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ANNUAL REPORT

(*With SUPPLEMENT*)

MADE TO THE

URBAN SANITARY AUTHORITY

OF THE

CITY OF LEEDS,

FOR THE YEAR

1906,

AND PARTLY FOR 1907.

BY

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- „ A.—Parts 3, 4, 5, 6, similar to part 1 for several quarters of 1906, and part 7 for the first quarter of 1907.
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- „ E.—Part 1.—Births, birth-rate, deaths, death-rate for registration districts; and deaths and death-rate for municipal wards (institution deaths in both cases allocated) for the year 1906.
- „ E.—Parts 2, 3, 4, 5, similar for each quarter of 1906, and 6 for first quarter of 1907.
- „ F.—Births, deaths in Leeds from all and certain groups of causes, sickness, and meteorological data for each week of fourth quarter, 1905, of each quarter of 1906, and of the first quarter of 1907.

The material asked for in the new Local Government tables will be found as follows:—

- I.—In table D, part 2.
- II.—In tables 21 a-k for districts and table D 2 for city.
- III.—Age groups in new table 18, pp. 104-5; localities in table B.
- IV.—Ages in table 17, pp. 101 and 103 (altered from old table 17 to include ages), including, however, all deaths in institutions; localities in table C, where institution deaths allocated.
- V.—Infantile mortality, 5a p. 16, 5b p. 27, 5c p. 32.

ERRATA, 1905 REPORT.

TABLE 6c.—Deaths for Chapel-Allerton and Potternewton should be transposed, and the rates made 1·17 and 1·08 respectively.

TABLE 5.—See text p. 14.

In the 52 weeks ended 29th December, 1906, the following births and deaths were registered, and cases of infectious diseases reported.

Population estimated by the Registrar General after Census	463,495
Acreage	21,572
Births registered ... 12,093	Birth rate per thousand 26·2
Average birth-rate, ten years, 1896-1905 † ...	30·0
Deaths (all ages) ... 7,405	Death-rate per thousand 16·0
(R.G. 7,222-15·63).*	
Average death-rate, ten years, 1896-1905*† ...	18·5
Deaths (under 1 year)... 1,837	Ratio to 1,000 births 152

	Total deaths.	Death rate per thousand.		Cases notified. 1906.
		1906.	1896-1905.	
1. Small-pox	...	...	0·01	2
2. Measles	275	0·60	0·46	280 ||
3. Scarlatina	33	0·07	0·18	1,029
4. { Diphtheria	76	0·16	0·29	662
{ Memb. croup	8	0·02	0·04	11
{ Other croups	5	0·01	0·03	11 ||
5. Whooping cough	146	0·32	0·38	...
6. { Typhus	...	...	0·00	...
{ Typhoid	49	0·11	0·17	303
{ Ctd. fever	...	...	0·00	1
{ Puerp. septicæmia	14	0·03	0·03	30
{ Erysipelas	15	0·03	0·03	381
7. Diarrhœa	450	0·97	1·01	...
{ Cholera (English)	...	...	0·00	...
{ Phthisis	570	1·23	1·38	720 §
{ Other tuberculous diseases	309	0·67	0·76	...
{ Seven commoner zymotics } (including mem. croup) }	1,037	2·24	2·49	...
{ Bronchitis	1,136	2·46	3·23	...
{ Pneumonia				
{ Pleurisy				
{ Other lung diseases } (without influenza) }	73	0·16	0·19	...
{ Malignant growths	432	0·94	0·82	...
{ Violence and accident	281	0·61	0·61	...

* The R.G. excludes deaths of non-municipal paupers. The rates 16·0 and 18·5 are calculated on the larger numbers.

† The average of the published returns were also birth-rate 30·0, death-rate 18·5. The death-rates for special groups are the uncorrected means of the published returns, from which non-residents were not excluded.

|| Means not notifiable.

§ Notification voluntary.

ANNUAL REPORT, 1906.

To the Chairman of the Sanitary Committee.

SIR,

A general statement of the mortality in the city and its sub-divisions, of the cases of infectious disease reported and hospitalised, and of the inspections made, has already been presented to the Committee for each of the four quarters of the year 1906. There have also been laid before them for the whole year 1906 the comparative death rates of the nine largest towns of the United Kingdom. These have been compiled from the quarterly returns of the Registrar General. A table has also been supplied giving for the whole city the deaths from all and certain causes, and the death rate per thousand from these causes for the year 1906 and the ten years preceding. This table also showed the birth rate and the number of infectious cases notified during the year. In the ordinary monthly reports were shown in regard to each district of the town the mortality from all and certain causes.

The two death rates.—As will be seen from the general table of vital statistics for the fifty-two weeks mentioned above and reprinted on page 2, while accepting the Registrar General's estimate of population, we have distinguished, as in former years, the death rate estimated upon all the deaths occurring within the town, plus those in the hospitals outside the town but belonging to the city, from the death rate when persons dying in public institutions who were not regarded as belonging to Leeds, have been excluded.

The former rate of 16 per thousand is deduced from the total deaths at all ages, 7,405. This figure includes, therefore all the deaths of Leeds patients in the City Fever Hospitals at Seacroft,—all the deaths of Leeds persons in the Hunslet Workhouse in Rothwell,—all the deaths in the Leeds, Bramley,

Annual, 1906.

TABLE 1.
Annual deaths per 1,000 of the estimated population.

	All causes.	Seven zymotics.†	Consumption.	Bronchitis, pneumonia, pleurisy.	Other lung diseases, without influenza.
Five years, 1885-89 ... (261 weeks)	21·16	2·78	1·70	3·93	0·27
*Five years, 1890-94 ... (261 weeks)	21·16	2·52	1·61	4·43	0·31
*Five years, 1895-99 ... (261 weeks)	19·77	2·74	1·47	3·54	0·22
*Five years, 1900-04 ... (261 weeks)	18·36	2·48	1·36	3·18	0·19
*Year 1905 (52 weeks)	15·65	1·60	1·23	2·76	0·16
*Year 1906 (52 weeks)	16·03	2·23	1·23	2·46	0·16
1906 increase on 1905	0·38	0·63	...	...	...
„ decrease „ 1905	...	...	...	0·30	...
1906 increase on '85-9	...	...	...	...	...
„ decrease on '85-9	5·13	0·55	0·47	1·47	0·11

* Estimated of course upon the population calculated from the result of the recent census.

† Exclusive of membranous croup which the Registrar-General did not include in the seven zymotics until 1894.

and Holbeck Workhouses, whether those of Leeds persons or not,—all the deaths in the Infirmary, the Women and Children's Hospital, and other public institutions, whether the patients belonged to Leeds or not. It does not include, however, the deaths of Leeds patients in institutions outside the city other than the Hunslet Workhouse and the Fever Hospitals, that is to say:—it does not include the deaths in the lunatic asylums at Menston and Wakefield and a few other deaths occurring casually throughout the country.

On the other hand the figure 7,222, with which the Registrar General credits us, includes all our own deaths in the Hunslet Workhouse and the City Fever Hospitals, but excludes the deaths which occurred within the City in the General Infirmary, in the Women and Childrens' Hospital, in the Leeds, Bramley, and Holbeck Workhouses, of persons not belonging to Leeds. It does include, however, certain casuals admitted from lodging houses, where there had been some even temporary residence in Leeds. The correction is not material. It reduces the death rate of 16 to one of 15·6 but the correction of outside places and asylums would bring the number back again to about 15·9 so that 16 is probably a nearer figure than 15·6.

The nine largest towns.—In comparing the death-rate in Leeds, however, with that of other towns, the comparison must be made upon uniform lines. We have therefore adopted in the table for the large towns already presented, but which is given in a little more detail in table 2, the practice as in former years of following strictly the Registrar General's figures. From this table it will be seen that in the first quarter of 1906 the lowest death-rate in any of the nine largest towns of the United Kingdom (15·3) occurred in Sheffield. London had a rate of 16·6, Edinburgh and Leeds of 17·3, Birmingham and Manchester of 17·9, Glasgow, Liverpool, and Dublin followed with somewhat higher rates. Whooping-cough and measles had been somewhat prevalent in our city during that quarter.

TABLE 2.

Shewing the death-rates in the nine largest towns of the United Kingdom for the 52 weeks, and each of the thirteen week periods of 1906.

		First quarter of 1906.	Second quarter of 1906.	Third quarter of 1906.	Fourth quarter of 1906.	52 Weeks.
<i>Leeds</i>	-	17·3	15·3	15·4	14·5	15·6
London	-	16·6	14·8	15·4	16·0	15·7
Edinburgh	-	17·3	17·1	13·1	16·2	15·9
Sheffield	-	15·3	14·6	18·9	16·9	16·4
Birmingham	-	17·9	16·1	17·4	15·8	16·8
Glasgow	-	18·9	18·3	15·5	18·2	17·7
Manchester	-	17·9	19·0	20·2	19·6	19·2
Liverpool	-	21·3	20·5	21·0	19·7	20·7
Dublin	-	22·9	21·4	21·4	24·2	22·5

From the quarterly reports of the Registrar General for England and Wales.

In the Registrar General's Annual Summary the rate for London is given as 15·1, for Liverpool 20·6, and for Dublin 22·4.

In the second quarter of the year Sheffield had a rate of 14·6, London of 14·8, Leeds of 15·3. Our mortality from measles had considerably diminished, that from whooping cough had slightly increased. The general death-rate from bronchial diseases had decreased.

In the third quarter the rate in Edinburgh fell from 17·1 in the second quarter to 13·1. London and Leeds had rates of 15·4 and Glasgow of 15·5. In this quarter although our deaths from measles were below the average of the ten years 1896-1905, they were still high for an autumn quarter. The rate from whooping-cough was considerably below the average of the ten years, and although the rate from diarrhoea (3·33) was three times as high as our own yearly rate for the ten years, it was not above that for the third quarter.

In the fourth quarter of the year we had the lowest rate (14·5) of any of the nine towns, so much below that of any of the others, as to put the question of error of population entirely out of court.

The total result for the year is that Leeds stands with a death rate of 15·6, London of 15·7, Edinburgh of 15·9. These numbers are so close together that one would not attach very much importance to the slight differences between them, but as the calculations are made on figures not supplied by myself, I do not need to apologise for the fact that Leeds comes out in a very favourable position.

The estimate of the population, as already said, is that made by the Registrar General. I think it is probably slightly in excess, making the crude death rate apparently rather lower than it really should be.*

COMPARISON WITH PREVIOUS YEARS.

In comparing our rates of mortality, from all and several causes, during 1906 with those of previous years, we use for convenience the figures dealing with the larger numbers, that

* The rates corrected for age and sex are not available for Edinburgh, Glasgow and Dublin. Table 2, therefore, gives only crude rates.

is to say, we include all deaths in our own Leeds institutions, and our own deaths in those just outside our boundary. By this means we are able to compare our present death rate with the death rate before the Registrar General's present practice of excluding non-municipal deaths in public institutions had come thoroughly into play.

Death rate—all causes.—It will be noticed in table 1, that our total death rate as compared with that of the preceding year was 0·38 in excess. It was a considerably lower death rate however than that of 1904, a slightly lower death rate than in 1903, and a considerably lower rate than in any of the three preceding years.

It will be seen also that if we compare the death rate last year with that of any of the five-year periods given in table 1, it comes out exceedingly well and it is 5·13 below the rate which prevailed in the ten years 1885-1894.

Seven zymotics.—In the same table the rates from the seven common zymotic diseases are given for four periods of five years each, for the year 1905, along with that for 1906. It will be noticed that as compared with that of the preceding year the death rate of 2·23 last year from the seven zymotic diseases was 0·63 higher. The rate in 1905 however from the seven zymotic diseases had been an exceedingly low one. It had been only two-thirds of the average of the five preceding years; which five had the lowest rate of any of the four quinquennia in the table. It has been already mentioned that measles and whooping cough had been prevalent in the earlier part of the year. The death rate from these two diseases was 0·60 and 0·32 in 1906. The average in Leeds in the ten preceding years had been 0·46 and 0·38, the former below, the latter slightly above that of the year we are considering. In 1905 the measles death rate had been as low as 0·24 as against 0·47 in the ten preceding years, a lower rate than in any of the twelve preceding years. The increase from this disease of 0·36

accounts for more than half the increase of the group as against the rate of the previous year. The rate for scarlet fever was about the same as in the previous year and below the average of the ten preceding (0·18). Diphtheria caused 8 deaths more per hundred thousand of the population in 1906 than in 1905, but its rate was little more than half the average of the ten preceding years. Whooping cough gave a rate of 0·32 which as already said was rather higher than in the preceding year (0·27), but lower than in the ten years (0·38). The death rate from the continued fevers was the same as that of 1905, and markedly below that of the ten preceding years. Diarrhœa caused an average death rate of 0·97 as against 0·80 in 1905 and 1·01 in the ten years.

Comparing the whole group it will be seen that the rate of 2·23 is below the average of any of the five quinquennial periods given in the table, and 0·55 below that of the first of them.

Phthisis.—Consumption will be referred to again in the second part of the report. It will be noticed that the death rate is the same as in 1905, and the rate that year was the lowest of any during the sixteen years on which I have had to report to you. The rate was 0·47 below the average rate for the five years 1885-1889.

Lung diseases.—The rate from bronchitis, pneumonia, and pleurisy, showed a decrease of 0·30 from that of the previous year, and a decrease of 1·47 from that of the five years 1885-1889. The rate was below that of any of the four quinquennial periods given in the table and markedly below the second of these periods, during the early part of which influenza was prevalent.

In the small group of other lung diseases our rate was the same in 1906 as in 1905, and lower than the average rate of any of the four quinquennial periods. It was 0·11 below the rate of the first of these and very little more than half

that of the second. Although influenza, as the primary cause of death, is excluded from both these columns, there is no doubt that the prevalence of that disease in 1890 and 1891 had increased the number of deaths returned from both groups.

Comparing our rate from all causes with that in previous years, we may regard it as satisfactory. As already said, it was a little higher than that of the record year 1905, but it was lower than in any of the 15 years which preceded it.

TABLE 3.

Births and deaths registered in the City of Leeds in the four periods of 13 weeks ended respectively March 31st, June 30th, September 29th, and December 29th, 1906. Deaths in age groups.

1	2	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.						
		3	4	5	6	7	8	9
1906. Estimated population at these ages ...	Regis- tered Births.	At all Ages. 463,495	Under 1 Year. 12,140	1 and under 5. 41,748	5 and under 15. 95,020	15 and under 25. 93,284	25 and under 60. 194,965	60 and upwards. 26,338
I. Quarter	3,112	2,054	447	344	80	77	570	536
II. Quarter	2,992	1,803	348	281	77	67	530	500
III. Quarter	3,106	1,837	670	207	56	74	446	384
IV. Quarter	2,883	1,711	372	165	71	85	504	514
52 weeks. . .	12,093	7,405	1,837	997	284	303	2,050	1,934

AGE MORTALITY.

It has been already pointed out that all death rates are functions of the estimated population, and that possibly the Registrar General in estimating our population for the middle of 1906 at 463,495, has given Leeds credit for a larger number of inhabitants than she really possesses.*

Assuming the Registrar General's estimate of the population as correct, the figures given in table 3 for the populations at the different groups of ages are obtained by dividing 463,495 proportionately, according to the populations at these various groups, at the time of the census. This is the method adopted in previous reports, but so great a change has occurred in the birth rate of late years that even assuming the estimate of the whole population to be right, it is not unlikely that the figures for children under one, from one to five, and young persons from five to fifteen are over-estimated, and those of the two last age groups under-estimated. It has been thought better, however, not to change the method, and the figures in table 4 have been calculated for each group of ages in each quarter upon the assumption that the populations given in table 3 are correct. The births and deaths given in table 3 are accurate, and are not dependent upon any estimates. It is the birth rates and death rates in table 4 which are dependent first upon the accuracy of the general estimate, and second, upon the method of estimating for the several age groups.

Revised age populations.—If the population at each age group were calculated upon the results of the two previous censuses in the manner used by the Registrar General for the

* His mode of estimating, it will be remembered (See Annual 1904, pp. 86-88), is by adding for each year or portion of a year since the census, a corresponding proportion of the actual increase which took place between the two most recent censuses. The number so obtained (and which may be regarded as the population of Leeds by the method of arithmetical progression) is then multiplied by a factor obtained by dividing the estimate for the whole country, obtained by geometrical progression to the middle of 1906, by the number obtained by estimating the population for the same area by arithmetical progression. This factor, of course, varies every year, but is growing larger. In 1903 it was approximately 1'0017; in 1904, 1'0027; in 1905, 1'0037; in 1906, 1'0049; and in 1907 it will be 1'0062.

whole population of the city, as already described in the previous footnote, the revised population for infants under one year of age would be 11,713, and the death rates in table 4 of this column would have to be increased by 3·6 per cent., making 152 into 157. From one to five, the population calculated in this way would be 40,453, and the rates in column 5 would have to be increased by 3·2 per cent., the bottom line becoming 25 instead of 24—the real change to two places of decimals being from 23·96 to 24·73.

From five to fifteen the new population is 91,550, and the rates printed in table 4, column 6, must be increased by the addition of 3·8 per cent., making the year's rate 3·1 instead

TABLE 4.

Birth and death rates in the City of Leeds in the four periods of 13 weeks ended respectively March 31st, June 30th, September 29th, and December 29th, 1906. Death rates in age groups.

1	DEATHS PER ANNUM PER 1,000 LIVING.									
	2	3	4	5	6	7	8	9	10	11
1906.	Birth-rate.	At all Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwds.	25 to 65	Over 65
I. Quarter	26·9	17·8	148	33·1	3·4	3·3	11·7	81·7	13·3	113·4
II. Quarter	25·9	15·6	115	27·0	3·3	2·9	10·9	76·2	12·8	99·7
III. Quarter	26·9	15·9	222	19·9	2·4	3·2	9·2	58·5	10·5	78·1
IV. Quarter	25·0	14·8	123	15·9	3·0	3·7	10·4	78·3	12·3	103·7
52 weeks . .	26·2	16·0	152	24·0	3·0	3·3	10·6	73·7	12·2	98·7

of 3.0—the correction carried to two places on the real figures being an alteration from 2.999 to 3.113.

From fifteen to twenty-five this method also reduces the population, but to a very much less extent, and the correction of the figures in the column may be made approximately by adding 0.9 per cent., the figure in the bottom line of column 7 however, 3.3, remains unaltered. Carried to three places of decimals, the original calculation was 3.259, the altered calculation is 3.289—the difference not affecting the first place of decimals.

The populations at higher ages are all increased by the new method, and the printed rates diminished. At twenty-five to sixty the population becomes 200,484, and the death rate is modified by being reduced $2\frac{3}{4}$ per cent.—10.6 becomes 10.3, or, carried a little further, the rate which was 10.551 becomes 10.261.

Above sixty the population is increased to 26,865, and the death rate correspondingly decreased by the subtraction of 1.96 per cent—73.7 becoming 72.2.

In columns 10 and 11 in table 4, similar reductions must be made. The death rates in column 10, at ages twenty-five to sixty-five, are corrected by the subtraction of 2.8 per cent—the number in the bottom line instead of 12.2 becoming 11.9. Similarly in column 11 the rates are reduced 1.3 per cent—the 98.7 in the lowest line of that column becoming 97.4.

Even these corrections do not necessarily show the real state of the population especially at the earlier ages. In table 3 the population under one is given as 12,140. This number is reduced by the method just described to 11,713. If however we take the average number of births registered in 1905 and 1906, and subtract from it half the average number of deaths of infants under one in the same two years, we get a population of 11,287, while if we take only the second of the two

years, the year 1906 itself, the population is 11,175. The error however does not probably amount to very much at the immediately following period of life, and the subject of infantile mortality is specially treated in table 5 and in a later part of this report.

INFANTILE MORTALITY.

Table 5 in this year's report differs in no essential respect from the similar tables in 1903-4-5. In regard to the two earlier lines, it is the same as the similar tables with the same number since 1891 and the table numbered 7a in the report for 1890. The first column probably explains sufficiently the meaning of the several lines, though explanatory matter has been given somewhat at length in previous reports. The second line is the one commonly used for infantile mortality, though for obvious reasons the third line at least in regard to the mortality in the quarters is probably less inaccurate. A mistake unfortunately crept into my reports for 1905 and 1904, in line four which should have read, in the former of these years, 150, 143, 220, 168, and 170, and in the latter, 146, 140, 226, 168, and 170. The mistake arose from our having included in our average the new bottom line of the two previous years, instead of the fourth which had previously been the bottom line.

More detailed table.—The number of deaths amongst children under one year of age with certain details, has been got out in table 5a, which corresponds with the table on p. 10 of the report for 1905, and like that table it applies to deaths registered within the fifty-two weeks. In this table, which deals with the whole of the deaths registered in the City, they are classified according to certain groups of causes and also to certain smaller age periods at which death occurred. The returns show the deaths at each week of age for the first four, and at monthly periods for the rest of the year. The deaths for the first four weeks are collected between the first pair of

TABLE 5.

Mortality in Children under one year of age, during the 52 weeks of 1906.

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	YEAR.
Calculated per 1,000 of the population under 1, estimated to the middle of 1906, on the supposition that the whole population of the city was that estimated by the Registrar General, and that the number of children under one bore the same proportion to the population as at the 1901 census ...	148	115	222	123	152
Deaths under 1 per 1,000 births registered in same period ...	144	116	216	129	152
Deaths per 1,000 registered births, the latter instead of those for the same quarterly period being the average of the same and four preceding quarters. The rate for the year is the mean of the four quarterly rates ...	145	115	222	125	152
Average rate by last method for five preceding years*	141	131	223	161	164
Average rate by second method for years 1886-90 (from table 7 and 1890 report)	158	147	223	171	175

* See correction of this line for table 5 in 1905 and 1904 Reports, given in text, p. 14.

TABLE 5a.—Infantile Mortality during the year (52 weeks ended 29th December), 1906.
Deaths from stated causes in weeks and months under one year of age.

CAUSES OF DEATH.	1 week.	1-2 wks.	2-3 wks.	3-4 wks.	Total under one mth.	1-2 mths.	2-3 mths.	One and under three mths.	3-4 mths.	4-5 mths.	5-6 mths.	Three and under six mths.	6-7 mths.	7-8 mths.	8-9 mths.	Six and under nine mths.	9-10 mths.	10-11 mths.	11-12 mths.	Nine and under twelve mths.	Total deaths under one year.
All causes { Certified .. Uncertified ..	299 3	76 ..	89 1	63 ..	527 4	134 1	144 ..	328 1	152 ..	137 ..	103 ..	392 ..	99 ..	107 ..	95 ..	301 ..	101 1	92 2	81 ..	272 3	1,820 8
Common infectious diseases.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Membr. croup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other croup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping cough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoeal diseases.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea, all forms ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis (not tuberculous) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastro-gastro-intestinal catarrh ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastro-enteritis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wasting diseases.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Premature birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Congenital defects ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Injury at birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Want of breast milk ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Immunisation, malnutrition, privation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Atrophy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marasmus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous diseases.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous meningitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous peritonitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous mesenterica ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other tuberculous diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rickets ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meningitis (not tuberculous) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Convulsions ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bronchitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Broncho-pneumonia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Laryngitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Suffocation, over-laying ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dentition ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other causes (exclusive of lines in italics) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS ..	302	76	90	63	531	185	144	329	152	137	103	392	99	107	95	301	101	92	81	275	1,828

heavy vertical lines ; from the end of the fourth to the end of the thirteenth, between the second pair of heavy lines, and then the similar groups are arranged for deaths in children from three to six, six to nine, and nine to twelve months, the last column giving the total deaths under one year.

The remarks on pages 9, 11, and 12, in my previous report in regard to the corresponding table apply in the main to the present one. One of our groups printed last year in italics has been placed in the list of causes in the new Local Government Board form. We have preferred however to leave them as they were printed last year. Thus gastro-enteritis, in italics last year, is included along with enteritis in the new schedule. We leave the separate line. Under "congenital defects" we have not included 7 cases of icterus neonatorum, which had been already entered under "other causes" before it was noted that the Local Government Board wished this cause of death to be regarded as due to congenital defect. The 7 cases occurred as follows:—in the first week of life 1 in West and 1 in Chapeltown ; in the second week of life 1 in North, 1 in Hunslet, 1 in Holbeck, and 1 in Kirkstall ; between two and three months 1 in Holbeck. These 7 deaths are included in this table and in table 17 under "other causes," while in table C they are entered under "jaundice." Two deaths from phthisis on the other hand have been included in table 5a under "other tubercular diseases" which heading is not intended to correspond either with the line so named in table 17 or with that in table C. Deaths from "hydrocephalus" have again been placed in a separate italic line. One of these was stated to be due to "acute hydrocephalus" and under note (h) on the Local Government Board form, should have been included under tuberculous meningitis. Another, under note (g) should have been classed with "congenital defects." We have however for many years past found it convenient to place all deaths from hydrocephalus in a column by themselves in table 6 which deals with all the tuberculous diseases. Of the ten deaths

in that column for 1906 only two are distinguished sufficiently to be classed according to notes (g) and (h). The same sort of thing is true of earlier years. Had the certifier always stated whether the hydrocephalus was acute or congenital the suggested classification of the causes of death would of course have been adopted years ago. The number however of these cases is small and the error from leaving the cases of tuberculous meningitis amongst those of hydrocephalus is probably trifling compared with the error of attributing to simple meningitis diseases which were of tuberculous origin. Many of these patients are seen only once before death, sometimes not until after death, in both cases the medical man is sent for to avoid an inquest and the data on which he has to found his diagnosis are meagre. The personal equation of the physician therefore determines largely the classification of the disease.

Deaths under one.

1906. Deaths.	1906. Percentage of whole.	1905. Percentage.	
302	16.5	17.6	— 1 week.
76	4.2	5.1	— 2 weeks.
90	4.9	4.8	— 3 "
63	3.5	4.1	— 4 "
	— 29.0	— 31.6	0 to 4 "
185	10.1	10.7	— 2 months.
144	7.9	7.9	— 3 "
	— 18.0	— 18.6	4 to 13 weeks.
152	8.3	7.6	— 4 months.
137	7.5	6.4	— 5 "
103	5.6	6.0	— 6 "
	— 21.4	— 20.1	3 to 6 "
99	5.4	6.2	— 7 "
107	5.9	5.1	— 8 "
95	5.2	5.1	— 9 "
	— 16.5	— 16.4	6 to 9 "
102	5.6	4.6	— 10 "
92	5.0	4.5	— 11 "
81	4.4	4.3	— 12 "
	— 15.0	— 13.4	9 to 12 "
1828	99.9	100.1	

The ages at which babies die.—It may be remembered that in the report for 1905, on page 20, a table was given showing what percentages of the whole deaths under one year of age occurred at the age periods differentiated in table 5a. In 1905 there were 1875 deaths amongst infants under one year registered in the City. Of these 12 could not be classified under any of the Leeds districts and were excluded from this table. Last year 1828 occurred in Leeds classifiable under districts, and 9 of children which were not. It will be convenient to put these in tabular form as was done last year, and against these we have put for convenience of comparison the corresponding percentages of the 1863 deaths registered in 1905. It will be noticed on comparing the percentage of infants under one year who died in the first week of life, that the figure, which had been 17·6 per cent. of the whole in 1905, was 16·5 per cent., or quite 1 per cent. less during 1906. The actual deaths in the first week was 327 in 1905 and 302 in 1906. The 76 deaths during the second week of life corresponded to 4·2 per cent. of the 1,828 deaths. The corresponding proportion was 5·1 the previous year, so that the percentage of deaths in the first fortnight to the whole deaths under one is 2 per cent. less last year than the year before. In the third week of life the percentage of all deaths under one last year was 4·9, in the year before 4·8, while in the fourth week the percentage was 3·5 in 1906 against 4·1 in 1905, so that again the second fortnight of life compares slightly less unfavourably with the whole mortality under one than last year. The first four weeks of life caused 29·0 per cent. of the deaths in 1906 against 31·6 in 1905.

Deaths in the next period—one to two months—in which are included any deaths between the end of the fourth week and the end of the first month—form 10·1 per cent. in 1906 against 10·7 in 1905; whilst amongst infants over two months and under three the deaths were 7·9 per cent. of the whole in each

year. The proportion per cent. therefore of the whole infantile deaths in those who died in the first three months of life was 3·2 less in 1906 than in 1905; the numbers being 47·0 and 50·2.

At three to four months and at four to five months the percentage of the whole deaths under one was higher in 1906, but from five to six months slightly lower, the total during this period having been 21·4 against 20·1 in 1905.

Between six and seven months the percentage was less, slightly higher between seven and eight, and practically the same between eight and nine months;—the three month period giving a percentage on all deaths under one of 16·5 last year against 16·4 the year before.

The deaths amongst children between nine and ten months had a percentage higher by 1 in proportion to the whole than in the previous year, from ten to eleven months by one half, and from eleven to twelve months one tenth. The three month period from nine to twelve months comprised 15 per cent. of the whole 1,828 deaths whilst the same period in 1905 furnished 13·4 per cent. of the 1,863.

It will be seen that the transfer is not very great but the tendency appears to have been that the children who died under one year in 1906 inclined to do so a little later in that year than was the case in 1905.

Rates in 1905 and 1906 per thousand born.—On page 23 in the report for 1905 a table was given showing the births in each district and in the whole City (exclusive of 92 in the workhouses), and in the lowest line the death rates of children under one at certain smaller age groups per thousand of the total births. Taking 12,245 births in 1905 (that is after excluding 92 in the workhouses) the mortality in children under one (again exclusive of 12 deaths in public institutions which could not be referred to any of our statistical areas) was

152·1. In the same way in 1906 (excluding those in work-houses) there were 12,005 births in the City, and (excluding 9 deaths of outsiders) there were 1,828 deaths of children under one. This gives us a rate of 152·3.

Had we taken the total deaths registered, including the deaths under one year in the workhouses, as well as the total births in these institutions, the number would have been 151·9. For the convenience of comparison with the table in last year's report and as probably corresponding more accurately with the real Leeds mortality, we shall in the following figures neglect the births in the workhouses and the deaths of outsiders. The correction is against ourselves, for most of the births in the workhouses were those of children who remained in Leeds, who if they died, died in some district in Leeds and are there counted. Neglecting decimals, however, the rate is 152 in both cases.

Rates at age groups per thousand births.—We have already seen that the percentage borne by children who died in the first week of life to the whole deaths under one was 1 less than in 1905. When we come to consider the deaths under one, per thousand births, during the same period, we find the difference appears even greater. The deaths in the first week were 25·2 per thousand births; in 1905 they had been 26·7.*

In the first four weeks of life there were 531 deaths in 1906 against 588 in 1905, and the rate per thousand births was 44·2 as against 48·0 in the previous year. The remaining deaths under three months (that is the deaths of children more than four and less than fourteen weeks of age) yield a death-rate, on the thousand births in the year, of 27·4 against 28·3. After three months the proportions changed. In children from three to six months the deaths per thousand births in the year were 32·7, the previous year they had been only 30·5. From six to nine months they were 25·1 against 24·9 the previous year, while

* See tables on pp. 32, 33.

in the age period nine to twelve months they were 22·9 against 20·3. As the same proportion to the births died in each year, the result again is equivalent to a slight increase of the age at death of the children who did not survive their first year.

More accurate death rates at these ages.—It was pointed out last year that this method is not altogether a fair one of estimating the mortality, especially at the later age groups. For instance, at the commencement of the period over four weeks and under three months, there had already occurred 531 deaths, but the infantile death rate per 1,000 births at this age period is calculated as if they were still alive—as if the children in the whole year were all living at the middle of this age period.

A certain amount of ambiguity arises from the use of the words “age period.” The whole number of deaths which occurred in the districts of Leeds in 1906 was 1828. These occurred in various places, and the ages at death differed, though all were those of children under one year. Some of the older amongst these may have died in January and some of the younger in December. Those who died in January at ages over one month must have been born in 1905, and in many such cases—say where the child lived to three months or so—the birth would have been registered during 1905. The ratio of deaths under one to total births, however, takes no account of this, but deals only with those registered as born or dead during the year.

The registration of births, like that of deaths, is going on throughout the year. The registration of a birth is effected on an average some six weeks later after the event, than that of a death. Dealing with a year's registration in each case, however, the ratio of deaths per 1,000 births is a familiar one.

In the case of an age period—say three to six months—it has also to be kept in mind that these three months are not any particular months—as April, May, and June. The figures dealt with include all the deaths amongst children under one in

1906 in whom the age at death was say more than three and less than six months. The life period three to six months extends over the whole year, some of the deaths occurring early in the year, some later, but all within 1906, as well as, of course all within the first year of the children's lives.

Deducting 531 from the 12,005 births, we get 11,474 as the population at the beginning of the second month as compared with 12,005 at the beginning of the first. If from this number we now take 165, the half of the 329 deaths which occurred during the period, we further reduce the imaginary population over one month and under three amongst whom the 329 deaths occurred to 11,309, the probable population near the middle of the period, and thus increase the death rate per thousand from 27.4 per 1,000 born during the year to 29.1 per average 1,000 living during the year above one and less than three months old.

Again deducting the remaining 164 deaths from the 11,309 we get 11,145 as the population at the end of the third month. During the period from three to six months 392 deaths occurred. The average population during those three months might be fairly considered as 10,949 at the middle of this age period. The 392 deaths calculated upon this average population during this life period correspond to a mortality at this period of life of 35.8 instead of 32.7 calculated in the ordinary way on the total births during the year.

In the same way at the end of the first six months of life the population is 10,753, and if the 1,828 deaths in the whole period in the first year of life be calculated upon this population the average mortality under one would come out as 170 per thousand living. This number is quite different from any of the results given in table 5, and is even higher than the number that would be obtained if the method suggested at the bottom of page 13 were adopted. That method gives the infantile death rate as 164. The difference is due to the fact that the majority of children who die in their first year do not live six months

The average age at death is about four months. The rate of 164 is, however, the more likely to be right, for although half the children who die under one do so before the end of the fifth month of life, the average population in that case is the population at the fourth month not at the end of the sixth.

Infant mortality in previous years.—In the report for 1904 a table was given containing the deaths under one per thousand births for each year since 1890 and for every quarter of these years. This table also showed the difference of such rates from the average for the whole period which had been 176. In 1905 the death-rate amongst infants under one was 152 per thousand births and in 1906 the same; in both cases some 14 per cent. below the average for the preceding fifteen years. In the table first mentioned and which is printed on page 21 of the report for 1904 the births are total births, and the deaths under one total deaths without any deductions for births in hospitals or deaths which could not be allocated to any district of the town.

For the years 1894-1903 an attempt was made to allocate the deaths in order to obtain the death-rate in each district, and it was found that in these ten years there were 65 deaths of infants under one in institutions which could not be allocated to any district of the town. The rate however for these ten years (174), printed in a table on p. 31 in the report for 1905, while excluding these 65 deaths of outsiders, included the whole of the births that took place within the borough, whether in the districts or in the workhouses. These figures differ therefore, in the way in which they are calculated from the figures already given for 1905 and 1906, in which births in the workhouses also have been excluded. The results err therefore in being rather too favourable to the earlier period.*

* The rate 176 (or more accurately 175.7) for the whole period from 1890 to 1904 inclusive, was calculated upon the whole births, but only upon the deaths referable to districts. In order to compare the rates for 1905 and 1906 (already given as 152.1 and 152.3) with these, it is necessary to add the births in the workhouses when the rates for these two years come out at 151.0 and 151.2. The difference is therefore evidently negligible. Even when we include the whole of the births and the whole of the deaths without any allocation, the rates are 152.0 for 1905 and 151.9 for 1906.

Infant mortality in districts.—When we come to the districts the correction is not however altogether negligible, as the North district of Leeds, which contains the Leeds Union Workhouse, is credited proportionately with a much larger number of births. Hunslet in the years before 1904 would have a slightly larger number of births, and Holbeck and Wortley also smaller numbers in excess.

Neglecting these corrections in the meantime, which, except in the district of North Leeds, do not affect the result to more than one death per thousand births, and dealing only with whole numbers, it will be found that in 1906 whilst the deaths in all the districts of the town corresponded to 152 per thousand births registered in these districts, the mortality in the several districts varied from 85 in Chapeltown, 95 in Bramley, and 97 in Kirkstall, to 185 in Holbeck and 188 in South-East Leeds. In 1905 with a rate again of 152, the lowest district rates had been 102 in Bramley and 111 in Chapeltown, and the highest in North Leeds 169 and in South-East Leeds 203. In both years we have left out the small district of Osmondthorpe. In the ten years 1894-1903 the rate in this district averaged 188. In 1905 it was nil. In 1906, 182.*

In North Leeds, which is one of the districts requiring a little correction, the average rate in 1905 and 1906 was 3 per cent. below that of the ten years 1894-1903, as given in the table, p. 31 of the 1905 report and reprinted on p. 26.†

In West Leeds, where the correction is negligible, the rate in the last two years was 12 per cent. below that of the ten already mentioned.

South-East Leeds had a rate, as will be seen from the table on p. 31 in the report for 1905 of 214 for the ten years 1894-1903, much the highest of any district of the Borough.

* It will be understood that the correction by exclusion of births in institutions has been made for 1905 and 1906, but not for the ten years 1894-1903, so that in some of the districts specially named the ten years' rates are estimated as a little lower than they should be.

† With the correction the improvement is one of nearly 8·8 per cent.

Infant Mortality, 1894-1903.

Chapelton	...	118	South-East ..	...	214
Kirkstall	...	138	Holbeck	...	189
Bramley	...	145	Osmondthorpe	...	188
North	...	173	Hunslet	...	183
Wortley	...	175	West	...	177
City	...	...	...	...	174

In 1905 the rate was 203·2 or 5 per cent. below that rate, and in 1906, 187·9 or 12 per cent. below the rate in the decade, the average of the two years being 8·7 per cent. below the decade rate.

In Hunslet, a district requiring some slight correction, the fall in the last two years was $8\frac{1}{2}$ per cent.* whilst in Holbeck and Wortley, also requiring correction, the rates were diminished by 12 and 17 per cent.

In Kirkstall the average rate of the last two years was 21 per cent. below the rate in the decade, whilst in Bramley the fall was no less than 32 per cent. In Chapelton, the district with the lowest rate for the ten years, 1894-1903, there was also a diminution in the last two years of 17 per cent.

Osmondthorpe is rather different. The diminution already given for other districts for the two years, as compared with the ten, has been obtained by comparing the average of the two last years with the average of the ten. In 1905 there were three births but no death under one in Osmondthorpe. The rate was therefore nil. In 1906 there were eleven births and two deaths, a rate of 182. The average between nothing and 182, is, of course, 91, but if the total births and the total deaths are taken into account the rate comes out as 143, as against 188 for the ten years, an improvement of 24 per cent.

* Hunslet 8·5 corrected to 8·7, Holbeck 12·1 corrected to 12·5, and Wortley 17·2 corrected to 17·6.

TABLE 5 b.—Infantile Mortality during the year (52 weeks ended 29th December) 1906.

Deaths from stated causes in each registration district, with rates per thousand births in the district.

