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REPORT
OF THE
MEDICAL OFFICER OF HEALTH
FOR THE
CITY OF LONDON
FOR THE YEAR
1910;

BY

WM. COLLINGRIDGE, M.A., M.D., D.P.H., LL.M.,

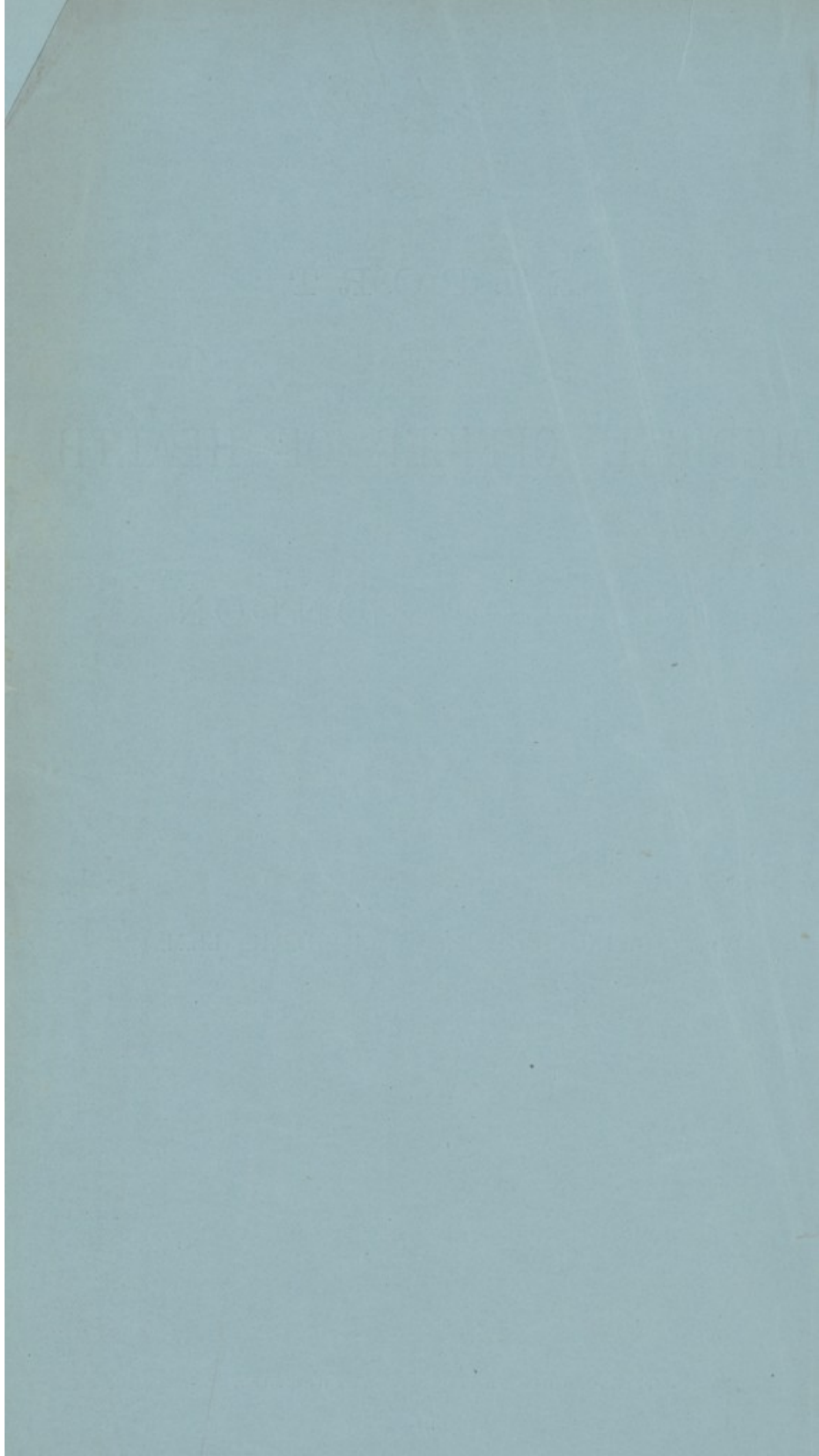
MEDICAL OFFICER OF HEALTH FOR THE CITY OF LONDON,

LATE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

LONDON:

PRINTED BY CHARLES SKIPPER & EAST 49, GREAT TOWER STREET, E.C.

1911.



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FOR THE YEAR 1910,

BY

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SANITARY STAFF.

MEDICAL OFFICER OF HEALTH.

	Date of Appointment
COLLINGRIDGE, Wm., M.A., M.D.	April, 1901

VETERINARY INSPECTOR.

YOUNG, T. DUNLOP, M.R.C.V.S.	Nov., 1909
-------------------------------------	------------

CLERICAL STAFF.

LOWE, GEORGE	Sanitary Clerk	Nov., 1902
GALLOWAY, R. E.		May, 1905
GRAY, CHARLES M.		March, 1911
STEPHENSON, F. H. (Meat Inspector's Office)		Feb., 1909
BEDWELL, NORMAN (Meat Inspector's Office)		Oct., 1910
BECKLES, VIRGINE		Jan., 1907

WOMEN SANITARY INSPECTORS.

SAFFORD, ADA J.	Feb., 1902
POLE, MILLICENT M.	Dec., 1904
WILKINSON, ANNIE M....	June, 1909

SANITARY INSPECTORS.

HILLS, ARTHUR REGINALD	1st Class, April, 1888
GATHERCOLE, WM. HENRY JOSEPH	" " May, 1891
MAY, WILLIAM HUSSEY	" " May, 1891
SIMMONS, EDWARD JOHN	" " June, 1892
ROBBINS, FRANCIS JOSEPH	" " Sept., 1892
RALPH, WILLIAM HOLDEN	" " July, 1898
DUNWORTH, JAMES	" " Jan., 1902
WHEATON, ARTHUR	" " Oct., 1902

SANITARY INSPECTORS AND MEAT INSPECTORS.

SHARP, OWEN, Senior Inspector	May, 1892
KELLAND, WILLIAM C....	May, 1899
METTAM, HARRY	Aug., 1903
DAVIES, THOS. L.	Dec., 1903
STANLEY, RALPH S.	March, 1907
BINTCLIFFE, CHARLES E.	March, 1907
MATSON, WILLIAM S.	Dec., 1910
MITCHENR, WILLIAM E.	Dec., 1910

INSPECTORS OF SLAUGHTERHOUSES AND MEAT.

JENKINS, HARRY	April, 1896
EGLIN, WILLIAM	July, 1896

ASSISTANT INSPECTORS OF SLAUGHTERHOUSES AND MEAT.

WAY, EDWARD	(on probation)	Oct., 1907
SLATTER, C.	(ditto)	May, 1908
KING, G. (Junior Assistant)		April, 1910

MATRON IN CHARGE OF THE SHELTER, GOLDEN LANE.

MRS. A. R. HILLS	Dec., 1900
-------------------------	------------

KEEPER OF THE MORTUARY.

OAKLEY, J. E.	Feb., 1909
----------------------	------------

DISINFECTOR.

LEE, ROBERT	Oct., 1894
--------------------	------------

LABOURERS.

MCDONNELL, R. J. (General Duties at Mortuary)	April, 1903
ADAMS, T. (Meat Shed)	May, 1905
LUDGATE, G. (Meat Shed)	Oct., 1906

ANNUAL REPORT OF THE MEDICAL OFFICER OF
HEALTH FOR THE YEAR 1910.

*To the Right Honourable the Lord Mayor, Aldermen and Commoners
of the Corporation of London.*

REPORT

TO THE CORPORATION OF LONDON,
CITY OF LONDON.

1st March, 1911.

GENTLEMEN,

OF

I have the honour to report upon the work of my Department
during the year 1910.

MEDICAL OFFICER OF HEALTH

Sanction passed without amendment to the work of your Officers.

The difficult question of supervision of the food supply is perhaps the
best instance of this increased work.

FOR THE

To the constant control of the Central Markets there is now added the duty
of controlling imports under the power of the Public Health Food Act.
Your staff of Food Inspectors has been increased, and has further been
strengthened by the addition of a new staff of Food Inspectors, act under your
Medical Officer of Health.

CITY OF LONDON.

This has undoubtedly increased the efficiency of inspection, but in view of
the great extension of work a further addition will shortly become necessary.

The requirements of Foreign Governments as to the inspection and
certification of food for export, and the restrictions placed on the imports into this country, and while such control
is most desirable in the interests of the Public Health, it of necessity occupies
much of the time and attention of your Officers.

1910.

Some of the special difficulties met with during the year were the presence
of *Oxytocara* (tubercle) in Australian beef, and the presence of trichinae in
varying degree in Argentine beef, and are dealt with in detail below.

The milk question, and the necessity for a decently clean supply, which
urgently calls for legislative measures, is referred to, and also the importance
of controlling the presence and amount of preservatives in foods generally but
more especially in milk.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1910.

*To the Right Honourable the Lord Mayor, Aldermen and Commons
of the Corporation of London.*

PUBLIC HEALTH DEPARTMENT,

GUILDHALL, E.C.,

1st March, 1911.

GENTLEMEN,

I have the honour to report upon the work of my Department during the year 1910

The tendency of modern legislation is to largely increase the duties and responsibilities of Sanitary Authorities in every direction, and scarcely a Session passes without some addition to the work of your Officers.

The difficult question of supervision of the food supply is perhaps the best instance of this increased responsibility.

To the constant control of the Central Markets there is now added the duty of controlling imports under the powers of the Public Health Food Act. Your staff of Food Inspectors has been increased, and has further been strengthened by the appointment of a Veterinary Inspector to act under your Medical Officer of Health.

This has undoubtedly increased the efficiency of inspection, but in view of the great extension of work a further addition will shortly become necessary.

The requirements of Foreign Governments as to the inspection and certification of food for export continuously increase, mainly in consequence of the restrictions placed on the imports into this country, and while such control is most desirable in the interests of the Public Health, it of necessity occupies much of the time and attention of your Officers.

Some of the special difficulties met with during the year were the presence of *Onchocerca Gibsoni* in Australian beef, and the presence of mould in varying degree in Argentine beef, and are dealt with in detail below.

The milk question, and the necessity for a decently clean supply, which urgently calls for legislative measures, is referred to, and also the importance of controlling the presence and amount of preservative in foods generally but more especially in milk.

This is the only country in the world where such vital matters are left entirely in the hands of producers and dealers, some of whom are unscrupulous, and the majority undoubtedly either careless or ignorant.

Among other subjects touched during the year is the important one of the water supply of the City.

In consequence of the high charges made by the Metropolitan Water Board, numerous wells have been sunk, and old disused ones again opened up for the supply of large blocks of offices, in which the demand is sufficiently large to justify the initial outlay.

Thirty-six wells are now in use within the City limits, all of which furnish the characteristic London deep well water—soft—organically pure—but with fairly large amounts of Sodium Sulphate and Bi-carbonate.

The sanitary work carried out continues to increase both in volume and responsibility, and it is somewhat difficult to exaggerate the complexity of the problems at times to be dealt with.

Under the Factory and Workshop Act, there is also a large extension of work.

While the number of Factories and Workshops are continuously increasing, other classes of workplaces are being gradually brought under inspection.

While the number of cases of infectious disease is small on account of the diminished night population, the question of dealing with contacts is one of the utmost importance, owing to the very large number of workers who daily pour into the City, and thus constitute it a veritable "Clearing House" for infection.

I regret to have to record the death of Mr. H. B. Turner, your Sanitary Clerk, after 34 years' faithful service under the Commissioners of Sewers and the Corporation.

AREA.

The City of London Registration District comprises an area of 672·7 acres (excluding tidal water and foreshore), or 1·051 square miles, equal to a square of 1·0252 miles to a side.

The area of "Registration London" is 74,817 acres (excluding tidal water and foreshore), or 116·9 square miles, equal to a square of 10·81 miles to a side.

DENSITY (1910).

City of London, Registration District, at night	-	-	25.4 persons to an acre.
" " " " during the day	-	*576.4	" "
Registration London, at night	-	-	65.6 " "
" " during the day	-	-	not known. No Imperial Day Census has yet been taken.

ANNUAL RATEABLE VALUE.

The rateable value of property within the *administrative county of London* was £44,875,809 on 6th April, 1910—whilst on the same date the corresponding rateable value of property in the City of London, including Temples, was £5,519,221, or nearly one-eighth of the whole County.

POPULATION.

The undermentioned figures are abstracted from the Registrar-General's Report, dated 30th December, 1901, on the Census of England and Wales, 1901 (County of London).

	Area. Statute Acres.	Inhabited Houses.		Population.	
		1891.	1901.	1891.	1901.
City of London	672.7	5,340	3,865	37,702	26,923

For Registration, Parliamentary and Municipal purposes the boundaries of the City are co-terminous.

These figures represent the population on the *night* of the 1st April, 1891 and 1901, exclusive of sub-district of Glasshouse Yard (see note on page 12).

A Day Census—the number of persons actively engaged in the City during the daytime—has been taken on three occasions, viz., in 1866, 1881, and 1891, and this is to be repeated during the present year, 1911.

CENSUS RETURNS.

YEAR.	Imperial Census. Night Population.	City Census. Day Population.
1861	112,063	—
1866	—	170,133
1871	75,983	—
1881	51,405	261,061
1891	37,705	301,384
1901	26,923	—

For statistical purposes, in the following pages the "Registration" District is referred to when speaking of the "City."

* This figure refers only to persons "actively engaged in the City during the daytime." The actual number of people visiting the City daily is probably nearly 1,500,000.

This consists of two sub-districts, together containing a population of at the middle of 1910, calculated on the last Census Returns :—

*St. Botolph	-	-	-	-	-	4,964
†St. Sepulchre and Allhallows	-	-	-	-	-	12,168
Total	-	-	-	-	-	<u>17,132</u>

The *Night* population, therefore, of the City of London Registration District at the middle of 1910 is taken at 17,132, and it is upon this figure that all vital statistics in this Report have been calculated.

The *Day* population at the middle of 1910 was estimated at 387,755 ‡ persons.

A *Day* Census taken in May, 1891, proved that 1,186,000 persons and 92,000 vehicles entered and left the City on the day the count was made.

In 1903 it was ascertained that in the week ending 19th July no less than 347,463 vehicles passed to and from the four City bridges, viz. :—London, Southwark, Blackfriars and Tower, equivalent to upwards of 18,000,000 vehicles per annum.

BIRTHS.

During the year 1910, 262 births were registered in the City. The annual birth rate was at the rate of 15·3 per 1,000 persons of all ages, compared with a quinquennial mean rate of 14·0 per 1,000. The birth rates last year in the Sub-Districts were—

St. Botolph	-	-	-	21·4 per 1,000.
St. Sepulchre and Allhallows	-	-	-	12·8 „

In the Metropolis the birth rate in 1910 was 23·9 per 1,000.

This decline in the birth rate has been in operation in this country since 1876, and is common to nearly all European countries.

CENSUS (GREAT BRITAIN) ACT.

This Act, which provides for the enumeration of the population of Great Britain on the second day of April, 1911, does not materially differ from previous Census Acts, and as your advisor on sanitary matters, only comes before me as affording a means of accurately determining birth and death rates. There is one point, however, to which I would direct attention.

* At the date of the last Census, this District included the "civil parish" of Glasshouse Yard. The parish was transferred to the Holborn Union by the Local Government Board Order, No. 43156, which came into operation on 29th September, 1901, and to the Registration District of Holborn (Finsbury Sub-District) on 1st January, 1902, making the Registration District of London City co-extensive with the Municipal City of London. All the Registration Districts in London are co-extensive with the Poor-Law Parishes or Unions except the District of Fulham.

† On the 1st April, 1901, the Middle Temple was transferred from the Strand Sub-District to St. Sepulchre Sub-District.

‡ This figure is based upon the assumption that the number of persons residing, occupied or employed within the City during the active hours of the day has increased at the same rate since the last Day Census in 1891 that it did between that and the previous Day Census in 1881.

There is a very strong feeling amongst sanitarians and others interested in vital statistics that the census should be taken by the Government every five years instead of every ten years, and the suggestion was made when the Census Bill was before Parliament that it should be amended so as to provide for a simple enumeration in 1916, showing number, sex and age of population of Great Britain. It is unfortunate that the President of the Local Government Board, for financial reasons, was unable to adopt this suggestion.

For the sake of convenience the census is taken of the night population, and in the majority of districts the results obtained are a fair indication of the actual number of the inhabitants ; but owing to the peculiar and exceptional nature of the city population, the figures obtained in no way indicate the masses who ceaselessly flow, morning and evening, in and out of the precincts of the City, and who live and have their being during 8, 9, ten, or even more hours of the day in the district over which the Corporation have sanitary jurisdiction. As the Sanitary Authority, the Corporation is responsible for the hygienic environment of this multitude while within the area under their charge, and it is obvious that if their well-being is to be effectively safeguarded, their numbers should be officially ascertained, and this view I urged upon the Sanitary Committee in June last. A Day enumeration has since been definitely decided upon by the Court of Common Council, and will take place in 1911 at a date subsequently to be determined, after the Imperial Night Census.

I may add that the cost of taking the last Day Census in 1891 was £1,350.

VACCINATION.

Of the 262 children born in 1910, 151 had been successfully vaccinated by the end of the year, 25 had died before the age for vaccination, and 1 was insusceptible. Vaccination was postponed by medical certificate in 10 cases, 21 had removed into other districts, and 21 vaccinations were pending at the end of the year. There were 33 cases of conscientious objection.

The Public Vaccinators performed 1,200 re-vaccinations during the year.

VACCINATION STATISTICS IN THE CITY OF LONDON.

Year.	Number of Births.	Successfully Vaccinated.	Insusceptible.	Had Small-pox.	Died before Vaccination.	Vaccination Postponed.	Cases pending or removed at the end of the year.	Conscientious Objections.
		<i>per cent.</i>	<i>per cent.</i>	<i>per cent.</i>	<i>per cent.</i>	<i>per cent.</i>	<i>per cent.</i>	<i>per cent.</i>
1905 ...	302	63·6	Nil.	Nil.	8·9	3·6	22·5	1·3
1906 ...	344	62·2	2·0	"	7·3	5·2	22·9	1·7
1907 ...	269	62·4	1·11	"	11·5	4·8	17·0	2·6
1908 ...	281	59·8	·71	"	9·6	3·9	21·3	4·6
1909 ...	248	58·4	·80	"	9·6	5·4	16·5	8·8
Average previous 5 years	289	61·2	·92	"	9·3	4·6	20·0	3·8
1910 ...	262	57·6	·38	"	9·5	3·8	15·6	12·9

VACCINATION ACT, 1907.

It will be seen that the number of conscientious objectors continue to increase. This is doubtless due to the Vaccination Act of 1907, which is a direct encouragement to persons not to protect their children from the risk attending an attack of small-pox.

MORTALITY.

During the year under review, 768 deaths were registered in the District, including *629 persons dying in the City, but not belonging thereto. See Table, p. 20, for details.

Deducting the latter 139 deaths remain, to which must be added 69 persons who died at City Institutions in *outside districts*, where they were registered. The mortality, therefore, from which the City death rate is calculated is 208.

The death rate for 1910 was 12·1 per 1,000 per annum of the population (the previous year being 16·0), whilst that for the whole of the Metropolis was 12·7.

DEATH RATES, PER 1,000 PER ANNUM.

Year.	City of London.	76 Great Towns of England and Wales.	Metropolis.
1905 	13·9	15·2	15·1
1906 	13·0	16·0	15·1
1907 	12·7	15·4	14·6
1908 	12·6	15·5	14·0
1909 	16·0	15·6	14·0
Average previous five years ...	13·6	15·5	14·5
1910 	12·1	13·4	12·7

In comparing the above with the Registrar-General's Returns, some discrepancies will be observed, due to the fact that I have not been furnished with the number of *citizens* who died in Institutions other than those with which the City is connected.

The death rate from zymotic disease per 1,000 of the population was ·17 compared with 1·1 in the Metropolis.

The deaths from phthisis correspond to a rate of 1·05 per thousand of the population.

* These deaths occurred in St. Bartholomew's Hospital, and the Union Dépôt, Thavies Inn.

INFANTILE MORTALITY.

The deaths of children under one year of age to 1,000 births were 53·4 against 102 for the whole of London.

The Table of infantile mortality on p. 17 shows the deaths of children under one year arranged according to monthly age periods. From this it will be seen that no less than 64·2 per cent. of these deaths occurred in the first month, 71·4 per cent. within the first three months, and 78·5 per cent. during the first six months of existence.

The work under the Notification of Births Act has been continued during the year. Two hundred and twenty-one births were notified, including seven still-births. Seventy-three other notifications were received relating to children the parents of whom did not reside in the City, and were forwarded to the Medical Officers of their respective districts.

Of the 221 City Births :—

111 were notified by private Medical Practitioners.

69 „ „ from Hospitals.

21 „ „ by Midwives.

20 „ „ by Parents.

As soon as expedient after a notification has been received, a visit is paid to the home in order to have a chat with the mother regarding the method of feeding, and also the clothing and management of the baby.

The mothers have invariably shown a keen interest, and appear glad of the suggestions which will help to improve the health of the baby, and at subsequent visits they have been pleased to tell that the advice has been followed. They appear to appreciate the interest shown in the welfare of their children.

The visits have aimed at being of educational value. If at a visit the advice tendered to a mother is a series "Do this" and "Don't do that," the greatest good from the visit will not be obtained; the reasons must be clearly explained why certain advice should be followed, and why many old-fashioned practises are unwise. The opportunity which an official visitor has of speaking to the women in a friendly way in their own homes is most valuable.

The visits allow of instruction on simple points in physiology—such knowledge should help a mother in making sensible decisions in the many difficulties which are bound to arise in matters of health in the subsequent years of childhood.

It is gratifying to record that the mothers are realizing the necessity of providing their children with warm clothing. Woollen and flannel garments being now frequently used from the birth of the child. They have in many

cases eagerly endeavoured to provide what is requisite upon the reason being explained, and are glad to profit by the advice, acknowledging that "Prevention is better than cure."

One hundred and ninety-seven babies were kept under observation during the year—of these 159 were breast-fed, 15 partly hand and partly breast-fed, 23 being entirely hand-fed.

One hundred and twenty-eight of the 159 breast-fed babies were found to be in a healthy condition at birth. Ten of the fifteen partly hand and partly breast-fed infants were reported as healthy and thriving, while 17 of the 23 entirely hand-fed children were said to be in a satisfactory condition. The ill-nourished condition of many of the babies was due possibly, in many cases, to the lack of proper food for the mother during pregnancy.

It is gratifying to record the fact that in the City it is the exception, rather than the rule, to find an "artificially" nourished infant being fed from a "long tubed bottle," and also that the majority of mothers now provide separate sleeping arrangements for their babies.

It was necessary in 15 cases to advise that the babies should be seen by medical men, and also that the eyes of four of the babies required some attention.

The number of births registered as occurring in the City was 262, and the number of deaths under twelve months was 14. This is equivalent to an infant mortality rate of 53·4 per 1,000, the lowest on record in the City. The year 1910 was, from a climatic point of view, a favourable one for the rearing of infants, and while this factor has undoubtedly had great weight, the results of the instruction and advice given cannot be altogether ignored.

DEATHS IN CITY INSTITUTIONS.

During 1910, 72 persons died in City Workhouses, Workhouse Infirmaries or Lunatic Asylums, or no less than 34·6 per cent. of the whole City mortality, the corresponding figure for the Metropolis being 43·3 per cent.

PERCENTAGE OF DEATHS OCCURRING IN WORKHOUSES, WORKHOUSE INFIRMARIES AND LUNATIC ASYLUMS TO TOTAL DEATHS IN THE CITY OF LONDON AND THE METROPOLIS RESPECTIVELY, FOR 1910, COMPARED WITH THE PREVIOUS FIVE YEARS :—

Year.	City of London.	Metropolis.
	<i>Per cent.</i>	<i>Per cent.</i>
1905 	29·4	22·4
1906 	12·9	22·3
1907 	37·6	24·8
1908 	23·0	25·8
1909 	38·0	42·0
Average of previous five years	28·1	27·4
1910 	34·6	43·3

(This Table is prepared in accordance with the requisitions of the Local Government Board.)

City of London.

Infantile Mortality during the Year 1910.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.			Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified		5	3	...	1	9	...	1	...	1	...	2	...	...	1	...	...	14
	Uncertified ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
i. Common Infectious Diseases.	Small-pox ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria { including Mem- branous Croup }		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Whooping Cough ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ii. Diarrhoeal Diseases.	Diarrhoea, all forms ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Enteritis, Muco-enteritis, { Gastro-enteritis }		...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
	Gastritis, Gastro-intestinal Catarrh }		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
iii. Wasting Diseases.	Premature Birth		2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital Defects		3	1	...	1	5	...	...	...	...	...	...	...	...	...	...	...	...
	Injury at Birth ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Want of Breast-milk, { Starvation }		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Atrophy, Debility, Marasmus ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
iv. Tuberculous Diseases.	Tuberculous Meningitis ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tuberculous Peritonitis : { Tuberculous Mesenterica }		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Tuberculous Diseases }		...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
	Erysipelas ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
v. Other Causes.	Syphilis ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rickets ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Meningitis (not Tuberculous)		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Convulsions ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Bronchitis ... ..		...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
	Laryngitis ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Suffocation (overlying) ... ..		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Causes ... ..		...	1	...	...	1	...	...	...	...	...	1	...	...	1	...	...	...
			5	3	...	1	9	...	1	...	1	...	2	...	...	1	...	...	14

Total Births in the year - - 262.

Population - - - - 17,132.

(Estimated to middle of 1910.)

Births in the year { legitimate 254
 { illegitimate *8

Deaths in the year of { legitimate infants 14
 { illegitimate infants 0

Deaths from all Causes at all Ages - - - 208

* In none of these cases did the mother belong to the City.

DEATHS FROM VIOLENCE.

Of the City deaths, 5·7 per cent. were caused by injuries or violence (as compared with 4·5 in 1908 and 5·1 in 1909), being ·96 above the average for the previous five years.

PERCENTAGE OF REGISTERED DEATHS FROM VIOLENCE.

Year.				City of London.	Metropolis.
				<i>Per cent.</i>	<i>Per cent.</i>
1905	...	...	...	4·15	4·27
1906	...	...	...	7·18	3·92
1907	...	...	...	3·10	3·75
1908	...	...	...	4·50	4·43
1909	...	...	...	5·10	3·59
Average previous five years ...				4·80	3·99
1910	...	...	...	5·76	4·03

VITAL STATISTICS, 1910.

City of London compared with the Metropolis, previous five years.

	City of London.		Birth Rate.		Death Rate.		Deaths of Children under 1 year to 1,000 Births.		Violent Deaths, per cent. of Deaths Registered.		Deaths from principal Zymotic Disease per 1,000 of the Population.	
	Estimated Night Population (Imperial Census).	Estimated Day Population (Corporation Census).	City.	Metropolis.	City.	Metropolis.	City.	Metropolis.	City.	Metropolis.	City.	Metropolis.
1905 ...	22,425	369,380	13·4	27·1	13·9	15·2	139	131	4·1	4·3	0·27	1·71
1906 ...	21,368	374,730	15·9	26·5	13·0	15·1	88	131	7·2	3·9	0·28	1·93
1907 ...	20,310	380,150	13·1	25·6	12·7	14·6	86	116	3·1	3·7	0·44	1·41
1908 ...	19,252	385,640	14·4	25·2	12·6	13·8	65	113	4·5	4·0	0·15	1·35
1909 ...	18,193	391,220	13·4	24·2	16·0	14·0	106	107	4·7	3·5	0·44	1·30
Average previous five years.	20,309	380,224	14·2	25·7	13·8	14·5	96	118	4·7	3·8	0·31	1·54
1910 ...	17,132	*	15·3	23·9	12·1	12·7	53·4	102	5·7	4·0	0·17	1·1

* Figures not yet published.

(This Table is prepared in accordance with the requisitions of the Local Government Board.)

Vital Statistics of Whole District during 1910 and Previous Years.

Name of District: CITY OF LONDON.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.
				Number.	Rate per 1,000 Births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1894 ...	34,831	520	14.9	82	157	993	28.5	570	562	169	600	17.2
1895 ...	33,823	552	16.3	81	147	1,057	31.2	629	627	189	619	18.3
1896 ...	31,412	534	17.0	72	133	1,066	33.9	677	672	164	558	17.8
1897 ...	30,245	491	16.2	58	118	1,046	34.6	615	608	146	584	19.3
1898 ...	29,121	468	16.1	55	118	957	32.9	620	615	132	474	16.3
1899 ...	28,039	416	14.8	56	135	1,011	36.0	649	642	149	518	18.5
1900 ...	26,998	403	14.9	72	179	987	36.6	625	609	146	524	19.4
1901 ...	27,411	377	13.7	60	160	974	35.5	644	633	115	456	16.6
1902 ...	26,546	339	12.7	42	124	910	34.3	643	610	136	436	16.4
1903 ...	24,958	338	13.6	39	115	839	33.6	647	631	91	299	12.0
1904 ...	23,565	353	15.0	34	96	865	36.8	662	644	85	306	12.9
1905 ...	22,425	302	13.4	42	139	896	39.5	701	675	92	313	13.9
1906 ...	21,368	341	15.9	30	88	901	42.1	691	658	36	279	13.0
1907 ...	20,310	268	13.1	23	86	853	41.9	715	692	97	258	12.7
1908 ...	19,252	277	14.4	18	65	899	46.7	736	712	56	243	12.6
1909 ...	18,193	244	13.4	26	106	912	50.1	756	725	105	292	16.0
Averages for years 1894-1909	26,149	388	14.7	49	122	947	37.0	661	644	119	416	15.8
1910 ...	17,132	262	15.3	14	53.4	768	44.8	645	629	69	208	12.1

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

Total population at all ages ...	26,923†	At Census of 1901.
Area of City of London Registration District in acres (exclusive of area covered by water) ...	672.7	
Number of inhabited houses...	3,865	
Average number of persons per house	6.96	

† At the date of the Census the civil parish of Glasshouse Yard was included in the City. This parish was subsequently transferred to another Registration District outside the City (see note on page 12). The population of Glasshouse Yard is therefore not included in this figure.

(This Table is prepared in accordance with the requisitions of the Local Government Board.)

Causes of, and Ages at, Death during Year 1910.

	DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES).			TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.
	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	St. Botolph.	St. Sepulchre.	*	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
1. Small-pox ...	...	...	...	...	...	...	...	...	...	...	...
2. Measles... ..	...	...	...	...	...	...	...	...	...	...	5
3. Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...	...
4. Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...
5. Epidemic Influenza ...	2	...	...	...	...	...	2	1	1	...	...
6. Whooping Cough ...	2	...	2	...	...	...	...	2	...	...	2
7. Diphtheria, Membranous Croup ...	...	...	...	...	...	...	...	...	...	...	19
8. Croup ... ..	...	...	...	...	...	...	...	...	...	...	...
9. Enteric Fever ...	1	...	...	...	...	1	...	...	1	...	...
10. Asiatic Cholera ...	...	...	...	...	...	...	...	...	...	...	...
11. Diarrhoea, Dysentery ...	...	...	...	...	...	...	...	...	...	...	16
12. Epidemic or Zymotic Enteritis ...	...	...	...	...	...	...	...	...	...	...	...
13. Enteritis	3	2	1	...	...	...	...	1	2	...	5
14. Other Continued Fevers ...	...	...	...	...	...	...	...	...	...	...	...
15. Erysipelas	1	...	...	...	...	1	...	...	1	...	2
16. Puerperal Fever ...	1	...	...	...	...	1	...	...	1	...	5
17. Other Septic Diseases ...	2	...	...	...	...	2	...	...	2	...	17
18. Intermittent Fever and Malarial Cachexia.	...	...	...	...	...	...	...	...	...	...	1
19. Tuberculosis of Meninges ...	2	...	2	...	...	...	...	...	2	...	16
20. Tuberculosis of Lungs ...	18	...	...	...	6	11	1	9	9	1	18
21. Other Forms of Tuberculosis ...	5	1	...	...	1	2	1	2	3	...	14
22. Alcoholism	3	...	...	...	...	2	1	...	3	...	...
23. Cancer	18	...	...	...	...	8	10	9	9	...	65
24. Premature Birth	2	2	...	...	...	...	...	1	1	...	15
25. Developmental Diseases ...	5	5	...	...	...	...	...	2	3	...	6
26. Old Age	17	...	...	...	...	...	17	5	12	4	...
27. Meningitis	1	...	...	...	...	...	1	...	1	...	12
28. Inflammation and Softening of Brain ...	...	...	...	...	...	...	...	...	...	...	4
29. Organic Diseases of Heart ...	1	...	...	...	1	...	...	...	1	...	11
30. Acute Bronchitis	10	...	...	...	...	3	7	3	7	...	5
31. Chronic Bronchitis	17	...	...	...	...	2	15	5	12	1	8
32. Lobar (Croupous) Pneumonia ...	...	...	...	...	...	...	...	...	...	1	4
33. Lobular (Broncho-) Pneumonia ...	5	1	1	...	...	2	1	2	3	1	39
34. Diseases of Stomach ... ..	...	...	...	...	...	...	...	...	...	...	14
35. Obstruction of Intestines ...	...	...	...	...	...	...	...	...	...	1	14
36. Cirrhosis of Liver	2	...	...	...	...	1	1	...	2	...	4
37. Nephritis and Bright's Disease ...	13	...	...	...	...	7	6	5	8	...	31
38. Tumours and Other Affections of Female Genital Organs.	...	...	...	...	...	...	...	...	...	...	5
39. Accidents and Dis. of Parturition ...	...	...	...	...	...	...	...	...	...	...	2
40. Deaths by Accident or Negligence ...	8	1	...	...	...	4	3	2	6	...	70
41. Deaths by Suicide	4	...	...	...	...	2	2	...	4	...	4
42. Deaths from Ill-defined Causes ..	3	1	...	...	...	...	2	1	2	...	4
43. All other Causes	62	1	...	...	...	34	27	24	38	4	207
Total all Causes	†208	14	6	...	8	83	97	74	134	13	†645

* Persons dying in City Institutions. Address not stated on certificate of death.

† Including 16 Citizens, distributed in Columns 1 to 10 (13 died in St. Bartholomew's Hospital and 3 at the Union Depot, Thavies Inn).

‡ Including 69 Citizens who died in City Institutions outside, distributed in Columns 1 to 10.

NOTIFICATION OF INFECTIOUS DISEASE.

In the following Tables will be found particulars of infectious disease notified under Sections 55 and 56 of the Public Health (London) Act, 1891, and information as to the removal of patients to hospitals, infirmaries, &c. :—

NATURE OF DISEASE.	Number of Certificates received.	Treated at Home.	Removed to the Metropolitan Asylums Board Hospitals.	Removed to the London Fever Hospital.	Treated at other Hospitals and Infirmaries.	Duplicate Certificates received.	Diagnosis incorrect.
Small-pox	—	—	—	—	—	—	—
Diphtheria	19	—	12	—	4	1	2
Scarlet Fever	24	—	13	5	—	4	2
Enteric „	4	—	1	—	2	—	1
Puerperal „	1	1	—	—	—	—	—
Erysipelas	17	10	—	—	6	1	—
Cerebro-Spinal Meningitis	1	—	—	—	—	—	1
Totals	66	11	26	5	12	6	6
*Chicken-pox	24	24	—	—	—	—	—
*Phthisis	4	3	—	—	1	—	—
Totals	94	38	26	5	13	6	6

* The notification of this disease is voluntary in the City of London.

It will be seen from the foregoing that during the year, excluding Chicken-pox and Phthisis, 66 Certificates were received, including 6 “duplicates,” and 6 in which the diagnosis was subsequently found to be incorrect.

The total number of cases of “notifiable infectious disease” was therefore, 54, as compared with 67 for the previous year. The total number of cases of Scarlet Fever reported was 18, compared with 35 of last year.

The following is a Return of infectious disease notified, exclusive of Chicken-pox and Phthisis, occurring in the City of London, with the percentages of such cases removed for treatment to hospitals or nursed at home during 1910, compared with the figures for the previous five years :—

Year.	Number of cases reported.	Per cent. of cases reported.	
		Removed to Hospital.	Treated at Home.
1905	113	77·9	22·1
1906	149	91·9	8·1
1907	140	84·8	15·7
1908	90	91·0	9·0
1909	67	82·1	17·9
Average for previous five years.	112	85·4	14·6
1910	54	79·6	20·4

Cases of Infectious Disease notified during the Year 1910.

CITY OF LONDON.

DISEASE.			CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.		NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY		TOTAL CASES REMOVED TO HOSPITAL.	
			At all Ages.	At Ages—Years.						St. Botolph.	St. Sepulchre.	St. Botolph.		St. Sepulchre.
				Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.					
Small-pox	...	—	—	—	—	—	—	—	—	—	—	—	—	
Cholera	...	—	—	—	—	—	—	—	—	—	—	—	—	
Diphtheria	...	16	—	5	7	1	3	—	7	9	7	9	16	
Erysipelas	...	16	—	—	—	1	12	3	9	7	5	1	6	
Scarlet Fever	...	18	—	2	7	5	4	—	9	9	9	9	18	
Typhus	„	—	—	—	—	—	—	—	—	—	—	—	—	
Enteric	„	3	—	—	—	1	2	—	1	2	1	2	3	
Relapsing	„	—	—	—	—	—	—	—	—	—	—	—	—	
Continued	„	—	—	—	—	—	—	—	—	—	—	—	—	
Puerperal	„	1	—	—	—	—	1	—	—	1	—	—	—	
Plague	...	—	—	—	—	—	—	—	—	—	—	—	—	
Anthrax	...	—	—	—	—	—	—	—	—	—	—	—	—	
Totals	...	54	—	7	14	8	22	3	26	28	22	21	43	
*Chicken-pox	...	24	1	5	18	—	—	—	10	14	—	—	—	
*Phthisis	...	4	—	—	—	1	2	1	1	3	—	1	1	
†														
Totals	...	82	1	12	32	9	24	4	37	45	22	22	44	

This Table is prepared in accordance with the requisitions of the Local Government Board.

* The notification of this disease is voluntary in the City of London.

† For cases of this disease notified under the Public Health (Tuberculosis) Regulation, see p. 24.

In each case a detailed examination was made of the sanitary condition of the premises where infectious cases occurred, and a summary of defects found by the District Inspectors is given on page 58.

EXAMINATION FOR PATHOGENIC BACTERIA.

Should any medical practitioner in the City desire examination of specimens for pathogenic bacteria in cases of suspected infectious disease occurring amongst their patients residing in the City, they are examined free of charge, and the result communicated as speedily as possible.

During the year the following 5 specimens were so dealt with. It will be seen that positive results were obtained in 60 per cent. of these cases :—

<i>Specimen.</i>	<i>Disease suspected.</i>	<i>Result—</i>	
		<i>Positive.</i>	<i>Negative.</i>
One of Blood - - -	Enteric Fever - - -	—	1
Four Throat Swabs -	Diphtheria - - -	3	1

SUGGESTED EXTENSION OF PROVISIONS OF "WORKMEN'S COMPENSATION ACT" TO HOSPITAL NURSES AND ATTENDANTS.

The question has been raised during the year relative to the liability, under the above Act, of Public bodies in cases where infectious disease has been contracted in the course of duty by nurses and other employés, whose occupation exposes them unduly to the risk of infection.

It appears that a number of nurses and attendants at the Isolation Hospital of one of the District Councils have died of infectious disease contracted in the course of their duties. The Insurance Companies repudiated liability under the Workmen's Compensation Act, denying that this was an "accident" within the meaning of the Act.

