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

Ilford Urban District Council.

ANNUAL REPORT

OF THE

Medical Officer of Health

INCLUDING A SPECIAL REPORT ON

MILK SUPPLY.

C. F. STOVIN, M.A., D.P.H.,

Medical Officer of Health,

and Medical Superintendent of the Isolation Hospital

ILFORD:

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1905-1906.

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PREFACE.

To the Chairman and Members of the

ILFORD URBAN DISTRICT COUNCIL.

GENTLEMEN,

Every Medical Officer of Health appointed under an order of the Local Government Board is required to make an Annual Report with regard to the Sanitary District which is under his superintendence.

I herewith beg to present my Annual Report for the year, 1905.

I estimate the total population at 65,021, or, excluding the Public Institutions 60,441 ; a great deal of trouble has been expended in the endeavour to get this as correct as possible, and I believe the above estimate to be fairly accurate.

The death-rate for the year was 8.9, or connected for age and sex distribution so as to be comparable with other district, 9.6.

The birth-rate was 26.25. On looking at the tables it will be seen how small is the increase in the number of births compared with the growth of the population. So that the birth-rate for Ilford, in the same way as in the country generally, is gradually and steadily falling. No nation which is unable to freely renew its population can hope to remain in the forefront in these days ; and this falling off in the birth-rate, if continued, is a most serious matter.

It is outside the power of Local Governing bodies to affect the birth-rate, but it is within their power to reduce the number of children who die in the first year of life. When one considers that out of every 1,000 children born, 132 die in the first year of life, in the smaller towns, it is apparent that every Local Governing body should take every means in their power to reduce this fearful waste of Infant life. What can be done by a municipality in this direction, has been shown by Huddersfield in the past year, which by combined effort their death-rate has been reduced to half. In other words, a saving of about 60 children has been effected in every 1,000 born. In Ilford as I pointed out in 1904, and again during the past year, a great part of the death-rate is due to want of knowledge, and help in that direction, I am more and more convinced would be attended with beneficial results. Of course, the problem is a very complex one, but in this particular district education, or lack of it, is the main factor. It must not be forgotten, too, that though we hear of the deaths, we do not hear of the numbers of other babies who are not thriving as they should do.

There has been no marked epidemic of any Infectious disease during the past year. Scarlet Fever has been the most prevalent; but, as can been seen by the spot map, it has been fairly distributed throughout the district. Seeing how rife this disease has been in surrounding districts, Ilford may congratulate itself on having got off so well. In this connection, and also with regard to Diphtheria, the school supervision is a great help, as large numbers of children are excluded from school as soon as they show signs of sore throat, and it is often very difficult to say where one disease ends and the other begins. In the section on Schools I have included some of the findings of the "Departmental Committee on Medical Inspection in Schools" as there seems to be a good

deal of doubt in some minds as to what Medical Inspection should consist of. There has been a marked absence of measles during the past year.

The provision of contact beds to complete the scheme at the sewage works has been proceeded with and is now nearly complete. When these are completed and the other modifications of the works finished, there should be a largely diminished cause for the complaints received during the year of smells and other nuisances.

I have included a special report on the Milk Supply of the district, which gives some interesting particulars. Taken as a whole the result must be considered disappointing, though probally no worse than the usual milk supply of a district. The chemical analysis gives 12 per cent. of the milks examined as being below the by no means high standard of the Board of Agriculture.

With regard to the Bacteriological examination it is difficult to compare the milks as there is no definite standard authoritatively laid down. All the milks were more or less polluted, and 80 per cent. shewed signs of manurial defilement.

The sample that gave the best analysis came from a cowshed situated within the district, but taken generally the samples show the necessity for some more general and complete control of the milk supply than obtains at present.

Dr. Thresh in is letter says :—

> "The only means of prevention by a Public Authority would be (*a*) frequent Veterinary Inspection of Cows, (*b*) byelaws, properly enforced, to secure

greater cleanliness in milking, and (*c*) byelaws enforcing cooling of milk to 50° F immediately after milking."

And for this purpose it seems desirable also that farms should be compulsorily registrable in the district to which they send their milk, so as to be open to Inspection at any time.

Finally, I should once more like to express my thanks and indebtedness to the various officials of the Council for their assistance in many ways, and especially to those of the Public Health Department.

I am, Gentlemen,
Your Obedient Servant,
C. F. STOVIN, M.A., D.P.H.
Medical Officer of Health

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PHYSICAL AND GEOLOGICAL FEATURES.

The surface generally is gently undulating. Flatter in the southern and more thickly inhabited portion, but rising to a higher elevation in the more northern parts. Ilford is situated on the London Clay, but this only comes to the surface as a narrow strip running almost due East and West through the middle of the district. In addition, there is a large patch to the North-West, as exemplified in the names Clayhall and Claybury.

There is a large square area of brick-earth lying roughly in the angle between the junction of the Romford road with the Ilford Lane, extending down the Romford road nearly as as far as St. Mary's Church, and down Ilford Lane nearly to Uphall Farm.

The rest of the subsoil is gravel.

SECTION 1.

Vital Statistics.

ILFORD URBAN DISTRICT COUNCIL.

MAP SHOWING INCIDENCE OF CERTAIN INFECTIOUS DISEASES
DURING THE YEAR 1905.

STATISTICAL SUMMARY.

Enumerated Population at Census, 1901	41,229
Estimated ,, ,, middle of 1902 ..	49,000
,, ,, ,, ,, 1903 ..	54,226
,, ,, ,, ,, 1904 ..	59,700
,, ,, ,, ,, 1905 ..	65,021
Area of District in Statute Acres—Land	8,470
,, ,, ,, ,, Inland Water..	26
,, ,, ,, ,, Tidal ,, ..	7
Density of Population, *i.e.* No. of Persons per acre	7.6
Average No. of Persons per acre in 33 great towns	32.4
Total number of births registered in 1905 .	1,587
Representing a birth-rate of	26.25
Total number of births registered in 1904 ..	1,548
Representing a birth-rate of	28.6
Total number of births registered in 1903 ..	1,522
Representing a birth-rate of	30.6
Total number of births registered in 1902 ..	1,334
Representing a birth-rate of	29.9
Total number of births registered in 1901 ..	1,194
Representing a birth-rate of	30.5
Total number of deaths registered in 1905 ..	549
Representing a nett death-rate of ..	8.9
Total number of deaths registered in 1904 ..	563
Representing a nett death-rate of ..	10.4

Total number of deaths registered in 1903 ..	498
Representing a nett death-rate of ..	10.0
Total number of deaths registered in 1902 ..	415
Representing a nett death-rate of ..	9.3
Total number of deaths registered in 1901 ..	434
Representing a nett death-rate of ..	11.1
Total number of deaths from the 7 principal Zymotic diseases in 1905	61
Representing a Zymotic death-rate ..	1·0
Total number of deaths from the 7 principal Zymotic diseases in 1904	120
Representing a Zymotic death-rate ..	2.2
Total number of deaths from the 7 principal Zymotic diseases in 1903	66
Representing a Zymotic death-rate of ..	1.3
Total number of deaths from the 7 principal Zymotic diseases in 1902	47
Representing a Zymotic death-rate of ..	1.05
Total number of deaths from the 7 principal Zymotic diseases in 1901	99
Representing a Zymotic death-rate of ..	2.6
Infantile mortality rate for 1905..	86.9
,, ,, 1904..	127
,, ,, 1903..	92.6
,, ,, 1902..	74.2
,, ,, 1901..	156.5
Rateable Value	£359,608
Inhabited Houses 1905	12,335
,, ,, 1904	11,045
,, ,, 1903	10,132
,, ,, 1902	9,088
,, ,, 1901	7,649

POPULATION.

I estimate the total population for 1905, at 65,021, Deducting from this total :—

Dr. Barnardo's Homes	1,000
Claybury Asylum	2,660
West Ham Asylum	920
Total	4,580

this leaves a nett population for the district proper of 60,441.

It is arrived at thus :—

Total number of houses in district	13,585
Total number of inhabited houses in district	12,335
Total number of uninhabited houses in district	1,250

At the Census in 1901 there were :—

No. of inhabited houses	7,649
No. of uninhabited houses	721
Total number of houses	8,370

Since then certificates for new houses have been granted by the Council as follows :—

From March, 1901 to June 30th, 1902	1,545
From July, 1902 to June 30th, 1903	1,226
From July, 1903 to June 30th, 1904	1,270
From July, 1904 to June 30th, 1905	1,174
Making to total for the past year	13,585

The Census gives 4·9 persons per house for Ilford, so that by multiplying the number of inhabited houses by 4·9 gives the population I have taken above. There are two possible sources of error in this estimate.

(1) That 4.9 persons per house does not represent Ilford at the present time. The tendency is in all these suburban district for the number of persons per house to increase, so that this error, if present, under-estimates rather than over-estimates the population.

In Walthamstow at the census, persons per house			5·8
,, East Ham	do.	do.	5·6
,, Romford	do.	do.	4·8

(2) The second source of error is that the number of empty houses may be under-estimated. This error has been carefully guarded against in counting them, and moreover allowance has been made in addition for possible errors. So that I have adopted the figures given by this means rather than the Registrar General method. In a rapidly growing neighbourhood like this it seems to me this is more likely to be the correct one if carefully carried out. Also, too, it must be remembered that the Registrar General's estimate is based on the ratio of increase during the ten years between the last two census years. Now, although the increase of Ilford was phenomenal during those ten years, the first four years showed comparatively but slight increase, and the real increase came during the last six years, so that is another reason, I think, why this estimate is more likely to be the correct one.

The Registrar General's estimate is 54,322.

BIRTHS.

The number of births registered during the year was 1,587, giving a birth-rate of 26.25.

This is the lowest birth-rate for some years.

The increase in the number of births is by no means keeping pace with the increase of population.

		Population.	Rate.
In 1900 the total No. of births was	1,037	34,399	30.0
„ 1901 „ „ „	1,194	39,022	30.5
„ 1902 „ „ „	1,334	44,530	29.9
„ 1903 „ „ „	1,522	49,646	30.6
„ 1904 „ „ „	1,548	54,120	28.6
„ 1905 „ „ „	1,587	60,441	26.2

In a district like Ilford where the population is largely composed of young married people, this is a very serious matter ; moreover, it is exactly what is occurring all over the country, and while conditions of life remain as they are at the present time there is every prospect of the same causes continuing to operate, with a diminishing birth-rate as the result.

Increasing civilisation and a high birth-rate do not go together, either in this country or any other.

DEATHS.

The total number of deaths registered for 1905 was 897.

The total number of deaths registered for the district proper, apart from the institutions, is 549.

These include deaths in :

German Hospital	1
City of London Asylum	1
London Hospital	17
Childrens' Hospital—Gt. Ormond St.	3
Camberwell House Asylum	2
Hospital for Women	2
Hospital of St. John and St. Elizabeth	1
Camberwell Infirmary	2
Royal Chest Hospital	1
St. Ann's House, Stoke Newington	1
St. Stephen's Avenue, Hammersmith	1
North Eastern Children's Hospital	1
Guy's Hospital	1
East London Children's Hospital	1
Charing Cross Hospital	1
King's College Hospital	1
Evelina Hospital	1
Ilford Isolation Hospital	9
County Asylum	9
Romford Infirmary	26
Clacton-on-Sea	1
East Ham Hospital	1
TOTAL ..	84

This gives a death-rate of 8·91 for the year 1905 for the district proper, or a corrected death-rate of 9.6.

The death-rate was 10.4 for the year 1904
" " " 10.0 " " 1903
" " " 9.3 " " 1902
" " " 11.1 " " 1901

Of non-residents dying in Institutions in the district :—

Claybury Asylum	203
West Ham Asylum	129
Dr. Barnardo's Homes	15
Ilford Isolation Hospital	1
Total	348

Zymotic Death-rate.—The number of deaths registered from the seven principal zymotic diseases for the year 1905 was 60, giving a zymotic death-rate of 1.00 per 1,000.

In previous years it has been as follows :—

Year.	Deaths.	Rate.
1900	70	1.8
1901	110	2.6
1902	47	1.0
1903	66	1.3
1904	120	2.2
1905	60	1.0

The seven diseases included in this rate are :—

Diseases.	Deaths in 1905.	Deaths in 1904.
Small Pox	—	—
Measles	3	17
Scarlet Fever	4	5
Whooping Cough	14	8
Diphtheria	4	10
Typhoid Fever	4	4
Diarrhœa (epidemic)	31	76
Totals	60	120

It will thus be seen that, as compared with the year before, the deaths for this past year have been about half.

MORTALITY OF AGE GROUPS,

On referring to the table at the end of this section, it will be seen that the greatest number of deaths were between 25 and 65.

Number of deaths occurring at the following ages :

Year.	Under 1 year	25 to 65.	Over 65.
1902	99	109	101
1903	141	129	108
1904	198	130	100
1905	138	187	112

INQUESTS.

In 1902 there were 26 Inquests held.
„ 1903 „ 46 „
„ 1904 „ 37 „
„ 1905 „ 22 „

INFANTILE MORTALITY.

The number of deaths registered for children under 1 year of age was 138, giving an infantile mortality rate of 86·9 deaths to every 1,000 births registered.

The rate has been :

1900.	1901.	1902.	1903.	1904.	1905.
141	156	74	92	127	86

The low rate for this past year has been due to the comparatively few deaths from Summer Diarrhœa. Only 30 for 1905 as against 76 for 1904.

The following table shows the causes of death in children under 1 year of age, for the past year.

TABLE V.

INFANTILE MORTALITY DURING THE YEAR, 1905.

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.
Common Infectious Diseases.	Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	2
	Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria : Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	1	..	..	1	..	..	..	1	1	..	..	4
Diarrhœal Diseases.	Diarrhœa, all forms	..	..	..	..	..	1	2	1	..	1	2	2	1	1	1	..	12
	Enteritis (*not Tuberculous*)	..	..	..	..	..	1	3	..	3	..	1	2	3	1	..	..	14
	Gastritis, Gastro-intestinal Catarrh	3	..	..	2	5	1	1	..	1	1	..	..	..	..	1	..	10
Wasting Diseases.	Premature Birth	20	4	5	2	31	1	1	..	..	..	..	..	..	..	..	..	33
	Congenital Defects	3	..	..	..	3	..	..	..	..	..	1	..	..	..	..	..	4
	Injury at Birth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast-milk	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
	Atrophy, Debility, Marasmus	4	1	1	2	8	5	2	..	..	..	..	..	..	..	1	..	16
Tuberculous Diseases.	Tuberculous Meningitis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
	Tuberculous Peritonitis ; Tabes Mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Tuberculous Diseases	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	2
	Erysipelas	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
	Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
	Meningitis (*not Tuberculous*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	3	..	..	..	3	4	..	..	..	..	1	..	..	..	..	..	8
	Bronchitis	..	..	..	..	..	2	2	1	..	1	1	1	..	1	1	..	10
	Laryngitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	..	..	1	1	2	..	..	..	..	1	2	..	..	..	1	2	8
	Suffocation, overlaying	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	Other Causes	3	..	..	..	3	..	2	1	2	..	..	..	..	2	..	..	10
	TOTAL	37	5	7	7	56	16	14	4	7	4	11	6	5	7	6	2	138

INFANTILE MORTALITY.

In 1905, the number of deaths amongst Infants under one year was 138, giving a proportion of 86.9 deaths to every 1,000 born.

As I consider the greatest need of a Health administration at the present time is the dealing effectively with this question of Infantile Mortality. I presented the following short report on the subject advocating the appointment of a female sanitary inspector, but I regret to say the Council did not adopt my suggestion.

In the following table it will be seen that the excessive mortality amongst children, is largely due to Summer Diarrhœa, which carries off far too large a proportion of Infantile life every year.

TABLE SHOWING CAUSES OF DEATHS OF CHILDREN UNDER 1 YEAR OF AGE,

FOR THE 4 QUARTERS OF THE PAST YEAR, ALSO CORRESPONDING PERIODS FOR 1904.

CAUSES OF DEATH	March Quarter.		June Quarter.		September Quarter.		December Quarter.		Total for Year.	
	1905	1904	1905	1904	1905	1904	1905	1904	1905	1904
Measles	2	—	—	—	—	—	—	4	2	4
Scarlet Fever	—	1	—	—	—	—	—	—	—	1
Whooping Cough	2	—	—	1	3	2	—	2	5	5
Diphtheria and Membranous Croup	—	—	—	—	—	1	—	—	—	1
Diarrhœa and Enteritis	1	2	1	1	27	71	1	2	30	76
Erysipelas	1	—	—	—	—	—	—	—	1	—
Other Tubercular Diseases	1	4	1	—	2	3	—	1	4	8
Bronchitis	4	2	2	—	1	—	1	7	8	9
Pneumonia	4	2	3	4	—	3	2	2	9	11
Other Diseases of Respiratory Organs	—	1	—	—	—	—	—	1	—	2
Premature Birth	5	5	10	4	9	8	12	6	36	23
Heart Diseases	—	1	—	1	—	1	1	4	1	7
Accidents	—	2	—	—	—	—	—	—	—	2
All other causes	11	7	9	10	1	18	13	14	42	49
TOTALS	31	27	26	21	51	107	30	43	138	198

It will thus be seen that the past year compares very favourably with 1904, due, I believe, to the more favourable weather conditions.