CAUSES OF DEATH.	NORTH.		WEST.		SOUTH-EAST.		HUNSLT.		HOLBECK.		WORTLEY.		KIRKSTALL.		BRAMLEY.		CHAPEL-TOWN.		OSMOND-THORPE.		City death-rate under one year per 1,000 births.
	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	Deaths.	Rate per 1,000 births.	
Common infectious diseases.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.2
Measles ..	6	3.6	13	7.0	7	5.0	10	4.7	5	5.0	13	8.1	2	2.0	..	..	4	4.1	..	..	5.0
Scarlet fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0.1
Diphtheria ..	1	0.6	..	..	1	0.8	1	0.5	..	..	..	..	..	..	..	..	..	..	..	..	0.2
Membr. croup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other croup ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping cough ..	7	4.2	15	8.0	8	6.5	14	6.5	7	7.0	4	2.5	3	2.0	2	4.3	6	6.2	..	..	0.1
Diarrhoeal diseases.	63	37.4	43	23.0	43	34.7	90	42.0	35	34.0	43	26.8	10	9.8	6	12.0	6	6.2	..	..	5.5
Diarrhoea, all forms ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis (not tuberculous) ..	8	4.7	16	8.0	5	4.0	9	4.2	4	4.0	3	1.0	2	2.0	1	2.2	3	3.1	..	..	28.2
Gastritis ..	1	0.6	3	1.6	1	0.8	1	0.5	1	1.0	1	0.6	1	1.0	1	2.2	2	2.1	..	..	4.3
Gastro- & gastro-intestinal catarrh ..	3	1.8	1	0.5	..	..	..	..	..	..	..	..	..	..	1	2.2	1	1.0	..	..	0.9
Gastro-enteritis ..	0	3.6	8	4.5	1	0.8	5	2.3	..	..	..	..	2	1.2	1	2.2	1	1.0	..	..	0.9
Wasting diseases.	28	16.0	48	25.7	19	15.3	53	24.7	27	20.0	26	16.2	15	14.7	7	15.1	15	15.6	..	..	2.2
Premature birth ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Congenital defects ..	7	4.2	15	8.0	4	3.2	15	7.0	10	10.0	12	7.5	4	3.0	..	..	5	5.2	..	..	10.0
Injury at birth ..	3	1.8	6	3.2	4	3.2	4	1.9	3	3.0	1	0.6	1	1.0	..	..	..	..	..	..	6.0
Want of breast milk ..	1	0.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1.8
Immunization, malnutrition, privation ..	12	7.1	8	4.3	7	5.6	15	7.0	9	9.0	18	11.2	3	2.9	2	4.3	1	1.0	..	..	0.2
Atrophy ..	..	..	1	0.5	..	..	2	0.9	..	..	4	2.5	..	..	..	..	..	..	..	..	..
Debility ..	14	8.3	11	5.9	9	7.3	22	10.3	4	4.0	7	4.4	8	7.8	..	..	4	4.1	..	..	6.2
Marasmus ..	24	14.2	15	8.0	15	12.1	19	8.9	13	13.0	6	3.7	4	3.0	3	6.5	7	7.3	..	..	0.6
Tuberculous diseases.	2	1.2	3	1.6	..	..	5	2.3	2	2.0	..	..	3	2.9	1	2.2	..	..	..	..	8.8
Tuberculous meningitis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous peritonitis ..	2	1.2	..	..	2	1.6	..	..	..	..	..	..	1	1.0	1	2.2	..	..	..	..	1.1
Tabes mesenterica ..	2	1.2	5	2.7	4	3.2	17	7.9	2	2.0	7	4.4	1	1.0	..	..	..	..	..	..	0.5
Hydrocephalus ..	..	..	2	1.1	..	..	2	0.9	..	..	1	0.6	..	..	..	..	..	..	..	..	3.2
Other tuberculous diseases ..	5	3.0	4	2.1	1	0.8	3	1.4	5	5.0	3	1.9	2	2.0	..	..	1	1.0	..	..	0.4
Erysipelas ..	1	0.6	..	..	1	0.8	2	0.9	..	..	1	0.6	..	..	..	..	..	..	..	..	2.0
Syphilis ..	3	1.8	6	3.2	4	3.2	..	..	1	1.0	1	0.6	..	..	..	..	..	..	..	..	0.4
Rickets ..	2	1.2	3	1.6	2	1.6	2	0.9	1	1.0	..	..	..	..	1	2.2	1	1.0	..	..	1.5
Meningitis (not tuberculous) ..	4	2.4	4	2.1	3	2.4	3	1.4	5	5.0	1	0.6	..	..	4	8.6	1	1.0	..	..	1.0
Convulsions ..	14	8.3	10	10.2	14	11.3	17	7.9	6	6.0	16	10.0	6	5.9	1	2.2	8	8.3	..	..	8.4
Bronchitis ..	20	11.9	10	5.3	28	22.6	22	10.3	11	11.0	16	10.0	6	5.9	3	6.5	3	3.1	..	..	9.0
Broncho-pneumonia ..	17	10.1	12	6.4	23	18.6	14	6.5	12	12.0	5	3.1	6	5.9	1	2.2	4	4.1	..	..	7.0
Laryngitis ..	..	..	..	..	..	..	..	..	..	1	1.0	..	..	..	..	..	..	..	..	..	0.8
Pneumonia ..	4	2.4	6	3.2	4	3.2	12	5.6	..	..	..	..	1	1.0	1	2.2	1	1.0	..	..	2.4
Suffocation, over-laying ..	5	3.0	1	0.5	4	3.2	1	0.5	1	1.0	1	0.6	3	2.9	..	..	..	..	..	..	4.3
Dentition ..	5	3.0	6	3.2	7	5.6	4	1.9	3	3.0	9	5.6	3	2.0	2	4.3	4	4.1	..	..	3.0
Other causes (exclusive of lines in italics) ..	11	6.5	15	8.0	11	8.9	8	3.7	17	17.0	20	12.5	11	10.8	5	10.8	4	4.1	..	..	8.5
TOTALS ..	281	166.7	302	161.6	233	87.9	375	175.0	185	184.6	225	140.2	99	97.1	44	91.6	82	85.1	2	181.8	152.3
Births, exclusive of those in public institutions ..	1,686	1,869	1,240	2,143	1,002	1,605	1,020	465	1,064	11	12,005										

The population of the district is, however, so very small, that it is not well to attach any great importance to variations over short periods.

The whole City comes out with an improvement in the two years of 12 per cent. as compared with the ten years. If taken exactly on the same basis, that is, including workhouse births, but excluding deaths of aliens, the improvement is 13 per cent.

The year 1904 is included in the table for the fifteen years 1890-1904 already mentioned and to be found on p. 21 in the report for that year. The rate, including Workhouse births and deaths of aliens, was 176, the same as the average for the fifteen years. When the deaths of aliens are excluded, but Workhouse births included, as was done in the figures for the ten years 1894-1903, the rate for 1904 (which is not included in these ten years) is 175, the ten years' rate being as already said 174. When all the Workhouse births are excluded, and also the deaths of aliens, the rate is again 176, practically the same as when both are counted.

	City.	Chapelton.	South-East Leeds.
1890 ...	173	104	199
1891 ...	177	134	236
1892 ...	168	122	203
1893 ...	206	126	254
1894 ...	156	96	176
		116	214
1895 ...	191	98	228
1896 ...	169	101	186
1897 ...	190	166	240
1898 ...	183	125	231
1899 ...	172	112	200
		120	217
1900 ...	183	122	233
1901 ...	188	143	262
1902 ...	160	103	208
1903 ...	153	106	185
1904 ...	176	114	234
		118	224
1905 ...	152	111	203
1906 ...	152	85	188
		98	196
	173	116	216

Cause of the diminution in the infant death rate.—It will be naturally asked: "To what is this improved state of things due?" One is unwilling to deny that some part at least in the fall in the infantile death rate may be due to better sanitation and to the greater amount of care given to the feeding of young children. The action of the Mayor of Huddersfield drew great attention to the unnecessary mortality in the early months of life and created a profound impression on the country. Our own action has been rendered more efficacious by this very fact. The publicity of the Caxton Hall Congress also helped.

But we must remember that infantile mortality varies very greatly from year to year. During the fifteen years 1890-1904, although it was never so low as 152, it was on one occasion 153, on another 156, and on a third 160. In no two consecutive years however of the period then given was the rate so low as 152. The rates in the years 1902 and 1903 of 160 and 153 averaged just over 156. No other two consecutive years had a rate nearly so low. The improvement has also been one in which other towns have shared.

Contrast in two districts.—In the ten years 1894-1903 the infantile mortality in Chapeltown was 118, in South-East Leeds it was 214. In 1904 the rate was 114 in the former and 234 in the latter. In 1905 it was 111 and 203, whilst last year it dropped in both—to 85 in Chapeltown and 188 in South-East Leeds. In the accompanying table (p. 28) the rates for these two districts have been placed side by side for the seventeen years, for which the figures are at our command. Along with these have been placed the rates for the same years in the whole City.*

* As the Workhouse births were not separated for 1890 and 1891 we have throughout taken the whole births and the whole deaths under one for the City, thus including outsiders in both cases. It has been already seen that this makes no practical difference for the whole City. The two districts Chapeltown and South-East Leeds are districts containing no public institutions, and have no Workhouse births to be deducted. The deaths however occurring in public institutions in other districts, but belonging to these districts, have been transferred to them for each of the seventeen years. The rates are given in whole numbers without decimals.

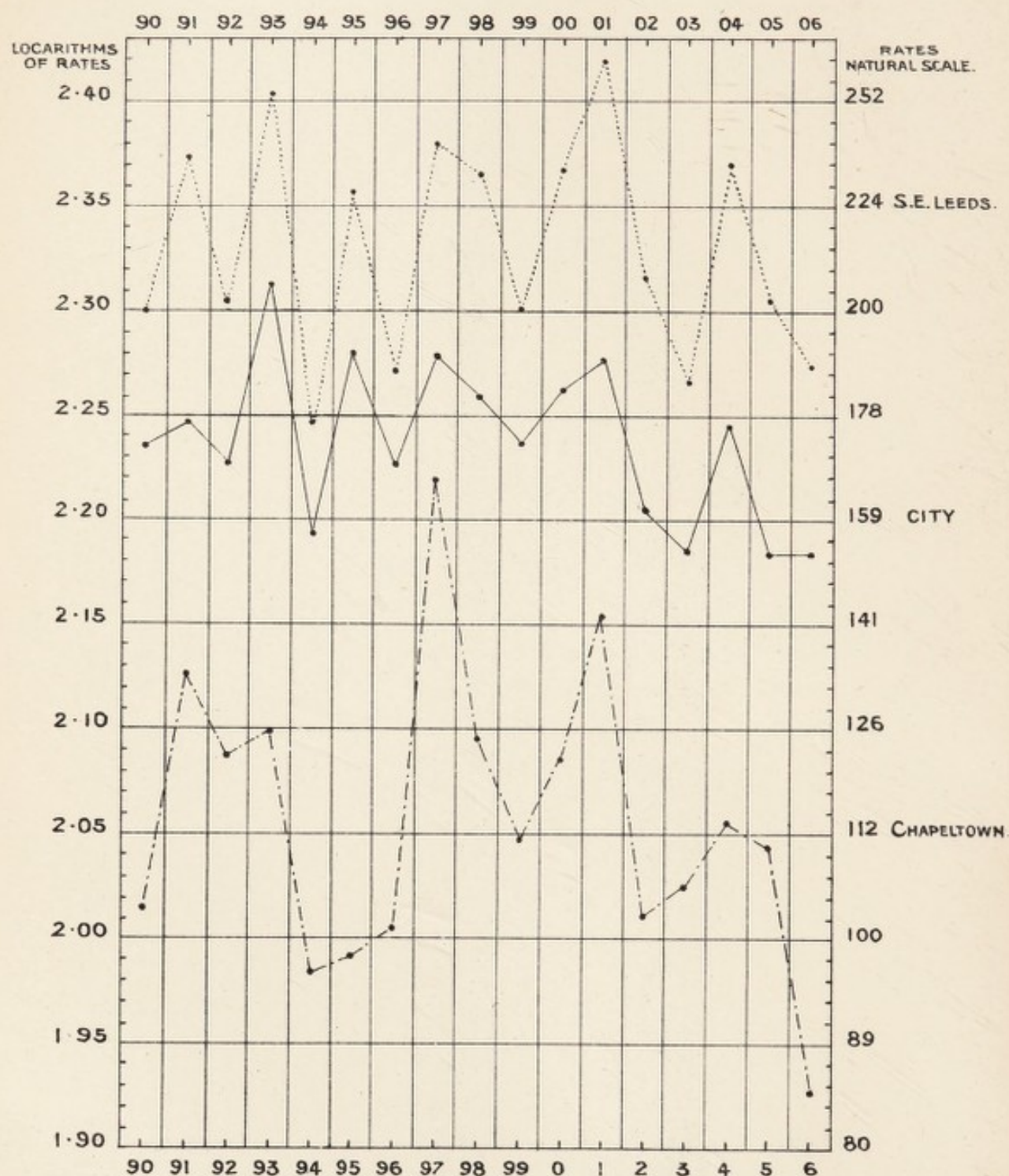
It will be noticed that the rates for the whole period of seventeen years are 173 in the City, 116 in Chapelton and 216 in South-East Leeds. During the fifteen earlier years tabled,—that is, until the last two years—the rate in the City was 176. In those two years it was 152. Until the last two years, in Chapelton it was 118; during the last two it has averaged 98. In South-East Leeds the rate for the fifteen earlier years was 218, during the last two it was 196.

That is to say, during the last two years the City had an infantile death rate per thousand births 14 per cent. below that of the fifteen previous years. In Chapelton the diminution was one of 17 per cent. and in South-East Leeds of 10 per cent.

The table on p. 28 shows that for the five earlier years, 1890 to 1894, the rate in the City was 176—the same as that of the fifteen year period. The rate rose in the latter part of the nineties to 181, but fell during the five earlier years of the nineteen hundreds to 172 and still further dropped to 152 last year and the year before. In Chapelton the rate also rose—from 116 in the first quinquennium to 120 in the second. It also fell in the nineteen hundreds to 118 in the first five, and to 98 in the two following years. In South-East Leeds the rate had been 214 in the five earlier years. Like that of the whole City and of Chapelton it rose but not to nearly the same extent during the following five years—the rate being 217 from 1895 to 1899. But contrary to what happened in the whole town and in Chapelton, instead of falling in the period 1900-1904 it rose from 217 to 224.

So that the 10 per cent. of fall in the two years 1905 and 1906 in South-East Leeds, as compared with the fifteen preceding years, is a fall upon an ascending gradient, not a continuation of a descending one as in Chapelton and in the City as a whole. The fall from 224 to 196 is one of $12\frac{1}{2}$ per

Chart showing on logarithmic scale the infantile death rates (per 1,000 births registered) in South-East Leeds, in the whole City, and in Chapeltown, for each year from 1890 to 1906 inclusive.



cent. The corresponding fall for Chapeltown was 17, the same as for the whole period, and for the City 11·6, a little less than in South-East Leeds.

Years of maximum and minimum death rate.—It will be seen from the table and still better from the chart that in the two districts there is a considerable amount of discrepancy between the maximum and minimum rates. In Chapeltown the maximum was 166 in 1897, the minimum 85 last year. In South-East Leeds the maximum was 262 in 1901 and the minimum 176 in 1894. With the exception of last year's, the lowest individual mortality rate in Chapeltown was also in 1894. The year 1894 had not the lowest mortality of the seventeen in the whole City, for in the last two years the City rate was 152 and in 1903 it was 153. With these three exceptions, however, the City rate was a minimum in 1894.

That year it may be remembered, was a somewhat moist one, with a low death rate in Autumn.* It is evident, though we may congratulate ourselves upon the diminished mortality during the two last years, both in the district of lowest, and in the district of highest death rate, that there are probably other factors, not functions of our administrative energies, to be taken into consideration in trying to account for this improvement, some of them, probably, similar to those conditions mentioned as present in 1894.

Explanation of chart.—The chart is based upon a logarithmic, instead of an arithmetical scale, though the figures on the right hand side show the numbers corresponding to the logarithms on the left. A vertical rise of 0·05 in the figures on the left hand side corresponds approximately to an increase of just over 12 per cent. in whatever part of the chart it occurs, and a fall of 0·05 corresponds to a decrease of just under 11 per cent.

* See Annual Report, 1904, p. 26, and chart in same report.

Proportionate age of infants in South-East Leeds.—It was pointed out last year that while the death rate under one was highest in the South-East district of Leeds, the proportion of the deaths at the earlier weeks to the whole deaths under one was less than in the City generally. In 1905, in South-East Leeds the death rate under one per thousand births was 33·7 per cent. in excess of that of the whole town, but the death rate under one month was only 16·5 per cent. in excess. The death rate from one to three months was 51·6 per cent. in excess of that of the town, while from three to six months it was 64·6 per cent. in excess.*

TABLE 5 c.

Infant mortality during the year (52 weeks ended December 29th), 1906.

Excess or otherwise compared with rate in whole city of district rates at certain age periods.

District.	Births in year.	Under 1 week.	Under 1 month.	1 and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Year.
North ...	1,686	- 22·2 %	- 8·8 %	+ 32·1 %	+ 5·2 %	+ 20·3 %	+ 11·4 %	+ 9·5 %
West ...	1,869	+ 35·7 %	+ 23·5 %	+ 1·5 %	+ 8·0 %	- 12·7 %	- 4·4 %	+ 6·1 %
South-East ...	1,240	- 4·0 %	- 5·2 %	+ 23·7 %	+ 40·7 %	+ 18·7 %	+ 58·5 %	+ 23·4 %
Hunslet ...	2,143	+ 13·1 %	+ 23·5 %	+ 17·5 %	+ 11·3 %	+ 11·6 %	+ 3·9 %	+ 14·9 %
Holbeck ...	1,002	- 12·7 %	+ 19·7 %	+ 9·1 %	+ 34·3 %	+ 3·2 %	+ 39·3 %	+ 21·2 %
Wortley ...	1,605	- 6·0 %	- 15·4 %	- 6·9 %	- 16·2 %	+ 19·1 %	- 13·1 %	- 7·9 %
Kirkstall ...	1,020	- 10·1 %	- 20·1 %	- 42·7 %	- 52·0 %	- 25·9 %	- 48·5 %	- 36·2 %
Bramley ...	465	- 14·7 %	- 41·6 %	- 68·6 %	- 14·4 %	- 48·6 %	- 15·3 %	- 37·9 %
Chapelton ...	964	- 17·9 %	- 29·6 %	- 47·1 %	- 52·3 %	- 46·2 %	- 54·6 %	- 44·1 %
Osmondthorpe ...	11	260·7 %	105·7 %	...	178· %	...	...	+ 19·4 %
City death rates per 1,000 births registered ...	12,005†	25·2	44·2	27·4	32·7	25·1	22·9	152·3

* See table, p. 23, 1905 Annual Report, reprinted on p. 33.

† Exclusive of 88 births in workhouses.

Infant mortality during the year (52 weeks ended December 30th), 1905.
Excess or otherwise compared with rate in whole city of district rates at certain age periods.

District.	Births in year.	Under 1 week.	Under 1 month.	1 and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Year.
North	1,792	- 18'4 %	- 4'6 %	+ 26'1 %	+ 26'2 %	+ 5'2 %	+ 12'8 %	+ 11'2 %
West	1,905	- 9'7 %	- 9'2 %	+ 3'9 %	- 5'2 %	+ 8'8 %	+ 1'0 %	- 1'6 %
South-East	1,235	+ 12'4 %	+ 16'5 %	+ 51'6 %	+ 64'6 %	+ 39'8 %	- 4'4 %	+ 33'7 %
Hunslet	2,140	- 3'7 %	+ 12'9 %	+ 3'9 %	- 6'6 %	+ 10'8 %	- 1'0 %	+ 5'1 %
Holbeck	1,071	- 2'2 %	- 4'6 %	- 27'6 %	- 5'2 %	+ 1'2 %	+ 33'5 %	- 3'0 %
Wortley	1,643	+ 13'9 %	- 2'3 %	- 16'3 %	+ 13'7 %	- 9'6 %	+ 4'9 %	- 2'0 %
Kirkstall	981	+ 33'7 %	+ 6'3 %	- 31'4 %	- 29'8 %	- 46'6 %	- 19'7 %	- 20'2 %
Bramley	459	- 2'2 %	- 22'9 %	- 45'9 %	- 64'3 %	- 12'4 %	- 14'3 %	- 32'7 %
Chapelton	1,016	- 7'9 %	- 7'7 %	- 16'6 %	- 58'0 %	- 32'9 %	- 32'0 %	- 26'9 %
Osmondthorpe	3	...	...	...	...	...	...	...
City death rates per 1,000 births registered ...	12,245*	26'7	48'0	28'3	30'5	24'9	20'3	152'1

* Exclusive of 92 births in workhouses.

The excess of the rate in the whole district over that of the City, which had been 33'7 per cent. in 1905, fell to 23'4 per cent. in 1906, but while the rate of all deaths under one was 23'4 per cent. in excess of that of the town, the rate of those under one month was actually 5'2 per cent. below that of the town. The rate at one to three months rose to 23'7 per cent. above that of the City, and from three to six months to 40'7. The rate was in excess of that of the town by 18'7 per cent. at six to nine months, and 58'5 per cent. at nine to twelve months

Comparing 1906 with 1905 briefly, the difference from the town rate was minus 4 per cent. in the latter as against plus 12 in the former for children under one week. Minus 5 as against

plus 16 of all dying under four weeks, including those already mentioned. From one to three months the rate was 24 per cent. in excess, against 52 the previous year. From three to six 41 against 65 the previous year. From six to nine 19 per cent. in excess against 40 the preceding year. On the other hand there was an excess of 59 per cent. of the total baby mortality in 1906 amongst children between nine and twelve months, as against a deficit of 4 per cent in 1905, as compared with the whole town.

Previous enquiries.—In the Annual Report for 1892, a somewhat detailed account was given of the health conditions in South-East Leeds, and certain suggestions canvassed as to its being specially scavenged (pp. 98-102). An important report upon the subject of diarrhoea was contained in the Annual for 1893, but this dealt with the town generally, and largely with the fatal cases of diarrhoea amongst very young children, during six weeks in the autumn quarter of that year. A full table was given of every death under one from diarrhoea during that period in the whole town, with information as to previous health, how the child had been mothered, the mode of feeding, bottle cleansing, the question of overcrowding, and the conditions as to drainage and attendant nuisances. An attempt was specially made at that time to deal with the particular district we are considering by extra attention from the Cleansing Department, and it was found that this district, which was specially scavenged during the autumn of 1903, was the only district in the town where the diarrhoea rate fell that autumn. Information upon this experiment will be found on page 138 of the report last named.

In the report for 1899 a still further study of diarrhoea, and especially in the South-East district, was made, and two charts showing the diarrhoea mortality in the City and in South-East Leeds from 1884 to 1899 were given. The death rates on which these charts were constructed were made out before the 1901 census and may require some correction.

During the early days of our women sanitary inspectors Miss Hobson and Miss Sharples made a special investigation into the deaths of young children, especially from autumn diarrhoea, but the work was never thoroughly classified. During the last four years, however, as already said, work of this kind has been much more completely done, all deaths in children under 2 years of age being inquired into. This investigation has been limited to the South-East district where the infant mortality was greatest, but not limited to any particular disease group. The results would probably have been classified before this time but for the necessity of preparing the new infantile death tables required by the Local Government Board to which reference has already been made.

We are, however, able in the meantime to select from the statistics in our books, collected during these four years, information as to the mode of feeding in young children who died under three months. This information is not of very great value until it can be compared with the information we are now obtaining, in connection with the births registered, as to how many children in these districts are fed naturally, and how many artificially, and for what periods of time. This information I hope to give for the years 1905 and 1906 in a later part of this report, but in the meantime it may be not without value to give some preliminary figures.

Feeding of infants dying under the age of 3 months.—During the four years 1903-6, 232 deaths of infants under one month were inquired into. In 88 of these (or 38 per cent.) the children were reported to have been breast fed entirely. In 40 (or 17 per cent.), the children were not entirely breast fed, whilst in 98 (or 42 per cent.), the children had never been fed at all; that is to say, they died before there was any opportunity of putting them to the breast. In regard to the remaining 6 (or $2\frac{1}{2}$ per cent.), the record is not complete.

If we disregard the cases in the first month where the child had never been fed at all, and those in which the record was incomplete, and deal only with those who had a chance of being fed, or mis-fed, we reduce the 232 under four weeks of age to 128, 88 of whom (or 69 per cent.) it was alleged were entirely breast fed, whereas 40 (or 31 per cent.) were either entirely or partially artificially fed.

Amongst children who died between one and two months there were 106 deaths investigated. Of these 58 (or 55 per cent.) were alleged to have been entirely breast fed, 43 (or 41 per cent.) had been partly or wholly artificially fed, whilst of the remaining 5 there was no record.

Adding together the 128 and 101 who died between the ages of one and two months and of whose feeding we have a record, we have 229 infants dying in the first two months of life who ought to have been entirely breast fed. Of these, 146 we are told were so,—that is, 64 per cent.—83 were not entirely so,—that is 36 per cent.

Of children who died in the third month, 80 cases were investigated. In 3 we have no record as to feeding, 28 were said to have been breast fed, and 49 were either not entirely so, or not so at all. That is 36 per cent. of those of whom we have a record were entirely breast fed and 64 not.

It will thus be seen that, putting aside for the time being those children, who, owing to prematurity, to malformation, or to extreme debility, were practically never fed at all, the proportion of infants, who died in the first month of life and who had been, or were said to have been entirely suckled at the breast, was 69 per cent. In the second month, again neglecting the imperfectly recorded, 58 per cent. had been entirely breast fed. In the third month 36 per cent. were said to have had only their mothers' milk.

These figures are on the whole rather remarkable as showing that amongst even the fatal cases, after eliminating those where breast feeding was impossible, the number of infants artificially fed is much smaller than one would have expected to find. Obviously it was during the earlier months that the largest proportion amongst those who died were breast fed, but it is sad to think that the proportion of entirely breast fed babies decreased so rapidly after the early weeks of life.

Age of weaning in South-East Leeds.—The information in the last paragraphs related only to children who died under the age of three months. The following figures concern only survivors. Usually the report of a birth does not reach us for an average of six weeks from the date of its occurrence. The homes of 29 children, whose births were registered in the six earlier months of 1905, were visited before they were four weeks old. In 20 the visit was made during the fourth, in 8 before the end of the third, and in 1 during the first week of life.

It was found that the child in the week last referred to was being suckled entirely by the mother, that in the 8 homes seen in the third week, the child was in each case entirely dependent upon his mother's milk at the time of our visit, and that, of the 20 infants seen in the fourth week, 14 were only breast fed, while 6 were not, at the time of visit, entirely dependent for nourishment upon their mothers. Of these 6 we have reason to think that 2 had been more or less artificially fed from birth, 3 of the remaining 4 were fed only at the breast the whole of the first week and into the second week, and the fourth the whole of the first and second weeks and into the third. Of the 29 thus visited during the first month, as already said, 23 (or 79 per cent.) at the time of visit were receiving only the mother's milk. From information obtained later we have reason to think that 12 of these 23 continued to be breast fed up to the end of the second

month, and in many of them considerably longer. Of the 11 we have no record until several months after the date of the first visit.

During the interval between the end of the fourth week and the end of the second month, the great bulk of first visits were paid. During the six months mentioned 425 children were thus seen. Of these 309 (or 73 per cent.) were at the time of visit entirely fed by the mother. Of the remaining 116 we had reason to suppose that 28 had never been solely breast fed, whereas 88 had been only breast fed for varying periods before the time of visit. Of these 88, 41 had been entirely breast fed during part of the first month of life and 47 also during part of the second. In regard to the 41, we learned that 8 had been fed during the first week but not beyond, that 10 had been fed during the two earlier weeks but not beyond, that 13 were not entirely breast fed after the third week and 10 not after the fourth. We have made no attempt to get out as to the 47 anything further than that they were entirely breast fed during the first four weeks of life, but were partly or wholly weaned before the end of the second month.

It would therefore appear that of the children as to whose feeding in the two earlier months of their life we have some information, 454 in all, 424 (or 93·4 per cent.) were fed only by their mothers during the first week of their lives and 6·6 per cent. not so; that during the second week 415 (or 91·6 per cent.) were fed entirely at the breast, 38 (or 8·4 per cent.) were fed more or less artificially, and as to one we have no record; that during the third week those fed only at the breast were 402 (or 88·7 per cent.), 51 (or 11·3 per cent.) were not entirely at the breast, and of one our record is incomplete. During the fourth week 385 (or 85·6 per cent.) were breast fed only, 65 (or 14·4 per cent.) not entirely so, and as to 4 the record is incomplete. During the second month of life of the 454 on our list, as to 11 (or 2·4 per cent.) our information was at fault. The remaining 443 included 367 (or 82·8 per cent.) of breast fed and 76 (or 17·2 per cent.) not entirely so.

During the third month of life comparatively few of the cases registered during these six months were visited for the first time. They amounted only to 14, but of the 14, 11 were being fed entirely by their mothers, 2 were not so fed, and the fourteenth was a child who had been entirely fed by the mother up to the end of the second month, but partially weaned somewhere in the third.

During the third month of life 5 children were visited a second time. Of these, 4 were found to be still receiving only their mothers' milk, and 1, which had been visited in the second month, was found as on the previous occasion to be still receiving artificial food.

During the fourth month of their lives 2 children were visited for the first time, and both were found to be getting only their mothers' milk, while 26 were visited who had been seen before. Of these 17 were reported to be only receiving breast milk. Of the remaining 9, 6 are included in those already mentioned as having been found at the first visit more or less artificially fed.

From these figures, which deal entirely with infants whose births were registered during the six earlier months of 1905, all cases have been excluded in which we know that the child has since died; so that the statistics just given deal chiefly with children born from 20 to 24 months ago, all of whom, so far as we know, are at present alive.

Fatal cases ;—when weaned.—During the first two quarters of 1905, 647 births were registered in the South-East district. Information has already been given as to those who were not known to be dead at the time of writing. One hundred and sixty are reported to us as having died during the interval. Of these, as to 5 we have no information as to the mode of feeding, further than that one of them was fed at the breast at the date of our visit in the second month of life, and afterwards died away from the district, but we do not know at what age. Two others died, one in the fourth week and one in the second

month, but we have no reliable information as to the mode of feeding in either of these cases. There remain 155, out of the 160 children whose births were registered during this period, and who subsequently died. Of their feeding we have some information not always strictly accurate—our information in those who lived longer erring, if anything, on the side of crediting the mother with feeding the baby entirely, when perhaps her breast milk was supplemented in some other way. As this error pervades the figures in the preceding paragraphs, it may be to that extent discounted. Of the 155 babies about whose feeding we know something, we find that, of those who survived the first week of life, 103 were fed entirely at the breast, 30 were fed artificially, more or less, even in the first week. The remaining 22 died during the first week, and of these 15 had never been fed at all, 6 are said to have had breast milk only, and one was fed partly or wholly artificially.

The 133 surviving babies were reduced in the second week to 126; 4 of those fed at the breast died and 4 ceased to be so fed, reducing the 103, fed entirely by their mothers during the first week, to 95. Three of the 30 not fed entirely at the breast in the previous week died and 4 previously entirely breast fed were transferred to this group, leaving it 31 instead of 30.

During the following week these 31 became 41 by the addition of 10 babies fed only at the breast in the second week. There was no death to account for in this week of life. In the fourth week of life the 85 breast fed babies were reduced to 79 by the transfer of 6 more from the fully breast fed to the wholly or partly artificially fed group. Of the latter group, which had been 41 in the third week, 4 died, the 6 recruits leaving the partially or wholly artificially fed babies 2 in excess of the number in the previous week notwithstanding the 4 deaths. The total living babies of the 155 had now been reduced to 122.

During the next month the 79 breast fed babies were reduced to 60. The partially or wholly artificially fed were increased to 44. The number of living babies was thus 104.

Nine of the 79, still breast fed at the end of the fourth week, died during the second month as did also 9 of the 43 who were acknowledged to have been more or less artificially fed.

In the third month the 60 breast fed babies were reduced to 50 and the 44 artificially fed to 40. Four of those who had been breast fed in the second month died in the third and also 10 of those who had not been completely breast fed.

In the fourth month the 50 babies entirely at the breast were reduced to 42, and the 40 artificially fed to 33. Two of the 50 breast fed babies died and 13 of the 40 not entirely so nourished.

In the fifth month the 42 wholly breast fed were reduced to 36, 3 having died and three going into the other group. The 33 more or less artificially fed were reduced to 29, seven of the 33 having died and 3 of the previously breast fed children having joined this group.

At the sixth month 35 out of the original 155 were still being fed, so far as we know, entirely by their mothers. One died during this month. Of the 29 more or less artificially fed babies 18 survived, 11 having died during the sixth month.

So far, we have shown, in regard to each week for the first four weeks, and in regard to each month for the remaining five months, how the entirely breast fed babies became fewer and fewer, and how the mortality amongst those artificially fed increased, we shall now deal only with periods of three months. The 35 remaining breast fed at the end of the sixth month fell at some time or other during the next three months to 18. Eight deaths amongst this group accounted largely for this decrease. Amongst the 18 artificially fed babies there were 6 deaths (33 per cent). In these three months 9 recruits joined their ranks from the entirely breast fed, leaving the number of artificially fed babies during the sixth to the ninth month at 21 instead of 18.

In the three following months the 18 breast fed babies were reduced to 8; 4 of them had died, 6 had been added to the group

of 21 artificially fed in the previous period, making that group apparently 27, but 8 of the 21 had died. The group thus becomes 19.

In the period from 12 to 15 months the 8 wholly breast fed babies were reduced to one,—one by death and 6 by transfer to the other group. The 19 in the latter group were reduced to 16, 9 of the 19 having died, but the group having been recruited again by the 6 from the breast fed.

One, of course, would not attach any very great importance to the fact that babies more than a year old were more or less artificially fed. It may, however, just be worth while to deal during the next three periods of three months each with those remaining artificially fed. The 16 babies so nourished in the first three months of their second year of life were reduced to 6, 10 of them having died as did the solitary baby remaining entirely breast fed at the last period.

TABLE 5d.

Percentage of children whose births were registered in the two earlier quarters of 1905, according as they were entirely breast fed, or not entirely breast fed, amongst (1) those surviving their second year of life, and (2) those dying under the age of two.

Period of life.	SURVIVORS' GROUP.		DEATH GROUP.	
	Entirely breast fed.	Not entirely breast fed.	Entirely breast fed.	Not entirely breast fed.
First week ...	93·4	6·6	77·4	22·6
Second week..	91·6	8·4	75·4	24·6
Third week ...	88·7	11·3	67·5	32·5
Fourth week ..	85·6	14·4	64·8	35·2
Two months...	82·8	17·2	57·7	42·3

In the next period of three months the 6 remaining babies of the 155 were reduced to 2, 4 of the six having died and in the last period under two years of age these two also died.

Comparison between these two groups.—The groups of cases dealt with under the last two headings differ. The one group deals entirely with children, who, though their births were registered in the first half of 1905, were to the best of our knowledge still alive at the end of the first quarter of 1907. The other group deals with those whose births were registered in the same period of 1905, but who are known to have died before the end of March, 1907. The information about the latter is much more complete, as they were visited soon after their births were registered, and further enquiry was made in every case when their deaths were recorded. Up to the second month of life, however, information as to feeding is in both groups fairly complete—many second and third visits having been made to children in the first, which we may, for convenience, call the “survivors’ group.” The figures have already been given in most cases in the text, but it will be convenient to put the percentages in the form of a table. (Table 5 d.)

It will be understood that in both groups the percentages refer to the numbers on our record at the age given, and that where we have no record the cases have been entirely left out. Our record after the second month becomes rather incomplete in the survivors’ group, although in the death group it is fairly complete to the very end. In both groups a continual change was occurring, as already seen, by the transfer of breast fed children to those not entirely breast fed. We have omitted from our calculations all deaths and transfers, and only worked out the percentages upon those remaining at the particular age periods. The percentages, therefore, in both groups refer to those living during these several age periods, about the method of whose feeding we have a fairly reliable record.

Limiting ourselves, therefore, to the figures dealing only with the cases living for two months, but not carrying our rates later than that period, it will be noticed at once that in the survivors' group, during these two months, there is a falling off in the proportion entirely breast fed steadily week by week to the end of the fourth week, but that even in the second month the percentage so fed is still close on 83. From the death group, it must be remembered, that all deaths occurring in unfed children during the first week of life are omitted, and the percentages counted in each case on those still living at the several age periods. In this group the entirely breast fed children are only 77·4 in the first week; they fall steadily each week, and are only 58 per cent. of those still alive during the second month.

It will, of course, be understood that in the death group a large number of the children counted in the earlier weeks had died before the later ones. Excluding the 15 who died without having been fed in any way in the first week of life, 103 lived through that first week and were fed at the breast, 30 lived through that first week but were not entirely so fed, while 6 breast fed babies and 1 not breast fed died. These seven deaths in the first week are equivalent to 5 per cent. of the total children in the group fed in some way during that week, but the seven who died are not included in the percentages given in the first line of the death group, which deals only with the 133 who survived that week.

Of the original 140 in the death group (still excluding the 15 altogether unfed babies) commencing the first week, 36 (or 25·7 per cent.)—more than a quarter—were dead at the end of the second month, and are entirely excluded from the percentages given in this group for that month—the figures in the last line of this group in the table referring only to 104 still surviving babies out of the 140 with whom we started.

Before the end of the second month, therefore, 19 amongst the entirely breast fed, and 17 amongst the not, or only partially,

breast fed—that is together 36—had died. The average number of breast fed babies was 75 a week, counting two months as eight weeks, and the 19 deaths in eight weeks are equivalent to an average death rate of 3·2 per cent. On the other hand, the breast fed babies averaged 40 a week, and the 17 deaths are equivalent to a rate of 5·3 per cent. per week. This applies to the first eight weeks of life and leaves out the 15 unfed babies.

Motherhood in South-East Leeds.—Neglecting the earlier statistics obtained in 1902, we have information about the mothers of 1,291 dead children. With a few exceptions these were different mothers, but to secure uniformity where the same mother lost more than one child in this district under two years of age during the period to which our figures refer, we have counted her again as if she had been a separate mother, and have repeated the figures relating to her family for each death. Where, as happened in 7 cases, there were twins, both of whom died, the repeated figures are the same in both cases, but where an interval of a year or two elapsed the figures in each case refer to the numbers of her family at the time that they were entered. It was found on enquiry that these 1,291 mothers, as thus counted, had had 5,483 children born to them, but that at the time when the enquiry was made no fewer than 2,933 of these children were already dead. That is to say, that in this district of Leeds, in families which should be increasing, the women still of the child-bearing age had actually already lost more than 53 per cent. of their offspring.

Maternity and occupation.—Any great sub-division of these 1,291 mothers, according to occupation, would be liable to produce such very small numbers as to be of no great use statistically. Of the 1,291, however, 750, not an inconsiderable figure, were not, at the time the enquiry was made, nor had they recently been engaged in earning their own livelihood at least by any acknowledged trade outside their own homes. To these 750 mothers 3,424 children had been born alive. That is nearly

4·6 children to each mother. If we include twins the proportion is rather larger to each mother. Of these children no fewer than 1,769 were already dead, or 51·7 per cent.

On the other hand, amongst those engaged in some recognised outside occupation—441 in all—there were 1,699 children born, or 3·9 each, and of the 1,699, 976 (or 57·4 per cent.) had died,—a smaller proportion of births and a larger one of deaths than amongst those engaged merely in domestic work.

The heading of “industrial occupations” includes women engaged in the staple trades of the town, in workshops and factories, and whose work is carried on therefore in places more or less under supervision. The number of mothers so employed amounted to 238. These women had 802 children born to them, an average of 3·4, considerably less than the 4·6, the average of the housewives; in fact 26 per cent. below that average. Of the 802 children born to these women, 473 had died before the

Table 5 e. — Maternity and occupation.

Results of enquiry as to deaths of 1,291 children under two years of age in South-East Leeds, during the four years 1903-6.

	Whole group.	Housewives.	All industrial.	Industrial separated.		Work not ascertained.
				Factories and workshops.	Miscellaneous.	
Number of mothers..	1,291	750	441	238	203	100
Number of children born to them ...	5,483	3,424	1,699	802	897	360
Average per mother.	4·2	4·6	3·9	3·4	4·4	3·6
Number already dead ...	2,933	1,769	976	473	503	188
Per cent. dead ...	53·5	51·7	57·4	59·0	56·1	52·2
Number of surviving children per 1,000 mothers ...	1,975	2,207	1,641	1,382	1,940	1,721

date of our enquiry, or 59 per cent. Comparing these with the housewives, and taking into account the larger number of children amongst the former, it might be put that to 1,000 women living in the district and engaged only in housework 2,207 living children would remain, whilst to a similar 1,000 engaged in these industrial occupations the surviving children would be 1,382. It has of course to be remembered in making this estimate that in many cases the women engaged in industrial pursuits after marriage are the younger ones with smaller families, and that later in life they would probably have to give up mill work and would come into the other category with the larger families. The numbers are given for what they are worth (see p. 132).

For a particular purpose rag sorters were separated from the regulated industrial class. Their number was only 47, and they had 172 children, or an average of 3·7. Of the 172, 113 had died at the time of the enquiry, or 65·7 per cent.

Of hawkers there were 15 with 62 births and 29 deaths, an average of 4 children to a family and of 46·8 per cent. already dead amongst them.

Of the miscellaneous class, including fruit pickers, show-people, bottle washers, &c., &c., there were 15 with 51 births and 30 deaths; 58·8 per cent.

Under shop assistants, including waitresses, there were 16; children born 58, of whom 36 had already died; 62·1 per cent.

There were 71 engaged in cleaning offices, charing, &c., and 3 as caretakers. We may add to these 12 who are entered as laundresses. The former had had 455 children, 6·4 children per mother. Of the 455, 232 had died; 50·9 per cent. The caretakers were 3. If they be added to the office cleaners they do not make much difference to their proportions. The proportion of births remains 6·4 and the fatality 51·2. The 3 caretakers alone

only had 45 per cent. of their children surviving. Laundresses were 12, their children 47, nearly 4 each; the deaths 24, 51·1 per cent. Taken together these 86 mothers had 522 children, an average of 6 each. Of these 267 had died, a rate of 51·1.

About the information as to domestic servants there is a great deal of uncertainty. Twenty-four mothers had had 32 children, of whom 28 had died, a death roll of 87½ per cent. Most of these were probably illegitimate children, unwelcomed and uncared for.

The whole group of miscellaneous callings comprise 203 mothers, whose children had been 897, or 4·4 each. Of the 897, 503 had already died; 56 per cent. A thousand such mothers might at these rates have 1,940 children remaining alive.

As to 100 other mothers, of whose occupation nothing was known, they had an average of 3·6 children, of whom 188 (52·2 per cent.) had died.

The general lesson from this enquiry seems to be that infant life for years in this district has been very little cared for, that even amongst the stayers at home more than half the children born to their mothers die while the latter are still comparatively young.