The Sanitary Committee is not directly interested in this matter as relating to nurses, as they have no hospitals or nursing institutions under their control, but members of their staff as a result of the nature of their duties, are liable to contract infectious disease.

As to whether or no the view taken by the Insurance Company is justified I am not qualified to express an opinion, but I can see no reason why persons contracting illness from the nature of their employment should not receive similar protection under the Act as that afforded employés liable to contract anthrax, lead poisoning, &c., as the result of their occupation, and I am of opinion that the Schedule of Diseases (third schedule) of the Workmen's Compensation Act should be enlarged so as to include hospital nurses, hospital attendants, sanitary inspectors, disinfectors, and others who by virtue of their office are peculiarly liable to contraction of infectious disease.

PHTHISIS.

The Public Health (Tuberculosis) Regulations, 1908, which became operative on the 1st January, 1909, require that medical advisers and certain officials of Boards of Guardians shall notify to the Medical Officer of Health the particulars of cases of "poor persons" suffering from pulmonary Tuberculosis that are brought to their notice.

During the year 53 notifications have been received in conformity with these regulations, of which 13 were duplicates. 30 refer to cases in which the previous movements of the patients are unknown, but in 10 the information furnished proved useful in enabling disinfection to be effected where the patient has been removed to the Infirmary; and more especially in those cases treated at home, in precautions being observed to minimise the danger of the spread of the disease.

As in former years several medical practitioners in the City notified cases of Phthisis which came under their observation in private practice, and, as recorded on p. 22, four cases (other than "poor persons") have been dealt with under this system of voluntary notification.

Disinfections have been also effected in any cases that can be found where those in attendance at establishments in the City have been suspected to be suffering from Phthisis; but in a place like the City, so densely populated during business hours, there must always be a danger from the presence of a large number of unrecognised and incipient cases that are constantly associated with their fellow workers.

CEREBRO-SPINAL FEVER.

As a preventive measure against the spread of Cerebro-Spinal Fever, which includes Basal Meningitis, the disease was first made notifiable by order of the London County Council in 1907, in accordance with section 56 of the Public Health (London) Act, 1891, for a period of six months as from the 12th March, 1907.

This order, which was approved by the Local Government Board, has since been extended at regular intervals of twelve months, and the present order covers the twelve months ending the 12th March, 1911.

In March of this year a notification was received of a case of Basal Meningitis in a child of $2\frac{1}{2}$ years. The symptoms were very indefinite, but the case was reported by the medical attendant as a matter of precaution.

From time to time details of cases of Cerebro-Spinal Fever are reported as occurring in adjoining Metropolitan Boroughs, and such details are carefully investigated with a view to the detection of any possible connection with the City.

NOTIFICATION OF OPHTHALMIA NEONATORUM.

In accordance with section 56 of the Public Health (London) Act, 1891, which empowers the Sanitary Authority of any district to make an Order augmenting the list of Infectious Disease of which notification is required under section 55 of the said Act, the London County Council have made such an Order, approved by the Local Government Board, with regard to Ophthalmia Neonatorum, and from 13th March, 1911, failure to notify this disease will constitute an offence under the Act.

Ophthalmia Neonatorum, or purulent conjunctivitis of the newly born, usually develops on the second or third day after birth. Earlier cases are attributable to a lingering labour. Material in the maternal passages containing gonococci clings to the baby's lashes and is carried into the eye after birth, either by blinking of eyelids or by sponges, or water, &c., employed in the first bath. Its leading feature is a discharge, at first thin and whey-like, and later resembling pus. As the case advances the eyelids are greatly thickened by serous effusion, and when thus swollen they tend to become everted when the baby cries. In this dangerous affection the cornea may be rapidly involved. The baby in marked cases is often fretful, and diarrhoea generally ensues. Complications include swelling of the preauricular glands, abscesses about the eyelids, &c.

The discharge must be frequently removed by means of antiseptic lotion, which should be applied warm to the everted conjunctiva with a piece of absorbent cotton wool. In bad cases, constant attention day and night is essential, as cure is dependent upon the care with which the eyes are kept clean.

This disease, which is highly infectious, is principally confined to the children of the poorer classes, and in the City of London only very rarely do cases arise.

SMALL-POX.

No cases of Small-pox have occurred during the year in persons residing in the City, but there has been one rather unusual "contact" case.

A troupe of variety artists had been touring abroad, and were playing in November, 1909, in Warsaw, at a circus. Employed at the same circus was a clown, who fell ill and died on the 10th November from hæmorrhagic Small-pox. The nature of his disease does not appear to have been recognised by the authorities, and the variety troupe, who had been in contact with the deceased, were permitted to proceed to Dantzic in Germany, where one of their number was taken to the hospital on the 24th November, suffering from severe pains in the back. Here, again, the disease does not appear to have

been recognised, for, without any precautionary measures being taken, the patient was permitted to return to England, where he arrived via Berlin and the Hook of Holland on the 28th November, going direct to his home in Islington, where he was seen by a medical man, who diagnosed the case as one of Chicken-pox. Subsequently, this man and three other persons living in the same house were removed to hospital suffering from Small-pox. He, himself, was taken to the Hospital as a suspected case on the 23rd December.

In the course of enquiries following the notification of the above cases, it was found that several packages belonging to the manager of the variety troupe were lying at the cloak room of a City railway station, and I deemed it advisable to have these disinfected. These goods, which consisted of a quantity of second-hand uniforms of the Gordon Highlanders, were taken to the disinfecting station, where they were dealt with.

It was later ascertained that some scenery used by the same troupe was deposited at a goods yard in Shoreditch, and this fact was accordingly reported to the Medical Officer of Health for that district.

PROVISION OF DIPHTHERIA ANTI-TOXIN.

The Local Government Board under an Order dated the 15th August, 1910, known as "The Diphtheria Anti-Toxin (London) Order, 1910," authorised the provision by Sanitary Authorities in the Metropolis of a temporary supply of Diphtheria Anti-Toxin, and of medical attention in connection therewith for the poorer inhabitants of their districts subject to the following conditions, viz. :—

"The arrangements with respect to the keeping, distribution, and use
"of the Diphtheria Anti-Toxin should be made in accordance with the
"advice of the Medical Officer of Health."

With regard to the provision of medical attendance in connection with the administration of the Anti-Toxin serum, Article II. of the Order extends the duties of a Medical Officer of Health to include all necessary action under the Order, and Article III. authorises the Sanitary Authority to pay from time to time to the Medical Officer of Health, in addition to the salary of such Medical Officer of Health, reasonable compensation for such action in the execution of the duties thrown upon him by the Order.

In a circular letter accompanying the Order of the Board, it is directed that in cases where the patient is under the care of a medical practitioner, such medical practitioner should, in ordinary circumstances, administer the Anti-Toxin. In cases not so attended, the Medical Officer of Health would have to act.

The Board also urged immediate action with regard to the provision of the Anti-Toxin, and for its use both as a prophylactic and as a curative agent, and having regard to the effect that the prompt use of the Diphtheria Anti-Toxin in cases of persons who may be attacked by Diphtheria, or exposed to infection of that disease, is of the utmost importance, often preventing a fatal termination to an otherwise hopeless case. I recommended that a supply of Diphtheria Anti-Toxin be issued at the direction of the Medical Officer of Health to medical practitioners in the City, and that a circular letter be addressed to them informing them of the new departure, and emphasizing the importance of the prompt administration of the Anti-Toxin and the saving in life which may thereby be effected.

These suggestions were agreed to, and arrangements have been made with a City firm whereby, upon the production of an order from the Medical Officer of Health, any medical practitioner in the City would receive a supply of Anti-Toxin free of charge.

This method is, in my opinion, superior to holding a supply in the office where proper facilities for storing are not forthcoming, and as the quantity used will in all probability be small, there would be every possibility of serious deterioration in the Anti-Toxin quality of the serum.

The free provision of Anti-Toxin must not in any way be regarded as a substitute for removal to hospital of a patient suffering from Diphtheria, nor as implying that the patient to whom such has been administered may properly be detained for treatment at home, unless means for efficient isolation to the satisfaction of the Medical Officer of Health are available.

In cases where isolation, in the opinion of the Medical Officer of Health, is insufficient, the patient must, as heretofore, be removed to the hospital.

The following is a copy of the circular letter issued to the medical practitioners in the City.

DIPHTHERIA ANTI-TOXIN (LONDON) ORDER, 1910.

To Medical Practitioners in the City of London.

"NOTICE IS HEREBY GIVEN that the Corporation of London has
 "decided, in view of the above Order, to make provision for facilitating
 "the prompt use of Diphtheria Anti-Toxin in the case of poorer persons
 "residing in the City who may be attacked by Diphtheria or exposed to
 "the infection of that disease, and has accordingly arranged for the
 "supply of such Anti-Toxin, free of charge, to medical men practising
 "in the City, for use either as a prophylactic or as a curative agent.

"It should be noted that the free provision of Diphtheria Anti-Toxin
 "must not be regarded as a substitute for removal to hospital of a
 "patient suffering from Diphtheria, nor as implying that the patient to

" whom the Anti-Toxin has been administered may properly be retained
 " for treatment at home, unless means are available for his efficient
 " isolation to the satisfaction of the Medical Officer of Health.

" The Corporation desires to lay emphasis on the importance of
 " prompt treatment by the Anti-Toxin of all those attacked by
 " Diphtheria or exposed to the infection of that disease, and to the
 " saving of life which may thereby be effected.

" Applications, by medical men only, either verbally or in writing, for
 " the Anti-Toxin, should be made to THE MEDICAL OFFICER OF HEALTH,
 " at the GUILDHALL, E.C., giving full particulars of the case and their
 " requirements with regard to the number of (Ehrlich-Behring) units
 " wanted.

SHELTER FOR TEMPORARY ACCOMMODATION DURING DISINFECTION.

The shelter in Golden Lane, Barbican, provided in accordance with Sec. 60 (4) of the Public Health (London) Act, 1891, which enacts that "sanitary authorities shall provide free of charge temporary shelter or house accommodation with necessary attendants for the members of any family in which any dangerous infectious disease has appeared, for the purpose of enabling such dwellings to be disinfected by the sanitary authority," has been visited by two families during the year. They numbered eight persons, of whom three were adults and five were children, and who were housed during the disinfection of their houses after :—

Diphtheria	-	-	-	1 family.
Measles	-	-	-	1 „

These families both came from houses of two rooms.

NUISANCE FROM BEETLES.

In October last, a private house in Upper Thames Street was invaded by a swarm of small flying beetles. In such quantities did they make their appearance that the premises became uninhabitable. An attempt was made to kill them, and although many succumbed to the influence of sulphur-dioxide, enormous numbers continued to find their way into the building. Further investigation proved that the beetles were hatching out from a quantity of Turmeric lying in an adjoining warehouse. This article, of which there was about 15 tons, had been imported from Bombay, and when examined by your officers was found to be honeycombed by the ravages of a small weevil, which eventually developed into the beetle which was the cause of the trouble.

The owner of the Turmeric was communicated with, and arrangements made for its immediate removal from the warehouse; in the meantime the windows of both buildings were kept closed. The premises that had been rendered untenable were again fumigated and all the insects killed, the tenants then resuming occupation.

Specimens of both the weevil and the beetle were sent to the Natural History Museum with a view to their identification, and were there certified as belonging to the species *Lasioderma Serricorne* (Fab.), and known as the "Cigar" or "Cigarette" beetle, owing to the injury done by them in boring into cigars and cigarettes.

The life history of this insect has not been published in full detail, but the following short article extracted from the "First Report on Economic Zoology," by F. V. Theobald, published by the Trustees of the British Museum in 1903, may prove of interest:—

(From Reports on Economic Zoology sent in reply to various Correspondents.)

"THE CIGAR BEETLE."

"Dr. Christy, of St. James's Place, forwarded some Indian cigars, a case of which were being damaged by a small beetle. The pest is known as the 'Cigar' Beetle (*Lasioderma testacea* Duf.), and is clearly related to the American, West Indian, and almost cosmopolitan 'Cigarette' Beetle (*Lasioderma Serricorne*). It is recorded from India as attacking cheroots, rice, saffron, the leaf coverings of opium balls, &c.

"They have been noticed largely in Burmah cheroots, and are frequently found in Manilla cigars and cheroots. It is almost cosmopolitan, and attacks most dry vegetable substances. I do not remember having seen it in Havana cigars. The egg stage lasts from eight to sixteen days. The grub stage normally takes six weeks, but under unfavourable conditions it may last for a year or more. The pupal stage lasts about eight days.

"The beetles may live for two months. The development of the larvæ is hastened and retarded by heat and cold. Both larvæ and beetles do the damage. A single tunnel into the cigar, as a rule, stops its drawing, so that the damage done by a comparatively small number of beetles and their larvæ in a case may often be considerable. This pest, when a case is opened and found to be infested, may easily be checked by bisulphide fumigation."

CONTAMINATED MILK.

In 1902 I instituted a system of taking samples of milk upon arrival at City Railway Stations with a view to determining to what extent the milk distributed in London could be regarded as an active agent in the spread of Tuberculosis.

Since 1902 these investigations have been continued in the years 1904, 1905, 1906, 1907, 1908, 1909 and 1910, and with each succeeding year it becomes more apparent that until the hands of the farmer, dairymen and others sending milk to London are forced by Statute, no real lasting improvement can be looked for in the character of the milk supply.

The milk taken during the present year represents the supply from the following counties :—

Essex.	Norfolk.
Hertfordshire.	Suffolk.
Derbyshire.	Huntingdonshire.
Kent.	Cambridgeshire.
Buckinghamshire.	

In all 42 samples were submitted to Dr. Klein for bacteriological examination, and his report thereon is as follows :—

<i>Sample No.</i>	<i>Dirt.</i>	<i>Date of Injection of Guinea-pigs.</i>	<i>Date of Death.</i>	<i>Result.</i>
		1910.		
1	Appreciable amount ...	June 2nd ...	... Killed July 15th ...	Negative local and visceral.
2	Small amount ...	June 2nd ...	... Killed June 23rd ...	Purulent inflammation, no tubercle bacilli.
3	Appreciable amount ...	June 2nd ...	... Killed July 15th ...	Negative local and visceral.
4	Small amount ...	June 2nd ...	... Killed July 15th ...	Negative local and visceral.
5	Negligeable ...	June 2nd ...	... Killed July 15th ...	Negative local and visceral.
6	Appreciable ...	June 2nd ...	... Killed June 23rd ...	Purulent inflammation, no tubercle bacilli.
7	Negligeable ...	June 4th ...	... Killed July 15th ...	Negative local and visceral.
8	Small ...	June 4th ...	... Killed July 15th ...	Negative local and visceral.
9	Appreciable ...	June 4th ...	... Killed July 12th ...	Pseudo tubercle.
10	Small ...	June 4th ...	... Killed July 15th ...	Negative local and visceral.
11	Appreciable ...	June 4th ...	... Killed July 15th ...	Negative local and visceral.
12	Appreciable ...	June 4th ...	... Killed July 15th ...	Negative local and visceral.
13	Small ...	June 7th ...	... Killed July 16th ...	Negative local and visceral.
14	Negligeable amount ...	June 7th ...	... Died June 10th ...	Septicæmia.
15	Negligeable amount ...	June 7th ...	... Killed July 16th ...	Negative local and visceral.
16	Negligeable amount ...	June 7th ...	... Killed July 16th ...	Negative local and visceral.
17	Appreciable amount ...	June 7th ...	... Killed July 16th ...	Negative local and visceral.
18	Small amount ...	June 7th ...	... Killed July 16th ...	Negative local and visceral.

<i>Sample No.</i>	<i>Dirt.</i>	<i>Date of Injection of Guinea-pigs.</i>	<i>Date of Death.</i>	<i>Result.</i>
1910.				
19	Negligeable amount	... June 9th ...	... Killed July 16th...	Negative local and visceral.
20	Negligeable	... June 9th ...	... Killed June 28th...	Purulent inflammation, no tubercle bacilli.
21	Negligeable	... June 9th ...	... Killed July 16th...	Negative local and visceral.
22	Negligeable	... June 9th ...	... Killed July 16th...	Negative local and visceral.
23	Small	... June 9th ...	... Died June 23rd ...	Pyæmia.
24	Small	... June 9th ...	... Killed July 16th...	Tubercle in glands and spleen, with tubercle bacilli.
25	Negligeable	... June 11th	... Killed July 18th...	Negative local and visceral.
26	Negligeable	... June 11th	... Killed July 18th...	Tubercle in glands and spleen, with tubercle bacilli.
27	Appreciable amount	... June 11th	... Killed July 18th ...	Negative local and visceral.
28	Small amount	... June 11th	... Killed July 18th ...	Negative local and visceral.
29	Negligeable amount	... June 11th	... Killed July 18th ...	Negative local and visceral.
30	Negligeable amount	... June 11th	... Killed July 18th ...	Negative local and visceral.
31	Small amount	... June 14th	... Died July 1st ...	Pyæmia.
32	Appreciable amount	... June 14th	... Killed July 1st ...	Tubercle in glands and spleen, with tubercle bacilli.
33	Small amount	... June 14th	... Killed July 18th ...	Negative local and visceral.
34	Small amount	... June 14th	... Killed July 18th ...	Negative local and visceral.
35	Appreciable amount	... June 14th	... Killed July 1st ...	Pseudo tubercle.
36	Negligeable amount	... June 14th	... Killed July 18th ...	Negative local and visceral.
37	Negligeable amount	... June 16th	... Killed July 20th ...	Negative local and visceral.
38	Small amount	... June 16th	... Killed July 20th ...	Negative local and visceral.
39	Small amount	... June 16th	... Killed July 20th ...	Negative local and visceral.
40	Appreciable amount	... June 16th	... Killed July 12th ...	Purulent inflammation, no tubercle bacilli.
41	Small amount	... June 16th	... Killed July 20th ...	Negative local and visceral.
42	Small amount	... June 16th	... Killed July 12th ...	Purulent inflammation, no tubercle bacilli.
43	Appreciable amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
44	Small amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
45	Small amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
46	Small amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
47	Negligeable amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
48	Negligeable amount	... June 18th	... Killed July 20th ...	Negative local and visceral.
14 Bis	Little	... June 21st	... Killed July 20th ...	Purulent inflammation, no tubercle bacilli.

From these tables it follows, leaving out No. 14 Bis :—

A. Dirt.—Appreciable amount in 12 samples	... 25 per cent.
Small amount in 19 samples	... 39·3 „ „
Negligeable amount in 17 samples	... 35·7 „ „
	<hr/> 100 per cent.

B. Pathogenicity.—In 13 samples	... 27 per cent.
Of these : 3 samples tubercle	... 6·25 per cent.

C. No pathogenic effect whatever in 35 samples	... 73 „ „
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For the purposes of comparison, I print below the following summary of the results of the several series taken during the years 1904-1910 :—

	1904.	1905.	1906.	1907-8.	1909.		1910.*
					1st Series.	2nd Series.*	
	%	%	%	%	%	%	%
Fairly clean and pure	48.7	68.2	80	54.2	43.7	66.6	75
Unclean ...	43.6	22.7	12	37.5	43.8	33.3	25
Tuberculous ...	7.7	9.1	8	8.3	12.5	4.7	6.25

This table shows that although the percentage of unclean samples has fallen from 33.3 to 25.0, the samples found to contain the bacillus of tuberculosis have increased from 4.7 to 6.25, which figure, however, is lower than the average obtained in the six series.

The improvements in the results with regard to dirt is doubtless accounted for by the increased use by dairymen and farmers of a common-sense type of churn.

For many years I have been urging upon milk traders the impossibility of safeguarding their milk from ingress of air-borne and other impurities during transit if they continued to use the old-fashioned churn.

Even though the milk leaves the farm perfectly clean and free from impurities, the journey in a receptacle that offers no obstacle whatever to the entrance of dirt and other extraneous matter, is practically certain to prejudicially affect its purity.

Then again, there is another factor that largely mitigates against the efforts of all concerned in this question—the practice, still largely in vogue, of returning the churns to farmers without in any way scalding or cleansing them. Many of the larger dairymen in London quite recognise the futility of trusting this important matter to the farmer, and have established an elaborate system of cleansing their churns, but there are many to whom the necessity of so simple a precaution does not appear to suggest itself.

In accordance with the arrangement entered into with the Medical Officer of the London County Council, under the provisions of Section 38 of the London County Council (General Powers) Act, 1907, the names and addresses of the farmers from whom these samples of tuberculous milk were obtained (Nos. 24, 26 and 32) were sent to the Medical Officer of the London County Council, and I am informed that tuberculous cows were found on the farms in two cases (Nos. 26 and 32), and the owners of both farms undertook not to send milk from these cows to London. The attention of the local authority for the district in which these farms were situated was directed to the cows in question.

* It will be noticed that the 100 % is made up of clean and unclean only in the years 1909 and 1910. The sample in which tubercle was found also contained dirt.

As to the ultimate fate of these animals I have no information, and it can only be hoped that they were killed, and their carcasses disposed of in such a way as to prevent their being used for human food. In the third case (No. 24) no evidence of tuberculosis was found in any of the cows on the farm.

In the case of sample No. 20, injection in a guinea-pig resulted in purulent inflammation, and when the farmer's attention was directed to the fact that he was selling milk unfit for food, he had his cows examined by a Veterinary Surgeon, who found that two animals in the herd were giving tuberculous milk, both being affected with indurated udders. This was reported to the Medical Officer of the London County Council.

In the cases of the dirty samples, the respective farmers were requested to furnish me with a certificate as to the sanitary condition of the farm, and although these conditions in most cases were found to be satisfactory, the reports obtained in some instances would amply account for the unwholesome condition of the milk.

As an illustration, I will quote from the report received in regard to Sample No. 1.

"The smaller cow-shed, which has accommodation for 18 cows, is an old building which does not come up to modern ideas. It is a 'lean-to,' and the height of the back wall makes it difficult to keep the upper part free from dust, and the spaces between the rafters and the top of the wall are packed with old straw which tends to collect and harbour dust and dirt. The shed is not sufficiently lighted. The uneven nature of the ground at the entrance by the stable door will probably make it difficult to keep the approaches clean. Shed drained by an open channel to a small brick-built pit outside. The size and position of these pits make it necessary to empty them daily."

Milk produced under such conditions as these cannot be as clean as it should be, and if an inspection of all farms and cow-houses throughout the country were made, similar and, in many cases, even worse conditions would be revealed.

Inspection in the past has revealed many unfavourable conditions at both the farmhouse and the surrounding building. Insanitary houses, dirty cow-sheds and stockyards, carelessness in the personal habits of the attendants, improper or insufficient grooming of cattle have all added their quota to the wholesale dissemination of disease. Many cattle have been found to be suffering from constitutional diseases, as well as local affections of the udder, and others have been discovered in an unspeakably filthy condition, their flanks, legs, udders and tails smothered with manure, and other dirt which readily drops into the pail during the process of milking. In many instances the stock-yards have

been found to be nothing more nor less than veritable manure heaps, the breeding ground of countless flies and other more noxious insects, the dead and dying bodies of which may often be found floating on the surface of the milk.

With the knowledge now available of the habits of the fly, this condition alone is a most dangerous source of milk infection, and the average housewife would be well advised to exercise greater care in this direction.

Again, the water supply on many farms is of doubtful purity.

During the past few years extraordinary progress has been made in the study of human and bovine tuberculosis, and the position taken by Professor Koch in 1901, that bovine tuberculosis is a negligible factor in the causation of human tuberculosis is no longer tenable. Indeed, the Royal Commission, in its third interim report issued in January, 1909, and to which I have referred to in my last annual report, showed that it was not sufficient for a farmer to ascertain merely whether a cow is suffering from tuberculosis of the udder, *but that no cow can be considered free from danger unless it passes the Tuberculin test.*

Concurrently with the bacteriological examination of these samples, duplicates were taken and submitted to the Public Analyst for chemical analysis, who reported as follows :—

Result of Analysis.							
Sample received.	No. of Sample.	Fat.	Solids (not fat).	Total Solids.	Nature and amount of Adulteration, &c.	Remarks.	
1910.							
June 1st	...	1	3.35	8.81	12.16	...	Boric acid and formalin absent
June 1st	...	2	3.27	8.67	11.94	...	" "
June 1st	...	3	3.38	8.70	12.08	...	" "
June 1st	...	4	3.24	8.66	11.90	...	" "
June 1st	...	5	3.23	8.79	12.02	...	" "
June 1st	...	6	3.80	8.90	12.70	...	" "
June 3rd	...	7	3.18	8.88	12.06	...	" "
June 3rd	...	8	3.13	8.85	11.98	...	" "
June 3rd	...	9	3.01	8.57	11.58	...	" "
June 3rd	...	10	3.12	8.98	12.10	...	" "
June 3rd	...	11	3.14	8.86	12.00	...	" "
June 3rd	...	12	2.85	8.81	11.66	5 per cent. fat deficient	" "
June 6th	...	13	3.17	8.67	11.84	...	" "
June 6th	...	14	3.33	8.65	11.98	...	" "
June 6th	...	15	3.13	8.85	11.98	...	" "
June 6th	...	16	3.42	8.90	12.32	...	" "
June 6th	...	17	3.07	8.59	11.66	...	" "
June 6th	...	18	3.66	8.98	12.64	...	" "
June 8th	...	19	2.61	8.57	11.18	13 per cent. fat deficient	" "
June 8th	...	20	3.18	8.80	11.98	...	" "
June 8th	...	21	2.66	8.90	11.56	11 per cent. fat deficient	" "
June 8th	...	22	2.85	8.79	11.64	5 per cent. fat deficient	" "

<i>Result of Analysis.</i>						
<i>Sample received.</i>	<i>No. of Sample.</i>	<i>Fat.</i>	<i>Solids (not fat).</i>	<i>Total Solids.</i>	<i>Nature and amount of Adulteration, &c.</i>	<i>Remarks.</i>
1910.						
June 8th	23	3.18	8.80	11.98	...	Boric acid and formalin absent.
June 8th	24	2.90	8.98	11.88	3 per cent. fat deficient	" "
June 10th	25	3.14	8.80	11.94	...	" "
June 10th	26	3.20	8.24	11.44	3 per cent. added water	" "
June 10th	27	3.09	8.29	11.38	2 per cent. added water	" "
June 10th	28	3.00	8.52	11.52	...	" "
June 10th	29	3.32	9.00	12.32	...	" "
June 10th	30	3.33	8.73	12.06	...	" "
June 13th	31	2.24	8.92	11.16	25 per cent. fat deficient	" "
June 13th	32	3.58	8.74	12.32	...	" "
June 13th	33	3.28	8.76	12.04	...	" "
June 13th	34	3.00	8.50	11.50	...	" "
June 13th	35	3.48	8.80	12.28	...	" "
June 13th	36	3.15	8.69	11.84	...	" "
June 15th	37	3.67	8.87	12.54	...	" "
June 15th	38	3.18	8.94	12.12	...	" "
June 15th	39	3.23	8.95	12.18	...	" "
June 15th	40	3.43	8.97	12.40	...	" "
June 15th	41	3.51	9.01	12.52	...	" "
June 15th	42	3.32	8.84	12.16	...	" "
June 17th	43	3.08	9.08	12.16	...	" "
June 17th	44	2.85	8.65	11.50	5 per cent. original fat deficient.	" "
June 17th	45	3.38	8.78	12.16	...	" "
June 17th	46	3.07	9.03	12.10	...	" "
June 17th	47	3.00	8.66	11.66	...	" "
June 17th	48	3.08	9.02	12.10	...	" "
Average composition (48 samples).		3.17	8.79	11.96		
Average of 30 Samples taken at Railway Stations, 1902.			Average of 28 Samples taken at Railway Stations, 1904.			Average of 48 Samples taken at Railway Stations, 1910.
Fat ...	...	4.00 per cent.	Fat ...	...	4.10 per cent.	Fat ... 3.17 per cent.
Solids (not fat)	8.79	"	Solids (not fat)	8.65	"	Solids (not fat) 8.79 "
Total solids	12.79	"	Total solids	12.75	"	Total solids 11.96 "

This is the third time I have taken samples from railway stations for the purpose of ascertaining the chemical character of the milk as it arrives in the City, and it will be seen from Dr. Teed's summary of analysis that there is a distinct decline in its quality, which confirms the opinion I have more than once expressed, that there is a tendency on the part of the farmers to take advantage of the low standard prescribed by the Board of Agriculture and Fisheries in the Sale of Milk Regulations, 1901, good quality milk being "toned" down to the limit by the addition of skimmed or separated milk.

This illustrates one of the disadvantages of the establishment of "standards" where natural good products are concerned, comparatively low limits being adopted owing to the very occasional variations found in the genuine article.

The falling off in the average fat content is very marked, dropping from 4 per cent. in 1902, to 3.17 per cent. in the present year, and in all probability this impoverishment is largely due to the increased demand on the part of the public for cream, the ill-gotten profit going to swell the exchequer of the farmer instead of reaching the pockets, as in former years, of the retailer.

In this connection I may quote the following from the last published Annual Report of the Local Government Board (1908/9).

“The heavy adulteration practised 30 years ago has practically disappeared, but if we may judge by the number of samples which are reported as ‘poor,’ ‘very poor,’ or as just reaching the legal limit of 3 per cent. of fat, all of which have to be returned as genuine, the practice of robbing good milk of a large proportion of its cream, so that it may just escape condemnation by the public analyst, is on the increase.”

“A firm of milk and cream contractors represented to us that a systematic practice is growing up in the south and west of England of ‘toning’ milk before it is despatched to London and other large towns. ‘Toning’ consists of reducing the quality of milk so that it barely complies with the minimum limits prescribed by the Sale of Milk Regulations, 1901. The firm states that samples taken in December, 1908, without notice, of the milk sent by nine farmers to one of their depôts showed that the average of fat in the morning and evening milks was 4.08 per cent. It will be seen that a large illicit profit can be made without risk when milk is thus systematically impoverished. Some magistrates appear to consider the limit for fat fixed by the regulations as representing milk of average quality, and regard all milk coming within 5 or 10 per cent. of that limit as passable. It must, however, be remembered that milk of good average quality contains more nearly $3\frac{1}{2}$ per cent. of fat than the 3 per cent. which has been fixed for the purpose of the regulations referred to.”

In all those cases reported by the public analyst to have been sophisticated, further samples were taken at a later date, but doubtless, owing to the suspicions raised in the minds of the farmers that their consignments were under observation, the milk was certified to be genuine in each instance.

While engaged in the conduct of this investigation, two instances came before my notice which may be regarded as a fair indication of the haphazard manner in which the wholesale milk trade is carried out. In one case the milk had been damaged in transit by rail, in consequence of the churns having been carried in trucks used for the conveyance of fish, the milk acquiring a fishy flavour. In the second case the milk had acquired an objectionable smell and taste, which gave considerable trouble to the wholesale dealers in London, as they received constant complaints from consumers.

The proprietor of the business, a well-known scientist, determined to get to the root of the evil, and after a lengthy enquiry discovered that the trouble was caused by the cows being milked in a building that had been sprayed with a strong smelling disinfectant. As is well known, milk, butter and other fatty substances have a well defined tendency to absorb the odour emanating from any strongly smelling material lying in its vicinity.

In reviewing the results of the past year in this direction, I am forced to the following conclusions :—

(1) The unsuitable type of churn fitted with a ventilated, unsealed or unlocked lid is still largely in evidence, 69 per cent. of the present series of samples coming to town in such receptacles.

(2) The fact that in many instances, churns are returned to farmers by the consignees in London without any effort being made to cleanse them. Obviously they should all be scalded and thoroughly washed out before being returned to the farmers. To leave so necessary a precaution to the countrymen is directly courting trouble.

(3) That a large proportion of milk goes into consumption in London that is capable of producing disease in the consumer, in some cases even tuberculosis, and that a still larger quantity is polluted with dirt.

(4) That in spite of perpetual activity on the part of sanitarians, the sanitary conditions prevailing at the seat of production leaves much to be desired.

(5) That the standard of milk shows a serious falling off, such decline in quality being due to sophistication at the farms.

It should not be a difficult matter to ensure that such an important article of food as milk is not only produced, but delivered to the consumer under the best hygienic methods, and I hope that the efforts made in this direction will ere long result in the observance of such a condition of cleanliness and commonsense principles by all engaged in the trade, that the presentation of a guarantee with every delivery of milk to the consumer that it is perfectly sweet and clean, will not be a position impossible to arrive at.

SODA WATER.

The conditions under which the manufacture of Soda Water was carried out was the subject of a report I laid before the Sanitary Committee in October, 1908. This report presented the results of an investigation made in consequence of the incidence of a case of Diphtheria which had been attributed to the consumption of Soda Water, and the following report by Dr. Klein upon a sample of the particular brand that the patient was in the habit of purchasing illustrated the necessity for some enquiry into the question :—

“The sediment contained an enormous number of microbes: they
“were (a) cocci, (b) some sporing bacilli, and (c) the main mass were
“small positive non-mobile bacilli, which in shape resembled diphtheroid
“microbes, but they gave no Neisser staining, and injected in large
“doses into a guinea-pig’s subcutaneous tissue caused no change what-
“ever; the animal developed no tumour and remained quite normal.
“It is clear from these observations that the chief microbe present in
“the sediment is not the Klebs-Löffler diphtheria bacillus, although it
“most probably—judged by the character and aspect of the colonies,
“the shape and grampositive staining—belongs to the large tribe of
“‘diphtheroid bacilli.’

“I was not a little surprised at the fact that this soda water con-
“tained such abundance of living microbes capable of growing at body
“temperature.

“The charging of the water with Carbonic Acid seemed to have left
“the water, no doubt originally impure, in an unaltered state—unaltered,
“that is, as to its abnormal bacterial nature.”

In the circumstances a series of samples were taken for analysis, and the following is a brief summary of the results :—

	No. of Samples.	
Pure - - -	10	or 27·7 per cent.
Fairly pure- -	7	„ 19·4 „ „
Impure - - -	19	„ 52·7 „ „
	<hr/> 36	<hr/> 100·0 „ „

These results showed the highly unsatisfactory character of the Soda Water as sold in the City, and made obvious the need for a more stringent control over its manufacture.

As the result of visits I paid to a large number of factories, I came to the conclusion that the principal causes of contamination were :—

1. Defects in the system of bottle-washing.
2. Exposure of water to the risk of pollution in wooden tanks.
3. Absence or imperfection of covers to receptacles containing the water and solution.

The powers of Local Authorities in regard to control of these premises is limited, and so long as there is no direct infringement of the law in relation thereto no action can be taken. For example, there is nothing upon the Statute forbidding the use of wooden tanks for the purposes of washing the bottles, yet, for obvious reasons, the use of wooden tanks for this purpose is highly undesirable.

At my suggestion, therefore, it was decided to call the attention of the Trade to the state of affairs, and, as far as possible, to leave the question of improvement in the condition in their hands.

This action resulted in the opening, by the Mineral Water Trade Protection Society, of a Register of Mineral Water Traders, registration to be dependent upon the following conditions :—

- (1) A Certificate from the Medical Officer of Health of the district in which the factory is situated, to the effect that the premises are in good sanitary condition.
- (2) A bacteriological analysis of the water supply used.
- (3) A bacteriological analysis of the finished goods.
- (4) And to further undertake to carry out certain regulations.

The regulations referred to in No. 4 were drawn up by your Medical Officer of Health for the Association, and are here reproduced :—

SODA WATER FACTORIES.—REGULATIONS.

PREMISES.—To be in good sanitary condition. Certificate from Medical Officer of Health, Sanitary Authority.

WATER.—Source of supply to be bacteriologically examined at entrance to works.

STORAGE TANKS.—To be of impervious material, viz., slate, glass or galvanised iron (*not wood*) and fitted with efficient covers (glass or galvanized iron, with flanges), *not wood*. Tanks to be cleansed periodically.

SOLUTION TANKS.—To be covered with impervious material (*not wood*) and cleansed after each emptying.

BOTTLE WASHING.—All bottles to have preliminary soaking, and labels, &c., removed.

WASHING TANKS.—(1) If revolving trays are used, the water to be kept running in and out. Tanks to be of impervious material (*not wood*). The water to be entirely emptied, and the tanks cleansed *several* times during the day.

The washing, brushing and rinsing tanks to be all fitted with an independent supply, water not to be allowed to run from one tank to another. The brushes used for cleansing require constant attention, and are to be at once changed if found defective, or fouled.

(2) If the washing tanks are filled with bottles, the water to be kept running, and the tank entirely emptied and cleansed after each charge of bottles.

THE RINSING JETS.—To be of the skeleton pattern. Boards filled to receive the bottles are nearly always dirty underneath. The jets require constant supervision to ensure their being efficient. The pressure to be sufficient to thoroughly cleanse the bottles.

STOPPERS OR CORKS.—Not to be placed in the washing tanks.

BOTTLES.—Not to be allowed to remain after washing. The washing to keep pace with the filling, and bottles left over-night unfilled to be again rinsed before filling.

Stoppers fitted with indiarubber rings to have these rings removed every time before washing.

Stoppers, rings and corks to be washed in a stream of running water.

All water used for washing bottles, corks, rings, and stoppers, and for rinsing bottles, to be of the same standard of purity as the water used for making the mineral water. Unless this be the case the purity of the finished article is ruined. Patent ball-stoppered bottles to have the rings removed before washing. (The shape of bottle prevents proper cleaning.)

For safety, only corked bottles to be used.

To the end of 1910, fifty firms had complied with the necessary formalities and been duly registered.

In order to ensure that the foregoing regulations were fairly and honestly complied with, it was understood that an Inspector should be appointed, but so far this part of the scheme has not been carried into effect.

In order to ascertain to what extent these steps, initiated two years ago, had proved of practical value in the protection of the public health, it was considered advisable that further investigation should be made, and accordingly 36 samples were obtained and submitted to Dr. Klein for examination.

Dr. Klein reported thereon as under :—

BACTERIOLOGICAL ANALYSIS OF SAMPLES OF SODA WATER

During October-November, 1910

No. of Sample.	No. of Microbes per 1 c.c.	Presence of B. coli in 10 c.c.	Presence of B. coli in 1 c.c.	Result.
1	Eight	Negative	Negative	Pure.
2	Uncountable	Positive	Positive	Impure.
3	Less than ten	Negative	Negative	Pure.
4	Very few	Negative	Negative	Pure.
5	Several hundred	Positive	Positive	Impure.
6	Innumerable	Positive	Positive	Impure.
7	One	Negative	Negative	Pure
8	Three	Negative	Negative	Pure
9	Over 300	?	Negative	Pure
10	Ten	Negative	Negative	Pure
11	None	Negative	Negative	Pure
12	None	Negative	Negative	Pure
13	None	Negative	Negative	Pure
14	Two	Negative	Negative	Pure
15	Few air borne	Negative	Negative	Pure
16	None	Negative	Negative	Pure
17	None	Negative	Negative	Pure
18	None	Negative	Negative	Pure
19	One	?	Negative	Fairly Pure
20	None	Negative	Negative	Pure
21	48	Negative	Negative	Fairly Pure.
22	115	Positive	Negative	Impure.
23	None	Negative	Negative	Pure.
24	None	Negative	Negative	Pure.
25	Few	Negative	Negative	Pure.
26	None	Negative	Negative	Pure.
27	None	Negative	Negative	Pure.
28	None	Negative	Negative	Pure.
29	None	Negative	Negative	Pure.

No. of Sample.	No. of Microbes per 1 c.c.	Presence of B. coli in 10 c.c.	Presence of B. coli in 1 c.c.	Result.
30	None	Negative	Negative	Pure.
31	None	Negative	Negative	Pure.
32	Five	Negative	Negative	Pure.
33	None	Negative	Negative	Pure.
34	None	Negative	Negative	Pure.
35	Two	Negative	Negative	Pure.
36	None	Negative	Negative	Pure.

Column 2 gives the number of Microbes per 1 c.c., capable of growing at body temperature.