The rain-fall for the months of July and August, of this and last year, was :—

	1904.	1905.
July	1.59 inches	1.30 inches.
August	.66 „	2.29 „

It has been shewn that Summer Diarrhœa amongst infants, is most prevalent when the earth temperature at the depth of 1 foot, reaches 59 deg. F., to 62 deg. F. Naturally this occurs when the rain-fall is less, and the Sun is more powerful, viz: —in July and August, and possibly part of September.

This condition is most favourable to the growth of all kinds of Bacteria, which develop rapidly in all forms of milk food.

There is no doubt that the number of children fed from the bottle, is on the increase, and especially in Urban Districts; partly due to disinclination on the part of some mothers to suckle their children, but more often, I believe, the mother in Urban Districts is becoming more and more unable to herself provide her child with milk that is sufficient in quantity and suitable in quality.

The following is a table shewing the average rate of infants dying under 1 year of age, per 1,000 births :—

Years.	Average rate of Infants dying under I year of age per 1,000 births.			
	Urban Counties.		Rural Counties.	
	Males.	Females.	Males.	Females.
1873 to 1877	176	146	140	113
1898 to 1902	180	149	139	111

Of 74 deaths from Diarrhœa in 1904, only 4 were fed by the mother; and during the past year the following shews how the children were fed.

Of 27 deaths, only 3 were suckled.
Of the others, 9 were fed with cows milk.
" " 15 " " condensed milk,
and 7 were receiving some form of patent food in addition to the milk.

It will be seen by the following table, that the bulk of the deaths occur in the smaller rented houses.

Rental.	1904.	1905.
£15 and under	12	10
£15 to £20	22	13
£20 to £25	9	4
£25 to £30	8	—
£30 and over	4	—

A certain proportion of the children that succumb to Summer Diarrhœa, are previously healthy children; but the greater number are not, owing to their receiving food that is not suitable to their needs. They are not in such a vigorous condition as they should be, and often even a mild attack of Diarrhœa is more than the enfeebled infant can survive.

Now that the birth-rate throughout the country is on the decrease, it is of national importance that the utmost should be done to preserve the lives of those that are born. This can only be done with each locality dealing with its own area.

To do any good at all, the problem must be attacked from the birth of the child; or, as near as it is possible to get to it. Therefore, the first thing to do, is to get a return from the Registrar, of the births of all children in the district. Secondly, to appoint a female sanitary inspector, or health visitor, who shall visit every house where a birth is registered; or, such as shall be necessary. It will be most important to exercise great care in her selection, as she should be a trained nurse with experience of children, and used to this kind of work. She should also have sanitary qualifications.

When I was appointed Medical Officer of Health in 1901, I drew up a pamphlet on "Care of Infants," and that it did a certain amount of good, is shown, I think, by the following table:—

	YEARS.					
Towns.	1900.	1901.	1902.	1903.	1904.	1905.
Ilford	141	156	74	92	127	86
Barking	203	198	134	113	142	142
East Ham	166	156	117	113	140	129
Leyton	140	136	107	99	138	94
Walthamstow	158	147	115	113	135	104
West Ham	192	172	151	148	165	156
Woodford	182	127	110	107	126	89
Romford (Urban)	105	138	101	99	110	130
Acton	168	170	149	105	142	—
Battersea	159	163	136	135	147	—
Croydon	132	140	133	104	128	—
Lewisham	—	128	122	92	122	—
Willesden	139	131	130	123	115	—

Thus showing that the question is largely one of education; and there is no education like the personal one. The bulk of the mothers are willing enough to receive advice, often from unsuitable sources, and I do not think there would be any difficulty about their resenting capable help. Then, again, the Council would receive a very valuable mass of information as to the condition of the babies in the district; and, until that knowledged is acquired, it is useless going in for any scheme which might or might not be beneficial.

This plan has now been adopted in some 47 towns, and is everywhere spoken of as beneficial in its action.

In Ilford, from the character of its population, I am convinced that this plan would be followed by good results. Of course, this visitor would in no way interfere with the Doctor, as she is not meant in any way to advise in illness. Her duty would be to advise only before the child is ill; in other words, she would assist, if necessary, but never intermeddle. I merely mention this, because there was some expression of opinion last year, that she would be a sort of amateur doctor. That is absolutely out of the question.

WEEKLY RAINFALL FOR THE YEAR, 1905.

Week ended	Rainfall in inches.	Week ended	Rainfall in inches.
Jan. 7	30	July 1	.68
„ 14	.08	„ 8	.26
„ 21	.44	„ 15	.43
„ 28	.02	„ 22	.05
Feb. 4	Nil	„ 29	.18
„ 11	.08	Aug. 5	.38
„ 18	.10	„ 12	.37
„ 25	.22	„ 19	.02
Mar. 4	.15	„ 26	.26
„ 11	.59	Sept. 2	1.29
„ 18	1.57	„ 9	.29
„ 25	.06	„ 16	.42
April 1	.12	„ 23	Nil
„ 8	.22	„ 30	1.46
„ 15	.87	Oct. 7	.17
„ 22	.26	„ 14	.02
„ 29	.12	„ 21	.12
May 6	.34	„ 28	.06
„ 13	Nil	Nov. 4	1.19
„ 20	.16	„ 11	.45
„ 27	.01	„ 18	.75
June 3	.27	„ 25	.16
„ 10	1.33	Dec. 2	.50
„ 17	1.07	„ 9	.33
„ 24	.13	„ 16	.04
		„ 23	Nil
		„ 31	.31

Total Rainfall for year in inches, 18.70.

TABLE 1.

Vital Statistics of Whole District during 1905 and Previous Years.

Year.	Total Population Estimated to Middle of each year.	Nett 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.	
					Under 1 year of age.		At all Ages.						
			Number.	Rate.	Number.	Rate per 1,000 Births registered.	Number.	Rate.				Number.	Rate.
	1	2	3	4	5	6	7	8	9	10	11	12	13
1895	18,822	18,122	455	25·1	58	127·4	532	28·2	358	358	?	174	9·5
1896	21,570	20,570	496	24·1	61	122·9	483	22·3	301	301	?	182	8·8
1897	24,719	23,319	635	27·2	88	138·5	481	19·4	254	254	?	227	9·7
1898	28,328	26,468	697	26·2	107	153·5	535	18·8	271	259	12	276	10·4
1899	32,464	30,154	895	29·6	120	134·0	650	20 3	281	268	13	382	12·6
1900	37,204	34,399	1,037	30·0	147	141·7	655	17·6	231	231	25	449	13·0
1901	42,622	39,022	1,194	30·5	187	156·6	657	15·4	245	245	22	434	11·1
1902	49,000	44,530	1,334	29·9	99	74.2	748	15·2	393	353	30	415	9·3
1903	54,226	49,646	1,522	30·6	141	92·6	828	16·6	364	357	27	498	10·0
1904	59,700	54,120	1,548	28·6	198	127 0	933	15·6	383	370	29	563	10·4
Average for years 1895—1904.	36,865	34,035	981	28·1	120	126·8	650	18 9	366	300	?	360	10·4
1905.	65,021	60,441	1,587	26·2	138	86·9	897	13·7	357	348	75	549	8·9

This table has been corrected as regards "estimated population" by calculating the ratio of increase of the population year by year from 10,913, in 1891 to 42,622 in 1901, that is from census to census. Column 8 is thus calculated from the total estimated population in column 1. All the other columns are calculated from the estimated nett population, that is, not including the populations of the Public Institutions, viz. :—

Claybury Asylum.
West Ham Asylum.
Dr. Barnardo's Village Homes.

It will be noticed that for the earlier years the rates are too low ; that is due to this method bringing the populations for the earlier years too high.

This table should be compared with the corresponding table in last year's report.

TABLE IV.

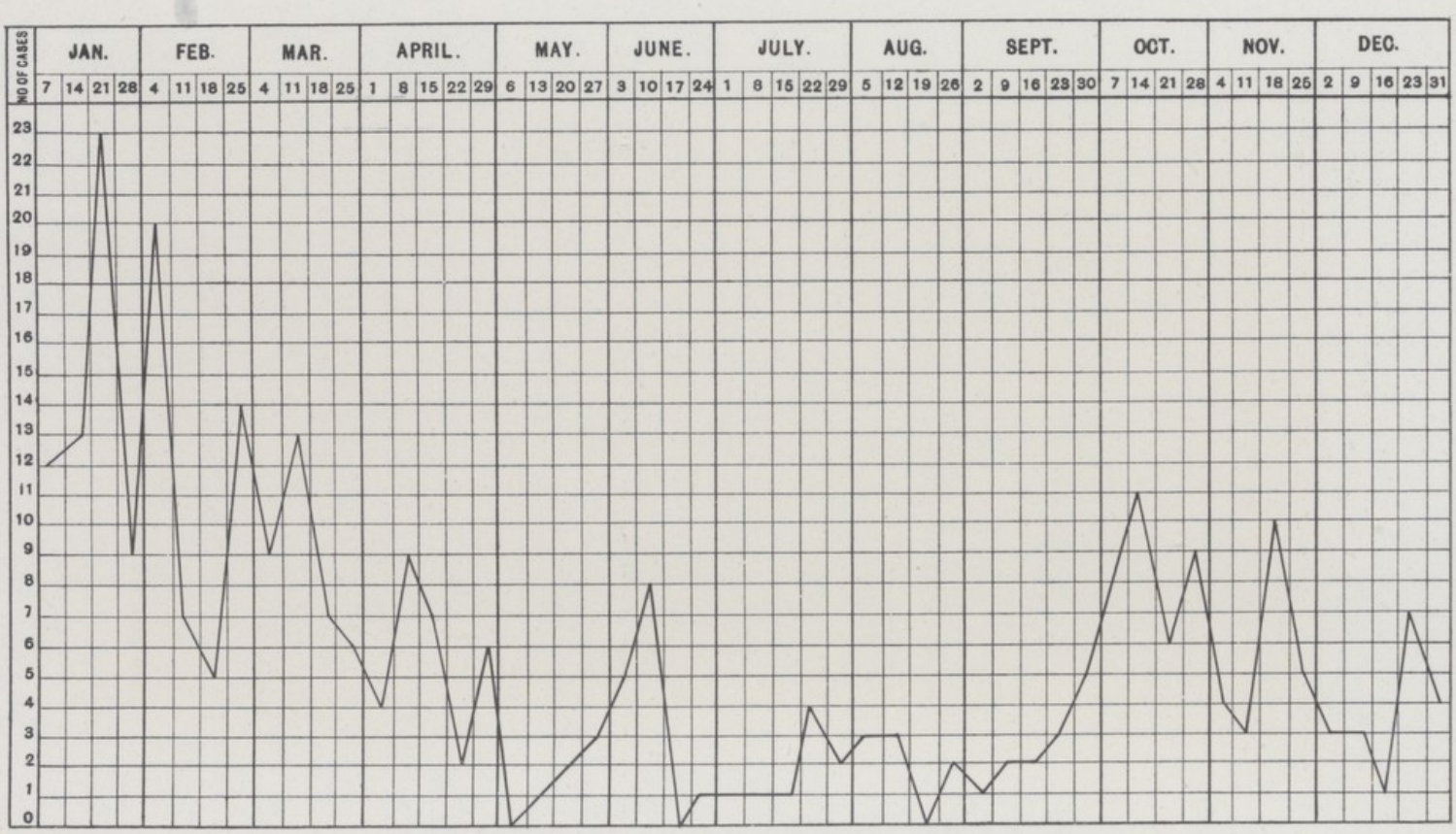
Causes of, and Ages at, Death during Year 1905.

Causes of Death	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District							Deaths at all ages of "Residents" belonging to Localities, whether occurring in or beyond the District.							Total Deaths whether of Residents or non "Residents" in Public Institutions in the District
	All Ages	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Cranbrook Ward	Park Ward	Seven Kings Ward	North Hainault Ward	Loxford Ward	Clements Wood Ward	South Hainault Ward	
Small-Pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	3	2		1	...		...	...	1	...	...	...	...	2	3
Scarlet Fever	4	...	2	2	...	...	...	...	3	...	...	...	1	...	3
Whooping-cough	14	5	8	1	...	...	...	1	2	1	2	5	1	2	2
Diphtheria and Membranous Croup	4	...	3	1	...	...	...	...	1	...	...	1	...	2	1
Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever — Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever — Enteric	4	...	..	...	2	2	..	...	1	...	...	1	2	...	...
Fever — Other contin'd	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Influenza	4	...	1	...	...	2	1	...	...	1	...	3	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	18	18			...	...	...	...	2	2	3	5	4	3	3
Enteritis	13	12	..	...	...	1	...	...	3	1	3	...	5	1	...
Puerperal Fever	3	.	..	...	...	3	...	...	2	.	...	...	1	...	...
Erysipelas	4	1	...	...	...	2	1	1	...	1	...	...	1	1	...
Other septic Diseases	4	...	...	1	..	3	...		...	...	...	2	2	...	2
Phthisis (Pulmonary Tuberculosis)	38	...	...	4	5	27	2	6	5	7	4	4	9	3	37
Other tubercular Diseases	8	4	..	3	..	1	..	..	1	1	1	2	1	2	8
Cancer, Malignant Disease	35	...	..	...	...	29	6	6	11	4	3	5	4	2	9
Bronchitis	37	8	4		...	4	21	4	7	4	10	4	6	2	17
Pneumonia	48	9	8	1	...	22	8	8	7	4	6	9	11	3	60
Pleurisy	1	...	...	...	...	1	...	...	...	1	...	...	..	.	3
Other Diseases of Respiratory Organs	7	...	..	...	...	4	3	.	...	...	...	1	4	2	...
Alcoholism Cirrhosis of Liver	8	...	...	...	...	4	4	1	2	...	1	1	2	1	2
Venereal Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Premature Birth	36	36	...	...	...	...	...	6	3	3	3	10	4	7	...
Diseases and Accidents of Parturition	4	...	...	...	1	3	...	2	...	...	1	1	...	...	...
Heart Diseases	50	1	...	3	3	29	14	5	10	5	5	14	8	3	23
Accidents	3	...	1	...	...	1	1	...	...	...	...	1	1	1	2
Suicides	4	...	...	...	...	2	2	1	...	...	...	1	1	1	...
All other causes	160	42	8	8	6	47	49	14	26	19	20	31	30	21	173
All Causes	514	138	35	25	17	187	112	55	87	54	62	101	98	59	348

SECTION II.

Infectious Disease.

SCARLET FEVER CHART OF NOTIFICATIONS.



INFECTIOUS DISEASES.

During 1905 there were notifled 446 cases of infection diseases

,,	1904	,,	,,	508	,,
,,	1903	,,	,,	364	,,
,,	1902	,,	,,	738	,,
,,	1901	,,	,,	437	,,
,,	1900	,,	,,	356	,,

From the institutions in the district the following cases have been notifled :—

Village Homes.	Claybury Asylum.	West Ham Asylum.
Scarlet Fever 82.	Erysipelas 2.	Erysipelas 1.
Diphtheria 3.		

So that deducting the infectious cases occuring in the Public Institutions leaves a grand total of 358. When the increase in population is taken into consideration, also the growth of the number of schools with the increased number of children of susceptible ages, this result speaks well for the control exercised and the measures taken for limiting the spread of these diseases.

SCARLET FEVER.

At the begining of 1905 Scarlet Fever was very prevalent in the Village Homes, and altogether 82 cases were notified at the begining of the year from that source. The attacks were confined to the Houses and there was no spread in the neighbourhood.

Deducting these 82 cases leave 206 which were notified from the district proper, and of the these 4 died giving a death-rate .06 per 1,000 living.

In 1904, out of 224 cases notified, 5 died, giving a death-rate of ·09

In 1903, out of 181 cases notified, 2 died, giving a death-rate of .04

In 1902, out of 264 cases notified, 2 died, giving a death-rate of .04

Considering that Scarlet Fever has been ripe in the metropolis and in the neighbouring Borough of East Ham, it is surprising that this district has managed to escape so well.

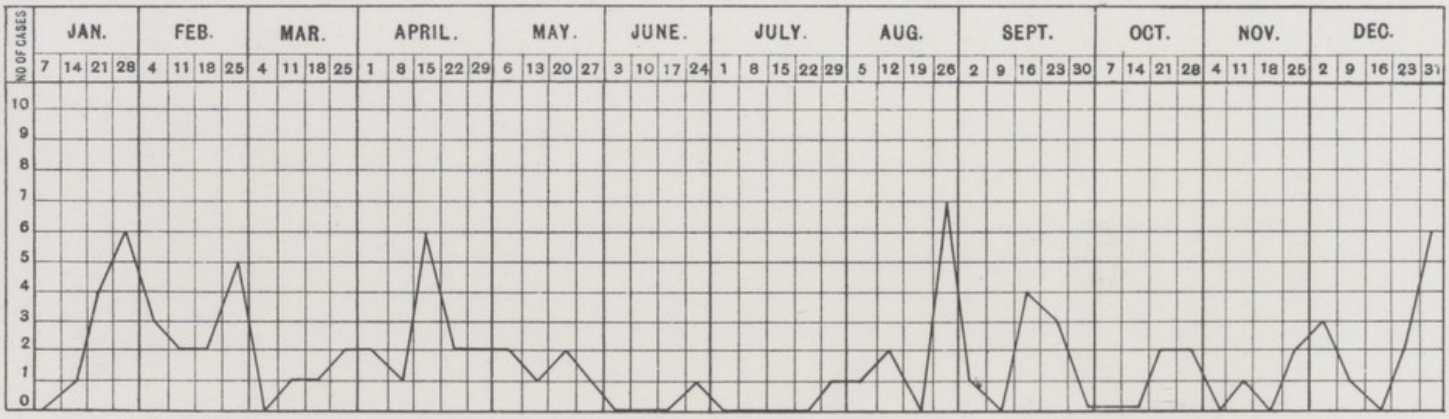
Of the 86 households where the patient was nursed at home, a spread of the disease to other members of the family occurred in 11 instances.