Contribution to population of district.—Regarded as furnishing live hostages to society for their good behaviour, it may be considered that a thousand East Leeds mothers working in factories or workshops would provide the community with 1382 surviving children, whilst a thousand of those about whose occupations we have no record would provide 1721. The mothers engaged in the miscellaneous collection of trades and callings other than those in factories and workshops* would furnish for a thousand mothers 1940 surviving children, while a thousand of the class of mothers whose occupations was merely domestic

* This class includes the rag sorters, although in many cases this calling is exercised in buildings under supervision.

would furnish 2207. The whole information collected in the four years would indicate that, in this district, a thousand mothers would have 1975 surviving children. The wide differences between the 1382 in the industrial, and the 2207 in the housewives' class, are probably largely explained by the circumstances mentioned in a preceding paragraph (p. 47.).

Causes of high mortality in South-East Leeds.—The causes of high infant mortality in S.E. Leeds are akin to those which cause a high general mortality. Poverty, hunger, and dirt, overcrowding and alcoholism, ignorance and superstition, are amongst the potent causes of infantile mortality. Superstition, in that the woman, who has already lost half the children born to her, is competent to advise the young mother as to the care of her offspring. The ignorance in regard to the mode of feeding the baby is frightful. While there is probably no lack of affection on the part of the mother to the child, it is scarcely recognised by a very large number of people in this district how important it is that the mother herself should not only begin but continue to suckle wholly her own baby. She is often willing to do so for the first few weeks. When she begins to go about, especially if she goes to work, she finds or thinks she finds that she has not enough milk for the child's wants. The child cries and is fed with bread, with shop milk and with various patent foods, administered by the fatal bottle, often with a long tube. The surroundings, under which the most valuable of artificial foods, cows' milk, is kept, are altogether wrong. Milk, already subjected since it left the cow's udder to innumerable contaminations, from the dirty hands of the milker, from the germ laden air of the mistal, and the imperfectly sterilized cans of the farmer, is exposed to the warmth of the railway truck, the sun and dust at the station, to further contamination in transfer to the retailer's vessels and the householder's jugs. Often it is placed in the warm living room of the house, sometimes covered with a plate, sometimes put near the sink, or deposited with other goods in a cupboard close to the fireplace. The importance of coolness and cleanliness to the keeping of milk are altogether unrecognised.

It must not be supposed that in speaking of children not entirely fed by the mother we are not taking into account partially breast fed infants. Where the mother goes out to work, she is frequently able, at any rate for a few weeks, sometimes even longer, to continue to feed the baby partially herself. It is consequently during the middle part of the day that the artificial feeding takes place. It is often ill-advised, inducing gastric disturbance in the child, to relieve which the nurse resorts to the use of drugs—soothing syrups, infants' preservatives and other dangerous substances. Amongst the 222 children whose births were registered in the second quarter of 1905, and who were still alive at the date of enquiry, no fewer than 115 (or more than half) were confessedly taking some medicament unorderd by a medical man.

Work of the women inspectors.—Something has been done during these four years. Our women inspectors have been, as already said, visiting the district and enquiring into the causes of death of the babies. They have thus had opportunities of speaking to the mothers of the dead babies and also to their neighbours, and of distributing the small handbills prepared in connection with the feeding of infants.

It was forced upon us by our investigations that it was necessary to have a purer milk supply in the district—that it was also necessary to have some better mode of keeping the milk pure after it had entered the house. The method adopted in St. Helens, Liverpool, Bradford, Battersea and elsewhere of feeding babies upon humanised and sterilised milk,—each feed being contained in a separate bottle not to be opened until needed—commended itself strongly as desirable. It was hoped that something of the same sort might be done in Leeds.

It was, however, felt that an even better method of dealing with the young children would be to provide carefully chosen pure milk, gathered from specially inspected cows, under cleanly conditions, in sterilised bottles, and kept cool.

It was hoped that we should be able to explain to the mothers how to deal with such milk, how to dilute it, and what to add to it according to the requirements of the child, and how to keep it pure and cool until needed for the baby.

For about a year, through the generosity of a body of ladies and gentlemen in Leeds, an attempt was made to provide such milk, under such circumstances, for the babies in the South-East district. The experiment was, notwithstanding many drawbacks and many difficulties, on the whole successful. The milk so provided was not intended as a substitute for mother's milk. In many cases the mothers were even persuaded, instead of giving the milk to the child, to take it themselves, and thus humanise it for their infants. But for a large number of babies whose mothers would not, or could not, feed them in the ordinary way, an attempt was made to provide them, within easy call, with a purer milk than they could possibly obtain in the shops.

One of the first questions asked of the lady inspectors in regard to the milk supplied by this voluntary association was, What do you put in it to make it keep? Another question was, How has it been thickened? Both questions indicate the nature of the milk these people had been accustomed to procure.

For a full year the experiment was carried on. The reports given by the women inspectors from time to time were most favourable, and it was with great regret that they and a large number of mothers who had been using the milk, heard that the period of experiment had come to an end, and that the pure milk supply was to be discontinued.

We have sheafs of reports as to the progress of particular babies. Encouraging as this class of information was, it was felt by the ladies and gentleman who had furnished the funds for this experiment, that it was advisable to have statistical evidence as to the value of the milk. This has now been got out, and I direct the attention of the Committee to it with no little confidence. It is necessary however to begin with, to say a few words as to the origin of the experiment.

MILK EXPERIMENTS.

Proposed milk dépôt.—It will be remembered that the Sanitary Aid Society and the Ladies' Council of Education came before the Sanitary Committee on 12th February, 1903, and Mr. William Hall as spokesman requested the assistance of the Corporation in the establishment of a sterilized milk dépôt. Members of the joint committees had visited St. Helens and they were prepared to undertake the working of such a milk dépôt for a year if the Corporation would give them the necessary expenses for the plant.

The Sanitary Committee resolved to visit Liverpool to see what was being done there. They saw the process of modifying, bottling and sterilizing the milk and they visited both the original plant in Netherfield Road and the more extended plant in Earle Road.

The Committee were on the whole pleased with what they saw, and with such statistics as could be procured, and at their meetings on May 14th and June 10th, 1903, agreed to grant the Joint Committee of the two Associations £500 on condition that, should they discontinue operations, the plant should belong to the Corporation, and that two members of the Sanitary Committee along with the Medical Officer of Health should be added to the Joint Committee.

The Committee thus enlarged met several times. Members of it visited St. Helens and Bradford and several places within the city suggested for the establishment of a milk dépôt.

The Medical Officer of Health pressed upon this committee the importance of limiting the area within which the work should be done, suggesting that in the first place the registration sub-district of South-East Leeds, in which the heaviest infantile mortality had occurred during the ten previous years, should be chosen as the field of operations. He pointed out also that as it was a registration sub-district the actual

infantile mortality could be obtained for many years back, and that it would be easier to measure any improvement in mortality in such a district than were the work extended as in Liverpool, St. Helens, and Bradford indefinitely throughout the town.

There were many difficulties to face, one was the undesirability of bringing the milk to a polluted atmosphere and dealing with it there, and the Committee entered into negotiations with the Garforth Farm Committee of the County Councils and the Professor of Agriculture to the University in the hope that it might be possible to obtain a supply of milk from the Garforth farm and bottle it there. It was also pointed out that not only a supply of modified milk might be thus obtained but that possibly pure cooled milk might be treated as one of the features of the dépôt.

Members of the Joint Committee visited the Garforth farm and dairy, and sketch plans were drawn for the necessary enlargement of the laboratory there to deal with the sterilizing and modifying of the milk.

It was found, however, that the quantity of milk produced at the Manor farm, Garforth, was little more than was required in connection with the University course in dairy teaching, and the Garforth Farm Committee were not prepared to increase their herd on speculation especially as the amount of land at their command was limited.

The Committee also received an offer from a dairy at Aldborough, near Boroughbridge to supply either the milk in bulk or in bottles ready sterilized. The expense of carriage, however, made this impracticable.

Proposed Municipal dépôt.—Finally, after nearly two years, the Joint Committee came to the conclusion, taking into account the expense involved and the uncertainty of their

being able to raise the funds necessary for continuing the depôt, to withdraw their offer. Dr. Hawkyard was at that time Chairman of the Sanitary Committee and he suggested that, as £500 had been placed in the estimates for two successive years for milk purposes, the Sanitary Committee should themselves undertake the establishment of a depôt. It was suggested by the Medical Officer of Health that it would perhaps be better on the whole to try the experiment of a pure milk depôt rather than one for modified milk and the Committee resolved to visit Mr. Sorensen's farm at York; this they did on 25th May, 1905. On 8th June it was resolved in committee that the Corporation themselves establish a pure milk depôt, and the Medical Officer of Health was authorized to enter into negotiations with a farmer whom he had recommended for a supply of milk, and to purchase certain necessary plant.

At the Council meeting on July 5th, 1905, the purchase was opposed, and at the following Council meeting (4th August) it was ruled that such expenditure was *ultra vires*. The Lord Mayor, in giving his decision, expressed regret that the wishes of the Sanitary Committee could not be carried out, and offered the chairman of that committee a cheque for £200 for his purposes. Several other citizens offered smaller sums, and at a meeting in the Lord Mayor's rooms on October 10th, 1905 it was resolved to establish a depôt for the sale of pure milk in South-East Leeds, and a committee was appointed to carry out the resolution. It was estimated that the expenses would amount to at least £500 in the first year and nearly as much for the following year. The intention of this committee was to secure pure milk under cleanly conditions, bottle it in sterilized bottles and sell it cooled in South-East Leeds.

Work of New Voluntary Association.—For some months before this, however, the Medical Officer of Health had been looking about with the Dairy Inspector in search of a farm

where the cows were kept in some moderate degree of cleanliness. They selected one at Potternewton where the man seemed to take a pride in keeping good cattle and in keeping them reasonably clean. The cowshed was by no means a model one, but by some relaying of the floor, by a liberal use of limewash, by the removal of the manure heap, a considerable improvement was effected. The tenant of the farm accompanied the Sanitary Committee on their visit to Mr. Sorrensen's dairy at York.

It was at first hoped that permission would be obtained from the owner of the farm to allow of the erection of a small chalet for the treatment of the milk in a place convenient of access both to the cowshed and the house. A sketch plan was made, but unfortunately the owner's consent was refused.

The tenant had a considerable number of cattle and rented a portion of the Corporation ground at Roundhay, where he turned his cattle entirely out during the summer, reserving the greater number of the fields in the immediate neighbourhood of the farm for hay.

During the progress of negotiations samples of milk were taken in various parts of the town and were found to vary very considerably. The cows, however, at this farm, were at this time out at Roundhay, and a sample of milk from the dairy at the house which had been taken about a quarter to eleven on the 14th of July, when the sun was playing upon the room, contained nearly 5,000,000 colonies to the cubic centimetre. As the number of growths in McConkey broth was, however, small, the smallest in fact that had been found in any specimen taken up to that time, this was looked upon as probably exceptional. A fortnight later specimens were taken in the field and the samples gave 110,000 and 550,000 respectively, but again growths occurred in the McConkey broth, but only

in the one in ten dilution and not at all in the one in a hundred or one in a thousand, indicating that the colon bacilli, if present at all, were so to only a limited extent.

The sheds in which the cows were milked in the field were anything but satisfactory, and it was suggested that a few cows to begin with should be brought down to the farm. To anticipate matters the first specimens drawn from these were taken on August the 3rd in the afternoon in the presence of the Medical Officer of Health. They are the ones numbered 14, 15 and 16 in table VIIIc. of the Annual Report for 1905. No. 14 was the first milk drawn from the teat of the cow. It developed 7,500 colonies per cubic centimetre, but showed no growth at all in the ten per cent. dilution in McConkey broth. No. 15 was one of the bottles prepared for distribution after the milk had been filtered through sterilized cotton wool and passed over a cylindrical refrigerator or cooler. It contained 5,000 colonies and again gave no reaction with McConkey broth in the one in ten dilution.

Another specimen (No. 16) was taken from the pail at the farm without going over the cooler. It was cooled in the bottle the colonies were 3,333 and gave a negative reaction with the McConkey broth.

The specimens were taken at three o'clock in the afternoon, placed in ice, but not sent to the Medical School for examination till about ten the following morning. The lowest temperature at the Philosophical Hall had been 54° the night preceding the reading on the 3rd, and 53° in the night preceding that taken on the 4th of August. The 10 a.m. temperature at the same place had been 56° and 63° on the 3rd and 4th, and the four o'clock temperature 59° and 66°. The temperature at the time of sampling at Potternewton Park was 60° and the temperature of the uncooled milk 89°. Unfortunately, the temperature to which the milk was cooled was not recorded, but my recollection is that it was about 50°.

This was looked upon as a fairly satisfactory result. The number of ordinary bacteria as indicated by the growth of colonies on gelatine plates was unusually small and there was no evidence of the presence of colon bacilli.

Specimens taken from the shops as already stated in the Annual Report for 1905 (pp. 111-114) were much richer in their bacterial content.

MORTALITY OF DEPÔT BABIES.

Difficulty in getting at death rate.—The calculation of a death rate amongst children taking the milk provided by the Association is not such an easy matter as might at first sight appear. Statistics have been given in other towns in which the mortality amongst all children taking depôt milk has been compared with the total mortality under one year per thousand births registered, and the results have on the whole been very favourable to the depôt milk children. Naturally one asks

(1) Whether the children taking depôt milk were all infants under one?

(2) Whether it is quite fair to compare all children under one with the children taking depôt milk, remembering that in Leeds 17 per cent. of the mortality in infants under one occurs during the first week of life,—a large number of these deaths being due to conditions other than the want of breast milk?

(3) Whether such statistics take into account children who at one time took depôt milk, but were not taking it at the time of their death?

To avoid these possible fallacies is not very easy, but we have made something like an attempt at it. It is perhaps better, however, to consider the mortality that occurred in Leeds amongst children taking depôt milk during the experimental year in several different ways.

Deaths amongst all children under one getting depôt milk.—Limiting ourselves in the first place entirely to children under one year of age during the experimental, yet complete, year (from Oct. 1st, 1905, to Sept. 29th, 1906, both inclusive), we find that 294 individual children of less than one year of age took the milk for periods varying from one week upwards. Of these 294 children we have ascertained that 29 died before having completed the first year of life. So far as possible we have traced the depôt children even where they have left the district, but there is of course a possibility that amongst the few we have not been able to trace after leaving the district there may have been deaths within the first year of life. Taking, however, the figures for what they are worth, and remembering at the same time that our 294 includes a very small number of children living on the very edge of the district, the 29 deaths are equivalent upon the gross population of 294 depôt children to a death-rate of just under 99 per 1,000.

Corresponding rate amongst all under one in whole district.—In the whole South-east registration district, during the 52 weeks of the experimental year, 1,221 births were registered and 240 deaths amongst children under one; equivalent to just under 197 deaths per 1,000 born, or double the rate amongst the children who took the depôt milk.

It is convenient also to calculate these rates in another way. Instead of a population of 294 milk drinkers, we might deduct from this number half the number who died, and calculate the 29 deaths as a rate upon the remainder. This gives us 104 deaths per 1,000, and the corresponding figure for the whole district is 218, more than double the number that occurred amongst the depôt milk drinkers.

Rate amongst depôt children aged three to six months.—Remembering, however, what has been already said in number (2) in an earlier paragraph, it is advisable to look at the

figures in a different way. For this purpose we may divide the takers of milk according to their age, and it will be, perhaps, most convenient to illustrate the process of our calculation by dealing with the age period when the largest proportion of these children were taking the *depôt* milk. During the period between the end of the third and the end of the sixth month of age, or more strictly in regard to the milk drinkers, between the end of the 13th and the beginning of the 27th week of life, 193 children were taking *depôt* milk. Eleven who had been taking the milk previous to reaching the age of three months gave it up during this period, and 90 began during these three months of life. If we were to calculate the deaths occurring at this period of life amongst the 193, who at some time or other during this period of their age were taking the milk, the rate would be 31·1 per 1,000, that is to say 31·1 deaths during the age period of three to six months, amongst 1,000 children of that age drinking the milk; but this is evidently not a fair way of estimating the mortality, as it would exclude the deaths of those who were not actually drinking milk during the period in question, although they had been taking milk during the previous period. Of the 193 actually using the Association milk during this period of their life some took it for a longer, others for a shorter time the average number in the week being 128·8. Amongst the 193 who drank the milk at this age 6 deaths occurred, or at the rate per 1,000 of 46·6 upon the average number of 128·8, instead of 31·1 when the whole of the milk takers are counted.

Method of getting average of milk-takers.—The manner in which these figures were got was as follows:—A sheet ruled in square tenths of an inch was used; each square tenth was considered as a week of life, and the vertical lines were numbered from the left hand from 0 upwards. Each *depôt* baby was marked off upon this sheet commencing with the square corresponding to his age, and as many squares were

filled up to the right of this as corresponded with the period during which the child took the depôt milk. It was therefore quite easy to calculate in regard to any particular week of life how many children at that age were actually receiving the Association milk. In this way, 1,674 square tenths between the 13th and 27th vertical lines were obliterated, equivalent to an average for each week of 128·8, on which population of depôt babies the death rate amongst them for this particular age period should be calculated. It was in this way that the rate of 46·6 as the mortality during the period from the end of the 13th to the beginning of the 27th week was obtained.

Rate in district in infants from 3 to 6 months old.—

During the same age period of three months there occurred in the whole district of south-east Leeds, and during the experimental year, 56 deaths. The population apparently corresponding to the 193 depôt milk drinkers at this age period would be 1,221, the number of births in the year, less 93 who had died during the three earlier months of life, leaving 1,128. But from this 1,128, to obtain the number corresponding to the 129, the average of the depôt milk drinkers during the period, we should have to subtract further half the deaths which occurred during the age period from three to six months. This reduces the 1,221 children born to 1,100 living in the middle of this age period, the 1,100 corresponding for the whole district approximately to the 129 babies taking the milk, and of course including them. The 56 deaths at this period of life in the district, when calculated upon this population, correspond to a death-rate per 1,000 of 50·9, as against 46·6 amongst the milk drinkers. There is of course the possibility that some cases not actually inside the limits might have been included amongst the depôt babies, but as the number of such in the whole year and at all ages was altogether not large, the error in excluding them is negligible.

The death rate in the district during the experimental year of children under six and over three months of age, if we exclude the dépôt milk babies, was just under 51·5, and the rate amongst the milk babies 46·6, a difference of 4·9 per thousand, equivalent for that particular period to a saving of life of just under 10 per cent.

Importance of the 3 to 6 month period.—The period of life from three to six months has been chosen for several reasons, in the first place it was the life period when the largest number of babies were taking the Association milk, in the second place it excluded the period of greatest fatality amongst young children, and especially the fatality from causes other than injudicious feeding; thirdly, it is the period at which weaned babies suffer most, and it must be remembered that with a few trifling exceptions, mentioned on page 51, the dépôt babies at this life period were weaned babies and were also babies who ought not to have been weaned but ought to have been breast fed. The 10 per cent. of saving at this age period was therefore not upon an average group of babies at the same age, but upon a selected group of those artificially fed. Another reason for commencing with this period was that in addition to dealing with a larger number than in any similar period, it also gives us the fairest representation of the weaned baby. The weaned baby from three to six months old is usually fed largely on milk, above that age other food is used to a greater extent, and it was consequently chiefly the less robust of the weaned for whom the dépôt milk was procured.

Ratios in infants aged 6 to 9 months and 9 to 12 months.—During the age period from six to nine months 59 children who had been taking the milk during the preceding period left off doing so, but 55 others were placed upon our list; a net diminution of four, and reducing the 193 in the preceding age period to 189 between six and nine months. These 189

were further reduced by the method of tabulating described before to an average of 140·1. The deaths amongst these 189 during this period were five. Calculated upon the 189 these five deaths were equivalent to a rate of 26·5 per thousand, but calculated upon the average number taking the milk of 35·7. The rate in the whole district, after reducing the population in the manner before described, was 39·0, or withdrawing the 140 depôt children and their five deaths 39·5, a difference of 3·3 or, excluding our own cases, 3·8 per thousand, and a gain to the depôt babies of nearly 8·5, or 9·6 per cent.

In a similar way during the fourth age period of three months, in the first year of life the depôt mortality was 24·8 and the district mortality 49·7, or more than double the depôt mortality. When the depôt cases are subtracted the rate for the remainder is 53·1.

Combination of the three life periods.—Taking these three periods together, amongst those aged three months but less than twelve, the total mortality of babies in the district was 139·6 and amongst the depôt milk babies 107·1, a difference per thousand of 32·5 and an advantage to the depôt babies of nearly 23·3 per cent. This advantage is increased to 25·7 per cent. if we exclude the depôt babies from the district rate.

First thirteen weeks of life.—So far we have left out of account altogether the first period of three months, and for the reasons already given. It is well, however, to look into the matter. During the first week of life, when the mortality in infants is highest, there were only 14 babies who were taking depôt milk; none of these died. During the first four weeks there were 30 babies taking the milk, 16 having begun to do so after the first week. Amongst these 30, none died. Between the end of the fourth week and the end of the third month 85 new babies came upon the list and one of the 30 left. So that during that period 114 were drinking the Association milk,

and during the whole period of the three earlier months of life there was a gross baby population of 115. The average, however, obtained in the same way as before, during this period was 54. The deaths were three. Calculated upon the whole 115 depôt milk drinkers of the period this was a rate of 26.1 per thousand, but calculated upon the 54, the average weekly number taking the milk, the rate was 55.6.

During the same period the mortality in the district was 79.2, a difference in favour of the depôt babies of 23.6 per thousand, and an apparent advantage to the depôt in mortality of 29.8 per cent., or if we again throw out the depôt babies an advantage of 30.8 per cent. For obvious reasons these three months should not be taken into account in judging the mortality of those using, and those not using, the depôt milk. For, in the first place, as already shown, the mortality is very heavy in the earlier weeks of life from causes other than dietetic, overbalancing therefore the statistics, and unfairly, in favour of the depôt. In the second place, and in the other direction, the babies under three months who were fed on the depôt milk were with the exceptions already referred to, babies who ought not to have been weaned, but were. In the third place the numbers dealt with at the depôt are too few for any importance to be attached to figures deduced from them.

It has been already mentioned that in the first month no death occurred amongst the depôt babies, but then there were only 30 taking the milk at any portion of that period. From the end of the fourth week to the end of the third month 114 were taking the milk, and if we average them for that period according to the number of weeks they were taking it, we get a rate of 63 per thousand. This high rate is due partly to the inclusion of the babies who ought never to have been weaned, and partly to the accident that in so small a number three deaths apparently caused a very heavy mortality.

TABLE 5 f.

Mortality in South-East Leeds in children under one, October 1st, 1905, to September 29th, 1906, amongst depôt fed babies and others.

AGE PERIODS.	POPULATION			DEATH AND DEATH RATES.					
	Of South-East Leeds, based on 1,221 births during year.	Average number taking depôt milk.	Of district, less depôt babies.	Whole district.		Depôt babies.		District, less depôt babies.	
				Deaths.	Rate.	Deaths.	Rate.	Deaths.	Rate.
0 to 3 months...	1,174	54	1,120	93	79.2	3	55.6	90	80.4
3 to 6 months...	1,100	129	971	56	50.9	6	46.6	50	51.5
6 to 9 months...	1,051	140	911	41	39.0	5	35.7	36	39.5
9 to 12 months	1,006	121	885	50	49.7	3	24.8	47	53.1
0 to 12 months	1,101	111	990	240	218.0	17	153.3	223	225.3

Of these three deaths two ought perhaps not to have been included. One girl died in her ninth week having only taken depôt milk for a single week, and her case was almost hopeless at the time she began to do so. She was in fact a moribund baby. Another did not actually die during the period of milk taking. She was moreover a child who died in the thirteenth week of her age, and therefore on the very boundary of the period. She had taken the milk for less than four weeks, and had given it up for three days before death. It has, however, been thought better to include this case also rather than to make even perfectly legitimate exceptions.

General conclusions from foregoing figures.—The figures given for the South-East Registration district show that, while this is a part of the town in which the birth rate is comparatively high it is also one in which the wastage of life is extreme. They suggest, moreover, that the families where the mothers have no outdoor occupation are rather larger than those in which the women work, either in workshops and factories, or

in various miscellaneous occupations. Again, the housewife class have not only larger families, but a larger proportion of them grow up. (Table 5 e, p. 46.) Any inference from these figures, however, must be drawn with caution, for many of the factory hands are the younger women, whose families are yet small, and whose experience in rearing children is not great.

The figures, however, decidedly suggest that infants in this part of the town, brought up, at any rate for the first eight weeks of their lives, entirely at the breast, tend to survive longer than the combined class, consisting of those only partially breast fed and of those brought up by hand. (Table 5 d, p. 42.)

Further, the figures suggest that the death rate amongst weaned babies can be brought some 25 per cent. below that of the mixed group, consisting of the entirely breast fed and the not entirely breast fed, by the use of a purer milk. (Table 5 f, p. 64.)

The advantages of this purer milk supply were probably enhanced by the efforts of our women inspectors, who gave out the tickets entitling the mothers to purchase the *depôt* milk. These advantages would have been still more enhanced had these ladies been more successful in their endeavours to persuade the mothers to avoid the administration of quack medicines, to refrain from supplementing the recommended diet by all sorts of unsuitable food, and to carry out the instructions given them as to keeping the cooled milk in a cool place until needed for the child. In visiting some of the "*depôt* babies" suffering from diarrhoea last Autumn, with Miss Sharples, we found repeatedly that the cooled milk was kept standing in the warm kitchen, utterly regardless of the reiterated instructions given to the contrary.

It would have been an advantage to the experiment of the pure milk *depôt* had it been possible for the Association themselves to deliver the milk at the house, and in some cases to

insist on a proper cool keeping place. The retail shops from which the milk was distributed were not always cool, and where we provided ice it had often melted before the milk was fetched.

It would also be advisable, should the Corporation, when Mr. Burns' Bill becomes law, resolve to renew and extend the experiment, that we should supplement the pure cold milk with a supply of modified milk, pasteurized, for the use especially of those babies whose requirements necessitate the modification, or whose mothers are too ignorant or too careless to dilute and enrich the milk themselves in the manner directed. The disadvantages of the cooked milk as an article of nourishment would probably in many of these cases be more than compensated for by its greater safety. It might also be an economic gain to preserve the milk in excess of the needs of any one day by heating, rather than by icing it, though I still think that for continued use the pure living milk from the healthy cow, collected under cleanly conditions, properly cooled and kept cool till needed, is the more wholesome food for the ordinary weaned baby. It might even be necessary during very hot weather to pasteurize, or even sterilize, the greater part of the milk distributed in the district until our teaching of the methods of keeping and treating the pure milk itself has been more thoroughly appreciated.

Notwithstanding, however, all these disadvantages, the figures in table 5 f, read in conjunction with the text on pp. 58 to 66, leave little doubt that for children just weaned the provision of a pure milk supply by the Association was attended by a great saving of infant life in South-East Leeds. Reasons have been given earlier (p. 63) for not claiming the whole of the 32 per cent. by which the death rate in the *depôt* fed babies under one (153·3) fell short of the rate (225·3) in those not so fed.

There is also to be considered the not unnatural suggestion that the *depôt* fed babies were better cared for. In some cases no doubt it was so, but the circumstance that a large number of

the depôt children belonged to families whose gross incomes were under Mr. Rowntree's poverty line, and to whom the milk was issued at a reduced price, and the fact that practically nearly all the depôt babies were weaned babies, probably together more than compensate for any correction that might have to be made for this factor in survivorship, were the figures to make it available.

The greater attention from our lady inspectors to the depôt babies is a factor of survivorship, which also cannot at present be estimated, but it is a factor which should, it seems to me, be looked upon as a constant one in any municipal attempt at supplying a clean, pure and safe milk to the babies in those parts of the town where it is most urgently needed and least easily procured.

J. SPOTTISWOODE CAMERON.

41, PARK SQUARE,
LEEDS, *May 31st, 1907.*

INFANTILE MORTALITY.

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PART II.—SPECIAL DISEASES.

TUBERCULOSIS.

Lessened fatality.—The number of deaths from all forms of tuberculous disease registered in 1906 was 879, against 846 and 995 in the two preceding years. The deaths were equivalent to a rate in the thousand of the estimated population of 1·90, against rates of 1·86 and 2·22 in 1905 and 1904 respectively, and against a rate for the five earlier years of the present century of 2·09. In table 6b the rates from the diseases making up the group will be found not only for each year since 1890 but for groups of five years.

As just said, the rate for 1901-5 was 2·09. In the previous quinquennium, 1896-1900, it was 2·21. In the period 1891-1895 it was 2·37. In the year 1890 it had been 2·52.

TABLE 6.

Mortality from tuberculosis, 1906.

1906.	Tuberculosis, general and undefined.	Phthisis.	Hydro- cephalus.	Tuberculous meningitis.	Tuberculous peritonitis.	Tubes mesenterica.	Scrofula.	TOTAL.
I. Quarter	27	169	4	29	9	15	...	253
II. do. ...	27	140	4	20	11	5	1	208
III. do. ...	38	135	...	14	12	18	2	219
IV. do. ...	21	126	2	19	11	20	...	199
Year (52 weeks)...	113	570	10	82	43	58	3	879
Annual death- rate, 52 weeks of 1906 ...	0·24	1·23	0·02	0·18	0·09	0·13	0·01	1·90

TABLE 6 a.

Shewing deaths from each of certain groups of tuberculous diseases in the 52 or 53 week periods of the years 1890-1906, and the populations of those years estimated from the changing ratios of the 1881-91, and 1891-1901 intercensal periods.

YEAR.	Population by interpolation.	General or undefined.	Phthisis.	Hydrocephalus.	Tuberculous meningitis.	Tuberculous peritonitis.	Tabes mesenterica.	Scrofula.	TOTAL.
1890*	363,018	92	612	20	92	14	92	6	928
1891	369,034	84	657	18	72	25	102	9	967
1892	375,081	84	530	14	65	14	93	9	809
1893	381,157	99	648	17	67	32	86	12	961
1894	387,259	79	576	9	72	18	61	13	828
1895	393,387	114	611	16	77	15	90	2	925
1896*	399,535	66	613	15	74	22	73	10	873
1897	405,716	102	589	14	91	36	99	2	933
1898	411,895	96	576	17	73	26	98	3	889
1899	418,101	86	596	9	102	33	80	1	907
1900	424,322	101	605	12	94	48	87	1	948
1901	430,555	107	605	7	75	46	136	...	976
1902*	436,800	109	584	4	100	36	80	3	916
1903	443,052	100	562	8	106	37	82	1	896
1904	449,311	137	626	8	88	43	93	...	995
1905	455,573	106	558	10	85	39	48	...	846
1906	461,837	113	570	10	82	43	58	3	879

* 1890, 1896, and 1902 were 53 week years, the others 52.

TABLE 6 b.

Shewing deaths from different forms of tuberculosis since 1890 per 1,000 of the population.

YEAR.	General or undefined.	Phthisis.	Hydrocephalus.	Tuberculous meningitis.	Tuberculous peritonitis.	Tubes mesenterica.	Scrofula.	TOTAL.
1890*	'25	1'66	'05	'25	'04	'25	'02	2'52
1891	'23	1'79	'05	'20	'07	'28	'02	2'63
1892	'22	1'42	'04	'17	'04	'25	'02	2'16
1893	'26	1'71	'04	'18	'08	'23	'03	2'53
1894	'20	1'49	'02	'19	'05	'16	'03	2'15
1895	'29	1'56	'04	'20	'04	'23	'01	2'36
1891 } 1895 }	'24	1'59	'04	'19	'05	'23	'02	2'37
1896*	'16	1'51	'04	'18	'05	'18	'02	2'15
1897	'25	1'46	'03	'23	'09	'24	'00	2'31
1898	'23	1'40	'04	'18	'06	'24	'01	2'17
1899	'21	1'43	'02	'24	'08	'19	'00	2'18
1900	'24	1'43	'03	'22	'11	'21	'00	2'24
1896 } 1900 }	'22	1'45	'03	'21	'08	'21	'01	2'21
1901	'25	1'41	'02	'17	'11	'32	...	2'27
1902*	'25	1'31	'01	'23	'08	'18	'01	2'06
1903	'23	1'27	'02	'24	'08	'19	'00	2'03
1904	'31	1'40	'02	'20	'10	'21	...	2'22
1905	'23	1'23	'02	'19	'09	'11	...	1'86
1901 } 1905 }	'25	1'32	'02	'20	'09	'20	'00	2'09
1906	'24	1'23	'02	'18	'09	'13	'01	1'90

* 1890, 1896 and 1902 were 53 week years, the others 52. The death rates in each case are calculated on a year containing 52'17747 weeks. The rates for 1906 are calculated on a population of 463,495 in this table, as in the report generally, if calculated upon the interpolation population given in table 6a the rates from undefined tuberculosis and phthisis become 0'25 and 1'24 respectively, and the total death rate from the whole group 1'91 instead of 1'90.

TABLE 6 c.

Table showing deaths from phthisis at all and at certain ages, and death rates at all ages in the intercepts of the wards and townships of Leeds in the year 1906.

				AGE.			TOTAL.	Deaths per 1,000.
				-25.	25-50.	50+.		
HOLBECK	Holbeck	...	...	13	18	6	37	1'18
	West Hunslet	...	...	3	7	1	11	2'94
HUNSLET	West Hunslet	...	...	11	15	4	30	1'05
	East Hunslet	...	...	9	18	3	30	0'79
	South	...	...	2	11	2	15	1'57
SOUTH-EAST LEEDS	South	...	} 3'32 {	2	6	5	13	2'99
	Central	...		1	3	1	5	4'67
	East	...		12	23	15	50	1'70
OSMONDTHORPE	East	...	} 1'95 {	...	...	...	...	...
CHAPELTOWN... (part of)	North-East...	...		8	8	3	19	2'02
	North	} Chap. + All. } Pottern'tn		1	4	...	5	0'95
				3	7	1	11	0'49
NORTH LEEDS	North	...	} 2'43 {	8	15	6	29	1'64
	North-East...	...		10	17	12	39	1'75
	Central	...		7	23	16	46	2'46
	Central in West	...		...	...	...	...	...
WORTLEY	New Wortley	...	} 1'01 {	8	8	1	17	0'92
	(Armley	...		13	13	6	32	1'00
	(Wortley	...		2	7	1	10	1'06
	Farnley	...		...	1	...	1	0'21
BRAMLEY	Bramley	...	...	5	10	3	18	0'97
KIRKSTALL	Kirkstall	...	} 0'59 {	...	2	2	4	0'90
	Burley	...		4	9	7	20	0'68
	Headingley	...		1	3	...	4	0'29
CHAPELTOWN... (part of)	Headingley	...	} 0'66 {	...	1	1	2	1'48
	North-West	...		...	...	...	...	...
	Brunswick	...		1	...	...	1	0'32
WEST	Brunswick	...	...	3	12	8	23	1'16
	North-West	...	...	6	20	6	32	0'93
	Mill Hill	...	...	5	6	...	11	1'58
	West	...	...	8	23	18	49	2'08
CITY	...	...	...	146	290	128	564	1'22
	Outsiders	...	...	3	3	...	6	...

The rates are calculated on populations estimated by the Registrar General's method described at p. 88 of the Annual for 1904; probably those for West Hunslet in Holbeck and North-East in Chapeltown do not really exceed 1'81 and 1'51 respectively.

In table 6 c. for 1905, the figures for Chapel-Allerton and Potternewton were transferred. The rates for these districts thus corrected should have been 1'17 and 1'08 respectively.

Difficulties with some small groups.—It will be noticed on looking down either table 6 a or 6 b that the figures for some of the diseases named are very small, and this is especially so in the case of those in the last column dealing with scrofula. To judge from the table alone one would be inclined to say that scrofula was dying out. *Tabes mesenterica* is a disease which has also apparently diminished since these records began to be kept. The rate for the five years 1891-5 is given in table 6 b as 0·23. For the following five years it was 0·21, and for the five earlier years of this century 0·20, whilst in 1906 it was 0·13. The rate last named is the lowest rate but one in any of the seventeen years dealt with in the table. In regard to both these groups there is a possibility that the apparent decrease may be as much due to a greater reluctance on the part of medical men to use the terms scrofula and *tabes mesenterica* as to any decrease in the deaths due to these diseases.

LUNG DISEASES.

PHTHISIS.

Marked diminution of death rate.—The last remark in the preceding paragraph does not apply to the same extent to consumption, the most important member of the tuberculous group. In 1890, the death rate from phthisis was 1·66; in the five following years it was 1·59; in the years 1896-1900 it was 1·45; and in the five earlier years of this century, 1·32. In 1906 the rate was 1·23, the same as in 1905. Leeds has therefore participated in the general improvement of the death rate from this cause. Consumption is a disease which has been pretty easily recognised for many years. Some medical men would no doubt certify a case of mason's lung as due to phthisis pulmonalis, others would attribute it to silicosis. Similarly, miner's lung might appear either as phthisis or anthracosis. In both these cases since 1890, the death has been classified as due to phthisis, the tuberculous ending of such cases being almost universal. It is probable that in

some previous years, these cases may have gone down to lung diseases generally. In 1890, as already said, consumption was credited with causing a death rate of 1.66. In the following year we got out the rate from the same disease for the five preceding years, 1885-9, and found it to be one of 1.70. My recollection does not serve me as to what means were taken to correct any disparities of the kind just mentioned. It is possible, however, that some diseases which would now be classified as consumption had not been so entered during the five years, although at the time that the figures were got out from the ledgers for those years, this matter was present in my mind. I think we may, however, take it for granted that the rate 1.70 for the five years, 1885-9, is fairly comparable with the rate of 1.32 for the five years, 1901-5, if anything the advantage being given to the earlier period. The difference between these two rates is 0.38 per thousand which is 22 per cent. of the original rate of 1.70.

If instead of the five years 1901-5, we take the five years 1902-6, so that while still using a quinquennial rate we may include the figures for 1906, the rate becomes 1.29 instead of 1.32, the difference from the earlier period 0.41 per thousand, and the improvement one of 24 per cent.

Relation to deaths from all causes.—The* death rate from phthisis has not only diminished absolutely in regard to the population estimated by the Registrar-General, but it seems to have diminished more than the general mortality. In the 261 weeks ended December 28th, 1889, the whole deaths in the city were 36,462, those from phthisis 3,547, or 9.73 per cent. In the 261 weeks ended December 30th, 1905, the deaths in the city were 38,651, those from phthisis 2,935, or 7.59 per cent. If we again take the five years including 1906, the figures come out as 7.68 per cent. It is evident, therefore, whether the actually last five years or the five years given in the table be taken that, in comparing the phthisis death rate with that of the period 1885-9

there has been not only a diminution in the deaths registered from that disease as compared with the estimated population, but an actual diminution as compared with the total deaths registered from all causes.

The period 1885-9 was free from the influence of the influenza outbreak of 1890-2. As already said, the rate given for the earlier period probably rather under than over states the phthisis mortality. It is the more satisfactory, therefore, to find that along with the gradual and steady fall in the total death rate, there has been an actual fall in the proportion of the deaths this disease bears to the total mortality.

Diminution considerable even if population over-estimated.—Even supposing, therefore, that the Registrar-General has given us credit for a larger population than is actually living in Leeds at the present time, thereby increasing apparently the proportion by which the death rate both from all causes and from phthisis has decreased, there is yet an evident improvement in the deaths from consumption as compared with those from all causes. Whilst the latter have decreased in the sixteen or seventeen years, if the estimate of the population be correct, to the extent of 17·6 per cent. in the former case, to 20·7 per cent. in the latter, the ratio of phthisis deaths to all deaths has decreased in the same periods by 22·0 per cent. in the sixteen or 21·1 per cent. in the seventeen years.

Mortality in intercepts.—Table 6c gives the mortality from phthisis in intercepts, distinguishing the deaths according as they occurred in persons under 25, between 25 and 50, or over 50 years of age. The last column in the table gives the approximate mortality per thousand of the population. The populations on which these rates have been calculated were obtained by the method adopted by the Registrar General, and, five years distant from the most recent census, are probably in some cases very wide of the mark (see p. 174).

It will be noticed in the table that in the portion of the Holbeck registration area lying in the West Hunslet Ward the death rate from phthisis was 2·94, 11 deaths having occurred, during the year, in that area. In 1905 there had been 10 deaths with the rate of 2·69. In 1904 there were only 3 deaths with a rate of 0·81. In 1903 with 6 deaths the rate was 1·67. In the five years 1900-1904 the deaths were 16 and the rate 0·88, whilst in the corrected table, last re-printed on page 34 of the annual report for 1904, for the ten years 1890-99, the rate for the period 1895-99 was 0·85, and for the period 1890-94, 1·17, a lessening of the death rate as between the five earlier and five later years of the decade of 28 per cent. I am therefore inclined to think that the Registrar General's method of estimating the population is unfair to this district in which a large number of new houses have been occupied since the date of the census. I hope to refer to this matter in a later part of the supplement to the report (see p. 151).

The same remark in regard to population probably applies also to the part of the North East Ward lying in the Chapeltown registration area (see p. 169).

Voluntary notification.—A table is given in the text showing the number of deaths from phthisis and the number of cases reported since voluntary notification was introduced. The tendency, even when care is taken to prevent the recounting of the same case, seems on the whole to be for the notifications to become equal to or even slightly exceed the deaths recorded in the same period.

NON-TUBERCULOUS LUNG DISEASES.