Column 3 gives the presence of B. coli, capable of fermenting glucose, per 10 c.c.

Column 4 gives the presence of B. coli, capable of fermenting lactose, per 1 c.c.

From this analysis it follows that, of the 36 samples, 32 may be considered as pure, that is, nearly 90 (88·) percentage are good, only 4 samples, or 12 per cent., are impure; and further, that more than 58 per cent. of the samples were quite pure, and showing hardly any or no bacteria in 1 c.c.

SUMMARY OF RESULTS, 1910.

AS COMPARED WITH 1907.

No. of Samples.	No. of Samples.
Pure - 30 or 83·3 per cent.	Pure - 10 or 27·7 per cent.
Fairly pure - 2 or 5·5 per cent.	Fairly pure - 7 or 19·4 per cent.
Impure - 4 or 11·1 per cent.	Impure - 19 or 52·7 per cent.

These results are a source of encouragement and congratulation, and show, at any rate, that some serious sources of trouble have been abolished.

With regard to those manufacturers whose goods have been proved to be impure, they have each received a cautionary letter, and further samples of their products will be taken at a later date, when, in the event of their being again declared unfit for food, the matter will be placed in the hands of the City Solicitor to take such action as he may deem necessary.

Although the periodical inspection of the premises, for which purpose the Inspector I have referred to was to be appointed, has never been put into operation, the practical results obtained in order to qualify for registration remain, and the result of Dr. Klein's analysis can only lead to the conclusion that such have been responsible for the improvement in the wholesomeness of the Soda Water as sold to the public.

These results have been obtained under a system of voluntary registration, but, bearing in mind the large extent to which soda water is consumed, especially by invalids, it does not seem too much to insist that what has been

shown to be practicable under the voluntary system should in future be carried on under a compulsory one, and at my suggestion the Sanitary Committee urged upon the Local Government Board the advisability of initiating an efficient system of registration and supervision over mineral water factories throughout the Kingdom.

In the course of the enquiry, my attention was called by manufacturers to the practice which is gaining ground in small establishments of the use of what is known as the "Soda Stream" process, which consists of filling bottles with ordinary tap water, and then aerating it from a cylinder of compressed gas.

There can be no objection to this process in itself, providing every care is taken to ensure that the bottle before filling is perfectly clean, but it is this possibility of the use of a dirty bottle that, in my opinion, renders the continuation of this practice undesirable.

This objection does not, of course, apply in cases where the soda water is manufactured direct into a glass for immediate consumption.

I was only able to locate one shopkeeper in the city using this apparatus, and a sample taken for analysis showed that :—

"The water contains many hundreds of bacteria per 1 c.c.

"The water does not contain any *B. coli* per 10 c.c. or per 1 c.c.

"On account of the great number of bacilli per 1 c.c., I do not consider this water satisfactory."

Upon my representations, the use of this apparatus has been discontinued.

Following upon the issue of the above report, the trade has again taken up the matter of registration, and already 18 have undertaken to renew their undertaking to carry out the regulations of the Association, and the following Resolution has been unanimously passed by the Council of the London Bottle Exchange and Mineral Water Trade Protection Society :—

"That in the opinion of the Council of this Association, it is desirable for the protection of the public, that every manufacturer or bottler of aerated waters for sale should be registered, and should observe regulations that would be a guarantee of the purity of the waters manufactured ; also that such registered bottler should pay an annual licence."

IMPORTED GERMAN BUTTER.

An illustration of the existence of international co-operation in tracing the movements of foodstuffs of questionable purity is afforded by the following facts.

Late in the evening of the 22nd July, the City Police lodged information with my Department that they had received a letter from the Hamburg Police giving particulars of the dispatch from Breszow, Galicia, for express delivery to the firm of Schenker and Co., of Hamburg, of a parcel of Butter, which was not in conformity with the law as to butter and fat percentage, and was in addition, unfit for human consumption on account of its rancid condition.

The butter in question, which consisted of a consignment of 25 tubs was in transit to England, and when received in Hamburg was transferred in charge of a Customs Officer from the express goods shed to the harbour and shipped in a steamship for delivery to Messrs. Schenker and Co., of Nos. 70-71, Bishops-gate Street. The butter was not sampled by the Hamburg Authorities "as the goods in question were transit merchandise."

The butter was received from Hamburg via Harwich at the Great Eastern Railway Company's Depot at Goodman's Yard, and on Messrs. Schenker's order, was delivered to the Central Creamery Co., Gray Street, Waterloo Road, Lambeth, where the Lambeth Authorities informed me it was unfortunately removed and passed into consumption before they received our notification, which I may add, was communicated to them by telephone on the morning after receipt of the information from the City Police.

Some little delay invariably occurs in tracking these cases, and it is regrettable that the Authorities in this country were unable to lay hands on this butter. This was, however, due in no part to the City Police, who acted with the greatest promptitude in communicating with my Department at such a late hour, in accordance with the arrangement made between myself and the Commissioner of the City Police in the public interest for taking action in cases of emergency, but to the fact that the delivery in Lambeth took place two days before any intimation of the circumstances reached the City Police.

CREMATION.

The number of cremations carried out at the Corporation Crematorium at Ilford last year was 22, being 2 less than the total for 1909. It will be seen from the table on p. 47, that 6 other Crematoria have to record a decrease in their numbers, the total for the United Kingdom for 1910 being 840, as compared with 855 for 1909. This decrease, however, need not be regarded with any misgiving, as in view of the steady increase of cremations since it received legal sanction in 1884, this fluctuation would appear only casual, and does not indicate in any way that the process is becoming less popular.

In 1907, I advocated the reduction of the charges for cremation at Ilford, in the hope that this would result in popularising, at any rate in the Eastern portion of the Metropolis, this method of disposal of the dead. The fees were reduced in 1908, from £3 16s. 6d. to £2 15s. 6d., and although the desired result does not appear to have been produced, it is yet early to judge the effects of the reduction.

The general adoption of cremation as a means of disposing of the dead is undoubtedly prejudiced, except among the intellectual community, by the fear that the rites and ceremonies that would be bestowed upon their dead at an earth burial would be withheld in the case of cremation. Cremation in no way interferes with the sanctity of the dead, and in any case an urn is surely a much more beautiful receptacle than a coffin, and for those who desire it can be buried in the quiet country churchyard in the same way as a coffin, and with identical ceremony. Religious prejudice we know dies hard, but it is difficult to see how any intelligent faith can suppose Christian doctrines to be violated by the substitution of a rapid and sanitary method of reducing this mortal body of ours to dust, instead of permitting it to be consigned to earth, there to undergo revolting putrefactive changes which must destroy the soil, contaminate springs of water in its vicinity, foul the air, and lead to risk of the spread of disease among the living. There is still, therefore, a vast amount of educational work to be performed before this popular sentiment will be eradicated. There is another factor which tends largely to prevent the increase in this practice. Many persons who have been known during their lifetime to express views favourable to cremation, have left no definite instructions in their will with regard to their wishes in this matter—this omission being probably due to a desire on their part not to injure the feelings of their relatives who may hold different views on the subject. Further, any direction as to how the testator's body is to be disposed of has no legal force, and may be, and often is disregarded with impunity. Again, more often than not the will is not examined until after the funeral

of the deceased. It is, however, open to a testator to make a gift to his executor dependent upon his body being cremated. In such cases he should acquaint his executor of his wishes.

Many people take exception to what they term "red tape" with regard to the due filling up of forms necessary before cremation can take place.

This so-called "red tape" is in my view an additional point in favour of cremation, as with the law as it at present stands it is only when a cremation is to be carried out that there is any really satisfactory inquiry into the cause of death. The ordinary death certificate is a very imperfect document, whereas the formalities necessary before cremation are so comprehensive that foul play could not easily escape detection.

The reasons for cremation upon public health grounds must be obvious. Years ago when the population was small and confined principally to villages and small towns, the objection to burial of the dead in the midst of the living may not have been of much consequence, but during the past century the population has so increased, that burial grounds that were once situated in the country, are now surrounded by house property, and the continuance of earth burial must thereupon offer an ever increasing menace to the community.

Take the case of London alone where about 72,000 persons die annually. Cemeteries are continually being established upon its outskirts, but the growth of the metropolis is so rapid, that before one of these have been half-filled it invariably becomes the centre of a thickly populated suburb. It seems incredible that people will continue to see the ground surrounding the City in which they live with a ring of decomposing and highly objectionable matter.

For this evil there is only one possible remedy—cremation, which will reduce the human body in the space of about one hour to a few pounds of harmless white ash, which, as I have said, can then be dealt with in the same ceremonious manner as the ordinary corpse without its attendant objections.

The figures for the thirteen crematoria in the United Kingdom are shown in the accompanying table, and the date of opening indicated in the first column.

CREMATIONS IN THE UNITED KINGDOM,

26 YEARS—1885-1910.

YEAR.	Woking.*	Manchester.	Glasgow.	Liverpool.	Hull.	Darlington.	Leicester.	Golder's Green.	Birmingham.	Leeds.	Ilford.	Sheffield.	Bradford.	No. of Cremations each year.
1885	3	...	...	...	...	...	...	...	...	...	...	...	...	3
1886	10	...	...	...	...	...	...	...	...	...	...	...	...	10
1887	13	...	...	...	...	...	...	...	...	...	...	...	...	13
1888	28	...	...	...	...	...	...	...	...	...	...	...	...	28
1889	46	...	...	...	...	...	...	...	...	...	...	...	...	46
1890	54	...	...	...	...	...	...	...	...	...	...	...	...	54
1891	99	...	...	...	...	...	...	...	...	...	...	...	...	99
1892	104	3	...	...	...	...	...	...	...	...	...	...	...	107
1893	101	30	...	...	...	...	...	...	...	...	...	...	...	131
1894	125	47	...	...	...	...	...	...	...	...	...	...	...	172
1895	150	58	1	...	...	...	...	...	...	...	...	...	...	209
1896	137	52	10	2	...	...	...	...	...	...	...	...	...	201
1897	173	51	16	10	...	...	...	...	...	...	...	...	...	250
1898	240	62	12	27	...	...	...	...	...	...	...	...	...	341
1899	240	88	16	23	...	...	...	...	...	...	...	...	...	367
1900	301	83	20	40	...	...	...	...	...	...	...	...	...	444
1901	273	96	18	40	17	2	...	...	...	...	...	...	...	446
1902	275	81	20	54	13	1	1	5	...	...	...	...	...	450
1903	143	92	24	35	18	1	5	158	3	...	...	...	...	479
1904	138	98	19	40	20	8	8	220	19	...	...	...	...	570
1905	95	97	35	35	15	3	16	252	20	16	9	7	1	601
1906	140	90	45	46	17	13	12	298	25	15	23	6	13	743
1907	108	96	30	34	29	8	13	290	33	16	18	18	13	706
1908	119	116	28	32	37	6	14	364	18	24	19	12	6	795
1909	105	106	30	46	15	9	19	421	30	19	24	18	13	855
1910	106	114	28	37	21	9	16	415	38	12	22	8	14	840
Total	3,326	1460	352	501	202	60	104	2423	186	102	115	69	60	8,960

* "Viscount Cross in the year 1879 forbid the practice of cremation there (Woking) under the threat of passing an Act to make it illegal But in 1884 appeared the well-known judgment of Mr. Justice Stephen, which, in the case of a child's body having been burned by its father contrary to the order of the coroner, determined cremation to be a legal act, provided no nuisance be caused thereby to others."—Extract from speech made by the late Sir Henry Thompson at the opening of Golder's Green Crematorium, 22nd November, 1902. *Vide* "Transactions of Cremation Society of England, 1903." p. 31.

ARTIZANS' DWELLINGS, STONEY LANE, HOUNSDITCH.

These buildings, erected by the late Commissioners of Sewers and opened in January, 1885, stand upon ground formerly the site of several courts and alleys in the Ward of Portsoken.

There are five "blocks" of Dwellings, severally named King's—Queen's—Prince's—North—and South, designed for occupation by persons of the artizan class ; some of the ground floors being let as shops. The buildings contain 501 rooms, arranged in 241 tenements, and are occupied by 880* persons, compared with 878 in 1909. 69·6 per cent. are adults, and 30·4 per cent. children (under 14 years).

The death rate for 1910 was 2·3 per 1,000 per annum [all of which were of children under 5 years of age]. The number of deaths per 1,000 births of children under one year was 68, as against 53·4 for the City generally.

TABLE OF BIRTHS AND DEATHS OCCURRING AT THE ARTIZANS' DWELLINGS, STONEY LANE, HOUNSDITCH, DURING THE YEAR 1910.

NAME OF BLOCK.	BIRTHS.		MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.						
	Male.	Female.	At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards.
NORTH BLOCK ...	...	...	...	...	...	...	...	...	...
SOUTH „ ...	...	...	...	...	...	...	...	...	...
KING'S „ ...	...	...	...	...	...	...	...	...	...
QUEEN'S „ ...	...	...	...	...	...	...	...	...	...
PRINCE'S „ ...	1	1	2	2	...	...	...	...	...
TOTALS	1	1	2	2	...	...	...	...	...

The number of births was 29, viz. : 10 males and 19 females. The birth rate was 32·9 per 1,000, and is 2·6 per 1,000 above the average for the previous five years.

* i.e., persons sleeping on the premises.

The birth rate in these Dwellings reached a maximum of 46·9 per 1,000 in 1896, and has since been falling, as shown by the following figures :—

BIRTH RATE, ARTIZANS' DWELLINGS.

1896	-	-	-	-	46·9	1904	-	-	-	-	30·1
1897	-	-	-	-	40·3	1905	-	-	-	-	29·1
1898	-	-	-	-	43·1	1906	-	-	-	-	26·1
1899	-	-	-	-	37·5	1907	-	-	-	-	35·0
1900	-	-	-	-	38·4	1908	-	-	-	-	31·5
1901	-	-	-	-	33·8	1909	-	-	-	-	29·6
1902	-	-	-	-	45·8	1910	-	-	-	-	32·9
1903	-	-	-	-	31·2						

The Baths provided for the use of the tenants of these Buildings, which were opened in May, 1904, continue to be extensively used, the number of persons bathing during 1910 being 11,687, of whom 6,134 were males and 5,553 were females.

The accompanying Table is compiled from the monthly records of attendances at the Baths.

RECORD OF ATTENDANCES AT THE BATHS, ARTIZANS' DWELLINGS.

(The corresponding figures for 1909 are in italics.)

MONTH.	SEX.								TOTAL.	
	Males.				Females.					
	Children.		Adults.		Children.		Adults.			
	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.	1909.	1910.
January -	179	134	199	323	125	163	281	277	784	897
February -	124	137	145	305	73	142	210	261	552	845
March -	143	101	189	354	64	132	182	244	578	831
April -	192	125	239	371	195	173	300	325	926	994
May -	163	152	273	410	231	203	402	401	1,069	1,166
June -	153	119	207	328	174	275	314	407	848	1,129
July -	274	126	392	311	365	316	445	457	1,476	1,210
August -	175	112	354	245	279	259	352	448	1,160	1,064
September -	182	126	279	249	256	365	356	438	1,073	1,178
October -	166	98	327	266	196	229	349	358	1,038	951
November -	138	78	308	188	156	158	255	226	857	650
December -	150	104	306	209	166	160	278	299	900	772
Totals -	2,039	1,412	3,218	3,559	2,280	2,575	3,724	4,141	11,261	11,687

DISINFECTION, &c., AT CITY MORTUARY.

418,957 articles of bedding, clothing, furniture, &c., were received at Golden Lane and disinfected. Of these 416,524 were disinfected at the request of City firms engaged in exporting second-hand clothing to South Africa, where the authorities will not allow such articles to enter the country unless accompanied by a certificate duly signed by a medical officer of health, vouching for the proper disinfection of each consignment, the remaining 2,433 articles were from premises in the City where infectious disease had occurred.

180 bodies were received at the Mortuary, pending interment, 69 post-mortem examinations were made, 161 inquests were held on bodies, and 2 inquests on fires.

NUMBER OF ARTICLES DISINFECTED, BODIES RECEIVED AT THE MORTUARY, AND
INQUESTS HELD AT THE CORONER'S COURT IN THE CITY DURING 1910,
COMPARED WITH THE PREVIOUS FIVE YEARS.

Year.	Articles of Bedding, &c., disin- fected.	Bodies received at the Mortuary.	Inquests held on bodies.	Inquests held on Fire.
1905	2,158	183	164	8
1906	3,796	236	216	3
1907	4,672	193	165	8
1908	10,078	194	173	3
1909	325,831	205	187	3
Average for previous five years	69,307	202	181	5
1910	418,957	180	161	2

Dr. F. J. Waldo, J.P., Coroner for London and Southwark, has kindly furnished me with the following list of places in the City which were the subject of Fire Inquests held by him during 1910:—

1910.

<i>Inquest held on</i>	<i>Name of Premises.</i>	<i>Date of Fire.</i>
26th May, 1910 - -	23, Australian Avenue - -	20th May, 1910.
14th June, 1910 - -	10, Fore Street- - -	6th June, 1910.

DISINFECTANTS.

It was not found necessary to use disinfectants so freely as usual in keeping the roadways free from nuisance. This was due to the cold and wet summer season experienced in 1910.

As heretofore, all the disinfectants used in the Public Health Department were obtained through your Medical Officer of Health.

They are used for the following purposes :—

- A. Deodorising and “denaturalizing” condemned meat, disinfecting public conveniences (urinals, &c.).
- B. Disinfecting roadways, street gullies, &c.
- C. Disinfecting premises, &c., after infectious disease, drain testing and sundries.

The amounts spent during the past twelve months under these several headings were :—

				£	s.	d.
A.	...	...	...	90	2	5
B.	...	...	...	172	16	6
C.	...	...	...	30	19	6
Total				£293	18	5

The above amounts only relate to materials purchased for the use of the Public Health Department. Arrangements have been made with the heads of other departments whereby any disinfectants required by them can be obtained direct from the Contractor supplying the Public Health Department.

PRESERVATION OF BODIES OF UNKNOWN DEAD.

In my annual report for last year I presented a full detailed description of the De Rechter apparatus for the preservation of dead bodies, installed at the City Mortuary in March, 1909.

Since its establishment twelve bodies have been placed therein, four during 1909, and eight during 1910. Eleven were bodies of unknown persons, but four were subsequently identified and buried by the friends.

The action of the formalin vapours upon highly decomposed bodies has in all cases not only arrested further decomposition, but has effected an actual improvement in the appearance. In one instance to which I especially called the attention of the Sanitary Committee, the body had been in the water for at least a month. It is unnecessary to harrow the feelings by a description of its condition, but under the influence of the formalin it was gradually restored to an almost normal appearance, and at the time of burial, was not only completely deodorised, but could have been readily identified by friends or relatives.

One of the bodies placed in the apparatus was that of the man Gardstein, who was shot in the Houndsditch affray. The City Police being desirous that it should be preserved for identification purposes, it was placed in the apparatus on the 22nd December, 1910, where it remained until the 29th March, having been kept for 97 days, at the end of which time it was in perfect condition.

SANITARY INSPECTIONS.

The following is a Statement of the work of the Sanitary Inspectors in their several Districts during each month of the year :—

WEST DISTRICT.

(Inspector F. J. ROBBINS.)

Month.	Premises inspected.	Orders issued.	Notices served.	Works completed.
January	118	8	2	35
February	208	4	10	20
March	160	6	7	10
April	320	4	144	25
May	402	25	38	88
June	201	5	7	39
July	226	0	9	49
August... ..	162	6	6	38
September	163	7	6	38
October	210	3	12	32
November	326	6	7	29
December	320	6	10	67
Totals	2,816	80	258	470

MIDDLE DISTRICT.

(Inspector E. J. SIMMONS.)

Month.	Premises inspected.	Orders issued.	Notices served.	Works completed.
January	108	9	1	21
February	225	11	10	24
March	170	12	11	16
April	310	12	16	38
May	366	12	24	34
June	187	11	22	21
July	258	18	20	70
August... ..	166	5	11	34
September	167	6	11	41
October	224	11	13	30
November	376	11	11	46
December	308	6	17	74
Totals	2,865	124	167	449

EAST DISTRICT.

(Inspector W. H. RALPH.)

Month.	Premises inspected.	Orders issued.	Notices served.	Works completed.
January	117	9	6	22
February	216	7	8	29
March	175	3	13	27
April	293	11	138	30
May	412	3	26	116
June	193	27	33	33
July	248	6	19	27
August	147	6	10	21
September	196	4	22	29
October	203	13	24	41
November	340	10	25	60
December	295	18	47	88
Totals	2,835	117	371	523

The foregoing are summarised as under :—

District.	Number of inspections made.	Orders issued.	Notices served.	Improve- ments effected.
West	2,816	80	258	470
Middle	2,865	124	167	449
East	2,835	117	371	523
Totals... ..	8,516	321	796	1,442
Average of previous five years	8,556	399	1,148	1,510

REGISTERED LODGING-HOUSES.

PUBLIC HEALTH (LONDON) ACT, 1891, SEC. 94.

The Corporation, as the Sanitary Authority in the City, are required, under the provisions of Sec. 94 of the Public Health (London) Act, 1891, to make and enforce Bye-laws applying to houses let in lodgings or occupied by members of more than one family for the following purposes :—

- For regulating the number of persons and separation of the sexes.
- For the registration and inspection of such houses.
- For enforcing drainage, and promoting cleanliness and ventilation.
- For the cleansing and limewashing of the premises at stated times.
- For the taking of precautions in any case of infectious disease.

The Bye-laws now in force in the City for this class of property were made by the Court of Common Council on 24th November, 1904, and confirmed by the Local Government Board on the 20th January, 1905.

Unfurnished lodgings, when the rent is not less than 10s. a week, and furnished lodgings when the rent is not less than 12s. 6d. a week, are exempt from the operations of the Bye-laws.

Particulars relating to the registered Lodging-houses in the City now on the Register are given in the accompanying table :—

REGISTERED LODGING-HOUSES.

District.	No. of Houses on Register.	No. of Lodgers.	No. of Tenements.	Average No. of Persons per Tenement.	Cleansing Notices Served.
WEST ...	119	984	414	2·38	154
MIDDLE ...	9	36	21	1·8	18
EAST ...	120	807	346	2·32	137
Total ...	248	1,827	781	2·3	309

These are periodically inspected, and in April of each year their owners called upon to undertake a thorough cleansing of them, in accordance with the provisions of your Bye-laws. This necessitated the service of a total of 309 Notices during the year.

The following were the corresponding figures for 1900, and show the reduction in this class of property in the City since that date :—

REGISTERED LODGING-HOUSES (1900).

District.	No. of Houses on Register.	No. of Lodgers.	No. of Tenements.	Average No. of Persons per Tenement.	Cleansing Notices Served.
WEST ...	183	1,502	656	2.29	239
MIDDLE ...	55	363	180	2.79	66
EAST ...	158	1,186	488	2.43	176
Total ...	396	3,051	1,274	2.39	481

In addition to the foregoing there are eleven Blocks of Dwellings let out in tenements, but not placed on the Register for the reason that each holding is "self-contained," it having been decided in a Court of Law that in these circumstances they are not subject to the Bye-laws for houses let in lodgings, or occupied by members of more than one family :—

WEST DISTRICT.

Name and situation of Artizans' Block Dwellings.	No. of Tenements.					No. of Inhabitants.
	One Room.	Two Rooms.	Three Rooms.	Four Rooms.	Five Rooms or more.	
{ Albion Buildings (No. 21), Bartholomew Close	...	10	...	...	...	34
{ Albion Buildings (No. 22), Bartholomew Close	...	10	...	...	...	28
Bartholomew House, Bartholomew Close ...	14	3	...	...	...	38
Dean Street Blocks, Fetter Lane—						
Block A ...	3	4	...	1	...	34
" B ...	2	5	...	...	...	22
" C ...	6	3	...	...	...	29
" D ...	2	5	...	...	...	18
" E ...	2	5	...	...	...	26
" F ...	...	4	...	1	...	19
St. Ann's Chambers, Ludgate Hill ...	3	22	...	...	...	40
Bloomfield House, Snow Hill ...	...	24	...	...	...	68
Total Six "Blocks" ...	32	95	...	2	...	356

MIDDLE DISTRICT.

Name and situation of Artizans' Block Dwellings.	No. of Tenements.					No. of Inhabitants.
	One Room.	Two Rooms.	Three Rooms.	Four Rooms.	Five, or more Rooms.	
Bridgewater House, Fann Street	12	...	...	...	26
City Buildings, Moor Lane	20	12	...	...	69
Total Two "Blocks"	32	12	...	...	95

EAST DISTRICT.

Name and situation of Artizans' Block Dwellings.	No. of Tenements.					No. of Inhabitants.
	One Room.	Two Rooms.	Three Rooms.	Four Rooms.	Five, or more Rooms.	
Harrow Alley and Stoney Lane—						
North Block ... ..	...	48	8	...	...	217
South „	5	22	13	...	...	178
Prince's „	5	50	...	...	...	167
Queen's „	5	40	5	...	...	160
King's „	8	16	16	...	...	158
Barker's Buildings, Catherine Wheel Alley, Bishopsgate Street Without	12	10	3	...	...	52
Total Two "Blocks"	35	186	45	...	...	932

These ten Blocks, containing 439 tenements, are inhabited by 1,383 persons = 3.15 persons to each tenement.

COMMON LODGING HOUSE.

116, MIDDLESEX STREET.

There is only one common lodging house now in the City. The "Salvation Army Working Men's Hotel and Shelter," No. 116, Middlesex Street, which was opened on the 7th February, 1906, and provides accommodation for 453 persons.

The charge for the hotel portion is 5*d.* per night, and the shelter 2*d.* per night, which includes, what is termed by the fraternity, a "bath and a bake" (a bath and a disinfection of clothing). Food can be purchased at the hotel cheaply. The premises are periodically inspected, and always found to be well managed and kept in a cleanly condition. Formerly complaints were of frequent occurrence with regard to the objectionable habit of spitting on the pavement, indulged in by men congregating outside awaiting admission. As men so waiting numbered on occasions over 100, the nuisance was real, but has now practically ceased, in consequence of applicants being refused admission if they have been waiting about the immediate vicinity of the premises before the doors open at 5 p.m.

DRAINAGE PLANS.

In the course of the year, 361 plans have been submitted with regard to proposed reconstruction of water-closets or drains in the City.

Of these, 305 were approved, 31 revised and approved, and 25 not approved.

In all cases where, on revision, it was found that the plans were not in accordance with the Corporation Bye-laws, the matter was submitted to the judgment of the Sanitary Committee.

PREMISES WITHOUT PROPER WATER SUPPLY.

No. 1A TRIG LANE.

On the 5th January the Metropolitan Water Board reported that they had ceased to supply water to the above-mentioned premises, as Well water was being used. Upon enquiry it was ascertained that the owners, having discovered the existence of a well in the basement that had been closed for upwards of 40 years, had connected the supply from the Well to the existing fittings by means of a force pump, and had then requested the Metropolitan Water Board to cut off the ordinary supply.

A sample of the water from the Well was obtained and submitted to the Public Analyst, who reported thereon as follows :—

“ This water is highly contaminated probably with recent sewage matter. It should on no account be used for drinking purposes, and its great hardness makes it unsuitable for washing purposes.”

The attention of the owner of the premises was directed to the serious consequences that might arise to any person drinking water so highly contaminated, and they were requested to take immediate steps to do what was necessary for the restoration of a proper and sufficient water supply.

Upon these representations the water supply of the Metropolitan Water Board was re-established.

Section 48 of the Public Health (London) Act, 1891, enacts that :—

“ An occupied house without a proper and sufficient supply of water shall be a nuisance liable to be dealt with summarily under this Act, and if it is a dwelling house, shall be deemed unfit for human habitation.”

STREET GULLIES.

In the past, complaints were of daily occurrence of nuisances arising from the offensive smells coming from street gullies, especially during the warm weather. This was sometimes due to want of flushing, but in the majority of cases the faulty construction of the receptacles was the cause of the trouble. The City Engineer has for some years past given special consideration to this source of annoyance to pedestrians, and the gradual substitution of properly trapped gullies for those formerly *in situ*, has greatly reduced the nuisance, and will eventually lead, I hope, to a complete abatement of the evil.

OVERCROWDING.

Under Section 2 (1) (e) of the Public Health (London) Act, 1891, overcrowding is a nuisance liable to be dealt with summarily; and during the year 15 cases were reported by your officers. In each case the overcrowding was discontinued on service of the statutory abatement notice.

SANITARY DEFECTS AND INFECTIOUS DISEASE.

In every case of notification of infectious disease, the premises involved were inspected with regard to the drainage, soil and waste pipes, water closets, water supply, ventilation, &c.; and of the 39 cases so investigated in 1910, it was found necessary to reconstruct the sanitary system in three instances, and to make minor amendments to soil and waste pipes, water closets, &c., in 17 others.

HOUSE, TRADE AND OTHER REFUSE REMOVAL.

The City Engineer informs me that the refuse removed from the City in 1910 consisted of 29,098 cartloads of street sweepings and slops, and 51,306 loads of house and trade refuse, a total of 80,404 loads. The total for the year 1909 was 80,759. The use of the Destructor was discontinued in September, 1905, since which date all refuse has been removed by barge from Lett's Wharf to the Corporation land on Hornchurch Marshes, where it is dealt with. The horse manure collected from the street orderly bins is not included in the above, but is dealt with by a contractor, who sells it to market gardeners, &c.

REMOVAL OF FISH OFFAL.

The contract with Messrs. F. S. Hempleman and Co., which was first entered into in May, 1906, and has since been extended from year to year, expired on the 21st May, 1909, and on the recommendation of the City Engineer and your Medical Officer of Health, was renewed for a further period of twelve months.

The conditions of the contract require that the contractor shall collect and remove, free of charge, between the hours of 7 p.m. and 9 a.m., all fish offal from the Corporation Markets and fishmongers' shops in the City, to the entire satisfaction of the Medical Officer of Health. Specially constructed air-tight galvanized iron bins of an approved pattern must be used for the purpose, and such bins have to be thoroughly cleansed and disinfected before return to markets and shops.

Since the contract was signed in 1906, the contractor, on my representation, has undertaken to remove the material during the evening hours instead of the morning, thus obviating the necessity of offal remaining in the markets and shops all night.

Prior to the adoption of this system, fish offal was removed by the Corporation's own officers in the ordinary way as trade refuse, but I am of opinion that in addition to the saving in cost, the present method is an improvement.

RAILWAY STATIONS.

Periodical inspections were made of the sanitary accommodation provided at the twenty-five Railway Stations in the City.

In 15 of them the Companies they belong to have been called upon to effect sanitary improvements thereat. The defects, for the most part, have been due to the lack of proper cleaning and to defective drains and sanitary fittings. In each case the necessary works have been satisfactorily carried out.

LEGAL PROCEEDINGS.

During the year 756 notices have been served by the District Inspectors at the order of the Sanitary Committee, and in five cases only was it found necessary, in consequence of non-compliance therewith, to refer the matter to the City Solicitor with a view to such steps being taken as he deemed necessary to ensure the required sanitary improvements being effected.

The following are the cases referred to :—

- | | | |
|--------------------------------|-----------------------------------|-----------------------------------|
| 1. 19, Fore Street | - Defective connection to sewer - | Works carried out by Corporation. |
| 2. 1 to 6, Bridgewater Place. | Insufficient W.C. accommodation. | In Solicitor's hands. |
| 3. 120, Cheapside | - Defective W.C. - - - | Works completed. |
| 4. 3 and 5, Whitecross Street. | Insufficient W.C. accommodation. | Do. |
| 5. 8 and 9, Hosier Lane | Defective drain - - - | Do. |

REMOVAL OF HUMAN REMAINS—BYWARD STREET.

During the year only one case has arisen of the disturbance of human remains in the City. A quantity of bones were discovered by the workmen engaged in excavation in connection with the construction of an underground convenience in Byward Street.

The spot where these were found was doubtless a portion of the churchyard which, in former days, surrounded the adjoining church of Allhallows Barking.

The usual application was made to the Home Secretary for a licence authorising the removal and re-interment of the remains at the City of London Cemetery at Ilford. A licence, dated the 24th August, was issued in due course, subject to the following conditions :—

(i.) That the removal be effected with due care and attention to decency early in the morning.

(ii.) That the remains be forthwith re-interred in the City of London Cemetery at Ilford.

(iii.) That the removal be effected under the supervision of the Medical Officer of Health for the City of London.

This is the second occasion on which remains have been found in the immediate vicinity of Allhallows Church. In November, 1892, during the construction of an open area round the Church itself, a quantity of human remains were removed and re-interred at Ilford under a faculty; and by arrangement with the Churchwardens, it was agreed to bury the remains recently found, in the plot of land purchased on the former occasion.

The removal and re-interment was carried out on the 19th September, when three large cases were buried at Ilford in accordance with the conditions of the licence.

SUMMER FLUSHING OF COURTS.

All the courts and narrow passages throughout the City were regularly flushed during the summer months under the direction of the City Engineer, who informs me that in this service and the flushing of the main streets, no less than 65,965,997 gallons of water were used.

Disinfectants were also freely supplied where necessary.

The condition of the approaches to Billingsgate Market and the Custom House, as heretofore, required special attention. There has always been a difficulty in keeping the thoroughfares in this neighbourhood free from the nuisance caused by the drippings from the fish carts, especially in hot weather; but I am glad to say that during last year no single complaint reached me of nuisances so caused.

Of all the courts and alleys in question, 9 were flushed six times a week, 21 five times a week, 2 four times a week, 26 three times a week, 128 twice a week, and 80 once a week.

LIMEWASHING OF COURTS.

Unless the 96 courts and narrow passages throughout the City are cleansed frequently, they become dirty. The constant passage of traffic and vehicles, together with the smoke-laden atmosphere, make the walls of these narrow passages unsightly and objectionable; and in order to combat this they are cleansed and limewashed twice a year under the direction of the City Engineer. Of the places so treated during 1910, 24 were situated in the East District, 39 in the Middle District, and 33 in the West District.

WELL WATER SUPPLY IN THE CITY.

The heavy increase in the charges made by the Metropolitan Water Board for the water service, has of late years resulted in the sinking of a large number of artesian wells, and in June, 1910, I submitted the result of an investigation into the nature of the water derived from such sources in the City. Consideration of space prevents the full reproduction of the report I then presented, but it is essential in a *résumé* of the year's work, that I should here refer to the conditions and circumstances affecting the citizens' supply of an indispensable element. This I will endeavour to accomplish as briefly as possible.

While there is no reason to take exception to the quality of the water supplied by the Metropolitan Water Board, the heavy charges levied have stimulated many property owners to seek relief from what they consider an unjust taxation, by sinking wells.

The City supply of water is derived from—

(a) The New River District (formerly the New River Company), the sources of supply being the Chadwell Spring, the River Lea, and 18 chalk wells.

(b) The Eastern District (formerly the East London Water Company), the source of supply being from the River Lea, the Thames at Sunbury, and chalk wells and springs.

With the exception of a few supplies in the Parishes of St. Botolph, Bishopsgate, and St. Botolph, Aldgate, which are in the Eastern District, the New River District embraces the whole of the City.

I do not wish to condemn the methods of the Water Boards at all, but it must not be overlooked that both of these districts are, to some extent, dependent upon the River Thames and the River Lea, both of which are navigable rivers flowing through densely populated areas, and doubtless receive their due share of filth and other objectionable matter. When the sixth report of the River's Pollution Commission, dated 1874, was issued, it was scarcely known that filtration removed anything more than suspended impurities, and that only to an imperfect extent, and the use of water for domestic purposes from both the Rivers Thames and Lea was unsparingly condemned by the Commission, but very soon after that Report was written, it became quite evident from things that occurred in connection with the London Water Supply, that organic matter in solution, as well as suspended impurities was removed by filtration. The Water Board moreover, take every precaution to ensure that the water supply under their control is free

from impurity when it reaches the consumer, and taking all these circumstances into consideration, I am in entire accord with the conclusions arrived at by the Royal Commission on Metropolitan Water Supply of 1892 :—" That the " water as supplied to the consumer in London is of a very high standard of " excellence and purity, and that it is suitable in quality for all household " purposes. We are well aware that a certain prejudice exists against " the use of drinking water derived from the Thames and the Lea because " these rivers are liable to pollution, however perfect the subsequent " purification, either by natural or artificial means, may be ; but having " regard to the experience of London during the last 30 years, and to the " evidence given to us on the subject, we do not believe that any danger " exists of the spread of disease by the use of this water, provided that " there is adequate storage, and that the water is efficiently filtered before " delivery to the consumers."

The method of obtaining a water supply in the City by means of well sinking is by no means a new one, since an artesian well sunk at No. 20, Old Broad Street (formerly the site of the Excise Office), is described in the transactions of the Institute of Civil Engineers, Vol. 1, page 155, published in 1836. This well became subsequently contaminated with polluted surface water, and in 1908 a new boring was made on the old site.

There are now 36 wells established in the City, 14 of which were sunk during the 71 years 1836-1907, the remaining 22, or 61 per cent. of the total number, being made in 1908-1909.

Samples of the water from all these wells were taken and submitted to Dr. Teed for chemical analysis, and the following table gives the detailed results of his examination.

TABLE A.