The infection of Scarlet Fever is a very difficult matter to deal with as there are so many mild cases where it is most difficult to say whether it is really Scarlet Fever or not. In 3 separate instances during the year I have known of children attending school in the peeling stage with their hands shedding skins in the class rooms, and yet no second case has occured in those class rooms. Of course, the children were excluded as soon as discovered.

But there were cases where one would expect to find the disease spreading and yet there was nothing developed. All the children were away from school for some days each, while the acute stage lasted, and possible this may have had something to do with the immunity of the others.

With regard to the outbreak in the Village homes, it is very difficult to account for this, as the cases did not occur in any one cottage, but were distributed about—one case in this cottage, and another in that, in the most irregular

DIPHTHERIA CHART OF NOTIFICATIONS.



manner. The children are constantly moving about, backwards and forwards to London, so that makes the problem more difficult of investigation, but easier of explanation. As the greater the number of points-of-contact, so the easier the spread of infection.

DIPHTHERIA AND MEMBRANOUS CROUP.

During the past year 85 cases have been notified with 4 deaths giving a death rate of ·06 per 1,000 living.

In 1904 out of 181 cases notified 10 died giving a death rate of ·18 per 1,000.

In 1903 out of 95 cases notified 14 died giving a death rate of ·28 per 1,000.

In 1902 out of 86 cases notified 8 died giving a death rate of ·17 per 1,000.

In 1901 out of 75 cases notified 6 died giving a death rate of ·15 per 1,000.

On referring to the table on page 46 it will be seen that it is necessary to go back to 1898 before finding so low a death rate from this disease as the past year. The cases have been fairly evenly distributed over the whole district and as will be seen from the chart, at no time has there been any great prevalence.

Of the 4 deaths, 2 occurred through the parents mistaking the condition for an ordinary sore throat and neglecting to call in help until it was too late. Provided medical advice is sought in time no disease is so easy to arrest as Diphtheria, now Antitoxin is as certain in its action as a

chemical re-action provided only it is injected in time and in sufficient quantity. I am sure the provision of this to medical men in this district has been of immense value in reducing the death rate.

ENTERIC FEVER.

During the past year 22 cases have been notified, with 4 deaths, giving a death rate of ·06 per 1,000.

In 1904 out of 32 cases notified 4 died giving a death rate of ·07.

In 1903 out of 28 cases notified 2 died giving a death rate of ·04.

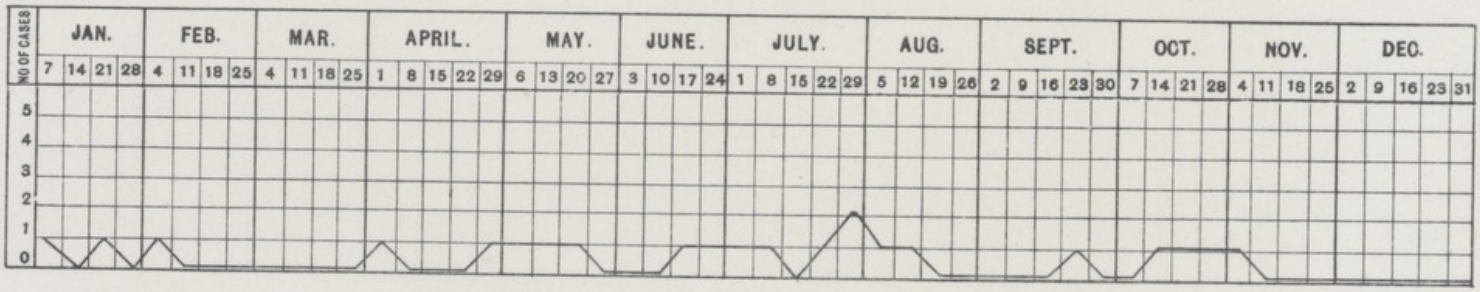
In 1902 out of 59 cases notified 7 died giving a death rate of ·15.

In 1901 out of 33 cases notified 4 died giving a death rate of ·10.

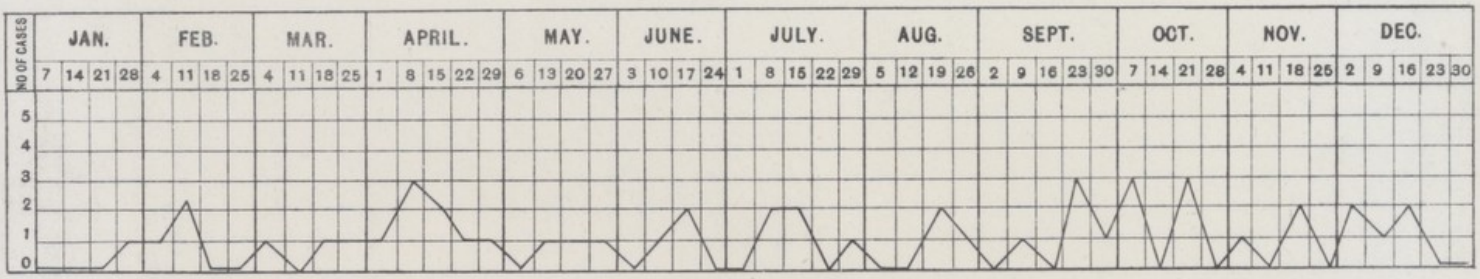
Of the 22 cases notified, 6 gave a history of having eaten shell fish during the fortnight previous to attack, but of course it is impossible to say if one was the result of the other. Another case had been staying at Lincoln during the epidemic there, was infected at Lincoln, came home and died in a short time, One case removed to Isolation Hospital turned out not to be Typhoid Fever was thence removed to the London Hospital and died there from Peritonitis but the cause of this was undiscoverable on a Post Mortem examination.

Several of the cases were of a mild type and ran a short course, terminating in recovery.

ENTERIC OR TYPHOID FEVER CHART OF NOTIFICATIONS.



ERYSIPELAS CHART OF NOTIFICATIONS.



ERYSIPELAS.

For	1905,	48	cases	were notified with	3 deaths.
„	1904,	56	„	„	1 „
„	1903,	49	„	„	no death.
„	1902,	67	„	„	4 deaths.
„	1901,	17	„	„	1 „

In these days the inclusion of Erysipelas under the Infectious Disease (Notification) Act appears to be of doubtful benefit, as the majority of the cases are slight, and are no index to the condition of the surroundings of the patient.

PUERPERAL FEVER.

During	1905	there	were 3	cases notified and	3 deaths.
„	1904	„	4	„	4 „
„	1903	„	2	„	1 „
„	1902	„	4	„	2 „

One case was removed to Hospital and every effort made to save her life, but she seemed to have absorbed such a large dose of toxins before admission that nothing appeared to make any impression. There was no connection between any of the cases, each appeared to arise *de novo* and was followed by no other notification.

MEASLES.

During the past year there have been reported from the schools and other sources 136 cases of measles, with 3 deaths, giving a death-rate of .04 per 1,000 living.

In 1904 measles was removed from the schedule of the Notification of Diseases Act, and it was feared by some that this was a retrograde step to take. So far this past year has shewn no sign of supporting this contention.

In 1898,	425	cases were	notified, with	5	deaths,	or rate of	.18
„ 1899	467	„	„	12	„	„	.39
„ 1900	326	„	„	2	„	„	.05
„ 1901	805	„	„	5	„	„	.12
„ 1902	564	„	„	3	„	„	.06
„ 1903	684	„	„	10	„	„	.20
„ 1904	1138	„	and reported	17	„	„	.30
„ 1905	936	„	were reported	3	„	„	.05

Of course it may be contended that 136 cases represented but a small proportion of the actual cases occurring. To a certain extent that may be true, but it would only apply to some of the cases under school age, and only those where there was no other child in the house attending school. Moreover, if there were many it is very unlikely to be so limited in its spread. There are four attendance officers, who report to me personally every morning, of any case of infectious disease coming to their notice, and the teachers also are supplied with forms to send me immediately they hear or suspect any such case, and I must say the teachers are extremely good in the care they take in watching for and reporting any case. Also, too, if there is a case of measles in a school it is so apt to spread, especially amongst the infants, that I should soon get to know of its prevalence.

The chief reason of the freedom from measles during the past year, I believe, is largely due to the excessive prevalence during the previous year, thus rendering a large proportion of the infant population immune to the infection.

CHICKEN POX.

Of the minor infectious diseases reported from the schools Chicken Pox has been the most prevalent during the last year. 423 cases have been so reported, and it is curious how it passed from the most southern school in the district to the north, through the centre of the district.

WHOOPING COUGH.

For the past year there were reported 243 cases of Whooping Cough. There were 14 deaths, giving a death-rate of ·23 per 1,000 living.

In 1904	there were	8	deaths,	giving a	death rate	of .14
„ 1903	„	19	„	„	„	.30
„ 1902	„	3	„	,	„	.06
„ 1901	„	21	„	„	„	.53

PHTHISIS.

For 1905	there were	38	deaths,	giving a	death-rate	of .62
„ 1904	„	33	„	„	„	.60
„ 1903	„	36	„	„	„	.72
„ 1902	„	32	„	„	„	.71
„ 1901	„	19	„	„	„	.48

It is curious how little the gross numbers of the deaths have varied the last four years. Sheffield has obtained power to make the notification of Phthisis compulsory, and it will be of interest to watch the result of the experiment.

RESPIRATORY DISEASES OTHER THAN PHTHISIS.

For	1905	there were	88	deaths, giving a death-rate of		1.4
„	1904	„	69	„	„	1.2
„	1903	„	73	„	„	1.4
„	1902	„	67	„	„	1.5
„	1901	.	44	„	„	1.1

CANCER,

For	1905	there were	33	deaths, giving a death-rate of		.54
„	1904	„	28	„	„	.51
„	1903	„	21	„	,	.42
„	1902	„	19	„	„	.41
„	1901	„	19	„	„	.48

These last two diseases are placed here for convenience.

TABLE III.

Cases of Infectious Disease Notified during the Year 1905.

Notifiable Disease.	Cases Notified in Whole District.							Total Cases Notified in each Locality.							No. of Cases Removed to Hospital from each Locality.						
	At all Ages.	At Ages—Years.						Cranbrook Ward.	Park Ward.	Seven Kings Ward.	North Hainault Ward.	Loxford Ward.	Clementswood Ward.	South Hainault Ward.	Cranbrook Ward.	Park Ward.	Seven Kings Ward.	North Hainault Ward.	Loxford Ward.	Clementswood Ward.	South Hainault Ward.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.														
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	82	..	18	40	14	10	..	14	10	12	4	9	13	20	6	5	10	4	8	7	14
Membranous Croup ..	3	..	2	1	..	..	..	..	..	1	..	1	..	1	.	..	..	..	..	..	..
Erysipelas	48	1	1	6	10	24	6	7	6	5	7	7	9	7	..	..	..	..	..	1	..
Scarlet Fever	288	1	59	174	40	14	..	30	45	17	86	47	37	26	6	34	4	4	36	21	15
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	22	..	..	9	7	6	..	2	3	..	1	7	7	2	2	1	..	1	4	3	2
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	3	..	..	..	..	3	..	..	2	..	..	..	1	..	..	1	..	..	..	..	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	446	2	80	230	71	57	6	53	66	35	98	71	67	56	14	41	14	9	48	32	31

TABLE GIVING DEATH RATE FROM VARIOUS INFECTIOUS DISEASES DURING THE PAST 15 YEARS.

Years.	Small Pox.			Erysipelas.			Diphtheria & Membranous Croup.			Scarlet Fever.			Enteric and Continued Fever.			Puerperal Fever.			Measles.			Estimated Population.
	Cases.	Deaths.	Rate per 1,000	Cases.	Deaths.	Rate per 1,000	Cases.	Deaths.	Rate per 1,000.	Cases.	Deaths.	Rate per 1,000.	Cases.	Deaths.	Rate per 1,000.	Cases.	Deaths.	Rate per 1,000.	Cases.	Deaths.	Rate per 1,000.	
1891	...	....	....	9	....	....	51	9	·82	11	...	....	11	3	·27	....	...	....	....	4	·36	10,913
1892	1	1	·08	18	....	....	29	....	..	25	1	·08	6	1	·08	..	....	....	..	3	·24	12,406
1893	4	....	...	30	....	....	75	12	·85	138	4	·28	11	2	·14	3	2	·14	..	....	....	14,082
1894	21	1	·06	27	1	·06	29	4	·25	90	1	·06	10	1	·06	1	....	....	....	5	·31	15,974
1895	1	....	....	36	1	·05	24	2	·11	32	....	....	11	2	·11	....	....	....	....	1	·05	18,022
1896	....	....	...	47	4	·18	46	7	·34	157	3	·14	34	5	·24	2	2	·09	38	2	·09	20.570
1897	..	....	...	35	....	....	32	1	·04	132	..	...	34	6	·25	2	2	·08	325	3	·12	23,319
1898	....	....	....	36	....	....	66	2	·07	74	....	.	33	3	·11	....	....	....	425	5	·18	26,468
1899	....	....	..	60	3	·09	74	11	·36	128	1	·03	26	6	·19	1	....	....	467	12	·39	30,154
1900	12	....	....	59	1	·02	71	4	·11	190	....	..	23	4	·11	1	1	·02	326	2	·05	34,394
1901	6	...	....	37	1	·02	76	6	·15	285	....	....	33	4	·10	..	....	..	805	5	·12	39,022
1902	44	8	·17	67	4	·08	86	6	·17	264	2	·04	61	7	·15	3	2	·04	564	3	·06	44,530
1903	9	1	·02	49	....	....	95	14	·28	181	2	·04	28	2	04	2	1	·02	684	10	·20	49,646
1904	11	....	....	56	1	·01	174	10	·18	224	5	·09	32	4	·07	4	4	·07	1138	17	·30	54,120
1905	...	.. ..	....	48	3	·04	85	4	·06	288	4	·06	22	4	·06	3	5	·04	....	3	·04	60,441

ISOLATION HOSPITAL.

Number of patients in hospital at beginning of year:—

Scarlet Fever	40
Diphtheria	1

Number of patients admitted during year:—

Scarlet Fever	156
Diphtheria	55
Typhoid Fever	13
Puerperal Fever	1
Erysipelas	1

Number of patients remaining in hospital on the 1st Jan., 1906:—

Scarlet Fever	32
Diphtheria	4

Number of deaths in hospital during year:—

Scarlet Fever	3,	,,	,,	1.92 per cent.
Diphtheria	4,	,,	,,	7.27 ,,
Typhoid	1,	,,	,,	7.69 ,,
Puerperal Fever	1,	,,	,,	—
Erysipelas	1,	,,	,,	—

Average stay in hospital :—

Scarlet Fever	48.94 days.
Diphtheria	28.62 „
Typhoid Fever	32.0 „
Erysipelas	2 „
Puerperal Fever	13 „

Percentage removed to the hospital of cases notified :—

Scarlet Fever	41.66
Diphtheria	63.52
Typhoid Fever	59.09
Puerperal Fever	33.33
Erysipelas	2.08

TABLE OF ADMISSIONS

IN THE RESPECTIVE MONTHS, DURING THE LAST FOUR YEARS.