Bronchitis, pneumonia and pleurisy.—The group of death causes generally headed "bronchitis, pneumonia and pleurisy," which apparently only includes three diseases, really contains many others. We have generally regarded it as containing

YEAR.	DEATHS FROM PHTHISIS.	CASES REPORTED.
1902	584	452
1903	562	586
1904	626	631
1905	558	555
1906	570	720

bronchitis, broncho-pneumonia, pneumonia, pleuro-pneumonia, and pleurisy. This group contributed deaths during 1906, at the rate of 2·46 per thousand per annum. It is, perhaps, unnecessary to remind the Committee, it is certainly quite unnecessary to remind you, sir, as a medical man, that even the separation of broncho-pneumonia from other pneumonias does not entirely get rid of the difficulty of separating the infectious fever called croupous pneumonia from other inflammatory conditions of the lungs. Croupous pneumonia in the adult generally takes the form of lobar pneumonia. It often takes the form of lobular pneumonia in children, although the true infective disease is probably in both cases due to the presence of the diplococcus pneumoniæ. It is exceedingly difficult, however, to distinguish in children catarrhal pneumonia, following bronchitis, from the lobular pneumonia due to the presence of the diplococcus. No attempt has, therefore, been made in our tables to group these diseases in more detail, although presently something may be said about grouping them from age considerations.

The death rate of 2·46 from the bronchitis-pneumonia group is an exceedingly favourable one. It is less by 0·30 per thousand than the rate of the previous year:—by 0·72 than that of the five years 1900-1904:—by 1·08 than the rate obtaining in the five

years 1895-99:—by 1·97 than the rate for 1890-94, containing the influenza years, and by 1·47 per 1,000 than the rate of the five years 1885-89 which preceded the first influenza outbreak.

Other lung diseases.—The small group of other lung diseases, from which influenza itself is also excepted, but which includes asthma, emphysema and empyæma, had a death rate of 0·16, the same as that in the previous year but 0·03 below the rate in the quinquennium 1900-1904, 0·06 below the rate of 1895-1899, 0·15 below the years 1890-94 (the influenza period), and 0·11 below the rate in the five years 1885-1889 which preceded that period.

TABLE 7.

Deaths from lung diseases, grouped according to nature of disease, and under age groups used for phthisis in certain tables.

1906.	—25.	25—50.	50 +	TOTALS.
Phthisis	149	293	128	570
Bronchitis	201	43	330	574
Broncho-pneumonia	240	7	24	271
Pneumonia and pleuro-pneumonia	102	96	76	274
Pleurisy	4	3	10	17
Other lung diseases	22	15	36	73
Totals	718	457	604	1,779

AGE OF DEATH FROM LUNG DISEASES.

A table will be found in the text dividing the deaths from all lung affections, including consumption, according as they occurred in persons under 25, between 25 and 50, or over 50 years of age. It will be noticed that of the 1,779 deaths 604, or nearly 34 per cent., occurred after the age of 50, whilst 718, or 40 per cent., were those of persons under the age of 25. From

phthisis, on the other hand, which is included in the figures given, the 570 deaths included in them 128 of persons over the age of 50 (or 22 per cent.), while 149 (or 26 per cent.) were of persons under the age of 25, leaving 293 (or more than 51 per cent.) between the ages of 25 and 50.

From bronchitis, pneumonia and pleurisy there were 1,136 deaths. Of these 440 (or nearly 39 per cent.) occurred in persons over the age of 50; 547 (or 48 per cent.) were in persons under 25. The remaining 149 (amounting only to 13 per cent.) were of persons between the ages of 25 and 50.

It is interesting to still further differentiate the age mortality from this group. From tables A, C, and 17 it will be seen that of the 547 deaths under 25 no fewer than 488 (or 89 per cent.) occurred in children under 5 years of age, and of these 488, 242 (or nearly half) in infants under one year of age. On the other hand, of the 440 deaths from this group amongst persons over 50, 239 occurred in those who had already reached the age of 65. The population of Leeds above the age of 65 is estimated at only 14,900. The 239 deaths are equivalent to a rate of 16 per thousand at this age period, the death rate at all ages from the group being, as already said, 2.46. The mortality under one was 20 (19.93) per thousand; the death rate, therefore, in persons over 65 and under one was respectively about seven and eight times as great as the average rate at all ages.

It must, of course, be remembered that the term bronchitis is made to cover a large number of senile deaths which might be ascribed to general natural decay. Amongst very young children the terms bronchitis and pneumonia often describe rather the modes of dying than the actual causes of death.

The whole tendency of the anatomical period of etiology was to confuse the cause of death with the morbid conditions found in the dead person. A more rational etiology attempts to

look further back to the origin of the conditions found. In young children the real cause of death is frequently ill-nourishment *in utero*, as is indicated in such death certificates as "premature birth," "debility," "marasmus," or, if the child lives long enough to develop a cough, "bronchitis." In the same way in elderly people conditions analogous to the death rattle, if they precede by some hours or days the fatal issue, are apt to be described in the same way.

SEVEN COMMONER ZYMOTIC DISEASES.

SMALLPOX.

Two cases only of smallpox were reported last year, both in the first quarter. Both patients recovered. These two cases occurred in Hunslet, and it is probable that the first of them, a woman, received the infection indirectly from Oldham, and the second from the first patient, his wife. Though several days had elapsed after the appearance of the eruption before the first case was reported, this man's was, so far as we know, the only other case that arose from it. Particulars about these two cases and the manner in which contacts were isolated were given in the Annual Report for 1905 at page 42. The cases are included in table 8 of that report, amongst cases heard of between April, 1905, and April, 1906. They are included also in table 8 a dealing with the fatality amongst the vaccinated and unvaccinated patients during the 235 weeks ended June 30th, 1906. They are also included in table 8 b, showing the age mortality in the vaccinated and unvaccinated during the outbreak, which we may now consider as practically having died out.

Tables 8, 8 a and 8 b are reprinted from the report of 1905, as they contain reference to these two cases, which belong to 1906.

Table 8.—Vaccination and Infectivity.

Showing cases of Small-pox reported from end of first quarter of 1905 to end of first quarter of 1906.

Date of eruption.	Date heard of	Zym. book No.	Ward.	Age.	Sex.	PRIMARY VACCINATION.			RE-VACCINATION (IF ANY) BEFORE CONTACT.	VACCINATION (IF ANY) AFTER CONTACT.	REMARKS AS TO SOURCES OF INFECTION, ETC.
						No. of marks.	Area, sq. ins.	Date.			
1905. April 5 6 12 29 May 2-3 9	1905. April 6 6 13 30 May 3 10	7104:6 7105:8 7110:6 7122:5 7124:7 7127:8	W.H.* W.H.* A. & W. S. A. & W. N.	33 17 33 32 28 41	f. m. f. m. f. m.	1 ... 2 2 2 3	$\frac{1}{2}$... $\frac{1}{4}$ $\frac{1}{8}$ $\frac{1}{4}$ $\frac{1}{8}$	infancy never infancy infancy infancy infancy	... ... ... ... ... ...	Mar. 26, succ. (E. Apl. 5) Mar. 26, succ. (E. Apl. 6)	} From 7055:7 From 7039:5 group. Note ? 7059:6. Note Ilkley Horsforth
Oct. 28-29 Nov. 13 13	Oct. 31 Nov. 13 13	7191:8 7301:4 7301:5	N. N.* N.*	29 29 30	m. m. f.	3 4 3	$\frac{3}{8}$ $\frac{3}{4}$ $1\frac{1}{2}$	infancy infancy infancy	... ... ...	... Oct. 31, not suc. Nov. 6, succ. (E. 13th) Oct. 31, not suc. Nov. 6, succ. (E. 13th)	Wakefield ... } From 7191:8
1906. Feb. 15-17 March 7	1906. Feb. 21 Mar. 8	7373:2 7385:5	E.H. E.H.*	48 58	f. m.	2 3	$\frac{1}{2}$ $\frac{1}{8}$	infancy infancy	... ...	... Feb. 22, succ. (E. Mar. 7)	? Oldham From 7373:2

* Developed symptoms when in quarantine.

References to notes on cases up to May 10th, 1905, will be found in the Report for the year 1904.

Reprinted from Annual Report, 1905.

TABLE 8 a.

Showing cases of Small-pox and deaths amongst vaccinated and unvaccinated persons† during the 235 weeks ended 30th June, 1906.

	All Ages.	0-1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70	70-75	75-80	80-85	85-90	90-95	100-105	65+	
Cases	695	8	3	4	3	9	19	28	40	68	55	83	138	81	104	79	65	55	27	23	18	452	4	5	1	...	10
* Deaths	35	3	1	...	1	1	3	...	...	6	...	1	5	3	3	4	4	2	22	...	1	...	...	...	1	...	
Cases	560	...	...	...	...	...	8	23	31	48	68	116	76	91	66	62	53	23	19	14	404	4	4	1	...	9	
Deaths	17	...	...	...	...	...	...	...	...	3	...	3	3	1	2	2	3	2	2	1	13	...	1	...	...	1	
Cases	112	8	3	4	3	9	19	17	16	33	7	12	19	4	9	10	1	...	3	3	3	33	...	...	...	...	
Deaths	14	3	1	...	1	1	3	...	...	...	...	3	3	...	3	...	...	1	1	...	5	...	...	...	...	...	
Cases	23	...	...	...	...	...	3	1	4	...	...	3	3	1	4	3	2	2	1	1	1	15	...	1	...	1	
Deaths	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	4	...	...	...	...	...	

* Including death Z. 6052:3 certified as Meningitis (v. pp. 44 and 68, Annual Report, 1903).

† To save a line in the table two cases are included amongst the vaccinated who had previously had small-pox, but neither of whom had been successfully vaccinated. These cases were 6276:4, act. 70, and 6282:0, act. 46. Both recovered, and are mentioned in the text and in table 8, report 1903.

Fifteen patients, entered as unvaccinated in table 8a in the 1903 report, have been transferred to the unknown or doubtful group. They had no marks. Reprinted from Annual Report, 1905.

TABLE 8 b.

AGES.	VACCINATED.			UNVACCINATED.		
	Cases.	Deaths.	Mortality per cent.	Cases.	Deaths.	Mortality per cent.
0—1	0	0	nil	8	3	37·5
1—5	0	0	nil	19	3	15·8
5—20	79	0	nil	40	0	nil
20—40	301	6	2·0	35	6	17·1
40+	180	11	6·1	10	2	20·0
All ages.	560	17	3·0	112	14	12·5

Reprinted from Annual Report, 1905.

MEASLES.

During 1906, 275 deaths were recorded from measles. A full investigation of the house conditions was made in 270. The full house examination was not made in five fatal cases occurring in public institutions. Of the 270 fully investigated 267 were already dead at the time of the examination; three were alive but died subsequently. Where more than one patient died in a house particulars about the house are counted separately for each fatal case; hence the term "death house." Of the 270, 34 died in through houses, or 12·6 per cent. The deaths in back-to-back houses were 236, or 87 per cent. Enquiry was also made into the house conditions attending 273 patients who recovered from this disease. Of these 68 recovered in through, 205 in back-to-back houses, that is to say, that 25 per cent., or nearly double the proportion in the death houses, belong to the through house group. There were also a small number of recoveries (3) investigated which occurred in the houses in which some of the 270 had died. These have also been separately tabulated in table 25.

TABLE 12.

Showing cases of Scarlet Fever heard of in Leeds during the seventeen years, 1890-1906, with the numbers admitted to the city fever hospital and the deaths in the city and in hospital; showing also for biennial periods the relations to the population of the deaths in the city, and the admissions to hospital.

	Cases. †		Deaths.		Per 1,000 living (Annual rates).	
	Heard of.	Admitted to hospital.	City.	Hospital.	Deaths in city.	Cases in hospital.
1890	337	133	103	23	} 0·23	0·39
1891	328	152	66	18		
1892	812	440	74	19	} 0·14	0·83
1893	316	188	31	6		
1894*	967	453	52	18	} 0·13	1·21
1895	874	493	52	29		
1896	1,216	441	72	20	} 0·21	1·26
1897	1,791	576	95	27		
1898	2,002	532	121	25	} 0·22	1·43
1899	1,620	649	64	21		
1900	1,745	722	52	21	} 0·16	2·07
1901	2,280	1,038	82	39		
1902	1,962	1,041	56	23	} 0·19	2·37
1903	2,465	1,063	109	36		
1904	1,295	850	59	34	} 0·11	1·74
1905	935	720	39	30		
1906	1,029	796	33	25		

* Notification became compulsory in May, 1894.

† "Cases heard of" does not include one fatal in the third quarter of 1894 (included, however, in the 52 deaths), of which we had no information till we received the Registrar's returns. Similarly one death in 1895, another in 1896, two in 1897, one in 1900, one in 1901, one in 1903, and two in 1906, are included in the death column, but not in that of cases heard of. Before May, 1894, there were, of course, many such.

Of the death houses, 196 out of the 270, or nearly 73 per cent., were houses in which the drains were all "cut off." Of the recovery houses, which were 273, 232, or nearly 85 per cent., belonged to the group in which the drains were "cut off."

Amongst the death houses, those with ordinary water closets as conveniences were 63 per cent., amongst the recovery houses 83 per cent., whilst the houses with trough water closets amounted to 36 per cent. amongst the death houses, and to only 12 per cent. amongst the recovery houses.

These figures correspond on the whole to the figures given in my report for 1896, p. 35, which dealt similarly with a period of six years. Measles continues to be proportionately more fatal amongst the dwellers in back-to-back houses and those to which trough closets are attached.

The subject of measles was dealt with in a special report in 1891, and was treated in special detail in the annual reports for 1894 (p. 57), 1896 (pp. 24-37), 1898 (pp. 38-43), and incidentally in all annual reports.

SCARLET FEVER.

Prevalence compared with 1905.—During the year, 1,029 cases of scarlet fever were notified, 201 in the first, 241 in the second, 312 in the third, and 275 in the fourth quarter. The first quarter had a slightly lower, the second and third quarters considerably higher, and the fourth quarter a slightly higher notification rate than the corresponding periods of 1905.

Ages of patients.—Of the 1,029 cases, 10 were those of children under one year of age, 260 of children between one and five years old, these numbers nearly corresponding with those of the previous year. From five to ten years of age the cases were 474, against 394 in 1905; from ten to fifteen the numbers were nearly equal in the two years, 148 last year, 143 the year before. From fifteen to twenty-five the notifications were 97 last year,

against 83 the previous one. The numbers were similarly nearly equal in both the 15 to 20 and 20 to 25 age periods. From twenty-five to thirty, however, we had 17 notifications last year, against 26 the year before, and in persons between thirty and thirty-five 12 against 13. After thirty-five the notifications were altogether 11 against 10 last year. (See table 18.)

Comparison with other previous years.—On referring to table 12, it will be seen that though the number of cases of scarlet fever notified to us last year was 94 in excess of the number in the corresponding period of 1905, it was with that exception a smaller number than was in any year recorded since 1895, the first complete year since notification was made compulsory. Though the number of cases was slightly higher than in the previous year, the number of deaths was smaller, 33 against 39.

Mortality.—The number of deaths was also the smallest recorded in any of the 17 years on which I have had to report, with the single exception of 1893, when the deaths were 31. It is scarcely necessary to add that the death rate (0·07) from scarlet fever in 1906 was actually the lowest in any of these years; the nearest to it was in the year 1893, already mentioned, when the rate was as low as 0·08.

Mortality in previous decades.—We reprint also table 12 a, brought up to date. This shows that in the ten years 1870-79 the death rate from scarlet fever in Leeds averaged 1·09, that in the ten years 1880-89 it fell 38 per cent. to 0·68. In the ten following years, 1890-99, the rate went down to 0·19, a further fall of 72 per cent. During the seven years since 1900, the average has been 0·14. The seven years do not form of course a full decade, but as far as they go, they show a further decrease in the death rate of scarlet fever of 26 per cent.

TABLE 12 a.

Showing deaths from Scarlet Fever in Leeds during three periods of ten years each and one period of seven years.

Periods.	Deaths.	Deaths per 1,000.*	Fall per cent. on rate of preceding period.
Ten years 1870-79 ...	3,090	1·09	...
Ten years 1880-89 ...	2,255	0·68	38
Ten years 1890-99 ...	725	0·19	72
Seven years 1900-06 ...	427	0·14	...

* The rate 1·09 is probably somewhat lower than the real rate for the period. It is calculated on an over-estimated population, and should probably be 1·11. As, however, the recent populations are mere estimates, the figure has been allowed to stand. The deaths are in each line those given by the Registrar General, which differ slightly in recent years from our own returns. The rates are recalculated from results of last census, as explained at pp. 69-71 of the Annual Report for 1902, where this matter was discussed.

DIPHTHERIA.

Prevalence.—During the year 660 cases were notified to us as diphtheria from the City,* and 11 as membranous croup; the corresponding numbers in 1905 were 363 and 8. Of the former, 173 cases, recorded as diphtheria, and 9, as membranous croup, were reported in children under five years of age, against 110 and 6 the previous year. Five of the 173 were infants under one year of age, and the 9 children reported as suffering from membranous croup were between one and five years old.

Age case mortality.—The fatal cases in children under one were 3, equivalent, on the 5 cases reported, to a case death rate of 60 per cent. The deaths between one and five were 40, equivalent to a case death rate, on the 177 cases reported between the ages of one and five, of 22·6 per cent.

* Not including two members of staff at Manston Hall, Seacroft.

In 1905 the cases from diphtheria and membranous croup under one year had been 8, and the deaths 1, equivalent to a case death rate of only 12·5 per cent. Between one and five the cases in 1905 were 108, and the deaths 29, a case death rate of 26·9 per cent.

The case death rates in the two years of all children under five were 23·6 in 1906, and 25·9 in 1905, so that although the deaths at this age period were more numerous, the case death rate was lower last year.

At the five to fifteen age period, embracing ten years, the cases reported were 1 of membranous croup and 358 of diphtheria, and the deaths from the combined group 35, a case death rate of 9·8 per cent. In 1905 the cases at this age reported from the two diseases were 177, and the deaths 13, a case death rate of only 7·3 per cent.

From ages fifteen to twenty-five, another ten years' period, the cases last year were 1 and 56, and the deaths 1, a case death rate of 1·8 per cent. The year before the cases had been 50 and the deaths nil.

Between the ages twenty-five and sixty-five, a forty years' age period, 75 cases were reported from diphtheria, and 5 deaths, a case death rate of 6·7 per cent. In 1905 the cases had been 29, with one death, a case death rate of 3·4 per cent. No case occurred in any person over sixty-five in either year.

Isolation of cases.—Of the 671 cases reported in the City,* 377, all called diphtheria, were sent into hospital, that is 56 per cent. Of the 371 cases in 1905, 152, all called diphtheria, were sent into hospital, or 41 per cent.

* Exclusive of two amongst the Manston staff.

Of the 182 cases in children under five in 1906, 97, all called diphtheria, were sent into hospital, that is 53 per cent. Of the 360 between the ages of five and fifteen, 227 were hospitalised, that is 63 per cent., whereas of the 129 over fifteen, 53 were isolated in hospital, that is 41 per cent.

During 1905 the percentage isolated under five was 44, from five to fifteen 45, and over fifteen 27 per cent. of those reported;—the average at all ages being 41 per cent. as against 56 last year.

Period of year.—The cases reported, taking diphtheria and membranous croup together, were 153 in the first quarter of 1906, against 126 in the corresponding quarter of 1905; 108 in the second quarter of 1906 as against 77 in 1905; 171 in the third quarter of 1906 as against 87 in 1905, and 239 in the fourth quarter of the later, as against 81 in the fourth quarter of the earlier year. The deaths in the corresponding quarters of 1906 were 34, 14, 10, and 26.

The case mortality was therefore in the first quarter of 1906, 22 per cent., in the second quarter 13 per cent., in the third 6 per cent., and in the fourth 11 per cent.

In the first quarter of the present year (1907) the cases reported from the city were 198 and the deaths 25—a case death rate just under 13 per cent.

Districts.—The mortality from these diseases in the several districts is given in table 21, but in this table membranous croup is for the first time given separately. In previous years, in this table, deaths from this cause were included in those from "croup." Taking diphtheria and membranous croup together the cases and deaths reported per 1,000 of the estimated population are given, for intercepts, in Table 13.

TABLE 13.

Table showing cases and deaths from diphtheria and membranous croup at all ages, and case and death rates per 1,000 living in the intercepts of the wards and townships of Leeds for the year 1906.

		Cases, 1906.	Average case rate per thousand.	Deaths, 1906.	Average death rate per thousand.
HOLBECK	Holbeck ...	54	1.73	3	0.96
	*West Hunslet	5	1.33	1	0.27
HUNSLET	West Hunslet	51	1.79	6	0.21
	East Hunslet	47	1.25	7	0.19
	South ...	10	1.05	...	...
SOUTH-EAST LEEDS	South ...	5	1.15	3	0.69
	Central ...	...	...	...	...
	East ...	44	1.50	4	0.14
OSMONDTHORPE ...	East ...	...	...	...	...
CHAPELTOWN (part of)	*North-east ...	16	1.70	...	...
	North { C. A.	5	0.95	...	...
	{ Pott.	23	1.03	4	0.18
NORTH LEEDS ...	North ...	18	1.02	2	0.11
	North-east ...	14	0.63	1	0.04
	Central ...	27	1.44	3	0.16
	Central in W.	2	9.61	...	...
WORTLEY	New Wortley	8	0.43	...	...
	Armley ...	30	0.94	7	0.22
	Wortley ...	5	0.53	1	0.11
	Farnley ...	6	1.26	...	...
BRAMLEY	Bramley ...	35	1.88	7	0.38
KIRKSTALL	Kirkstall ...	120	27.11	11	2.48
	Burley ...	56	1.89	12	0.41
	Headingley ...	10	0.73	2	0.15
CHAPELTOWN (part of)	Headingley ...	4	2.96	1	0.74
	North-west ...	...	...	...	...
	Brunswick ...	1	0.32	...	...
WEST	Brunswick ...	18	0.90	...	...
	North-west ...	21	0.61	5	0.15
	Mill Hill ...	16	2.29	3	0.43
	West ...	20	0.85	1	0.04
CITY	...	671	1.45	84	0.18

* The rates given for West Hunslet in Holbeck do not probably exceed .83 and .17, and for North-east in Chapeltown 1.27. See pp. 151 and 169.

Kirkstall.—On November 28th, 1906, I sent a special report to the Education Committee in regard to the prevalence of this disease in connection with the schools in Kirkstall. The "Kirkstall," however, dealt with in that report covers a slightly larger area than the one so named in table 13. As the other report was written from the point of view of the school prevalence of the disease, we added to the Kirkstall part of the Kirkstall registration district, a small portion of the township of Bramley (Wythers), on the south side of Kirkstall bridge. In dealing with the whole year this may be neglected, as it was only at the very beginning of the outbreak that this district was much affected.

The Kirkstall part of the Kirkstall registration area contains a population of about 4,400, the Burley portion upwards of 29,000, whilst the portion that we call Headingley is less than 14,000, the whole registration area having an estimated population, to the middle of 1906, of 47,911.

In a small district of 4,400, a few cases or deaths for a short time may make a high case rate or death rate. A case rate of 27·1 for a whole year, and a death rate of 2·5 from this one disease, diphtheria, is however, to say the least, unusual. It is interesting, therefore, to compare the condition of Kirkstall in 1906 in regard to diphtheria, with the condition of the same district in the three previous years.

During those years the cases reported in the Kirkstall portion of the township were 2 in 1903, 3 in 1904, and 2 again in 1905, an average case rate for the whole period of 0·54 per thousand of the estimated population, per annum. The death rate, during those three years, was nothing at all, as no death was certified either from diphtheria or membranous croup.

In the much larger portion of the district, called Burley, 42 cases of diphtheria and 1 of membranous croup were reported in 1903, 26 and 1 in 1904, and 31 of the former in

1905. The case rate in this part of the district in 1903 had been 1·6, in 1904 it was 1·0, while in 1905 it was 1·1—the average for the three years being 1·22, against 1·89 in 1906. The deaths in this district were 3 from diphtheria and 1 from membranous croup in 1903, 3 and 1 in 1904, and 3 from diphtheria in 1905—the average death rate being one of 0·13. The death rate last year was one of 0·41. In the part of Kirkstall, called Headingley, the cases reported had been 24 in 1903, 12 in 1904, 7 in 1905, and 10 in 1906 all from diphtheria. The average case rate for the three earlier years was 1·09, whilst the rate last year was 0·73—a considerable decrease on the rate of the preceding years, though higher than that of the last of the three. The certified deaths from this district, all from diphtheria, were 1 in each of the three years and 2 in 1906—an average death rate of under 0·08, in the three years, against a rate last year of 0·15.

Whilst the case rate, therefore, in 1906 in the Kirkstall part of the township of that name was nearly 19 times higher than that of the City (excluding outsiders), the Burley case rate was scarcely one and a quarter times the City rate, and the Headingley case rate was only half that of the City as a whole. The case rate in the whole registration district was 3·90 per thousand or nearly 3 times that of the City.

The diphtheria death rate in 1906 in the Kirkstall hamlet (2·48) is nearly 14 times that of the City; in Burley somewhat over twice that of the City; in Headingley below that of the City. The total deaths from diphtheria (25) in the whole Kirkstall registration district as will be seen from tables 20 and 21 caused a death rate of 0·52 per thousand, which is nearly 3 times the rate in the City as a whole.

It will be seen, therefore, that the condition of Kirkstall, and to a less extent that of Burley was unusual, both the case rate and the death rate from diphtheria having been in excess of that of the three previous years, bringing the rates of the

whole district notwithstanding the slightly lessened case rate in Headingley considerably above the rates for the three preceding years as well as above both the case rate and death rate for the whole City in the year we are considering.

During the first quarter of 1907, 14 cases of diphtheria or membranous croup were reported in Kirkstall. None of these occurred in the Wythers district. There were 2 deaths recorded, one in the fifth and the other in the tenth week of the quarter. Four cases occurred in Burley and four in Headingley but without a death.

During the second quarter of 1907 the cases were 11 in Kirkstall, 10 in Burley, 1 in Headingley, and the only death one in Burley.

Comparison with whole City.—Before considering the methods adopted of dealing with this outbreak, and which were reported to the Committee in full at frequent intervals during the spread of the disease, as well as in the special report to the Education Committee already referred to, it is worth while to compare the rates from diphtheria with the rate not only in the whole town but also in the years already mentioned in regard to deaths from all causes.

The rate in the City for the three years 1903, 1904, and 1905 from all causes was 16·36. In 1906 it was 15·63;—a diminution of 0·73 per thousand, notwithstanding the fact that diphtheria had increased by a rate of 0·06 per thousand. Without this slight increase from diphtheria, the gain would therefore have been 0·79 per thousand as compared with the rate from all causes in the three previous years.

In the Kirkstall part of the district of the same name the death rate from all causes for the three years was 14·62. In 1906 it was 15·59—an increase of 0·97 per thousand. The increased death rate from diphtheria however was 2·48. If this increase were subtracted from the death rate

of 15.59 it would leave a rate of only 13.11—1.51 below the rate for the three years. The increase from diphtheria in the year in this district therefore more than accounts for the slight increase in the death rate from all causes. Even when this rate is taken into account the death rate for the district is less than that of the City as a whole, though not so much less as it might have been expected to be had diphtheria been absent.

In Burley the three years death rate had been 12.00 and the diphtheria death rate 0.13. In 1906 notwithstanding the increase of the diphtheria death rate to 3 times the amount (0.41) the death rate of the district was only 10.88 or 1.12 below that of the three years.

In Headingley, it will be remembered that the case rate had not increased beyond that of the three preceding years, but that the deaths from diphtheria had been proportionately twice as numerous. That is to say that while there had been 1 death in each of the three years, in 1906 there were 2. The death rate from all causes in the three years was 10.09, and, in 1906, 8.89—a difference in favour of 1906 of 1.20, notwithstanding an increase in the diphtheria rate of 0.07. If this increase had not occurred the rate for Headingley might have been 8.82 instead of 8.89.

It is therefore only in the Kirkstall portion of the Kirkstall registration district that the rate from all causes has not gone down more than that of the whole town and the increase in that district is really very slight—less than half the excess of the diphtheria death rate over that of the three preceding years.

Measures taken.—With the exception of the special bacteriological examination of the throats of children on reassembling after the long vacation, the measures taken to limit the spread of the disease were practically those adopted in other parts of

TABLE 13a.

Shewing the death-rate from all causes and from diphtheria per 1,000 of the estimated population in the three years 1903-5 and in 1906 in the City of Leeds, in the Kirkstall registration district and in the hamlets of Kirkstall, Burley and Headingley composing it—shewing also in each case the increase or decrease in mortality in the latter as compared with the former period.

	1903-5.		1906.	
	All causes.	Diphtheria.	All causes.	Diphtheria.
City rate ...	16·36	0·12	15·63	0·18
<i>Difference</i> ...	—	—	- 0·73	+ 0·06
Kirkstall ...	14·62	—	15·59	2·48
<i>Difference</i> ...	—	—	+ 0·97	+ 2·48
Burley ...	12·00	0·13	10·88	0·41
<i>Difference</i> ...	—	—	- 1·12	+ 0·28
Headingley ...	10·09	0·08	8·89	0·15
<i>Difference</i> ...	—	—	- 1·20	+ 0·07
Kirkstall registration area ...	11·69	0·10	10·74	0·52
<i>Difference</i> ...	—	—	- 0·95	+ 0·42

For boundaries of hamlets see p. 159.

the town and on previous occasions. Wherever a case of diphtheria was reported the patient's brothers and sisters were kept away from school. Where we were able to remove the patient to hospital we did so, disinfected the whole house and the clothing of the family. The drains were flushed, the ashpits cleansed in every case, and the house examined and drains tested in the usual manner. In a large proportion of cases the patient himself was removed to hospital. Where this was not done, home isolation was attempted and disinfection done later.

Notwithstanding the prompt measures taken and the repeated visitation of the houses the disease did not disappear. It had at first shown itself disproportionately amongst the children attending the Church school, but as the disease spread from the neighbourhood of the Church many attending the Council school in Beecroft Street were affected.

The examination of the children on their return to school in September showed as had been suspected, and indeed suggested in the bills distributed throughout the district, that a certain proportion of children not supposed to be ill had the bacillus of diphtheria in their throats and were capable of infecting others.

Course of the outbreak and relation to schools.—In the whole period from December 29th, 1905, to November 24th, 1906, out of an average attendance of 557 at St. Stephen's school 83 were reported as suffering from diphtheria and 12 died, respectively 14·9 and 2·2 per cent. of those attending. Out of an average attendance of 337 at the Council school 20 cases were heard of, 2 fatal, corresponding to rates of 5·9 and 0·6 per cent. of those at school. In the first part of the outbreak from December 29th to April 28th the percentage of those on the register attacked at St. Stephen's school was 4·5, and of those who died 1·4, while 0·3 per cent. at the Council school were attacked, but without a death.

The disease then seemed to have disappeared, but a second outbreak occurred and continued from May 23rd to September 1st. Out of an average attendance of 547 at the Church school 5.9 per cent. were reported as suffering from diphtheria and 0.7 as having died. At the Council school with an attendance of 340 the cases heard of were 3.8 per cent. and the fatal cases 0.3.

From the 2nd of September to the 29th might be looked upon as a period of investigation. During this period 2.5 of those upon the register at the Church school were attacked without any fatal case, and 0.9 per cent. of those at the Council school with 1 fatal case (equivalent to 0.3 per cent. of the attendance). During the period from September 30th to November 24th, up to which day the figures sent to the School Committee were made out, 2.3 per cent. of those in attendance at the Church school were attacked with diphtheria and 0.9 at the Council school. In neither case was there any death. During the remaining five weeks of the year 8 cases were heard of, 6 of them attending the Church school, none were at the Council school. The position therefore for the whole period was that with an average attendance of 557 children at the Church school 16.0 per cent. (including these 6) were attacked with diphtheria and 2.2 per cent. died, the case mortality being 13 per cent. Of those attacked at the Council school, with an attendance of 337, 20 cases were heard of, a percentage of 5.9; 2 cases were fatal, or 0.6 per cent. of the attenders, a case mortality of 10 per cent.

The examination of children's throats.—Although we have since 1895 afforded facilities to medical men for the bacteriological examination of the throats of their patients, we have not on any previous occasion, except in regard to isolated families, attempted to press this form of examination upon all contacts, nor to swab the throats of a whole school. The Education Department prepared us a list of 881 children attending the two

schools. With the assistance of four local practitioners, Dr. Charles Porter, the assistant medical officer of health, obtained swabs, two in each case, one from the throat, one from the nose, in 769 of those who came up for examination. In 751 or 97·7 per cent. the examination by the professor of pathology revealed no diphtheria bacillus in either throat or nose. In 18 or 2·3 per cent. the bacilli were present. One hundred and six children did not attend any of the musters, and in 6 cases where no growth was found at the first examination the children were not subsequently examined. It may be taken therefore that nearly $2\frac{1}{2}$ per cent. of the children who would have attended these two schools on their re-opening after the holidays, had diphtheria bacilli in the nose or throat, and were capable of infecting those with whom they might come in contact. These it will be remembered were all children who were supposed to be well. An attempt was made to isolate these 18 children at home, but it was found exceedingly difficult to persuade their parents to keep them away from the rest of the family, or even to restrict their rambles to the family circle. I therefore asked the Chairman to consent to open a ward in the new and yet unoccupied Killingbeck smallpox hospital for the isolation of apparently healthy persons whose throats contained the diphtheria bacillus. Fifteen out of the 19 (for one of the teachers also had a positive result) were sent to this ward along with two members of their families, not supposed to have suffered from an illness, and not known to have the bacillus in their throats, but coming from houses in which other members of the family were infected. Of these 17, 11 (including the two last referred to) were regarded by Mr. Pearson as having recently suffered from an acute attack of illness, probably of diphtheria.

This fully bore out the suggestion that has been made in all handbills sent out since 1902 in regard to diphtheria. In these handbills it has been attempted to press upon the

public (1) that the germ of diphtheria and membranous croup may exist in the throat of a person apparently quite well; (2) that such a person may carry about with him infective particles and convey them to an apparently healthy child without knowing that he has done so. It is the difficulty of getting persons, who have had slight attacks of this disease and persons who have been in contact with them and become carriers of the infection, to take certain necessary precautions, that makes it so difficult, when the meteorological conditions favouring the spread of the disease are present, to arrest its course. The infection of disease is carried always directly or indirectly from one person to another. It does not arise from drains, nor is it carried to any great distance in the air. Diphtheria is a contact disease. A solid particle must in every instance be carried from the infective person directly or indirectly to the patient. The infective person may, as already said, be apparently well, as were those 19 persons examined at the Kirkstall schools. It is probable, though apparently well, that the majority of those persons had had a slight unrecognized attack of this disease.

It is evidently in schools chiefly that the subjects of these unrecognized cases spread the complaint. Their classmates are at the age most prone to take disease; they are congregated, and often crowded, together. These conclusions, although strengthened by the outbreak in Kirkstall, are those which were arrived at in previous outbreaks which have occurred in Leeds. The advantage of these figures is that they to some extent prove the position which has been taken for so many years—a position adopted by most medical officers who have studied school outbreaks.

CONTINUED FEVERS.

The number of cases of continued fever reported in the fifty-two weeks of 1906 was 300. Of these 299 were considered cases of typhoid. One case, in a person over fifteen,

in Hunslet, was certified as "continued fever." Before making up the books, the medical man who had been in attendance was asked if he had made any more definite diagnosis. He replied that the patient's temperature continued up between two and three weeks, but he did not think that the case was one of typhoid. The other 299 were regarded as typhoid or enteric fever, though some of them may have been cases of the disease now distinguished as paratyphoid.

Though the number of cases reported was rather in excess of the number recorded last year (including one regarded as typhus, 290) the number taken into hospital was fewer than those hospitalled in 1905, the numbers being last year 178, and in 1905, 182, exclusive of four nurses in the last, and three in the preceding year, admitted from hospital. Not only were the cases taken into hospital fewer, but the deaths recorded in the City (including any in hospital) were also fewer, the deaths from all forms of continued fever having been 49 in 1906, and 55 (including one "typhus" and two "other or doubtful") in 1905. The death rate of 0·11 per thousand is, with the exception of the rate for 1904, which was the same, the lowest I have ever had to record.

The districts in which these cases occurred are given in table B and the deaths in table 20 and tables A and C. In table A the deaths are recorded according to the place in which they occurred, institutions being counted as districts. In the two other mortality tables the Leeds deaths have been allocated to their districts and outsiders given separately. In table 18 the ages of the cases notified will be found.

DIARRHŒA.

Four hundred and fifty deaths were recorded as due to diarrhœa—equivalent to a death rate of 0·97 per 1,000 per annum. In 1890 the rate was 0·98, in 1891, 0·86; in 1894 it fell to 0·45. It was 0·69 in 1896, 1·58 and 1·24 the two following years. In 1899 it fell to 0·96, it was 1·09 and 1·47

TABLE 17.

Causes of, and ages at, death during year (52 weeks) 1906.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN SEVERAL QUARTERLY PERIODS (AT ALL AGES).				DEATH PER 1,000 FOR YEAR.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	I.	II.	III.	IV.	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...
Measles	275	60	200	14	...	1	...	146	102	25	2	0'60
Scarlet fever	33	1	22	10	...	...	...	4	5	13	11	0'07
Whooping-cough	146	66	75	5	...	...	...	42	62	21	21	0'32
Diphtheria and membranous croup	84	3	40	35	1	5	...	34	14	10	26	0'18
Croup	5	1	3	1	...	...	...	1	2	...	2	0'01
Fever { Typhus	...	...	...	...	...	...	...	...	...	...	...	...
Enteric	49	...	3	5	12	29	...	12	5	12	20	0'11
Other continued	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic influenza	37	...	...	1	3	19	14	12	13	1	11	0'08
Cholera	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea	450	344	76	3	...	15	12	10	15	384	41	0'97
Enteritis	104	79	18	2	...	2	3	18	15	47	24	0'23
Puerperal fever	14	...	...	...	3	11	...	6	3	2	3	0'03
Erysipelas	15	5	...	...	...	6	4	3	4	3	5	0'03
Other septic diseases	5	1	...	...	...	4	...	...	2	...	3	0'01
Phthisis	570	2	15	23	109	399	22	169	140	135	126	1'23
Other tubercular diseases	309	85	107	43	22	46	6	84	68	84	73	0'67
Cancer, malignant disease	432	1	1	...	6	330	94	99	114	117	102	0'94
Bronchitis	574	119	70	5	7	183	190	206	162	64	142	1'24
Broncho-pneumonia	271	94	137	7	2	20	11	85	88	32	66	0'59
Pneumonia and pleuro-pneu.	274	29	37	18	18	140	32	87	74	49	64	0'59
Pleurisy	17	...	2	1	1	7	6	5	3	3	6	0'04
Other diseases of respiratory organs	73	4	10	5	3	30	21	17	23	11	22	0'16
Alcoholism	66	1	...	...	...	59	6	16	18	19	13	0'14
Cirrhosis of liver	...	...	...	...	...	...	...	...	...	...	...	...
Venereal diseases	20	18	...	...	...	2	...	6	4	6	4	0'04
Premature birth	239	239	...	...	...	...	...	69	58	56	56	0'52
Diseases and accidents of parturition	60	19	...	...	7	34	...	20	13	13	14	0'13
Heart diseases	630	4	1	22	23	355	225	181	170	125	154	1'36
Accidents	231	26	30	23	17	89	46	52	67	43	69	0'50
Suicides	50	...	...	...	4	38	8	11	18	10	11	0'11
All other causes	2372	636	150	61	65	694	766	659	541	552	620	5'14
All causes	7405	1837	997	284	303	2518	1466	2054	1803	1837	1711	16'03

The deaths of outsiders in the workhouses within the city, which are excluded from the Registrar-General's figures, are included in this table. The diseases from which they died will be found enumerated in table C. As to diarrhoea and enteritis see note p. 103.

the two years after. In 1902 and 1903 it fell to 0·61 and 0·62. In 1904 it was 1·01, and in 1905, 0·80. So that the rate, 0·97, though not an unfavourable one cannot be looked upon as anything unusual.

There is a great difficulty in comparing different years on account of the fact that what is called diarrhœa at one time is not called diarrhœa at another. To the 450 deaths from diarrhœa probably most of the 104 from enteritis should be added.

Of the 450 deaths under the heading of diarrhœa, 344 occurred in children under one, and of the 104 deaths from "enteritis" 79 were under that age. These deaths occurred as follows:—In the first quarter of the year 10 and 18, in the second quarter 15 and 15, in the third quarter 384 and 47, in the fourth quarter 41 and 24. The death rate for the whole year from enteritis was 0·23 (see note to table 17).

ILLNESSES NOTIFIED.

Table 18 gives the ages of the patients in cases of infectious disease notified to us under the Act of 1889, first at all ages, then under one year of age, then at each year of age up to five, then in periods of five years up to ninety-five. The dark vertical lines in this table separate the age groups used in table 17 and in table A, part 2, as well as in tables 3 and 4. Table 18 also separates the cases according to their various age groups and as they occurred in the first, second, third, or fourth period of thirteen weeks.