No.	SITUATION.	Date of collection of Sample.	Depth of bore from ground level.	Yield per hour.	ALL RESULTS STATED IN GRAINS PER GALLON.								REMARKS.
					Free Ammonia.	Albuminoid Ammonia.	Oxygen absorbed.	Nitrogen as Nitrates.	Chlorine.	Chlorine as Common Salt.	Total Solids.	Hardness in Degrees.	
		1908	ft. in.	Gallons.									
1	Mansion House Chambers - No. 11, Queen Victoria St.	27 April	384 0	1,000	0.023	0.0065	0.024	0.035	7.80	12.85	53.0	11	Well sunk 1883.
2	Shorter's Court - - - No. 6, Throgmorton Street.	27 "	402 0	2,000	0.082	0.004	0.0286	Absent	7.70	12.69	49.0	6	Well sunk 1908.
3	Warnford Court - - - Throgmorton Street.	27 "	468 0	2,000	0.073	0.0045	0.0253	0.14	7.50	12.36	48.0	6	Well sunk 1885.
4	Electra House - - - Finsbury Pavement.	4 May	465 0	1,300	0.058	0.0045	0.0278	Absent	7.20	11.86	46.0	5½	Well sunk 1903.
5	Salisbury House - - - London Wall.	4 "	466 0	3,000	0.098	0.005	0.0286	Absent	7.60	12.52	47.0	6	Well sunk 1901.
6	London Wall Buildings - London Wall.	4 "	440 0	2,400	0.058	0.0037	0.0257	Absent	7.60	12.52	48.0	6	Well sunk 1902.
7	No. 62, London Wall, and No. 20, Copthall Avenue.	11 "	509 0	900	0.0635	0.0035	0.0186	Absent	7.70	12.65	48.0	6	Well sunk 1908.
8	Bank of England - - -	11 "	420 0	3,000	0.0883	0.0067	0.0186	Absent	7.65	12.61	49.0	7½	Well sunk 1851.
9	Artizans' Dwellings - Stoney Lane.	18 "	512 0	5,500	0.0725	0.0025	0.020	0.100	6.70	11.04	48.0	9	Well sunk 1887-8.
10	The Baltic - - - St. Mary Axe.	18 "	477 0	6-7,000	0.0385	0.0027	0.0164	0.100	7.70	12.69	47.0	7	Well sunk 1903.
11	Baltic House - - - No. 26, Leadenhall Street.	18 "	473 0	3-4,000	0.1137	0.0040	0.021	0.07	7.50	12.36	49.0	7½	Well sunk 1906.
12	No. 21, Mincing Lane - -	25 "	527 0	3,000	0.1065	0.0035	0.015	Absent	7.95	13.10	50.00	7	Well sunk 1907.
13	Royal Hotel - - - Victoria Embankment, E.C.	25 "	505 6	3,000 <small>Abt. 40,000 galls. daily.</small>	0.0137	0.0067	0.015	Absent	9.25	15.24	54.00	6	Well sunk 1876.
14	Manchester Hotel - Aldersgate Street.	25 "	372 0	700	0.0712	0.0030	0.015	Absent	8.00	13.18	53.00	5	Well sunk abt. 1880.
15	No. 23, Leadenhall Street East India Chambers.	29 June	413 6	8,000	0.1320	0.0045	0.0192	Absent	7.60	12.52	50.00	7½	Well sunk 1908.
16	Nos. 17 to 21, Cheapside	29 "	400 0	1,500	0.0427	0.0035	0.0175	Absent	7.90	13.03	51.00	7½	Well sunk 1908.
17	Broad Street House - New Broad Street.	6 July 1909	395 0	1,800	0.0345	0.0040	0.0216	Absent	7.40	12.19	47.00	7½	Well sunk 1902½.
18	No. 20, Old Broad Street	29 Jan. 1908	510 0	1,200	0.0787	0.0055	0.028	Absent	7.55	12.44	47.0	6½	Well in existence 1836.†
19	Bishopsgate House - Nos. 55-56, Bishopsgate Street Within.	6 July	416 0	2,000	0.0477	0.0080	0.0134	Absent	7.40	12.19	49.00	7	Well sunk 1908.
20	Winchester House - Old Broad Street.	7 "	471 0	7,600	0.0480	0.0072	0.0309	Absent	7.50	12.22	49.00	6½	Well sunk 1908.
21	No. 43, Threadneedle Street	20 "	582 0	700-800	0.0775	0.0015	0.0255	Absent	7.60	12.52	50.00	7	Well sunk 1908.
22	Dunster House - - - Mincing Lane.	24 Aug. 1909	551 0	2,000	0.071	0.006	0.013	Absent	8.00	13.10	50.00	8½	Well sunk 1908.
23	No. 24, Mark Lane, London Commercial Sale Room Co.	16 Nov.	430 0	2,000	0.035	0.003	0.023	Absent	7.90	13.02	48.00	5	Well sunk 1908.
24	Leadenhall House - - - No. 101, Leadenhall Street.	11 Jan.	422 0	1,000	0.0475	0.0032	0.0099	Absent	7.60	12.52	51.0	6	Well sunk 1908-9.
25	Salterns' Hall - - - St. Swithin's Lane.	18 "	458 0	1,945	0.0542	0.0055	0.0167	Absent	7.65	12.61	49.0	5	Well sunk 1908.
26	Gresham House - - - No. 24, Old Broad Street.	2 May 1910	510 0	1,600	0.0705	0.004	0.0195	Absent	7.50	12.36	49.0	4½	Well sunk 1909.
27	City of London Club - No. 19, Old Broad Street.	29 March 1909	511 6	1,400	0.054	0.004	0.033	Absent	7.80	12.85	51.0	5½	Well sunk 1909.
28	Ocean House - - - Nos. 24-25, Lower Thames St.	29 "	420 0	2,000	0.089	0.007	0.023	Absent	8.20	13.51	49.0	5½	Well sunk 1909.
29	Dashwood House - - - New Broad Street.	2 May 1910	427 0	900	0.062	0.003	0.0169	Absent	7.40	12.19	49.0	4	Well sunk 1909.
30	Basildon House - - - Nos. 7 to 11, Moorgate St.	5 April 1909	470 0	2,000	0.0627	0.003	0.0228	Absent	7.90	13.02	49.0	3½	Well sunk 1909.
31	No. 110, Cannon Street.	5 "	492 6	1,200	0.071	0.004	0.0246	Absent	8.00	13.18	47.0	4½	Well sunk 1909.
32	Nos. 32-35, Bishopsgate St. Within.	19 "	Two bores, one 4½ ft., and one 48½ ft. 6 in.	2,000	0.0737	0.0040	0.0148	Absent	7.60	12.53	50.0	5½	Well sunk 1909.
33	No. 55, Gracechurch Street	26 "	511 6	1,200	0.081	0.004	0.030	Absent	7.80	12.85	50.0	7½	Well sunk 1909.
34	No. 55, Wood Street	15 June	470 0	700-800	0.073	0.004	0.0176	Absent	8.30	13.68	49.0	8½	Well sunk 1909.
35	Drapers' Hall - - - Throgmorton Street.	11 Oct.	517 0	800	0.0635	0.004	0.0122	Absent	7.75	12.77	46.0	4	Well sunk 1909.
36	No. 26, Gracechurch Street	11 "	453 5	3,000	0.065	0.003	0.0174	Absent	7.10	11.70	49.0	4½	Well sunk 1909.

Two bores, eight feet apart. 1,200 gallons per hour yielded by each bore.

* Bore tube extended to the surface and well shaft filled in, 1908.

† Disused for some years. New boring made 1908.

With regard to their purity, Dr. Teed reports that :—

“The waters are highly pure as far as organic contamination is concerned, they are soft, but on the other hand they are somewhat saline. The total solids average 49 grains per gallon, whereas London water runs about 20 grains to the gallon. The London deep well waters contain fair amounts of bi-carbonate of soda and sodium sulphate, which I have known to be a source of considerable trouble to steam raisers.”

“Lead and copper were absent in all cases.”

In this connection, and for comparative purposes it may be interesting to again quote from the report of the Rivers Pollution Commission previously referred to :—

“Of the different varieties of potable water, the best for dietetic purposes are spring and deep well waters. They contain the smallest amount of organic matter, and are almost always bright, sparkling, palatable and wholesome, whilst their uniformity of temperature throughout the year, renders them cool and refreshing in summer and prevents them from freezing readily in winter. Such waters are of inestimable value to communities, and their conservation and utilization are worthy of the greatest efforts of those who have the public health under their charge.”

With regard to the uniformity of temperature referred to in the above quotation, such is demonstrated in its completest sense by the chemical analysis. Although the samples were taken during both the summer and winter months, the variation in temperature never exceeded 6 degrees, the lowest recorded being 54 degrees and the highest 60 degrees ; the average temperature being 57.4 degrees Fahrenheit.

When it is realised that the water obtained from this source is of undoubted purity and wholesomeness, and that, moreover, the fact of its being “soft” renders it more suitable for domestic and manufacturing purposes than that delivered by the Metropolitan Water Board, it is not surprising that the adoption of a well water supply is gaining ground so rapidly, especially when one takes into consideration the fact alleged by experts that great economy can thereby be effected.

An example of this economy which may be quoted is that of a large West End Hotel which was paying £900 per annum water rate. A well and pumping plant were installed at a cost of £800, and the total cost of running this plant, including repairs, has been found to be £200 per annum. Thus a saving of about £700 per annum appears to have been effected on a capital outlay of £800.

The fact, however, must not be overlooked that there is a possibility, undoubtedly remote, that the yield may eventually prove insufficient, and this would necessitate the reinstatement of the Water Board's supply with the subsequent loss of money spent in sinking the well. In the City alone there are 36 of these wells in use, and with the exception of 4, all are within about 2,000 feet of the Merchant Taylors' Hall in Threadneedle Street.

All these wells are deriving their supply from the same source, and, moreover, the Water Board largely tap the water supply before it reaches the City, there being no less than 49 wells belonging to the Board drawing upon the water in the chalk.

This depletion cannot be expected to continue indefinitely without seriously affecting the interests of well owners, and already there is evidence that the continual drainage is having its effect upon the supply. The fall of the water level in the London Basin, which is the geological formation upon which the City is situated, is undoubtedly due to the increased demands made upon it.

Considerable difficulty was experienced in obtaining reliable information in the City upon the question of water levels. That the normal rest level of water in wells is falling, it is generally admitted that the rate of fall does not appear to be uniform, varying from 2 to $3\frac{1}{2}$ feet per annum. The discrepancy is doubtless accounted for by the difficulty in accurately determining the normal rest level.

Of course the falling of water levels is not so disquieting as it may at first appear. The simple expedient of lowering the pump will give the well a new lease of life, and then the abandonment of the well is at least postponed.

It is obvious, therefore, that there is a certain element of speculation in investing money in well sinking in London, as in addition to the possibility of the supply becoming inadequate, there is the risk of unforeseen circumstances arising that may involve the expenditure of large sums of money. Our own experience in connection with the well at the Artizans' Dwellings, Stoney Lane, is a case in point. Commenced 23 years ago, costing no less than £5,610 before ready for use, while the cost of pumping, allowing for all contingencies except interest on capital expenditure and depreciation of plant, reaches $5\frac{1}{2}$ d. per 1,000 gallons. It must be pointed out, however, that this is an exceptional case, as the methods then adopted have since been considerably improved. Further, the progress of the work was at times very slow, at one time 110 working days being spent in boring through 5 feet 10 ins. of conglomerated rock. In all, 4 years were occupied in its construction.

I know of two cases at least in which when the well was completed, the yield was so scanty as not to be worth pumping, labour and maintenance, and the wells were accordingly abandoned.

There does not appear to be any reason whatever why property owners, if they feel oppressed by water taxes, should not seek relief by the sinking of a well, the water derived from which is equal in purity to that supplied by the Metropolitan Water Board.

The economical advantages that may be derived from this method hardly fall within my province, the only persons qualified to authoritatively decide this point being geologists and hydraulic engineers who have made a special study of the subject.

HYGIENE OF HAIRDRESSERS' AND BARBERS' SHOPS.

The Hairdressers' establishments throughout the City remain under the constant supervision of your officers, and there are now 31 proprietors of these places who hold certificates that they have undertaken to comply with the Regulations of the Corporation for the conduct of their business.

One new firm has been placed on the Register, two saloons has been closed, and in three cases there were changes of ownership.

The following establishments are now on the Register :—

Jacob Arbeiter, 9, Duke Street.
 The Army and Navy Toilet Club, 35, Bucklersbury.
 Chester and Co., 42, Old Broad Street.
 Henry William Choldcroft, 3, Queen Street.
 Civil Service Supply Association, 136-140, Queen Victoria Street.
 William Clarke, 5, Birchin Lane.
 Samuel Cohen, 120, Newgate Street.
 Fox's Paragon Toilet Club, 60, Fore Street.
 Frederick G. Foerstel, 1, Telegraph Street.
 Franz Friedel, 35, Moorgate Street.
 Carl Hartmann, 5, Queen's Head Passage, Newgate Street.
 Phillip George Hoerr, 1, Cullum Street.
 Anton Kaiser, 4, Liverpool Street.
 Kingstone and Hubbard, 8-10, Ludgate Arcade.
 The King Street Toilet Club, 6, King Street, Cheapside.
 Gustav Krajewski, 137, Fenchurch Street.
 Charles Lehman, 8-9, Aldermanbury Postern.
 Heinrich A. E. Leopold, 8, Masons' Avenue.
 Charles Massberg, 12, Cullum Street.
 Marsh, Decker and Prince, 36, Coleman Street.
 Albin Antony May, 77, Fetter Lane.
 Thomas W. Monk, 5, Angel Court.
 The New Baltic Toilet Co., 37, St. Mary Axe.
 Pierre Pozzi, 16, Lawrence Lane.
 Ernst Robert and Erich Beyer, 13, Pilgrim Street.
 Lucien Saulet, 5, Eastcheap.
 Alexander Schocke, 149, Cannon Street.
 Stephen J. Schuster, 125, Wood Street.
 Arthur Jules Schweitzer, Royal Hotel, Victoria Embankment.
 Henry Theobald, 201, Bishopsgate Street Without.
 Joseph Witte, 151, Aldersgate Street.

PUBLIC HEALTH LEGISLATION IN 1910.

Several measures for safeguarding the public health interests with regard to food supplies were introduced in Parliament during 1910, of which the following is a summary :—

The Shops No. 2 Bill (see p. 68). Not proceeded with.

London County Council (General Powers) Act, 1910 (see p. 71).
(Passed.)

Housing, Town Planning, &c., Act, 1909 (see p. 74). (Passed.)

Public Health (Health Visitors) Bill. Not proceeded with.

Census (Great Britain) Bill (see p. 12). (Passed.)

Departmental Orders and Regulations were issued as under :—

Compulsory notification of Cerebro-Spinal Fever (see p. 24).

Compulsory notification of Ophthalmia Neonatorum (see p. 25).

Diphtheria Anti-Toxin Order (see p. 26).

Board of Agriculture and Fisheries Leaflet with regard to destruction of rats.

Order of Local Government Board prescribing forms of Notices and Documents under Housing, Town-Planning, &c., Act, 1909

London County Council—Infectious Diseases—Rules and Regulations.

Provisional Orders under the Public Health Act, 1875, the Local Government Act, 1888, and the London Government Act, 1899, for authorising compulsory purchase of land.

The following official publication was also issued during the year, and contains a mass of information which will be found of the greatest service to those interested in the welfare of the community from the public health point of view :—

Report from the Joint Select Committee on the Water Supplies
(Protection) Bill.

THE SHOPS (No. 2) BILL.

The Shops (No. 2) Bill, promoted by the Government in July last, was a measure to consolidate, amend and extend the Shops Regulation Acts, 1892 to 1904.

As drafted, the Bill defined the Local Authority as under :—

The Borough Council in any Municipal Borough.

The District Council in any Urban district with a population of 20,000 or upwards.

The County Council elsewhere.

It will be seen, therefore, that so far as the City was concerned, the London County Council would have been the Authority.

The omission of the necessary provision for the preservation of the autonomy of the City was undoubtedly an oversight, as the Bill was described as one for consolidating the Shops Regulation Acts 1892-1894 (in all of which the Corporation is the administrative authority in the City), which, by the passing of the Shops (No. 2) Bill, were automatically repealed, providing that such repeal did not affect any closing order made under the Shop Hours Act, 1904, except so far as it is inconsistent with the Bill under review, every such order having effect as if it were made under this Act.

Moreover, as the Corporation is the administrative authority for dealing summarily with nuisances in the City under the Public Health Acts, it would appear an anomaly for the London County Council to be also dealing with breaches of Sections 14 and 15 as nuisances to be dealt with summarily under the Public Health Acts. The Bill is divided into four parts, with two Schedules as under :—

Part I. Hours of employment in shops.

Part II. Closing of Shops.

Part III. Seating, ventilation, and sanitary convenience in shops.

Part IV. General.

Schedule I. deals with intervals allowed for meals.

Schedule II. specifies (1) the trades and businesses exempted from weekly half-holidays and Sunday Closing, and (2) permits the sale of bread, milk and cream until 10 o'clock on Sunday mornings.

The sanitary provisions are confined to Parts III. and V., and it is on these parts that I propose to comment.

PART III., *Section 14*.—Sufficient means of ventilation are to be provided and maintained. A contravention of this Section renders the shop a nuisance liable to be dealt with summarily under the Public Health Acts.

Section 15.—Sufficient and suitable sanitary accommodation must be provided, regard being had to the number and sex of the shop assistants.

The Secretary of State may, by order, determine what is sufficient and suitable. The Sanitary Accommodation Order of 4th February, 1903, will presumably be taken as a model. This Order provides, *inter alia*, that the sanitary conveniences shall be so arranged and maintained so as to be *conveniently accessible* to all persons employed *at all times* during their employment. In shops in which only one person is employed, some such provision is urgently needed.

A contravention of this Section constitutes a nuisance liable to be dealt with summarily under the Public Health Acts. This is quite a departure from precedent. No provision is made with regard to (i) cleanliness, (ii) ventilation and cubic space of sleeping rooms where assistants "live in," (iii) temperature.

The Departmental Committee appointed in 1906 to enquire into the operation of the Truck Acts, and incidentally into the "living-in" system, recommended the regular inspection of shops where the assistants are lodged and boarded by their employers, and the passing of regulations providing for sanitation, sanitary accommodation, ventilation and cubic space in bed-rooms.

In this connection I may point out that the Bye-laws in force in the City for dealing with employment agencies prohibits the use of any room as a "sleeping place" unless there is at least 350 cubic feet of air space for each person accommodated therein. It seems only reasonable that women in actual employment and "living in" should receive from the State as much consideration as those seeking work at employment agencies.

PART 4, *Section 16* (i), seeks to enact that Inspectors are to be appointed with the powers of Inspectors under the Factory Acts. No qualification is insisted on, though these Inspectors have to carry out duties with regard to Sanitary Accommodation which, under the Factory and Workshops Acts, are delegated, in factories as well as workshops, to Sanitary Inspectors.

Section 22 exempts any premises in which Post Office business is carried on from the provisions of this Act (except as regards hours), and makes no provision with regard to the health of the persons employed in such shops.

In Crown factories and workshops, the duties of Local Authorities are transferred to Inspectors under Factory and Workshops Act (Factory and Workshops Act 1901, Sect. 150). Some such regulation is surely needed in these shops.

Section 24 relates to Exhibitions, and directs that any Exhibition intended to be open for more than a month and employ more than 20 persons shall, as regards provision of intervals for rest and refreshment and of sanitary accommodation, be under the control of the Secretary of State.

There seems to be no sufficient reason why Local Authorities should not control exhibitions as well as shops, and it is difficult to see how the Secretary of State can safely approve a scheme of sanitary accommodation without reference to the health authorities for the district.

The Bill provides that a person guilty of an offence against its provisions shall be liable to a fine not exceeding, in the case of a first offence, one pound; in the case of a second offence, five pounds; and in the case of a third or subsequent offence, twenty pounds; but in the event of a conviction of a second or subsequent offence within two years of the last conviction for the same offence, the fine imposed shall be not *less* than *one pound*.

In consequence of the dissolution the Home Secretary formally gave notice of withdrawal, and the fate of this measure is accordingly still undecided.

LONDON COUNTY COUNCIL (GENERAL POWERS) ACT, 1910.

In June of last year the question of the effective control of the conditions of foodstuffs exposed for sale on barrows and stalls received the consideration of a Committee of the London County Council with a view to the inclusion in their next General Powers Act of clauses relating to the subject.

Section 8 of the London County Council (General Powers) Act, 1908, regulates the sanitary conditions of premises on which food is exposed or prepared for sale, and premises (such as yards, stables or arches) where food is stored to be sold by costermongers on barrows can be dealt with under this Section, but it does not apply to barrows, stalls and other vehicles on which food is exposed for sale.

Control over their sanitary conditions could be effected if legislation were obtained enabling Sanitary Authorities to ensure the observance of proper sanitary regulations in regard to foodstuffs exposed for sale in the streets or in such other places to which the provisions referred to do not apply.

I reported to the Sanitary Committee the desirability of extending, as far as possible, the powers already possessed in regard to the control of the food supplies of the community, and on my recommendation the London County Council were informed that the Corporation were in favour of the proposed extension, and that they would be willing to carry into execution any further powers that might be imposed upon them by such extensions.

A large quantity of foodstuffs are sold from barrows and stalls in various parts of London, and unquestionably in many cases the sanitary condition of the latter leaves much to be desired, and I regret, therefore, that no provision was made in the Bill under review for control in the direction indicated, and it is to be hoped that such will be included in the next General Powers Bill of the London County Council, and if such be omitted I recommend that it be referred to Mr. Remembrancer to endeavour to secure the addition of a clause to this end.

When the Bill was laid before the House of Commons, in the latter half of last year, the provisions more particularly affecting the Corporation were contained in :—

- PART IV. Smoke Nuisances.
- PART V. Employment Agencies.
- PART VI. Milk Supply.
- PART IX. Miscellaneous and Financial.

As a result, however, of considerable opposition from the Corporation and others, many alterations were made before the measure was placed upon the Statute Book, and as the Act now stands there are only the clauses relating to Smoke Nuisances and Employment Agencies that bear any relation to the work of this Department.

PART IV.—*Smoke Nuisances*.—This part of the Act empowers the London County Council, in any special case and at the request of the Sanitary Authority, to enforce the provisions of section 23 (Furnaces and Steam Vessels to consume their own Smoke) and section 24 (Summary Proceedings for abatement of nuisances caused by Smoke) of the Public Health (London) Act, 1891.

The Council is further empowered to enforce the provisions of the same section of the Act of 1891—their application to any building or premises belonging to or leased by a Sanitary Authority.

Power is also granted the Council to expend a sum not exceeding £500 per annum in making investigations and experiments with a view to combating the nuisances arising in London from smoke. This provision is an admirable one, and any steps likely to lead to the abatement of this nuisance are to be encouraged.

PART V.—*Employment Agencies*.—In consequence of the abuses existent in the conduct of agencies for the employment of governesses, female domestic servants, and other female persons seeking their aid, the London County Council obtained powers in their General Powers Act of 1905 for the registration and control of such agencies. These powers were repealed by

the passing of the present Act, and provisions were made for a system of licensing in lieu of registration, the licensing authority in the City being the Corporation.

As the licensing authority, the Corporation are authorised to make Bye-laws for the proper regulation of such agencies, and upon my recommendation the County Purposes Committee appointed your three women Sanitary Inspectors as duly authorised officers to carry out any Bye-laws the Corporation may make in relation to sleeping accommodation for women at employment agencies.

I may add that similar duties were performed by these officers under Clauses of the General Powers Act of 1905 in relation to registration of agencies that are repealed by the Bill under consideration.

PART VI.—*Milk Supply*.—In this part of the Bill as drafted the London County Council again attempted to promote legislation to prevent the supply in London of dirty milk by the same procedure as that applying to Tuberculous milk under Part IV. of the General Powers Act of 1907, and similar objections were taken by your Medical Officer of Health against the principles of such a measure as were unsuccessfully taken against that Bill, and such objections were embodied in the Petition of the Corporation against this part of the Bill. Further, although the sampling and the proper division of samples was provided for, no provision was made for ensuring the competency of the examiner thereof. Such provision obtains in the Sale of Food and Drugs Acts, and it seems an anomaly that the farmer or dairyman in the conduct of his business should be without the protection afforded publicans, chemists, grocers and others. In my opinion no attempt to deal with the milk supply by piecemeal legislation can be regarded as satisfactory, and only the compulsory supervision over the whole of the country can be regarded as any real advance in the direction of the establishment of a clean and wholesome milk supply.

The Corporation and other opponents of piecemeal legislation were successful in getting the whole of these milk clauses struck out of the Bill.

PART IX.—*Miscellaneous and Financial*.—Part IX., although affecting the Corporation as a Local Authority, does not call for any comment on my part as your Sanitary Advisor, the provisions thereof being confined, so far as the City is concerned, to the granting of power to any of the magistrates of the City for the appointment of persons to act as special constables for the purpose of safeguarding the interests and property of the County Council.

The Act received the Royal Assent on the 3rd August, 1910.

HOUSING, TOWN PLANNING, &c., ACT, 1909.

This Act largely consists of Amendments to the Housing of the Working Classes Act, 1890, giving local authorities powers for dealing with unhealthy areas, unhealthy houses, and providing lodging-houses for the working classes, and for this purpose the Corporation is the local authority in the City of London.

The new Act further enables a local authority (the London County Council within the administrative County of London, which includes the City—Section 66) when authorised by the Local Government Board, to carry out a town planning scheme as respect any land which is in course of development, or appears likely to be used for building purposes, with the general object of securing proper sanitary conditions, amenity, and convenience in connection with the laying out and use of the lands, and of any neighbouring lands. The Local Government Board may also authorise a local authority to adopt a town planning scheme proposed by all or any of the owners of any land with respect to which the local authority might themselves have been authorised to prepare a scheme.

If the Local Government Board are satisfied on any representation, after holding a public local inquiry, that a local authority have

- (a) Failed to make a satisfactory town planning scheme when such ought to be made ;
- (b) Failed to adopt any scheme prepared by owners of land when a scheme ought to be adopted ; or
- (c) Have unreasonably refused to consent to any modification or condition imposed by the Board ;

the Board are granted very strong powers for ensuring that such town planning scheme shall be carried out.

This town planning provision is one of the most useful and beneficial pieces of legislation that has been placed upon the Statute Books of recent years.

Part III. of the Housing of the Working Classes Act, 1890, which was formerly adoptive, has, by Section I. of the new Act, been put into force throughout the country. It enables local authorities (the Corporation in the City) if they think fit, to contract for the purchase or lease of any lodging houses for the working classes, already or hereafter to be built or provided. Provision is made for the purchase and erection of lodging-houses, and for the sale and exchange of land required for this purpose of the Act, also for the management of lodging houses established under the Act, and the sale of them, if at the expiration of seven years they are found too expensive to keep up.

It is unlikely that the Corporation will have occasion to establish any lodging-houses of this kind.

The new Act consists of four parts and six schedules.

Part I. deals with the housing of the working classes.

Part II. with town planning.

Part III. relates to the appointment, duties, and tenure of office of County Medical Officers, and the County Public Health and Housing Committees, &c.

Part IV. is described as supplemental, and relates to commons and open spaces, and land in the neighbourhood of royal palaces and parks.

With regard to Part I. dealing with housing of the working classes, which gives power to the Corporation, as the local authority in the City, to acquire lands for erecting houses for the working classes thereon, the Corporation are unlikely to avail themselves of the provisions.

Some twenty-five years ago, the late Commissioners of Sewers, who at that time were the local authority for the purposes of the Artizans' and Labourers' Dwellings Act, erected the large block of Dwellings in Houndsditch, generally known as the Artizans' Dwellings, and these provide sufficient and suitable accommodation at reasonable rents for the requirements of the working class citizens.

The following are the provisions in the new Act, in which the Corporation, as a sanitary authority, are more directly concerned.

Section 17 imposes upon a local authority the duty of causing from time to time, an inspection to be made of their district with a view to ascertain whether any dwelling-house therein is in a state so dangerous or injurious to health as to be unfit for human habitation, and for that purpose it shall be the duty of the local authority, and of every officer of the local authority to comply with such regulations and keep such records as may be prescribed by the Local Government Board.

The law as regards the closing and demolition of dwellings unfit for human habitation is simplified and strengthened.

Formerly when action of this kind was necessary the case had to be taken before a magistrate. Under section 17 (2) of the new Act, if on the representation of the Medical Officer of Health or of any other officer of the authority, or other information given, any dwelling-house that appears to the local authority to be in a state so dangerous or injurious to health as to be unfit for human habitation, it shall be their duty to make an order

prohibiting the use of the dwelling-house for human habitation (in the Act referred to as a "closing order") until in the judgement of the local authority the dwelling-house is rendered fit for that purpose.

Notice of the closing order has to be forthwith served on the owner of the dwelling-house, and if he is aggrieved by the order, may appeal to the Local Government Board within fourteen days of the service of the order.

When the order has become operative, the local authority must serve notice on every "occupying" tenant of the dwelling-house in question, and he and his family are required to cease to inhabit the dwelling-house. The local authority may make a reasonable allowance to a tenant on account of his expenses in moving, but no allowance is to be given if the house has been made unfit for habitation by the wilful act or default of the tenant or of someone for whom, as between himself and the owner or landlord, he is responsible.

The local authority must determine a closing order when they are satisfied the house has been rendered fit for human habitation, and if the local authority fail to determine the order, the owner has the right of appeal to the Local Government Board.

The use of an underground room as a sleeping place may be prohibited by a closing order, if the flooring is more than three feet below the surface of the part of the street adjoining or nearest the room, or the room is not on an average at least seven feet in height from floor to ceiling, or the ventilation, lighting, protections against dampness, effluvia or exhalation does not comply with such regulations as the local authority with the consent of the Local Government Board may prescribe. There is a proviso that the issue of such closing order shall not prevent the use of the room for purposes other than those of a sleeping place. This provision did not become operative until the 1st of July, 1910.

When a closing order in respect of any dwelling house has remained operative for three months, the local authority are required to take into consideration the question of demolition of the premises, and must give the owner notice of the time (not less than one month after the service of the notice) and place where the question will be considered, and the owner is entitled to be heard when the question is so taken into consideration.

If upon any such consideration the local authority think the circumstances require it, they may order the demolition of the building, but the local authority may, if they think fit, postpone the operation for six months in order to give the owner, if he undertakes to do so, an opportunity to render the premises fit for human habitation.

Notice of a demolition order is to be served upon the owner, who if aggrieved, is granted right of appeal to the Local Government Board within twenty-one days after the order is served upon him.

Section II. provides that should a local authority fail to make inspection of their district in order to ascertain if there are any dwelling-houses in their district in such a state as to be dangerous or injurious to health as to be unfit for human habitation, the Local Government Board are empowered to make an order requiring the local authority to remedy the default, and such order is enforceable by *mandamus*.

Section 75 of the Act of 1890, provided that in any contract made after the 14th August, 1885, for letting for habitation by persons of the working classes a house or part of a house, there was to be an implied condition that the house was at the commencement of the holding in all respects reasonably fit for human habitation, but this only applied where the rent did not exceed in London, £20 per annum.

Section 14 of the new Act makes this condition implied in any contracts made after the passing of the Act (*viz.*: 3rd December, 1909) for letting a house or habitation where the rent does not exceed, in the case of a house situate in the Administrative County of London, £40 per annum. This applies to *all houses* within the rental limits, and is not confined to those let to the working classes as formerly. Provision is made against "contracting cost."

But the condition above referred to, is not to be implied where a house or part of a house is let for a term of not less than three years upon the terms that it be put by the lessee into a condition reasonably fit for occupation, and the lease is not determinable at the option of either party before the expiration of that term.

Section 15 further provides that, during the holding of a term to which section 14 applies, the premises be kept by the landlord in all respects reasonably fit for human habitation, failing which (if a closing order is not made with respect to the house) it is the duty of the local authority by written notice to require the landlord within a reasonable time, being not less than twenty-one days, by written notice to do such work as the local authority specify in the notice as being necessary to make the house in all respects reasonably fit for human habitation.

The landlord is enabled within twenty-one days after the receipt of the notice to notify the local authority his intention of closing the house for human habitation, and thereupon a closing order is to be deemed to have become operative in respect of the house.

If the notice is not complied with, and if the landlord has not given notice of his intention to close the house, the local authority may, at the expiration

of the time specified in the notice, themselves do the work required and recover the expenses so incurred from the landlord.

The local authority may, if they think fit, allow the expenses incurred to be repaid by annual instalments, paid within five years with interest not exceeding £5 per cent. per annum.

The landlord is given the right of appeal within twenty-one days to the Local Government Board against any notice served under this Section, and pending appeal, no proceedings are to be taken in respect of such notice.

It is pointed out in the Local Government Board's memorandum on the new Act, that in the case of houses within the rental limit of £40 per annum requiring repair, local authorities should avail themselves of section 15 referred to in the foregoing, in preference to taking proceedings under sections 17 and 18, relating to closing and demolition of houses that are unfit for human habitation as closing of houses involves removal of the tenants, as the natural sequence is demolition, resulting in a decreased amount of accommodation being available in the district.

I may add that, in taking proceedings under section 15 (3), the local authority have only to be satisfied that the premises in question are not "reasonably fit for human habitation," whereas in considering the advisability of taking action under section 17 (2) they can only do so if they consider that the house is "in a state so dangerous or injurious to health as to be unfit for human habitation."

It is obvious that many cases can be dealt with under section 15 to which it would be difficult to apply section 17 (2).

Section 16 of the new Act empowers local authorities to extend bye-laws made with respect to houses let in lodgings or occupied by members of more than one family, made under section 94 of the Public Health (London) Act 1891, in the case of houses occupied by members of the working classes, to imposing any duty, which may be imposed by the bye-laws, and which involves the execution of work, upon the owner within the meaning of the Act of 1891, so as to make it the duty of the owner to do such work in addition to, or in substitution for, any other person, having an interest in the premises.

Section 35 of the new Act provides for the exemption of houses occupied for the sole purpose of letting lodgings to persons of the working classes, at a charge not exceeding sixpence a night for each person, from payment of Inhabited House Duty upon the production of a certificate of the Medical Officer of Health that the house is solely constructed and used to afford suitable accommodation for the lodgers, and that due provision is made for their sanitary requirements.

I have already issued such certificate with respect to the Salvation Army Shelter at No. 116, Middlesex Street.

Section 36 of the new Act gives increased powers of entry, and provides that any person authorised by the local authority or the Board may enter any house, premises or buildings at all reasonable times on giving twenty-four hours' notice to the occupier and the owner (if the owner is known) of his intention to do so. The authority must be in writing, and must state the particular purpose for which the entry is authorised.

Section 43 prohibits the erection of back-to-back houses for the working classes, and any such house commenced to be erected after the passing of the Act shall be deemed to be unfit for human habitation, but nothing in this section

(a) shall prevent the erection of a house containing several tenements in which the tenements are placed back-to-back if the Medical Officer of Health for the district certifies that the several tenements are so constructed and arranged as to secure effective ventilation of all habitable rooms in every tenement, or

(b) shall apply to houses abutting on any streets the plans whereof have been approved by the local authority before the 1st day of May, 1909, in any borough or district in which, at the passing of this Act, any local Act or bye-laws are in force permitting the erection of back-to-back houses.

In conclusion, I desire to point out that the new Act is a striking example of the inconvenience of legislation by reference.

The various Housing Acts should be consolidated. The Local Government Board have issued Memoranda to those responsible for their administration, but in spite of this they are difficult of interpretation even by a legal mind.

SMOKE NUISANCES.

Nine cases of smoke nuisance were reported during 1910. The number of observations recorded amounted to 360, as against 237 noted at fourteen premises in 1909.

The service of Notices upon offenders resulted in the abatement of the nuisances in all cases, and therefore there has been no occasion to take further action in the matter.

In my reports for previous years, attention has frequently been invited to the necessity for amendment in the law with a view to strengthening your powers and those of the Metropolitan Borough Councils for more completely abating smoke nuisances.

In my annual report for 1909, reference was made to certain sections of the London County Council (General Powers) Bill. This Bill has resulted in the passing of the London County Council (General Powers) Act, 1910, an Act referred to in greater detail on page 71, but which, as far as smoke nuisances are concerned, does not appear to effect much improvement.

As frequently reiterated, the pall of darkness so often hanging over London is undoubtedly largely due to the smoke from the chimneys of private dwelling-houses, the factory chimney as a rule contributing but a small portion of the whole, and while the Acts of Parliament under which we are governed permit private dwelling-houses to send forth black smoke in unlimited quantity, and any premises other than private dwelling-houses to send forth unlimited smoke of any sort provided it be not black, any drastic mitigation of the evil is improbable.

The most useful alteration of the Law proposed by the Bill mentioned, viz., that any chimney (not being the chimney of a private dwelling-house) sending forth smoke in such quantity as to be a nuisance shall be a nuisance liable to be dealt with summarily (thus omitting the word "black" which still obtains), has not been retained in the Act as passed, thus continuing the existing difficulty of local authorities in taking offenders into Court, and necessitating the proof that the smoke causing the nuisance was black.

Annoyances are still reported by occupiers of lofty buildings from chimneys at a lower level. Proprietors of restaurants and grills occasionally give trouble to their neighbours when lighting or forcing their fires and by improperly burning refuse, requiring the interference of your officers; but it is to be noted that the atmosphere is now much less dense than in former years, and in the summer season it is noticeable that on many afternoons, while clouds of smoke overhang adjoining districts, but little smoke is seen in the clear air of the City.

FACTORY AND WORKSHOP ACT, 1901.

FACTORIES, WORKSHOPS AND WORKPLACES.

The work required to be done under the above Act continues to increase.

The total number of premises registered amounts to 3,885, and represents 7,582 workrooms, &c., to be inspected during the coming year, independently of new places established or discovered.

The Register of all places coming under the operation of the Act (factories, workshops and workplaces), was first instituted during the past year. Formerly Registers of each class of places were kept, but, as was anticipated in my report of last year, the complete Register has proved to be more convenient for reference as well as facilitating the work of inspection. More especially has the Register been of service in the preparation of the returns required by the Home Office, the figures being especially heavy for the City, where so much work is done and is given out to be done in Greater London and some of the provinces, even as far distant as Edinburgh and Bournemouth.

The reference book for the year shows 5,652 entries, an increase upon last year.

The notices issued for various purposes under the Act amounted to 3,317.

The question of underground rooms used for purposes of business is dealt with in another portion of this report (see page 101.)

An increase of 150 premises registered has to be recorded, representing 640 additional workrooms, &c.

Practically the whole of the premises registered were visited during the year.

The number of Factories, Workshops, and Workplaces at present registered is as follows :—

	Premises.	Workrooms, &c.
Factories - - - - -	748	3,021
Workshops - - - - -	2,135	3,559
Workplaces :—		
Kitchens of Restaurants, Tea-rooms, &c. - -	868	868
Stables - - - - -	26	26
Other places - - - - -	108	108
TOTALS - - - - -	3,885	7,582

The following figures abstracted from the Register will be of interest.

Of the 3,021 Factory Workrooms registered, 1,486 were occupied by men only, 243 by women only, and 1,292 by men and women.

Of the 3,559 Workshops registered, 1,854 were occupied by men only, 745 by women only, 927 by men and women, and 33 were " Domestic Workshops."

The number of workers employed was as follows :—

	<i>Men.</i>	<i>Women.</i>
Factories - - -	18,966	13,573
Workshops - - -	8,473	13,052
Workplaces (Kitchens, &c.)	5,466	6,106
Totals - - -	<u>32,905</u>	<u>32,731</u>

The following is a summary of inspections of separate Workrooms, &c., made annually since the passing of the Act :—

FACTORIES.	Workshop Inspectors.	Women Inspectors.	TOTALS.
1904—Inspections during the year	39	39	78
1905 " " "	625	110	735
1906 " " "	1,496	212	1,708
1907 " " "	1,731	656	2,387
1908 " " "	2,745	580	3,325
1909 " " "	3,331	607	3,938
1910 " " "	3,787	993	4,780
	<u>13,754</u>	<u>3,197</u>	<u>16,951</u>

WORKSHOPS.	Workshop Inspectors.	Women Inspectors.	TOTALS.
1901—Inspections during the year	745	—	745
1902 " " "	341	140	481
1903 " " "	264	283	547
1904 " " "	948	345	1,293
1905 " " "	1,306	719	2,025
1906 " " "	2,367	1,114	3,481
1907 " " "	2,701	1,386	4,087
1908 " " "	3,034	1,634	4,668
1909 " " "	3,333	1,833	5,166
1910 " " "	3,826	1,976	5,802
	<u>18,865</u>	<u>9,430</u>	<u>28,295</u>

WORKPLACES.	Workshop Inspectors.	Women Inspectors.	TOTALS.
1902—Inspections during the year	78	390	468
1903 " " "	344	13	357
1904 " " "	82	11	93
1905 " " "	555	299	854
1906 " " "	860	299	1,159
1907 " " "	660	227	887
1908 " " "	705	372	1,077
1909 " " "	604	140	744
1910 " " "	846	180	1,026
	<u>4,734</u>	<u>1,931</u>	<u>6,665</u>

FACTORIES.

During the year there were 125 businesses placed on the register for the first time. There were, however, 80 removed, which shows a net increase of 45 businesses, which will involve the inspection of an additional 334 work-rooms by your Inspectors during the coming year.

The Local Authority has but little responsibility respecting the internal arrangements of Factories, their duty being confined to the provision of suitable and sufficient sanitary accommodation and the maintenance of the structure in a sanitary condition under the Public Health (London) Act, 1891.

When any defect remediable under the Factory Acts comes to the knowledge of this Department, H.M. Inspector of Factories is immediately informed.

* DETAILS OF FACTORY INSPECTIONS, 1910.

Initial inspections (workrooms)	-	293	
Periodical inspections	-	3,494	
Re-inspections (sanitary work needed)		761	
		—	4,548
Notices served—			
Intimation	-	265	
Statutory	-	47	
		—	312

DEFECTS REMEDIED.