Months.	Scarlet Fever.				Diphtheria.				Typhoid Fever.				Erysipelas.		Puerperal Fever.
	1902	1903	1904	1905	1902	1903	1904	1905	1902	1903	1904	1905	1903	1905	1905
January	12	16	17	10	8	7	3	5	—	—	—	1	—	—	—
February	2	11	17	18	5	5	10	8	—	—	1	—	—	—	—
March	8	3	13	15	1	4	3	3	1	—	1	—	—	—	—
April	13	11	12	9	3	2	4	10	3	—	—	1	—	1	—
May	6	9	8	10	1	4	4	3	3	1	—	2	—	—	—
June	9	7	4	16	2	1	15	1	3	—	2	2	—	—	—
July	8	6	12	5	2	1	5	2	2	—	—	4	—	—	—
August	11	8	10	10	—	3	3	8	10	2	2	1	—	—	—
September	2	5	4	9	—	3	7	4	6	4	2	—	—	—	—
October	16	11	10	23	4	2	9	3	5	2	—	1	—	—	—
November	18	11	7	15	1	2	12	4	—	2	1	1	—	—	1
December	15	17	26	16	4	3	5	4	—	—	—	—	1	—	—
Totals	120	115	140	156	31	37	80	55	33	11	9	13	1	1	1

Average stay in hospital in days:—

	1902.	1903.	1904.	1905.
Scarlet Fever ..	56	58	54.7	48.94
Diphtheria ..	35	—	21.07	28.62
Typhoid Fever ..	38	—	40.66	32.0

Deaths in hospital:—

	Scarlet Fever.	Diphtheria.	Typhoid Fever.
1902.	1 death Rate - ·83%	2 deaths Rate - 6.7%	7 deaths Rate - 21.2%
1903.	1 death Rate - ·86%	4 deaths Rate - 11.4%	2 deaths Rate - 18.1%
1904.	4 deaths Rate - 2.66%	7 deaths Rate - 8.75%	2 deaths Rate - 22.22%
1905.	3 deaths Rate - 1.92%	4 deaths Rate - 7.27%	1 death Rate - 7.69%

During the year Miss Brown, who has been Matron since the opening of the Hospital in 1898, resigned. I should like to put on record here, my appreciation of her services to the Hospital and so to the town. In starting an Isolation Hospital of the size that this was, a great deal depends on its popularity with the patients and their friends. Probably still more a few years ago than even now. Miss Brown was ever ready to sacrifice herself to the interests of the patients and the hospital, which quickly gained for her the respect and affection of a series of inmates and visitors. If one thing, more than another, contributes to the value of an Isolation Hospital it is the efficiency of its nursing staff, and in changing matrons it is desirable to take stock of the nursing conditions, to see if they can be improved. A large

proportion of the nurses employed are probationers without previous experience, and it is essential that these should be well trained and taught, as well as infused with a real enthusiam for their calling. Miss Barling, the new matron, fully sympathises with this ideal, and I trust that under her guidance the Hospital will still further increase in efficiency.

RETURN CASES OF SCARLET FEVER.

During the year there have been 7 cases discharged from the Hospital, to houses in which another case has been notified within 21 days after the previous case returned home. Curiously enough, there were 7 instances, too, where secondary cases were notified in houses in which the first case was nursed at home. That is, after an interval of more than 7 days; thus shewing that these 7 cases were not infected directly by the first patient before it was isolated. This is an exceedingly difficult question, and one that worries the mind of those responsible for Isolation Hospitals as much as anything.

If a patient is discharged quite well, free from any discharge or obvious signs of infection, on the way home or shortly after, a "chill is caught," the child gets a running from the nose, which appears to re-light up the infection and another member of the family is infected in consequence. This was the history of five of the above cases. No care on the part of the Hospital management can obviate this, and yet this question is one that severely militates against the usefulness of Isolation Hospitals.

In 1899, Professor Simpson reported to the Metropolitan Asylums Board on the subject of these "return cases" after a special investigation his principal conclusions were:—

(1). That about half the number of supposed "return cases" were really due to cases leaving the Hospital in an infectious condition.

(2). That these constituted at least 1.6 of the total discharges.

(3). That 80 per cent. of the primary infective cases are connected with discharges from the mucous membranes (nose, throat and ear).

(4). That "return cases" are not due to premature discharge and the isolation in Hospital is, if anything, too long.

(5). That warm baths immediately before the patient is sent out of Hospital, do not remove the infection but contribute to its increase.

During the past year the result of a further investigation has been reported by Dr. Cameron, to the Metropolitan Asylums Board, and the following are his principal conclusions:—

(1). That the supposed infectious cases are 4.1 per cent. of the total number discharged.

(2). That the majority of these were probably the actual causes of infection in the return cases.

(3). That although a large proportion of the infecting cases are those which have been detained beyond the average time in Hospital, length of detention is not in itself the cause of infectiousness.

(4). That the principal cause of the occurrence of "return cases" is the persistence and recurrence of

mucous discharges from the nose, and that this happens especially in the winter.

(5). That late "peeling" cannot be regarded as evidence of infectiousness.

The experience of these sort of cases in this district, coincides with the conclusions here quoted, and are set out for that reason.

During the year a "temporary shelter" has been built in one portion of the Hospital grounds but outside the actual Hospital precincts. It is proposed to use this as a convalescent home or "half-way house" between the Hospital and the home, for Scarlet Fever patients—this when not otherwise required. By this means it is hoped to minimise the number of return cases by hardening off, so to speak, the patient before returning home. The shelter was declared open in December of the past year. It will provide accommodation for about 8 patients.

During the year a contract was made with the Woodford Urban District Council to admit a certain number of their infectious cases.

The following number have been admitted to our hospital:—

Scarlet Fever	34
Diphtheria..	1

The following number have been discharged:—

Scarlet Fever	23
Diphtheria.....	1

The following number remained in Hospital at the end of 1905:—

Scarlet Fever	11
Diphtheria	—

DISINFECTION.

There is a large-sized Washington Lyon Steam Disinfector at the Hospital. This is used for disinfecting the hospital bedding, and also the infected material from the town. For this purpose two vans are employed; one for removing the infected articles, and the other for returning them after disinfection.

The following table shows the number of houses and articles disinfected for the past three years.

	Houses.			Articles.		
	1903.	1904.	1905.	1903.	1904.	1905.
January ..	29	36	71	602	397	783
February ..	26	35	48	307	544	727
March ..	18	30	40	270	487	707
April ..	15	21	40	239	209	579
May	22	22	31	273	479	757
June	14	55	16	147	447	196
July	9	24	13	144	96	187
August ..	21	28	20	234	301	220
September ..	20	28	16	250	260	205
October ..	18	35	34	141	338	397
November ..	29	28	33	280	241	478
December ..	31	30	20	363	458	179
Totals ..	252	372	382	3250	4257	5415

Two men are employed on this work part time.

The rooms are sprayed with a 1 or 2 per cent. Formalin solution, from a "Mackenzie's Spray."

Cyllin has been used in some cases recently.

SECTION III.

Schools.

MEDICAL INSPECTION.—An interesting report has been issued during the past year by the Inter Departmental Committee on "Medical inspection of children attending Public Elementary Schools," and as there seems to be a good deal of doubt as to what should be included in the term "Medical Inspection," in the minds of the public, I propose to quote some of the findings of that report as being of practical import to this town.

Medical Officers for educational purposes have been appointed by six Counties, 35 County Boroughs, 31 Boroughs, and 13 Urban Districts.

The duties of the School Medical Officer may include any of the following :—

(*a*) Periodic examination of, and report on, the sanitary condition of the school premises and the general health of the scholars; examination from this standpoint, of plans for new schools and enlargements.

(*b*) The prevention of the spread of infectious disease.

(*c*) Examination of children alleged to be physically unfit to attend school.

(*d*) Periodic visits to the schools and examination of the eyes, ears, teeth, and general physical condition of the children.

(*e*) Making of an anthropometric survey.

(*f*) The examination of defective and epileptic children, and the superintendence of special schools for defective, epileptic, blind, and deaf children.

(*g*) Advising the authority on special points; lecturing to the teachers and advising them as to the curriculum for certain children, and as to general matters of health.

(*h*) Examination of the health of teachers and other employes.

The report goes on to state that it must not be assumed that all these duties are assigned to every Medical Officer, and in point of fact very seldom are all assigned to him.

In Ilford, most of the duties stated above are carried out, and I trust as time goes on, that they will all be attended to and carried out in their entirety.

One of the most difficult would be (*e*) the making of an anthropometric survey, as it involves a great amount of time and detail; but it is one that would be most interesting, and could be tried as an experiment in two of the schools—say one of the Council schools and one of the non-provided schools. An interesting comparison could then be made between the physique and stamina of the two sets of children.

The following extract from the list of duties of the Medical Officer for Kidderminster shows the possibilities which lie before a sympathetic Officer.

"The function of the Medical Officer in relation to the children in the schools is preventive, and in individual cases only applied to matters involving educational questions. The conditions of the special senses, the avenues of knowledge, are of great importance with regard to educational success. The officer can call attention to the need of glasses, but has nothing to do with prescribing them. He may

> notice the presence of Adenoids, but takes no part in their removal. On the other hand his work should extend far beyond mere investigation of the sanitary state of the buildings, or the excluding of unhealthy or diseased children. The methods of education, requirements of physical exercise, avoidance—particularly in the very young—of overstrain from prolonged fatigue or from improper tasks, are all matters in which improvement can only be obtained by the Medical Officer acting, not as an authority to shut or close, to disturb or interrupt the proper work of the school, but as a counsellor and adviser, with a knowledge of school routine, and of the requirements for health ; to assist and collaborate with the Committee, and it is with this in his mind that he should enter any school."

Thus it is seen that it is most important for the Medical Officer to work in harmony with the teacher, and really their object is the same in the long run, though on the surface, occasionally, their ideas may be opposed. They are both anxious to help and assist the individual child and to maintain the attendance at the best point possible.

In most areas where medical inspection is organised, the School Medical Officer does not examine each individual child ; he relies very largely upon the teachers for information as to the children who need his attention, and in a district like Ilford, with 10,000 children and 16 schools, which the Medical Officer is expected to visit once a month, it is obviously impossible to examine each child individually. In Section 21 of the Report attention is drawn to another aspect of the matter as follows :—" We have received information from several towns, where the staff of the Sanitary Depart-

ment, acting under the Medical Officer of Health, have been of material assistance in following up in the house, cases of infectious disease, and of dirty and verminous children.

Also there are distinct advantages in the School Medical Officer being also Medical Officer of Health. The duties of the two offices naturally overlap. The inspection of children for the prevention of the spread of infectious disease and the sanitary inspection of the premises are examples of this. The union of the two offices tends to prevent duplication of work. It has the additional advantage that the staff of the Authority's Sanitary Department is thus made easily accessible for any special work. They are employed for disinfecting schools, and for following up cases of dirty and verminous children, and for obtaining attention to the condition of the homes as well as of the children. At the same time the Medical Officer of Health finds that his position as Educational Medical Officer greatly facilitates his work in preventing the spread of infectious disease."

In the report of the Inter-Departmental Committee, the results of medical inspection have been summarised as follows :—

(1) There is no doubt that the establishment of proper organisations for the prevention of the spread of infectious disease has had marked results. Diphtheria especially, it is stated, is now in several areas under such complete control, that it can be stopped in a few days.

The knowledge now possessed by many teachers of the symptoms of infectious diseases, enables them to act with the promptitude which is essential if effective measures are to be taken. The Education Act of 1902, by uniting to a large

extent the Sanitary and Educational Authorities, has undoubtedly facilitated prompt and effective action in dealing with epidemic sickness.

(2) Much has been done to secure greater cleanliness and freedom from vermin, and to attack such troublesome diseases as Ringworm. The results here have been further improved in certain areas, by the prosecution of the parents in extreme cases of neglect. Apart from the general physical gain to the child, resulting from greater cleanliness, there is also the consequent improvement in the morale of the school.

(3) The establishment of medical inspection has caused more careful and widespread attention to be given to defective children. Minor physical defects have been remedied; surgical apparatus has been obtained.

(4) To nothing, probably, has more attention been paid than to eyesight, and in no direction have beneficial results more certainly been obtained, Defects have been discovered which would otherwise have passed unnoticed, and spectacles have been provided.

Overstraining of the eyes has often been stopped, with the consequent disappearance of many headaches and much apparent stupidity.

(5) Some steps have been taken towards dealing with the more difficult question of defective hearing.

(6) Teachers have been lead to take more intelligent and more sympathetic interest in the physical welfare of the children placed under their care. Ventilation is better attended to as its importance becomes more fully realised.

The School Medical Officer gives teachers valuable support in any effort they may make to arouse the better feelings of the apathetic or negligent parent.

(7) Generally, we feel no doubt that the medical inspection has done much towards bringing to view defects, the treatment of which secures the child from unnecessary suffering, and may save him from serious trouble in after life.

Finally, we desire to point out now small is expenditure which inspection involves; in no urban area does it require more than one tenth of a penny rate—generally not so much. After all, medical inspection is but now making a beginning, and there is every reason to hope that as time goes on its value will become more widely recognised by the parents, and that the results it produces will thus become more completely satisfactory.

INFECTIOUS DISEASE.

From the table of infectious diseases in the schools, for 1904 and 1905, it will be seen that the past year compares favourably with the year 1904 in the more serious infectious deseases.

In the table this year a double column has been placed, shewing the children who have been actually suffering from the disease, and also the number of contacts, or children from the infected houses who have been excluded from school in consequence. Thus it will be seen that out of a total number of 1,009 children who have been excluded from school as suffering from infectious disease, 709 other children have also been excluded who have been in contact with the affected children. It is surprising what a large proportion of children are involved, and what a serious matter it is from a financial

point of view alone. For about every six children attending school, one has been excluded for a shorter or longer time for infectious disease. Last year the proportion was about the same, without including contacts, a record of whom has been kept this year for the first time, so that the record for this year is better than last, but only proves the necessity for still further effort. I also think it would be a good plan if teachers on admitting new children would find out from the parent if the child has had Measles, Whooping Cough, or Chicken Pox. It could easily be done and would involve little extra trouble on the part of teachers, as all they would have to do would be to add another column to the admission register. This information would be specially valuable in the case of Measles, as after a short time it would be an extremely valuable guide as to the closure, or not, of a school, as then the proportion of susceptible children would be known.

MEASLES.

Measles has been markedly absent this year, probably due to its great prevalence during the former two or three years, thus rendering a great proportion of the children immune to a renewed attack during the year 1905.

The following regulation has worked well and without trouble:—

> "In certain cases where there are children in the same house who have previously suffered from Measles and are over eight years of age, certificates will be granted by the Medical Officer of Health for these children to attend school. The granting of these certificates will depend on whether the arrangements for the isolation and nursing of the patient are satisfactory or not."

CHICKEN POX.

Chicken Pox.—The infectious disease of most prevalence has been Chicken Pox, and this affected the attendance at Loxford Infants, and thence spread to the High Road Infants, Cleveland Road, and Christchurch Road Schools. Chicken Pox is such a mild disease and is so seldom followed by any serious result, that it might seem questionable whether it might not be left alone and allowed to run its course without supervision, especially as there are numerous cases where there are only a few spots, and the child's general health does not appear to suffer at all. There are three objections to this course, viz. :—

(1) It is not fair to the parents of other children not to do the best possible to protect their children from any infection.

(2) The more it spreads—and the less it is supervised the more it spreads—the more disastrously it affects the attendance register.

(3) If there was any Small Pox in the district, the gaining knowledge and location of cases of Chicken Pox would be of material assistance in discovering mild cases of Small Pox, and would save the Sanitary Authority the expense of making Chicken Pox a notifiable disease under the Act as was done during the last Small Pox epidemic.

RINGWORM.

Ringworm.—This is a constant source of trouble in the schools, though I am glad to say that there has not been any great prevalence. In 11 instances, where it was doubtful whether it was fit for a child to return to school after Ring-

worm, a bacteriological opinion was obtained. This is the only way to settle the question if return, or not, to school is desirable, and it is quite a question whether it would not be to the advantage of the school authority to provide a free bacteriological examination to any Medical Practitioner who desired to make certain before sending a patient who has had Ringworm back to school. The risk to the school of a premature return is so great, and the difficulty of determining when a patient is fit to go to school is also sometimes a serious matter.

EXCLUSION OF CHILDREN UNDER 5.

Exclusion of Children under 5, from the elementary schools has received a good deal of attention during the past year. In the Councils' there were about 600 children under 5, and since the Board of Education has left it to the discretion of the local authority to exclude them or not, a great many authorities have excluded these children. In Ilford 10 schools have excluded all children under 5 years, of course depending on the style of school.

On the Continent the usual age for compulsory school attendance is at 6, and in America it is about the same. Some of the members of the Moseley Commission were struck with the difficulty the teachers had in teaching children of 7 years of age the elements of learning. In districts like Ilford, where the Education Rate is going up, and likely to continue to increase, unless some other means than at present exist are found for lightening the local burden, the financial element is likely to have most weight with the authority and the ratepayers. Though here some provision later will have to be made for these children, and there will be the loss of attendance at school of older girls who will be kept at home to look after their smaller brothers and sisters.

It is worth considering, however, which is likely to be most beneficial to the child and the teacher in the long run. A great many Medical Officers of Health have advocated the exclusion of children under 5, on the ground of the prevalence of Measles and Whooping Cough in Infant schools. But if schools are such propagators of Measles, it means, of course, that the incidence of Measles will be postponed to a later age, which will have a more serious effect on the interruption of school work, as if the same standard is required the teacher will have less time to instruct the child, and consequently the interruption will be more serious. With Whooping Cough the greatest mortality is under 2 years of age, and consequently its effects are felt before school life begins. The postponement of the age of Measles attack would probably have a beneficial effect on the death-rate, but to what extent it is problematical, as here, too, a large number of children develope Measles before 3 years of age, and still more before 4.

There is an idea that children under 5 cannot learn, but this is a mistake. With the right sort of instruction a great deal is learnt, habits of school discipline are formed, and I have been astonished at the results achieved in some of the infant schools under an efficient mistress. The effect on the average child is entirely beneficial so long as the education is carried out on the right lines and impossibilities are not attempted.

Moreover, the child developes physically far better if it is using its brain to a legitimate extent than if it is limited to the monotony of the back yard or confined premises, day after day.

It is a difficult matter to prove, but my impression is that more children shew signs of over-pressure who started

school after 5, than those who started before. It is a matter which requires careful consideration, and the effect studied.