SICKNESS AND MORTALITY TABLES.

In table 17 certain selected causes of death are dealt with, first in the larger age groups, and also according to the quarters of the year in which the death occurred. In table A, part 1, nearly the same groups are dealt with in districts, and are distinguished as they occurred in children under five or in persons over that age. In this table public institutions are separated,

Similar tables are given for the several quarters. The cases of infectious disease notified are given in table B, distributed in three age groups—under five—five to fifteen, and fifteen and upwards—according to the registration districts in which the cases occurred. In part 2 of the same table they are arranged according to wards. In both parts of the table corresponding figures are given for cases removed to hospital. Other parts of table B deal with the several quarters in a somewhat similar manner. Table C gives the deaths registered in each district, classified somewhat more in detail as to causes, and distinguished as they occurred in persons under or over the age of five. Deaths of outsiders occurring within the City are given in separate columns. In this table the Institution deaths have been distributed to the localities to which the patients belonged. The deaths of Leeds persons occurring outside the City so far as they came to our knowledge are given in table A, part 1, according to the different diseases, and in table D, part 2, without reference to special causes but for every year since 1890.

NOTE TO TABLE 17.

Table 17 contains the deaths at all ages and under certain age groups required in the first eight columns of the Local Government table IV. The information as to localities asked for in that table will be found in table A, where deaths in public institutions have been separated, and in table C, where deaths of Leeds persons in those institutions have been referred to the districts to which they belonged. In the notes to the Local Government table for 1906, the request is made that in regard to the deaths of children under one, the heading diarrhoea should be made to include the whole group of diarrhoeal diseases given in their table V., and printed in this report at p. 16 and numbered table 5a. As to do so would interfere with the comparison of table 17 with the same table in previous years, this has not been done. To make table 17 correspond in this respect with table 5a, and thus satisfy the requirements of the note (c) on the Local Government Board's table, it would be necessary to add in column 3 under the headings "diarrhoea" and "enteritis" 11 deaths from gastritis and 6 from gastric catarrh. These deaths are included in our table 5a in the third and fourth lines of the second disease group. The other deaths in that group in the table on p. 16 are included in table 17, column 3, under diarrhoea or enteritis, making, with the addition of the 17 deaths, the total deaths amongst infants under one from the diarrhoeal group in both tables 440. These 17 deaths are included under "other causes" in table 17 as printed, and under "diseases of the stomach" in table C.

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PART III.—HEALTH OF DISTRICTS.

Estimated populations.—Before saying anything about the several divisions of the town, it may be worth while to point out how the death rates for the whole City, used throughout this report, have been obtained. The Registrar General estimated the population in Leeds to the middle of 1906 as 463,495. This population has been adopted principally on the ground that it is arrived at in the same way in which the populations for other towns have been obtained. The method by which the Registrar General arrived at the figure given above has been explained in previous reports—especially in the report for 1904, page 87. It may, however, be convenient to state the matter again briefly.

The two common methods of estimating population may be distinguished as that by arithmetical progression, and that by geometrical progression. In obtaining the population by arithmetical progression, the difference between the populations enumerated at the two most recent censuses is divided by ten, and one of these tenth parts added for each year since the census to the population at the last census, along with a proportionate part for any fraction of the year. By geometrical progression, instead of the populations at the two census periods, the common logarithms of those populations are taken, and the difference between these common logarithms divided by ten. This tenth part of this difference is added to the logarithm of the population at the recent census for each year since that date, and a proportionate part for any fraction of the year. The result is the logarithm of the required population by geometrical progression.

The Registrar General assumes that for the whole country the population to the middle of 1906, obtained in the last-named way, would be the probable population of England and Wales, which he therefore estimated at 34,547,016, whereas estimated by arithmetical progression it would only have been

34,378,635. The populations of all districts composing the country he, therefore, estimates first by the last-named method, and then he multiplies each result by the number of times that the population of the whole country, estimated in the same way, is contained in that arrived at by geometrical progression. For 1906 this is equivalent to adding nearly 0·5 per cent. to the population obtained for any district by the method of arithmetical progression.

Advantages of Registrar General's method.—The method is charmingly simple, and has an advantage over others that no further correction requires to be made. If the populations of the several districts in any large area are obtained, each of them by geometrical progression at its own rate of increase, and the results added together, they do not generally total up to the population obtained for the whole area when it is dealt with in the same way, and corrections have to be made in consequence—the populations have to be slightly cooked. If every district be dealt with by arithmetical progression, the results added together will give the same result as when the whole district is increased by arithmetical progression. That result will, however, differ from the population of the same district by geometrical progression, but by taking all the districts by arithmetical progression and then multiplying each of them by the factor described, the several results will of course add up to the population of the whole district obtained in the same way.

Disadvantages of the method.—Unfortunately, in Leeds this method does not give accurate results for small districts. Where building has gone on rapidly since the time of the census, the population obtained by arithmetical progression may be very much more than 0·5 per cent. in error; and where a district has, since the time of the last census, decreased in population, although there had been a slight increase previous to the census, not only is the error owing to the decrease uncorrected, but an addition is made to the error of more than 0·5 per cent.

Mention has been made, earlier in the supplementary report, of probable errors of this kind in the part of the North-East ward lying in the township of Potternewton, and in the portion of the West Hunslet ward lying in the township of Beeston. In both these districts the population obtained by the method described is probably much less than the actual population of the district.

Certain new tables.—In the following tables—21a to 21k—the population of each registration district for and since 1901 has been worked out by the Registrar General's method. The result, though probably incorrect, is as just said, conveniently obtained, and the error is not so great as in some of the smaller districts, which we are in the habit of calling intercepts.

For the year 1890, and the years between 1890 and 1901, the results have been obtained by a method previously described, which is briefly as follows:—The population of the whole City was obtained by interpolation by the method of differences from the results of the three censuses of 1881, 1891, and 1901. This method makes allowance for the lessened rate of increase in the second of the two decades as compared with the first. The method itself is fully described in the report for 1901, page 55, and is probably the best by far for dealing with populations between known limits, though as pointed out elsewhere, it sometimes leads to extravagant results when used as a means of calculating the rates of small districts outside those limits. (See Annual 1904, p. 88.)

In table D, part 2, the populations thus obtained are given for the whole City for the years 1890-1900. The populations for the remaining six years are by the Registrar General's method. In table 6a the populations are given calculated by the interpolation method right up to 1906. It will be noticed that the population for the year we are considering is 461,837 (table 6a) by the method of interpolation, and 463,495 by that of the Registrar General (table D 2). It is upon the latter, however, that all our rates have been calculated.

Assuming the correctness of the interpolation method for obtaining the population for the whole City, between 1890 and 1901 the rates for the several districts were obtained as follows:—The population on the data of the 1881, 1891, and 1901 censuses was obtained by the method of interpolation for each intercept of wards and districts. Similarly, the population by geometrical progression for each intercept, at the rate obtaining between 1891 and 1901, was also obtained. The two numbers were averaged, and the results of these averages added. The difference between the sum of these means and the population of the whole City obtained by the method of interpolation was then distributed amongst the intercepts, proportionately to the algebraic differences of these provisional populations from the population enumerated at the nearer of the two censuses. The population both of the registration district and the municipal ward was then obtained by adding together the population of the intercepts contained in each such district. The method, on the whole, may be regarded as fairly correct when dealing, as already said, with the population of districts within certain limits; and when these intercepts come to be added for the larger districts, those larger populations may probably be also regarded as nearly correct, allowance having been made (1) for the change in the rate of progress, (2) for the greater importance of the changes taking place in the second period, and (3) for the toning down of extreme changes by taking into account the actual differences from the census populations. It should, perhaps, be mentioned that for the year 1896 the toning down took into account the differences from both censuses.

The populations given in table 19 for 1906 for the municipal wards are those obtained entirely by the Registrar General's method, with all its errors. The population on which we have calculated the rates in tables A, C, E, 21 and 22, have been obtained in the same manner by the Registrar General's method.

(I) MUNICIPAL WARDS.

Exclusion or non-exclusion of outsiders.—It will be noticed that, taking the deaths in the whole town for the year (including those of outsiders dying within our borders), the rate on the Registrar General's population was 16·03; higher by 0·40 than when the outsiders not belonging to Leeds are left out, but only fractionally higher (0·12) than when we restore the Leeds inmates of asylums and similar institutions dying outside.

For the whole City, it may be considered that the correction is not worth making. To disregard the correction, however, for small districts, would be very unfair. The figures given in table 19 are obtained by adding the deaths in public institutions within the City to those in the wards to which the patients belonged.

Seven wards with rates below that of City.—It will be seen that taking 15·63, the rate for the City when outsiders are left out, seven of the wards had a rate below that of the City, whilst nine had rates above the City rate. The ward with the lowest mortality was Headingley, where the rate was 4·82 below that of the City, less outsiders. Next came Bramley, with a rate of 3·67 below the City rate. Then followed the North ward, with a death-rate of 12·36 per 1,000 of the population, or 3·27 below that of the City. After the North ward came Armley and Wortley, with a rate of 12·76, or 2·87 below that of the City. After this came the North-West ward, followed by Brunswick, with rates respectively 1·59 and 1·41 below the City rate. Then came the Central ward, with a rate of 15·52—very nearly the same as that of the City, less outsiders, although a decimal point below. These complete the seven which had rates under that of the City, less outsiders.

Nine wards with higher death rate.—The West Hunslet, East Hunslet, and Mill Hill wards had rates only very slightly above that of the City when outsiders are excluded. The differences were, respectively, 0·15, 0·22, and 0·29 in excess of the City rate—differences which are not beyond the slight

TABLE 19.

Table shewing deaths in the four quarters of 1906, for each Municipal Ward, with the estimated population and the death-rate of the ward for the Year.

MUNICIPAL WARDS.	Population, estimated to middle of 1906.	First quarter, 1906.	Second quarter, 1906.	Third quarter, 1906.	Fourth quarter, 1906.	Fifty- two weeks.	Death- rate.
Central	20,037	90	78	72	70	310	15.52
North	45,370	156	131	154	118	559	12.36
North-East	31,808	172	136	164	131	603	19.02
East	29,860	190	155	208	154	707	23.76
South	13,956	90	75	104	76	345	24.80
East Hunslet ...	37,868	177	129	144	148	598	15.85
West Hunslet ...	32,299	139	115	133	121	508	15.78
Holbeck	31,334	115	137	135	113	500	16.01
Mill Hill	6,996	36	27	21	27	111	15.92
West	23,635	137	133	108	113	491	20.85
North-West	34,443	144	108	116	114	482	14.04
Brunswick	23,075	94	77	85	71	327	14.22
New Wortley ...	18,469	91	103	75	72	341	18.53
Armley & Wortley	41,594	163	124	111	131	529	12.76
Bramley	23,483	56	81	59	84	280	11.96
Headingley	49,268	154	153	89	135	531	10.81
Outsiders	...	50	41	59	33	183	..
Totals	463,495	2,054	1,803	1,837	1,711	7,405	16.03

The rates are calculated on populations estimated by the Registrar General's method, described at p. 88 of the Annual for 1904.

errors inevitable in all statistics based on populations estimated on a dead reckoning of $5\frac{1}{4}$ years. Eleventh in order came Holbeck, with a rate only 0·38 above that of the City, without the outsiders, though actually below the rate of the City when outsiders are included. Then came a considerable gap, and New Wortley followed with a death-rate of 18·53, or 2·90 above the City rate. Close upon New Wortley came the North-East ward, with a rate of 19·02—3·39 above the rate of the City. The West ward followed, with a rate of 20·85—5·22 in excess of the City rate. Trailing behind were the East and South wards, with rates of 23·76 and 24·80—8·13 and 9·17 respectively above the rate of the town.

The excess in the rate of the last-named ward over that of the City is as great as the whole death-rate in the Headingley part of Kirkstall or the Brunswick part of Chapeltown, given in table 22.

Probable errors.—As already said there are possible errors in regard to some of these wards, and such errors probably tend to increase proportionately the rates in the outer districts, so that the disparity is possibly even greater than it appears. The want of an intermediate census is here, as elsewhere, seriously felt.

(2) REGISTRATION SUB-DISTRICTS.

Deaths in Sub-Districts.—Table 20 gives, as in former years, the deaths in each registration district, or sub-district from the seven zymotic diseases, from membranous and other non-spasmodic forms of croup, from phthisis, and from other diseases of the air passages, with which we have generally included deaths from influenza, although that disease is really a zymotic one. Its mortality, however, is largely due to the lung complications which accompany or follow it.

This year we have divided the group formerly called "croup" according as the death was stated to be due to membranous croup or simply to "croup," leaving out, however, as formerly, 1 cases stated to be due to spasmodic croup.

TABLE 20.

Shewing the number of deaths from certain specific causes and groups of causes in the 52 weeks of 1906 in the Sub-Registration Districts in the City of Leeds. All deaths in public institutions within the City of persons belonging to the City have been referred to the Sub-District to which they belonged.

	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough	"Fever."	Diarrhea.	All seven.	CROUP.		Phthisis.	Influenza and diseases of the air-passages other than consumption.	All causes
									Membranous.	Other non-spasmodic.			
Leeds, North	...	44	6	5	12	9	87	163	1	...	114	174	1010
„ West ...	...	50	6	9	32	12	55	164	...	1	115	219	1388
„ South-E.	...	26	3	6	22	7	68	132	1	...	68	204	844
Hunslet ...	...	49	8	9	30	7	116	219	3	1	75	216	1244
Holbeck	...	16	5	5	18	5	40	89	...	1	48	99	595
Wortley ...	...	59	2	6	11	3	53	134	2	1	60	145	917
Kirkstall	...	20	1	25	4	2	16	68	...	...	28	81	513
Bramley ...	...	...	...	7	4	...	7	18	...	...	18	37	233
Chapelton ...	...	11	2	4	13	4	8	42	1	1	38	62	471
Osmondthorpe	...	...	...	...	...	...	...	...	...	...	...	1	7
City of Leeds	...	275	33	76	146	49	450	1029	8	5	564	1238	7222

Six deaths from phthisis, 8 from influenza and diseases of the air-passages other than consumption, and 169 deaths from other causes, occurred in the City of persons not belonging to Leeds; on the other hand 128 deaths occurred during the year of Leeds persons in West Riding Asylums and other public institutions, outside the City. Of these 15 were from phthisis, 15 from the lung groups, and 98 from other causes not given in table.

In this table, deaths of persons not belonging to Leeds dying in institutions are entirely left out and those of Leeds people restored to the districts from which they had been sent to these hospitals. The numbers of the outsiders left out are stated in the foot note.

Death rates in same districts.—Table 21 gives the rates from these several causes in the same sub-districts, calculated upon the populations obtained by the method of the Registrar General. It will be noticed, again taking 15·63 as the mean, that in the ten districts into which Leeds is divided for registration purposes, the death rate fell below the average of the City in four, whilst in six others it was above that rate.

Districts with low mortality.—Amongst the former we start with Kirkstall, with a rate of 10·74—4·89 below the rate for the whole City. Close after follows Chapeltown, with a rate of 11·36, or 4·27 below that of the City. Third in the list is Bramley, with a rate of 12·50; 3·13 less than that of the town generally. Next comes Wortley, 14·19—1·44 below the rate of the City.

Less healthy districts.—Amongst those districts which have a rate higher than the average, we begin with West Leeds (16·35), 0·72 above the City rate. Hunslet follows it closely (16·45), 0·82 above the City rate. Holbeck comes next with a rate of 16·97, 1·34 above the City rate. The rate of North Leeds is 1·59 above that of the City, whilst the rate of the small district of Osmondthorpe* is 4·27 higher than that of the whole town. Last of all comes the South-East registration district, which has a rate of 24·23, or 8·6 above that of the town; the difference being almost as great as the whole rate in some of the smaller sub-divisions, given in table 22.

Kirkstall and South-East Leeds.—Kirkstall, with a population of nearly 48,000, had a death rate of only 10·7, whilst South-East Leeds, with a population just under 35,000, had a death rate of 24·2. The difference between the rate at which people die in South-East Leeds and at which they die in the township of Headingley, was 13·5, which difference was

* The population of Osmondthorpe is underestimated, and the death rate therefore too high. See p. 172.

in itself higher than the whole rate obtaining in Chapeltown, Bramley, or Kirkstall, with an aggregate population of more than 108,000.

Figures for 17 years.—For the first time I have been able almost to satisfy myself in regard to the populations of the several districts, at any rate between 1890 and 1901. In tables 21a to 21k will be found the populations estimated in the manner already described (page 109) for each registration area in Leeds for each of the seventeen years, 1890 to 1906.

TABLE 21.

Shewing the mortality of the Sub-Districts stated in deaths per 1,000 of the population as estimated to the middle of 1906.

	Small-pox.	Measles	Scarlatina.	Diphtheria	Whooping-cough.	"Fever."	Diarrhoea.	All seven.	CROUP.		Phthisis.	Influenza and diseases of the air-passages, other than consumption.	All causes.
									Membranous.	Other non-spasmodic.			
Leeds, North	...	0·75	0·10	0·09	0·20	0·15	1·48	2·78	0·02	...	1·94	2·97	17·22
„ West	...	0·59	0·07	0·11	0·38	0·14	0·65	1·93	...	0·01	1·35	2·58	16·35
„ S. E.	...	0·75	0·09	0·17	0·63	0·20	1·95	3·79	0·03	...	1·95	5·86	24·23
Hunslet	...	0·65	0·11	0·12	0·40	0·09	1·53	2·90	0·04	0·01	0·99	2·86	16·45
Holbeck	...	0·46	0·14	0·14	0·51	0·14	1·14	2·54	..	0·03	1·37	2·82	16·97
Wortley	...	0·91	0·03	0·09	0·17	0·05	0·82	2·07	0·03	0·02	0·93	2·24	14·19
Kirkstall	...	0·42	0·02	0·52	0·08	0·04	0·34	1·42	...	...	0·59	1·70	10·74
Bramley	...	...	...	0·38	0·21	...	0·38	0·97	...	...	0·97	1·98	12·50
Chapeltown	...	0·27	0·05	0·10	0·31	0·10	0·19	1·01	0·02	0·02	0·92	1·50	11·36
Osmondthorp	...	...	...	...	...	...	...	...	...	...	...	2·84	19·90
City of Leeds	...	0·60	0·07	0·16	0·32	0·11	0·97	2·23	0·02	0·01	1·22	2·68	15·63

Six deaths from phthisis, 8 from influenza and diseases of the air-passages other than consumption, and 169 deaths from other causes not mentioned in the table, occurred in the City of persons not belonging to Leeds.

These tables give also the births and the deaths registered in each of these years and the number of the latter that occurred in children under one year of age. In italic figures the corresponding birth rates, and death rates from all causes, are given, both calculated upon the populations in the second column, whilst in the last column, also in italics, will be found the ratio between the deaths of children under one year of age and each thousand born. A thick line separates the ten years, 1896-1905, and the average births and deaths for those ten years are given immediately above the corresponding figures for 1906. It may be worth while to say something about these districts in detail.

NORTH LEEDS.—*Population.*—The population in North Leeds is a decreasing one. It had decreased slightly in the inter-censal period, 1891-1901, and the mixed method of calculating the population by interpolation and geometrical progression, already referred to, has induced us to regard this decrease as having commenced about 1893, and as having continued steadily since that time.

Boundaries.—North Leeds, it will be remembered, is that part of the old township of Leeds which lies on the east of North Street and Vicar Lane, and north of a line running along Kirkgate, Marsh Lane, and York Road, and ending at the township boundary just beyond the avenue to the East End Park. The township boundary runs from York Road across by the Burmantofts Cemetery and the north wall of the Workhouse grounds to the Gipton Beck, whence it runs along the north of the cavalry barracks to Chapeltown Road, and the boundary of the sub-district follows this road down to North Street.

Intercepts of wards included.—It contains portions of the Central ward, the North ward, and the North-East ward, but not the whole of any of them. The parts in North Leeds are usually the more populous portions of these wards.

TABLE 21a.
NORTH LEEDS.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	60,436	2,345	38·2	1,495	24·4	387	165
1891	60,563	2,401	39·8	1,619	26·8	464	193
1892	60,564	2,405	39·8	1,355	22·4	422	175
1893	60,526	2,300	38·1	1,544	25·6	491	213
1894	60,456	2,310	38·3	1,273	21·1	398	172
1895	60,331	2,343	39·0	1,381	23·0	431	184
1896*	60,176	2,318	37·9	1,298	21·2	410	177
1897	59,997	2,338	39·1	1,436	24·0	456	195
1898	59,925	2,261	37·9	1,307	21·9	392	173
1899	59,658	2,234	37·6	1,260	21·2	356	159
1900	59,475	2,147	36·2	1,290	21·8	353	164
1901	59,257	2,096	35·5	1,324	22·4	394	188
1902*	59,166	2,100	34·9	1,161	19·3	325	155
1903	59,082	2,057	34·9	1,090	18·5	319	155
1904	59,004	1,875	31·9	1,149	19·5	356	190
1905	58,932	1,870	31·8	1,040	17·7	303	162
Average of years 1896 to 1905 ..	59,467	2,130	35·8	1,236	20·8	366	172
1906	58,866	1,758	30·0	1,010	17·2	281	160

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

Characteristics.—It contains the whole of the area which was labelled some years ago Unhealthy Area No. 1, and which comprised most of what have been more recently called the York Street and Quarry Hill Areas. It contains the markets and a large proportion of the Jewish population of Leeds. It contains the Leeds Workhouse, and until a few years ago it contained our fever and smallpox hospitals.

Birth rate.—Not only is the population of this district steadily diminishing, but the number of births registered has decreased with even greater rapidity. In the six years 1890-1895 the birth rate was close upon 39 per thousand (38·9). During the ten years 1896-1905 it averaged 35·8, having, with a few exceptions, come steadily down year by year from 39 in 1895 to 32 in 1905. Last year the birth rate was 30.

Death rate.—Here, the fall has not been quite so steady, although its progress has been in the same direction. In the six years 1890-1895 the death rate per 1,000 averaged nearly 23·9. In the ten following years it was 20·8. Last year it was 17·2. During the ten years 1896-1905, with the exception of a rise in 1897, the course has been nearly uniformly downwards.

Infantile mortality.—In the six years 1890-1895 the deaths under one year of age averaged 184 per 1,000 births registered. The rate wobbled a good deal in the interval. In the ten years 1896-1905 it averaged 172, having varied from 155 in 1902 to 195 in 1897. Last year the rate was 160.

Infantile mortality and employment of married women.—At the 1901 census the population of the district was 59,281, of whom 29,769 were male and 29,512 female persons. Of these latter 16,625 were between the ages of fifteen and fifty-five. Of the 16,625, 6,212 (37 per cent.) were unmarried, 10,413 (63 per cent.) were married women or widows. Of the unmarried women, 5,195 (or 84 per cent.) were engaged in some occupation, and of the 10,413 married women 1,897 (or 18 per cent.) had some definite wage-earning employment.

The census was taken at the end of March, 1901, and was therefore within three months of the middle of the eleven year period 1896-1906. During that period there were 23,054 births registered, and 3,945 deaths were registered of children under one year of age, or at the rate of 171 per thousand born. The corresponding rate in the whole city was the same.

The average number of births registered annually in these eleven years was 2,096. If this number be compared with the married women between fifteen and fifty-five years of age at the time of the census—practically the middle period of the eleven years—the numbers come out as 201 births per thousand women of this class living between these ages. We do not know how many of the mothers of the averaged 2,096 babies were engaged in occupations outside their own homes, but as the census figures for married women employed includes widows, it is not likely that the proportion of mothers working exceeded the proportion of married women and widows between the ages of fifteen and fifty-five credited in the census with some occupation.* That ratio was 182 per thousand.

The number 182 is beyond the corresponding ratio for the City as a whole, which was 131. In fact this 182 per 1,000 average is the highest average of married women working in any of the districts into which Leeds is for statistical purposes divided. Whilst the number of married women and widows working in this district is greater in proportion than in any other, the rate of mortality amongst infants per thousand born is identical with the average for the whole town.

The figure 201, corresponding to the fertility figure of the married women and widows between fifteen and fifty-five, is the highest but one in all the ten districts, and is considerably in excess of the average of the whole city, which was 168. The births, however, from which it is calculated, include an average of 73 in the Leeds Workhouse, only about 17 of which probably belong to the district, reducing the average of 2,096 to a

* Doubtless many married women occasionally earning wages were returned at the census as not engaged in any outside occupation.

probable average of 2,040, and the fertility figure from 201 to 196 per thousand married women and widows at the ages stated. Even when this correction, which is a rough one, is made, the ratio still stands, with one exception, as the highest of any district in the town. Possibly the large number of Jewesses living within the district accounts to some extent for this and possibly also for the fact that the infantile mortality per thousand born was not above the average of the city although the number of employed persons was.

Of the 1,897 married women working in North Leeds at the time of the census, 519 (or 27·4 per cent.) were set down as being tailoresses, whilst 120 (or 6·3 per cent.) were engaged in the woollen manufacture, and 52 (or 2·7 per cent.) in the cotton manufacturing industry. Of the 5,195 unmarried women working in the district, 41·7 per cent. were tailoresses, 4·7 and 1·8 per cent. were engaged in woollen and cotton manufacture respectively.

WEST.—*Boundaries.* The portion of the township of Leeds included within this district is bounded on the east by a line commencing in Chapeltown Road, just above the cavalry barracks, and running down North Street to Lowerhead Row. The eastern boundary is then transferred from the one end of Lowerhead Row to the other, and runs down Briggate to the river. The river forms the southerly border. The westerly border passes by a rather irregular line in a north-north-easterly direction across Kirkstall Road, and then runs in a somewhat curved line between Ventnor Street and Lloyd Street. It then goes a short distance up Woodsley Road and makes another loop with the concavity towards Hyde Park Road. It joins Hyde Park Road at the corner of Woodhouse Moor, follows it to Headingley Lane, then crosses at Wrangthorne and runs towards the west side of Montpelier Terrace, and then nearly in a straight line down to Meanwood beck. It follows the Meanwood beck east as far as the bottom of Buslingthorpe Lane, and then runs along Buslingthorpe Lane to Chapeltown Road.

TABLE 21b.
WEST LEEDS.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	82,907	2,394	28·4	1,774	21·1	389	162
1891	83,558	2,417	29·0	1,726	20·7	445	184
1892	83,898	2,321	27·8	1,573	18·8	408	176
1893	84,157	2,270	27·1	1,735	20·7	453	200
1894	84,371	2,261	26·9	1,385	16·5	327	145
1895	84,519	2,166	25·7	1,675	19·9	436	201
1896*	84,545	2,253	26·2	1,534	17·9	387	172
1897	84,519	2,180	25·9	1,620	19·2	427	196
1898	84,415	2,339	27·8	1,683	20·0	439	188
1899	84,499	2,085	24·8	1,548	18·4	378	181
1900	84,455	2,214	26·3	1,662	19·7	427	193
1901	84,374	2,145	25·5	1,631	19·4	398	186
1902*	84,517	2,186	25·5	1,455	16·9	347	159
1903	84,670	1,994	23·6	1,332	15·8	304	152
1904	84,832	1,921	22·7	1,473	17·4	334	174
1905	85,005	1,905	22·5	1,290	15·2	285	150
Average of years 1896 to 1905	84,583	2,122	25·1	1,523	18·0	373	176
1906	85,186	1,869	22·0	1,388	16·4	302	162

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

Population.—The population of this district was 73,892 at the 1881 census. It was 83,520 at the census in 1891, and if the increase had gone on at the same rate it should have been 94,402 at the following census. The population, however, in 1901, turned out to be 84,340, or more than $10\frac{1}{2}$ per cent. less than the estimate at geometrical progression. Between 1890 and 1901 we therefore estimated that there had been a gradual, though slight, increase up to 1896, and that from 1896 to the census year there was a slight fall.* Since 1901 the estimate by the Registrar General's method shows again an increase, making the population in 1906 85,186, which may or may not be correct.

Birth rate.—Upon the population thus calculated, the birth rate for the years 1890-1895 averaged 27·5. During the ten years 1896-1905 the average as given in the table was 25·1. Last year it was 22·0. In the first period, that of six years, the fall is pretty gradual, from 1891 to 1895. The year 1896 had a higher birth-rate than 1895, and slightly higher also than that of the following year. In the year 1898 the rate was still higher and the births were more numerous than in any year since 1891. They fell the following year below the average, rising slightly in 1900, and have continued to fall since—the apparent rise in 1902 being quite accounted for by the extra week included in that year. This inclusion does not affect the birth rate which was calculated on the 53 weeks.

Death rate.—In 1890-1895 the death rate counted upon the given populations averaged 19·6, in the ten years 1896-1905, 18·0. Last year it was 16·4.

Infantile mortality.—About the ratio of births to deaths there is less difficulty. From 1890 to 1895 it averaged 178, but varied from 162 to 201. In the following ten years the average was 176, the variation between 150 and 196. In the

* The slight variations from the above statement in the table are due to the fact that the populations in the latter are made by the addition of those of five intercepts, of varying size, each varying at a different rate.

first period of six years the rate twice touched 200. In the ten following, it once nearly reached 196, and only in one other year exceeded 190. Last year the rate was 162.

Infantile rate and employment of married women.—In 1901 the census population of West Leeds was 84,340, 39,434 male and 44,906 female. Of the latter, 27,946 were between the ages of fifteen and fifty-five. Rather less than half, 13,702, were unmarried, while 14,244 were recorded as married. The employed women at these ages embraced 74·7 per cent. of the unmarried, and 17·7 of the married. This rate of 17·7, though lower than the 18·2 in the North District, was, with that exception, the highest in any district, or even any township in Leeds. The average for the whole borough was 13·1 per cent.

During the eleven years, 1896-1906, 23,091 births were registered, an average of 2,099 per annum. During the same period, the deaths of 4,028 children under the age of one year were recorded, giving an infantile death rate of 174 per thousand born—the rate for the whole city being 171.

Taking the average births in the year, per thousand married women between fifteen and fifty-five enumerated at the census, the fertility rate is 147, which is below the rate of the city as a whole, though not below the corresponding rate in Kirkstall, Chapeltown and Osmondthorpe. (Table p. 173.)

The interesting points about the district are, that (1) the fertility rate is low, while the infant mortality is practically the same as that of the city; that (2) of the married women of child-bearing age, a larger proportion than in any other district, except the North, are engaged in some employment, this figure being very considerably in excess of that of the town as a whole, but, notwithstanding, the infant mortality was practically the same as that of the City.

Of the 2,518 married women returned at the census as employed in West Leeds, 638 (or 25·3 per cent.) worked as tailoresses; 160 (or 6·4 per cent.) were engaged in woollen or

worsted manufacture, and 32 (or 1·3 per cent.) were employed in the cotton industry. Amongst the occupied unmarried women, who numbered 10,229, 22·9 per cent. were tailoresses, 3·7 and 0·4 per cent. respectively were engaged in the woollen and cotton industries.

SOUTH-EAST LEEDS.—Boundaries. The north boundary of the South-East registration district of Leeds runs from the western corner of Lowerhead Row to its eastern corner. It then transfers itself from the end of Vicar Lane to Kirkgate, runs along Kirkgate and Marsh Lane to York Road, and along York Road to the township boundary about 230 yards to the west of the main avenue leading to East End Park. The eastern boundary then follows the township boundary to the river opposite Thwaitegate. The south western boundary follows the river up stream as far as the works at the end of Carlisle Road. It then takes a very irregular course, running a little to the west of Carlisle Road to its junction with Clarence Road through the "New Dock," then southwards to the southern limb of Chadwick street. It then passes south of the Globe Twine Works to Black Bull Street, crosses Black Bull street about 30 yards from its junction with Hunslet Road, runs on to the junction of Cudbear Street and Sheaf Street, turns then direct east running nearly to Black Bull Street, then in a northerly direction to the east end of Orchella Place, then in a north-westerly direction to the southern junction of South Brook Street and Crown Point Road. It then assumes a southerly direction on the west side of Crown Point Road, running a little to the north and west of Crown Point Road to Hunslet Road, opposite the Midland Goods Station. It follows this road for about 70 yards, then turns south along the west side of Junction Street. It turns west again at the Midland Bonding Warehouse, crosses Kidacre Street about 70 yards north of Holmes Street, passes irregularly through the Meadow Lane Gas Works, crosses between the Meadow Lane Gas Works and to the north of the houses

TABLE 21 c.
SOUTH-EAST LEEDS.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	33,147	1,279	38·0	922	27·4	255	199
1891	33,363	1,241	37·3	1,063	32·0	293	236
1892	33,502	1,310	39·2	814	24·4	266	203
1893	33,629	1,208	36·0	1,022	30·5	307	254
1894	33,736	1,240	36·9	771	22·9	218	176
1895	33,865	1,180	35·0	836	24·8	269	228
1896*	33,942	1,146	33·2	834	24·2	213	186
1897	34,022	1,183	34·9	896	26·4	284	240
1898	34,104	1,222	36·0	850	25·0	282	231
1899	34,161	1,207	35·5	824	24·2	241	200
1900	34,235	1,221	35·8	876	25·7	284	233
1901	34,327	1,100	32·2	881	25·8	288	262
1902*	34,444	1,227	35·1	819	23·4	255	208
1903	34,564	1,258	36·5	801	23·3	233	185
1904	34,688	1,254	36·3	928	26·8	294	234
1905	34,817	1,235	35·6	771	22·2	251	203
Average of years 1896 to 1905 ..	34,330	1,205	35·1	848	24·7	263	218
1906	34,949	1,240	35·6	844	24·2	233	188

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

in March Street to Dewsbury Road at its junction with Meadow Road. It then takes a line between John Street and Mill Street to the site of the old Water Works depot, crosses Victoria Road and follows that road northward, but a little on the east side, passes behind Victoria Buildings and then follows the west side of the group of cottages at the bottom of New Lane opposite Hustrope Hall, re-crosses Victoria Road and follows Back Row, Camp Field, to Front Street, then along the continuation of Front Street to Water Lane, crosses Water Lane and takes a north-westerly direction, crossing the Railway Sidings, to the river opposite Watson's Soap Works. It then follows the middle line of the river down stream and in an easterly direction to Leeds Bridge. The western boundary follows Briggate from Leeds Bridge northwards as far as Lowerhead Row.

Sub-divisions of the sub-district.—For convenience it has been found useful to divide South-East Leeds first of all according to the wards its boundaries intercept:—(1) There is the part on the south side of the river, with the very irregular southern boundary, which it has been attempted to describe. This forms a portion of the South ward—the rest of that ward belonging to the township of Hunslet. (2) The part north of the river, but south of Lowerhead Row, between Briggate and Vicar Lane, and the part north of the river, but south of Kirkgate as far as Timble beck. This part belongs to the Central ward. The rest of the district east of the Timble beck lies in the East ward, and it has been considered convenient for some purposes to sub-divide this part into the district nearest the river and the Parish Church, (3) called “The Bank,” and (4) the district west of a line running from York Road along Accommodation Road to Ellerby Lane, and down Ellerby Lane to the river. This we have called “Temple View.”

South ward portion.—The portion of the district south of the river contains much old property notwithstanding that

considerable street improvements have involved the demolition of many insanitary premises. It contains several common lodging houses.

Central ward.—The district in the Central ward includes a portion of the business part of the town, with hardly any dwelling houses. It contains also several common lodging houses.

The Bank.—The Bank portion is notoriously about as unhealthy a slum as there is in Leeds, although considerable improvements have been made in some parts of it within the last few years.

Temple View.—The Temple View portion contains many comparatively new houses, and it is to the building in this part that the increase of the population of the ward is principally due.

Population.—We have considered the population of the whole registration sub-district of South-East Leeds as steadily increasing since 1890. The increase, however, is probably largely due to extensions in the Temple View district. Between the date of the census and October, 1907, 1,940 houses have been built in the Temple View district, and 1,809 of these were occupied at the time of our visit. Taking into account the number occupied at the time of the census, 2,083, this would give the number of occupied houses to the middle of 1906 as 3,451, and a probable population to the middle of 1906 as 15,702. This is on the supposition that the building of houses has taken place at a geometrical ratio.

Birth rate in whole district.—The number of births showed a tendency to diminish during the first six years given in the table 21 c. Since 1896 there has been a slight increase. The birth rate is the highest in any district of the town. For the six years 1890—1895 it averaged 37·1, varying from 35 to 39. During the following ten years it averaged 35·1, the rate in the

last four of those years having been equal to, or above, the average rate of the decade. It is, however, possible that our estimate of population since the census may be, in this case, below rather than above the actual figure.

Death rate.—During the first six years given in the table, the rate of mortality was 27 per 1,000, varying from 22·9 in 1894 to 32 in 1891. The latter was one of the influenza years. In the ten years 1896-1905, the rate averaged 24·7, varying from 22·2 in 1905 to 26·8 in 1904. Last year it was 24·2.

Infant Mortality.—The death rate of infants under one, per thousand births in the same period, averaged 216 in the six years 1890-95, and varied between 176 in 1894 and 254 in the year preceding it.

During the ten years 1896-1905 the infantile rate was 218, varying between 185 and 186 in 1903 and 1896, and 262 in 1901. Last year the rate was 188, with three exceptions the lowest in any of the seventeen years. A good deal has been said in the report proper, under the head of infant mortality, about the high rate in this district. A chart is given in the main report (opp. page 31) contrasting the variations of this rate in South-East Leeds with those in Chapeltown and the City as a whole.

INFANTILE MORTALITY IN SOUTH-EAST LEEDS AND THE EMPLOYMENT OF MARRIED WOMEN.

In this district we are able to speak more fully on the relation of the employment of women to infant mortality than in any other, as it is in the South-East district especially that since 1902 our women inspectors have been making enquiries into the circumstances of the death of every child dying under two years of age. Since 1904 this enquiry has been extended so as to include information about all children born in the district. Some of the facts deduced from the information thus collected have been already recorded in the report itself (pages 35 onwards). It may, however, be worth while to epitomise some of them in this place.

Previous feeding of those whose death occurred during 1903-6.—On investigating the deaths of infants dying under the age of *one month* during the four years 1903-6, it was found that, excluding 98 children who died before there had been any opportunity of putting them to the breast, and 6 as to whom our record was incomplete, the proportion amongst the remaining 128 fatal cases was 69 per cent., said to be entirely breast fed, and 31 per cent. partly, or not at all so.

Of the children who died in the *second month* of life, and excluding 5 as to whom our record was imperfect, 57 per cent. were said to have been entirely breast fed, and 43 per cent. not.

Of children who died in the *third month*, excluding three imperfectly recorded, 36 per cent were said to have been entirely breast fed, and 64 per cent. not.

These figures, however, deal only with fatal cases and only with those who died in the first three months of life. Though we have a good deal more information as to the feeding after these three months it is less complete.

Feeding of surviving and dead children compared.—A comparison was therefore attempted as to breast feeding, so far as our records would allow, between the surviving and the fatal cases. By surviving was meant in this case surviving for two years. The desire to deal only with those dying within or surviving the second year restricted our enquiry to the children whose births were registered in the first half of 1905, that is, at the beginning of our enquiry as to the newly born. Our record at this, the commencement of our enquiry, was in some cases imperfect, and it was occasionally found where a second visit of enquiry was made later on account of a death, that the information obtained sometimes differed from what had been given on the visit paid nearer the date of the child's birth. The results came out somewhat as follows :—

Amongst the death group, 77 per cent. had been entirely breast fed for the first week; amongst the surviving group 93 per cent. During the second week in the death group, 75 per cent. were still said to have been fed entirely at the breast, whilst amongst the surviving group the percentage was 92. During the third week the corresponding figures were 68 and 89, and during the fourth week 65 and 86. Evidently, therefore, during the first month of life the group of children who survived their second year had been much longer breast fed than those who did not.

Our record is still fairly complete in regard to children in the second month of life, and in this period we found that in the death group 58 per cent. were still being entirely breast fed, but that in the survivors' group the percentage was 83. These figures are given in table 5 d, on page 42 in the main report.

Employment of Mother.—Dealing with the question of the occupation of the child's mother, it was found on investigating the deaths of 1,291 children under two years of age, which were registered in this district during the four years 1903-6, that they were the children of mothers who had as an average borne 4.2 children each, but of these children 53.5 per cent. were either still-born or had since died. Where the women were engaged only in household occupations, the average number of children borne was a little higher, 4.6: and the percentage of those already dead a little lower, 51.7; while, dealing only with 238 mothers employed in workshops, the average number of children borne by them had been 3.4 (as compared with 4.6 amongst the housewives) and the number dead amongst those so borne was 59 per cent., as compared with 52 per cent. amongst the housewives.

It is pointed out, in the part of the report already mentioned, that probably the differences between these figures were partly accounted for by the fact that the married women employed in

factories and workshops are usually younger than the housewives (page 47). Accordingly, since table 5 e (page 46), which records the above facts was compiled, we have enquired into the comparative age of these two classes, and it has been found that the average age of the mothers engaged only in housework was 30·4 years, while the mean age of those employed in factories and workshops was 27·8. The births of the children of the latter presumably included a larger proportion of first-born (v. p. 137).