Drains relaid or amended	-	7	
Soil pipes repaired or renewed	-	13	
Urinals repaired or renewed	-	12	
„ cleansed	-	67	
		—	79
Sink wastes amended	-	39	
Rain-water pipes repaired	-	4	
Cisterns cleansed or covered	-	6	
Refuse receptacles provided	-	20	
Water-closets—			
Separate and suitable provided	12		
Additional provided	-	10	
Lobbies constructed	-	106	
Ventilated	-	45	
Floors made impervious	-	6	
Pans cleansed	-	664	
Walls and ceilings cleansed	235		
Flush improved	-	66	
		—	1,144
General defects remedied	-	243	
		—	
Total defects remedied	-	-	1,555

* For details of Women Sanitary Inspectors' work, see page 92.

WORKSHOPS.

Under the Factory and Workshop Act, 1901, new duties were imposed upon Local Authorities after the year 1902. Formerly the Factory Inspector was responsible entirely for the condition of workshops as well as factories. Such duty has now to be assumed by Local Authorities, although H.M. Inspector of Factories still exercises the same power as before, and may call defaulting Authorities to order should they neglect to carry out the provisions of the Act.

During the year there were 448 businesses placed upon the register for the first time. There were, however, 349 removed, which shows a net increase of 99 businesses, which will involve the inspection of an additional 333 work-rooms by your Inspectors during the coming year.

* DETAILS OF WORKSHOP INSPECTIONS, 1910.

New workshops notified by H.M. Factory Department	-	-	-	-	184
No Abstract of Act affixed where women and young persons were employed — cases notified to H.M. Factory Inspector	-	-	-	-	128
Matters referred by Workshop Inspectors to District Inspectors	-	-	-	-	132
Domestic workshops on register	-	-	-	-	33
Statutory Certificates for cleansing issued by Medical Officer of Health	-	-	-	-	215
Outworkers working in the City notified to the Corporation	-	-	-	-	664
Outworkers notified by Corporation to outside districts	-	-	-	-	17,083
Complaints—					
From H.M. Factory Inspector	-	-	-	-	37
General	-	-	-	-	32
Total number of complaints	-	-	-	-	69
Initial inspections (workrooms)	-	-	-	-	317
Periodical inspections	-	-	-	-	3,510
Re-inspections (sanitary work in hand)	-	-	-	-	1,760
Notices served—					5,587
Intimation	-	-	-	-	662
Statutory	-	-	-	-	195
					857

* For details of Women Sanitary Inspectors' work, see p. 92.

DEFECTS REMEDIED.

Walls, ceilings, and approaches cleansed	540
Ventilation improved - - -	36
Overcrowding abated - - -	6
Drains relaid or amended - - -	15
Soil pipes repaired or renewed - - -	18
Urinals repaired or renewed - - -	4
„ flush improved - - -	1
„ cleansed - - -	18
—	23
Sink wastes amended - - -	75
Rain-water pipes repaired - - -	10
Cisterns cleansed or covered - - -	25
Refuse receptacles provided - - -	42
Water-closets—	
Separate and suitable provided	45
Additional provided - - -	6
Lobbies constructed - - -	57
Ventilated - - -	65
Floors made impervious - - -	26
Pans cleansed - - -	662
Walls and ceilings cleansed	255
Flush improved - - -	106
—	1,222
General defects remedied - - -	355
—	
Total defects remedied - - -	2,367

WORKPLACES.

(KITCHENS OF RESTAURANTS, &c).

Workplaces are not required to be registered under the Act—that is to say, any person can establish a workplace in any situation and under any conditions without giving notice as is required for factories and workshops. I have repeatedly mentioned this in my previous reports, and cannot too strongly urge that this obvious defect in the Act should be remedied at the earliest possible moment. It is obviously in the best interests of owner or occupier that notice should be given to the Local Authority prior to the establishment of a workplace in the same manner as obtains in regard to Factories and Workshops. Experience has shown that the advice given by the Inspector on his visit subsequent to such notice in these latter invariably results in a saving of time, trouble and expense to the owners or occupiers, and on these grounds alone, amended legislation on these lines would be welcomed by all concerned.

In addition to the inspection of kitchens, other workplaces have received attention, including those occupied by grocers, provision merchants, fishmongers, fruiterers, fried fish shops, &c., &c.

* DETAILS OF WORKPLACE INSPECTIONS, &c., 1910.

Initial inspections - - - - -	55
Periodical inspections - - - - -	791
Re-inspections (sanitary works) - - - - -	797
Total inspections - - - - -	1,643
Notices served—	
Intimation - - - - -	273
Statutory - - - - -	47
Total Notices served - - - - -	320

DEFECTS REMEDIED.

Drains relaid or amended - - - - -	10
Kitchens—	
Walls and ceilings cleansed - - - - -	263
Light and ventilation improved - - - - -	28
	— 291
Water-closets—	
Separate accommodation provided for sexes - - - - -	34
Arrangements improved - - - - -	74
	— 108
Water supply improved - - - - -	10
Refuse receptacles provided - - - - -	32
General defects remedied - - - - -	455
Total defects remedied during the year - - - - -	906

* For details of Women Sanitary Inspectors' work, see page 93.

BAKEHOUSES.

Bakehouses are scheduled as Workshops (Part II., Sixth Schedule), and are required to be registered by the Local Authority (Sec. 132).

The following is a list of bakehouses registered in the City :—

ABOVEGROUND BAKEHOUSES.

†90, Bishopsgate Street Without.	†85, Middlesex Street.
†61, Middlesex Street.	*4, Water Lane.
*155, Minorities.	†*93-94, Upper Thames Street.

* Established during 1903.

† These have been established at least 25 years.

‡ Factory Bakehouses (power is used).

UNDERGROUND BAKEHOUSES.

188, Aldersgate Street.	48, Knightrider Street.
†81, Bishopsgate Street Without.	18, Long Lane.
†4, Broadway.	†37, Middlesex Street.
95, Cannon Street.	††63 to 65, „
8, Copthall Avenue.	†122, „
15, Cornhill.	31, Newbury Street.
†67, Farringdon Street.	3, Pancras Lane.
††88, „ „	21, Stoney Lane.
†93, Fetter Lane.	†68, St. Mary Axe.
†12, Gracechurch Street.	†75, St. Paul's Churchyard.
†8 to 14, King Street, Snow Hill.	194, Upper Thames Street.

SUMMARY.

Aboveground bakehouses -	-	-	-	6
Underground bakehouses -	-	-	-	22
Total number of bakehouses in the City				28

As usual, the bakehouses were inspected, 108 visits being made.

With few exceptions, these places are kept in good condition and in accordance with the standard required by the Act. In eight instances attention had to be called to defects, including untidy conditions, want of cleanliness, &c., which were remedied without delay.

SANITARY DEFECTS IN FACTORIES AND WORKSHOPS NOTIFIED IN 1910 BY H.M. INSPECTOR OF FACTORIES.

Complaints were received from H.M. Inspector of Factories with regard to Sanitary defects at 37 places, and all these were disposed of before the end of the year.

Dirty conditions existing in factories were reported to H.M. Inspector of Factories in 18 cases. The necessary whitewashing and cleansing in factories is carried out under his supervision in all cases, as required by the Act.

† These have been established at least 25 years.

‡ Factory Bakehouses (power is used).

A comparison of the number of such notifications received in past years with the year under review shows as follows :—

<i>Year.</i>									<i>No. of Complaints received.</i>
1901	-	-	-	-	-	-	-	-	51
1902	-	-	-	-	-	-	-	-	54
1903	-	-	-	-	-	-	-	-	66
1904	-	-	-	-	-	-	-	-	31
1905	-	-	-	-	-	-	-	-	32
1906	-	-	-	-	-	-	-	-	39
1907	-	-	-	-	-	-	-	-	21
1908	-	-	-	-	-	-	-	-	19
1909	-	-	-	-	-	-	-	-	23
1910	-	-	-	-	-	-	-	-	37
Average									37·3

OUTWORKERS AND "HOME" WORKERS.

The provisions of the Act respecting outworkers have, as heretofore, been carried into effect.

The Lists due on February 1st and August 1st were all obtained without recourse to legal proceedings. Over 1,500 lists were sent in.

Very few "home" workers reside in the City. The outworkers numbered 204 (some outworkers are employed by as many as a dozen firms), and of this number only 34 were "home" workers. These places are dealt with by your Women Inspectors, except where men only are employed.

The following figures will illustrate what has occurred :—

Year.	Number of Lists received.		Outworkers Employed in City.		Outworkers Employed outside City.		Total number of Outworkers.	
1902	...	—	...	17	...	3,752	...	3,769
1903	...	—	...	118	...	2,729	...	2,847
1904	...	272	...	123	...	3,334	...	3,457
(NOTE.—1st Notice issued to all employers at end of 1904.)								
1905	...	576	...	236	...	7,891	...	8,127
1906	...	1,112	...	229	...	14,376	...	14,605
1907	...	1,426	...	491	...	16,570	...	17,061
1908	...	1,506	...	624	...	16,909	...	17,533
1909	...	1,515	...	674	...	16,193	...	16,867
1910	...	1,540	...	664	...	17,083	...	17,747

Special notices were issued in 65 cases, where firms had failed to send lists or to keep a copy of the same, as required by the Act.

There are no cases of infectious disease in outworkers' premises to be recorded, but 11 "contacts" were reported, as follows :—Diphtheria 2, Phthisis 1, and Scarlet fever 8. Each case was enquired into, and precautions taken to prevent the spread of infection.

THIS TABLE WAS ISSUED BY THE LOCAL GOVERNMENT BOARD BY REQUEST OF THE SECRETARY OF STATE.

FACTORIES, WORKSHOPS, WORKPLACES AND HOMEWORK.

1910.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions. (4)
Factories (including Factory Laundries) ...	4,780	317	—
Workshops (including Workshop Laundries) ...	5,802	921	—
Workplaces (other than Outworkers' premises included in Part 3 of this Report.)	1,026	460	—
Total ...	11,608	1,698	—

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars. (1)	Number of Defects.			Number of Prosecutions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of cleanliness	922	881	12†	—
Want of ventilation	72	58	—	—
Overcrowding	26	26	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	1,491	1,636	—	—
†Sanitary accommodation {	insufficient	40	30	—
	unsuitable or defective	2,736	2,438	—
	not separate for sexes... ..	86	77	—
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bakehouse (S. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouses(SS. 97 to 100)	—	—	—	—
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	—	—	—	—
Total	5,373	5,146	12	—

* Including those specified in Sections 2, 3, 7 and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

† For districts not in London state here whether Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; and if so what standard of sufficiency and suitability of sanitary accommodation for persons employed in factories and workshops has been enforced.

‡ Defects in Factories.

17 If an employer gives out work to more than one of the classes specified in column 1, and subdivides his list in such a way as to show the class only, but the contractors should be assigned in columns 2 and 4 (or 5 and 7) into their respective classes. A footnote should be added to the figures required in columns 3, 5 and 4 the total number of the lists received from those employers who have subdivided their lists strictly with the class only, as there will be two lists for each employer—in some previous returns old numbers have been inserted. The figures in the and of the lists of the same employer the same contractor's name will often be repeated.

18 If a view of the wide discrepancies found to exist between the totals in the two columns when the returns are added together it is desired that other Council during the year covered by the reports.

Workshops on the Register (8, 151) at the end of the year.

Important classes of workshops, such as workshop bakerhouses, may be enumerated here.

NOTE.—The Factory and Workshop Act, 1901 (S. 132), requires the Medical Officer of Health in his Annual Report to the District Council to deal with this subject, to the Secretary of State (Home Office). If the Annual Report is presented otherwise than in print, it is or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Circulars and Medical Officers of Health in October, 1906.

[illegible]

Class

Matters notified to H.M. Inspector of Factories :—

Failure to affix Abstract of the Factory and Workshop Act (S. 133)	128
--	-----	-----	-----	-----	-----

Action taken in matters referred by H.M. Inspector	(Notified by H.M. Inspector	37
--	-----------------------------	-----	-----	----

Action taken in matters referred by H.M. Inspector
as remediable under the Public Health Acts, but } Reports (of action taken) sent to H.M.

not under the Factory and Workshop Act (S. 5) / Reports (or action taken) sent to H.M.
Inspector 37

Gentification awarded during the year		Name	

In use at the end of the year: *books, handbooks, etc. owned by the school* 99

Dated 31st December, 1910.

(Signature) W. COLLINGRIDGE, *Medical Officer of Health.*

WOMEN SANITARY INSPECTORS.

FACTORIES.

The number of women employed in factories in the City varies greatly according to the time of year. This is especially so in the Printing and Publishing Trades, where large numbers of women are employed as "jobbers" during the busy seasons only. Nearly half the factories on the Register belong to these trades, the remainder being mostly clothing factories. The number of women employed in the factories inspected is 11,860.

The number of inspections of factories made during the year is as follows :—

Initial inspections	-	-	182
Periodical inspections	-	-	811
			<hr/>
Total	-	-	993
			<hr/>

On the whole a decided improvement is noticeable in the sanitary accommodation in factories. In comparison with former years few cases of insufficient or unsuitable accommodation are reported, by far the greater proportion of defects found being defective apparatus and want of cleanliness.

WORKSHOPS.

The workshops inspected during the year represent 101 trades, the majority of them being places where clothing of some kind is made.

The number of inspections made is as follows :—

Initial inspections	-	-	344
Periodical inspections	-	-	1,571
			<hr/>
Total	-	-	1,915
			<hr/>

In addition 245 re-inspections were made in connection with work required to remedy defects. Where defects are found in "general" workshops, *i.e.*, those where both men and women are employed, they are referred to the Workshop Inspectors in order to avoid overlapping.

The defects found were as follows :—

Sanitary accommodation defective	-	-	106
" dirty	-	-	123
" unsuitable	-	-	20
" insufficient	-	-	5
" not kept separate	-	-	12
		—	266
Walls and ceilings dirty	-	-	91
Ventilation insufficient	-	-	32
Workshop overcrowded	-	-	20
Damp walls or ceilings	-	-	18
General defects	-	-	57
Total	-	-	<u>484</u>

DOMESTIC WORKSHOPS.—There are 33 domestic workshops now on the Register, 23 of which are outworkers' premises, and were included in the lists of outworkers sent in by employers. Nine domestic workshops were inspected for the first time this year, and forty-three periodical inspections have been made.

WORKPLACES (KITCHENS).

The continued inspection of kitchens goes to prove that, as pointed out in my Annual Report of 1907, the majority of basement-kitchens are entirely unsuited to the purpose.

In many of these kitchens the amount of cooking, and consequently the number of gas stoves in use, has greatly increased, while the means of ventilation have not been proportionately improved, and in some cases the kitchens are so far removed from the external air, that when every available means of ventilation has been utilised, the state of the atmosphere is still unsatisfactory.

It is to be hoped that before long the Corporation will have more definite powers of dealing with this matter.

The number of inspections and defects found is as follows :—

Initial inspections	-	-	37
Periodical inspections	-	-	143
		—	180
Re-inspections	-	-	149

Defects found—sanitary accommodation defective	31
" " dirty	2
" unsuitable, insufficient	5
	— 38
Walls and ceilings dirty	- - - 43
Ventilation insufficient	- - - 43
General defects	- - - 14
Total	- - - <u>138</u>

In view of the fact that that part of the Home Office Return which deals with outworkers is headed "*Home Work*," it is necessary to point out that of the 204 outworkers notified, 170 do *not* carry on their work in dwelling-houses, but in premises used only for business purposes, and that the actual number of outworkers who do work in their own homes is only 34, made up as follows :—

Eight employ persons other than members of their own families, and appear on the Register of Workshops.

Twenty-two employ only members of their own families, and are classed as Domestic Workshops.

Four are "occasional workers," i.e., those whose "labour is exercised at irregular intervals and does not furnish the whole or principal means of living to the family," and who are consequently exempt from the provisions of the Factory and Workshop Acts.

The following Table shows the number of premises in the City where work is carried on by "outworkers," and a List of Domestic Workshops is also appended :—

	Factories.	Workshops.	Domestic Workshops.	Occasional.	Total.
WEARING APPAREL.					
(1) MAKING.					
Tailors	3	74	13	1	91
Furriers...	—	24	1	—	25
Costumes	—	23	—	—	23
Ties	1	11	2	—	14
Embroidery	—	7	—	—	7
Caps	—	3	—	—	3
Shirts and Collars...	—	3	—	—	3
Blouses, &c.	1	4	3	1	9
Feather dressing	—	2	—	—	2
Gloves	—	1	—	—	1
Dressmakers' Sundries ...	1	—	—	—	1
Buttons	—	1	—	—	1
FURNITURE AND UPHOLSTERY	—	—	2	—	2
UMBRELLAS	—	18	1	—	19
PAPER BAGS	—	1	—	—	1
ARTIFICIAL FLOWERS ...	—	—	—	2	2
	6	172	22	4	204

DOMESTIC WORKSHOPS, 1910.

Premises.	Trade.	Number of Workers.			Remarks.
		M.	F.	Total.	
32, Aldersgate Street	Millinery	—	1	1	Independent business.
85, Bartholomew Close	Tailoring	—	2	2	Outworkers.
34A, Beech Street	Do.	1	—	1	Do.
43, Bishopsgate Street Without	Do.	—	2	2	Do.
130, Do.	Do.	—	1	1	Do.
11, Bloomfield House	Dressing Gowns ...	—	1	1	Do.
31, City Buildings	Doll Dressing ...	—	1	1	Independent business.
6, Cloth Fair	Fur Lining	—	1	1	Outworker.
2, Cockerills Buildings	Tailoring	1	—	1	Do.
7, Dorset Street... ..	Boot Repairs ...	1	—	1	Independent business.
7, Do.	Umbrellas	—	1	1	Do.
9, Ellison Street	Tailor	1	—	1	Outworker.
2, Evangelist Court	Umbrellas	—	1	1	Independent business.
118, Fenchurch Street	Blouses	—	1	1	Outworker.
4, Garden Place	Umbrellas	—	1	1	Independent business.
10, Godliman Street	Mantles	—	2	2	Do.
117, Gravel Lane	Repairing Clothes	—	1	1	Do.
10, Hutchison Avenue	Tailoring	1	1	2	Outworkers.
17, Hutchison Street	Caps	—	1	1	Independent business.
1, Little Montague Court ...	Umbrellas	—	4	4	Outworkers.
2, Do.	Ties	—	1	1	Do.
5, Middle Street	Butcher's Aprons...	—	1	1	Do.
20, Do.	Ties	—	1	1	Do.
96, Minories	Tailoring	—	1	1	Do.
2, Neville's Court	Do.	1	—	1	Do.
8, North Block	Dressing-gowns ...	—	2	2	Do.
15, Princes Block	Tailoring	1	—	1	Do.
6, Red Lion Passage	Do.	1	—	1	Independent business.
7, Stoney Lane	Do.	1	—	1	Do.
6, Temple Lane	French Polishing...	—	1	1	Outworker.
9, Vine Street	Tailoring	—	1	1	Do.
57, West Smithfield	Cushions	—	1	1	Do.
21, Widegate Street	Tailoring	—	1	1	Do.

OFFICES.

The complaints which have been received during the past year with regard to insanitary conditions in offices in which women clerks are employed have all been investigated, and a few offices have been inspected in the routine inspection of premises which were also occupied as workshops.

The percentage of defects found is as follows :—

No separate sanitary accommodation	45 per cent.
Sanitary accommodation unsuitable or defective - - - - -	20 „
Sanitary accommodation insufficient	10 „
	<hr/> 75 per cent.
Offices overcrowded - - - - -	5 „
General defects. - - - - -	20 „
	<hr/> 100 „

It is satisfactory to note that owing to the action of your Medical Officer in requiring that in every new building intended to be used as offices, due provision shall be made for suitable sanitary accommodation for women, several of the offices inspected have been found to be well equipped in that respect.

In most cases where improvements were made, the work required was of a structural nature, and has been carried out under the direction of the District Inspectors.

LADIES' WAITING ROOMS AT RAILWAY STATIONS.

The Ladies' Waiting Rooms at Railway Stations have been inspected, and were found to be in good sanitary condition with the exception of some defects of a minor character, which were promptly remedied on being brought to the notice of the Railway Companies concerned.

UNDERGROUND CONVENIENCES FOR WOMEN.

The underground conveniences for women have been inspected, and any defects found have been reported to the Engineer.

There are now 15 conveniences for women in the City situated at :—

Aldersgate Street (North).	Golden Lane.
Aldersgate Street (South).‡	Guildhall Buildings.
Aldgate.	Holborn.
Bishopsgate Street	Minories.
Circus Place (Finsbury Circus).	Royal Exchange.
Eastcheap.	Upper Thames Street (near London Bridge).
Farringdon Street (North).	
Farringdon Street (South) (Ludgate Circus).	West Smithfield.

FREE SANITARY ACCOMMODATION FOR WOMEN.

The need for the provision of free sanitary accommodation for women by public authorities, has received considerable attention of late. The matter was discussed at the Congress of the Royal Sanitary Institute in September last, and as an outcome of the discussion a special committee was formed, and the following resolutions were passed and have been forwarded for the consideration of the Streets Committee :—

RESOLUTIONS.

Passed, November 21st, 1910.

1. That in the opinion of this meeting, sufficient sanitary accommodation for women's use should be provided free of charge by Sanitary Authorities, Railway Companies, and in places of public entertainment and resort.
2. That in the opinion of this meeting, it is essential in the interests of public health and decency, that there should be an attendant in charge of the sanitary convenience provided for women's use in public places.
3. That in the opinion of this meeting, all sanitary conveniences provided for the use of women should be subject to periodical inspection by women sanitary inspectors appointed by the local sanitary authorities.
4. That this meeting desires to call the attention of the Railway Companies, and Managers of Theatres and other places of public resort, to the unsatisfactory character of much of the sanitary accommodation provided for women, and to the necessity for having only sanitary conveniences of good modern type and construction.

These resolutions embody the policy which the Corporation have for some years carried out, and it may be of interest to recapitulate the steps taken by them in this direction.

In 1893, one convenience for women was constructed in Holborn, at which no free accommodation was provided ; but in 1897 the experiment was tried of providing three free urinettes at the Golden Lane convenience, but these were eventually removed owing to the impossibility of preventing abuse, and free water closets were substituted.

In 1903, your Women Sanitary Inspectors undertook the duty of inspecting the underground conveniences for women. There were then nine conveniences, and only at Golden Lane and at Farringdon Street South was any of the accommodation free. The free closets at Golden Lane had waterproof curtains instead of doors, and those at Farringdon Street South had doors without locks or fastenings.

In 1906 the Streets Committee adopted a report of your Medical Officer of Health and constructed an additional convenience for women, and provided for free accommodation at each convenience. The free closet at Golden Lane and Farringdon Street South were at the same time fitted with doors and locks, and this improvement was found of great assistance to the attendants in keeping order, besides ensuring privacy for the users.

Another convenience for women was constructed in 1907, and in the following year two more were added. In 1909 the number was increased to fourteen, and a fifteenth is now in course of construction.

An enquiry has been made with regard to the action of the Sanitary Authorities of London on this matter, and it is found that in every district except Chelsea, some sanitary conveniences are provided, and that in most districts a certain proportion of the accommodation is free. The exceptions are Bethnal Green, Greenwich, Holborn, and Wandsworth, where there is no free accommodation, while in Deptford, Shoreditch, and Stepney, there are no conveniences labelled "free," but the attendants can allow free use at their discretion.

BAKEHOUSES IN THE CITY.

On the 29th June last, Lord Winterton addressed the following question to the President of the Local Government Board :—

"Whether his attention had been drawn to the statements made by
 "Drs. Michael, of Camberwell, F. Forbes-Ross, Ryan and others, citing
 "cases where infection has been carried through bread sold in chandlers'
 "shops and on insanitary and disease-infected premises, or through
 "exchanged bread : and if so, what action he proposes to take
 "to prevent the continuance of this practice in the future."

Mr. Burns, in reply, said that his attention had been drawn to certain newspaper paragraphs in regard to this matter, and he undertook to make enquiries respecting the allegations.

Accordingly, a circular letter was directed to the Local Authorities requesting information on the subject.

Bakehouses themselves are scheduled under the Factory and Workshops Act as "Workshops," and as such, are required to be registered by the Local Authority, and in consequence of the control thus given, such premises are kept in sanitary condition. It is not in the Bakehouses themselves, however, that the danger is alleged to exist, but in the smaller shops, such as chandlers, grocers, &c.

This type of shop, of which there are only a small number in the City selling bread, are kept under constant supervision, and in the event of circumstances arising thereat, that in my opinion would be likely to prejudicially affect the food sold, steps would be taken to remedy the trouble.

There are, besides these, numerous depôts of the larger catering firms, and these places are kept in good condition and quite up to the standard required by the Act.

During the nine years that I have held the appointment as your Medical Officer of Health, no case has occurred in the City where there has been any evidence of possible contamination by infection from persons employed in these shops.

With regard to the question of the danger arising from the practice, largely in vogue in many parts of London, of the exchange of bread, the percentage of bread sold in the City to customers of the residential class is exceedingly small, and there is, therefore, practically no call upon bakers to adopt this system.

It is very doubtful whether infection is ever transmitted in the ways suggested, and at any rate, in the City, where there is practically no infectious disease; should isolated cases occur they could be dealt with under the Public Health (London) Act, 1891, which provides for the removal to hospital of the patient and the disinfection of the premises.

Although, as I have said, the exchange system is practised largely in other parts of London, I am of opinion that control is absolutely unnecessary, and would only add a further burden to the already heavily inspected trader.

In my opinion, the allegations referred to in Lord Winterton's question, as to the danger to the public health arising from the sale of bread in chandlers' shops and from insanitary and infected premises, or from the practice of the exchange of bread, at any rate in the City, are groundless, and the Local Government Board were so informed.

UNDERGROUND WORKROOMS.

Attention has been called to the necessity for further restrictions upon the use of underground workrooms.

This matter is an important one as affecting the preservation of the health of workers in underground premises, and it must be obvious that some higher standard should be required than obtains in the case of aboveground workrooms, which have the advantage of light and ventilation.

Under the Factory and Workshop Act, 1901, notice of the establishment of a factory or workshop is required to be given to the Factory Department, Whitehall, within one month of their occupation, but this does not apply to workplaces, and in the majority of instances underground workrooms come within this category.

Therefore, while factories and workshops come immediately under the supervision of the Factory Inspector, who informs the local authority, workplaces may be established and be in existence for any length of time without any control unless they happen to be accidentally discovered.

A local authority has power to deal with all insanitary conditions in workshops and workplaces, and to some extent in factories, but it is obvious that if the knowledge of the existence of a "workplace" is dependent upon casual discovery, workers therein are not so well protected as those engaged in "workshops," the existence of which is notifiable. Kitchens of restaurants come within the designation of a "workplace."

Where any definite nuisance exists in an underground workplace, it can be dealt with, but many such places are totally unfit for the purposes for which they are used, and it is next to impossible to make them thoroughly sanitary. It is useless to take such cases into Court because of the difficulty of getting a conviction when everything has been done that could reasonably be expected, although the place in question would still be unsuitable.

Further restriction upon the use of underground workplaces is, in my opinion, necessary, and the compulsory notification of their establishment, as obtains in the cases of factories and workshops, would be a step in the required direction.

PRESERVATIVES IN FOODS.

From time to time I have taken steps to ascertain to what extent the various foodstuffs sold in the City are treated with preservatives, and in all the inquiries I have undertaken, the results have demonstrated how largely this dangerous practice is taking a hold on the traders. I can recall one recent case in which as much as 63 grains of boric acid per pound was found in pork sausages, and another in which boric acid was found in milk to the extent of 43·4 grains per pound.

When one considers that the dose of boric acid according to the British Pharmacopœia is from 5 to 15 grains, and that a person eating one pound of the sausages treated as above, would take into his system a quantity of boric acid four times as large as the maximum medicinal dose, it is not surprising that such would be found difficult of digestion.

Dr. Buchanan, in his report on the question, published some little time since, gave it as his opinion that the "presence of as much boric acid as 42 grains per pound is objectionable from the point of view of public health," and this view is hardly likely to be questioned when one realises that it is by no means excessive for a man to consume one pound of sausages for a meal.

Besides boric preparations, it is well known that other and even more objectionable drugs are sometimes employed ; and with a view to ascertaining to what extent such are used by manufacturers of the largely advertised preservative mediums supplied to sausage makers, &c., fifteen samples were taken and submitted to the Public Analyst, who reported thereon as follows :—

<i>No. of Sample.</i>	<i>Description of Article.</i>	<i>Result of Analysis.</i>
503	Biscuit Powder for Sausage Making	Torrefied Wheat Flour.
504	Sausage Seasoning	Salt 64·1 per cent. Spices 31·6 " Water 4·3 "
505	Preservative	Borax (calculated as dry) 22·13 per cent. Boric Acid 76·88 " Undetermined... .. 0·99 "
506	Meat Preservative	Borax (calculated as dry) 37·13 per cent. Boric Acid 60·41 " Undetermined... .. 2·46 "
507	Beef Seasoning	Common Salt 55·1 per cent. Spices 39·2 " Moisture 5·7 "
508	Sausage Filling	Cooked Starch, probably Maize. Preservative absent.

<i>No. of Sample.</i>	<i>Description of Article.</i>	<i>Result of Analysis.</i>
509	Pork Seasoning	Common Salt ... 59.5 per cent. Spices ... 35.8 " Moisture ... 4.7 "
510	Sausage Filling	Torrefied Wheat Flour.
511	Meat Preservative	Borax (calculated as dry) 20.90 per cent. Boric Acid ... 77.81 " Undetermined... 1.29 "
512	Sausage Filling	Torrefied Wheat Flour.
513	Milk Preservative	Borax (calculated as dry) 42.16 per cent. Boric Acid ... 30.08 " Sodium Benzoate ... 7.93 " Water of Crystallisation and Undetermined ... 19.83 "
514	Special Milk Preservative	Sodium Carbonate ... 12.21 per cent. Sodium Benzoate ... 78.22 " Water... 7.90 " Undetermined... 1.67 "
515	Meat Preservative	Borax (calculated as dry) 11.13 per cent. Boric Acid ... 86.70 " Water and Undetermined 2.17 "
515A	Food Preservative	Dry Borax ... 32.82 " Boric Acid ... 67.18 "
528	For Preserving Meat, Sausages, Pie, &c.	Borax (calculated as dry) 19.79 per cent. Boric Acid ... 68.87 " Common Salt... 9.45 " Water and Undetermined 1.89 "

It will be seen from the foregoing that the preservatives used in 505, 506, 511, 515 and 515A, are all nothing more nor less than simple mixtures in varying proportions of borax and boric acid, the average proportions in these samples being 24.82 and 73.79 respectively.

In view of the claims made by the manufacturers of these samples, and in order to show to what extent these claims are supported, and how the retailer is frequently imposed upon, it is necessary that I should here quote extracts from the advertisements, and will proceed with these *seriatim*.

Sample 503.—This is advertised as a "biscuit powder for sausage making," and is reported to consist of torrefied Wheat Flour. No preservative was present.

Sample 504.—"Sausage seasoning." This is merely a mixture of salt and spices, and contains no preservative.

Sample 505.—Described simply as “preservative.” borax and boric acid present.

Sample 507.—“Beef seasoning, the well-known favourite.” Salt and spices only, and contains no preservative.

Sample 508.—“Proved to be the best absorbent of moisture to be “found.” It is also advertised to be the best filler and binder for all kinds of sausages, because it takes up more water, holds the water and binds the meat, does not sour, and enables a better sausage to be produced at the least expense. This sample is reported to consist of cooked starch, probably maize, and contained no preservative.

Sample 509.—“Pork seasoning” contained only salt, spices and no preservative.

Sample 510.—A granulated bread sold under a fancy name and advertised to possess the following merits :—“It is nothing but bread, “baked and dried in a particular manner so that all moisture is taken “out of the same, consequently, it will take up the greatest quantity of “water.

“It soaks up more water, but all the same mixes with the meat just like ordinary bread.

“It will not sour.

“It makes a firm meat sausage.

“It will not make your sausages burst.

“It does not make a flabby or pasty sausage like biscuit meal.

“It is always ready for use, handy to use.

“Will not get mouldy.

“One pound of it is about equal to two pounds of ordinary bread.”

This preparation for which so much is claimed, is reported to consist of torrified Wheat Flour with no preservative.

Sample 511.—“The renowned preservative. The only proven and “reliable remedy for the hot, damp and muggy weather. Prevents “waste, saves anxiety, stops fly-blow.”

This “renowned preservative,” is proved to be nothing more than a mixture of boric acid and borax,

Sample 512.—Is advertised as a speciality for use in making sausages and polonies. “Will absorb its own weight of fat, and in addition take

"its own weight of water," and the public are cautioned to beware of imitations. Torrefied Wheat Flour, of which this sample consists, would not appear to render imitation difficult.

Sample 513.—This is described as a milk preservative and is "guaranteed free from salicylic acid and formalin compounds and "injurious metallic impurities. Owes its powers of checking decomposition solely to the boron compounds." In addition to borax and boric acid, this sample contained nearly 8 per cent. of sodium benzoate, and it is difficult to see why this latter should be added if, as the makers avow, the preservative powers of the preparation are entirely due to boron compounds. Further, it seems disingenuous to guarantee the absence of salicylic acid, formalin, and metallic impurities, and omit reference to sodium benzoate.

Sample 514.—"An entirely original preparation, and quite harmless even to the youngest infant. This preservative is non-boron in character, and guaranteed free from boracic acid."

This preparation is sold as a milk preservative, and as in the case of Sample 513, exception must be taken to the maker's description. As a substitute for boron compounds, the makers use 78.22 sodium benzoate and 12.21 sodium carbonate, and a preparation (the avowed use for which is the preservation of an infant's diet) containing so large percentages of these drugs cannot, in my opinion, be regarded as "an entirely original preparation and quite harmless to the youngest infant."

The following note on the use of this drug as a milk preservative is taken from Goodwin's* recent translation of Barthel's well-known book on the examination of dairy products, and explains the object of the maker in including it in this sample.

"Carbonate of soda is not used for its antiseptic properties, for it "possesses none, but because of its power of neutralising the lactic acid which forms, and which would naturally curdle the milk. The "development of the bacteria is in no way hindered by the use of this "preservative," which must be regarded as harmful, seeing that it "permits of a milk being in an advanced stage of decomposition without "the appearance indicating the fact."

Sample 515.—"A reliable and effective boron preparation containing "no salicylic acid."

A meat and milk preservative which, it is claimed by the seller, has certain advantages over the preservatives composed of saltpetre, borax, boracic acid, &c. One of these alleged advantages is that it meets with the recommendation of the Departmental Committee appointed by the Board of

Agriculture to inquire into the use of food preservatives. This sample contained the highest percentage of boric acid of any in the series, and I have yet to learn that the Departmental Committee referred to sanctioned the use of preservative agents in milk for which this preparation is sold as well as for meat. In fact the reverse is the case, as the Committee in question have expressly recommended:—

“ That the use of any preservative or colouring matter whatever in
“ milk offered for sale in the United Kingdom, be constituted an offence
“ under the Sale of Food and Drugs Acts.”

Sample 515A.—Known under a proprietary name and advertised as
“ A Food Preservative famous from pole to pole,” also as being
“ the greatest discovery of the age.” This is only borax and boric
acid. From Dr. Teed’s analysis one would hardly be likely to agree
with the makers, that this is a “ special preparation of unquestionable
“ superiority, and considered by users to be the finest production of its
“ kind.”

An interesting sidelight is thrown upon modern methods of Ham and Bacon curing in a circular supplied to purchasers of this preparation.

It appears that curers may follow one of two methods in their operations :—

- (i) Hams, &c., immediately after severance from the carcases, are placed in a solution of this preparation for a few hours, and are then hung up to dry and salted in the usual way.
- (ii) The powder to be sprinkled over the meat, together with the saltpetre and salt in usual salting process ; but by the use of this preparation a saving is made, as one half the saltpetre and salt can be dispensed with and the hams and bacon cured much milder, whilst retaining the power of keeping.

The argument advanced by the makers that this preparation effects a material saving, appeals to the commercial mind ; but I am inclined to think that were disclosure made (as it should be) to the customer at the time of purchase, that the hams sold had been steeped in a boron compound instead of having been prepared in the old fashioned way, such “ economy ” would indeed prove expensive.

Sample 528.—A meat and milk preservative. “ What the Trade has
“ been asking for for years past, has been the minimum quantity with
“ the maximum result, and thus avoid what has often caused trouble.
“ You have it here at a very small cost, looking at the efficiency of the
“ article.”

The directions for use carefully point out that although the quantities to be used appear to be small, they should not be exceeded, as they would only frustrate the real object aimed at, *i.e.*, “ preservation without injury.”

Here, again, the seller appeals to the business instincts of the trader on the question of cost, and the results promised above, the maker endeavours to accomplish by an ordinary mixture of borax, boric acid and common salt.

With regard to the general use of preservatives in foodstuffs, I am strongly of opinion that there is absolutely no justification for their presence whatever, inasmuch as articles of food so treated may, before treatment, be in an advanced state of decomposition, the appearance of which is masked by the preservative, and the directions issued with regard to the use of 515A in the manufacture of sausages, bears directly upon this point. "The required quantity varies according to the class of the article, a superior article requiring less than an inferior one." The term "inferior," as applied to material from which sausages are made, obviously only refers to condition *quâ* decomposition, and the above quoted passage is nothing more nor less than a direct hint that tainted meat can be used if a larger amount of the preservative be added. It is well known that the presence of boron preparations mask the signs of decomposition in meat, and as already mentioned, 515A is only a mixture of boric acid and borax. It will be of interest to quote in this connection the deductions arrived at by Dr. Bernstein, Lecturer in Bacteriology at the Westminster Medical School, in experiments conducted at the instigation of the Medical Officer of Health for the City of Westminster.

"(a) That it did not prevent decomposition proceeding, but that it
"prevented the development of odour, so that it prevented
"persons detecting that the meat was bad."

"(b) The growth of harmless organisms was checked, while the
"harmful ones were allowed to grow and produce harmful
"products."

"(c) When boric acid was added to meat which was beginning to
"smell, the odour was diminished, and the meat might have
"been used without detection for making sausage meat."

"(d) Very large quantities of boric acid would be required to check
"the growth of bacilli [Professor Max Gruber, International
"Congress of Hygiene, 1907, reporting on the subject, stated
"(Vol. II., Proceedings, p. 286), that boric acid is an
"inadmissible preservative for meat, because even in large
"amounts (2 to 5 per cent.) it is not able to inhibit the toxin
"producing organisms to kill them.]"

"(e) By the addition of (0.3 per cent.) boric acid stale meat can be
"used—even after some weeks—for the making of sausages
"and also meat which has already begun to putrefy, without
"the consumer being able to tell by the sense of taste or smell
"that the sausage was a source of danger."

The Departmental Committee appointed to inquire into this question, expressed the view, with which, by the way, I cordially disagree, that the addition of mixtures of borax and boric acid should be permitted in cream, provided it does not exceed 0.25 per cent. expressed as boric acid, and its presence is notified on the vessel, and double that amount in butter or margarine without any notification at all; and this expression I believe to be responsible for the general belief current among traders that the presence of these two drugs in any foodstuffs has received the approval of the authorities. One instance of this I have already referred to in Sample No. 515.

Apart from the morality of making such pretentious claims as those put forth by the advertisers as to the merits of the articles referred to, which it is hardly within my province to criticise, the results of this inquiry demonstrate that with two exceptions, the use of the preparations referred to, although undesirable, is hardly likely to be fraught with actual or immediate danger to health.

The exceptions are samples Nos. 513 and 514, both of which contain benzoates, and with regard to which the makers issue a most misleading circular. I am of opinion that articles with so misleading a description come within the penal provisions of the Sale of Food and Drugs Acts, as it clearly is to the prejudice of the purchaser of any drug or mixtures of drugs if he is misled as to its nature.