UNDERFED CHILDREN.

A good deal of attention has been paid to this matter during the year, but the amount of underfeeding in Ilford, is not great. In most of the schools 2 or 3 children in each department was about the average, and these were generally examples rather of bad feeding than under feeding. I examined about 40 of these children and most of them were suffering from malnutrition. I then personally visited most of the homes concerned. The father was generally out of work, or they were children of widows; so that in about two-thirds of these cases, there was real need of some help. It is a very difficult matter to deal with, as the supply is very apt to create the demand, and that was the case in about one-third of the cases mentioned above.

During the year I was appointed to act under the Epileptic and Defective Childrens' Act, and one severe case of Epilepsy in a boy 12 years of age, was examined and sent to Lingfield School. There are about a dozen defective children scattered through the schools, who are deriving no benefit from their present instruction.

VISION.

Out of the number of children who have been examined for defective vision, 27 have been advised to seek medical advice, and a certain proportion have had spectacles in consequence. Some did not need them and in other instances

the parent either would not take the trouble to take them to the hospital, or said they could not afford to get the spectacles.

HEARING.

The number of children in the schools suffering from Adenoids are not numerous. A few have been seen, advised to seek surgical treatment, and some have benefited by the operative treatment. The open mouth, vacant expression and dulled senses, are detrimental to the child in more ways than one; but here, too, sometimes the parent will take pains to have the matter remedied, and sometimes not. These are the children who give rise to great trouble if they contract either Scarlet Fever or Diphtheria; and they are difficult to clear of infection.

NEW SCHOOLS.

One new temporary iron school has been erected during the year, at Goodmayes, and one new permanent school at the Highlands has been opened.

During the year I have examined 1493 children at the Town Hall, as to their fitness to attend school, or not, and have given certificates to that effect.

SUMMARY OF INFECTIOUS DISEASES AND CHILDREN WHO HAVE BEEN EXCLUDED, OWING TO CONTACT WITH PATIENTS, IN CONNECTION WITH SCHOOLS DURING THE YEAR ENDED 31st DECEMBER, 1905.

SCHOOLS.	No. of Scholars on Roll.	DISEASES AND CONTACTS.																							
		Scarlet Fever.		Diphtheria.		Membranous Croup.		Typhoid Fever.		Measles.		German Measles.		Chicken Pox.		Mumps.		Whooping Cough.		Ringworm.		Ophthalmia.		Totals.	
		Cases	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.	Cases.	Contacts.
Cleveland Road	1,763	7	15	3	7	..	..	1	..	7	13	..	2	76	52	21	11	57	14	19	..	..	..	191	114
Downshall	1,697	11	18	6	18	..	..	..	..	17	11	3	4	16	10	5	1	67	32	9	..	..	..	134	94
Loxford	1,607	25	39	3	10	..	..	1	1	6	13	..	..	152	110	29	3	15	7	19	..	..	..	250	183
Christchurch Road	1,356	16	24	5	14	..	..	1	..	17	14	..	..	70	49	3	1	7	6	8	..	1	..	128	108
Highlands	820	9	7	15	20	..	..	..	1	33	15	1	1	16	8	..	..	9	4	6	..	..	..	89	56
Horns	527	..	6	..	3	..	..	..	..	1	1	..	..	10	6	2	2	..	..	..	..	..	..	13	18
Chadwell	466	2	4	3	2	1	4	..	..	..	..	..	..	7	14	..	..	3	..	..	..	..	..	16	24
Goodmayes	379	4	4	4	4	..	..	..	..	1	1	..	..	3	2	..	..	1	..	1	..	..	..	14	11
National, Ilford	509	1	3	1	..	..	..	1	5	3	9	..	2	7	4	1	1	5	..	4	..	..	..	23	24
Infants, High Road	142	..	6	1	1	..	..	..	..	..	..	2	3	22	12	1	..	8	..	..	..	..	..	34	22
National, Barkingside	290	..	..	..	..	..	..	..	..	1	7	..	..	..	..	19	19	6	1	3	..	..	..	29	27
Roman Catholic	257	4	..	1	2	..	..	..	..	..	..	..	..	..	1	..	..	6	3	1	..	..	..	12	6
Beehive	112	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	2	..	..	..	..	7	2
Ilford Lane	104	..	1	..	..	..	..	1	..	..	..	..	..	..	..	15	4	..	..	..	..	..	..	16	5
Aldborough Hatch	81	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	5	2
Secondary	580	2	10	1	3	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	5	13
Private Schools	....	23	..	2	.	..	..	1	..	15	..	..	..	2	..	..	..	..	..	..	..	..	..	43	..
Totals	10,690	105	139	45	84	1	4	7	7	102	84	6	12	381	268	96	42	195	69	70	..	1	..	1009	709

SUMMARY OF INFECTIOUS DISEASES REPORTED IN CONNECTION WITH SCHOOLS FOR THE YEAR ENDED 31ST DECEMBER, 1904.

SCHOOLS.	No. of Scholars on Roll.	DISEASE.													
		Small Pox.	Scarlet Fever.	Diphtheria.	Membranous Croup.	Typhoid Fever.	Continued Fever.	Measles.	German Measles.	Chicken Pox.	Mumps.	Whooping Cough.	Ringworm.	Glass Pox.	TOTAL.
Downshall	1,632	....	31	7	1	3	....	248	23	4	1	9	16	....	343
Loxford	1,484	....	12	14	1	2	1	170	..	14	3	8	1	....	226
Christchurch Road	1,223	....	14	9	2	2	....	136	6	9	....	13	2	....	193
Cleveland Road	1,626	...	34	16	....	1	....	176	13	27	...	21	8	....	296
Highlands	641	....	8	25	....	..	..	31	1	28	2	13	6	3	117
National, Ilford	522	...	8	1	1	1	....	33	2	....	....	1	....	....	47
Chadwell	508	....	22	2	....	....	...	7	8	1	....	2	2	...	44
National, Barkingside	290	....	1	1	....	....	....	54	....	3	..	1	1	....	61
Infants', High Road	153	..	2	1	1	..	....	62	2	1	....	....	....	....	69
Horns	439	....	2	.	..	....	....	99	2	4	1	....	..	....	108
Roman Catholic	215	..	1	1	...	..	..	13	..	1	....	2	1	....	19
Secondary	..	...	...	4	....	2	..	3	....	1	....	....	....	....	10
Beehive	107	...	1	....	....	....	....	9	....	4	....	1	...	...	15
Ilford Lane	67	....	2	....	....	....	....	7	....	....	....	2	....	....	11
Aldborough Hatch	93	..	1	1	...	...	....	....	...	2	....	.	.. .	....	4
TOTALS	9,000	....	139	82	6	11	1	1,048	57	99	7	73	37	3	1,563

SECTION IV.

Special Report on Milk Supply.

MILK SUPPLY.

For some time past the milk supply of Ilford has received a good deal of attention, but in accordance with the instructions of the Council, I am presenting a special report on the subject.

The bulk of the milk that comes into the district, comes from farms in Essex, direct to the retailer; that is, the larger retail dairymen contract direct with the farmer, and receive their milk direct from him, either by road or rail. Thirty-two farmers in Essex and one in Norfolk thus deal with 20 Ilford dairymen. The smaller dairymen obtain their supply through a company which acts as an intermediary between the farmer and the retailer. This company obtains its milk from farms in Norfolk, Suffolk, Essex, Cambridgeshire, and Hertfordshire. Every week some 3,300 churns of milk come into Ilford by train, and in addition about 200 churns come in by road. Each churn, if full, should contain 68 quarts; so that one may reckon that about 238,000 quarts of milk come into Ilford from outside sources, every week. The amount produced and sold within the district is not large. There are 7 cowsheds registered in the district, containing 3, 35, 19, 14, 5, 44, and 120 cows respectively. Thus the milk that is produced locally is small compared with that imported from without. Taking 10 quarts a day as the average yield of a cow about midway in her milking period. will give 2,400 quarts per day produced in Ilford, or 16,800 quarts per week, out of the 253,680 quarts sold.

LIST OF PLACES SUPPLYING ILFORD WITH MILK.

No. of separate Farmers.	District.	
1	Braintree,	Essex.
1	Boreham,	,,
3	Billericay,	,,
3	Brentwood,	,,
1	Chelmsford,	,,
1	Chadwell,	,,
1	Dunmow,	,,
5	Ingatestone,	,,
1	Havering,	,,
1	Harold Wood,	,,
1	Lambourne End,	,,
1	Ongar,	,,
8	Romford,	,,
1	South Weald,	,,
1	Southminster,	,,
1	Shenfield,	,,
2	Takely, S.O.	,,
1	Writtle,	,,
1	Woodham Ferris,	,,
2	Witham,	,,
2	Wickford	,,
1	Merton,	Norfolk.
1	Shipdham,	,,
2	Hailsworth,	Suffolk.
1	Ipswich,	,,
1	Long Melford,	,,
1	Saxmundham,	,,
1	Wickham Market,	,,
1	Yoxford,	,,
1	Linton,	Cambridgeshire.
1	Sheedy Camp,	,,
1	Buntingford,	Herts.
Total .. 51		

From the list of farmers shown on the opposite page it will be seen that a large proportion of the milk comes from farms within easy reach of Ilford Railway Station. In that way, Ilford may consider itself fortunate, for, when one realises that milk often spends some nine or more hours in transit from farmer to retailer, in railway trucks with no special provision for keeping it sweet, the advantage of this proximity is obvious. The result of the evening milking, instead of spending the night being shaken up in a railway train, can be delivered to the dairyman the same evening; kept cool in his dairy and sent out on the early morning round. Likewise the morning milking can in a similar way go direct to the consumer within 3 or 4 hours after leaving the cow. With such an article as milk, which affords such an excellent food for all sorts of putrefactive bacteria, this is a very great advantage.

In June, 1904, there was an outbreak of Diphtheria in Ilford, probably due to the milk supplied from a particular farm being infected; and as a result of the condition of things found at that farm, I was authorised by the Council, with the voluntary assistance of the dairymen, to inspect all these farms supplying Ilford. As a consequence a great many of them have been inspected; and a regular inspection, by joint action of the Medical Officer of Health and the dairymen, would in time result in bringing some of the more backward farmers up to a better standard.

The care in milking and attending to the dairy, of course varies greatly. Some leave little to be desired while others are careless and slovenly.

Often a difficulty in the country districts is the scarcity of water.

All milk after being drawn from the cow should be cooled, which is usually done by passing the milk slowly over a series of tubes through which cold water is kept running. The water used to run through these tubes is often obtained from a pond, or it may be rain-water that is used over and over again; so that in summer, when cold water is required the water used is not much below the temperature of the milk. Moreover, if by any chance the cooler goes wrong and the tubes leak, this filthy water gains access to the milk. As one farmer naively remarked to me that he could not make out the increased yield of milk from his cows, until one day he discovered a leakage in his cooler.

Then again, there is also the difficulty of keeping the animals clean. Cows are about the most difficult of all animals to keep clean in the region of the udder; and this dirt is very apt to pollute the milk. On most farms, now, in Essex at any rate, men-milkers have replaced the old-time "dairymaid." There is reason to think that this change is not for the better, either for the cow or for the cleanliness of the milk.

ILFORD COWSHEDS AND DAIRIES.

As mentioned before, there are 7 Cowsheds in Ilford. Of these, 4 are modern, well drained, paved, and with sufficient cubic air space for the cows.

The other three are in the rural part of the district, the buildings are old and only waiting for the development of building, to be pulled down. They are fairly well kept, and only provide accommodation for some 23 cows in all.

There are 44 Milkshops and Dairies registered in the district, and of these, about one-half may be said to have

good brick-built accommodation for storing their milk, a plentiful supply of hot and cold water for washing milk cans and other utensils, and good drainage from impervious floors. The others are either small shops where the milk is sold among other things over the counter in small quantities, and have no milk round, or are men with a small round who have been established some years, do all the work themselves, and keep their premises and cans in a cleanly condition.

On two occasions during the past year, men who started a milk round without having given the Council proper notice of their intention to do so, or making any suitable provision for carrying on their business, ceased to sell milk when they were informed that the Council intended to take action to compel them to provide suitable accommodation.

In a new neighbourhood like this, by making free use of the "Milkshops and Dairies Order," it is easy to prevent new dairymen from starting selling milk, unless they provide suitable accommodation for storing their milk, and for for keeping their vessels and milk cans clean.

The small general shops that sell about a gallon per day over the counter, are the most difficult to deal with. The milk is generally kept in an open vessel on the counter, surrounded by all kinds of goods, such as bacon, firewood, blacking, oil lamps, &c., &c.

Under these conditions, in summer-time especially, with flies dropping in and out of the milk on to the various other articles in the shop, one may imagine what condition the milk gets into after a few hours. Fortunately the quantity kept under these conditions is small, and also, too, that most of this milk is consumed by adults, in their tea, cocoa, &c

To feed babies on milk of this sort, in summer-time, is to court disaster; though, doubtless, it is sometimes done.

A regulation should be made to compel all milk-sellers to provide a muslin cover to prevent flies and coarser dirt particles from obtaining access to the milk when exposed for sale in an open vessel on the counter. This could easily be done and would do a certain amount of good.

CONDENSED MILK.

No account of the milk supply of the district would be complete without taking into consideration the question of condensed milks. Of these, there are three groups sold, according to Dr Hutchison on "Food and Dietetics,"

They are:—

(1). Unsweetened and condensed whole milk.

(2). Sweetened and condensed whole milk.

(3). Sweetened and condensed skim milk.

The quantity of group 1 sold in Ilford is so small as to be practically nil. The chief reason, I believe, being the difficulty in keeping it. Owing to the absence of sugar it often goes wrong.

Group 2 contains what is ordinarily called the best condensed milk. This contains, as a rule, rather more added cane-sugar than solids in the milk.

An analysis of the better brands from Pearmain and Moore's "Analysis of food and drugs," is here given :—

Brand.	Total solids.	Proteids.	Fat.	Milk sugar.	Cane sugar.
Nestle ..	77·2	9·7	13·7	15·0	37·2
Rose ..	76·6	8·3	12·4	17·6	36·1
"Milkmaid"	76·3	9·7	11·0	14·6	38·7
"Full weight"	76·5	12·3	11·0	13·5	37·2
"Anglo Swiss"	74·4	8·8	10·8	16·0	37·1

Now condensed milk is simply cows milk from which a large part of the water has been removed. As a rule the cows' milk is reduced to a third of its original volume by evaporation under reduced pressure; so that all that should be necessary would be to add twice its volume of water, to restore it to its original condition. There is, however, so much cane-sugar added that at that strength, it is too sweet to be drinkable.

Pearmain and Moore give the following table shewing the character of the liquid that is produced by following out the directions on the labels of half-a-dozen of the best brands of sweetened whole cream milk :—

Sweetened whole milk.	Dilution recommended for household purposes.	Fat in such product	Dilution recommended for Infant's use.	Fat in such product.
A.	1 to 3	2·6%	1 to 5	1·8%
B.	1 to 5	1·6%	1 to 14	0·7%
C.	1 to 5	1·6%	1 to 14	0·6%
D.	1 to 6	1·4%	1 to 15	0·7%
E.	1 to 5	2·1%	1 to 14	0·8%
F.	1 to 5	1·7%	1 to 14	0·7%
Human milk	..	..	..	3·5%

"Group 3. or condensed sweetened skim milk, resembles group 2, or the sweetened whole milk in composition, but differs in that there is almost an entire absence of fat ; so that

when diluted as recommended, the resulting fluid is very poor, in proteid, and almost free from fat; and is therefore entirely unsuited for a baby's nourishment." (Dr. Hutchison on "Food and Dietetics.")

With Mr. King's help careful enquiries have been made of all the shops selling condensed milk in Ilford, and they were all good enough to supply the information required.

It was found that some 65 shops sell between them :—

Of group 2– sweetened condensed whole milk 350 dozen tins per week.

Of group 3—sweetened condensed skim milk 310 dozen tins per week.

Of course, the skim condensed milks are far the cheaper; selling at an average of three-pence per tin, as compared with an average of Five-pence-half-penny for the whole milk tins.

Doubtless this cheapness accounts for the immense sale of these skim milks, but from a nutritive point of view they are far the dearer. When one considers that many babies are fed on this condensed skim milk, through pure ignorance on the part of the mothers, it seems to me that it is time some Authority stepped in and pointed out to the mothers the dangers they are running in feeding their children on this skimmed condensed milk.

There has lately come on to the market a Condensed Humanised Milk, which gives on dilution of 1 in 2, a percentage of fat, similar to human milk. The marked

difference will be seen on comparing this percentage with the table of dilutions of other condensed milks. It is more expensive, and will therefore have some difficulty in competing with the cheaper brands; especially so with the poorer mothers, but with others it should have a future as providing a suitable milk in a cheap form and without the indigestible curd of cows' milk, which makes the latter impossible of digestion with some babies.

"Humanised condensed milk possesses the following advantages:—

1. When diluted with 2 parts of water it has the same chemical and physical characteristics as human milk.

2. It is free from micro-organisms.

3. It is free from colouring matters, preservatives, starch, cane-sugar, and all other foreign additions.

4. It has a standard composition.

5. It is easily digested.

6. It is moderate in price."

RESULT OF

Chemical Analyses

OF

ILFORD MILKS,

MADE BY

DR. J. C. THRESH.