In this part of the enquiry we were dealing with pretty large numbers, and in a very general way. The difference, however, between the deaths of the children of the employed and unemployed mothers was, perhaps, less than one would have expected. The contribution of each set of mothers to the surviving population is set forth in the table referred to and the accompanying text. The disadvantages of this table are (1), that as to previous confinements it dealt only with statements made in regard to more or less remote periods; (2) that there was a possible confusion between still births and subsequent deaths.

Mothers working before the child's birth.—In regard to the children whose births were registered in the first half of 1905, and who are divided into two classes according as they survived or did not survive their second year of life, there is less hesitation in accepting the figures as to employment, although in these cases there is, in addition, the occasional discrepancy between the information given at the first visit after birth and the information given, sometimes to a different inspector, after the child's death.

We are able to deal with something like accuracy with 626 children whose births were registered in these six months. Of these, 467, so far as we know, were surviving at the end of their second year, while 159 were already dead. Of the 467, in 87 (or 19 per cent.) the mother had been engaged in some

outside employment within nine months before her confinement. Amongst the 159 who died, this had been the case in 35 (or 22 per cent.). Bringing the date of employment nearer to the child's birth, it was found that in 53 out of the 467 survivors (or 11 per cent.) the mother had worked within three months of the child's birth, whereas the 159 in the death group contributed 16 per cent. of mothers who had worked within these three months. When we come down to shorter intervals the numbers get very small, 5 per cent. only of the mothers of the survivors had been engaged outside their homes within four weeks of the child's birth, but amongst the death group the proportion was 8 per cent.

These figures may be conveniently put in the form of a table. It will, of course, be noted that the death group includes all who are known to have died within two years.

Table showing within what period before confinement the mothers of 626 children whose births were registered in South-East Leeds in the first half of 1905 had been employed outside their homes.

	Group of those surviving two years.		Group of those who died within two years.	
	Number.	Proportion.	Number.	Proportion.
Totals on record ...	467	100	159	100
Mothers working within 9 months of child's birth ...	87	19	35	22
Within 3 months ...	53	11	25	16
Within 4 weeks ...	24	5	12	8

Relation of early death of infants to employment of mothers in South-East Leeds.

January 1st, 1905, to December 29th, 1906.

(1)	(2)	(3)	Children of wage-earning women.			Children of those whose occupation was not recorded.
			All.	Of those who worked within 3 months of child's birth (before, after, or both).	Of those reported not to have worked within 3 months of child's birth.	
(4)	(5)	(6)	(7)	(8)	(9)	(10)
Born	2,488	1,871	553	341	212	64
Died under 3 months	218	148	61	34	27	9
Per cent.	8.76	7.91	11.03	9.97	12.74	14.06

Employment of mothers whose children died under three months.—Somewhat fuller information is at our command in regard to children who died within three months of their birth. During the 104 weeks of 1905 and 1906, our women inspectors have enquired into the circumstances and history of 2,488 children in South-East Leeds, of whom 2,475 were registered as born in the district within that period. In the case of 13 others the birth occurred elsewhere, but the child was brought into the district soon after that event.

Of these 2,488 newly born children, 218 died under the age of three months, or 8·76 per cent. Of these children, 1,871 were born of mothers whose work was only that of the household, and of these 1,871, 148 died under the age of three months, or 7·91 per cent. Again, of the total 2,488, 553 were the children of mothers engaged in some wage earning employment, and 61 of these children did not survive the third month. This is equivalent to 11·03 per cent. of the children of employed mothers.

The apparent advantage is in favour of the children of the housewives. For every 100 deaths, amongst these, before the stated age, there were 126 amongst the children of employed mothers. To put it in another way—for every 100 deaths among the children of employed mothers, there were only 79 amongst the housewives' class. The numbers from which these figures are deduced are sufficiently numerous to enable us at least to say that the children of those not employed outside their homes showed a greater tendency to survive the first three months of life.

An attempt has been made from the same enquiry to estimate the influence of actual work within three months after or before the birth of the child. The 553 births of children of employed mothers have been sub-divided (1), according as the mother had been engaged in some outside occupation within three months before the birth of the child, but not within three

months after her confinement ; (2) according as she was known to have been engaged in some outside occupation within three months after the birth of the child, although not so engaged within the same period before that event ; (3) as she was engaged in some outside occupation both before and after the child's birth, in both cases within three months of that event ; (4) according as the mother, although usually engaged in some wage-earning occupation, was not employed at that occupation within three months of her confinement either before or after. In this latter group, and also in number (2), the mother has not been considered to have been employed within three months after her confinement if the child had died in the meantime, that is at least if she was not so employed before the death of the child.

In the first group were placed 162 babies whose mothers had worked within three months before the child's birth, but not within three months after. Of the 162 born, 20 died within the period stated, or 12 per cent.

Seventy-three babies came into the class of those whose mothers, although employed, did not, so far as we know, work at all within the three months preceding their confinement, but who were engaged in some outside employment after and within three months of that time. Of these seventy-three, three died before the completion of their third month of life, or 4 per cent.

Of children whose mothers worked within three months of their confinement, both before and after, there were 106, and of these, 11 died, or a little over 10 per cent.

In the remaining group of children whose mothers did not work within three months before or three months after* their birth, there were 212, and out of these 212, 27 died before they were three months old, a number just short of 13 per cent.

* Excepting those where the child's death had occurred before the end of the third month.

It would thus appear, if we may venture to draw any conclusions from such small numbers, as if work after confinement had been less fatal to the chances of the baby's survival than work before, or (and here is the puzzle) work both before and after. These conclusions, however, must be discounted by reason of the smallness of the figures from which they are arrived at.

It is interesting, however, to compare in this connection the two groups into which the 553 babies, born of wage earning women, may be divided. First those (numbering 341) in which the mother worked either before or after her confinement, or both before and after, but in both cases within the same limiting period of three months. Amongst these 341 babies born of persons actually working within three months of their birth, before or after, or both before and after, 34 died, a rate of 9·97 per cent. Second: on the other hand, 212 out of the 553, or nearly two-fifths, were the children of mothers who, although they worked, are said not to have done so within three months of their confinement, except in those cases where the child died within that period. Of these 212 babies, 27 died before they were three months old, or 12·74 per cent.

An interesting point is that although the numbers were small, 341 in one case and 212 in the other, the deaths were least in proportion where the mother frankly confessed to having worked within three months of the child's birth, the deaths being nearly as 100 amongst those whose mothers did to 128 whose mothers did not so work.

As for the remaining 64 babies, our information as to work done by the mother is incomplete. Nine of them died within the three months, or 14·06 per cent.

Mortality amongst first-born and subsequent children.—It has been already suggested that at least in what we might call "protected" trades, that is, those carried on in factories and workshops and therefore under a certain amount of

supervision, that it is the younger mothers chiefly that are employed. Not infrequently, this is due to the fact that they have been engaged in that class of work before marriage, in some cases have not discontinued it, in others have returned to it temporarily. Naturally, as their families increase, work of this kind would in most cases be given up. If this view be correct, we should have a larger number of first-born amongst these women than amongst the housewife class, as well as a larger number than amongst the class carrying on such occupations as caretakers and charwomen.

Miss Sharples has been kind enough to get out for me a comparison so far as we know it between the early mortality of the first-born and of later born children. Dealing with the two years 1905 and 1906, of the 2,488 births registered in those two years, it was found, on looking up our records, that amongst the married mothers we had records of 424 children who were first-born, 1,906 who were born to multiparous mothers, and 44 as to whom information of this kind was incomplete. These numbers correspond to 17·9, 80·3 and 1·9 per cent.

Amongst the unmarried women of whom there were 114 during these two years, 67 (or 58·8 per cent. of the 114) were primiparæ, 38 (or 33·3 per cent.) were multiparæ, and as to 9 (or 7·9 per cent.) we had no record.

Amongst the married mothers who were primiparæ, the child died under three months of age in 43 cases (or 10·1 per cent. of the 424). The child survived the first three months in 381 (or 89·9 per cent. of the 424). Of the multiparous married mothers 148 out of the 1,906 (or 7·8 per cent.) of the children born died within three months and 1,758 (or 92·3 per cent. of the 1,906) survived the third month.

Amongst the 67 primiparous unmarried women, the child died under three months in 15 (or 22·4 per cent.), and survived the three months in 52 (or 77·6 per cent.). Amongst the

38 multiparous unmarried mothers, the child died under three months in 7 (or 18·4 per cent.), those who survived the first three months of life were 31 (or 81·6 per cent.).

It is evident, therefore, that both amongst the married mothers and the unmarried mothers the number of infants who survived the first three months is larger amongst those

Comparison of mortality amongst first-born and later children.

(From record of visits to 2,488 newly-born infants in South-East Leeds, 1905-6.)

	Children born.		Died under 3 months.		Survived 3 months.	
	No.	Per cent. of group.	No.	Per cent. of column 2.	No.	Per cent. of column 2.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
All born ..	2,488	100	218	8·8	2,270	91·2
First-born	491	19·7	58	11·8	433	88·2
Born later	1,944	78·1	155	8·0	1,789	92·0
Unrecorded	53	2·1	5	9·4	48	90·6
Legitimate	2,374	100	196	8·3	2,178	91·7
First-born	424	17·9	43	10·1	381	89·9
Born later	1,906	80·3	148	7·8	1,758	92·3
Unrecorded	44	1·9	5	11·4	39	88·6
Illegitimate	114	100	22	19·3	92	80·7
First-born	67	58·8	15	22·4	52	77·6
Born later	38	33·3	7	18·4	31	81·6
Unrecorded	9	7·9	—	—	9	100·0

who were not first children. Even if in the case of the unmarried women, we suppose all the 9 as to whom we do not know whether they were first children or not, and who survived the first three months, to have been first-borns, the proportion of survivals is still greater amongst the children of multiparous than of primiparous mothers. It is hardly necessary to remark that the mortality of the children both of primiparous and multiparous mothers was greatest where illegitimate.

Facts from the census.—In 1901, South-East Leeds contained 3,840 unmarried women between the ages of 15 and 55, of whom, 3,125 (or 81 per cent.) were engaged in some wage-earning occupation. Of these unmarried women, 772 (or 24·7 per cent.) were tailoresses, 586 (or 18·8 per cent.) were engaged in some way in the woollen trade; whilst 124 (or 4 per cent.) were engaged in cotton manufacture.

At the census 5,996 women at this age were returned as married, and 1,039 of them as engaged in wage-earning occupations—this is about 17 per cent. as against 81 amongst the unmarried. Of the 1,039 at work, 194 (or 18·7 per cent.) were tailoresses, 204 (or 19·6 per cent.) were in woollen mills and 57 (or 5·5 per cent.) in cotton factories; 172 (or 16·6 per cent.) were occupied in charing or washing, 54 (or 5·2 per cent.) in domestic service, and 22 (or 2·1 per cent.) were engaged in the leather trade. No other special industry seems to have employed more than 2 per cent.

Occupation, Fertility and Mortality Ratios.—Whilst for every 1,000 married women between 15 and 55, 173 were engaged in some industrial occupation at the census, there was during the eleven years 1896-1906, an average of 202 births for the same number of married women at this age. This is the highest fertility figure in the table printed on page 173. Unfortunately, as has been already pointed out, the mortality of infants during the same period was 215 per thousand born.

The average number of births registered during the same eleven years was 1,208. The proportion of employed women at the census was the largest but two in any of the ten districts. West Leeds and North Leeds, with rates of 177 and 182, furnished a larger proportion of married women at work. In the latter of these, the fertility figure was nearly as high as in South-East Leeds but in both of them the infant mortality was only about the same as in the town generally, and very much less than in South East Leeds.

Employment of mothers does not seem to have been the determining factor of this high mortality, although it may in some cases have contributed to it.

HUNSLET—Boundaries.—The northern boundary is that part of the irregular line already described as the southern boundary of the South-East district east of the Meadow Lane Gas Works to the river. The eastern boundary is the river as far as the ferry, near Thwaitegate. The boundary then follows in a southerly direction a footroad from the ferry to the Wakefield Road, runs along the Wakefield Road on its west side to within a few yards of the Midland railway; leaving the road at its bend it keeps in a S.S.W. direction to beyond the Hunslet Cemetery on Woodhouse Hill, the boundary from the river from this point being the boundary also of the City. The southern boundary, which is here also the Parliamentary and Municipal boundary, runs then along the south side of the cemetery to Lane Head, and from thence to Odd Run and about 170 yards to the west of the road running from Hunslet Lake down to the City boundary.

A change has taken place since 1896 in the rest of the southern and western boundary. Before that date the boundary from the point just named ran in a north-westerly direction to Carr Beck, reaching the Beck at a point about 60 yards from the Middleton Colliery line. It then ran up stream for about 50 yards, crossed the Colliery line and took again a

north-westerly direction, running along the north-east of the Parkside cricket and football ground, to the north of which it assumed a westerly and then south-westerly direction to the footpath leading from Dewsbury Road to Low Fold, and then in a more or less westerly direction to Dewsbury Road, reaching this road about 370 yards beyond the New Inn. Crossing Dewsbury Road beyond the New Inn it then took a north-westerly direction to Lodge Lane, and along Lodge Lane to Beeston Road. It then turned directly eastward, ran nearly to the back of Greenmount Street, and then by a very irregular line with a N.W. tendency across Coupland Street to Lady Pit Street at its junction with Khandalla Terrace, then N.N.E. to the junction of Folly Lane and Lady Pit Lane; W. along Folly Lane to Beeston Road, N. along Beeston Road to Moorville Road, E. along Moorville Road to its junction with Hunslet Hall Road, then N. about 30 yards up the cross street leading to Galway Terrace. At the middle of this street it turned N.W. to the junction of Lane End Place and Beeston Road. It ran along Beeston Road to Bewerley Street; then west to Elland Road and Elland Place, and N.N.W. to the railway and the corner of Jack Lane at the end of the Green Cottage Estate; then east along Jack Lane, about 70 yards, to the bend near the Board School between the Green Cottage Estate and the Board School; then N. to the footpath south of Carlton Row, east along that footpath to Potter Street, and as far as a point between Potter Street and about one block of property beyond it. It then turned south along the space between Potter Street and Moor Street back to Jack Lane, along Jack Lane east to the back of Balloon Street. Thence north, crossing Back Ainsley Street and Ainsley Street to Charlotte Street, and then through Soho Foundry and east to Meadow Road, across Meadow Road to Dewsbury Road, and across Dewsbury Road south of Potterdale Mill; then N.E. to the east end of the old reservoir, north along the eastern bank of the reservoir to Holm Street, crossed Holm Street to the Meadow Road Gas Works, leaving these

Works and crossing Kidacre Street to Midland Bonding Warehouse, and then along Junction Street to the corner of Hunslet Lane and Great Wilson Street.

In 1896 an interchange of certain areas took place between Hunslet and Holbeck, and the boundary from the point mentioned near Odd Run is now continued along the City boundary in a westerly direction to the old footpath running near Low Fold, and across that footpath and the Belle Isle Beck at a point about 400 yards to the south of where the old boundary crossed the same footpath. From this point it quits the City boundary and follows that between the Beeston Township and the old strip of Holbeck township, now transferred to Hunslet, as far as Dewsbury Road. It crosses Dewsbury Road just to the north of Lowmoor Cottages, it continues in a north-west direction following still the boundary between Beeston and the transferred slip, passes to the north of Cross Flatts to the Beeston Road at the corner of the park opposite the south corner of the cemetery. The western boundary then follows the Beeston Road and Meadow Lane to the Gas Works.

A small isolated patch belonging to Holbeck to the east of the Burton House Estate and north of Child's farm was transferred to the Hunslet township. A tongue of land south-east of Beeston Road stretching from that road to the City boundary and lying between the two southern boundaries already described, was also transferred to Hunslet. To the north of this a portion of the Holbeck township on Beeston Hill, lying east of the Beeston Road and south of Folly Lane, was also transferred to Hunslet. Another wedge east of Beeston Road and N. of Moorville Road whose N.E. boundary returned to Beeston Road at the corner of Bewerley Street, also went to Hunslet, whilst certain segments, intercepted by the irregular boundary already described from the corner of Jack Lane opposite the Board School (running first north, then east, then south then east then north to Charlotte Street),

TABLE 21 d.
HUNSLET.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	57,042	2,127	36·7	1,393	24·0	410	193
1891	58,515	2,231	38·3	1,307	22·4	380	170
1892	59,734	2,187	36·7	1,177	19·8	393	180
1893	60,903	2,203	36·3	1,347	22·2	482	219
1894	62,105	2,171	35·1	1,046	16·9	328	151
1895	63,290	2,190	34·7	1,314	20·8	446	204
1896	64,414	2,141	32·7	1,273	19·5	380	177
1897	64,894	2,292	35·4	1,215	18·8	436	190
1898	66,086	2,198	33·4	1,149	17·4	401	182
1899	67,241	2,271	33·9	1,264	18·9	432	190
1900	68,329	2,296	33·7	1,481	21·7	450	196
1901	69,383	2,401	34·7	1,347	19·5	461	192
1902*	70,666	2,340	32·6	1,287	17·9	411	176
1903	71,959	2,282	31·8	1,120	15·6	387	170
1904	73,262	2,264	31·0	1,344	18·4	408	180
1905	74,576	2,140	28·8	1,080	14·5	342	160
Average of years 1896 to 1905 ..	69,081	2,263	32·7	1,256	18·2	411	182
1906	75,901	2,143	28·3	1,244	16·5	375	175

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

were all uniformly included within the Holbeck ward, was as also the portion called "Hunslet detached" lying to the north of the Beeston boundary and to the west of the Holbeck cemetery, and through which the Elland Road passes after it has left Holbeck Moor. These alterations involved a transfer from Hunslet to Holbeck of an area which in 1891 had contained 2,730 persons, and a transfer from Holbeck to Hunslet of an area containing at the 1891 census 1,292 persons—the change of areas leaving a gain to Holbeck, had the population remained as at the earlier census, of 1,438 persons.*

Population.—The population of the township of Hunslet in 1891, with the boundaries first described, was enumerated at 58,164. In 1881 the population of the same area had been 46,942. At the census of 1901 the population of the altered area was enumerated at 69,064, and the population given for the previous census, 1891, on the same area, was given as 56,746, differing by 1,418,† from the population published at the previous census for the old area.

The populations printed in table 21d have been, in the first place, calculated from 1890 to 1901 in the manner already described, by the mixed methods of interpolation, geometrical progression, and "toning down." The figures were got out for the various intercepts and added together for the township. The area for these intercepts was the revised area, but the population of the small intercept of East Hunslet in Beeston was at first left and afterwards deducted from that for the township. The figures thus obtained for Hunslet corresponded to those for the new area since 1896, but in that year and before were deficient. Additions, taking into account the changes of population in the transferred areas before 1891 and 1901, were therefore made to the Hunslet township, and deductions from

* The Registrar General's figures at the recent census show a transfer from Hunslet to Holbeck of 1,418 and not 1,438 as given above.

† There is a discrepancy of 20 between the Registrar General's figures and our own which we have been unable to account for.

that of Holbeck to rectify the population in the years 1890-96. The numbers printed in table 21d are the results of these alterations.*

Birth rate.—Up to 1896 the births are those registered in the old area; since 1896 in the new. The birth rate has been calculated in each case upon the populations corrected as explained above, to the area in which the births occurred. From the years 1890 to 1895 the birth rate averaged 36·3 per thousand persons living, and varied from 38·3 in 1891 to 34·7 in 1895. In the ten following years the birth rate only once exceeded 35—that was in the year 1897, and it descended as low as 28·8 in the year 1905. The average of the ten years was 32·7. Last year the rate was 28·3, the lowest of any year in the table.

Death rate.—The deaths are also those recorded in the areas which represented the township in the years named. The rates are calculated upon the populations estimated to exist in those areas in the years given. In the earlier six years the death rate varied from 24 in 1890 to 16·9 in 1894, the average of the six years being 21·0. In the following ten years the average death rate was 18·2, and varied from 21·7 in 1900 to 14·5 in 1905. Last year the rate was 16·5, the lowest but two in the seventeen years.

Infant mortality.—As the births and the deaths in each year were returned by the same registrars, any error due to the alteration of boundaries may be disregarded. During the six earlier years given in the table the infantile mortality was 186 per thousand born. The year with the highest rate was 1893, that with the lowest the one following it. In the ten years 1896-1905 the rate never fell so low as in 1894. The year in that decade with the lowest rate was 1905, when the infants

* The difference of transferred population, which in 1891 was 1,418, had diminished to 70 in 1901, the districts added to Holbeck having increased in population scarcely at all, while those added to Hunslet were mostly areas of growing population.

who died were 160 per 1,000 born, and the year of highest rate 1900, when the ratio was 196. The average of the period was 182. In 1906 it was 175.

Infantile mortality and the employment of married women.—

In the census year, 1901, the number of married women in the township between the ages of 15 and 55 was 12,583, and of these 1,032, or 8·2 per cent., were engaged in some wage-earning occupation. The number of births registered in the eleven years, 1896-1906, was 2,252, giving a fertility rate upon the married women between 15 and 55 of 179 per thousand, a rate in excess of that of the town as a whole. The eleven years included the year 1896, in which the alteration of township boundaries were made. The births in that year, although a 53 weeks one, were below those registered in either the year before or the year after, and also below the actual number in any of the eleven years, except 1905. Any error, therefore, due to difference of area may probably be neglected. The population of married women was, of course, counted on the new area.

It is an interesting point about this district that while the mortality of children under one per thousand born during these eleven years was 10 above the average of the whole City, and whilst the fertility figure per thousand married women of the child-bearing age was 11 in excess of the average of the town, the number of married women working outside their own homes was 49 per thousand below the average of the town. It was less than half the proportion of women working in any of the three registration areas in the township of Leeds.

The general mortality rate in the ten years 1896-1905 was also lower than in North Leeds, practically the same as in West Leeds, and very considerably lower than in South-East Leeds. The infantile mortality rate was higher than in North and West, but lower than in South-East Leeds. It does not, therefore, appear that the lesser employment of women in this district as compared with North and West Leeds had been attended with any improvement in the infantile death rate.

HOLBECK—*Boundaries*.—The Holbeck registration district contains the townships of Holbeck and Beeston. The eastern boundary separating it from Hunslet before and since 1896 has been already sufficiently described. Commencing at the southern of the two crossings of the footway already mentioned near Low Fold, the boundary of Beeston and the borough continues S.S.E. along the Belle Isle Beck for about 400 yards. The southern boundary of Beeston and the borough then turns west towards the Park Wood, turning a little more to the south shortly before it reaches the Wood, which it leaves near the Kennels, it continues in a S.W. direction to the Great Northern Railway, crossing which it turns again to the north, striking the Dewsbury Road, which it crosses a little nearer the town than the Woodman Inn. Thence it continues north and a little to the west along the Beck to Millshaw. It then turns sharp to the west, running nearly to Churwell Station. It crosses the London and North-Western Railway on the Leeds side of that station, then follows the Farnley Wood Beck in a westerly direction to the E. boundary of the Jewish Burial Ground. The boundary turns north, crossing Gelderd Road, continues N. through Farnley Wood, past the Cottingley Springs, then after a short distance turns to the E., then runs N.E. to Far Royds. At Far Royds it strikes E., crosses the London and North-Western Railway and reaches the Wortley Beck on the east side of the railway; follows it along the south of the township of Wortley, re-crossing Gelderd Road and the Great Northern Railway. At a point about 230 yards to the west of the Garden Pit and about 200 yards north of the Pumping Station it turns to the N.W., continues in that direction for about 260 yards; it then turns to the N.E., and in about 150 yards strikes the Wortley Beck again. It then follows this Beck in a northerly direction to Millgreen, and thence to the junction of Wortley and Holbeck Lane. It strikes the Whitehall Road at its Junction with Springfield Road, crosses, and continues in a north-easterly direction across the railway and the

northern part of the Monk Bridge Works to the river ; it follows the River to Whitehall Road Soap Works, and then follows the southern boundary of the South-East district via Camp Field to Meadow Road.

The area included within this boundary contains the townships of Holbeck and Beeston. The former has very nearly, but not quite, the same boundaries as the ward bearing the same name.

With the exception of a small area of nearly stationary population lying to the east of Dewsbury Road, and containing at both censuses about 100 persons, the township of Beeston lies wholly within the West Hunslet ward. The small area just mentioned lies in the East Hunslet ward and, although an intercept of the East Hunslet ward and the Beeston township, has for convenience, in table 22 and similar tables, been considered as if it belonged entirely to East Hunslet. For the purpose of table 21e it has been, however, separated and returned to its own township of Beeston. The area is one not very likely to increase as it is still workable by the Middleton Colliery Company. It contains a few scattered farms, but no new houses.

The district immediately adjacent to it which formerly belonged to the Holbeck township and which has been described as "the tongue," has, however, increased rapidly, but that increase has taken place since it became part of the Hunslet township.

Population.—Many of the remarks about population under the heading of Hunslet apply equally to Holbeck. The transfer after 1896 of areas containing at the time of the 1891 census 2,730 persons from Hunslet to Holbeck, and the transfer from Holbeck to Hunslet of areas containing 1,292 persons, have been allowed for, and the rate of increase or decrease of the population in these areas has been taken into account. It will be understood (1) that in 1896 and the six years before it the population given in the table applies to the old district, and

TABLE 21e.

HOLBECK.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	23,168	798	33·9	568	24·1	145	182
1891	23,818	800	33·7	537	22·6	134	168
1892	24,410	837	34·4	522	21·5	133	159
1893	25,266	806	32·0	563	22·4	164	203
1894	26,035	866	33·4	497	19·2	163	188
1895	26,860	916	34·2	587	21·9	187	204
1896*	27,642	913	32·5	544	19·4	155	170
1897	29,026	997	34·5	602	20·8	213	214
1898	29,759	1,008	34·0	584	19·7	202	200
1899	30,425	1,063	35·1	674	22·2	180	169
1900	31,074	1,069	34·5	640	20·7	208	195
1901	31,741	1,055	33·4	679	21·5	221	209
1902*	32,421	1,106	33·6	589	17·9	187	169
1903	33,105	1,103	33·4	609	18·5	191	173
1904	33,795	1,108	32·9	630	18·7	197	178
1905	34,489	1,075	31·3	594	17·3	158	147
Average of years 1896 to 1905 ..	31,348	1,050	33·5	615	19·6	191	182
1906	35,189	1,007	28·7	595	17·0	185	184

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

(2) from 1897 onwards to the new areas ; (3) that the transference took place on the 1st February, 1897, and (4) that the births and deaths registered before that time were those in the old area, and (5) since that time in the new. There may possibly have been a few errors at the time of the change both in the Registrar's books and our own, but probably not enough to involve any important alteration in rates of mortality.

The township of Holbeck increased considerably between the 1891 and the 1901 censuses. Before the alteration of the area the revised census of 1891 gave the population of the township as 20,630, and of the same area in 1881 as 19,150. In the 1901 census the population of the new area was given as 22,048 for 1891, and 28,249 for 1901, an inter-censal increase of 6,201, or at the annual rate of $2\frac{1}{2}$ per cent. Some 27,870 of this population lived in the Holbeck ward, or workhouse, and the remaining, 379, in the Holbeck part of the West Hunslet ward.

In the township of Beeston the population at the 1891 census had been 2,962 ; at the preceding census in 1881 2,928. In 1901 it was 3,323, an increase of 361 persons, or at the rate of 1.16 per cent. per annum. Of the 3,323 persons in the township of Beeston 105 lived in the part of East Hunslet already spoken of, and 3,218 in the West Hunslet ward.

It has been already said that 379 persons living in the township of Holbeck did so within the boundaries of the West Hunslet ward. What we call the intercept of the West Hunslet ward and the Holbeck registration area included at the time of the census the 3,218 belonging to Beeston and the 379 belonging to the Holbeck township.

From the date of the census in April, 1901, to October, 1907 (the date when this portion of the supplement was being written) there had been an addition to this intercept of 861 houses. Of these 725 were occupied. Multiplying this number by 4.55 we get a population of 3,300, which added to the 3,218 Beeston persons in the West Hunslet ward and the 379 Holbeck

township persons in the same ward at the time of the census, gives 6,897 as the approximate population in October, 1907, in that portion of the West Hunslet ward intercepted by the boundary of the Holbeck registration area. The increase since the census, if uniform, is one of 10·5 per cent. per annum. Calculated in this way the population to the middle of 1906 is 6,085 (geometrical progression), but by arithmetical progression 6,262.

Birth rate.—Assuming the populations given in the second column to be correct for the years in which the births were registered, the birth rate, allowing for the 52 or 53 weeks in the respective years, in the years 1890-1895, averaged 33·6, the lowest rate having been 32 in 1893, the highest 34·4, the year previous. During the ten years 1896-1905 the birth rate was 33·5, almost the same as in the six earlier years. It varied from 35·1 in 1899 to 31·3 in 1905, and fell last year to 28·7.

Death rate at all ages.—Again assuming the accuracy of the populations, the death rate of the six earlier years of the seventeen averaged 21·9, varying from 24·1 in 1890 to 19·2 in 1894. During the ten following years the rate averaged 19·6, varying from 22·2 in 1899 to 17·3 in 1905. In 1906 it was 17·0.

Infantile mortality.—The ratio of the deaths of infants under one per thousand born in the same period is not affected by estimates of populations. Presumably the areas were the same in each year both for the births and the deaths under one. In the first six years given in the table the deaths under one per thousand children born were 184, varying from 204 in 1895 to 159 in 1892. During the following ten years the rate was 182, and varied from 214 in 1897 to 147 in 1905. Last year the rate was 184.

Infantile mortality and employment of married women.—In the whole district at the census of 1901 there were enumerated 9,331 women between the ages of fifteen and fifty-five; 8,386 of them in the Holbeck township, 945 in Beeston. Of this total 3,523 were unmarried, 5,808 were married women or widows.

Of the latter 719, or 12·4 per cent., were returned as employed in wage-earning occupations. The rate was 12·8 per cent. in Holbeck and 8·7 in Beeston. The births registered in the eleven years 1896-1906, of which period the census occupied nearly the middle position, averaged 1,046 per annum in the whole registration area, and this number was 180 for every thousand women married or widowed between the ages of fifteen and fifty-five. This number, which we have called elsewhere the "fertility ratio," was the highest but two in any of the registration areas, and was very considerably higher than that for the City as a whole, which was 168.

For every thousand children born for the whole area during these eleven years, 182 died under one year of age. This figure is also higher than that for the whole City, which was 171 in the same eleven years, and, if we except the small district of Osmondthorpe, where one death counts for a great deal, it was the highest mortality figure but one for any district in the town. The rate, however, was practically the same as that in Hunslet, which was 181.

It would thus appear that while the ratio for the employment of married women was actually lower than the average for the town, and considerably lower than for the North or West registration districts, the mortality figure amongst the new-born was higher than in either of those two districts. The high mortality figure in Holbeck has been a source of considerable anxiety to your Medical Officer for many years. Whatever be the cause it does not appear to be principally due to the employment of the mothers outside their homes.

WORTLEY—*Boundaries*.—The registration area of Wortley includes the civil parishes of Wortley, Armley, and Farnley. The greater part of the eastern boundary of the whole district has been already given in speaking of Holbeck. The southern boundary coincides with that of the borough, where it separates

TABLE 21 f.
WORTLEY.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	48,631	1,699	34·4	1,015	20·5	277	163
1891	49,722	1,658	33·5	1,070	21·6	271	163
1892	50,815	1,683	33·2	954	18·8	279	166
1893	51,868	1,658	32·1	996	19·3	319	192
1894	52,943	1,702	32·3	925	17·5	274	161
1895	54,004	1,662	30·9	1,054	19·6	311	187
1896*	55,008	1,723	30·8	950	17·0	316	183
1897	55,969	1,765	31·6	1,028	18·4	299	169
1898	56,948	1,755	30·9	1,108	19·5	325	185
1899	57,916	1,777	30·8	1,108	19·2	338	190
1900	58,770	1,805	30·8	1,143	19·5	309	171
1901	59,585	1,790	30·1	1,045	17·6	315	176
1902*	60,618	1,863	30·3	1,049	17·0	317	170
1903	61,660	1,760	28·6	1,010	16·4	269	153
1904	62,710	1,666	26·7	1,100	17·6	292	175
1905	63,769	1,653	26·0	943	14·8	245	148
Average of years 1896 to 1905 ..	59,295	1,756	29·6	1,048	17·7	303	172
1906	64,837	1,616	25·0	917	14·2	225	139

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

the township of Farnley from that of Gildersome, and for a short distance from Drighlington. The western boundary separates Farnley from Tong, and then from Pudsey as far as Park Spring. The boundary between Farnley and Bramley township then runs in an easterly direction to Hough End. The western boundary of the district then becomes the boundary of the Armley township, separating it from Bramley. This boundary is a very irregular one. It keeps to the east of Green Thorp, to the east of Green Hill House; it then runs southwards along the western side of the Armley Grange Estate and then back again through that Estate, crossing the main Bradford Road near and to the south of Armley Ridge. It then makes for Cockshott Lane, runs along the southern side of the Wyther House Estate to Houghley Gill, and then makes east to the river. The boundary follows the river down-stream to Monk Bridge, where it joins the Holbeck boundary.

At the time of the census the townships of Wortley and Armley were nearly equal in population, Armley 27,521, Wortley 27,456. A portion of Wortley, with a population of 18,734, is separated from the rest under the name of New Wortley ward. The remainder of the Wortley township, containing Upper and Lower Wortley, is combined with Armley to form the Armley and Wortley ward, with a population at the census of 36,243. The remaining district of Farnley, with a census population of 4,351, is combined for municipal purposes with the small township of Bramley to form the Bramley ward. We are thus able to sub-divide the whole district into the following: (1) New Wortley ward, (2) the remainder of Wortley township, (3) the Armley township, and (4) the township of Farnley. Two complete wards, New Wortley ward and Armley and Wortley ward lie wholly within the sub-district. The township of Farnley, which completes the sub-district, is combined with the township of Bramley to form the ward of that name. The Bramley union contains three sub-

districts, that of Wortley containing the three townships just described, of Bramley containing only that township, and of Gildersome, which lies outside the City.

Population.—The New Wortley ward had decreased in population between the 1891 and 1901 censuses. The township of Wortley had, however, increased by some 600, notwithstanding the decrease in its more populous part. The township of Armley had increased upwards of 8,000. Farnley had also increased. Its population in 1901 was 4,351.

In arriving at the populations given in table 21f for the years 1890 to 1901, the population for each intercept have been got out separately on the method already described, and the populations given in the second column of that table are the sums of the populations of those four intercepts. Since 1901 the simpler method used by the Registrar General has been adopted. For the year 1906 the populations of the whole area is estimated as 64,837.

Birth rate.—Assuming the accuracy of these populations, the birth rate for the six years 1890-95 was 32·7, and varied from 34·4 in 1890 to 30·9 in 1895, the descent being nearly uniform. In the following ten years the rate averaged 29·6, and varied from 31·6 in 1897 to 26·0 in 1905. In this case also, with the exception of the rise in 1897, the descent has been, on the whole, uniform. Last year the birth rate was only 25·0.

Death rate.—Again assuming the accuracy of the populations, the death rate in the six earlier years given in the table was 19·6, and varied from 21·6 in 1891 to 17·5 in 1894. In the following decade the death-rate was 17·7, and varied from 19·5 in 1898 to 14·8 in 1905. In 1906 it was 14·2.

Infantile mortality.—The ratio of deaths in children under one to a thousand births was 172 in the six years, and varied from 192 in 1893, to 161 in 1894. During the following ten years it was 172, and varied from 190 in 1899, to 148 in 1905. Last year it was 139. A fall in the birth rate is at the first apt

to coincide with a fall in the general death rate, but it has not here been associated with a corresponding diminution of infantile mortality.

Infantile mortality and employment of married women.—

During the eleven years 1896-1906 the rate of mortality per thousand born has been 169, which was just under that of the whole City, considerably under the rate in the South-East Leeds, appreciably under that in Hunslet and Holbeck, practically the same as the rate in North and West Leeds, and considerably higher than the rate in Kirkstall, Bramley and Chapeltown.

The fertility rate per thousand married or widowed women between 15 and 55 years of age was 161, not very different from that for the whole City (168), but considerably below the rate for each of the registration areas already dealt with, except West Leeds. It was above the rate that obtained in West Leeds, Kirkstall, Bramley, and Chapeltown.

The number of married women at the census between 15 and 55 was 10,831, and the number of those said to be employed 1,259, or 116 per thousand. The rate was 130 in Wortley, 107 in Armley, and 91 in Farnley. The rate of 116 was slightly below the average for the whole town, and very much below the average for the three Leeds townships. It was slightly below the rate for Holbeck, practically the same as the rate for Bramley, and it was above that for Kirkstall, for Hunslet, and for Chapeltown. The infant mortality rate in the eleven years, it has been seen, was nearly as high as that of the North and West registration districts. It was appreciably below that of Holbeck and of Hunslet, and very considerably below that of South-East Leeds. It was considerably above the rate in Kirkstall and in Bramley, and very considerably above that in Chapeltown. The interesting points in regard to these figures are that the fertility and the infantile mortality rates were practically those of the City as a whole, that the employment of mothers rate was considerably below that of the City, but not below that of Kirkstall, in which district both the fertility and the mortality rates were below the City average.

KIRKSTALL—*Boundaries.*—The registration sub-district of Kirkstall contains only one township, that of Headingley. The greater part is contained in the Headingley ward. The latter, however, contains a small portion belonging to the township of Chapel Allerton, to be mentioned later. The Kirkstall sub-district is bounded on the south-west by the river, from a place opposite Aire Place Dye Works and Aire Tannery Works, to the City boundary at the Cow Beck. From this point the north-west boundary follows the above-named Beck in a north-westerly direction to the Corn Mill. It then follows the Corn Mill goit and goes through the Mill yard back to the stream, then in a northerly direction, keeping to the eastern side of that beck to the ford. At this point it leaves the Horsforth boundary and follows the road in a northerly direction for about 130 yards, and then turns north-east, crosses the railway, and follows the boundary between Leeds and Cookridge in a north-easterly direction to the Cookridge Road. It then crosses the field between the Cookridge Road and the continuation of Old Spen Lane, runs up that road to the end of the plantation, turns east till it reaches the Lawnswood Cemetery, leaves the Cemetery outside Leeds, crosses the Otley Road, turns north-east to the end of the plantation, and then follows the line of what may have been an old water-course down to Weetwood Lane, and crosses that Lane north of Weetwood Farm. It then follows irregularly the water-course in an east-south-east direction for about 300 yards, then turns south-south-east for about 250 yards more, and runs nearly due east to the Meanwood Beck, following that Beck to Bentley. At this point it takes an easterly direction to Bentley Lane, continues more or less in the same direction through the old quarries to Meanwood Road, where it strikes the Bentley Beck and follows it back to the Meanwood Beck at Grove Mills. Keeping south it crosses the footpath on the Ridge at a point nearly opposite the back of Cliff Lodge, follows the boundary between Cliff Lodge and Hill Ridge House along the eastern boundary of the tennis ground, and follows Cliff Lane as far as Back Regent Park

Terrace, then goes along the back of Regent Park Avenue to Hyde Park. It then follows the boundary between Leeds and Headingley down Hyde Park Road to the corner of Woodhouse Moor, and along the line already described in dealing with the West district, to the river.

Population.—The population of this district has been a rapidly increasing one. For convenience, since the last census we have sub-divided the township into three parts, "Kirkstall," "Burley," and "Headingley," and have as far as possible estimated the increase from the information we already had about the two previous censuses. It is not quite easy to trace for the two earlier censuses the divisions for the enumeration areas used for that of 1901, but we have made allowance for interception of areas used at the earlier censuses. The hamlet we have called "Kirkstall" includes all the parts of the township west of a line starting from the river at a point where the goit leaves it at the weir above the Burley Mills, passing north to the Kirkstall Road, then along Kirkstall Road to the lodge at Burley Wood. The line then follows the road from the lodge towards St. Ann's Hill. From the junction of St. Ann's Lane, Kirkstall Hill, and Burley Road it continues in a north-west direction to the railway, follows the line of the rail to the bridge in Kirkstall Lane and thence across Beckett's Park to where the railway crosses Spen Lane. The line then follows the upper part of Spen Lane to Horsforth Lane, and then along the railway to the Cow Beck. The population of the sub-districts to the west and south of the boundary described contained a population in 1881 of 3,207, in 1891 of 3,624, and in 1901 of 4,146, a steady but not a very large increase.

The district or hamlet of Burley lies east of the line already described from the river to the railway, and south of the railway between the point just mentioned and the bridge in Cardigan Lane, then south and east of a line running along Cardigan Lane and the Welton Road as far as the south end of Chesnut

TABLE 21g.