Upon my recommendation, these two cases were referred to the City Solicitor to take such action as he deemed necessary.

The unrestricted use of preservatives in foods constitutes, in my opinion, a very serious danger to the health of the community. That the practice is growing, there can be no doubt; and to its maleficent influence, it has been stated, can be traced the growth of Appendicitis. Whatever truth there may be in this, it is significant to note that the development of one has been parallel with that of the other.

It does not seem conceivable, taking the wide range of foodstuffs to which the articles referred to in this inquiry can be added, that a man for his breakfast might ingest salicylic acid, for his dinner benzoates, and for his tea boracic acid; and at the end of such a day would, in all probability, have taken a large medicinal dose of an irritating drug.

The chemical most in demand for this purpose is boracic acid, doubtless on account of its cheapness and its lack of smell and taste.

The ill effects of this drug when given medicinally are:—Indigestion, inflammation of the kidneys, loss of appetite, and various skin diseases; and I am of opinion that many cases of ill-health, for which no obvious

cause can be assigned, are entirely due to the consumption of articles of food heavily treated with this drug, and I cannot express too strongly my conviction that unless the recommendation of the Departmental Committee on the use of Preservatives in Food be given a legal value, and efficient disclosure be compulsory at the time of sale of all articles of food to which preservative has been added, the public have little or no protection from an injury it is otherwise impossible to guard against.

SEIZURE OF PARTRIDGES IMPORTED FROM THE CONTINENT.

The importation of partridges from the Continent, especially Germany and Austria, has, of late years, largely developed, and birds from these places, if in good condition on arrival, command a very fair price. From time to time, however, consignments reach the Market in such a decomposed state that salesmen refuse to accept delivery.

Every precaution is taken by the consigners to ensure that the birds arrive fresh, but should any delay occur in transit from the Continent, in spite of the fact that ice is frequently packed in the cases, the birds arrive much decomposed.

Two such cases occurred in September, when 625 birds consigned from Buda Pesth were condemned by your officers, thus involving the senders in heavy loss, as the charges for express delivery alone are very high. The birds, which had been caught by trapping and netting, were five days in reaching London *via* Ostend and Dover.

They are not of the red-legged French variety, but resemble more closely the ordinary English brown bird.

The Continent is not the most far-distant region from which a portion of our supply of partridges is derived, considerable quantities being received from Russia, and even Manchuria, but as these arrive in a frozen condition, their transport presents fewer difficulties.

EXPORT OF MEAT FOOD PRODUCTS TO THE UNITED STATES OF AMERICA.

In my Annual Report for 1908 reference was made to the Food Laws then recently made operative in the United States of America and the Philippine Islands with regard to Meat Food Products imported into those countries.

Such imports have to be accompanied by an official attestation, signed by the Certifying Officer (for the City your Medical Officer), of precautions taken to ensure the wholesomeness of the food in question, and at the request of the Foreign Office the Local Government Board formulated certain conditions to be observed by traders in England and Wales who prepare or pack meat foods to the countries in question, and who desire that their exports shall be accompanied by the official attestation referred to.

The Certifying Officer is required to keep himself strictly informed, by personal enquiry or in other available ways, on four points, the first three of which are precisely similar to those existing under the Regulations for export of meat foods to the Argentine, and relate to ordinary common-sense precautions with regard to structure and character of premises, cleanliness and wholesomeness of methods employed, the steps taken to avoid the utilization for food purposes of diseased meat in any portion of the premises, and arrangements made safely to dispose of such meat which, on account of disease, unsoundness, unwholesomeness, or any other reason, is unfit for human food.

The fourth point upon which the Certifying Officer was to keep himself informed is what steps are taken to ensure that all meat foods prepared or packed for export to the United States of America and the Philippine Islands are solely the products of animals which, on adequate ante-mortem and post-mortem inspection, have been found free from disease and suitable for human food.

If, in the opinion of the Certifying Officer, the information obtained with regard to any of the four points is unsatisfactory, the attestation is to be withheld, and notice thereof forthwith sent to the Local Government Board.

Copies of the scheduled forms of Declaration and Certificates required are given in Appendix.

From time to time instances have arisen in which firms trading in the City, and whose animals are slaughtered at the Islington Cattle Market, desire to export meat from such animals to the United States of America or the Philippines, and in such cases it has been the custom (approved by the Local Government Board) for your Medical Officer to accept the Certificate of the

Veterinary Surgeon at the Islington Cattle Market as to freedom from disease after ante-mortem and post-mortem examination, and upon that Certificate to issue attestation on Form A.

The Local Government Board have recently called attention to the possibility of mistakes arising with regard to the identity of the animals, and as the continuance of this particular trade depends upon the acceptance of the Certificate by the United States Government, I suggested the advisability, in the traders' interest, of the adoption of the following simple precaution with a view to obviating the possibility suggested :—

That the carcases, after passing the ante-mortem examination by the Veterinary Inspector at Islington, should be stamped on slaughter, and the Certificate issued after successful post-mortem examination should refer specifically to such stamp.

It was, of course, to be understood that such stamp would refer only to freedom from disease, and would not in any way imply that the condition of the animal *quâ* soundness is good or otherwise, as obviously unforeseen circumstances arising after attestation might prejudicially affect the meat, and even render it totally unfit for food.

My suggestions on this point were agreed to by the Sanitary and Cattle Markets Committees, and the system is now in operation.

Since I was appointed Certifying Officer in January, 1909, to the 31st December, 1910, I have issued in that capacity 66 Certificates—27 to Hams, 17 to Bacon, 11 to Mutton, 2 to Lambs, 8 to Veal, and 1 to Venison.

EXPORT OF MEAT FOOD PRODUCTS TO THE ARGENTINE.

The conditions controlling the export of Meat Food Products to the Argentine, with regard to which I reported fully in 1908, are similar to those in operation with regard to the United States of America and the Philippines, with the exception that no ante-mortem or post-mortem examination is required.

The conduct of this business, so far as the City is concerned, is highly satisfactory, and has necessitated the issue by me, in my capacity as Certifying Officer, of 139 Certificates—136 relating to Hams, 1 to Cheese, and 2 to Bacon.

PUBLIC HEALTH (LONDON) ACT, 1891, AS AFFECTING EXPORT OF MEAT DISEASED MEAT.

In my Annual Report for 1904 I urged, without effect, the necessity for seeking an amendment to the law as relating to the seizure of unsound meat. During the year under review, the necessity for more stringent statutory provisions for safeguarding the public from the danger attaching to the sale and consumption of diseased meat has again been made abundantly clear.

Section 47 of the Public Health (London) Act, sub-section 2, enacts that:

“ If it appears to a justice that any animal or article which has been
“ seized, or is liable to be seized, under this section is diseased or unsound,
“ or unwholesome, or unfit for the food of man, he shall condemn the
“ same, and order it to be destroyed or so disposed of as to prevent it
“ from being exposed for sale or used for the food of man ; and the
“ person to whom the same belongs, or did belong at the time of sale or
“ exposure for sale, or deposit for the purpose of sale or of preparation
“ for sale, or in whose possession or on whose premises the same was
“ found, shall be liable on summary conviction to a fine not exceeding
“ fifty pounds for every animal, or article, or, if the article consists of
“ fruit, vegetables, corn, bread or flour, for every parcel thereof so con-
“ demned, or, at the discretion of the court, without the infliction of
“ a fine, to imprisonment for a term of not more than six months, with
“ or without hard labour ” ;

and it is the wording of this section to which exception is taken.

In many cases the guilty party is rendered completely immune from the consequences of their evil deeds, the owner escaping because he had no knowledge, and the butcher because he is not the owner.

If the words “ and the person or persons, if any, under whose control the same was ” were added after the word “ belongs,” both parties would be rendered liable, and on the evidence the decision as to how the responsibility should be apportioned could then be left in the hands of the Court.

The following are two illustrative instances that have arisen within the limits of the City jurisdiction, and consideration thereof cannot but lead to the conclusion that amendment of the Act in such a way as to ensure the punishment of the right person is, in the interests of the public health, of absolute necessity : —

Meat Case, No. 9.

In this case four pigs affected with Swine Fever were seized on the 8th December, 1909.

Investigation was made, and the City Solicitor having received the evidence, advised that there was a legal difficulty, because the ownership was not in the consignor of the pigs. It having appeared that the sender of the meat had been to

some extent misled by an alleged statement of an Inspector of the Board of Agriculture and Fisheries, I addressed a communication to that Board, as a similar case had been brought to their notice in January, 1907, and up to the present no satisfactory arrangement had been made. It was ascertained that the statement of the sender of the meat as to having been misled by an officer of the Board was not borne out; and that the legal owner of the meat was in no way implicated in the transaction.

Meat Case, No. 11.

On the 17th December, 1909, two pigs, extensively diseased and quite unfit for food, with evidence of attempt at concealment, were seized in the Central Market. It was found on investigation that these pigs were the property of a man "C," who stated that he killed them because "they seemed a bit sickly," and sent them to a man "M," and told him he could do what he liked with them. This man "M" forwarded them to a third man "W," who states that without his seeing them his man "E" had forwarded them to London.

The evidence as to the condition of the carcasses was quite clear. This was forwarded to the City Solicitor, who states that he regrets to say "that it appears this is another case in which the consignor was not the person to whom the meat belonged. The owner of the two pigs was a farmer, one 'C.' He killed them, and sent the carcasses to a butcher, 'M,' who sent them to another butcher, 'W,' in Ipswich, and *his man* sent the carcasses to London. 'W' did not see them, or know that they had been sent, and neither of the others named had anything to do with sending them; further, there was no privity between 'C' and 'W'."

It is obviously unsatisfactory that the only person who can be proceeded against in offences of this nature is the person to whom the animal or article belongs or did belong at the time of sale or deposit for sale, such a provision leaving a loophole for anyone to send diseased meat to the Markets without fear of legal consequences.

At my suggestion a representation was made to the Local Government Board urging them to consider the advisability of section 47 (sub-section 2) of the Public Health (London) Act, so as to render liable to proceedings any person, whether the owner or otherwise, by whose instrument or by whose act such meat is sold or exposed for sale or deposited for the purpose of sale, or for preparation for sale.

If the suggested alterations were to be effected, the chance of successful defiance of the Statute, such as those referred to above, would be eliminated, and the guilty person would then receive the punishment for his acts that the law intended.

A clause giving effect to this modification of the Public Health Act has been inserted in the City of London (General Powers) Bill now before Parliament.

CONVEYANCE OF MEAT.

All who have witnessed the unseemly manner in which our meat is conveyed from the markets to local butchers must be impressed by the obvious necessity for the prohibition of the present methods. Improvements certainly have been effected during the past few years, but even now carcasses are piled into carts, many of which are quite unfit for the purpose of conveying food stuffs of any description, they are afforded no protection whatever from the dust and dirt of the public thoroughfares, and it is, moreover, no infrequent occurrence for the drivers to so overload their vehicles that there is no room left for them to sit except upon the carcasses. Having regard to the condition of the clothing of many of these men, this in itself is a most objectionable practice, and one that can hardly fail to have a deleterious effect upon the meat, but at the present time the Corporation have no legal power that will enable them to cope with the question.

In the absence of such statutory powers the education of the traders concerned as to the importance of strict cleanliness in the transport of meat is a matter of some moment, and the Cold Storage and Ice Association is to be commended upon passing the following resolution at the Eleventh Anniversary Meeting held at Manchester on the 27th April, 1910 :—

“ This Association desires to urge all local authorities to adopt and
“ enforce proper methods for the protection during transit of meat,
“ carcasses, &c., intended for human food.”

I have on several occasions brought this matter before the Sanitary Committee, and the following recommendation, submitted on the 26th November, 1907, was endorsed by the Court of Common Council, and duly presented to the Local Government Board :—

“ That the Local Government Board be asked, in considering the issue
“ of Regulations under the Public Health (Regulations as to Food) Act,
“ 1907, to include one for prohibiting the conveyance of meat through
“ the public thoroughfares except in properly constructed carts or other
“ suitable vehicles in which the contents are properly covered and not
“ exposed to view.”

Similar views were entertained by 15 of the Metropolitan Borough Councils, and were presented by the London County Council to the Local Government Board, but up to the present time no practical step has resulted. In June of this year, the Local Government Board were again requested by the Corporation to take action in the direction indicated above.

Meat traders themselves are fully alive to the necessity for the efficient protection of meat during transit, and on the 9th December, 1907, I discussed

the question with a deputation from the Incorporated Society of the London Meat Trades, when the representatives practically agreed with my views on the subject.

In Dublin the Sanitary Authority have power to make Bye-laws, *inter alia*, with regard to this question. Bye-law 21, made under the Towns Improvement Act, 1847, the Public Health (Ireland) Act, 1878, and the Dublin Corporation Act, 1890, runs as follows :—

“ Every carcase or portion of a carcase of meat conveyed through the
“ public thoroughfares shall be conveyed in a properly constructed cart or
“ other suitable vehicle, and shall be properly covered and not exposed to
“ view.”

The Irish are to be congratulated upon the provision of such a reasonable Bye-law, and it seems an anomaly that the protection afforded to the community of Ireland should be withheld from the inhabitants of the rest of the United Kingdom, where the necessity for such is certainly as great.

In this connection there is another matter which affects the interests of traders and consumers alike. I refer to the common practice until recently in vogue of depositing meat, &c., on the pavements in the vicinity of the Market, where it is liable to contamination from numerous sources, of which it is only necessary to present one—the dog nuisance.

At my suggestion the following notice was issued to those engaged in the handling of meat supplies, and I may say that this has to a large extent resulted in abatement of the evil :—

“CENTRAL MARKETS.

“ *Notice to Meat Carriers and Butchers.*”

“ Attention is called to the objectionable habit of depositing meat and
“ offal on the pavement, preparatory to loading, and thus rendering the
“ articles liable to contamination of various kinds. Unless this habit be
“ discontinued, it will be necessary for the Meat Inspectors to take action
“ in accordance with the powers conferred by the 47th Section of the
“ Public Health (London) Act, 1891.”

*Table showing the average deliveries at the Central Meat Market, and other details for successive quinquennial periods during the past 35 years :—

Quinquennium.	Annual Average General Supply.	Seizures by Inspectors.	% of Bad Meat.
	Tons cwt. qrs.	Tons cwt. qrs.	
1874-1878	178,373 10 0	192 18 2	·108
1879-1883	218,200 12 3	282 11 2	·129
1884-1888	249,580 19 2	248 1 2	·099
1889-1893	304,986 5 1	461 15 1	·151
1894-1898	372,440 12 2	749 3 3	·201
1899-1903	410,456 18 1	1,082 13 2	·263
1904-1908	414,906 11 1	1,584 19 3	·382
Years 1909-1910	419,805 7 1	1,571 6 2	·374

The sources of origin of the Central Market Supplies during the past five years are here expressed in terms per cent. of total annual deliveries.

	BRITISH.		† Foreign Killed.	AMERICAN.		Australian and New Zealand.
	Country Killed.	Town Killed.		Home Killed.	American Killed.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1906	17·2	3·4	11·1	17·3	26·0	25·0
1907	17·4	3·1	13·1	16·1	24·6	25·7
1908	17·3	4·2	14·3	13·4	26·1	24·7
1909	17·8	4·9	13·6	10·6	27·5	25·3
1910	16·8	5·7	12·6	7·1	32·6	25·2

† Includes "General Foreign Meat and Produce."

Some idea of the amount of the work of your Inspectors of Slaughter-houses and Meat may be obtained from the following figures supplied by the Superintendent of the Market :—

	1906.	1907.	1908.	1909.	1910.
	Tons.	Tons.	Tons.	Tons.	Tons.
Average daily delivery into the Markets -	1,375	1,358	1,335	1,368	1,371
Minimum delivery on any one day -	186	204	192	229	219
Maximum delivery on any one day - -	2,607	2,594	3,235	3,918	3,200

The heaviest weight previously recorded on any one day (21st December, 1896) was - - - 4,159 tons.

One ton in every 256 tons of meat paying toll in the Central Markets, Smithfield, was condemned last year, as compared with one ton in 278 in 1909.

* I am indebted to the Clerk and Superintendent of the Central Markets for the figures relating to the market supplies, sources of origin, &c.

UN SOUND MEAT, 1910.

The meat, &c., seized by your Inspectors as unfit for food is classified as under :—

1910.	Diseased.				Unsound.				Unwholesome.				Poultry.				Offal.				Fish.				Total.			
	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.	tons.	cwts.	qrs.	lbs.
First Quarter ...	17	8	3	12	249	4	3	18	13	8	1	4	18	5	3	13	11	14	3	21	0	2	0	0	310	4	3	12
Second „ ...	9	2	2	5	255	4	0	26	44	1	3	9	10	19	0	17	22	19	3	18	1	7	2	0	343	15	0	19
Third „ ...	7	17	1	5	175	7	2	17	47	9	1	7	13	3	0	15	21	11	1	15	0	3	0	12	265	11	3	15
Fourth „ ...	84	10	3	3	483	18	0	19	39	5	0	3	125	16	2	12	21	19	3	25	0	0	0	0	755	10	2	6
Total ...	118	19	1	25	1163	14	3	24	144	4	1	23	168	4	3	1	78	6	0	23	1	12	2	12	1675	2	1	24

The above figures include 34,541 separate seizures.

The percentages of meat seized under a summary of the various headings of the above Table and for the preceding five years, were as follows :—

Year.						Diseased.	Unsound.*	Unwholesome.
						Per Cent.	Per Cent.	Per Cent.
1905	...	...	...	...	...	7·9	88·4	3·7
1906	...	...	...	...	...	8·6	88·1	3·3
1907	...	...	...	...	...	15·1	77·4	7·5
1908	...	...	...	...	...	14·2	78·2	7·5
1909	...	...	...	...	...	7·5	87·5	5·0
Average for 5 years						10·7	83·9	5·4
1910	...	...	...	...	...	7·1	84·2	8·7

* Including poultry, offal and fish.

The percentage of *diseased* meat seized was the lowest yet recorded in the City.

TUBERCULOUS MEAT.

An account has been kept of the meat seizures during the year on account of Tuberculosis, and of the diseased meat recorded above, 22 tons 4 cwts. 2 qrs. 6 lbs., or 18 per cent., of the total quantity was found to be tuberculous.

The percentages during the four years 1906, 1907, 1908 and 1909, was 29, 56, 54, and 50 respectively. The following are the details of these seizures in 1910 :—

		No.	lbs.
Carcases of beef	...	7	3,286
Quarters „	...	61	9,412
Pieces „	...	18	1,354
Carcases of pork	...	282	27,882
Quarters „	...	1	35
Pieces „	...	26	671
Carcases of veal	...	2	490
Quarters „	...	2	136
Total	...		43,266

OFFAL.

<i>Ex Bovine Animals—</i>		No.	lbs.
Heads	...	9	1,223
Tongues	...	8	
Lungs	...	18	
Hearts	...	8	
Livers	...	17	
Stomachs	...	13	
Spleens	...	6	
Kidneys	...	5	
<i>Ex Pigs—</i>		No.	lbs.
Heads	...	416	5,031
Plucks	...	49	270
Total	...		6,524

	Tons.	cwts.	qrs.	lbs.
Grand Total	22	4	2	6

CENTRAL MARKETS, SMITHFIELD.

Table showing Weight of Meat delivered, and Meat seized as unsound, during each Month of the Years 1909 and 1910.

MONTH.	Meat delivered at the Market, 1909.			Meat seized by the Inspectors, 1909.			Meat delivered at the Market, 1910.			Meat seized by the Inspectors, 1910.		
	Tons	cwts.	qrs.	Tons	cwts.	qrs.	Tons	cwts.	qrs.	Tons	cwts.	qrs.
January	35,481	18	0	94	8	0	35,837	0	0	75	14	0
February	32,525	13	1	133	16	0	32,227	0	0	132	3	3
March	36,488	18	1	192	19	1	36,060	0	0	99	5	0
April	34,968	14	3	236	18	1	35,394	0	0	151	11	1
May	32,438	5	2	95	15	2	33,046	0	0	84	2	0
June	36,137	18	2	132	5	0	33,427	0	0	68	1	1
July	35,303	19	0	125	7	3	33,986	0	0	136	14	3
August	31,650	12	0	130	18	2	33,005	0	0	87	14	1
September	34,990	7	0	104	4	0	34,639	0	0	67	17	2
October	34,559	1	1	126	2	0	35,235	0	0	133	0	0
November	36,513	3	0	70	9	3	38,420	0	0	251	13	1
December	39,001	4	0	61	16	2	38,275	0	0	349	15	3
TOTALS	420,059	14	2	1,505	0	2	419,551	0	0	1,637	12	3

DISEASED MEAT PROSECUTIONS, 1910.

Date of Hearing.	Where Heard.	Before whom.	Occupation of Person Summoned.	Defendant's Place of Business.	Result.
1910.					
Mar. 18	Guildhall -	Ald. Sir Thomas Boor Crosby, Knt., M.D.	Butcher- -	8, East Street, Tonbridge, Kent.	Fined £20 and £5 5s. expenses.
July 21	Do. -	Ald. Sir John Charles Bell, Bart.	Farmer- -	Waxlow Manor, Southall.	Fined £50 and £1 10s. expenses.

REPORT OF THE VETERINARY INSPECTOR.

1st March, 1911.

To the Medical Officer of Health.

Although I had the honour of being appointed Veterinary Surgeon and Chief Inspector of Meat to the Public Health Department in November, 1909, by an arrangement between the Sanitary Committee and the Cattle Markets Committee I did not take up my new duties until 1st March, 1910, my predecessor continuing in office until that date. One of the first things to attract my attention after entering office was the magnitude and variety of the work *re* meat inspection within the City, a work perhaps unequaled in the world.

The variety of the food requiring inspection is such that it is almost impossible to classify it, although an attempt will be made to do so in future reports.

The Central Markets, Smithfield, are, of course, the chief centre of the work, but the figures showing the amount of food entering the markets do not give a full indication of the work done by the Inspectors, because, in addition to the Central Markets, there are Leadenhall Market, Aldgate Market and Slaughterhouses, 12 Cold Stores with a total capacity of 1,008,000 carcasses of mutton or 252,000 quarters of beef, also the wholesale and retail shops and food factories within the City.

The work of the Inspectors is of a most responsible and difficult character ; duty begins at 5 a.m., the greater part of the inspection is done under artificial light (especially during the winter months), and during a great rush of business. The inspection of pig carcasses causes most difficulty, they being hung with the heads almost on the floor, a position the reverse of suitable for a satisfactory examination of lymphatic glands ; and were it not for the assistance willingly rendered by the salesmen and their assistants the difficulties would be much greater. Not only has the inspection to be done quickly, but particulars have to be taken as to the addresses of consignors of unsound food, certificates (condemned notes) have to be written out, and all the unsound food has to be removed from the markets as rapidly as possible.

When the amount of such food reaches a total of 35 tons in one day, as it has done, the extent of the work may be realised. The system of inspection adopted is to place an officer in charge of each section of the market, a change of inspectors being made every month. The Senior Inspector moves from section to section guiding the inspectors in their work, at the same time arranging for the removal of all unsound food to the sheds, ordering the vans necessary for its final removal, &c. In any case of doubt as to the fitness for food of a carcass, it is detained until examined by the Veterinary Inspector, who may, if necessary, make use of the microscope before giving a decision.

Thus, in a systematic manner, an endeavour is made to seize only what is definitely unfit for food, the interests of the public are carefully guarded, while the consignor is justly dealt with. Certificates (condemned notes) are given for all meat seized, and, if necessary, the reason for seizure is stated thereon.

After the unsound meat has been taken to the sheds it is placed in lock-up vans, and before being passed over the market weighbridges it is coloured by means of an aniline dye, the vans locked, and the contents sent to a manure factory.

The Leadenhall Market and the Cold Stores are carefully inspected, as also the shops and factories.

SLAUGHTERHOUSES.

The slaughterhouses at Aldgate, seven in number, are very old premises, and therefore difficult to improve or bring up to modern ideas as to what slaughterhouses ought to be, although two or three of them have been very much improved lately. Due to lack of sufficient inspectors, the examination of all animals slaughtered has not been as systematic as you desired; this defect is being remedied by the appointment of two additional inspectors, and by the aid of the proposed new Bye-laws it will, in future, be possible to make a careful examination of all animals slaughtered.

The two most important clauses in the Bye-laws provide for—

(1) The detention of all carcasses and offal in the slaughterhouses until examined by an inspector.

(2) That the occupier of a slaughterhouse who intends to kill any animal before 6 a.m. or after 9 p.m. shall give three hours' notice prior to the time of commencing to kill such animal, in order that an inspector may be present at the time of slaughter.

IMPORTED MEAT.

Speaking generally, the meat imported from the various countries is free from *disease*, most of the meat seized as unfit for food being affected with "bone taint" "mould fungi," "brine stains," or occasionally unsound in consequence of some failure of the refrigerating machinery on board ship.

With regard to "mould fungi" found on beef arriving from Argentina, the meat has lately been much freer from such growths, and as the remedy, viz., hygienic handling, sterilization, and rapid transport in modern vessels is in the hands of the importers themselves, it is to be hoped that ere long the amount of meat arriving on the market affected with fungi will soon be an infinitesimal quantity. Keeping in view the fact that such moulds by themselves are

generally not dangerous to health, but only unsightly, the practice at Smithfield is to judge each quarter of beef on its appearance, *i.e.* to say, no hard and fast rules are laid down (and this rule applies to the examination of all meat). If only a few spots are present on the meat, these are trimmed off by the salesmen or their men, and the quarter of beef is passed, but if in addition to fungi there is any slimy condition or decomposition, or if the moulds have penetrated into parts that cannot be properly trimmed out, then such meat is considered unfit for food and seized.

MEAT IMPORTED UNDER LINLEY PROCESS.

That meat can be brought long distances without fungi appearing on it has been proved by consignments of chilled beef arriving from Australia during the year. The meat was conveyed in chambers the atmosphere of which had been sterilised by means of the "Linley Process." When the first consignment arrived on the market I examined the meat carefully, and in view of the opinions expressed in Dr. Buchanan's Report on the treatment of meat *re* "Formalin," I consulted you as to the suitability of such meat for human food. You instructed that a sample of the meat under consideration be sent to Dr. Teed, who returned to you an analysis, of which the following is a copy, viz. :—

Samples A and B.

" These two samples were analysed for formalin with the result—

" A=1.2 parts of formalin per 100,000 parts of meat.

" B=0.6 " " " " "

" A third sample taken from A and B was cooked and examined for formalin, but none could be detected. By formalin is meant 40 per cent. of Formaldehyde. The meat was delivered in one piece; a point steak was cut so as to include the discoloured portion. This may be called sample A. The remainder may be termed sample B."

The consignment and a subsequent one were sold and no complaints have been heard as to their fitness for human food. I understand that the quantity of formalin used is gradually being reduced, until only the smallest quantity necessary to secure complete sterilisation is finally adopted.

AUSTRALIAN MUTTON.

The quality of some of the Australian mutton deposited on the markets and in the Cold Stores during the year has engaged our attention. Some of these carcasses were very small and of very poor quality, and when thawed out presented a most unmarketable appearance, while some of them, on section of the musculature, showed a condition indicative of an unhealthy state of the animals prior to slaughter.

Traders complain that many of the carcasses are entirely unmarketable, not on account of disease, but because they are too thin to stand the effects of freezing and thawing ; further, that such carcasses when disposed of are sold at so low a price as to reduce the value obtained for a better class of mutton. That, of course, is a trade matter with which inspectors have nothing to do, their duty being confined to a consideration of whether the carcasses are fit or unfit for food. Nevertheless, it is in the interests of the consignors in Australia to know that so poor a quality of mutton is entirely unsuitable for the London markets, and this opinion you conveyed to the Agent-General for Australia.

PARASITIC AUSTRALIAN BEEF.

At the beginning of August, by an arrangement made between Dr. Williams, Medical Officer of Health for the Port of London, and yourself, Australian beef suspected of being infested with parasites in certain parts was brought into the Cold Stores within the City subject to the condition that no part of such meat would be exposed for sale until it had been examined and passed by the meat inspectors.

Having ascertained that the previous method of dealing with this class of meat was to examine 10 per cent. in the frozen condition, I consulted you as to the method of examination to be adopted in the City, when it was decided to examine every quarter of beef. Shortly after beginning the examination of the hard frozen meat I formed the opinion that it was impossible to make sure that the quarters of beef passed as apparently sound were entirely free from parasites, and I again consulted you, when it was resolved that tests should be made of forequarters of beef that had been passed. The test was conducted as follows : the flanks and briskets were cut from quarters which had been examined in a frozen condition and, as far as could be ascertained, free from parasites ; these portions were thawed, and then cut into strips about two inches apart down to the ribs and sternum, with the result that 50 per cent. were found to be extensively infested, the nodules in some cases adhering to the periosteum of the ribs. Further tests were made with increasing percentages of infestation. This information was conveyed to the officials of the Finsbury Borough Council ; tests of a similar kind were made there, when 80 per cent. were found affected. The officials of the Southwark Borough Council were next informed, and tests of a similar kind made there showed 100 per cent. infested. During this time tests were continuously being made by this department which showed similar results.

Having all these facts before you, there seemed only one line of action that could be adopted to ensure that all meat passing through the City markets was free from parasites, viz., to excise all flanks and briskets from forequarters of Australian beef. You at once took the matter up, and, as stated in Dr. MacFadden's Report, a Conference was held at the Local Government

Board, at which uniform action on the lines suggested by you was adopted. The table showing meat destroyed ex Cold Stores gives the results.

Our attention was next directed to Australian hind-quarters of beef ; these were also found infested. In order to ascertain the usual position of the parasites, quarters of beef were thawed out and carefully dissected. This showed that, with rare exceptions, the nodules were confined to the region of the stifle joint, and that they could be excised from the quarter of beef in the frozen condition with only a little disfigurement of the meat.

Statistics kept as to the numbers of hind-quarters examined show up to 60 per cent. infested. Microscopical examination and experiments were made by this department in order to ascertain if any of the parasites were alive, or if the eggs or embryos could be found in the blood or lymph in the tissues around the nodules, but with negative results.

During this examination anatomical differences between the description of *Onchocera Reticulata* as given in text-books and the parasite under consideration were observed, which caused doubts as to whether it was, as at first thought to be, *O. Reticulata*, and these doubts have been confirmed by the interesting description given by Dr. Leiper of *O. Gibsoni*.

The amount of extra work entailed in dealing with this meat has severely taxed the whole of the meat inspection staff, overtime having to be done in order to cope with it, but the importers rendered every assistance, and were at all times desirous that no meat of a doubtful character should be exposed for sale.

From the 17th August until 31st December, 1910, 43,649 forequarters of beef and 25,429 hind-quarters of beef were dealt with.

The Commonwealth of Australia have taken this matter in hand, and state that on and after 1st February, 1911, veterinary inspectors will be placed in charge of meat inspection at all abattoirs, and that all carcasses will be carefully examined, the flanks and briskets will be excised from all forequarters of beef, also that all hind-quarters will be examined prior to export.

If this is done carefully, as we believe it will be, then large importations of beef will still arrive from the Commonwealth which, after passing through the markets (where the results of the inspection in Australia will be checked), may be purchased by the public with every confidence that it is free from parasites.

The United States of America and the New Zealand Government have stationed in England veterinary inspectors who watch the interests of their respective countries *re* the class of meat suitable for the markets, and what is here considered as unfit for food. Dr. Wray represents the United States, and Mr. Crabb, M.R.C.V.S., represents New Zealand.

In actual work no friction has been found to arise, and by the mutual interchange of opinions as to what is considered unfit for food in their countries and in our markets, a considerable amount of useful knowledge is obtained. During the latter part of this year the Netherlands Government sent to Smithfield Dr. Berger, one of their veterinary inspectors, in order that he might ascertain exactly what was considered suitable or unsuitable for our markets. He fully understood the practical, in addition to the scientific, part of his duties, and by an interchange of opinions on pathological subjects, difficulties were cleared away. He returned to Holland at the end of the year, and we expect to note good results from his visit.

All the meat imported from Holland arrives in the markets without being subjected to inspection at the docks, and during the latter part of the year, by an arrangement made between Dr. Williams and yourself, meat from Sweden is received on similar terms, viz. :—

- (1) That the whole of the consignments shall come to the Central Markets ;
- (2) That the consignees give notice when the vessel arrives with quantities of meat ;
- (3) That the meat shall not be dealt with until inspected.

I append a table shewing the number of cases of tuberculosis observed within the markets. Regarding this disease in pig carcasses, many cases showed lesions in one or more than one lymphatic gland in the head, without the slightest evidence of the disease elsewhere. This matter has been given a considerable amount of attention during the year, carcasses with apparently *only* the lymph glands of the head affected have been chopped down, the bones of the vertebrae and sternum, the serous membranes, the kidneys and all the lymph glands throughout the body most carefully examined without any macroscopical evidence of the disease being found. The lymph glands of these carcasses were examined by smear and section preparations with negative results.

From information supplied to me it appears that in many of the large provincial towns, *e.g.*, Glasgow, Manchester, Birmingham, Leeds, Cardiff, &c., also in Continental towns, the method of dealing with such carcasses is to cut off the head and pass the carcass. In some of the German States tuberculosis of the pig is dealt with on a similar method to that adopted in the inspection of bovine animals.

That the prevalence of the disease in pigs can be reduced by care in feeding is shown by an interesting experiment conducted in New Zealand, *vide* Annual Report, Department of Agriculture, New Zealand, 1909.

A farmer had been feeding his pigs on separated milk with the following result :—

<i>No. of Pigs killed in 1907-8.</i>	<i>No. found tubercular.</i>	<i>Percentage.</i>
(1) 63	39	61·90
(2) 110	65	59·09
(3) 50	50	100·00

During 1909 he pasteurised his separated milk before feeding it to his pigs with the following result :—

<i>1909.—No. of Pigs killed.</i>	<i>No. found tubercular.</i>	<i>Percentage.</i>
(1) 28	3*	10·70
(2) 36	0	0·00
(3) 40	0	0·00

* Two very slightly affected.

As the Chief Veterinarian remarks, these figures speak eloquently for themselves, as all these pigs were, as before, examined at the time of slaughter by Government Inspectors, and previous to slaughter had been bred, housed and kept under exactly the same conditions as in the previous year. There seems little doubt that the same thing, viz., the feeding of pigs and also calves on milk containing tubercle bacilli is being done every day in this country.

If hygienic measures were adopted in every cowshed, all clinically affected cows sent to the slaughterhouses, there to be killed under supervision, and all milk pasteurised before being fed to calves and pigs, the number of cases of tuberculosis observed in slaughterhouses and markets would soon be considerably reduced with benefit to the feeders of the animals and also to the general public.

During the year the Army Officers attending the Royal Sanitary Institute classes *re* Meat and Food Certificate have received some training at the markets, and 22 Naval Officers have undergone a course of training in practical meat inspection under the tuition of Mr. Sharp, the Senior Meat Inspector.

Before finishing this report, I beg to thank you for the kindness and advice so willingly given during my first year of office, and I also desire to express my appreciation of the loyal and enthusiastic manner in which each member of the meat inspection staff has carried out his duties.

T DUNLOP YOUNG.

ALDGATE SLAUGHTERHOUSES.

CAUSES FOR DESTRUCTION. (Whole Carcases include all organs.)	OXEN.			SHEEP.		GOATS.	CALVES.	
	Carcases.	Quarters.	Pieces of Beef in lbs.	Carcases.	Quarters.	Carcases.	Carcases.	Quarters.
Asphyxia ... ..	...	...	...	3	...	...	...	...
Decomposition ... ..	...	...	270	...	17	...	...	2
Dropsy and Emaciation	2	...	...	63	...	1	1	...
Injuries ... ..	...	...	176	11	4	...	18	...
Pleurisy ... ..	...	...	...	8	...	...	3	...
Pyæmia ... ..	...	...	...	...	...	...	1	...
Tuberculosis	4	29	...	...	...	...	2	...
Total	6	29	446	85	21	1	25	2

DISEASED AND UNSOUND ORGANS DESTROYED.

DISEASES, &c.	EX OXEN.										EX SHEEP.			EX CALVES.			
	Heads.	Tongues.	Lungs.	Hearts.	Livers.	Stomachs.	Spleens.	Mesenteries.	Intestines.	Kidneys.	Heads.	Livers.	Plucks.	Heads.	Feet.	Plucks.	Sweetbreads.
Abscesses ...	7	...	45	...	184	7	...	...	...	...	...	...	...	...	...	...	...
Actinomycosis ...	9	51	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cirrhosis ...	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	...	...
Decomposition ...	...	7	50	...	2	...	...	...	...	...	11	...	...	2	40	2	118
Emphysema ...	...	...	16	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Engorgement ...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...
Enteritis (slight) ...	...	...	...	...	...	...	...	7	7	...	...	...	...	...	...	...	...
Hepatitis ...	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...
Nephritis ...	...	...	...	...	...	...	...	...	...	24	...	...	...	...	...	...	...
Parasitic Disease ...	...	...	25	...	309	...	...	...	...	...	...	571	66	...	...	...	...
Pericarditis ...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy (chronic) ...	...	...	50	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rumenitis ...	...	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis ...	10	...	37	...	20	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	26	58	223	8	530	13	7	7	7	24	11	571	66	2	40	2	118

NUMBER OF ANIMALS KILLED IN THE ALDGATE SLAUGHTERHOUSES DURING
THE YEAR ENDING 31ST DECEMBER, 1910.

Cattle	...	...	...	...	13,760
Sheep	...	...	...	...	16,304
Calves	...	...	...	...	7,672
Total					37,736

COLD STORES.

UN SOUND FOOD DESTROYED FOR YEAR ENDING 31ST DECEMBER, 1910.

				Tons.	cwts.	qrs.	lbs.
Beef, mutton and offal	...	...	...	36	19	1	24
Australian meat (infested with parasites)	223	5	1	27			
Total				260	4	3	23

LEADENHALL MARKET.

UN SOUND FOOD DESTROYED FOR YEAR ENDING 31ST DECEMBER, 1910.

			No.		lbs.
Game	...	...	11,984	...	11,203
Poultry	...	...	3,667	...	12,506
Rabbits and hares	...	...	3,459	...	7,096
Venison (carcases)	...	...	12	...	620
„ (quarters)	...	...	4	...	37
„ (pieces)	...	...	30	...	200
Pork (carcases)	...	...	1	...	50
„ (pieces)	...	...	4	...	24
Mutton (pieces)	...	...	3	...	32
Veal (quarters)	...	...	1	...	32
Pigs' plucks	...	...	1	...	5
Calves' hearts	...	...	18	...	24
„ sweetbreads	...	...	18	...	14
Eggs	...	...	464	...	58
Total			19,666	...	31,901

FISH SUPPLIES.

239,275 tons of fish, of which 169,968 were land-borne and 69,307 water-borne, were received at or near Billingsgate Market during the year.

Of the above, 198,934 tons were consigned to Billingsgate Market, the remainder, viz., 40,341 being delivered at the salesmen's shops in the neighbourhood of the Market.

There was a decrease of 9,189 tons in the land deliveries, and an increase of 389 tons in the deliveries by water.