The samples were all collected in sterile bottles, packed in ice and sent by hand direct to the Laboratory.

CHEMICAL ANALYSIS.

The Board of Agriculture in excercise of the powers conferred on them by Section 4 of the "Sale of Food and Drugs Act, 1899" have made the following regulations :—

1. "Where a sample of milk (not being milk sold as skimmed, or separated, or condensed milk) contains less than 3 per cent. of milk-fat, it shall be presumed for the purpose of the "Sale of Food and Drugs Acts, 1875 to 1899," until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk-fat or the addition thereto of water.

2. "Where a sample of milk (not being sold as skimmed, or separated, or condensed milk) contains not less than 8·5 per cent. of milk solids other than milk-fat, it shall be presumed for the purposes of the "Sale of Food and Drugs Acts, 1875 to 1899," until the contrary is proved, that the milk is not genuine, by reason of the abstraction therefrom of milk solids other than milk-fat, or the addition thereto of water.

3. "Where a sample of skimmed or separated milk (not being condensed milk) contains less than 9 per cent. of milk-solids, it shall be presumed for the purposes of the "Sale of Food and Drugs Acts, 1875 to 1899," until the contrary is proved that the milk is not genuine, by reason of the abstraction therefrom of milk solids other than milk-fat, or the addition thereto of water,"

4. "These regulations shall extend to Great Britain."

5. "These regulations shall come into operation on the first day of September, one thousand nine hundred and one.

6. "These regulations may be cited as the "Sale of Milk Regulations."

I quote these regulations as being the chemical standard laid down for milk, and the following analyses will show how far the Ilford Milks exceed, or come below, this by no means high standard.

In the report of the Department Committee on "Preservatives and Colouring Matters in Food," a recommendation was made that :

1. The use of Formaldehyde in food and drink be absolutely prohibited, and that Salicylic Acid be not used in greater proportion than one grain per pint per pound respectively for liquid or solid food, its presence in all cases to be declared.

2. That the use of any preservative or colouring matter in milk be made an offence under the "Sale of Food and Drugs Acts."

Of the 25 samples of Ilford milks, examined for Boron Compounds or Formalin, not one gave any indication of their addition.

Of the 25 samples examined, 21 gave a percentage of fat above the Board of Agriculture standard, 3 are just at the 3% and one below.

Of the "solids—not fat" 18 milks are above the 8·5% standard, 4 just reach that percentage, and 3 are below it.

So that—13 milks may be classed as chemically of a good quality.

Four milks may be classed as chemically of a fair quality.

Five milks may be classed as chemically of a poor quality.

Three milks may be classed as chemically of a bad quality.

One of the milks classed as bad was a sample taken from a milkseller whose dairy is situated in another district, but sells milk in Ilford.

Only a month previously he had been fined for selling milk with added water.

CHEMICAL ANALYSIS.

Samples Collected on 14th December, 1905, and Delivered on same day.

	A	B	C	D	E
Specific Gravity	1,031	1,031	1,031	1,033	1,030
Fat per cent.	3·2	3·2	5·0	3·9	3 5
Solids not Fat, per cent.	8·65	8·54	8·9	9·17	8·35
Total Solids per cent.	11·85	11·74	13·9	13·07	11·85
Preservatives;					
Formaldehyde	Absent	Absent	Absent	Absent	Absent
Boron Compounds	Absent	Absent	Absent	Absent	Absent

General Remarks upon the above :

No preservative was present in any of the samples.

The chemical quality leaves much to be desired. The milk with most dust and dirt in it, "D," was the best in chemical quality. "C" was also very good. "A" and "B" just exceed the lowest possible standard, and "E" barely reaches that standard.

CHEMICAL ANALYSIS.

Samples Collected on 20th December, 1905, and Delivered same day.

	F	G	H.	I.	J
Specific Gravity	1,0308	1,0304	1,0297	1,033	1,032
Fat, per cent.	3·4	3·8	3·0	3·0	3·5
Solids, not fat, per cent....	8·53	8·51	8·25	8·99	8·84
Total Solids	11·93	12·31	11·25	11·99	12·34
Preservatives:					
Boron compounds.....	Absent	Absent	Absent	Absent	Absent
Formaline	Absent	Absent	Absent	Absent	Absent

General Remarks upon the above:

All are free from preservatives.

The milk "H" is below the low standard of the Board of Agriculture, and doubtless contains added water.

CHEMICAL ANALYSIS.

Samples Collected on 4th January, 1906, and Delivered on same day.

	K	L	M	N	O
Specific Gravity	10,308	10,328	1,033	1,031	10,301
Butter fat per cent	4·3	4·2	3·5	3·5	3·2
Solids, not fat, per cent.....	8·71	9·18	8·96	8·6	8·32
Total Solids per cent.	13·01	13·38	12·46	12·1	11·52
Boracic Acid or Borax.....	Not	detected	in any	specimen	
Formaline	Not	detected	in any	specimen	

General Remarks upon the above :

"L" was a milk of very good quality chemically. "C" was below the standard and was doubtlessly watered.

All appeared free from preservatives.

CHEMICAL ANALYSIS.

SAMPLES COLLECTED ON 14TH JANUARY, 1906, "T" ON 15TH JANUARY, 1906, AND DELIVERED ON 15TH JANUARY.

	P	Q	R	S	T
Specific Gravity	1,033	1,031	1,033	1,031	1,032
Fat, per cent.	2·42	3·7	3·5	3·0	3.2
Solids, not fat, per cent. ..	9·24	8·61	9·01	8·62	8·71
Total Solids	11·66	12·31	12·52	11·62	11·91
Boron Compounds and Formalin	—	—	—	—	—
Note on *Chemical* Results ..	Some fat removed	Fair ..	Good ..	Poor ..	Fair ..

General Remarks upon the above:

One of the milks is good, two are fair, one is just passable, and one has had some of the fat abstracted.

CHEMICAL ANALYSIS.

Samples Collected on 22nd January, 1906, and Delivered same day.

	U	V	W	X	Y
Specific Gravity	1,033	1,032	1,034	1,032	1,034
Fat, per cent.	3·9	3·2	3·2	3·9	3.5
Solids, not fat, per cent. ..	9·29	8·75	9·40	8·92	9.46
Total Solids	13·19	11·95	12.60	12.82	12·96
Boron Compounds and Formaline	—	—	—	—	—
Note on Chemical Results ..	Excellent	Fair ..	Very Good	Very Good	Excellent

RESULT OF

Bacteriological Examination.

OF

ILFORD MILKS.

MADE BY

Dr. J. C. THRESH.

The samples were all collected in sterile bottles, packed in ice and sent by hand direct to the Laboratory.

BACTERIOLOGICAL EXAMINATION.

The object of making bacteriological examinations of milk, is to arrive at the amount of dirt and other extraneous matter that gains access to it. For whenever dirt in any form is added to milk, bacteria are also added at the same time. Of course some bacteria are harmless, but others lead to putrefaction and hasten the decomposition of the milk. When milk is obtained direct from the udder of the cow—especially if the "fore milk" or first drawn milk be rejected—it is practically free from any bacteria. But in the act of milking, as ordinarily carried out, some bacteria are almost certain to gain access to the milk, either from the udder and teats of the cow, the hands of the milker, the milk cans, &c., or from the atmosphere of the cowshed.

Milk is an excellent food for the growth of bacteria, so that if a small quantity of bacteria gain access at the time of milking, the longer the milk is kept the greater the number of bacteria, provided the milk is not kept artificially cooled. In other words—*vide* Dr. Houston in his report on "Bacteriological Examination of Milk," to the London County Council:—

> "Time and temperature are the two great factors influencing the degree of bacteriological impurity of the milk."

> The report says: "It follows that a comparatively clean milk to start with, may, after a lapse of some time, yield worse results as judged by the ordinary bacteriological tests, than a milk containing initially an excess of filth but which has been maintained at a low temperature; or which has been examined shortly after milking."

When one considers the stages that milk has to pass through before reaching the consumer—(1) at the farm, (2) in transit, (3) in distribution at the locality, and (4) in the house of the consumer, it is no wonder that it is often an exceedingly impure article by the time it is consumed. Then too, milk has been practically proved often to contain the germs of certain diseases, such as Diphtheria, Scarlet Fever, Typhoid Fever, Tuberculosis, and certain forms of sore throat that has given rise to more or less widespread epidemics. There is no definite bacteriological standard laid down in the same way as the chemical one, but according to Dr. Lister, in the New York Department of Health "Milk above the temperature of 50 deg. Fahrenheit is there defined as adulterated; and whenever found in the hands of dairymen, carriers, dealers, or retailers, is liable to summary destruction."

In the following examinations it will be seen that *Acid-fast bacilli* were present in 3 samples; pointing to the probability of Tuberculosis being present in the udder of one or more cows from which the milk was derived. It must not be forgotten, though, that the absence of these bacilli does not prove the absence of the Tubercle, as the bacilli might not be present in sufficient numbers; and it has been found that the inoculation of guinea-pigs with milk deposit has given rise to Tubercle, although there were no signs of the Acid-fast bacilli, on microscopical examination.

Pus cells or abscess matter were found in 7 of the 25 samples examined, which points to the probability of some of the cows having some inflammatory affection of the udder. Unless present in large quantities and in association with other bacteria, probably no harm would result, but I can conceive no benefit in drinking "matter," even if bovine. The milk from these cows should not be mixed with other milk.

The following remarks by Dr. Houston in the above-mentioned report are interesting, and are here given :—

(1) B. Enteritidis Sporogones Test.—As minute amounts both of human fœces and cow dung give a positive result with this test, and as the spores of this anaerobe do not seemingly multiply in milk under ordinary conditions of time and temperature, it is obvious that the test, as a test, may be of considerable value in the bacterioscopic analysis of milk. Whether or not this anaerobe may on occasion be the exciting cause of Diarrhœa in the human being, is a controversial matter which need not be considered here."

(2) Coli Test.—Both human fœces and cow dung contain B. coli in abundance. Unfortunately B. coli multiplies rapidly in milk in summer temperature, so that the results obtained may be interpreted with great discretion. If, however, the proportion of a standard temperature (below 10 deg. Centigrade) for milk be entertained, the test at once becomes of great value. Under these circumstances the B. coli test is a valuable means of measuring the degree of excremental pollution of milk, and also is a means of guaging its bacteriological status as regards potential danger to health."

(3) " Streptococcus Test. — Streptococci are present in abundance in human saliva, in human fœces, in cow dung, and in many morbid affections of the cows' milk secreting apparatus. Moreover, serious epidemics of illness have been ascribed to the ingestion of milk containing specific Streptococci. Intrinsically this test would appear to be unsurpassed in judging the purity of milk were it not for two circumstances. One is that

some Streptococci at all events, multiply rapidly in milk at summer temperature; the other is that the 'fore milk' of apparently healthy cows *may* sometimes contain numerous streptococci. Moreover, it is a matter of great difficulty to sift the harmful streptococci from those of the innocuous sort.

The first difficulty may be surmounted of the imposition of a standard temperature for milk (below 10deg. centigrade) be considered practicable; the second difficulty may perhaps eventually be solved by the discovery of new media and improved methods of isolating and differentiating streptococci."

(4) "TOTAL NUMBER OF BACTERIA. — Bacteria multiply so rapidly in milk, that to judge the purity of a milk by the total number of microbes present in it, is open to many objections. Not least among these is the fact that the majority of bacteria in milk are innocuous. Yet even this test, although of subordinate importance to tests 1, 2, and 3, may be of some value if a standard temperature below 10deg. centigrade be adopted."

BACTERIOLOGICAL ANALYSIS.

SAMPLES—Collected on 14th December, 1905, and delivered on same day,

	A	B	C	D	E
Bacteria per c.c. ..	134,400	164,000	100,800	201,600	159,400
Bacillus coli in 1 c c. ..	Present	Present	Present	Present	Present
B. Enteritidis sparogones in 10 c.c.	Absent	Absent	Absent	Absent	Present
B. Enteritidis in 15 c.c. ..	Absent	Absent	Absent	Absent	Present
CENTRIFUGALIZED DEPOSIT:					
Amount ..	Small	Moderate	Small	Abundant	Small
Colour .	Grey	Brownish	Light Brown	Light Brown with Black specks	Pale Brown
Epithelial Cells ..	Present	Present	Present	Present	Present
Organic Debris ..	Present	Present	Present	Present	Present
Pus Corpuscles ..	Absent	Absent	Absent	Absent	Absent
Blood Corpuscles ..	Absent	Absent	Absent	Absent	Absent
Staphyloccci ..	Present	Present	Present	Present	Present
Streptococci ..	Present	Present	Present	Present	Present
Bacilli ..	Present, no filaments	Present, no filaments	Present, many long filaments	Present, no filaments	Present, no filaments
Acid fast Bacilli ..	Absent	Absent	Absent	Absent	Absent
Moulds, spores of ..	Present	Present	Present	Present	Present

GENERAL REMARKS UPON THE ABOVE.

No sample could be considered really clean; all contained a certain amount of "dirt" in suspension. "D" was distinctly dirty, as also was "E."

In no case was anything found indicating that the milk came from cows with diseased udders. Though Streptococci were found in all, they were not associated with pus cells or blood corpuscles.

Bacteria indicative of the presence of manurial dust were present in all, most marked in "E," which contained the Bacillus Enteritidis Sporogones as well as the Bacillus Coli.

No Bacillus resembling the Tubercle Bacillus could be found in any of the samples.

The number of Bacteria present was in all cases below the average of samples promiscuously collected. In samples "B" and "E" there were some organisms which liquified the gelatine so rapidly that they could not be counted after the second day.

Doubtless, therefore, the numbers given were below the actual numbers present.

BACTERIOLOGICAL ANALYSIS.

SAMPLES —Collected on 20th December, 1905, and delivered on same day.

	F	G	H	I	J
Bacteria per c.c. ..	93,000	436,000	176,000	61,000	83,000
Bacillus coli in 1 c.c. ..	Present	Absent	Present	Present	Absent
A Bacillus allied to the B. coli ..	Present	Present	Present	Present	Present
Bacillus Enteritidis Sporogones ..	Doubtful	Present	Present	Present	Doubtful
CENTRIFUGALIZED DEPOSIT: 15 c.c. Milk					
Amount ..	3 loops	4 loops	2 loops	1½ loops	1½ loops
Colour ..	Very pale Fawn	Pale Brown	Darker Brown	Pale Brown	Grey
Staphylococci ..	Present	Predominant	Predominant	Predominant	Present
Streptococci ..	Predominant	Few	Present	Present	Present
Bacilli ..	Present	Few	Present	Present	Present
Acid fast Bacilli resembling Tubercle Bacilli...	Absent	Absent	Absent	Absent	Present
Spores of moulds ..	Present	Present	Present	Present	Present
Organic debris and Epithelial cells ..	Present	Present	Present	Present	Present
Blood Corpuscles and Leucocytes ..	Absent	Absent	Absent	Absent	Absent

GENERAL REMARKS UPON THE ABOVE.

In all cases the number of Bacteria present was so great that by the third day the plates were liquified, though the dilution used was I in 10,000 (1 c.c. to 10 litres of sterile water). The numbers given were the counts on the second day at end of 48 hours.

The greatest amount of dirt and of Bacteria was present in "G."

Streptococci were so prevalent in "F" as to suggest some infection of the cows' udder, but no definite pus cells could be found in the milk.

The only sample containing Bacilli which may be Tubercle is "J." The cows should be examined or an inoculation test applied to ascertain if they are really Tubercle Bacilli.

"H," "G," and "1" shew presence of fœcal matter; the other two, "F" and "J" are clean.

BACTERIOLOGICAL ANALYSIS.

SAMPLES—Collected on 4th January, 1906, and delivered on same day.

	K	L	M	N	O
No. of Bacteria per c.c. 48 hours growth ..	370,000	2,120,000	450,000	460,000	360,000
No. of Bacteria per c.c. 84 hours growth ..	540,000	4,000,000	All liquid	840,000	620,000
Bacillus coli in 1 c.c. ..	Present	An allied form.	An allied form	Present	An allied form
Bacillus Enteritidis Sporogones in 2 c.c. ..	Present	——	——	——	——
Do. in 10 c.c. ..	Present	Absent	Present	Present	Present
CENTRIFUGALIZED DEPOSIT: from 15 c.c. ..					
Quantity in loops ..	2	3	1½	3	2
Colour ..	Pale Grey brown	Brown	Pale grey brown	Pale grey brown	Brown
Acid fast Bacilli ...	Absent	Absent	Absent	Absent	Absent
Predominant type of organism ..	Staphylococci	Staphylococci	Staphylococci	Staphylococci	Staphylococci
Blood corpuscle and pus cells ..	NOT DEFINITELY RECOGNISED IN ANY SAMPLE.				

GENERAL REMARKS UPON THE ABOVE.

All the above contain an excessive number of bacteria and bacteria of manurial origin.

"K" and "L" especially the latter, are worst in this respect.

"L" and "N" contain most "dirt" but again "L" was the worse.

No organism resembling the tubercle bacilli was found in any. None contained any number of Streptococci.

BACTERIOLOGICAL ANALYSIS.