KIRKSTALL.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period.— Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	29,307	923	31·0	543	18·2	147	159
1891	30,243	908	30·1	517	17·2	125	138
1892	31,538	926	29·5	420	13·4	98	106
1893	32,787	994	30·4	605	18·5	177	178
1894	34,063	946	27·9	471	13·9	120	127
1895	35,326	1,039	29·5	561	15·9	179	172
1896*	36,510	1,040	28·0	537	14·5	118	113
1897	37,639	1,026	27·4	576	15·4	153	149
1898	38,779	1,081	28·0	548	14·2	159	147
1899	39,875	1,067	26·9	602	15·1	148	139
1900	40,889	1,085	26·6	661	16·2	191	176
1901	41,859	1,027	24·6	535	12·8	148	144
1902*	43,055	1,098	25·1	560	12·8	112	102
1903	44,258	1,101	25·0	526	11·9	124	113
1904	45,468	1,069	23·6	551	12·2	143	134
1905	46,686	981	21·1	511	11·0	119	121
Average of years 1896 to 1905 ..	41,502	1,058	25·5	561	13·5	142	134
1906	47,911	1,020	21·4	513	10·7	99	97

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

Avenue, and then running south to Brudenell Road and down Queen's Road as far as Royal Park Road, and along Royal Park Road to the boundary of the sub-district at the Moorland Road corner of Woodhouse Moor. This part of the Kirkstall sub-district contained in 1881 a population of 9,791. This number in 1891 had increased to 15,977, whilst in 1901 it had still further increased to 24,833.

The hamlet or district of Headingley lies north and west of the lines bounding Kirkstall and Burley, but does not include the portion of the ward in Chapel Allerton. It had a population of 6,138 in 1881, of 10,309 in 1891, and of 12,531 in 1901.

The varying rates of increase of these three districts has been taken into account in arriving at their estimated populations for 1890 to 1901. These have been arrived at separately in the way already described, and the figures in table 21g for those years are the sum of these estimates. From 1901 to 1906 the Registrar General's method has been adopted.

Birth rate.—During the six earlier years dealt with in table 21g, the number of births in the sub-district showed a tendency to increase. The average birth rate was 29·7, and varied from 31 in 1890 to 27·9 in 1894. In the ten following years, again assuming the correctness of the estimated population, the birth rate was 25·5, a very considerable diminution, and it varied from 28 in 1896 and 1898 to 21·1 in 1905. With two exceptions each of the ten years showed a lower birth rate than the one preceding it. In 1906 the birth rate was fractionally higher than in 1905.

Death rate.—Again assuming the accuracy of the populations, during the six earlier years the death rate averaged 16·2. It varied from 18·5 in 1893 and 18·2 in 1890 to 13·9 in 1894 and 13·4 in 1892. During the following ten years the death rate was 13·5, and varied from 16·2 in 1900 to 11·9 in 1903 and 11·0 in 1905. The rate last year was 10·7.

Our estimated death rates for the several parts of the sub-district during 1906 are Kirkstall 15·59, against an average of 14·62 in the three previous years; Burley 10·88, against an average of 12·00 in the three preceding years; Headingley 8·89, against an average of 10·09. It will be seen, therefore, that the mortality in the hamlet of Kirkstall was 1 per thousand higher than in the three preceding years; that in Burley and Kirkstall in each case the rate was rather more than one per thousand below that of the three earlier years. The whole district in the same way had had a death rate one per thousand less than in those three years. Reference is made to this matter under the head of diphtheria in the supplement to the Report on page 93.

Infantile mortality.—The ratio of deaths amongst children under one to a thousand births was 147 in the six earlier years, and varied from 178 in 1893 to 106 in the preceding year. In the ten years the average was 134, and varied from 176 in 1900, 149 in 1897, and 147 in 1898, to 113 in 1896 and 1903, and 102 in 1902. In 1906 it was 97.

Infantile mortality and employment of married women.—In the eleven years 1896-1906 the infantile mortality in Kirkstall was 131, against 171 in the whole City. The average number of births per annum in these eleven years was 1,054, which, calculated as a fertility rate per thousand of the married women between the ages of fifteen and fifty-five, gave a ratio of 144, which was also below the rate of the City (168). The number of married women engaged in outside occupations at the time of the census was 9·7 per cent., as against 13·1 in the City. All these three rates were therefore below the average of those of the City (see table p. 173).

BRAMLEY—*Boundaries.*—Bramley is a small sub-district in regard to population, but a large one in regard to area. The northern part of the Farnley boundary from the point on the east where Butt Road crosses the Farnley Beck west to Park Springs,

forms part of the southern boundary of the Bramley township. The southern boundary then separates Bramley from Gildersome. The boundary runs to Hough Side, then along the northern of the two roads leading to Pudsey, cutting off from that township the district in which Allenbury's Mill is situate. The line of our western boundary then runs along Bridge Road to the east, then north past Priestley's Mill, crosses the railway and then runs between the railway and the main road a little beyond Stanningley Station. It then follows the Bagley Beck to the river at Rodley.

The northern boundary then runs along the river down stream to a point opposite Burley Mill. The eastern boundary follows the zigzag line already described from the river to Houghly Gill, passing near Armley Grange, and Greenthorpe, back to the boundary where Butt Lane crosses the Farnley Beck.

The township forms part of the Bramley ward. It is the only township in the Bramley sub-district of the Bramley Union, the other part of the Bramley ward, Farnley, coming into the Wortley sub-district, already described.

Population.—The population in 1881 was 11,054, in 1891 14,787, in 1901 17,299, and it is still increasing, though whether to the extent estimated by the Registrar General's method, or not, is uncertain.

Birth rate.—The birth rate in the six years above the horizontal bar in table 21 h averaged 31, and ranged from 33·5 in 1891 to 29·2 in 1895. In the ten years between the two horizontal lines the rate was 27·1, and ranged from 29·3 in 1897 and 1899 to 25·0 in 1905. Last year it was 24·9.

Death rate.—The death rate in the six earlier years was 18·0, varying from 22·9 in 1890 to 13·6 in 1894. In the ten years 1896 to 1905 the average was 15·9, and ranged from 18·6 in 1899 to 13·4 in 1905. Last year the rate was 12·5.

TABLE 21h.

BRAMLEY.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	14,526	453	30·7	338	22·9	78	172
1891	14,867	497	33·5	260	17·5	50	101
1892	15,203	460	30·4	256	16·9	60	130
1893	15,515	462	29·9	312	20·2	89	193
1894	15,820	506	32·1	275	13·6	66	130
1895	16,109	468	29·2	273	17·0	70	150
1896*	16,351	481	29·0	280	16·9	82	170
1897	16,568	483	29·3	273	16·5	71	147
1898	16,798	444	26·5	298	17·8	85	191
1899	17,003	496	29·3	315	18·6	56	113
1900	17,188	449	26·2	262	15·3	66	147
1901	17,365	479	27·7	256	14·8	78	163
1902*	17,628	456	25·5	274	15·3	59	129
1903	17,895	491	27·5	259	14·5	56	114
1904	18,164	470	26·0	290	16·0	68	145
1905	18,435	459	25·0	246	13·4	47	102
Average of years 1896 to 1905 ..	17,340	471	27·1	275	15·9	67	142
1906	18,709	465	24·9	233	12·5	44	95

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

Infantile mortality.—The infant mortality ratio in the six years was 146, and varied from 193 in 1893 to 101 in 1891. In the ten years 1896-1905 it was 142, and varied between 191 in 1898 and 102 in 1905. Last year it was 95.

Infantile mortality and employment of married women.—The number of married or widowed women between fifteen and fifty-five at the time of the census was 3,105. Of these, 367 were at work, or 11·8 per cent. This was smaller than the corresponding proportion in the town, which was 13·1—smaller than in the Holbeck registration area, the South-east, West, or North areas, but slightly in excess of the rate in Wortley sub-district, though lower than the rate in the Wortley township. It was a higher rate than that in Hunslet, Kirkstall, or Chapel-town. Both the mortality and the fertility rate for the eleven years were below the average of the City.

In regard to the employment of women in this district, it is perhaps interesting to know that of the 367 married women at work 225, or 61·3 per cent., were engaged in the woollen trade, 5, or 1·4 per cent. were tailoresses, whilst 8, or 2·2, were engaged in the cotton industry. The percentage of 61·3 of employed women engaged in the woollen trade is larger than in any other district of the town, while the tailoresses formed a smaller proportion in Bramley than in any other district except the small township of Osmondthorpe.

CHAPELTOWN—*Boundaries.*—Chapelton includes, for our statistical purposes, only that portion of the sub-district lying within the City. It includes the whole of the township of Chapel Allerton and the whole of the township of Potternewton, but excludes those of Roundhay and Seacroft. The northern boundary of this district starts from where the eastern boundary of Headingley took a southern direction near Foxhill, follows it to the Meanwood Beck, which it reaches at the wooden bridge. It then ascends the stream, crossing Smithy Lane, and follows

the Beck to the Seven Arches. It still keeps to the stream nearly to Thorner Ford. A little below this Ford it turns directly east, runs along the north of the plantation almost in a straight line to King Lane, crosses King Lane to Moortown, crosses Harrogate Road at Moortown to Moor End Cottage. At this point it turns south, following the eastern boundary of the City. A little to the east of Folly Bank it then turns east, keeping an easterly and south-easterly direction nearly to Home Farm, but stopping about 200 yards short. It then turns south-west, then south, then south-east, passing by Woodlands to Barker Wood. It then passes along the edge of Gipton Wood, still in a south-easterly direction, runs to the east of Gipton Farm and to the north of Low Gipton to Wike Beck, which it follows as it becomes Killing Beck down to the White Bridge. It then runs along York Road towards Leeds to the township boundary, already described, between the White Horse Inn and the East Park Avenue. It then follows the township boundary in a north-westerly direction past the workhouse, along the north side of the cavalry barracks and down Buslingthorpe Lane to Meanwood Beck, following the Meanwood Beck to Grove Mill, from whence the western boundary is the one already described as separating the Chapelton from the Kirkstall sub-district.

Divisions.—The boundary between the townships of Chapel Allerton and Potternewton, the latter the more populous of the two, runs from the point where the Meanwood Road crosses Bentley Beck, up the beck to Grindstone Lane, along Grindstone Lane and a footpath to the north of Scott Hall nearly to Stainbeck Lane. A little short of Stainbeck Lane it makes a bee-line to a point between West Lodge and Allerton Hall, from whence it takes nearly a straight line east to St. Matthew's Church. Leaving the Church and Parsonage on the north (*i.e.*, in Chapel Allerton) it then takes a somewhat undefined line, still in an eastern direction, north of Gledhow Grove to the Gipton Beck. It follows the Gipton Beck down

through Gledhow Wood nearly to the Wetherby Road, where it turns north-east, running a little to the north-west side of Wetherby Road, leaving the Gipton Inn to the east, and then ends at the borough boundary at the corner of Barker Wood and Gipton Wood, near the Park gates.

The whole of the Chapel Allerton township, except a small strip, including Bentley and Meanwood, which belongs to the Headingley ward, lies in the North ward. The boundary of the Headingley ward portion runs, roughly, along Smithy Lane and Stainbeck Lane to Allerton Hall, and then back along the township boundary to Grindstone Lane and the place where the Bentley Beck crosses Meanwood Road, then west to the Meanwood Beck, and along the Meanwood Beck to a point opposite Weetwood, where it diverges to the west nearly to Weetwood Lane, returning, however, to the Beck at the little wooden bridge near Smithy Lane.

The portion of Potternewton between the boundary described from Grove Mill to Allerton Hall, and west of Bell Lane, belongs to the North-West ward, and the portion between Bell Lane and the Harrogate Road belongs to the Brunswick ward, while the portion between Harrogate Road and Harehills Road, north of the cavalry barracks and the workhouse belongs to the North ward. The remainder of the township, including the hamlet of Coldcotes, and bounded by the Harehills Road, Roundhay Road, the borough boundary from Barker Wood to Wike Beck, and down the Wike Beck southwards to York Road, and along York Road to the boundary of the Leeds township, belongs to the North-East ward. There are thus portions of four different wards included in Potternewton township. It is a township which has increased very largely in population, but at different rates in different parts. The township of Chapel Allerton contains two intercepts, so that there are altogether six intercepts of wards and townships in the Leeds portion of the Chapeltown sub-district.

TABLE 21 i.
CHAPELTOWN.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	13,420	308	22·6	185	13·6	32	104
1891	13,956	373	26·8	180	12·9	50	134
1892	14,994	403	27·0	201	13·4	49	122
1893	16,089	438	27·3	234	14·6	55	126
1894	17,319	488	28·3	203	11·8	47	96
1895	18,677	500	26·9	250	13·4	49	98
1896*	20,546	552	26·4	261	12·5	56	101
1897	22,686	638	28·2	321	14·2	106	166
1898	24,690	654	26·6	314	12·8	82	125
1899	26,936	735	27·4	322	12·0	82	112
1900	29,524	802	27·3	416	14·1	98	122
1901	32,306	796	24·7	409	12·7	114	143
1902*	34,148	860	24·8	403	11·6	89	103
1903	35,998	941	26·2	396	11·0	100	106
1904	37,856	930	24·7	454	12·0	106	114
1905	39,720	1,016	25·7	465	11·8	113	111
Average of years 1896 to 1905 ..	30,441	792	26·0	376	12·3	95	119
1906	41,594	964	23·3	471	11·4	82	85

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

Population.—The population of Chapeltown has been obtained in our usual way by estimating the increase of each of the six intercepts just described, namely, the Headingley portion in Chapel Allerton, the North ward portion in Chapel Allerton, and, in Potternewton, the North-West ward portion, the Brunswick portion, the North ward portion, and the North-East ward portion—six intercepts in all. It is possible, therefore, that although the Registrar General's method of estimating the increase of the population of the Leeds portion of the sub-district since 1901 may not be altogether out of court, the populations for some of these intercepts are probably very much so.

For instance, in the North-East ward portion of the district the population in 1881 was 102; in 1891 it was 171; in 1901 it was 6,210. In the spring of 1906 our inspectors counted the houses and enquired as to the number of people living in them, and found that there were 3,539 houses, of which 3,091 were occupied, and contained 12,629 persons, or more than double the population at the census. The population of this intercept, to the middle of 1906 may therefore be regarded as about 12,629. The following remarks apply only to the Chapeltown sub-district within the City taken as a whole.

Birth rate.—The birth rate was 26·5 in the six earlier years. It varied from 28·3 in 1894 to 22·6 in 1890. Neither of these years was very far removed from the census of 1891, and probably the rates are not very inaccurate. The largest number of births in any of these six years was 500. During the next ten years the births increased from 552 in 1896 to 1,016 in 1905, the average being 792. The average birth rate was 26·0, and varied from 28·2 in 1897 to 24·7 in 1901 and 1904. As 1901 was the census year, the probability is that any error in the birth rate for that year is not very great. On our estimated population for 1906 the birth rate was 23·3.

Death rate.—In the six earlier years the death rate was 13·3, the highest in 1893, 14·6, the lowest the following year, 11·8. The ten following years it was 1 per thousand lower, 12·3; the highest 14·2 and 14·1 in 1897 and 1900 respectively; the lowest 11·0, in 1903. Last year it was 11·4.

Infantile mortality.—Chapelton has been all along the district with the lowest infantile mortality. During the six earlier years the rate was 113, the highest rate of the six being one of 134, in 1891. The two lowest rates were 98 in 1895, and 96 in 1894. Between 1895 and 1905 we have supposed that the district has doubled its population. The average infantile death rate was 119, and the variations from 166 in 1897 to 101 in 1896. In 1906 the rate was 85. In no district during the ten years did an infantile death rate fall under 100.*

Infantile mortality and employment of married women.—As may naturally be expected in a residential district, the number of married women employed in outside occupations is low, 7·3 per cent. Rather curiously it is 7·2 per cent. in Potternewton and 8·0 per cent. in Chapel Allerton—the district of Meanwood probably raising the average in this respect. The infant mortality, which we have just described as the lowest of any district in the town, averaged 116 per thousand born during the eleven years 1896-1906. The fertility rate was 142, also considerably lower than the rate for the whole town (168), but not much lower than in Kirkstall (144), nor very much lower than in Bramley (151). The points for observation are that the fertility rate, the infantile mortality, and the employment of married women rate are in each case small. (Table p. 173.)

Of the 336 married women employed in wage-earning occupations in Potternewton, 4, or 1·2 per cent., were engaged in the woollen trade, 43, or 12·8 per cent., were tailoresses, whilst 2, or 0·6 per cent., were engaged in some form of the cotton

* In the small district of Osmondthorpe, in three out of those ten years there was no death under one year of age, but the infantile rate for the ten years was 212.

TABLE 21 k.
OSMONDTHORPE.

Shewing for each year from 1890 to 1906 inclusive the births registered, the birth rate per thousand per annum, the deaths at all ages, and the death rate per thousand living, the deaths under one year of age and the ratio to the thousand births in the same period. Showing also the average in these respects of the ten years previous to 1906.

YEAR.	Population estimated to middle of each year.	Births registered.	Birth rate per 1,000 per annum.	Deaths at all ages.	Death rate per 1,000 per annum.	Deaths under one year.	Death rate under one year per 1,000 births registered.
1890*	434	10	22·7	5	11·3	1	100
1891	429	12	28·1	6	14·0	..	..
1892	423	14	33·2	2	4·7	..	..
1893	417	9	21·7	7	16·8	1	111
1894	411	12	29·3	7	17·1	1	83
1895	406	14	34·6	3	7·4	1	71
1896*	401	6	14·7	10	24·6	2	333
1897	396	10	25·3	6	15·2	2	200
1898	391	9	23·1	13	33·4	2	222
1899	387	4	10·4	7	18·1	1	250
1900	383	3	7·9	4	10·5	1	333
1901	378	9	23·9	5	13·3	..	..
1902*	373	9	23·8	6	15·8	4	444
1903	368	9	24·5	7	19·1	2	222
1904	363	4	11·1	4	11·1	..	..
1905	358	3	8·4	6	16·8	..	..
Average of years 1896 to 1905 ..	380	7	17·3	7	17·9	1	212
1906	353	11	31·3	7	19·9	2	182

* The years 1890, 1896, 1902, were 53 week years, all the others 52.

Births in workhouses have been ascribed to the districts in which they occurred. The deaths in workhouses and other public institutions have been transferred to the districts to which the patients belonged, those from outside the City having been entirely omitted. Deaths of Leeds people dying outside the City have not been added, as our information was generally insufficient to fix the district to which they should be referred. Information about such is to be found in table D, part 2. For the method of obtaining the populations see the text, page 109, and the annual report for 1901.

[Tables 21a to 21k contain the information asked for by the Local Government Board in their table II.]

industry. In Chapel Allerton there were no married women engaged in the cotton industry at the time of the census. Two married women were engaged in tailoring, or 2·5 per cent. of the 79 wage earners.

OSMONDTHORPE.—Osmondthorpe is a small slip belonging to Whitkirk. It lies between York Road and the river. It is bounded, more or less, by the White Beck on the east, and on the west by the boundary, already described, of the Leeds township from near the White Horse to Knostrop. The whole of this area is included in the East ward, and is adjacent to the district in that ward we have called Temple View.

Population.—The population at the three censuses was 481, 431, and 379—a decreasing one. We have lately made a survey of the district and find 121 inhabited houses, containing 546 occupants, or 167 more than the number at the census. Estimated from the census figure and the one just given, the population at the middle of 1906 by arithmetical progression would be 514 instead of 353, or, if worked out by geometrical progression, 509. On the latter hypothesis the population for 1901 and subsequent years should be 384, 407, 430, 455, 481, and 509.

Birth rate.—In a small district like this, with an uncertain population, the birth rate, of course, wobbles tremendously. In the six earlier years it averaged 28·3, varying from 34·6 in 1895 to 21·7 in 1893. In the following ten years it averaged 17·3, varying from 25·3 in 1897 to 7·9 in 1900. With the exception of South-East Leeds it is the only sub-district in Leeds in which the birth-rate last year, as given in the table, exceeded the average of the previous ten years. In South-East Leeds the rate had been 35·1 for the ten years; in 1906 it was 35·6. In Osmondthorpe the rate had been 17·3 for the decade; last year it was 31·3.

Table showing (1) Unmarried and Married Women of child-bearing age and number per 1,000 of the latter earning wages in each township of Leeds at the 1901 census; 2) Average births and deaths under one per 1,000 births; births per 1,000 married women of child-bearing age in eleven years in the Registration Sub-Districts.

1	Women aged 15 to 55 years recorded census 1901.				Average births in 11 years, 1896-1906.		Mortality under one per 1,000 born, 1896-1906 (11 years).	Proportion per 1,000 of married women between ages of 15 and 55 at work.
	Unmarried.		Married.		Registered.	Per 1,000 in col. (4).		
	Total	At work.	Total.	At work.				
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
North...	6,212	5,195	10,413	1,897	2,096	201 *	171 †	182 *
West ...	13,702	10,229	14,244	2,518	2,099	147 †	174 †	177 *
South-East	3,840	3,125	5,996	1,039	1,208	202 *	215 *	173 *
Hunslet	7,534	5,904	12,583	1,032	2,252	179 *	181 *	82 †
{ Holbeck	3,132	2,554	5,254	671 }	1,046	180 *	182 *	124 †
{ Beeston	391	316	554	48 }				{ 128 †
{ Wortley	3,075	2,491	4,974	646 }				{ 87 †
{ Armley	3,329	2,652	5,093	543 }	1,743	161 †	169 †	{ 130 †
{ Farnley	538	435	764	70 }				{ 107 †
Kirkstall	6,729	4,808	7,304	706	1,054	144 †	131 †	97 †
Bramley	2,302	1,872	3,105	367	470	151 †	138 †	118 †
{ Potternewton	4,522	3,014	4,685	336 }	808	142 †	116 †	73 †
{ Chapel Allerton	1,055	715	988	79 }				{ 72 †
Osmondthorpe	43	28	65	4	7	108 †	208 *	{ 80 †
City ...	56,404	43,338	76,022	9,956	12,783	168	171	131

In columns 7, 8, and 9, * means the number is more than the corresponding one for the City; † means less; and ‡ approximately the same.

Taking the geometrical progression population of 509, the birth rate for 1906 becomes 21·6 instead of 31·3. Similar alterations might have to be made for the post census years.

Death rate.—The death rate in the six earlier years averaged only 11·9. During these years we were inclined to look upon the district as one of the healthiest in the town. The range was between 17·1 in 1894 and 4·7 in 1892. In the ten years the rate was 17·9, and varied from 33·4 in 1898 to 10·5 in 1900. The first six and the last ten years show a marked disparity, 11·9 and 17·9. If, however, we divide the sixteen years into two periods of eight years each, the disparity is not so great, though still remarkable. The earlier rate becomes 13·9, and the later 17·3.

In 1906 the rate was 19·9, to which we may probably attach as little importance as the birth rate of 31·3. Calculated on the revised population given on page 172, the death rate would be 13·8, which for a comparatively rural district is still quite high enough. Going backwards and assuming a geometric increase in population, the rate for 1905 was 12·5, for 1904 8·8, for 1903 16·3, for 1902 14·8, and for 1901 13·1, an average for the six years of 13·2, and for the last eight 15·9.

Infantile mortality.—The infantile death rate is scarcely worth calculating for less than the whole sixteen years. The deaths under one in that period were 18, and the births 137, a rate of 131 per thousand, which is nothing to be alarmed about. The uncomfortable thing is that the rate has not decreased in the later period of time.

(3) INTERCEPTS OF WARDS AND SUB-DISTRICTS.

It will of course be understood that by the word intercept we mean that part of any particular township cut off from the rest of it by the boundary line of a ward. In table 22 the registration sub-districts are arranged in the first column, and the intercepts of wards lying in those sub-districts in the second.

For instance, the first registration area is that of the Leeds portion of the Holbeck sub-district, constituted as we have already seen by the townships of Holbeck and Beeston, and the intercepts in it are (1) the part of that area contained in the Holbeck ward, and (2) the part in the West Hunslet ward. The Holbeck intercept lies wholly in the township of Holbeck, the West Hunslet intercept partly in the township of Holbeck and partly in the township of Beeston, but these two intercepts in the Holbeck and West Hunslet wards make up the whole of the Leeds portion of the registration sub-district of Holbeck, with the exception, already mentioned, of a small portion of Beeston, with a population of about 100, which for convenience has been left in the East Hunslet ward, and is included, in table 22, in the middle intercept given as lying in the township of Hunslet.

The registration sub-district of Hunslet, which consists of the township of the same name, contains the remaining part of the West Hunslet ward—the part that is not contained in the Holbeck registration area. It contains the whole of the East Hunslet ward, except the area with the population of 100 just mentioned, which really belongs to the township of Beeston in the Holbeck registration area, but the figures in regard to which are included in the East Hunslet intercept of Hunslet for convenience of tabulation. The third intercept is that portion of the South ward which lies in the township of Hunslet.

The sub-district of South-East Leeds contains the remainder of the South ward, really that part of the South-East registration area south of the river. A portion of the Central ward also comes into South-East Leeds—part of the northern boundary of the South-East registration area intercepting this portion. The remainder of the South-East registration district lies in the East ward, but does not contain the whole of that ward—the township of Osmondthorpe being included in the ward but not in the South-East registration sub-district.

TABLE 22.

Table showing deaths from all causes at all ages, and death rates at all ages in the intercepts of the wards and townships of Leeds for the year 1906.

			Deaths, 1906.	Average death rate per thousand.
HOLBECK	Holbeck		500	16.01
	*West Hunslet		94	25.09
HUNSLET	West Hunslet		414	14.56
	East Hunslet		598	15.85
	South		233	24.38
SOUTH-EAST LEEDS	South	} 26.55 {	112	25.73
	Central		32	29.86
	East		700	23.80
OSMONDTHORPE	*East	} 17.75 {	7	19.87
CHAPELTOWN (part of)	*North-east		166	17.67
	North { C. A.	} 9.40 {	51	9.68
	North { Pott.		208	9.34
NORTH LEEDS	North		300	16.98
	North-east		437	19.59
	Central	} 14.71 {	273	14.61
	Central in W.		5	24.01
WORTLEY	New Wortley		341	18.53
	Armley	} 12.76 {	385	12.01
	Wortley		144	15.31
	Farnley		47	9.88
BRAMLEY	Bramley		233	12.50
KIRKSTALL	Kirkstall	} 10.74 {	69	15.59
	Burley		322	10.88
	Headingley		122	8.89
CHAPELTOWN (part of)	Headingley	} 10.19 {	18	13.31
	North-west		..	..
	Brunswick		28	9.08
WEST	Brunswick		299	15.01
	North-west		482	14.07
	Mill Hill		111	15.92
	West		491	20.85
CITY ... ..	... ..		7,222	15.63
	Outsiders		183	..

The rates are calculated on populations estimated by the Registrar General's method, described at p. 88 of the Annual for 1904.

In Annual for 1891, tables 22, 23, and 24 give deaths and rates in sections of insanitary area No. 1, *i.e.*, the triangular area in the North-East ward. The numbers have not been used for any tables since; but in 1894 two tables dealing with Camp Field and West ward, and in 1905 two tables dealing with Camp Field and the York Street area, were inserted unnumbered between tables 21 and 25.

* See pp. 177 and 178.

In table 22 the deaths during the fifty-two weeks for 1906 are given for each of the intercepts in the City, and in each case include the deaths of persons belonging to that particular area who have died in any institution of the town. One hundred and eighty-three deaths of outsiders, dying in institutions, are excluded from these areas.

Errors in population estimates.—It has been explained elsewhere that several of the intercepts have increased at a more rapid rate since than before the census, and the death rates given in the last column in table 22 must be taken with several grains of salt. The portion of West Hunslet lying in the Holbeck registration area is a case in point. It has been already mentioned, both in speaking of phthisis, page 76, and also in dealing with the population of the Holbeck sub-district, page 151, that the population used for the calculation of the death-rate of 25·09 in table 22 was probably below the actual population of the intercept. The population of this intercept for 1906, estimated by the Registrar General's method, was 3,759. The lower of the two populations estimated from our survey was 6,085. While the former gives a death rate of 25·09, the latter estimated population gives one of 15·46, and I need scarcely say that the lower rate is probably the correct one. In the same way the death rate from all causes in this intercept for the three preceding years, counting backwards, would have been 15·13, 17·53, and 18·04. In table 6c, on page 72, the death rate from phthisis in the West Hunslet intercept of Holbeck is given as 2·94. On a population of 6,085 the rate would be 1·81. The phthisis rate for the four previous years, counting backwards, on corresponding estimates, would have been 1·82 for 1905, and 0·60, 1·34, and 0·72 for 1904, 1903, and 1902 respectively.

In South-East Leeds, though we have divided the East ward portion into two parts—Temple View and Bank—we have not kept the deaths from all causes distinct. The division was intended more for the purpose of studying infant mortality than for any other.

The township of Osmondthorpe is a very small one, and information has been already given about it as a complete township. In this case also it was found that a considerable increase of the population of the sub-district had occurred since the 1901 census, and a corrected death-rate for the whole district is given earlier, on page 174. The rate instead of being 19·87, as given in table 22, should probably not have been more than 13·80.

It has been already mentioned that the part of Potternewton lying in the North-East ward appeared to have a larger population when the houses were counted last year than was estimated for. If the death rate from all causes be calculated on the revised population of 12,629, it becomes 13·19 instead of 17·67, and for the two preceding years 12·55 and 12·70 instead of 15·72 and 14·94, while from phthisis alone the rate for 1906 became 1·51 instead of 2·02, and for the two preceding years 1·09 and 1·04, instead of 1·37 and 1·22.

(4) OTHER LOCAL FACTORS.

Table 25 contains information as to the condition of houses in which disease of an infective type has occurred. It will be remembered that in regard to cases of diphtheria and typhoid fever, it has been our practice ever since the present form of the table has been in use, and even for some few years earlier, to require the examination of the drains by the smell test, in addition to the ordinary routine statement of the conditions found. It is probably on this account that the proportion of drains often found defective in these diseases is a little higher than in some of the others. Examination by test has been used occasionally in other cases, but not as a routine. Since the beginning of 1906 houses in which measles has occurred, and those in which phthisis has been heard of, have had their drains tested in the same way as those in which cases of diphtheria or typhoid had occurred. For some years now the testing of all drains has been usual in connection with house-to-house work.

The work required in getting out special statistics and revising the whole of the populations for different districts has left no time for the analysis of this table and the compilation of a summary from the similar tables in former reports. It has been thought well, however, to make a note of the change in the method of examination in regard to the two diseases named.

TABLE 25.

Shewing case-houses examined on account of certain diseases heard of during 1906, and some of the conditions found as to drainage and closet arrangements.

	1	2	3	4	5	6	7	8	9	10	
	Drains severed.										
	Water-closet.										
	Inside.		Outside.		T.W.C.		M. or P.				
	F.V.	not F.V.	def.	not	def.	not	def.	not	def.	not.	
	def.	not	def.	not	def.	not	def.	not	def.	not.	
Through ...											
Back-to-back ...											
Through ...	1	106		4	1	158		12		10	} 1. Smallpox ...
Back-to-back ...		53		1	1	353		106		6	
Through ...	21	43		4	20	75	5	16		3	} 2. Scarlet fever ...
Back-to-back ...	3	23	2		52	206	3	55	1	2	
Through ...	2					2					} 3. Diphtheria ...
Back-to-back ...		2				2		1			
Through ...											} 4. Membranous croup ...
Back-to-back ...											
Through ...											} 5. "Croup" ...
Back-to-back ...						5		4			
Through ...											} 6. Typhus fever ...
Back-to-back ...											
Through ...	8	19	2		9	35	1	8		2	} 7. Typhoid fever ...
Back-to-back ...	4	6			19	66		43		4	
Through ...											} 8. Continued fever ...
Back-to-back ...						1					
Through ...		16	1	1		44		7		4	} 9. Erysipelas ...
Back-to-back ...		8				131		56		4	
Through ...											} 10. Puerperal fever...
Back-to-back ...					1	6					
Through ...	2	7			3	12		1			} 11. Measles : death-houses
Back-to-back ...	1	6		1	8	88	5	62			
Through ...	2	13			6	28		5	1	7	} 12. Measles : recovery houses
Back-to-back ...	12	37			16	84	2	15		4	
Through ...											} 13. Measles : recoveries in death-houses
Back-to-back ...						1					
Through ...		15		4		38		4			} 14. Diarrhoea ...
Back-to-back ...		7			1	150		109		2	
Through ...	4	19		1	8	44		6		3	} 15. Phthisis : death-houses
Back-to-back ...	5	13		1	11	86	2	41		1	
Through ...	4	21			11	47	2	15		3	} 16. Phthisis : notified in life
Back-to-back ...	10	19			29	176	6	107		6	
Through ...		9		1		24		4		2	} 17. Broncho-pneumonia ...
Back-to-back ...		4				96	1	54		1	
Through ...		18				29		8		1	} 18. Pneumonia ...
Back-to-back ...		7			1	87		43		1	
Through ...								2			} 19. Pleuro-pneumonia ...
Back-to-back ...											
Through ...						2					} 20. Pleurisy...
Back-to-back ...		1				7		1		1	
Through ...		1				2					} 21. Laryngitis ...
Back-to-back ...						4		5			
Through ...		6				6		1			} 22. Influenza ...
Back-to-back ...		2				9		4			
Through ...	44	293	3	15	58	546	8	89	1	35	
Back-to-back ...	35	188	2	3	139	1560	19	706	1	32	
Both ...	79	481	5	18	197	2106	27	795	2	67	

TABLE 25.—Continued

		1	2	3	4	5	6	7	8	9	10	11	Cases.		Total deaths in City.
		Drains not severed.													
		Water-closet.										No drain	Alive.	Dead.	
		Inside.				Outside.		T.W.C.		M. or P.					
		F.V.		not F.V.											
		def.	not	def.	not	def.	not	def.	not	def.	not				
1.	{ Through	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Back-to-back	...	...	...	...	...	...	...	...	...	...	...	2	...	
2.	{ Through	...	...	20	...	1	2	14	...	8	...	...	337	...	33
	{ Back-to-back	...	...	25	...	1	2	82	...	37	...	3	672	...	
3.	{ Through	...	2	8	...	...	6	8	1	...	...	...	209	3	76
	{ Back-to-back	...	9	6	...	...	24	26	10	12	...	3	432	5	
4.	{ Through	...	...	...	...	...	...	...	...	...	...	...	4	...	8
	{ Back-to-back	...	...	...	...	...	...	...	2	...	...	...	7	...	
5.	{ Through	...	...	...	...	...	...	...	...	...	...	...	...	...	5
	{ Back-to-back	...	...	...	...	...	...	2	...	...	...	...	10	1	
6.	{ Through	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Back-to-back	...	...	...	...	...	...	...	...	...	...	...	...	...	
7.	{ Through	...	...	3	...	...	4	1	1	1	...	3	97	...	49
	{ Back-to-back	...	...	2	3	...	10	20	7	11	1	...	195	1	
8.	{ Through	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Back-to-back	...	...	...	...	...	...	...	...	...	...	...	1	...	
9.	{ Through	...	...	...	...	1	2	4	...	...	...	1	81	...	15
	{ Back-to-back	...	1	2	...	...	...	34	...	23	...	1	260	...	
0.	{ Through	...	...	...	...	...	...	1	...	...	...	...	1	...	14
	{ Back-to-back	...	...	...	...	...	...	2	...	...	...	...	9	...	
1.	{ Through	...	...	2	...	...	...	3	1	1	...	1	1	33	275
	{ Back-to-back	...	1	1	...	...	9	27	7	19	1	...	2	234	
2.	{ Through	...	...	...	...	...	...	6	...	...	...	...	68	...	...
	{ Back-to-back	...	3	10	...	...	1	9	1	10	...	1	205	...	
3.	{ Through	...	...	...	...	...	...	1	...	...	...	...	1	...	...
	{ Back-to-back	...	...	...	...	...	...	1	...	...	...	...	2	...	
4.	{ Through	...	...	3	...	...	...	9	...	2	...	...	1	76	450
	{ Back-to-back	...	...	3	...	...	1	44	1	54	...	1	373	...	
5.	{ Through	...	...	2	...	...	2	5	...	2	...	...	...	96	570
	{ Back-to-back	...	4	6	2	...	8	14	7	9	...	...	210	...	
6.	{ Through	...	...	1	...	...	5	5	...	5	1	2	119	3	...
	{ Back-to-back	...	1	7	1	...	17	54	20	56	2	3	516	1	
7.	{ Through	...	...	1	...	...	...	2	...	1	...	...	...	44	271
	{ Back-to-back	...	...	5	...	...	...	34	1	26	...	2	...	224	
8.	{ Through	...	...	1	...	...	...	2	...	...	...	1	...	60	267
	{ Back-to-back	...	...	3	...	...	...	25	...	16	...	...	2	185	
9.	{ Through	...	...	1	...	...	...	...	...	1	...	...	...	4	7
	{ Back-to-back	...	...	...	...	...	...	1	...	1	...	...	...	2	
0.	{ Through	...	...	1	...	...	...	1	...	...	...	...	...	4	17
	{ Back-to-back	...	...	...	...	...	...	1	...	1	...	...	...	12	
1.	{ Through	...	...	...	...	...	...	1	...	...	...	...	...	4	17
	{ Back-to-back	...	...	...	...	...	...	...	1	1	...	1	...	12	
2.	{ Through	...	...	...	...	...	...	1	...	...	...	...	...	14	37
	{ Back-to-back	...	...	...	...	...	...	1	...	...	1	...	...	17	
	Through	...	2	43	...	2	21	64	3	21	1	8	918	341	...
	Back-to-back	...	19	70	6	1	72	375	57	278	4	13	2313	1277	...
	Both	...	21	113	6	3	93	439	60	299	5	21	3231	1618	2111

TABLE E.
VITAL STATISTICS FOR MUNICIPAL YEAR, 1906-7.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the fifty-two weeks ended 28th September, 1907. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	7 Zymotics.
LEEDS. { North ...	1,673	<i>28.54</i>	923	<i>15.75</i>	<i>1.25</i>
{ West ...	1,862	<i>21.90</i>	1,298	<i>15.26</i>	<i>0.76</i>
{ South-East ...	1,227	<i>35.12</i>	755	<i>21.61</i>	<i>1.60</i>
Hunslet ...	2,059	<i>26.87</i>	1,105	<i>14.42</i>	<i>1.24</i>
Holbeck ...	1,064	<i>29.89</i>	528	<i>14.84</i>	<i>1.38</i>
Wortley ...	1,568	<i>23.97</i>	960	<i>14.67</i>	<i>1.11</i>
Kirkstall ...	956	<i>19.64</i>	539	<i>11.07</i>	<i>0.64</i>
Bramley ...	438	<i>23.23</i>	254	<i>13.48</i>	<i>0.90</i>
Chapelton ...	1,030	<i>24.00</i>	451	<i>10.52</i>	<i>0.40</i>
Osmondthorpe ...	11	<i>31.55</i>	5	<i>14.38</i>	...
<i>Outsiders</i> ...	...	...	182	...	...
Totals ...	11,888	<i>25.46</i>	7,000	<i>14.99</i>	<i>1.02</i>

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.			Deaths.	Death Rate.	Wards.			Deaths.	Death Rate.
Eastern Division.					Western Division.				
Central	...	...	281	14'17	Mill Hill	...	...	115	16'75
North	...	...	513	11'11	West	...	...	438	18'62
North-East	...	...	555	17'29	North-West	...	...	475	13'71
East	...	...	626	20'87	Brunswick...	...	...	307	13'33
South	...	...	261	18'96	New Wortley	...	...	324	17'64
East Hunslet	...	...	515	13'43	Armley	...	...	570	13'49
West Hunslet	...	...	518	15'87	Bramley	...	...	320	13'52
Holbeck	...	...	440	13'87	Headingley	...	...	560	11'19

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were one hundred and seventeen deaths at Manston Hospital during this year.

The rates are calculated for the year on populations estimated by the Registrar General's method, described at p. 88 of the Annual for 1904.

PART IV.—ADMINISTRATIVE WORK.

CHANGES IN STAFF.

Chief inspector.—Dr. Arthur Porter, the assistant medical officer of health, chief inspector of nuisances and, for certain sanitary purposes, "surveyor" under the Public Health Acts, resigned his position in June, 1906, on his appointment as Medical Officer of Health for the Urban and Rural Districts of Reigate, in Surrey. While we were all glad that he had secured an important appointment in his native county, it was with the universal regret of the department that we parted with him. Dr. Porter had thrown himself thoroughly into the work of the chief inspector and had raised the tone of the inspectors' work. It was during his time that we first persuaded our sub-inspectors to attempt to state on their reports of nuisance the Act and section under which the nuisance should be dealt with, and after this had been carried out for some time we by degrees entrusted the ordinary ward inspector with the responsibility of drafting the preliminary notices sent to owners and occupiers of property for abatement of nuisances. At the same time each inspector was made to feel that in doing this he was bound to be accurate, and this responsibility has had its usual educative effect.

At the time that Dr. Porter left we had practically got rid of all the privy middens, at any rate in the denser parts of the town, those left being chiefly such as owing to want of water supply, or want of a sufficient sewer, could not at present be dealt with.

Dr. Charles Porter, formerly Deputy Medical Officer of Health in Sheffield, who had also held appointments with the Education Committee and the University in that city, was elected his successor on the first of August, and took office on September 3rd. He is a doctor of medicine and bachelor of science of the University of Edinburgh, as well as a member of the Edinburgh Royal College of Physicians, and a Barrister-at-Law of the Inner Temple.

TABLE I.
Table of Ward Inspectors' Work. Year 1906.