MONTHLY FISH RETURNS, 1910

Table showing Weight of Fish Delivered, Fish seized as Unsound, and percentage of Fish Condemned to that Delivered, *at or near* Billingsgate Market, and on board boats lying off that place, during each month of the year 1910.†

Month.	Weight of Fish Delivered.		Total.	Weight of Fish Condemned.			Ratio of Fish Condemned to that Delivered.	
	By Land.	By Water.		Tons.	cwt.	qrs.		Per cent.
JANUARY	Tons. 12,378	Tons. 4,322	Tons. 16,700	22	18	0	1 in 729·257 tons, or about	·137
FEBRUARY	12,528	4,468	16,996	15	17	2	1 „ 1,070·614 „	·093
MARCH	14,985	6,828	21,813	127	2	3	1 „ 171·57 „	·583
APRIL	14,649	6,197	20,846	73	6	2	1 „ 284·296 „	·352
MAY	13,890	6,531	20,421	103	4	0	1 „ 198·07 „	·505
JUNE	15,381	5,256	20,637	171	6	1	1 „ 120·499 „	·83
JULY	15,942	5,061	21,003	93	6	2	1 „ 225·052 „	·444
AUGUST	14,778	6,296	21,074	268	10	1	1 „ 78·579 „	1·272
SEPTEMBER	14,349	7,405	21,754	168	7	2	1 „ 129·2 „	·773
OCTOBER	13,602	7,323	20,925	171	6	0	1 „ 122·154 „	·818
NOVEMBER	13,431	5,393	18,824	30	18	2	1 „ 608·698 „	·164
DECEMBER	14,055	4,227	18,282	42	11	1	1 „ 429·533 „	·233
TOTAL	169,968	69,307	239,275	1,288	15	0	1 „ 184·211 „	·538

† Compiled from the Monthly Returns furnished to the Corporation by the Fishmongers' Company.

MONTHLY DELIVERIES OF FISH AT LONDON CENTRAL MARKETS,
SMITHFIELD, 1910.

	Tons	Cwts.	Qrs.
January - - - - -	130	9	0
February - - - - -	149	8	0
March - - - - -	155	14	0
April - - - - -	175	8	0
May - - - - -	135	0	0
June - - - - -	127	4	0
July - - - - -	160	18	0
August - - - - -	106	5	0
September - - - - -	122	5	0
October - - - - -	162	18	0
November - - - - -	123	9	0
December - - - - -	150	14	0
	1,697	12	0

Of the above, 4 tons 8 cwts. 9 qrs. 1 lb. were seized by your Officers, and those of the Fishmongers' Company as unsound, equal to '265 per cent. or 1 ton in 376 tons.

WEIGHT OF FISH DELIVERED, FISH SEIZED AS UNSOUND, AND PERCENTAGE OF FISH CONDEMNED TO THAT DELIVERED, AT OR NEAR BILLINGSGATE MARKET DURING 1910 AND THE FIVE YEARS 1905-1909.

YEAR.	Weight of Fish Delivered.		TOTAL.	Weight of Fish Condemned.	Ratio of Fish Condemned to that Delivered.
	By Land.	By Water.			
	Tons.	Tons.	Tons.	Tons cwts. qrs.	
1905	164,016	47,626	211,642	674 3 2	1 ton in 314 tons, or '318%
1906	157,591	55,483	213,074	1,444 17 3	1 " 147 " '678 "
1907	162,115	71,630	233,745	783 16 0	1 " 297 " '335 "
1908	177,892	63,295	241,187	1,236 12 3	1 " 195 " '511 "
1909	179,157	68,918	248,075	946 15 1	1 " 262 " '383 "
Average (5 years)	168,154	61,390	229,544	1,017 5 0	1 ton in 225 tons, or '443 %
1910	169,968	69,307	239,275	1,288 15 0	1 ton in 184 tons, or '538 %

CONTAMINATED SHELLFISH AND ENTERIC FEVER.

In previous Annual Reports cases have been recorded of Enteric Fever attributed to the consumption of polluted Shellfish, yet in spite of the publicity thus given to the facts, together with the energetic action of many interested in the public welfare, little has been done to remedy what is a potential source of danger to the community.

Dr. Bulstrode, in a report presented to the Local Government Board in 1896, showed conclusively that, at that time, shellfish were cultivated in layings, the greater part of which were specially liable to sewage pollution, and although isolated attempts have since been made to improve matters, no effective alteration in the right direction is likely to result until legislative powers are obtained to protect this class of food and its consumers.

In 1899, subsequent to Dr. Bulstrode's report, a Bill was introduced in the House of Lords, but in view of the unworkable nature of some of its provisions, the Government of the day were unable to afford it the support it deserved, and unfortunately what would have proved to be a useful measure had to be dropped.

It may here be desirable to give a short précis of the Bill, which was entitled "An Act for the Protection of Public Health against Danger arising from the Consumption of Oysters," proposed to deal with the question by giving powers :—

- (i.) To enter upon any oyster laying and take samples.
- (ii.) To prohibit the sale of any oysters from any layings found to be fouled by sewage, giving the owner ten days' notice and according him a hearing, with the right to appeal to the Local Government Board within twenty-one days. The penalty for selling after prohibition being fixed at £5.
- (iii.) To empower the Local Government Board to act in default of the Authority.
- (iv.) To His Majesty in Council to prohibit the importation of oysters from foreign layings, known to be unsound.

As originally drafted, the Authority under the Bill was the County Council, but this was subsequently altered to the Sea Fisheries Committee. There were obvious objections to the relegation of such important sanitary duties to a body having no Sanitary Officers or no Sanitary Authority, and your Medical Officer, who was then acting for the Port Sanitary Authority, gave evidence before the Select Committee against the proposals. Unfortunately, however the views then expressed did not appear to have been shared by the Select Committee.

Other than this question of the administrative Authorities, however, there was only one weak point in the suggested Bill, and that was the fact that oysters only were to be brought within its provisions. It seems an anomaly that the protection afforded to consumers of oysters should be withheld from consumers of other shellfish which are equally liable to pollution.

MUSSELS.

Mussels and Oysters were the only shellfish to which cases of Enteric Fever may have been attributable during 1910, and these have been implicated on several occasions. The following are the facts relating thereto :—

A case of Enteric Fever occurring in Islington, enquiry was made, and it was found that suspicion attached to Mussels eaten by the patient, and procured from a dealer in Billingsgate Market. These mussels had been imported from Holland and had been accompanied by a certificate issued by the Netherlands Authorities to the effect that the layings and ponds from which the mussels in question had been taken "are free from noxious microbes, and "in consequence of their position, not exposed to any reasonable risk of "pollution by sewage or other objectionable filth."

A sample of these mussels was taken and submitted to Dr. Klein, who reported thereon as follows :—

"Re samples of mussels No. 1 brought here on March 8th. The bacteriological analysis shows that these mussels are polluted. They contain each over 50 B. coli communis. They contain each over 50 streptococci. They contain each spores of Enteritides.

"I have also made two large Drigalski plates. On each of these appeared several colonies which might be either B. paratyphosus or B. typhosus. I have made subcultures of these, and when the necessary tests have been made I will report thereon."

Dr. Klein later reported the result of the continuation of his bacteriological experiments as under :—

"I have tested by subcultures the (bluish) colonies which had appeared on the Drigalski plates, and found that none answered the tests either for B. paratyphosus or B. typhosus. None gave an agglutination reaction with the respective blood serum of protected rabbits."

Although it may be agreed that the result of the analysis disproves any allegation that the mussels were directly responsible for the incidence of Enteric Fever, it is clear that they were contaminated and unfit for human consumption, and the attention of the Netherlands Authorities was called to this

fact, and, moreover, was directed to the depreciation which must result to the value of this certificate if mussels so polluted continued to be accompanied thereby.

Outbreaks of Enteric Fever were reported from various parts of London in September, and the only source of possible infection found in common was the consumption of mussels.

A sample of mussels taken from "layings" in Lymptone, South Devon, in the neighbourhood of the River Exe, was obtained on the 20th September at Billingsgate Market, and submitted to Dr. Klein, who reported:—

"At least 180 *B. coli communis* per mussel: anaerobic spores about 9 per mussel.
"No microbes belonging to the typhoid Gaertner group. Result:—Mussels
"passable."

Mussels from Lymptone were the subject of enquiry in December, 1908, when it was ascertained that the locality had been under the supervision of the Fishmongers' Company, and that arrangements had been made for mussels to be gathered from an approved shoal.

On the same date that the above sample was taken, a sample was also procured of North Dutch mussels, and an examination of these by Dr. Klein gave the following results:—

"Some of these mussels contain black mud within the shell. Between 900 and
"1,000 *B. coli communis* per mussel. Anaerobic spores about 10 per mussel.
"Fairly numerous microbes belonging to the Gaertner group. Result:—Mussels
"not clean."

These mussels, which were accompanied by a similar certificate referred to in connection with the Islington outbreak, are said to have been taken from the open sea in the neighbourhood of the Zuyder Zee, and nowhere near any inhabited coast, but it is evident from the analysis that at the time of examination they were largely polluted.

On the 21st September a sample of South Dutch mussels was taken and submitted to Dr. Klein for examination, with the following result:—

"Less than 80 *B. coli communis* per mussel. Anaerobic spores about 8 per
"mussel. No microbes of the Gaertner typhoid group. Result:—Mussels
"passable."

This consignment was accompanied by the certificate referred to above, which I would point out only refers to the purity of the layings or ponds, and not to the mussels themselves, and although I am not prepared to support the suggestion made by the Consul-General for the Netherlands that the contamination has resulted in transit or on this side, that phase of the question must not be overlooked.

The action, however, of the Fishmongers' Company, when their attention had been directed to the condition of these mussels that were being sold with their authority, is significant. In reply to my communication they wrote, "pending further investigation, they have prohibited in the London Markets the sale of mussels from Lympstone in the neighbourhood of the River Exe. The result of the analysis of North Dutch mussels also place the Company in such a position that they will have to prohibit the sale of such mussels coming, as it is stated, from the neighbourhood of the Zuyder Zee."

With regard to the samples from North and South Holland, I have laid the facts before the Netherlands representative in this country, who has been in communication with the Authorities abroad over the matter.

OYSTERS.

A fatal case of Enteric Fever occurring at Chester was reported. Upon enquiry, the following facts were revealed.

The patient, who was in London at the beginning of February last, lunched at a City Hotel, upon the 3rd, and there partook of oysters. Seven days later the patient was taken ill with a virulent type of Enteric Fever, and succumbed on the 28th February.

There appeared no reason to suspect infection from the deceased's private residence, the drains of which had been tested and found to be in good order, and further, he had been in contact with nobody suffering from Enteric Fever.

A sample of the oysters dealt in by the Hotel in question were obtained, and submitted to Dr. Klein for bacteriological examination, who reported thereon as follows :—

- "These were tested for general and for specific pollution.
- "No *B. coli communis* were discovered per $\frac{1}{25}$ part of oyster.
- "Streptococci were present per $\frac{1}{30}$ part of oyster.
- "No enteritidis spores were found per $\frac{1}{4}$ part of oyster.
- "In none of the Drigalski plates were any colonies which in the least resembled either the *B. typhosus* or paratyphosus. Result :—Oysters passable."

Although from this report it would appear that the oysters were not responsible for the death of the patient, such is by no means certain, as we are faced with the usual difficulty in dealing with these cases, and that is the impossibility of getting at the actual oysters presumed to have caused the trouble. A considerable time must always elapse from the date of consumption to the date when the circumstances come to the knowledge of this Department. In this instance there was an interval of five weeks, and it will be readily

seen that oysters eaten five weeks ago might easily be responsible for an outbreak of Enteric Fever, whilst samples taken from the same beds to-day could, upon examination, prove negative.

The attention of the Fishmongers' Company was called to the matter, and a copy of Dr. Klein's report forwarded to them.

On the 20th May, a case of Enteric Fever was notified from Chelsea. There appeared to be no history of any possibility of infection except from oysters of which the patient was in the habit of partaking once a week when he attended the Board Meetings of a City Company. A sample of the same brand of oysters was submitted to Dr. Klein for analysis, who reported thereon as follows :—

" I have analysed the sample of Oysters No. 3 delivered here by your Inspector
" on May 31st.

" (1.) As to general pollution—

" (a) The oysters contained no *B. coli communis*.

" (b) The oysters contained no streptococci.

" (c) The oysters contained enteritides spores per $\frac{1}{4}$ of oyster.

" (2.) As to specific pollution as tested by Drigalski plates the oysters contained
" no microbes belonging to the group of Paratyphoid-Typhoid bacilli.

These oysters were, therefore, above suspicion, but the fact must not be lost sight of that the oysters examined were procured on the 31st May, whereas those were eaten on the 22nd April, and this again is a further illustration of one of the difficulties that Sanitary Authorities have to contend with in their endeavours to ensure the purity of the shellfish sold within their districts.

Another case of Enteric Fever, with which was associated the consumption of oysters, occurred in January in the West Sussex Combined Districts, the circumstances of which were as follows :—

Two dozen oysters were delivered at a local residence by a fisherman who stated that they were supplied to him by a firm of salesmen in Billingsgate Market. There appeared to be some reason to doubt the truth of this statement, the Medical Officer of Health for the District believing that the man obtained the oysters from a local hawker. Enquiry at Billingsgate Market substantially supported this view, as the firm from whom the oysters were alleged to have been purchased, altogether repudiated any transaction with the man in question. The oysters were served to the table cooked, but the patient partook of some before they had been submitted to this process, and was the only person in the house affected. This case was only brought to my notice with the object of proving or disproving the statement that the oysters came from the City Markets.

FISH FILLETS.

There has been during the past few years an increasing demand for a certain class of fish which has the appearance of being heavily smoked, and on casual inspection bears a marked resemblance to the famous Scotch Haddies. This is not put up for sale in the entire fish, but in fillets only, and my attention having been called to an allegation that this fish, although sold as "smoked haddocks," had in reality not been smoked at all, but merely salted and dyed, I caused enquiries to be made and, found that it was sold largely in Billingsgate and Farringdon Markets and by the various fishmongers throughout the City as "prime fillets," "fillets of fish," and "Scotch fillets," but I could find no substantiation of the statement that they were sold as "smoked haddocks."

The fish used for this purpose are haddocks, cod, cat-fish, tusks and coal-fish, and I am informed that the method of preparation adopted in Aberdeen, Grimsby, Hull and some Welsh seaports, from whence the major portion of this class of goods emanate, is as follows:—The fish is headed, gutted, washed in clean water, split and filleted. The fillets are then dipped in a weak solution of Annatto, and afterwards soaked in clean made pickle, being subsequently dried on spits in a kiln. Occasionally they are slightly smoked.

The result of an examination made by the Public Analyst shows the composition of the sample to be as under:—

Water	-	-	-	-	75.74 per cent.
Fish (dry)	-	-	-	-	22.27 „
Salt	-	-	-	-	1.99 „
					<hr/> 100.00 per cent. <hr/>

Dr. Teed adds that some proportion of the salt found would be normal to the flesh of a salt-water fish containing this amount of water, and that "the dye was not Annatto, but, in my opinion, a coal tar derivative. The amount of dye was so small in the samples submitted that its identity could only be approximately made out. It was a dye somewhat of the methyl-orange type, which is, I believe, largely employed for colouring imitation Damara sugar, sweetmeats, &c."

It will be seen therefore, that the information afforded me that the dye used was Annatto is not borne out by the report of the Analyst.

The trade in fish fillets was first introduced about 10 or 12 years ago by an enterprising Aberdeen merchant, with the object of finding a market in South Africa for a large glut of small haddocks which had been landed from the North Sea. The long journey made it necessary to use a preservative, and to this was added a small quantity of liquid Annatto for colouring purposes.

As the innovation became known, a demand sprang up in the home markets, and a large number of fishermen are now engaged in this practice. Apart from the fact that the dye is admittedly used to make it look better than it really is, there seems to be nothing objectionable in the mode of preparation, which I am informed is carried on under satisfactory conditions, and the goods, moreover, do not appear to be sold under any false or misleading description, but while it is not possible to say whether aniline dye employed in such small quantities is or is not poisonous, there are grave objections to its use as a colouring agent for foods while other absolutely innocuous materials are at the disposal of the manufacturers; it seems only right that if the use of the dye is to be continued, the fact should be disclosed to the purchaser at the time of purchase.

The publication in March last of the results of the analysis referred to above raised considerable controversy in the Trade, and definite assurances and guarantees were not lacking that nothing but Annatto was used for colouring purposes, one firm asserting that they were prepared to prove this, if necessary, in a Court of Law, and indeed, samples submitted by them to their own Analyst were found to contain only Annatto.

UN SOUND CRABS.

At the instigation of the Medical Officer of Health for Islington, the presiding Magistrate at the North London Police Court on the 2nd May last, formally condemned and ordered to be destroyed four kits of crabs, 150 in all, that had been submitted to Dr. Harris for his examination. It was stated that they were bought that day by an Islington trader from a salesman in Billingsgate Market, who returned the purchase money when he learnt that they had been condemned. As is usual in these cases, no positive evidence was procurable that the crabs condemned were part of the same consignment as those sold at Billingsgate Market on the 2nd May to the Islington fishmonger referred to.

On the day of the purchase consignments of crabs reached Billingsgate Market from Crail, in Fifeshire, having been in transit two days. No other complaints were received as to their condition, and it is quite possible that, although alive when put on rail, some may have died en route to the City. Crabs are fish that deteriorate quickly after death, decomposition setting in almost immediately, and one dead member of a crate or kit may affect the whole parcel. The same applies to the boiling of dead or unsound crabs. It is the invariable rule of the Trade to select only sweet or live crabs for the boiling pots, all "turned" or stinking crabs being destroyed. It would,

however, be difficult to provide that no decomposing crab found its way into the copper, and if, unfortunately, this happened, the whole batch would be affected. This, in all probability, is what happened in the present case.

It is therefore obviously in the interest of the salesmen to see that only absolutely fresh and sweet crabs are cooked.

PACKING OF FISH AT BILLINGSGATE MARKET.

An incident illustrative of the necessity for the observance of scrupulous cleanliness in the conduct of the fish trade came before my notice in November.

A case of Enteric Fever was notified in an outlying borough, and in the course of the usual investigations following such cases, it was ascertained that the patient had a particular liking for fried fish, which he always purchased from a local vendor.

When approached on the matter, this vendor, while not admitting the possibility of infection from his fish, made a serious complaint with regard to the dirty condition of the boxes in which he received his fish from Billingsgate. He alleged that it was no infrequent occurrence for such boxes to arrive "filthy and stinking, and look as if they had never been washed out." The decaying and decomposing remains of previous contents frequently adhering to the sides and in the corners, the fish in contact with the wood of the boxes was often so foul-smelling that it had to be destroyed, and only such of the contents as had escaped contact with this dirty receptacle was fit to eat.

The Fishmongers' Company had, prior to my representation in the case, requested the market salesmen to adopt a more systematic method of ensuring that their wares were at least packed in decently clean cases, but at my request they undertook again to take this matter up, and the following letter to the salesmen indicative of more stringent action in the future, has at any rate resulted in the absence of further complaint.

"It has unfortunately been the practice for boxes containing fish to be used over and over again without being thoroughly washed.
"Serious complaints have recently been made by Medical Officers of Health and others.

"Illness has been traced by the pollution of fish by being in contact with the decaying matter in the boxes.

"I will thank you to ask your consignors for the future to see that all boxes are properly cleansed before fish is placed in them.

"It is the intention of the Company in the future to detain and destroy all boxes their Meters consider unfit for use."

To take such precautions as will ensure that sound fish is placed in clean boxes appears so obviously common sense, even in their own financial interests, that it is difficult to see how responsible tradesmen can afford to neglect it, even should they be totally regardless of the most elementary principles of modern hygiene.

INSPECTION OF FOOD AT RIVERSIDE WHARVES, &c.

As the result of the daily inspection of the City wharves, 110 loads of unsound food were removed from these places during the year by the Cleansing Department.

The material so disposed of comprised :—

				<i>Tons</i>	<i>Cwts.</i>	<i>Qrs.</i>
Tinned fruit and vegetables	...	...	...	37	5	3
Condensed milk	...	...	...	12	10	2
Miscellaneous tinned food	...	...	...	47	11	0
Fruit pulp	...	...	...	26	3	3
Fruit and vegetables	...	...	...	7	18	2
Miscellaneous food	...	...	...	1	16	0
Total	...	...	...	133	5	3

The greater portion of the above was removed at the written request of the owners. Section 47 (8) of the Public Health (London) Act, 1891, provides that—

“Where a person has in his possession any article which is unsound
 “or unwholesome or unfit for the food of man, he may, by written
 “notice to the Sanitary Authority, specifying such article, and containing
 “a sufficient identification of it, request its removal, and the Sanitary
 “Authority shall cause it to be removed as if it were trade refuse.”

This provision takes away the ground of a common defence in prosecutions for being in possession of unsound food. It has often been suggested that the food was set aside with the intention of destroying it before it was discovered by the Inspector. This power to notify to Sanitary Authorities under this section affords a test where this line of defence is adopted.

Additional powers with regard to dealing with imported food have now been conferred upon your Officers by the Regulations made by the Local Government Board under the provisions of the Public Health (Regulations as to Food) Act, 1907.

ICE CREAM.

In 1910 there were 241 premises in the City where ice creams were sold, as compared with 248 in 1909.

In 106 instances the ice cream sold at these establishments was manufactured within the City, and in 135 cases the commodity was made in other districts ; in each of the latter cases letters of enquiry were sent to the Medical Officer of Health of the Borough in which the manufacture took place, and only one unfavourable reply was received, and then only as regards the defective paving of the yard at the place of manufacture—this is a distinct improvement on former years, clearly showing the satisfactory results of the increased supervision that has been exercised over this particular kind of business.

These places may be classified as under :—

	<i>Number.</i>	<i>Place of Manufacture.</i>	
		<i>In the City.</i>	<i>In other Districts.</i>
Tea shops	125	37	88
Confectioners	21	16	5
Small confectioners and light refreshment shops ...	95	53	42

With two exceptions, the 95 small confectioners and refreshment shops were kept by foreigners.

ITINERANT ICE CREAM VENDORS.

In the course of the year 25 itinerant vendors were found in the City, only one less than last year. It was ascertained that in all cases the material they were selling was manufactured outside the City.

Upon making enquiry of outside districts, it was found that in two instances the addresses displayed on the barrows were incorrect, and in three cases the local authorities took action in regard to insanitary conditions of manufacture as follows : one place required cleansing, one was not carrying out the manufacture in a proper manner, and in the other case the premises were defective, but manufacture properly conducted.

Five itinerant vendors of ice cream were summoned for failing to exhibit a name and the place of manufacture of the ice cream on the barrow from which they were selling, contrary to the provisions of the London County Council (General Powers) Act, 1902, Sections 42, 43 and 44.

In two cases fines of 10s. and 3s. costs were imposed, in another 5s. and 3s. expenses was inflicted, and in another the defendant was let off on payment of the costs 3s., and one vendor was sent to prison for three days.

DAIRIES, COWSHEDS, AND MILKSHOPS ORDERS.

At the end of the year there were 638 purveyors of milk registered in the City of London, as compared with 602, an increase of 36.

The sale of milk was discontinued at 25 premises and the owners' names removed from the register, 61 new premises were added, and 25 changes of ownership necessitating re-registration occurred.

Section 5 of the London County Council (General Powers) Act, 1908, provides that any Sanitary Authority in the Metropolis may remove from or refuse to enter on the Register the names of dairymen or purveyors of milk whose premises are, in the opinion of such Sanitary Authority, for any reason unsuitable for the sale of milk thereon. Any person feeling aggrieved by any decision of a Sanitary Authority under the provisions of this section has the right of appeal within twenty-one days from the date of such decision to a Court of Summary Jurisdiction.

Before this Act came into force purveyors of milk could be placed on the Register without any restrictions, and it is greatly to the advantage of the public health that Sanitary Authorities should be armed with the powers provided by this section as the sale of milk in small chandlers' shops, entirely unfitted for the proper storage of such a susceptible article as milk, is most objectionable from a public health point of view.

Two cases occurred in the course of the year in which action was taken under the section referred to above with regard to premises unfitted for the sale or storage of milk. In one case, a small grocer carrying on business in George Street, Minories, the place was found to be unfit for the purpose of the sale of milk, and the applicant served with an intimation notice as to the requirements imposed upon retailers of milk; before further action could be taken the premises were closed. In the other case, also that of a grocer, certain conditions were imposed upon the applicant which she failed to observe, and the matter is now in the hands of the City Solicitor.

No case of infectious disease has occurred at a registered milk shop during the year.

A list of Registered Purveyors of Milk in the City is given in Appendix.

SALE OF FOOD AND DRUGS ACTS.

During the year 1,202 articles of food and drugs were analysed under the Sale of Food and Drugs Acts, 1875 to 1899. Of this number, 72 were taken as test samples without the formalities imposed by the Act being observed—these samples being made up as follows, viz., 52 milk samples, principally taken at Railway Stations, 15 samples of preservatives, 2 samples of filleted fish (for preservatives), and 1 sample each of cydrax, chocolate and Coto suet.

Of the former samples, 32, or 2·8 per cent., were certified by the Public Analyst to be adulterated or not up to standard, as compared with 3·27 in 1909.

A summary of the Quarterly Reports on all samples examined by the Public Analyst, showing both those taken in accordance with the Act and those taken otherwise, and the percentage of adulteration of each individual article, is given on pages 150-151. In 1901, the percentage of adulteration in the City was 13·11, and has since steadily fallen to the present figure—the lowest on record.

The percentage of adulteration of samples taken in England and Wales in 1877 was 16·2, and this has continuously fallen to 8·5 in 1908, this being the latest year available.

The accompanying Table has been partly compiled from the Annual Reports of the Local Government Board, to which are added some figures for the City of London, and London as a whole :—

YEAR.	Total Number of Samples Examined in England and Wales.	Number Examined in the City of London.	Percentage of Total Number Examined in City of London.	Number of Persons to each Sample examined.		
				England and Wales.	*City of London.	London.
1881	17,823	162	·92	1,462	318	760
1891	29,028	169	·42	999	227	580
1901	67,841	854	1·26	479	32	291
1909	97,985	1,190	1·31	330	15	202
1910	Return not yet received.	1,202	—	—	14	—

* The figures in this column are based on the Imperial night census, and are obviously misleading. Unfortunately there are no accurate means of arriving at the number of persons in the City during the daytime.

MILK.

A slight decrease in milk adulteration during 1910 is shown by the following Table :—

Year.	No. of Samples Examined.	Found Genuine.	Found Adulterated.	Percentage of Adulterated Samples.
1901	392	209	83	21.2
1902	599	519	80	13.3
1903	517	457	60	11.6
1904	452	417	35	7.7
1905	481	445	36	7.5
1906	556	513	43	7.7
1907	472	432	40	8.4
1908	469	440	29	6.2
1909	520	495	25	4.8
1910	474	454	20	4.2

It is doubtful if this percentage will be materially reduced ; milk is, and always has been, the object of the dishonest trader's especial attention, no doubt largely on account of the ease with which it can be deprived of a goodly portion of its fat, or its bulk increased by the addition of water or skimmed or separated milk. A danger always present when the adulteration takes the form of added water is the source of the water used for the purpose of the dilution, which is not infrequently obtained from the nearest available, and not always sanitary, supply, even the water from Public horse troughs being commandeered.

The extent of sophistication of milk samples was in percentages of added water 5 to 24 per cent. ; abstracted fat from 6 to 57 per cent. ; in three cases the samples were found not only to be adulterated with added water, but were also deficient in cream as well.

In no case was boric acid, formalin, or salicylic acid found in any milk samples submitted to the Public Analyst.

The following Table shows the relation between place of purchase and adulteration :—

Where Purchased.	No. of Samples taken.		No. Adulterated.		Percentage of Samples Adulterated.	
	1909.	1910.	1909.	1910.	1909.	1910.
At shop ...	488	435	21	13	4.3	2.9
In the street...	18	16	1	—	5.5	—
During delivery ...	14	23	3	7	21.4	30.4
Total ...	520	474	25	20	4.8	4.2

An improvement is apparent in the quality of milk sold from milk barrows in the streets, no case having been detected.

The increase of adulterated samples of milk taken in course of delivery is accounted for, in a great measure, by the discovery that a farmer carrying on business at Cheshunt was supplying a wholesale London dealer with milk of an inferior quality. Two samples of this individual's milk was taken on its arrival at Liverpool Street Station by an evening train, and two further samples of milk from the same source were taken at the same station on its arrival early next morning—all these samples were found wanting, and the vendor was prosecuted and ordered to pay fines amounting to £25 and £2 14s. costs.

In two of the other cases the milk was being delivered by wholesale milk dealers to their retail customers. The adulteration in one instance was 40 per cent. fat abstracted, and a fine of £20 and 16s. 6d. costs was inflicted, this being the defendant's third conviction; and in the other, 24 per cent. of added water was present, a fine of £20 and £3 3s. costs was imposed, the full penalty for a first offence, the Magistrate not being satisfied as to the transference of the business to the defendant by her husband, against whom action in the first instance was taken; in the other case, the sample was taken as being delivered by a wholesale firm to a private customer—the firm in question gave a satisfactory explanation of the occurrence, and no further action was taken.

The action taken in regard to the 20 samples of milk reported against by the Public Analyst was as follows:—17 were proceeded against, and fines amounting to £103 1s. and £15 17s. 6d. expenses imposed; in two instances the vendors were cautioned, one defendant proved warranty, and in one no action was taken.

The amount of individual fines ranged from £20 to 20s. Two persons escaped on payment of expenses, 12s. 6d. and 17s. 6d. respectively.

BUTTER.

484 samples of butter were taken, of which 7, or 1·4 per cent., were certified as being adulterated.

The figures for 1910 and nine previous years are given hereunder:—

Year.	No. of samples taken.	No. of samples found Genuine.	No. of Samples found Adulterated.	Percentage of Adulterated Samples.
1901	241	226	15	6·2
1902	299	292	7	2·34
1903	368	367	1	·27
1904	442	429	13	2·94
1905	354	350	4	1·14
1906	328	311	17	5·18
1907	411	398	13	3·16
1908	381	376	5	1·30
1909	457	452	5	1·09
1910	484	477	7	1·4

Special attention has been paid, as in the past seven years, to the character of butter supplied when slices of bread and butter have been asked for at coffee-houses, and it is regrettable that the following table shows that there is an increase of this despicable form of fraud since the last year. It is a curious fact that out of the five instances of margarine substitution three were perpetrated by persons newly established in business in the City. The percentages of margarine present in the samples varied from 90 per cent. to 100 per cent.

Date.	Samples taken.	Cases of Substitution.	Percentage Substituted Samples.
1903	71	19	26.7
1904	101	12	11.8
1905	16	Nil.	Nil.
1906	87	12	13.8
1907	184	8	4.3
1908	112	1	0.9
1909	115	1	0.9
1910	110	5	4.5

Proceedings were taken against the vendors of these samples in four instances, and fines of £1 and 17s. 6d. expenses, £2 and 17s. 6d., and £5 and 17s. 6d. were inflicted, and in one case the defendant was ordered to pay the expenses amounting to 17s. 6d.

One vendor was cautioned.

One sample of butter purchased at a provision shop was found on analysis to contain 70 per cent. of margarine; the vendor in this case was summoned, and pleaded in extenuation a new assistant had served the article, and the Magistrate ordered him to pay expenses, 22s. 6d.

In the other case the "butter" was purchased with a roll of bread at a restaurant; it consisted entirely of margarine. The defendant pleaded that he had purchased the article in a paper marked "Pure Butter," and the Justice dismissed the case.

COFFEE.

It is satisfactory to report that none of the 24 samples of coffee examined during the year were reported against.

In 1901 the percentage adulterated was 9.

MUSTARD.

22 samples of this article were examined, and in no case was adulteration detected.

The accompanying Table shows the amount of mustard adulteration discovered during the last ten years.

Year.	Samples taken.	Found genuine.	Found adulterated.	Percentage of Adulteration.
1901	23	20	3	13.0
1902	28	28	Nil.	Nil.
1903	15	15	Nil.	Nil.
1904	15	15	1	6.2
1905	50	48	2	4.0
1906	8	8	Nil.	Nil.
1907	14	14	Nil.	Nil.
1908	39	38	1	2.5
1909	24	23	1	4.2
1910	22	22	Nil.	Nil.

DRUGS.

Of the 40 samples of drugs procured at the various chemists' establishments in 1910 within the City, not one was found to be deficient; in addition to the above, 13 prescriptions caused to be made up by them were all found, on analysis, to be correctly dispensed.

The following Table includes particulars of drug adulteration in the City during the past ten years :—

	Samples taken.	Found genuine.	Found adulterated.	Percentage of adulteration.
1901	111	103	8	7.2
1902	79	74	5	6.3
1903	65	60	5	7.7
1904	52	48	4	7.7
1905	61	56	5	8.2
1906	47	42	5	10.6
1907	65	59	6	9.2
1908	57	55	2	3.5
1909	86	84	2	2.3
1910	40	40	Nil.	Nil.

An interesting comparison of the dispensing of prescriptions is shown in the following table :—

	Number dispensed.	Number correctly dispensed.	Inaccurate.	Percentage inaccurate.
1907	25	12	13	52.0
1908	18	16	2	11.1
1910	13	13	Nil.	Nil.

This matter is one of great importance to the public that the drugs supplied them are of good quality, and still more important that they should also get the intention of their medical attendant carried out by the proper compounding of his prescription.

GOLDEN SYRUP.

Four samples of golden syrup have been examined and found to be genuine.

OLIVE OIL.

Eight samples of olive oil have been submitted, and in each case a satisfactory report has been given by the Public Analyst.

BRANDY.

Two samples of brandy have been analysed and found to be of the required strength.

WHISKY.

Of nine samples of whisky examined, two, or 22·2 per cent., were found to be below the standard strength.

The dilution in each case was not excessive, and the vendors of the samples were cautioned.

GIN.

Six samples of gin were submitted for examination, and were found of satisfactory strength.

RUM.

Nine samples of rum were obtained for analysis. Three of this number were reported against—the amount of dilution in two cases was carried but slightly below the standard, the vendors were therefore cautioned; in the other case the rum was found to have been reduced to 43·7 degrees under proof. The vendor was prosecuted, and the defence set up was that earlier in the morning of the day upon which the sample was purchased, a customer had purchased half a pint of rum, which he took away and afterwards returned, and asked to have exchanged for Scotch whisky; this was done, and the returned rum placed back in bottle, from which the analysed sample was afterwards supplied. In view of the possibility of the rum returned to the publican having been tampered with, the Magistrate ordered the defendant to pay expenses 18s. 6d.

MARGARINE.

Five samples of margarine were examined for excess of water, and also to ascertain if the provisions of the Act in regard to labelling were carried out.

No excess of moisture was present in any of the samples, and the paper in which the samples were served were all marked, but one being illegible the vendor was cautioned to exercise more care in the future.

OTHER SAMPLES.

The remaining samples, which were all genuine, comprised 15 of cocoa, 1 of Demerara sugar, and 1 of Pearksown, the latter examined for any excess of water.

SAMPLES TAKEN WITHOUT FORMALITY FOR TEST PURPOSES.

72 samples were taken without the recognized formalities of the Act being observed, the object being, in most cases, to avoid publicity.

Of the samples so examined, 52 were of milk taken at the railway station, in 48 instances at the same time and from the same churns as the samples required for bacteriological purposes were obtained, and which are reported on together in another part of this Report (see page 30). Of the remaining four, two were taken in connection with an enquiry in regard to a suspected dealer, who finally disappeared, the shop being closed and discarded before an official sample could be taken.

In the other two cases they were obtained from customers of a suspected milkman, whose milk was taken the following morning as he was delivering it to one of them, with the result that a summons followed, and a £20 fine and £3 3s. costs inflicted.

CIDER.

The attention of the Board of Agriculture and Fisheries has, for some years past, been directed against the practice adopted by certain traders of placing upon the market, and describing as "Cider," a beverage not wholly derived from the apple.

Last year samples of a so-called cider advertised as non-alcoholic were submitted to the Government Analyst, who reported upon them as follows:—

"The sample is a mixture of genuine cider and a solution of cane sugar, to which a small quantity of Phosphoric Acid has been added."

Enquiry in the City revealed the fact that many of the larger caterers displayed on their menus similar beverages to the above, describing them as "Cider non-alcoholic," "Sparkling Cydro," "Cydrax," &c.

Samples were submitted to the Public Analyst, and in the case of "Cider non-alcoholic" he reported that the "samples proved to contain 2·6 per cent. of Proof Spirit and 2·09 grammes per 100 c.c. of cane sugar."

It will be seen, therefore, that this article is not "non-alcoholic," neither is it cider.

It is the practice in this particular case, when cider is asked for by a customer, to hand him a glass of this beverage, and the purchaser, not seeing the bottle, is not warned by the label thereon that the article is not genuine cider.

In short, he is served with an article which, in the words of Section 6 of the Food and Drugs Acts, 1875, "is not of the nature, substance, and quality of the article demanded," and under this Act the seller is liable to a penalty of £20.

When the attention of the Company in question was directed to their position under the above-mentioned Act, they at once expressed their desire to meet the Authorities in the matter, and I received the following undertaking from them:—

"We have now seen the makers, and find that the error is entirely our fault in not having had the name altered on our menu. The correct name, however, appears on each label, and also on our show cards which we have in all our establishments. The manufacturers inform us that this alteration in name was made about a year or so ago, and we have to express our regret that, owing to the many details of our business, it had escaped our attention, as you know it is not our desire to supply the public with an article different to what they demand, and the name will be altered as from this week."

In the other cases the result of the analysis was similar to the above, and when the attention of the sellers was directed to the matter, they expressed a willingness to at once stop the misinterpretation of the term "Cider," and the menu was accordingly amended.

I am of opinion that in these cases the principle of allowing the traders to voluntarily remedy an unwitting infringement of an Act of Parliament is preferable to proceeding formally under the Sale of Food and Drugs Act.

SALE OF FOOD AND Articles examined during each

Articles submitted for Analysis.	Quarter ending 31st March.				Quarter ending 30th June.			
	No. of Samples taken.	No. Genuine.	No. Adulterated.	Percentage of adulteration.	No. of Samples taken.	No. Genuine.	No. Adulterated.	Percentage of adulteration.
Milk	188	181	7	3.7	98	95	3	3.0
Butter	167	165	2	1.1	135	133	2	1.4
Coffee	5	5	...	...	5	5	...	...
Mustard	4	4	...	...	4	4	...	...
Cocoa	2	2	...	...	5	5	...	...
Olive Oil	4	4	...	...	3	3	...	...
Drugs	18	18	...	...	9	9	...	...
Pepper	7	7	...	...	...	...	...	...
Golden Syrup	4	4	...	...	...	...	...	...
Margarine	5	5	...	...	...	...	...	...
Brandy	2	2	...	...	...	...	...	...
Rum	2	2	...	...	...	...	...	...
Gin	2	2	...	...	...	...	...	...
Whisky	2	2	...	...	...	...	...	...
Demerara Sugar	1	1	...	...	...	...	...	...
Prescriptions ... ..	...	...	...	...	...	...	...	...
Pearksown	1	1	...	...	...	...	...	...
	414	405	9	2.1	259	254	5	1.9
INFORMAL SAMPLES—								
Milk	2	0	2	...	48	39	9	...
Cydrax	1	1	...	...	...	...	...	...
Chocolate	1	0	1	...	...	...	...	...
Fish	2	0	2	...	...	...	...	...
Preservatives ... ..	...	...	...	...	15	15	...	...
Coto Suet ... ..	...	...	...	...	1	...	1	100.0
Total of Informal Samples	6	1	5	83.3	64	54	10	15.6
TOTAL SAMPLES FOR YEAR	420	406	14	3.3	323	308	15	4.6

DRUGS ACTS, 1875-1907.

Quarter of the year 1910.