SAMPLES—Collected on 14th January, 1906, "T" on 15th January, 1906, and delivered on 15th January.

	P	Q	R	S	T
Bacteria per 1 c.c. at end of 48 hours growth ..	6,400,000	5,370,000	7,250,000	8,300,000	4,190,000
Bacteria of intestinal type in 1 c.c. (i.e. giving acid and gas in Bile Salt broth) ..	+	+	—	—	+
Presence or absence of true Bacillus coli in 1 c.c. ..	—	+	—	—	+
Presence or absence of Bacillus Enteritidis Sp. in 1 c.c. ..	—	—	—	—	—
Ditto in 10 c.c..	A typical	+	—	+	+
CENTRIFUGALISED DEPOSIT FROM 15 C.C.:					
Amount in loops ..	3	2	2½	1	2
Colour ..	White, a few colored specks	Grey	Light brown	Grey with specks	Light brown
Pus cells ..	—	+	—	+	+
Acid fast bacilli ..	—	—	—	—	+
Predominant organisms	Streptococci	Minute cocci	Minute cocci	Minute cocci	Minute cocci
Hairs, epidemial cells, debris of veg-tissue spores ..	+	+ Abundant	+	+	+

GENERAL REMARKS UPON THE ABOVE.

The milks contained an enormous number of bacteria, far in excess of what should be found in good clean milk.

Organisms derived from manure were present in "Q," "T," and possibly in all but "R" and "S," but in much smaller numbers.

All except "S" and "T" contained an excessive amount of "dirt" the most being in "P."

Pus cells were formed in 3 out of the 5. The significance of this is not absolutely certain, but in all probability it means that in cows of all the herds supplying the milk in which pus cells were found, there were some suffering from a more or less inflammatory condition of the udder. Taking milk from known healthy cows we do not find such cells, nor were they found in "P" and "R."

BACTERIOLOGICAL ANALYSIS.

SAMPLES—Collected on 22nd January, 1906, and delivered on same day.

	U	V	W	X	Y
Bacteria per c.c. at end of 48 hours	196,000	165,000	139,000	318,000	126,000
Bacteria of intestinal type in 1 c. c. (*i.e.* giving acid and gas in Bile Salt broth) ..	+	+	+	+	+
Presence or absence of true Baccilus Coli in 1 c.c. ..	—	—	—	—	—
Presence or absence of Bacillus Enteritidis Sparogones in 1 c.c. ..	+	—	+	+	—
Do. do in 10 c.c.. .	+	+	+	+	+
CENTRIFUGALIZED DEPOSIT FROM 15 c.c. :					
Amount in loops ..	3	3½	2	2	1
Colour ..	Dirty Brown	Grey-Brown	Light Grey	Light Brown	Grey
Pus cells ..	+	—	+	+	+
Acid fast Baccili ..	—	—	—	Many —	—
Predominant organisms	Diplococci	Staphylococci	Staphylococci	Staphylococci	Staphylococci
Hairs, epidemal cells, debris of veg.-tissue, spores ..	+	+	+	+	Very little

GENERAL REMARKS UPON THE ABOVE.

The milks contained an enormous number of bacteria, far in excess of what should be found in good, clean milk.

All contained an excessive amount of "dirt," the most being in "W" and "V."

Pus cells were found in 4 out of the 5 samples, but were most abundant in "X."

THE COUNCILS' POWERS WITH REGARD TO THE LEGAL REGULATION OF ITS MILK SUPPLY.

The powers respecting the regulation of the milk supply are embodied in the following Orders and Acts:—

(1). The Dairies, Cowsheds and Milkshops Orders of 1855 and onwards.

(2). The Infectious Diseases (Prevention) Act of 1890.

(3). The Ilford Improvement Act of 1898.

(4). The Ilford Urban District Council Act of 1904.

(5). Sale of Food and Drugs Acts, 1875-1899.

In No. 1, the Dairies, Cowsheds and Milkshops Orders the Council have power to compel:—

(*a*) The registration of all milk sellers.

(*b*) The reasonably suitable construction, as regards ventilation, drainage, etc., and water supply of new dairies and cowsheds.

(*c*) The provision of suitable accommodation for the health and good condition of the cattle. Also for the cleanliness of milk vessels, etc., and for the protection of the milk therein against infection or contamination.

(*d*) The prevention of any person suffering from a dangerous infectious disorder from handling milk in any way.

(*e*) The abolition of any water-closet or privy which communicates directly with or ventilates into any dairy.

(*f*) The prevention of a dairy being used as a sleeping apartment.

(*g*) The prevention of the milk from any cow with a tubercular udder from being mixed with other milk, or sold or used for human consumption.

In 1902 the Council adopted under the same order, the following regulations :—

(*a*) For the Inspection of Cattle in Dairies.

(*b*) For prescribing and regulating the lighting, ventilating, cleansing, drainage, and water supply of Cowsheds and Dairies in the occupation of persons following the trade of Cowkeepers or Dairymen.

(*c*) For the provision of 800 cubic feet of air space for each cow in cowsheds in which cows are kept that are not habitually turned out to graze for the greater part of the year.

(*d*) For securing the cleanliness of milk stores, milk shops, and of milk vessels used for containing milk for sale by persons following the trade of Cowkeepers or Dairymen.

(*e*) For prescribing precautions to be taken by purveyors of milk and persons selling milk by retail, against infection or contamination.

Under No. 2, the Infectious Diseases (Prevention) Act, 1890 :—

If the Medical Officer of Health is in possession of evidence that any person in his district is suffering

from infectious disease attributable to milk from any dairy either within or without his district, such Medical Officer shall, if authorised by an order of a Justice having jurisdiction in the place where such dairy is situated, have power to inspect such dairy, and if accompanied by a Veterinary Inspector, have power to inspect the animals therein, and if on such inspection the Medical Officer of Health shall be of opinion that infectious disease is caused from consumption of the milk supplied, he shall report thereon to the local authority, and the local authority may therefrom give notice to the dairyman to appear before them, within such time as may be specified, to show cause why an order should not be made requiring him not to supply any milk therefrom within the district until such order has been withdrawn by the local authority, etc.

Under No. 3. the Ilford Improvement Act of 1898, Section 65, provides for the prohibition of any person who is suffering from infectious disease, milking any cow or carrying on any trade or business in such a way as to be likely to spread the infectious disease.

Under No. 4, the Ilford Urban District Council Act of 1904 contains clauses for :—

(*a*) Dairymen to notify infectious disease among their servants.

(*b*) Medical Officer may require Dairymen to furnish list of sources of their supply of milk, and of persons supplied.

(*c*) Compensation to dairymen.

(*d*) Compensation to persons ceasing employment through one of the above sections.

(*e*) Penalty for selling milk from diseased cows.

(*f*) Penalty on failing to isolate diseased cows.

(*g*) Obligation to notify cases of Tuberculosis.

(*h*) Power of Medical Officer to take samples of milk.

(*i*) Power to inspect cows and take samples of milk.

Under No. 5, the Sale of Food and Drugs Acts.

The object of these acts is to prevent :—

(*a*) The mixing of injurious ingredients with any article of food.

(*b*) The selling of any such article if of inferior quality.

(*c*) The selling of any such article from which abstractions have been made to effect its quality injuriously.

As Ilford is an urban district, the County Council administers this Act in this district, and is the proper authority to do so. The Council can also exercise all the powers of the Act, but owing to the fines being paid over to the County, they have decided not to incur the expense.

To Summarise :—

(1) The chemical standard of the Ilford milk, is, on the whole, fairly good. Three out of the 25 samples being below standard, or 12%.

(2) Bacteriologically examined, as a guide to the amount of dirt and outside matter gaining access to the milk, the result is not good; though probably no worse than most milks consumed in urban districts.

(3) The absence of preservatives in all the milks examined is satisfactory, but the samples being taken in December and January, it is not the time of year when one would expect to find them to any extent.

(4) Though so much milk coming from outside the district, it is difficult to exercise any effective control over distant farms. Here a certain amount of good may be done by Local Authorities, but until the public awake to the fact of the importance of a clean milk supply, and insist upon getting it, even at a slightly increased cost, it will be impossible to get sufficient care taken in milking and keeping the cattle clean.

At present the Council should:

(*a*) Continue to enforce their legal powers as to the condition of dairies in their district.

(*b*) Exercise what control they can, in voluntary association with the dairymen over the farms supplying milk to this district.

(*c*) Have samples of the milk supplied to their district taken from time time; and, if necessary, take action under the Food and Drugs Act on their own account independently of the county.

(*d*) Make the following regulation under the "Dairies, Cowsheds and Milkshops Order":–

"Every purveyor of milk, or person selling milk by retail, shall cause every vessel containing milk for sale to be kept properly covered or to be otherwise sufficiently protected from contamination by dust or flies."

(*e*) Do all in their power to ensure proper cleanliness in all that pertains to the dairy, cowsheds, and cows; to encourage in every possible way proper and sufficient cooling of the milk below 50 degrees Fahrenheit.

(*f*) Support any effort made to obtain compulsory powers to compel registration of farmers in districts to which they supply milk.

MUNICIPAL MILK DEPOTS.

As Municipal Milk Depots have been discussed to a great extent recently, a brief description may be of interest.

The first one to be established in this country was at St. Helens, in 1899, and since that time, depots have been started at Ashton, Liverpool, Battersea, and other places.

In starting a depot the first thing is to ensure a supply of milk from a farm where the cows are not tuberculous, where the milking is conducted under cleanly conditions, cooled to 40 degrees Fahrenheit, and sent in sealed cans to the depot. It is then modified by the addition of water and cream in varying proportions according to the age of the baby it is to be provided for.

The following table gives the proportions which are taken from Dr. McCleary's book on "Infants' Milk Depots."

Age of Child.	Modification.	No. of bottles per day.	Amount per bottle.	Amount per day.
During 1st Fortnight . .	Milk 1 part, water 2 parts . .	9	1½ oz.	13½ oz.
„ 2nd „ . .	„ „ „ . .	9	2½ „	22½ „
„ 2nd Month . .	„ „ „ . .	9	2¼ „	22½ „
„ 3rd „ . .	Milk 1 part, water 1 part . .	9	3 „	27 „
„ 4th „ . .	„ „ „ . .	8	4 „	32 „
„ 5th „ . .	Milk 2 parts, water 1 part . .	7	5 „	35 „
„ 6th „ . .	„ „ „ . .	7	5 „	35 „
„ 7th „ . .	Milk unmodified . .	6	6 „	36 „
„ 8th „ . .	„ „ . .	6	6 „	36 „
Over 8 months . .	„ „ . .	6	7 „	42 „

This milk is then put into bottles in varying quantities, and then sealed and sterilized.

According to the age of the child, bottles are supplied and filled with sufficient milk for one feed. These bottles are supplied in wire baskets, each basket holding from 6 to 9 bottles, and containing a 24 hours supply. So that all the parent has to do is to take one of the bottles, warm it, unseal and fit on a rubber teat, thus doing away with the "feeding bottle." At Battersea the following instructions are issued to each mother:—

1. "The charge for the full weekly supply of humanised milk for infants under 6 months is 1s. 6d., payable in advance. If a day's supply only is taken, the charge is 3d. The charge for the full weekly supply for infants aged from 6 to 12 months is 2s., or 4d. per day. Children above 1 year old will be charged 2s. 6d. per week, or 5d. per day.

The scale of charges for children living outside the Borough is as follows:—

Under 6 months	2s. 3d.	per week, or	4d.	per day.
Six to 12 months	2s. 9d.	,,	5d.	,,
Over 1 year old	3s. 3d.	,,	6d.	,,

2. The depot is open from 11 a.m. to 6 p.m. on week-days, and is closed on Sundays.

3. The Milk will be supplied in bottles in a basket, each bottle containing sufficient milk for one meal, the amount varying with the age of the child.

Infants under two months receive nine bottles per day ; older children receive fewer bottles, as they should be fed less frequently.

4. If children are sent for the milk, they must be warned not to tamper with the stoppers of the bottles. On no account must a bottle be opened until the infant is ready to be fed.

5. Just before using, each bottled should be placed unopened in a basin or jug of hot water, and warmed to the proper temperature. The bottle should then be opened and the teat put on. The child should be fed at regular intervals, and fed from these bottles only. On no account should any other feeding-bottle be used. The teat should be kept scrupulously clean.

6. When all the milk in one bottle is not used, the remainder must not be warmed up again, but a fresh bottle opened for the next meal. Where there are other children this milk need not be wasted.

7. On no account should any other food be given unless ordered by a doctor.

8. After using, the bottles should be thoroughly rinsed in cold water.

9. Breakages will be charged for at the rate of 1d. per bottle, and damage to baskets must be made good. All bottles, baskets, and rubber rings not returned to the depot will be charged full value.

10. It is important that the child should be brought once a week to be weighed. The depot is open for this purpose on Tuesdays and Wednesdays from 2.30 to 4 p.m.

11. The presence of infectious disease in a house must be at once notified to the Medical Officer of Health,

N.B.—The milk should never be used in preference to mothers' milk, which is the best of all foods for young infants."

The homes of all the children fed on this milk are visited by the Lady Sanitary Inspector.

The *result* of the milk depots cannot yet be definitely determined, but there is a growing body of evidence pointing to their beneficial influence on the Infantile Mortality in the districts where they have been introduced.

The *cost* of fitting up a depot is given by Dr. McCleary, Medical Officer of Health for Battersea, as about £400 in his Borough; cost of appliances £150, and for fitting up and altering the premises £250.

He also gives the following table as Expenditure and Income for the years 1900 to 1904 in St. Helens:—

Current Expenditure.	1900—1901.	1901—1902.	1902—1903.	1903—1904.
	£ s. d.	£ s d.	£ s. d.	£ s d.
Wages for Attendance .	115 11 5	119 2 2	116 7 9	108 13 11
Milk	272 9 2	185 5 10	185 13 4	123 19 2
Rent of House and Rates ..	18 0 0	18 0 0	21 15 0	22 3 11
Sugar	8 6 6	14 2 6	16 6 6	9 2 0
Fuel, Gas, and Water ..	9 4 0	9 19 10	15 4 8	12 2 8
Sundries	21 13 5	22 19 6	22 16 1	25 11 7
Renewal of Bottles, &c. ..	25 18 8	33 6 5	62 1 2	24 14 2
	471 3 2	402 16 3	440 4 6	326 7 5
Income from sale of Milk ..	328 9 5	245 16 3	208 16 8	139 13 8
Amount falling on Rates ..	142 13 7	157 0 0	231 7 10	186 13 9

FOOD AND DRUGS ACTS.

These Acts are administered by the County, and Mr. McKirdy, Chief Inspector, has kindly given me a return of the number of samples taken with the results which I here append :

SAMPLES TAKEN IN ILFORD.

	No. taken.	No. genuine.	No. adulterated.	No. in which Reports are pending.
Milk ..	82	69	7	6
Butter..	59	47	4	8
Jam ..	3	3	—	—
Bread ..	1	1	—	—
Totals	145	120	11	14

SECTION V.

Sanitary Administration.

MEAT SUPPLY.

This is nearly all obtained from the Central Market at Smithfield; but there are three slaughter-houses licensed annually, in which a few beasts, and more sheep and pigs are killed. One is satisfactory, the others are not so good, but are periodically inspected.

VEGETABLE AND FRUIT SHOPS.

These have been frequently inspected.

OFFENSIVE TRADES.

There are none in the district.

FACTORIES.

The duties of Sanitary Authorities with regard to factories are not extensive, and are practically limited to supervision with regard to provision of means of escape in case of fire, and also of sufficient sanitary convenience.

The following is a list of the factories in the district:—

Laundries (Steam)	4
Saw Mills and Joinery Works	6
,, Wheel Works	1
Brush and Veneer Cutter	1
Printers	5
Engineers	1
Granary	2
Chemical Works	2
Photographic Plate Works, etc.	1
Paper Mill	1
Carriage Works	3
Carried forward	27

Brought forward	27
Gas Works	1
Electric Light Works	1
Celluloid Collar Works	1
Brickfields	2
Furniture Makers	1
Patentee	1
Total	34

WORKSHOPS AND WORKPLACES.

Under the Factory and Workshops Act, 1901, each Local Authority is obliged to keep a register of Workshops and Workplaces, and to forward to other Authorities the addresses of outworkers employed by masters in their district, but who reside in other districts.

The Medical Officer of Health is required to report to the Home Office and the Local Government Board on the administration of the Act in their district during the preceding year, with regard to :—

(a) Cleanliness.

(b) Air space.

(c) Ventilation.

(d) Drainage of floors on which wet processes are carried on.

(e) Provision of suitable and sufficient sanitary conveniences.

Three hundred and seven have been inspected during the year.

