 33 weeks)	...	2	21	...	1	7	20	...	...	1	10	...	1	147	5	3	39	...	...	...	5	...	1	273	536
Mr. Taylor	11	...	...	5	12	...	...	1	4	...	...	110	5	3	44	...	...	4	1	...	...	315	515
Dr. Gahagan	13	...	...	3	13	...	...	1	38	...	...	123	6	3	31	...	...	2	4	...	...	326	563
Total	2	45	...	1	15	45	...	...	3	52	...	1	380	16	9	114	...	...	6	10	...	1	914	1614
Corresponding weeks, 1897.	...	3	20	3	6	45	42	...	...	5	43	...	...	456	11	4	110	1	2	9	4	...	...	808	1572

TABLE VI.

1898. MONTHS.	Mean Reading of the Barometer.	TEMPERATURE OF THE AIR.								RAIN.	
		Highest by Day.	Lowest by Night.	Range in Month.	Mean of all Highest.	Mean of all Lowest.	Mean Daily Range.	Mean for the Month.	Departure from Average of 127 Years, 1771-1897.	Number of Days it Fell.	Amount Col- lected.
January ...	in. 30·151	54°5	30°0	24°5	47°1	39°3	7°8	43°6	+6°9	8	in. 0·65
February ...	29·771	55·8	26·1	29·7	46·9	36·0	10·9	41·2	+2·4	12	1·19
March ...	29·702	60·0	27·2	32·8	46·8	34·0	12·8	39·8	—1·4	14	1·40
April ...	29·743	67·2	29·7	37·5	57·4	39·8	17·6	48·0	+1·8	10	0·93
May ...	29·664	75·0	36·0	39·0	60·2	44·9	15·3	51·7	—0·9	22	2·64
June... ..	29·814	78·4	40·0	38·4	67·3	49·8	17·5	57·6	—0·8	11	1·75
July	29·935	82·0	44·6	37·4	72·3	52·7	19·6	61·5	—0·2	9	1·34
August ...	29·845	90·0	48·0	42·0	75·9	55·2	20·7	64·6	+3·7	11	0·86
September ...	29·930	92·1	39·9	52·2	74·5	51·3	23·2	62·1	+5·5	5	0·31
October ...	29·669	69·2	37·9	31·3	59·6	48·4	11·2	53·8	+4·4	17	3·15
November ...	29·678	60·3	29·0	31·3	51·0	40·5	10·5	45·9	+3·4	13	2·41
December ...	29·897	57·8	28·6	29·2	49·9	40·7	9·2	45·8	+6·7	10	2·22
Means ...	29·816	70·2	34·8	35·4	59·1	44·4	14·7	51·3	+2·6	142 sum.	18·85 sum.