Quarter ending 30th September.				Quarter ending 31st December.				Total for 1910.			
No. of Samples taken.	No. Genuine.	No. Adulterated.	Percentage of adulteration.	No. of Samples taken.	No. Genuine.	No. Adulterated.	Percentage of adulteration.	No. of Samples taken.	No. Genuine.	No. Adulterated.	Percentage of adulteration.
102	94	8	7.8	86	84	2	2.3	474	454	20	4.2
99	98	1	1.0	83	81	2	2.4	484	477	7	1.4
4	4	...	...	10	10	...	...	24	24	...	...
3	3	...	...	11	11	...	...	22	22	...	...
3	3	...	...	5	5	...	...	15	15	...	...
...	...	...	...	1	1	...	...	8	8	...	...
3	3	...	...	10	10	...	...	40	40	...	...
...	...	...	...	6	6	...	...	13	13	...	...
...	...	...	...	...	...	...	...	4	4	...	...
...	...	...	...	...	...	...	...	5	5	...	...
...	...	...	...	...	...	...	...	2	2	...	...
...	...	...	...	7	4	3	42.8	9	6	3	33.3
...	...	...	...	4	4	...	...	6	6	...	...
...	...	...	...	7	5	2	28.5	9	7	2	22.2
...	...	...	...	...	...	...	...	1	1	...	...
3	3	...	...	10	10	...	...	13	13	...	...
...	...	...	...	...	...	...	...	1	1	...	...
217	208	9	4.1	240	231	9	3.7	1,130	1,098	32	2.8
...	...	...	...	2	...	2	100.0	52	39	13	23.5
...	...	...	...	...	...	...	...	1	1	...	...
...	...	...	...	...	...	...	...	1	...	1	100.0
...	...	...	...	...	...	...	...	2	...	2	100.0
...	...	...	...	...	...	...	...	15	15	...	...
...	...	...	...	...	...	...	...	1	...	1	100.0
...	...	...	...	2	...	2	100.0	72	55	17	23.6
217	208	9	4.1	242	231	11	4.5	1,202	1,153	49	4.0

SALE OF FOOD AND DRUGS ACTS, 1875-1907.

1910.

RESULTS OF PROSECUTIONS.

FIRST QUARTER.

<i>Sample.</i>		<i>Nature and Extent of Adulteration.</i>		<i>Result.</i>
111	Milk	...	5 per cent. added water, 26 per cent. fat abstracted.	20s. and 21s. 6d. expenses.
196	"	...	40 per cent. fat abstracted	£20 and 16s. 6d. expenses.
224	"	...	57 per cent. fat abstracted	40s. and 17s. 6d. expenses.
231	"	...	6 per cent. added water	12s. 6d. expenses.

SECOND QUARTER.

271	Butter	...	90 per cent. margarine	20s. and 17s. 6d. expenses.
306	Milk	...	15 per cent. fat abstracted, 3 per cent. added water.	£20 and 24s. 6d. expenses.
464	Butter	...	100 per cent. margarine	Dismissed. Paper in which article was sold to vendor marked "Pure Butter," held to be a warranty.
478	"	...	70 per cent. margarine	22s. 6d. expenses.
490	Milk	...	7 per cent. fat abstracted and 4 per cent. added water.	80s. and 19s. 6d. expenses.
535	"	...	10 per cent. added water	41s. and 23s. 6d. expenses.

THIRD QUARTER.

779	Milk	...	6 per cent. added water	£5 and 17s. 6d. expenses.
795	"	...	6 per cent. fat abstracted	17s. 6d. expenses.
811	"	...	18 per cent. fat abstracted	40s. and 12s. 6d. expenses.
847	"	...	15 per cent. added water	£10 and 13s. 6d. expenses.
848	"	...	14 per cent. added water	£5 and 13s. 6d. expenses.
849	"	...	8 per cent. added water	£5 and 13s. 6d. expenses.
850	"	...	12 per cent. added water	£5 and 13s. 6d. expenses.

FOURTH QUARTER.

885	Butter	...	90 per cent. margarine	40s. and 17s. 6d. expenses.
872	Milk	...	19 per cent. fat abstracted	40s. and 17s. 6d. expenses.
986	"	...	21 per cent. fat abstracted	Dismissed, warranty proved.
987	Butter	...	90 per cent. margarine	£5 and 17s. 6d. expenses.
1039	"	...	100 per cent. margarine	17s. 6d. expenses.
1123	Rum	...	43.7 degrees under proof	18s. 6d. expenses.
1202	Milk	...	24 per cent. added water	£20 and £3 3s. costs.

By direction of the Sanitary Committee eight persons were cautioned as to the questionable or unsatisfactory character of articles sold by them.

In accordance with the Standing Order of the Court that no person shall enter the employ of the Corporation or any of its Committees without previously passing a medical examination to the satisfaction of the Committee having cognizance of the appointment, 41 persons were so examined during 1910, all of whom were reported by me as physically fit for office. Seven officers were also medically examined with a view to their retirement, and of these 4, or 57.1 per cent., were reported to be unfit for duty.

In addition to the foregoing, medical examinations were made of persons accepted by the Central (Unemployed) Body, on the recommendation of the City of London Distress Committee, for employment on the Labour Colony at Hollesley Bay, established by the Central Body under the Unemployed Workmen Act, 1905.

GENTLEMEN,

Your obedient Servant,

H. Mayfield

*Medical Officer of Health for the
City of London.*

Public Health Department,
GUILDHALL, E.C.

Appendix.

List of Persons registered under the Dairies, Cowsheds
and Milkshops Order.

1ST JANUARY, 1911.

Premises.	Person Registered.	Premises.	Person Registered.
24, Aldersgate Street ...	Robert Douglas.	7, Bell Yard ...	Jane Mary Ann Birch.
28/9, do. ...	"J.P." Restaurants, Ltd.	5, Billiter Street ...	Overhills, Ltd.
30, do. ...	John Thomas Gooden.	22, do. ...	John Stevenson, Andrew Ritchie, and Donald McDonald, trading as J. and B. Stevenson.
42, do. ...	Nunzio Allocca.	23, do. ...	William Cole and Grant Ventnor Robert Riach.
54, do. ...	Bartolerino Fabrizi.	9, Billiter Square ...	Callard, Stewart & Watt, Ltd.
67, do. ...	J. Lyons and Co., Ltd.	5, Bishopsgate Church Passage.	Gerardo Lamberti.
72, do. ...	Slaters, Ltd.	41, Bishopsgate St. W'n.	Romulatto Mansi.
73, do. ...	Nunzio Allocca.	50, do. ...	W. Hill and Son, Ltd.
90, do. ...	Bonaventura D'auria.	57, do. ...	Slaters, Ltd.
92, do. ...	Joseph James Metcalf.	66, do. ...	Fitch and Sons, Ltd.
170, do. ...	Aërated Bread Co., Ltd.	79, do. ...	J. Lyons and Co., Ltd.
179, do. ...	Nunzio Allocca.	101, do. ...	Williamsons, Ltd.
188, do. ...	James Dwarber.	107, do. ...	Aërated Bread Co., Ltd.
193, do. ...	J. Lyons and Co., Ltd.	15/6, Bishopsgate St. W't.	Aërated Bread Co., Ltd.
40, Aldermanbury ...	Emile Gross.	19, do. ...	J. Lyons and Co., Ltd.
55, do. ...	Aërated Bread Co., Ltd.	31, do. ...	Atanasio Diviani.
62, do. ...	Luigi Cattini.	51, do. ...	Antonetta Arpino.
12 and 13, Aldgate ...	Lockharts, Ltd.	77, do. ...	Gaston Debry.
15, do. ...	Francis William Yeomanson.	90, do. ...	William Sandrock.
24, do. ...	J. Lyons and Co., Ltd.	145/7, do. ...	J. Lyons and Co., Ltd.
28, do. ...	Dominico George.	23, Birch Lane ...	Mary Ann Ivison and Jane Laver, trading as M. A. Ivison and Co.
7, Aldgate High Street	John Wattam.	Blackfriars Bridge Station	J. Lyons and Co., Ltd.
73, do. ...	Express Dairy Co., Ltd.	8/10, Blomfield Street...	"J.P." Restaurants, Ltd.
7, Artillery Lane ...	Louise Mellor.	16, do. ...	Ulrich Maino.
22, do. ...	Thomas Piggott.	4, Botolph Alley ...	Charles Peach.
1, Austin Friars ...	Olive Marie Muriel Simonds.	2, Bow Lane ...	"J.P." Restaurants, Ltd.
5, do. ...	Express Dairy Co., Ltd.	9, do. ...	Pasquale Mansi.
6/7, Barbican ...	Aërated Bread Co., Ltd.	11, do. ...	Antoinette Fontanne.
17, do. ...	Peter Fumasoli.	38A, do. ...	Frien Manor Dairy Farm, Ltd.
20, do. ...	Lockharts, Ltd.	46, do. ...	P. Palumbo.
43a, do. ...	Edwin Evans.	54, do. ...	Andrea Beschizza.
9, Bartholomew Close...	Price's Restaurants, Ltd.	43, Bread Street ...	Dominico Cavalli.
21, do. ...	Charles Baker.	33, Breams Buildings...	Thomas Henry Davis.
38, do. ...	Catherine Lewis.	18, Bride Lane ...	Herbert John Heath.
53, do. ...	George Smith.	20, do. ...	George Price.
89, do. ...	William Henry Letley.	3, Brushfield Street ...	Henry Pugh Lloyd.
1, Basinghall Street ...	Aërated Bread Co., Ltd.	3, Bridgewater Street	Charles Cromwell Crocker.
15, do. ...	Luigi Necchi.	5, Broad Street Place...	Aërated Bread Co., Ltd.
16, do. ...	Pasquale Palumbo.	14, do. ...	Richard Mills & Co., Ltd.
29/30, do. ...	J. Lyons and Co., Ltd.		
54, do. ...	Sidney Havard Willmott.		
65/66, do. ...	Walter Peers Jackson.		
69, do. ...	Express Dairy Co., Ltd.		
1, Gresham Buildings, Basinghall Street	London Café Co., Ltd.		
50, Beech Street ...	John Richards.		
4, Beehive Passage ...	Lockharts, Ltd.		

Premises.	Person Registered.	Premises.	Person Registered.
Broad Street Station	Aërated Bread Co., Ltd.	74, Coleman Street ..	Bartolomeo Zaccarini.
4, Broadway ...	Percy Robson.	Copthall Ave. (Throg-	Florence Le Breton.
7, do. ...	J. Lyons and Co., Ltd.	morton House)	
35, Bucklersbury ...	J. Lyons and Co., Ltd.	8, Copthall Avenue ...	Alexander Hampton.
2, Budge Row ...	Jane Anderson Carnegie.	10 & 12, do. ...	J. Lyons and Co. Ltd.
20, do. ...	J. Lyons and Co., Ltd.	15, do. ...	James William Davis.
24, do. ...	Edward Jennings.	28, Copthall Avenue ...	Ulrich Maino.
30, do. ...	"J.P." Restaurants, Ltd.	29, do. ...	Exchange Café Co., Ltd.
9, Bull's Head Passage	Pasquale Cocchi.	9, Cornhill ...	Aërated Bread Co., Ltd.
1, Burgon Street ...	Vincent Infanti.	7, Cripplegate Builds.	Aërated Bread Co., Ltd.
1, Bury Street ...	Express Dairy Co., Ltd.	7, Crooked Lane ...	John Morgan Jones.
1a, do. ...	Albert Alexander Price.	16, do. ...	Judah Harris.
1, Byward Street ...	Francesco Arpino.	Crown Court (Old	J. Lyons and Co., Ltd.
9, do. ...	Aërated Bread Co. Ltd.	Broad Street)	
40/2, Cannon Street ...	Aërated Bread Co., Ltd.	2, do. ...	Henry Charles Bainbridge.
44, do. ...	J. Lyons and Co., Ltd.	13, Crutched Friars ...	Express Dairy Co., Ltd.
49, do. ...	J. Lyons and Co., Ltd.	27, do. ...	Amy Mary White.
50, do. ...	Slaters, Ltd.	7, Cullum Street ...	Antonio and Michele Precha.
51, do. ...	Aërated Bread Co., Ltd.	16, do. ...	Luigi Cattini.
86, do. ...	Aërated Bread Co., Ltd.	21, Cullum Street ...	Allard Bros.
91, do. ...	W. Hill and Son, Ltd.	26, do. ...	Frederick Spiers.
95, do. ...	Madeline H. Oswald and	14, Cursitor Street ...	Martha Kersey.
	Geo. Brown, trading as	3/5, Devonshire Street	Henry Pearce.
	J. H. Brown.	8, do. ...	Mitchell's Dining Rooms,
99, do. ...	J. Lyons and Co., Ltd.		Ltd.
139, do. ...	London Café Co., Ltd.	1 & 2, Dorset Street ...	City Catering Co., Ltd.
145, do. ...	Ye Mecca, Ltd.	7, do. ...	Guisepppe Indaco.
147, do. ...	Aërated Bread Co., Ltd.	5, Dove Court (Old	Mary Ann Donnelly.
153 and 155, Cannon St.	"J.P." Restaurants, Ltd.	Jewry)	
Cannon St. Station	Aërated Bread Co., Ltd.	2, Duke Street ..	Lucidoro Mauro.
Approach		12, do. ...	Frank Dyson.
3 & 4, Camomile Street	"J.P." Restaurants, Ltd.	41, do. ...	Francesco Berti.
36, do. ...	Pietro Necchi.	50, do. ...	Joseph Alexander Williams.
36a & 37, do. ...	Henry Douglas Fletcher.	5, Eastcheap ...	Aërated Bread Co., Ltd.
46, Carter Lane ...	Albert Edward Knapp.	15, do. ...	Ye Mecca, Ltd.
54, do. ...	Reuben Josephus Phillips.	28, do. ...	Aërated Bread Co., Ltd.
57a, do. ...	James Burgess.	35, do. ...	J. Lyons and Co., Ltd.
75, do. ...	John Humphreys.	49 & 51, Eastcheap,	"J.P." Restaurants, Ltd.
81, do. ...	William Henry Overhill.	(Ceylon House)	
12, Carthusian Street ...	Helen F. Higgins.	16, Eldon Street ...	J. Lyons and Co., Ltd.
60, Charles Street ...	George William Copeland.	18, do. ...	Bartolomeo Cattini.
25, Castle Street ...	Rosina Andrews.	25, do. ...	"J.P." Restaurants, Ltd.
18, Charterhouse Street	"J.P." Restaurants, Ltd.	5, Falcon Square ...	Price's Restaurants, Ltd.
38, do. ...	John Vincent.	2, Falcon Street ...	Nunzio Allocca.
23, Cheapside ...	J. Lyons and Co., Ltd.	59, Fann Street ...	Serafino Fazzani.
26, do. ...	Slaters, Ltd.	32, Farringdon Street...	Arthur Atkins.
41, do. ...	Ideal Restaurants, Ltd.	33, do. ...	Friern Manor Dairy Farm,
49, do. ...	J. Lyons and Co., Ltd.		Ltd.
51, do. ...	Aërated Bread Co., Ltd.	39, do. ...	"J.P." Restaurants, Ltd.
66, do. ...	Tiffin, Ltd.	40, do. ...	"J.P." Restaurants, Ltd.
74/5, do. ...	Slaters, Ltd.	62, do. ...	David and Robert Jones.
77, do. ...	Aërated Bread Co., Ltd.	65, do. ...	Amerighi Guilio.
128, do. ...	J. Lyons and Co., Ltd.	67, do. ...	Lewis Bertram Heyward.
136, do. ...	Williamsons, Ltd.	70/1, do. ...	Geo. Jas. and Arthur J.
140, do. ...	Ye Mecca, Ltd.		Silverlock.
150, do. ...	Aërated Bread Co., Ltd.	72, do. ...	City Catering Co., Ltd.
7, Clark's Place ...	Jessie A. Harris.	79, do. ...	Edwin John Ridout.
2, Cloak Lane ...	Romulatto Mansi.	87, do. ...	Peter Zanchi.
20, Cloth Fair ...	William Mortimer Phelan.	88, do. ...	Frederick Philipp Weinell.
22, do. ...	Flora Jackson.	1, Fen Court...	Rose Greenaway.
19, Cock Lane...	Jane Jones.	2, do. ...	Aërated Bread Co., Ltd.
23, Coleman Street	Ye Mecca, Ltd.	15, Fenchurch Street...	Aërated Bread Co., Ltd.
38, do. ...	Antonio and Valentine	30, do. ...	Rose Malyon.
	Ostacchini, trading as	31, do. ...	J. Lyons and Co., Ltd.
	Ostacchini and Son.	47, do. ...	The Cabins, Ltd.
70, do. ...	Hyman Simons.	62, do. ...	Aërated Bread Co., Ltd.

Premises.	Person Registered.	Premises.	Person Registered.
81, Fenchurch Street...	Croci Carlo.	11, Garlick Hill ...	Walter Robert William Marchant.
99, do. ...	Aërated Bread Co., Ltd.	12, George Yard ...	Callard, Stewart and Watt, Ltd.
107, do. ...	"J.P." Restaurants, Ltd.	3, Godliman Street ...	Arthur H. Hill, Margaret Hale, and Alice George, trading as Free and Co.
161, do. ...	Maynards, Ltd.	12, do. ...	Bartolomio Fabrizi, trading as Bartolomio Fabrizi and Co.
164, do. ...	Slaters, Ltd.	21, do. ...	Express Dairy Co., Ltd.
1, Fenchurch Buildings	"J.P." Restaurants, Ltd.	8, Gough Square ...	William Lloyd.
1, Railway Approach	J. Lyons and Co., Ltd.	12, Gracechurch Street	Charles John Haag.
Fenchurch St. Station	Henry Christian Thomas Amendt.	31, do.	Fullers', Ltd.
19/20, Fetter Lane ...	"J.P." Restaurants, Ltd.	33, do.	Aërated Bread Co., Ltd.
31, do. ...	Morgan Jones.	41, do.	Maynards, Ltd.
33, do. ...	Joseph Pratt.	51, do.	J. Lyons and Co., Ltd.
42, do. ...	Teresa Cascella.	72/3, do.	J. Lyons and Co., Ltd.
44/5, do. ...	Stewart and Wight, Ltd.	77/78, do.	London Café Co., Ltd.
49, do. ...	Albert Alexander Price.	119, Gravel Lane, Houndsditch.	William Cambridge.
57, do. ...	Paul Quartermass.	1, Great New Street...	Sarah Amelia Barnsley.
83, do. ...	Mary Harris.	12, do. ...	Maria J. L. Kersey.
1, Finsbury Pavement	Luigi Ostacchini.	31, Great St. Helen's ...	Rose Malyon.
73, do. ...	Aërated Bread Co., Ltd.	"Crosby House," Great St. Helen's.	Ye Mecca, Ltd.
Electra House, Finsbury Pavement.	Henry Phillips.	12, Great Swan Alley ...	G. Payne, J. J. Rawlings, trading as Sarah Rawlings and Co.
Finsbury Pavement House.	J. Lyons and Co., Ltd.	14, Great Tower Street	Stewart and Wight, Ltd.
13, Fish Street Hill ...	Guileo Barbierri.	17/8, do.	Aërated Bread Co., Ltd.
22, do. ...	George Porteous Johnston.	24/25, do.	Andrew Glenning.
37, do. ...	Pasqualino Palumbo.	28, do.	Antonio and Michale Precha.
43, do. ...	Howard Kowin.	58, do.	Joseph James Medcalf.
2, Fishmongers' Alley	Mary Jones.	74, do.	J. Lyons and Co., Ltd.
16, Fleet Street ...	George Rice Bolton.	78, do.	Callard, Stewart and Watt, Ltd.
23, do. ...	J. Lyons and Co., Ltd.	96, do.	London Clerks' Café Co., Ltd.
46, do. ...	James Love Lightfoot, Jnr.	100, do.	Ercole Farnese.
61, do. ...	J. Lyons and Co., Ltd.	1, Gresham Street ...	Aërated Bread Co., Ltd.
62, do. ...	Matteo Mansi.	1, do. ...	Friern Manor Dairy Farm, Ltd.
109, do. ...	Lockharts, Ltd.	3, do. ...	Ye Mecca, Ltd.
116, do. ...	Aërated Bread Co., Ltd.	5, do. ...	Antonio Ostacchini.
131, do. ...	Express Dairy Co., Ltd.	11, do. ...	Pietro Barbieri
167, do. ...	Cabins, Ltd.	46, do. ...	J. Lyons and Co., Ltd.
173, do. ...	J. Lyons and Co., Ltd.	54, do. ...	Ye Mecca, Ltd.
175, do. ...	Luigi Lieto.	69, do. ...	Aërated Bread Co., Ltd.
182/3, do. ...	"J.P." Restaurants, Ltd.	87, do. ...	Express Dairy Co., Ltd.
190, do. ...	Aërated Bread Co., Ltd.	93A, do. ...	Raffaele Ferrara.
31, Fleet Lane ...	Albert Edwin Derry.	12, Grocers' Hall Court	Timothy Jones.
17, Fore Street ...	J. Lyons and Co., Ltd.	7½, Gunpowder Alley	William James Argent.
28, do. ...	William R. Child.	12, Harp Lane ...	Frederick C. H. Coles.
46, do. ...	Antonio Lusardi.	20/22, Holborn ...	Williamsons, Ltd.
54, do. ...	J. Lyons and Co., Ltd.	31, do. ...	Aërated Bread Co., Ltd.
56/7, do. ...	Aërated Bread Co., Ltd.	114/5, do. ...	Aërated Bread Co., Ltd.
66, do. ...	Arthur Reginald Staines.	144, do. ...	Luigi Rattazzi.
70, do. ...	Priori Oresti.	145, do. ...	Slaters, Ltd.
84, do. ...	Lockharts, Ltd.	1/2, Holborn Viaduct ...	Aërated Bread Co. Ltd.
90, do. ...	Raffaele Ferrara.	14, do. ...	J. Lyons and Co., Ltd.
108, do. ...	Elizabeth Charlotte Collett.	65, do. ...	Express Dairy Co., Ltd.
112, do. ...	William Briesser.	1, Honey Lane Market	Dominico Cavalli.
2, Foster Lane ...	Giovanni Diviani.	4, do. ...	J. Lyons and Co., Ltd.
5, do. ...	John Roberts.	9, do. ...	John Gow.
41, do. ...	Arthur H. Hill, Margaret Hale, and Alice George, trading as Free and Co.	10, do. ...	John Thomas Gow.
Freeman's Court, Cheap-side.	Arthur H. Hill, Margaret Hale, and Alice George, trading as Free and Co.	1, Hosier Lane ...	David Morgan.
2, Friday Street ...	Giero Lovino.		
31, do. ...	Claire Palmyra Jenman.		
65, do. ...	Aërated Bread Co., Ltd.		
1, Furnival Street ...	Henry Charles Leaver.		
4, do. ...	Food Reform Co., Ltd.		

Premises.	Person Registered.	Premises.	Person Registered.
1, Houndsditch ...	Giovanni Devincenzi.	106, Leadenhall Street...	Aërated Bread Co., Ltd.
52, do. ...	Silvia Peretti.	140, do. ...	Aërated Bread Co., Ltd.
105, do. ...	Bartolomeo Cattini.	8/9, Lime Street ...	John Stevenson, Andrew Ritchie, and Donald McDonald, trading as J. and B. Stevenson.
118, do. ...	David Jones.	15a, do. ...	Express Dairy Co., Ltd.
1, Huggin Court ...	Emma Watts.	23, do. ...	J. Lyons and Co., Ltd.
10, Huggin Lane ...	Daniel Jones.	24, do. ...	Ye Mecca, Ltd.
19, Hutchison Avenue	Joseph Falk.	26, do. ...	Aërated Bread Co., Ltd.
13, Hutchison Street ...	Isidore Spivakoff.	29, do. ...	Lozzaro Cattini.
15, do. ...	Jacob and Leah Miller.	34, do. ...	Agnes Powell.
35, Hutton Street ...	Amy Reeve.	49, do. ...	Ellen Gwendoline Vaughan.
13, Idol Lane ...	Price's Restaurants, Ltd.	53, do. ...	Ulrich Maino.
3, Imperial Arcade ...	Friern Manor Dairy Farm, Ltd.	4, Little Britain ...	Frederick Pearce.
10, Ironmonger Lane...	Henry Francis Hardy.	17, do. ...	Sarah Page.
20, do. ...	Bertha Annie Gander.	19, do. ...	Express Dairy Co., Ltd.
27, do. ...	The Café Syndicate, Ltd.	25, do. ...	John Davies.
28/9, do. ...	"J.P." Restaurants, Ltd.	33, do. ...	Welford and Sons, Ltd.
14, Ivy Lane ...	Eisa Riva.	54, do. ...	Guiseppe Fazzani.
18, do. ...	Andrea Proto	2, Little College Street	Alice Maud Turner.
22, do.	West London Dairy Co., Ltd.	6, Little Trinity Lane	Agnes Howat.
39, Jewin Crescent ...	Giovanni Caccioli.	18, do. ...	Ellora Ferrari.
6, Jewin Street ...	E. Seton Karr.	27, Liverpool Street ...	Romulatto Mansi.
9, do. ...	J. Lyons and Co., Ltd.	37, do. ...	David Lowrie.
24, do. ...	Margaret A. S. McFarlane, trading as Geo. McFarlane and Co.	Liverpool Street Station.	H. C. T. Amendt.
31, do. ...	"J.P." Restaurants, Ltd.	4, Lombard Court ...	Ye Mecca, Ltd.
45, do. ...	William Roff.	5, Lombard Street ...	Aërated Bread Co., Ltd.
8, Jewry Street ...	John Jones.	74, do. ...	Aërated Bread Co., Ltd.
32, do. ...	Angelo Beschizza.	319, London Central Markets.	Lockharts, Ltd.
12, John Street ...	William Alston.	332, do. ...	Cream Dairy Co., Ltd.
27, King Street ...	Biagio Manzi.	3/4, London House Yard.	George Porteous Johnston.
32, do. ...	Aërated Bread Co., Ltd.	1a, London Street ...	Friern Manor Dairy Farm, Ltd.
8, King's Head Court	Frederick Lewindon.	4, do. ...	Croci Carlo.
8, King William Street	Slaters, Ltd.	8, do. ...	Ideal Restaurants, Ltd.
32, do. ...	Lockharts, Ltd.	19, do. ...	Aërated Bread Co., Ltd.
34, do. ...	J. Lyons and Co., Ltd.	34, London Wall ...	Andrew Glendinning.
41, do. ...	Romulatto Mansi.	46/7, do. ...	J. Lyons and Co., Ltd.
44, do. ...	Aërated Bread Co., Ltd.	49, do. ...	Ye Mecca, Ltd.
50, do. ...	J. Lyons and Co., Ltd.	55, do. ...	"J.P." Restaurants, Ltd.
51, do. ...	Mitchell's, Ltd.	58a, do. ...	Express Dairy Co., Ltd.
61, do. ...	J. Lyons and Co., Ltd.	138a, do. ...	Biagio Manzi.
64, do. ...	Aërated Bread Co., Ltd.	151, do. (Salisbury House).	Aërated Bread Co., Ltd.
25a, Kinghorn Street	William Phelan.	52/53, Long Lane ...	Joseph Young.
King's Arms Yard	Ye Mecca, Ltd.	55, do. ...	Edward Woodman.
44, Knighttrider Street	Antonio Donatantonio.	77, do. ...	Francis Arthur Lester.
48, do. ...	William Adamson.	80, do. ...	Luigi Migliorina.
1, Laurence Lane ...	Angelo Beschizza.	85, do. ...	E. Rees and Son, Ltd.
38, Leadenhall Market	Arthur H. Hill, Margaret Hale, and Alice George, trading as Free and Co.	75, Lower Thames St.	Thomas Deacon.
40, do. ...	Lewis Thomas Owen and Percy John Randall.	129½, do. ...	Franks Bottilieri.
50, do. ...	Henry George Saunders.	5, Ludgate Circus ...	J. Lyons and Co., Ltd.
54/5/6, do. ...	Lewis Dowling.	1, Ludgate Circus Buildings.	Slaters, Ltd.
4, Leadenhall Street...	Aërated Bread Co., Ltd.	10/12, Ludgate Hill ...	J. Lyons and Co., Ltd.
6, do. ...	J. Lyons and Co., Ltd.	16, do. ...	Callard, Stewart and Watt, Ltd.
24, do. ...	J. Lyons and Co., Ltd.	21, do. ...	J. Lyons and Co., Ltd.
27, do. ...	Slaters, Ltd.	29, do. ...	Aërated Bread Co., Ltd.
64, do. ...	J. Lyons and Co., Ltd.	38, do. ...	Aërated Bread Co., Ltd.
67, do. ...	William Henry Neal.	54, do. ...	Express Dairy Co., Ltd.
92, do. ...	Henry Rudolph and Charles Wichtendahl.	56, do. ...	Ye Mecca, Ltd.
96/98, do. ...	Aërated Bread Co., Ltd.	74, do. ...	J. Lyons and Co., Ltd.
101, do. ...	Ye Mecca, Ltd.		

Premises.	Person Registered.	Premises.	Person Registered.
Ludgate Hill Station	J. Lyons and Co., Ltd.	122/3, Newgate Street ...	Peter Diviani.
6, Maidenhead Court...	Matteo Mansi.	44, Noble Street ...	Antonio Ostacchini.
14, do. ...	William John Palmer.	19/20, Old Bailey ...	Lockharts, Ltd.
20, do. ...	David Haydon.	33, Old Broad Street ...	Aërated Bread Co., Ltd.
48, Mark Lane ...	Liverpool China and Indian Tea Co., Ltd.	40, do. ...	Aërated Bread Co., Ltd.
69/70, do. ...	Ye Mecca, Ltd.	2, Old Change ...	Andrea Marroni.
78, do. ...	Express Dairy Co., Ltd.	13a, do. ...	"J.P." Restaurants, Ltd.
80/81, do. ...	J. Lyons and Co., Ltd.	6, Old Jewry ...	The Cabins, Ltd.
Mark Lane Station	J. Lyons and Co., Ltd.	33, do. ...	Katherine Mellisle.
3, Mason's Avenue ...	Antonio Ostacchini.	3, Pancras Lane ...	Frederick Walter Hicks.
25, Middlesex Street (Middlesex House)	Mitchell's Dining Rooms, Ltd.	3, Paper Street ...	Albert Intrepidi.
36a, Milton Street ...	Hugh David Pugh.	5/6, Paternoster Row	"J.P." Restaurants, Ltd.
71, do. ...	Charles Gentry.	12, do. ...	Giovanni Strinate.
76, do. ...	Andrew Annanson.	60, do. ...	J. Lyons and Co., Ltd.
16, Mincing Lane ...	Luigi Cattini and Giorgio Beschizza.	5, Paul's Alley ...	Carlo Demaria.
17, do. ...	London Café Co., Ltd.	8, Philpot Lane ...	Alberti Intrepidi.
30, do. ...	Slaters, Ltd.	14, do. ...	Robert Arthur Buddicom, trading as Holland's Café.
99, Minorities ...	Walter Bugden.	22, do. ...	Alfred Walter Bennett.
136, do. ...	Elizabeth King.	21, Pilgrim Street ...	Galvani Andrea.
155, do. ...	William McGavin Reid.	32, do. ...	Priori Oreste.
9, Mitre Street ...	Henry William Richards.	34, do. ...	Aërated Bread Co., Ltd.
10, Monkwell Street ...	George Cattini.	30, Poppin's Court ...	Guiseppe Indaco.
40½, do. ...	David Davies.	31, Poultry ...	J. Lyons and Co., Ltd.
"Monument Dairy," Monument Street.	Frederick Lewindon.	35, do. ...	Andrew Glendinning.
Monument Station...	The Ideal Restaurants, Ltd.	1, Queenhithe ...	Albert Ashlee.
43, Moor Lane ...	Bartolomeo Carreta.	10, Queen Street ...	J. Lyons and Co., Ltd.
28, Moorfields ...	Express Dairy Co., Ltd.	40, do. ...	Egidio Fabrizi.
38, do. ...	Conti Celestino.	70, do. ...	Fredk. Chas. Weidig, trading as Weedon Bros.
50, do. ...	James Charles Blackgrove.	71, do. ...	Lockharts, Ltd.
19, Moorgate Street ...	Alexander Hampton.	81, do. ...	Luigi Necchi.
28, do. ...	Aërated Bread Co., Ltd.	85, do. ...	Ellen Claire Aveline.
37, do. ...	J. Lyons and Co., Ltd.	7, Queen Victoria Street	Express Dairy Co., Ltd.
40, do. ...	Cabins (1901), Ltd.	17, do. ...	J. Lyons and Co., Ltd.
Moorgate Station Chambers.	Express Dairy Co., Ltd.	35a, do. ...	Raffaele Ferraro.
2, Moorgate Station Buildings.	Fullers, Ltd.	100c, do. ...	Biagio Manzi.
7, do. ...	Aërated Bread Co., Ltd.	105, do. ...	"J.P." Restaurants, Ltd.
35, New Street ...	Sarah Keil.	115, do. ...	Lockharts, Ltd.
1, New Basinghall St.	"J.P." Restaurants, Ltd.	130, do. ...	Aërated Bread Co., Ltd.
4, New Bridge Street	"J.P." Restaurants, Ltd.	143, do. ...	J. Lyons and Co., Ltd.
13, do. ...	J. Lyons and Co., Ltd.	148a, do. ...	Antonio Infanto.
40, do. ...	Aërated Bread Co., Ltd.	177, do. ...	Aërated Bread Co., Ltd.
44, do. ...	David Stewart.	9/10, Redcross Street	J. Lyons and Co., Ltd.
3, New Broad Street...	J. Lyons and Co., Ltd.	23, Rood Lane ...	Rose Malyon.
4b, do. ...	The Capital & Counties Café Co., Ltd.	2/4, Ropemaker Street...	John Pearce.
13, do. ...	Richard Charles, trading as R. Charles and Co.	12, Rose Street ...	Biagio Nappi.
13a, do. ...	Lockharts, Ltd.	19, St. Bride Street ...	Express Dairy Co., Ltd.
16, do. ...	Aërated Bread Co., Ltd.	35, do. ...	Stewart and Wight,
28, do. ...	W. Hill and Son, Ltd.	3/4, St. Martin's Court...	"J.P." Restaurants, Ltd.
64, do. ...	Aërated Bread Co., Ltd.	21, St. Mary Axe ...	Ye Mecca, Ltd.
1, New London Street	James Barrett.	33/5, do. ...	Slaters, Ltd.
2, Newgate Street ...	J. Lyons and Co., Ltd.	34, do. ...	Express Dairy Co., Ltd.
13, do. ...	Stewart and Wight, Ltd.	45, do. ...	Aërated Bread Co., Ltd.
16, do. ...	Ernest Salusbury Price.	49, do. ...	J. Lyons and Co., Ltd.
18, do. ...	Slaters, Ltd.	65/66, do. ...	Overhills, Ltd.
24, do. ...	Aërated Bread Co., Ltd.	18, St. Paul's Churchyard	"J.P." Restaurants, Ltd.
33, do. ...	"J.P." Restaurants, Ltd.	53, do. ...	Nicholson's, Ltd.
87, do. ...	J. Lyons and Co., Ltd.	61, do. ...	J. Lyons and Co., Ltd.
97, do. ...	Andrew Maroni.	68a, do. ...	Fullers, Ltd.
		75, do. ...	Callard, Stewart and Watt, Ltd.
		80, do. ...	J. Lyons and Co., Ltd.
		82, do. ...	Giorgio Beschizza.
		St. Paul's Station ...	J. Lyons and Co., Ltd.
		30/1, St. Swithin's Lane	Aërated Bread Co., Ltd.

Premises.	Person Registered.	Premises.	Person Registered.
135a, Salisbury Court ...	Matteo Mansi.	190, Upper Thames Street	Joseph James Medcalf.
19, Sherborne Lane ...	Edward William Davies.	194, do.	Robert Cooper.
3, Ship's Tavern Passage	Friern Manor Dairy Farm, Ltd.	223, do.	Price's Restaurants, Ltd.
3b, Shoe Lane ...	Gerao Indaco.	224, do.	Robert Cooper.
35/6, do. ...	"J.P." Restaurants, Ltd.	1, Walbrook ...	Fullers Limited.
96, do. ...	Edwin John Ridout.	4, do. ...	J. Lyons and Co., Ltd.
98, do. ...	Mrs. Laura Jones.	10/11, do. ...	Antonio and Michele Precha.
109, do. ...	Charles Baker.	14, do. ...	Ye Mecca, Ltd.
112, do. ...	Henry Wallwork.	19/20, do. ...	J. Lyons and Co., Ltd.
113, do. ...	Simeon Northam.	34, do. ...	Aërated Bread Co., Ltd.
18, Silver Street ...	Nuncio Allocca	Warnford Court ...	Aërated Bread Co., Ltd.
27, do. ...	David Haydon.	2, Water Lane (Black-friars).	Price's Restaurants, Ltd.
1, Star Alley, Fen-church Street.	William Walter Knight.	4, Water Lane (Black-friars).	Samuel Thomas Withers and William Henry Medway.
18, South Place ...	Romualatto Mansi.	5, Water Lane (Black-friars).	Argia Vicini (Mrs.).
6, Stoney Lane ...	Pasquale Manno.	7, Water Lane (Black-friars).	"J.P." Restaurants, Ltd.
23, do. ...	Henry Jones.	"Aldermay House," Watling Street.	Ye Mecca, Ltd.
29, do. ...	Mrs. Annie Geviss.	73, Watling Street ...	Lockharts, Ltd.
62, do. ...	Alfred Garcia.	57a, West Smithfield ...	J. Lyons and Co., Ltd.
16, Swan Lane ...	Frederick William Ward.	25, White Street ...	Mary Ann Keeble.
1, Telegraph Street ...	Giovanni Rolle.	31, Whitecross Street...	Robert Douglas.
17/8, do. ...	J. Lyons and Co., Ltd.	5, Whitefriars Street	Frederick Philipp Weinell.
— do. ...	Ye Mecca, Ltd.	7, do. ...	Vincenzo Mansi.
1, Three Tuns Passage, Ivy Lane.	Annie McKay.	26, do. ...	Alfred Loveys.
27, Throgmorton Street	J. Lyons and Co., Ltd.	27, do. ...	George Robert Smith.
29, do. ...	Aërated Bread Co., Ltd.	36/38, do. ...	Lockharts, Ltd.
Trump Street (St. Laurence House)	The Siesta Café, Ltd.	1, Whittington Avenue	Ye Mecca, Ltd.
6, Tudor Street ...	John Pantalone.	7, do.	Callard, Stewart and Watt, Ltd.
10, do. ...	Frank Gowlett.	10, do.	Antonio Cattini.
14, do. ...	Walter Thomas Beames.	12, Widegate Street ...	Edward Albert Withrington.
32, do. ...	Fanny Payne.	17, do. ...	Allec Cohen.
3, Union Court, Old Broad Street.	Express Dairy Co., Ltd.	21, do. ...	Alice Issacs.
do.	Ye Mecca, Ltd.	25, Wood Street ...	J. Lyons and Co., Ltd.
8, Union Row, Minorities.	Lockharts, Ltd.	42/43, do. ...	Cabins (1901), Ltd.
5, Upper Thames Street	Melchiorre Arpino.	78, do. ...	Nunzio Allocca.
57, do. ...	George Chitty.	80, do. ...	Ye Mecca, Ltd.
99, do. ...	The City Catering Co., Ltd.	130, do. ...	Express Dairy Co., Ltd.
104, do. ...	John Morgan Jones and William Jones, trading as Jones Brothers.	Wool Exchange ...	Callard, Stewart and Watt, Ltd.
105, do. ...	Ercole Farnese.	8, Wormwood Street	William Henry Neal.
138, do. ...	Stewart and Wight, Ltd.	19, do. ...	Guilio Barbieri.
172, do. ...	George Chitty.	22, do. ...	Aërated Bread Co., Ltd.
186, do. ...	Robert Waterson.	36, do. ...	Emilio Fuggacia.
		38, do. ...	"J.P." Restaurants, Ltd.