They are :—

Dressmakers	86
Milliners	24
Tailors	28
Bootmakers and Repairers ..	47
Sadlers and Harness Makers ..	5
Hand Laundries	14
Smiths	6
Cycle Makers and Ropairers ..	6
Motor Makers and Repairers ..	1
Stonemasons	5
Picture Framers	5
Upholsterers	5
Surgical Belt Makers ..	2
Watch and Clock Repairers ..	6
Glass Cutter	1
Electrical Fitters	4
Umbrella Repairers	6
Undertakers	6
Carpenters and Joiners ..	13
Carriage Builders & Wheelwrights	6
Plumbers	3
Dentists.	2
Printers.	1
Feather Dressers	4
Lace Workers	2
Basket Maker	1
Signwriter	1
Domestic Machinist	1
Tie Makers	3
Wearing Apparel	8
Florists	5
	307

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspector of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	34	Nil	Nil
Workshops (including Workshop Laundries .	323	26	Nil
Workplaces	Nil	Nil	Nil
Homeworkers' Premises ..	56	Nil	Nil
Total ..	413	26	Nil

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts:—				
Want of cleanliness	3	3		
Want of ventilation				
Overcrowding	4	3		
Want of drainage of floors .	3	2		
Other nuisances	28	27		
Sanitary accommodation — insufficient ..	2	2		
Sanitary accommodation — unsuitable or defective..				
Sanitary accommodation — not separate for sexes .				
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (s. 101) .				
Breach of special sanitary requirements for bakehouses (ss 97 to 100) . ..	10	9		
Failure as regards lists of outworkers (s 107)	13	13		
Giving out work to be done in premises which are . — unwholesome (S. 108)				
Giving out work to be done in premises which are . — infected (S. 110)				
Allowing wearing apparel to be made in premises infected by scarlet fever or small pox (s. 109) ..				
Other offences				
Total .	63	59		

3.—OTHER MATTERS.

Class.		Number.	
Matters notified to H.M. Inspector of Factories			
Failure to affix Abstract of the Factory and Workshop Act (s. 133)		26	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (s. 5)	Notified by H.M. Inspectors		
	Reports (of action taken) sent to H.M. Inspector		
Other			
Underground Bakehouses (s. 101)			
Certificates granted during the year			
In use at the end of the year		1	
Homework :—		Number of	
		Lists.	Outworkers.
List of Outworkers (s. 107) :—			
Lists received		33	34
Addresses of outworkers	forwarded to other Authorities	39	
	received from other Authorities	26	
		Wearing Apparel:	Other.
Homework in unwholesome or infected premises :—			
Notices prohibiting homework in unwholesome premises (s. 108)			
Cases of infectious disease notified in homeworkers' premises			
Orders prohibiting homework in infected premises (s. 110)			
Workshops on the Register (s. 131) at the end of the year		307	
Bakehouses		32	
Total number of workshops on Register		339	

For 1904 there were 293 on the register.

For 1903 there were 250 on the register.

26 notices were sent under the Public Health Act.

Notices of outworkers residing in this district were received in 26 instances from other Authorities. A record is kept of their addresses. Notices of outworkers residing in other districts were sent in 39 instances.

A list of outworkers supplied by 13 employers was kept; 26 notices were sent to the Factory Inspector, where young persons were employed and no abstract of the Act was posted.

There are several small laundries in the district, worked by members of one family, which are, of course, outside the scope of the Factory Act; but in any fresh Act they should be brought in.

BAKEHOUSES.

There are 32 bakehouses in the district.

There is 1 underground bakehouse in the district.

Frequent inspections have been made, and are required, to keep some of them in a reasonably suitable condition.

WATER SUPPLY.

The district is supplied by the Metropolitan Water Board on all that portion north of the Cranbrook Road, and including Fencepiece. Analysis has given satisfactory results.

The other portion of the district is supplied by the South Essex Water Company. This water has given a much better

result on analysis, than has occurred before. This company is sinking a well in the Roding Valley in this district, and also one in Mill Road.

REMOVAL OF HOUSE-REFUSE.

Collection is made once a week throughout the whole district, and is carried out by the Council.

Previous to 1901 this work was carried out by contractors; but in that year part of the district was scavenged by the Council themselves, and it was found possible to do it more efficiently and cheaply than it was done under the contract system in 1902, the Council decided to take the whole district.

It is under the Direction of the Sanitary Inspector, and is carried out very efficiently.

The refuse is taken to the brickfields.

Most of the dustbins are portable ones, and supervision is exercised to see that suitable receptacles are used and kept in order.

In the New Ilford Urban District Council Act a clause has been obtained as to the regulation of provision of dustbins.

SEWAGE WORKS.

Good progress has been made with the extension of the Sewage Works during the year.

Two new grit chambers have been provided, and two screens similar to those already in use.

Two open septic tanks have been laid down with a capacity of 950,000 gallons each; and the old settling tanks have been knocked into one, making another open septic tank of 600,000 gallons capacity. Making in all a capacity of 2,500,000 gallons. Also a storm roughing filter of an area of 1,178 yards has been laid down, made of clinker three feet in depth.

Two-and-a-half acres of contact beds have been started and split up into ten beds. These will be filled with coke breeze five feet in depth, and of such a size as to pass through a screen excluding all above two inches, and all below one inch. It is expected that these beds will be completed by the spring of 1906, and be in full working order then.

The effluent passes from the works to empty into the river Thames below Barking Creek.

SECTION VI.

Report of Sanitary Inspector.

ANNUAL REPORT OF

Chief Sanitary Inspector.

PUBLIC HEALTH DEPARTMENT,
COUNCIL OFFICES,
ILFORD.,
13*th March*, 1906,

To the Chairman and Members
of the Ilford Urban District Council.

GENTLEMEN,

I have the honour to submit to you my Thirteenth Annual Report, and in doing so, desire to express my appreciation of the kindness and support I have received from the Public Health Committee.

Mr. Monkcom, and also Mr. Haigh who commenced his duties in April last, have both done good work as Assistant Sanitary Inspectors, and I believe they have conscientiously endeavoured by their effort, to maintain the sanitary condition of the district in a high state of efficiency.

I must also record my approval of the satisfactory manner in which Messrs. Bull and Aldous, the Clerks, have worked. They have always been willing, obliging and painstaking. A word of praise is also due to Mr. May, the Dust Foreman. To his steady working and courteous manner, the efficiency in the collection of the house refuse is, to a great extent, due.

I also appreciate and desire to acknowledge the kind co-operation of the other officials.

I am, Gentleman,

Your obedient Servant,

F. W. KING,

Chief Sanitary Inspector.

NUISANCES.

For the detection and abatement of nuisances, the district has been systematically inspected, especially in the localities where they are likely to exist and recur. As a result, the following work was carried out :—

DRAINAGE.

Drains cleansed	258
Do. repaired or relaid	93
W.C. pans and traps provided	67
Flushing cisterns to W.C.'s repaired or provided	138
Soilpipes repaired or renewed	22
Ventilating shafts repaired or provided ..	35
Cesspits and privies abolished	18
Do. do. do. emptied and cleansed ..	25
W.C. floors cemented..	49

DRAINAGE—*continued.*

Rain-water pipes disconnected from drains ..	4
Ditches cleansed	6
Water laid on to closets	6
Premises connected with main sewer ..	7
Sink-waste-pipes provided and repaired ..	20
Do. do. disconnected from drain ..	1
Bath-waste-pipes do. do. ..	1
Yards drained	14
Manhole covers fitted	26
Manure pit drained	2

DEFECTS IN DWELLING-HOUSES.

Roofs repaired	40
Yard paving repaired	92
Rain-water spouts repaired or provided ..	41
Water laid on	7
Houses or parts of houses cleansed	40
Bedding cleansed	7
W.C.'s cleansed	5
Overcrowding abated	2
Yards cleansed	16
Dilapidated houses repaired	11
Basements ventilated	11
Trough-sink provided	1

ILFORD IMPROVEMENT ACTS.

Yards paved	13
Galvanized iron dustbins provided	161
Ice-cream vessels cleansed	1

Byelaws.

Water storage cisterns cleansed . ..	124
Do. do. do. covered	89

Dairies Regulations.

Milk stores cleansed	10

ACCUMULATIONS OF REFUSE, &c.

Manure, soil and urine removed	30
Fish offal removed	1
Refuse removed	43
Manure pit provided	2
Stagnant water removed from basements ..	17

Workshop Acts.

Yards paved	3
Overcrowding abated	2
Ceilings repaired	2
Walls, floors and ceilings cleansed	21
W.C.'s cleansed	1
W.C.'s provided	1
Hoods fitted	2
Floors paved	3
Bakehouses cleansed	20

Infectious Diseases (Prevention) Act.

Rooms stripped and cleansed..	34

GENERALLY.

Animals (improperly kept) removed.. ..	11
Smoke nuisances abated	3
Roadways, courtways, and rearways paved and drained	3
Roadways, courtways, and rearways cleansed	3
Fowl-houses cleansed..	1
Quarry filled in	1
Lands fenced in	2

NOTICES SERVED.

Notices.	Served 1905.	Complied with, 1905.	Outstanding, January, 1906.
Statutory	33	46	1
Preliminary	219	237	2
Do. (by letter)	115	115	—
Pave Yard (Ilford Improvement Act)	9	13	1
Dustbins (Ilford Improvement Act) ..	116	107	9
Cleanse Cistern (Bye-laws)	127	125	6
Cover do. (Do)	62	64	2
Lay on water to Dwelling-House ..	5	5	1
Cleanse Dwelling-House, (Infectious Disease (Prevention) Act, 1890) ..	12	12	—
Workshop	26	22	6
Abate overcrowding	1	1	—
Totals	725	*747	28

* Included in this number are some notices outstanding previous to 1905.

Where a nuisance is found, the procedure is to call the attention of the owner or occupier (as the case may be), to the fact by letter or preliminary notice. If no action is taken, the matter is brought before the Committee, and if necessary, they recommend to the Council that a statutory notice be served; and if not complied with within the time stated, legal proceedings to be taken.

As you will see under the heading "Notices Served," very few statutory notices were issued. Most of the work

mentioned in the above statement was executed, upon the owner or occupier receiving either a letter or preliminary notice, calling attention to the particular defect or breach of bye-laws, and stating the remedial measures required to be carried out.

I find most owners of property willing to carry out my requirements, provided I can convince them they are not unreasonable. This is borne out by the fact that no legal proceedings had to be taken during the year, to enforce compliance with a notice.

SUMMARY OF VISITS AS ENTERED IN JOURNAL DURING THE YEAR ENDED 31st DEC., 1905.

Houses and premises inspected	2746
Do. do. do. during progress of work	3405
Nuisances detected	832
Do. abated	846*
Do. unabated	20
Complaints received	186
Houses disinfected	382
Articles do.	5415
Summonses taken out	5
Convictions	3
Amount of fines 5/-, 10/- & 40/-, = £2 15s. 0d.	

* Included in this number are some nuisances outstanding previous to 1905.

COMPLAINTS.

The complaints received were as follows :—

Choked drains	84
Sewage smells pervading the neighbourhood ..	18
Accumulations of refuse and manure	22
Animals improperly kept	10
Smoke nuisances	8
No water supply	7
No water to W.C.'s	2
Houses being dirty and insanitary	9
Decomposing bodies of animals	4
Flooding of premises	4
Gipsies	2
Streams being obstructed	2
Overcrowding	1
Sundry	4
Total	177

All of these were investigated at once, and accordingly dealt with as necessity demanded.

GIPSIES AND TENT DWELLERS.

Very little trouble was given by these people during the past year The annoyance caused by them formerly, must, I think, diminish as the land becomes built over. However, the system adopted of calling upon the Police for assistance in order to prevent a breach of the peace, and going to the encampment with some men and a chain-horse to draw the

vans on to the highway, and by generally worrying them, also tends to keep these most undesirable visitors out of the district.

PERIODICAL INSPECTIONS.

1. Cowsheds (7). These are situated as follows :—

Hainault Farm, Chadwell.

Padnall Corner (2), Chadwell.

White Rose Hall, Barkingside.

245, High Road, rear of

New Road.

Green Lane.

All these have been visited, and on the whole they have been kept in a satisfactory condition. It is, however, quite necessary to visit them frequently, as in one or two cases the occupiers are inclined to show laxity in the care of the premises as regards cleanliness.

2. Dairies & Milkshops (44). These have been frequently visited, and careful attention given so as to obtain cleanliness of the vessels, and suitable accommodation for storing the milk under suitable conditions.

3. Bakehouses (32). The bakehouses have been frequently inspected and limewashing and cleansing carried out when necessary. The general condition of them may be stated as satisfactory.

4. Workshops. There are 307, including laundries and domestic workshops, on the register. These have been visited and notices served to abate any nuisances when found to exist. Overcrowding was abated in two instances.

5. Slaughter houses. These are situated as follows -

Rear—3, The Pavement, Ilford Lane.

Rear—60, High Street.

Rear—The Post-Office, High Street, Barkingside.

HOUSING OF THE WORKING CLASSES ACT.

No action under this Act had to be taken during the year.

Sixteen cottages however were pulled down to make room for other buildings, viz :—Roding cottages (10) for erection of Pumping Station for the S.E.W.W. Co., and Goodmayes Cottages (6) for a Church.

These cottages were let at about 4/6 or 5/- per week, and as none are now erected to let at a like rental, it is to be assumed that these families are now living in part of a house where there is also another family living.

INSPECTION OF FOOD.

Periodical visits were made to the shops in the district for the purpose of inspecting food exposed for sale, but no seizures of unsound food had to be made.

INFECTIOUS DISEASES.

Nearly every house in which any infectious disease occurred was visited ; the sanitary arrangements and surroundings being carefully inspected for the purpose of ascertaining whether any defects or nuisances existed.

Directions were given as to isolation and the usual rules to be obtained to prevent the spread of disease.

Inquiry was also made to ascertain the probable origin of the disease, and where possible the history traced. The result of the enquiry was then reported to the Medical Officer of Health.

The number of infectious diseases notified and entered in the Register was 446.

WATER SUPPLY.

Very few complaints were received respecting shortage of water, and these, upon investigation, showed that the cause was due to defective fittings.

There were only 11 intimations from the Metropolitan Water Board, of water being cut off from inhabited houses. These houses were at once visited and notice served upon the responsible person, to reinstate the supply within 48 hours.

No intimation is given by the S.E.W.W. Co, when they cut off the supply, although I frequently requested them to give me this information.

In the Ilford Improvement Act, 1898, there is a provision as to houses without a water supply, and the Owner is liable to a penalty of £5 for allowing a dwelling house to be occupied without a proper and sufficient supply.

REMOVAL OF HOUSE REFUSE.

The removal of house refuse during the year ended the 31st December, was, I consider, carried out most satisfactory, both as regards efficiency and cost.

Very few complaints were received, and these when investigated were found generally to be caused through no fault of the men, but rather to a misunderstanding respecting our method of collecting and principally among the new residents. A slight disorganisation occurred through no collection being made on Public Holidays, especially at Easter. although the dustman gave notice to the house-holders the week before that the collection would be made either a day earlier or a day later (as the case might be) the following week. Since then I have given public notice either by printed notice posted on the vans, or announcement in the local newspapers. However, the collection on these occasions would have been facilitated had the house-holders allowed the dustbins to be emptied each week, and not have allowed the refuse to accumulate for two or three weeks. All appear to wish to see their dustbins clear of superfluous refuse at holiday time, but they do not seem to realize the extra labour involved, and at a time when we are practically doing two days work in one, by failing to allow the dustbins to be emptied weekly

The cost of the work for collection and disposal of the refuse I must leave over until the end of the financial year, yet it will not exceed the estimate.

The number of loads of refuse removed and the number of horses and vans engaged in the collection was as follows:—

	Loads of refuse.	Horses and Vans.
January ..	828	220
February ..	816	220
March ..	1,029	275
April ..	851	231
May ..	1,033	287
June ..	806	230
July ..	762	232
August ..	949	290
September ..	772	232
October ..	810	233
November ..	1,050	304
December ..	848	246
Totals ..	10,554	3,000

The number of days upon which collections were made was 307.

The average number of horses and vans engaged per day was 9·77.

The average number of loads of refuse removed per horse per day was 3·51.

The capacity of the vans is 3 cubic yards, and allowing as a fair average that a load of refuse weighs 1 ton 6½ cwt., the total number of loads represents in weight about 14,000 tons.

About 1,000 houses were erected during the year, and these had to be visited as they became occupied. I estimate there are about 12,500 houses in the district from which the refuse is removed weekly. The refuse is also collected from the Village Home each week.

It will thus be seen that the average number of horses and vans engaged, and the number of loads of refuse removed per horse per day is very satisfactory, especially taking into consideration the position of the tip, and the bad condition of the approaches to same during wet weather.

DISPOSAL OF HOUSE REFUSE.

As in former years most of the refuse has been carted to the brickfields where it is piled in large heaps, and there to remain in a more or less state of decomposition until reduced to a condition that it can be broken down and sifted.

The fine siftings are mixed with the clay used for making bricks, and the cinders are used for burning the bricks. The coarser material is then thrown into the holes from where the clay to make the bricks was dug out.

Complaints respecting the depositing of house refuse in the brickfields, and the nuisances arising therefrom were far less numerous than in former years. This no doubt was due in some measure to the climatic conditions, but every precaution was taken after the refuse had been deposited, to minimize any nuisance that would arise, by levelling and covering with dry material.

The difficulty of disposing of the refuse is becoming greater every year. At the present time there is only one brickfield where a shoot is available, and should anything occur to prevent us going there, we should be in a very awkward position. It is therefore absolutely necessary that the question of "What shall be done with the dust," must be very seriously considered without delay.

F. W. KING,

Chief Sanitary Inspector.