	Quarters.				City Total 1906.
	I.	II.	III.	IV.	
HOUSE INSPECTION.					
1. Houses and premises completely examined on account of	1398	1108	1343	1299	5098
2. Houses and premises examined only as to	167	270	298	263	998
3. Number of houses wholly or partly examined	2348	2321	2461	2790	9920
4. Total number of above houses where sanitary defects were found	2401	1281	70	28	3780
5. Sanitary defects found in above houses	807	440	255	170	1672
6. NUISANCES, &c.	528	434	422	360	1744
7. Houses dirty	7649	5854	4849	4820	23172
8. " overcrowded	1889	1612	1679	1687	6867
9. " with defective eave-gutters or fall pipes	2491	2195	2355	2493	9534
10. " badly drained	97	95	147	149	488
11. " without sink drain	81	57	91	46	275
12. " badly lighted	216	116	103	154	589
13. " with defective or insufficient closet accommodation	272	146	280	590	1288
14. " with dirty closets	725	713	782	869	3089
15. " with drains, &c., temporarily stopped	27	54	40	59	180
16. " with other nuisances	14	8	3	5	27
17. Total nuisances found in houses	1013	884	740	804	3441
18. No. of houses in which above nuisances were found	269	205	174	203	851
19. Street gullies stopped	584	495	533	492	2104
20. Offensive accumulations	815	962	1039	1810	4626
21. Other outside nuisances	4115	3735	3944	5181	16975
22. Total nuisances found	3586	3261	3291	4328	14466
23. Complaints unfounded	239	314	437	265	1255
24. Additional visits paid to houses for	58	57	74	83	272
25. Other outside nuisances	179	257	354	420	1240
26. Total nuisances found	4591	4363	4839	5949	19742
27. Complaints unfounded	9	13	20	11	53
OTHER WORK DONE.					
28. Infective disease	2382	790	3645	2442	9259
29. Nuisances found	2539	2314	2713	2697	10263
30. Completion of Reports	48	687	29	25	789
31. Other causes	5177	2522	2135	1124	10958
OTHER WORK DONE (continued).					
32. Special examinations of drains by tests	..	..	..	..	..
33. Defects found by ditto	..	..	..	..	..
34. Notices and letters served	..	..	..	..	..
35. Dwelling houses unfit for human habitation closed	..	..	..	..	..
36. Houses cleaned	..	..	..	..	..
37. Overcrowded houses dealt with	..	..	..	..	..
38. Defective spouting, &c., repaired	..	..	..	..	..
39. New ashbins	..	..	..	..	..
40. Old middens privies repaired	..	..	..	..	..
41. Do. rebuilt	..	..	..	..	..
42. Privies converted into trough water closets	..	..	..	..	..
43. Do. ordinary water closets	..	..	..	..	..
44. Water closets erected	..	..	..	..	..
45. New dry ashpits	..	..	..	..	..
46. New trough water closets built	..	..	..	..	..
47. Trough closets converted into water closets	..	..	..	..	..
48. Trough closets altered into water closets	..	..	..	..	..
49. Closets cleansed (lime-washed, &c.)	..	..	..	..	..
50. Drains in course of reconstruction	..	..	..	..	..
51. " inspected when connection made to sewer	..	..	..	..	..
52. Disconnections of house drains effected	..	..	..	..	..
53. Cesspools filled up	..	..	..	..	..
54. Public or private wells abolished	..	..	..	..	..
55. Houses supplied with town's water	..	..	..	..	..
56. Trough and water closets repaired	..	..	..	..	..
57. Other house nuisances remedied	..	..	..	..	..
58. Total houses for which above work done	..	..	..	..	..
59. Houses in which all defects found have been remedied	..	..	..	..	..
60. Street gullies cleansed	..	..	..	..	..
61. Offensive accumulations removed	..	..	..	..	..
62. Pollutions of river or streams remedied	..	..	..	..	..
63. Other non-domestic nuisances removed	..	..	..	..	..
64. Additional visits paid to inspect work in progress	..	..	..	..	..
65. Total nuisances abated	..	..	..	..	..
66. City Total 1906.	3070	2908	3371	3587	12936
67. City Total 1906.	1154	1074	1163	1514	4905
68. City Total 1906.	335	279	287	269	1170
69. City Total 1906.	6	3	5	2	14
70. City Total 1906.	..	..	..	..	..
71. City Total 1906.	..	..	..	..	..
72. City Total 1906.	..	..	..	..	..
73. City Total 1906.	..	..	..	..	..
74. City Total 1906.	..	..	..	..	..
75. City Total 1906.	..	..	..	..	..
76. City Total 1906.	..	..	..	..	..
77. City Total 1906.	..	..	..	..	..
78. City Total 1906.	..	..	..	..	..
79. City Total 1906.	..	..	..	..	..
80. City Total 1906.	..	..	..	..	..
81. City Total 1906.	..	..	..	..	..
82. City Total 1906.	..	..	..	..	..
83. City Total 1906.	..	..	..	..	..
84. City Total 1906.	..	..	..	..	..
85. City Total 1906.	..	..	..	..	..
86. City Total 1906.	..	..	..	..	..
87. City Total 1906.	..	..	..	..	..
88. City Total 1906.	..	..	..	..	..
89. City Total 1906.	..	..	..	..	..
90. City Total 1906.	..	..	..	..	..
91. City Total 1906.	..	..	..	..	..
92. City Total 1906.	..	..	..	..	..
93. City Total 1906.	..	..	..	..	..
94. City Total 1906.	..	..	..	..	..
95. City Total 1906.	..	..	..	..	..
96. City Total 1906.	..	..	..	..	..
97. City Total 1906.	..	..	..	..	..
98. City Total 1906.	..	..	..	..	..
99. City Total 1906.	..	..	..	..	..
100. City Total 1906.	..	..	..	..	..

Sub-inspectors.—In June Mr. Mortimer Roberts, who had been a ward inspector since April 1901, left us to take up the position of chief sanitary inspector at Castleford. Mr. Roberts worked in Leeds principally in the Holbeck and Headingley Wards, and we have heard good accounts of him in Castleford since he left us. He held the certificate of the Sanitary Institute and had passed some of the examinations for a medical diploma.

In February, Miss Reinherz, who had come to us as a probationer in March, 1904, and had been appointed six months later as one of our women inspectors, left us to establish a nursing home at St. Leonard's. Miss Reinherz made a very efficient inspector and we should have been glad to have retained her services longer. Miss Reinherz holds the certificate of the Sanitary Inspectors' Examination Board.

Miss Enid Orange, who had been with us as a sub-inspector since March, 1905, and who had previously served her six months as a probationer, left in July, 1906, to undergo an examination. She returned to us for a short time later in the year, and finally left at the end of November, much to our regret. Miss Orange had the certificate of the Sanitary Inspectors examination board, the diploma of the National Health Society, and had passed the preliminary scientific examination of the London University.

Veterinary Assistant to the Medical Officer of Health—Mr. Dixon, who in June, 1905, was appointed veterinary assistant to the medical officer of health, continued his work so much to my satisfaction that I had pleasure in recommending the Committee to avail themselves of the authority obtained in our Consolidation Act of 1905, section 266, and to recommend the Council to appoint him as an additional inspector of nuisances with special authority to carry out seizures of meat. The Committee accepted the recommendation and the Council approved of the appointment on August 1st, 1906.

TABLE II.
Analysis of work done by District Inspectors in the several Wards, 1906.

52 weeks ended Dec. 29th, 1906.										No. III Division. Population—107,181.						No. IV. Division. Population—123,965.												
No. I Division. Population—116,872.										No. II Division. Population—115,457.						No. IV. Division. Population—123,965.												
CITY TOTAL.	MILL HILL.	Central (South of Lady Lane).	North.	N. East.	East.	Division I.	South.	East Hunslet.	West Hunslet.	Holbeck.	Division II.	HOUSE INSPECTION.						NUISANCES, &c.										
												1. Houses and premises completely examined on account of	2. Infective disease	3. Alleged nuisances	4. Houses and premises examined only as to	5. Occupants	6. Buildings and Offices	7. Drainage	8. Number of houses wholly or partly examined	9. Total number of above houses where sanitary defects were found	10. Sanitary defects found in above houses	11. Houses dirty	12. overcrowded	13. damp or dilapidated	14. with defective eave-gutters or fall pipes	15. badly drained	16. without sink drain	17. badly lighted
5,058	84	33	380	561	324	1382	184	486	479	336	1485																	
988	144	53	168	124	94	563	38	53	43	84	218																	
9,920	100	97	385	485	213	1280	800	814	647	776	3037																	
3,780			16,356	8	3589		10	18	20	12	60																	
1,672	31	56	188	14	6	285	30	55	515	285	893																	
1,744	8	3	272	36	344		28	22	193	16	260																	
23,172	367	222	1409	4785	670	7453	1061	1446	1887	1519	5953																	
6,867	148	117	603	548	122	1538	238	344	961	706	2249																	
9,534	181	133	635	803	124	1876	279	437	1366	1087	3179																	
488	4	46	6	47	99	202	22	28	32	48	130																	
275			6	34	11	51	11	15	15	41	82																	
589	13	8	26	48	1	96	94	16	120	90	320																	
1,288	34	28	62	101	38	263	65	235	19	130	449																	
3,089	9	2	312	253	82	688	77	141	745	215	1178																	
180	3	9	27	6	45		21			3	24																	
17			5	1	2	8																						
27	2	2		1		5				2	2																	
3,441	50	39	60	407	36	592	257	77	182	189	715																	
851	28	10	26	82	104	250	51	79	101	88	319																	
2,104	61	17	131	76	148	433	118	146	97	273	634																	
4,626	121	65	285	481	408	1360	203	439	103	417	1162																	
16,975	325	226	919	1558	935	3963	838	1197	1414	1506	5015																	
14,466	275	208	862	1281	916	3543	810	1156	1020	1182	4168																	
1,255	23	17	153	108	146	447	73	60	103	234	470																	
272	4	18	3	23	46	94	11	13	14	25	63																	
1,240	75	36	111	312	96	630	34	59	63	94	280																	
19,742	427	297	1186	2001	1223	5134	1016	1329	1594	1859	5798																	
53	7	4			7	18				3	5																	

City Total.	Mill Hill.	Central (North of Lady Lane).	North.	N. East.	East.	Division I.	South.	East Hunslet.	West Hunslet.	Holbeck.	Division II.	WARDS.										West.	New Worley.	Armsley and Worley.	Bramley.	Division III.	Head- ing (part).	Burley.	N. West.	Brunswick.		Central, (North of Lady Lane).		Division IV.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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This table includes work done by four Works Inspectors and Yiddish Inspectors.

It will be seen that with the exception of the change of assistant medical officer we had not many alterations in our staff of inspectors during 1906.

WARD INSPECTION.

Tables I. and II., as in former years, contain the details in regard to the work of the ordinary ward inspectors. Some analysis of this work for the year ended March, 1907, has been recently prepared for the Committee and presented to the Council. I do not propose to enter further upon it here.

TABLE III.

Shewing the number of drains or sources of pollution diverted from the River Aire and its tributaries and connected to the town sewers.

DATE.	Mills, factory, house drains, stables, and pigstyes.	Water closets.	Privies.	Trade pollu- tions.	Total.
Previous to 30th Dec., 1905	5,871	506	233	78	6,688
During the 52 weeks end- ed 29th Dec., 1906...	9	...	...	...	9
Totals ...	5,880	506	233	78	6,697

INSPECTION OF WORKPLACES.

Bakehouses.—In the Central Ward there were, at the end of 1906, 40 bakehouses, 33 above ground, 7 below. In 16 of the former there were employees to the number of 48, not belonging to the families of the occupiers. In the remaining 17 no outsider was employed, the bakehouses being, in that respect, domestic workshops. In 2 of the 7 underground bakehouses 7 strangers, not members of the occupier's family, were employed. These bakehouses were therefore "workshops," the remaining 5 were domestic workplaces.

Altogether 139 visits were made by the three ward inspectors dealing with this ward to these 40 bakehouses. Seven additional visits were made by my laboratory assistant to underground bakehouses, to Byron Street 1, Grand Arcade 2, Busfield Street 1, Bridge Street 1, North Street 2. On one of these occasions Mr. Lonsdale, the workshops inspector, accompanied Mr. Ferguson to an underground bakehouse, and on another he visited one of the overgrounds alone.

In the North Ward there were 48 bakehouses above ground and 5 below ground on our list. Five of the former were new, 2 had been discontinued during the year. Of the 48 above ground 14 were workshop bakehouses, 21 employees not members of the family having been engaged. In 3 of the 5 underground bakehouses 6 strangers were employed; the 2 others were not workshop bakehouses.

Altogether 108 visits were paid by the ward inspector, 98 to the bakehouses above and 10 to those underground. To the latter 3 visits were paid by my laboratory assistant, all to the same bakehouse, in which alterations had been made. Mr. Lonsdale visited one underground and two overground bakehouses, these visits not being included in the 108 of the ward inspectors.

In the North-East Ward there were 89 overground and 2 underground bakehouses at the end of the year. Twenty-three of the former were new during the year. Of the latter 2 of the 4 existing in 1905 were discontinued during 1906. Of the 89 above ground, in 16 there were employees other than members of the household, numbering 19 in all. The remaining 73 were domestic bakehouses. Both the underground bakehouses were "domestic."

To the latter 8, to the former 290 visits were paid by the ward inspector during the year, while 8 visits to underground bakehouses were paid by my laboratory assistant, 5 of them along with the ward inspector. The workshops inspector made two visits to bakehouses overground.

In the East Ward there are no underground bakehouses. Three new ordinary bakehouses were opened during 1906, 10 persons not members of the occupier's family were employed in 5 of them. The remaining 29 were domestic workplaces. The ward inspector paid 72 visits, and Mr. Lonsdale 1 during the year.

In the South Ward at the end of the year there were 67 overground and 7 underground bakehouses, total 74; increased from 72 the previous year by the opening of two new overground bakehouses. Of the 67 above ground 9 were workshops employing 16 persons from outside. The 58 were "domestic" bakehouses. Of the 7 underground 2 were "workshop" bakehouses employing in each case one outsider. The remaining 5 were domestic workplaces.

Three hundred and nine visits were paid by the ward inspector, 35 to the 7 underground, 274 to the 67 above ground. One underground bakehouse received a visit from my laboratory assistant, Mr. Ferguson, and one of the overground ones from the workshops inspector, Mr. Lonsdale.

In East Hunslet there were 93 bakehouses at the end of 1906, an increase of one as compared with the end of the former year. There was no change in the underground bakehouses, but amongst those above ground 3 new ones had been opened and 2 old ones discontinued. In 3 of the latter, outsiders were employed, one each in two, and two in a third, the remaining 87 being domestic bakehouses. On the other hand in two out of the three underground bakehouses there were 5 outside employees, whilst the remaining one was a "domestic" bakehouse.

Two hundred and five visits were made by the ward inspector, 9 to the underground, 196 to those above ground. Two visits were made by my laboratory assistant to an underground bakehouse in Dewsbury Road.

In West Hunslet the bakehouses were 127, 6 underground, 121 above. There was no change in the number of undergrounds during the year, but the overground bakehouses increased from 116 at the end of 1905 to 121 at the end of 1906. Four of the 121 employed 11 outsiders, the remaining 117 were "domestic" bakehouses. There were 2 outsiders employed in one of the undergrounds, none in any of the remaining 5.

Two hundred and seventy-five visits were paid by the ward inspector, 19 to the six underground, 256 to the bakehouses above ground. Two of the latter also received visits from the Workshops Inspector, Mr. Lonsdale, and visits were also paid—one each but not together—by Mr. Lonsdale and Mr. Ferguson, to underground bakehouses.

In Holbeck there were 98 bakehouses at the end of 1906, 7 new ones above ground having been opened and 17 discontinued. The 3 underground bakehouses remained as last year. In one of these three an outsider was employed making it into a "workshop." In 8 out of the 95 overground bakehouses there were outsiders employed to the number of 18. The remaining 87 were "domestic" workplaces.

The ward inspector paid 192 visits in all during the year, 6 to the three underground bakehouses and 186 to those above ground. The Workshop Inspector also paid 3 visits to the latter class.

In Mill Hill there were 19 bakehouses in the ward at the end of 1906. One underground bakehouse had been discontinued, 1 new one above ground had been made and 1 old above ground discontinued. Of the 15 remaining above ground, 7 had employees who were not members of the family, to the number of 35. In 3 of the 4 underground bakehouses there were altogether 6 employees.

Eighty-eight visits were made, 20 to the undergrounds, 68 to those above ground by the ward inspector during the year. Mr. Lonsdale also made 2 visits to bakehouses above ground, and Mr. Ferguson 9 to four underground bakehouses.

In the West Ward there were, at the end of 1906, 58 bakehouses, 2 underground, 56 above ground. The latter had been 59 in the previous year, 3 having been discontinued. The former had been 3 in the previous year, 1 having been discontinued during 1906. Eleven out of the 56 bakehouses above ground employed outsiders to the number of 16. One outsider was employed in one of the two undergrounds.

One hundred and five visits were paid by the ward inspector, 5 to the undergrounds, 100 to those above ground. One of the undergrounds also received a visit from my laboratory assistant.

At the end of 1906 there were 70 bakehouses in the North West Ward, 63 above ground, 7 below ground. To the former 9 had been added during the year and 2 had been discontinued. Eight of them were not worked entirely by the family, 12 outside employees taking part in the work. The remaining 55 were merely "domestic" workplaces. In the 7 undergrounds there were 5 employees in four of them; three were domestic.

The ward inspector paid 177 visits, 24 to the undergrounds, 153 to those above ground. One visit to an underground was also paid by my laboratory assistant, another to an underground by the workshop inspector, who also made a visit to one of those above ground.

In the Brunswick Ward there were 47 bakehouses; the same as in the previous year. Two above ground were new and 2 were discontinued. One underground was opened during the year and closed again at once without recourse to legal proceedings. Six of the 44 above ground employed 9 outsiders; one of the undergrounds employed 4 outsiders. The other 38 above ground, and both the below grounds were "domestic" workplaces. Ninety-two visits were made by the ward inspector, 10 to those underground, 82 to those above ground. Two visits were made by the workshops inspector to bakehouses above ground, and 2 visits to one bakehouse underground, in Claypit Lane, by my laboratory assistant

In Armley and Wortley the bakehouses at the end of the year were 64, an increase of 4, 10 new ones having been added during the year to those above ground, whilst 5 above ground and 1 below ground were discontinued. Fourteen of those above ground furnished work to 20 employees outside the house, 47 were domestic. One employee from outside worked in one of the underground bakehouses, the other two bakehouses below ground were "domestic."

One hundred and twenty-nine visits were made by the ward inspector, 10 to the undergrounds, 119 to those above ground. The workshops inspector also paid two visits to the latter, whilst three visits were paid to one of the former in Canal Road by my laboratory assistant, Mr. Ferguson. This underground bakehouse has been discontinued.

In New Wortley there are no underground bakehouses. One of those above ground was discontinued during the year, leaving 56. Five of these employed outsiders to the number of ten, 51 did not. One hundred and twenty-seven visits were paid by the ward inspector.

In Bramley the number of bakehouses increased by one above ground to 23; the 2 underground remained as in 1906. At 2 of the 23 above ground one outsider each was employed, while at one of the two undergrounds an outsider was also employed. Eighty-six visits were made by the ward inspector, 9 to the two undergrounds, 77 to those above ground.

The Kirkstall and Headingley portions of Headingley Ward had 23 bakehouses, 1 below ground, 22 above ground. The number of the latter had been increased during the year from 19 to 22. At 6 of them 8 outsiders were employed, at the remaining 16 none. In the single underground bakehouse one outsider was employed. Thirty-two visits were made by the ward inspector, 2 to the underground and 30 to those above ground. One visit was made by Mr. Lonsdale to a bakehouse above ground.

Burley, although a part of Headingley Ward, is sufficiently important to be regarded by itself. There are 55 bakehouses, 9 below and 46 above ground. The 9 below ground had been 10 the year before, the 46 above ground had been 45, 3 new ones having been opened and 2 old ones discontinued. In 10 of the 46 above ground 16 outsiders were engaged, in 4 of the 9 underground 5 outsiders were employed.

One hundred and five visits were made by the ward inspector, 19 to the bakehouses underground, 86 to those above. Ten visits were made to underground bakehouses in Burley by Mr. Ferguson, 5 in Burley village, alone, and 5 in other parts of Burley with the ward inspector.

At the foregoing 963 bakehouses above ground, 275 persons not members of the family of the occupier found work in 144. In 819, only members of the family were employed. In the 64 underground bakehouses, 47 persons outside the occupier's family were employed in 27 of them. In the remaining 37, only members of the occupier's family were employed. Baking, as was remarked in the report for last year, is still carried out in Leeds chiefly in private families.

Workshops.—The visits paid to workshops already on the register were 1,037, against 1,462 in 1905 and 1,489 in 1904. The findings are recorded under the various months in table IV. The decline in the number of visits of this kind was partly due to the demands thrown upon the women inspectors in the examination of the children in South-East Leeds and the following up of the feeding experiment which had commenced in the autumn of 1905. In the report for 1905 it was mentioned that the ladies had made 1,092 inspections and 1,213 return visits to workshops, whereas I shall have to report later on that the corresponding numbers were 842 and 1,080 for 1906. This points, I think, to the necessity of our soon enlarging our staff of women inspectors if we are to keep up with this work, and at the same time carry on our

TABLE IV.

Shewing the sanitary conditions at time of visit of workshops on register and occupied, during the 52 weeks ended December 29th, 1906.

DATE. 1906.	Visits to workshops.	EMPLOYEES AT TIME OF VISIT.			VENTILA- TION.		CONDITION OF PREMISES.				Workshops found closed.
		male.	female.	total.	good.	defec- tive.	rooms.		closets.		
							clean.	dirty.	clean.	dirty.	
5 weeks ended Feb. 3	114	304	483	787	107	7	107	7	100	14	15
4 weeks ended Mar. 3	108	546	757	1,303	102	6	102	6	82	26	1
4 weeks ended „ 31	121	365	775	1,140	117	4	108	13	107	14	13
4 weeks ended Apl. 28	57	261	275	536	54	3	54	3	51	6	15
5 weeks ended June 2	138	820	723	1,543	136	2	131	7	114	24	13
4 weeks ended „ 30	72	286	323	609	64	8	66	6	62	10	3
4 weeks ended July 28	64	238	373	611	63	1	55	9	50	14	4
5 weeks ended Sept. 1	67	174	292	466	67	...	67	...	52	15	7
4 weeks ended „ 29	29	129	125	254	29	...	29	...	23	6	25
5 weeks ended Nov. 3	134	180	648	828	134	...	129	5	108	26	8
4 weeks ended Dec. 1	102	698	681	1,379	100	2	94	8	67	35	8
4 weeks ended „ 29	31	32	111	143	31	...	29	2	28	3	4
Totals	1,037	4,033	5,566	9,599	1004	33	971	66	844	193	116

important enquiries into the cause of infantile mortality, and continue the helpful visits they have been paying to the mothers of newly-born children.

Table IVa. is the modified table now required by the Home Office, and table V. shows first visits to workshops, and the sanitary conditions found at the time of such visits. The number of these first visits, 189, was slightly in excess of those made in 1905. The number of workshops found closed

TABLE IVa.

Factories, Workshops, Laundries, Workplaces, and Homework.

1.—INSPECTION.

Including Visits and Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries.)	711	75	...
Workshops (Including Workshop Laundries.)	3,807	195	..
Workplaces	110	2	...
Total	4,628	272	...

2.—DEFECTS FOUND.				
Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
<i>Nuisances under the Public Health Acts:—*</i>				
Want of cleanliness... ..	225	209	...	...
Want of ventilation... ..	8	5	...	...
Overcrowding	1	1	...	...
Want of drainage of floors	...	...	...	...
Other nuisances	200	188	...	...
Sanitary accom-	{	insufficient	...	...
modation.		unsuitable or defective	...	...
Sec. 22 in force.		not separate for sexes...	...	...
<i>Offences under the Factory and Workshop Act:</i>				
Illegal occupation of underground bakehouse (S. 101)	30	7	...	...
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	72	71	...	...
Other offences	...	...	...	...
Total	876	771	...	...

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

was 8 in excess of those so found in 1905. The 19 workshops found closed were of course new workshops opened and again closed within the year.

Outworkers.—The number of complete inspections on first visits to outworkers was 490, against 493 in 1905. The additional visits on account of work ordered were fewer by 40, and the total visits paid 126 fewer than in 1905. This work is entirely done by the women inspectors, and is referred

TABLE IVa—continued.
3, 4, 5.—OTHER MATTERS.

Homework:—	Number of	
	Lists.	Outworkers.
<i>List of Outworkers (S. 107):—</i>		
(No homeworkers on our register except amongst those engaged in making wearing apparel)	...	...
Lists received twice in the year	148	2,018
" once in the year	32	123
Addresses of outworkers { received from other Authorities... { forwarded to other Authorities...	24	1
Prosecutions	...	...
Inspection of Homeworkers' premises (see table 5a)	490	...
<i>Homework in unwholesome premises:—</i>		
Instances	...	...
Notices	...	...
Prosecutions	...	...
<i>Homework in infected premises:—</i>		
Instances	4	...
Orders made (S. 110)	...	...
Prosecutions (SS. 109, 110)	...	...
[Infectious cases removed, disinfection both of places and material carried out under ordinary powers].		
Workshops on the Register (S. 131) at the end of year	...	...
Ordinary (145 trades)	936	...
Domestic do. (15 trades)	444	...
Bakehouses on register as workshops	144	...
Do. domestic	854	...
Total number of workshops on Register	2,378	...
<i>Matters notified to H.M. Inspectors of Factories:—</i>		
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	22	...
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. Inspector ...	112
	Reports (of action taken) sent to H.M. Inspectors ...	49
	Other	...
<i>Underground Bakehouses (S. 101):—</i>		
Certificates granted during the year	1	...
In use at the end of 1906	62	...

to in a later part of this report. The remark about diversion of their energies in another direction already made applies also to this part of their work.

Other work.—The special work of the senior inspector and his assistant, not included in tables IV. and V., is given in table Vb. For these special purposes the number of visits to factories paid by him or his assistant was 160 more than in 1905 and to workshops 384.

TABLE V.

Shewing workshops not previously visited to which visits have been paid during the year, and the sanitary arrangements at time of visit.

DATE. 1906.		Workshops added to register.	DESCRIPTION OF DRAINAGE.			SITUATION OF CLOSETS.				Workshops found closed.
			cut off.	not cut off.	none.	inside.		outside.		
						w.c. soil-pipe carried up.	w.c. soil-pipe not car- ried up.	Water Closets.	Privies.	
5 weeks ended Feb.	3	6	3	3	...	4	...	2	...	1
4 weeks ended Mar.	3	11	5	3	3	5	...	5	1	...
4 weeks ended „	31	11	5	3	3	3	...	8	...	2
4 weeks ended April	28	23	13	4	6	8	...	15	...	...
5 weeks ended June	2	10	4	1	5	4	...	6	...	...
4 weeks ended „	30	21	10	9	2	10	...	11	...	...
4 weeks ended July	28	15	6	4	5	4	...	11	...	3
5 weeks ended Sept.	1	17	7	4	6	6	...	11	...	...
4 weeks ended „	29	14	3	8	3	4	...	10	...	1
5 weeks ended Nov.	3	25	11	7	7	12	...	13	...	3
4 weeks ended Dec.	1	25	14	2	9	8	...	17	...	8
4 weeks ended „	29	11	5	2	4	2	...	9	...	1
Totals	...	189	86	50	53	70	...	118	1	19

WOMEN INSPECTORS.

Infectious diseases.—On account of puerperal fever 29 houses have been completely examined and 126 other visits paid. In all, 30 cases occurred, but in one instance house inspection was done by the ward inspector, as the case was first notified as typhoid.

TABLE Va. (Outworkers).

Wards.	Complete inspections of houses on first visit.	Additional visits about			Total.
		work ordered.	infectious disease.	other causes.	
Central	20	2	...	8	30
North	18	4	...	14	36
North East... ..	38	8	...	18	64
East	46	10	...	20	76
South	20	2	...	15	37
East Hunslet	15	6	...	15	36
West Hunslet	33	...	...	21	54
Holbeck	40	3	...	27	70
Mill Hill	4	...	...	5	9
West	132	20	...	132	284
North West	30	10	...	19	59
Brunswick	24	8	...	6	38
New Wortley	18	...	...	4	22
Armley and Wortley	20	2	...	4	26
Bramley	4	...	...	2	6
Headingley	28	...	...	18	46
Totals	490	75	...	328	893

Fifty additional visits were paid to midwives and nurses who were attending the patients, and 10 visits were paid by midwives to the disinfecting station for the purpose of being disinfected personally and as to their wearing apparel, under the personal oversight of our inspectors.

This number does not include the relations and neighbours who nursed the patients, some of whom visited the disinfecting

station. In other cases the clothing of the nurse was sent from the house, where the illness occurred, to be disinfected at the station. Among the houses visited on this account one was found to be dirty and one overcrowded. Both defects were remedied.

On account of smallpox 17 visits were made to factories and 45 visits were paid to persons who had directly, or indirectly, been in contact with smallpox patients.

Only one visit was paid in consequence of measles.

On account of phthisis 4 inspections were made and 2 visits paid.

A special inquiry was made in relation to a small outbreak of diphtheria, and in this connection 431 visits were paid.

On account of infectious disease among persons employed 51 visits of enquiry were made to factories, 12 to workshops, and 2 to private houses.

Twenty-six houses of absent employees were visited in connection with this work.

In the girls' and infants' departments of elementary schools 292 visits of inspection were made on account of infectious illness, not including smallpox. To the houses of absentees 179 visits were paid, and 71 other visits were paid in connection with this branch of work. Notices to the number of 21 were sent to the offices of the Education Committee informing them of cases in which it was considered inadvisable that children should return to school until medical advice had been obtained. It was necessary to give three notices for cleansing and limewashing of school premises, all of which were attended to. There were also 9 notices in respect of other nuisances, all of which have been complied with except two.

TABLE Vb.
Other Visits paid by Senior Workshops Inspector and his Assistant on account of

	Factories.	Workshops.
Non-abatements	305	792
Drain inspection	15	3
Drains tested	12	26
Disease enquiries	131	28
River pollution	...	22
Complaints	160	214
Measurement of workrooms	...	27
Wage enquiries	...	...
Bakehouses { underground	...	4
{ above ground	...	20
Other causes	116	285
Appointments	43	68
TOTAL	770	1,463

Work done.

	Factories.	Workshops.
River pollutions abated	...	9
Nuisances abated	171	212

Outworkers.—Table Va. gives, as in previous years, the work of our women inspectors in visiting at their homes persons employed as outworkers. In addition to those given in Table Va. as to the outworkers, 127 visits were paid to their employers. Thirteen notices for the cleansing of premises occupied by

outworkers were given, and these have all been complied with except one. Other sanitary defects to the number of 5 have been found and remedied.

Workplaces.—There were 842 inspections made of workshops, and 1,080 return visits were paid. One notice was given for overcrowding, and was complied with; two for defective ventilation, one complied with; the other workshop had been closed. For cleansing and limewashing 178 notices were given. Of these, 6 have lapsed because the occupiers have left and 9 are not yet remedied. In the case of 62 other nuisances for which notices have been given, 6 are not yet abated, and 3 notices have lapsed because the workshops were closed.

In the matter of insufficient and unsuitable sanitary accommodation 41 notices were given, all being complied with except in three cases where the occupiers had left.

A special enquiry was made during the year into the condition of the Leeds rag-shops. For this purpose 56 rag-shops were thoroughly inspected and 45 return visits were paid to them.

Of workshop laundries 3 inspections were made and 1 return visit paid.

Of restaurant kitchens 81 inspections were made, and 25 other visits paid. One notice was sent on account of a defect and complied with, while 2 notices were sent for cleansing and limewashing. One has been complied with.

In addition to the 51 factories visited on account of infectious illness, 1 was visited on complaint, while 20 further visits were paid to factories on account of defects found.

For cleansing and limewashing closets 4 notices were given, which were all complied with. Four notices for other nuisances were given, one of which has not yet been attended to.

Inspections of shops, for the sake of discovering the conditions of sanitary accommodation for women employed were made to the number of 4.

Infant mortality.—During the year, in South-East Leeds, 323 investigations were made of deaths of infants, and 469 return visits paid. In connection with this work, 155 notices were given to cleanse and limewash. Of these 13 have not yet been complied with, and 15 have lapsed because the occupiers have left. Notices for other defects were given to the number of 23; of these, 3 have not yet been complied with.

Visits to the newly born.—In this branch of the work, 1,175 first visits were made to advise mothers how best to keep their babies in health, and 542 return visits were paid to these homes. Much valuable information was at the same time obtained in regard to the methods of rearing infants, the work and housing of the mothers, &c., some of which has been already analysed in another part of this report. In connection with the distribution of milk and the supervision of infants, 8,854 visits were paid. This does not include 360 visits paid to other persons for the purpose of obtaining information, and regulating the supply of milk.

Thirty-six of the babies visited were systematically weighed, and for this purpose 360 extra visits were paid.

Midwives' Act.—Part of the work, done in the supervision of midwives has been mentioned already under the heading Infectious diseases. Thorough inspection of books and bags was made in 102 cases. In addition to 112 other visits paid, 56 interviews with certified midwives took place at the Public Health Offices, and 7 interviews with maternity nurses.

The number of midwives who have notified their intention to practise during the year 1907 is 74. During the past year two of the older midwives have died.

Altogether 3,480 cases were attended by certified midwives during the year. This number of course includes the still births, of which 59 were notified. It does not include the cases taken by uncertified midwives, many of whom still continue to practise.

Of the 30 cases notified as puerperal fever, 8 were attended by registered midwives, and in three other instances the patients were nursed by certified midwives.

In all, 19 of the cases recovered. Of the 8 cases taken by midwives 3 were fatal.

In such cases special attention has always been given to the disinfection of the bags and their contents, as well as to that of the clothing and persons of those attending these cases. Figures have been already given.

Miss Sharples and her chief aide in this respect, Miss Taylor, report that on the whole there has been steady improvement in the condition of the bags and casebooks, and

TABLE VI.

Ashpits inspected by Nuisance Inspectors during the 52 weeks ended 29th December, 1906.

Number of inspections of ashpits.	Requisitions to cleanse sent to Cleansing Sub-Department from Sanitary Office.	Number of latter returned as carried out.	Ashpits not cleansed within four days of requisition.	Condition of ashpits generally.
36,858	6,121	6,070	24	Good.

TABLE VII.

Refuse Removal (same period).

No. of midden emptyings.	No. of dry ashpit or tub emptyings.	No. of box or pail emptyings.	Total.	LOADS REMOVED.			Total.
				Night-soil.	Dry ashes.	Rubbish.	
...	1,483,624	12,912	1,496,536				184,993

with few exceptions the women have shown a desire to keep the rules and generally to raise the standard of their work, but many of them are very ignorant, and the inspectors' work has chiefly been in enforcing the application of elementary rules of cleanliness.

Notifications of 59 stillbirths have been received during the year. There were 99 notifications of requests for medical assistance, and 15 deaths of infants were notified where no medical practitioner was in attendance.

In the course of examination of the midwives' houses, one was found to be dirty, and in five instances sanitary defects were found and remedied.

Other work.—In the course of enquiry into two cases of lead poisoning, 10 visits were paid. There were 27 visits to philanthropic institutions. On receipt of complaints 26 inspections of houses were made and 34 other visits paid; in 3 cases cleanliness was enforced, and in 9 instances other defects were remedied.

In addition to the work already given, 263 visits were made for various purposes which cannot be classified under any of the previous headings.

CLEANSING.

Ashpit cleansing.—Tables VI. and VII. contain the usual information about ashpits. For some years now there has been a difficulty about getting the number of midden emptyings and loads removed respectively from middens and dry-ash-places, as some rearrangement took place a few years ago in book-keeping. The reason for the change was that the midden-privy had practically disappeared, and that the small number of middens still remaining were emptied in the day time by the ordinary day staff. The practice is to empty these middens as far as

possible first, but they are getting so few that no separate account is kept of them; the number of emptyings of these is therefore included in the dry ashpit emptyings. The total loads removed of nightsoil, dry ashes, and rubbish was 184,993, against 191,814 the previous year and 181,807 in 1904.

Destructors.—The following work has been done at the four destructors:—

At Armley Road 28,093 loads of rubbish, weighing 23,739·9 tons (0·85 tons or 16·90 cwts. per load) were destroyed during 305 working days. On an average of 12 cells, the work per cell per day would be 6·49 tons. The highest observed temperature was 1,500° Fahr.,* the lowest 550°; average, 1,477°. There were 7,320 observations taken. The firemen employed averaged 13 a day, and the amount turned over by each averaged 5·99 tons daily.

At Beckett Street, 24,071 loads of rubbish, weighing 18,521·9 tons (0·77 tons, or 15·39 cwts. per load) were destroyed in 6½ cells during 305 working days, being an average of 9·59 tons per cell per day. The highest observed temperature was 1,500° Fahr.,* the lowest 1,150°; average 1,490°. There were 7,320 observations taken. The average number of firemen employed was 8·5, and their daily turn over 7·16 tons.

At Kidacre Street, 26,800 loads of rubbish, weighing 21,676·1 tons (0·81 tons, or 16·18 cwts. per load) were destroyed in 12 cells during 305 working days, being an average of 5·92 tons per cell per day. There were 7,320 observations of temperature taken, the readings averaged 1,468° Fahr., the highest was 1,500°,* the lowest 540°. The average number of firemen was 11·17, and they turned over an average of 6·37 tons a man daily.

At Meanwood Road, 18,339 loads of rubbish, weighing 14,106·2 tons (0·77 tons, or 15·38 cwts. per load) were destroyed

* The pyrometer does not register above 1,500° Fahr.

in 8 cells during 305 working days, being an average of 5.78 tons per cell per day. There were 7,320 observations of temperature taken, the readings averaged 1,467° Fahr., the highest was 1,500°,* the lowest 650°. The average number of firemen was 6, and they turned over an average of 7.71 tons each day.

Street cleansing.—This heading is intended to include the work done in the ordinary sweeping and gully cleansing to the paved streets, in the watering of streets and roads, in the cleansing of certain Macadam roads and their gullies, and in the removal of snow.

Mr. Mann reports that during 304 working days, 314,867 street cleansings were effected, an average of 1,036 a day. The length of paved streeting cleansable by us is 263 miles.

The cleansing of gullies was equivalent to cleansing 214,838 or an average of 707 per day; charges of disinfectant were applied to all gullies cleansed. In addition to this, 66,854 loads of street refuse were carted away (220 a day), and 166,896 cleansings of courts and yards were effected, an average of 549 a day.

The number of horse-days for street cleansing was 24,673 and for watering 6,745, being an average of 81 and (during 128 days) 53 horses a day respectively.

During the 128 street watering days 117,765 barrels of water were used.

The work done in connection with the unpaved streets was equivalent to the cleansing of 29,552 roads and 19,585 gullies; whilst 20,285 loads of refuse were removed, averaging for 298 working days, respectively 99 roads, 66 gullies, and 68 loads per day. The number of horse-days was 5,203, an average of 17 horses a day.

During the 52 weeks, the sub-department removed 27,376 loads of snow.

* The pyrometer does not register above 1,500° Fahr.

FOOD INSPECTION.

FOOD, DRUGS, AND DAIRIES.

Table VIII. again contains a general summary of the work done by the inspectors of cowsheds and dairies. In 1904 there were 136 cowkeepers on the register, in 1905, 149, in 1906, 145. The milk retailers in these years were 503, 510, and 437, a diminution chiefly due to the clearing of the list of persons who had given up the trade but whose names had remained. The visits made by the ordinary inspectors to cowsheds were 695 in 1904, 886 in 1905, and 967 in 1906. The increase is partly a natural one and partly due to better book-keeping. The visits to milk shops in the same way were 949, 791, and 512, whilst the visits paid to railway stations in connection with the arrival of milk were 219, 210, and 208 respectively. The visits to cowsheds of the veterinary assistant to the Medical Officer of Health were not included in this table until 1905. In that year there were 294, in 1906 they had increased to 451. The other figures in the table speak for themselves.

TABLE VIII.

**Work done in connection with the Cowsheds and Dairies
Order during the 52 weeks ended 29th Dec., 1906.**

Cowkeepers on the register	...	...	...	145
Milk-retailers	"	...	...	437
Visits to cowsheds	...	...	...	967
" " (veterinary)	..	...	...	451
" milkshops	...	...	...	512
" railway stations	...	...	...	208
Cowkeepers discontinued business	...	...	...	4
New cowkeepers registered	...	...	...	5
New cowsheds built	...	...	...	3
Cowsheds reconstructed and provided with additional light and ventilation	...	...	...	8
Farms or milkshops visited on account of infectious disease	...	...	...	23

Cowsheds.—Table VIIIa. contains, as in several previous years, an account of visits to cowsheds by the veterinary inspector for the purpose chiefly of examining cattle. For several years back now it has been our habit to mention also the condition of the shed found at the time of the veterinary inspection, and I have usually commented upon the particular circumstances under which unsatisfactory conditions have been found. On January 3rd, Mr. Dixon found the walls of a shed containing 11 cows dirty. This same shed had been visited the previous year on the same day of the same month, and found in a satisfactory condition, and again on the 14th of April. On the 26th of September both the cows and the shed were found dirty. This is mentioned in my report for 1905, page 107. The occupier was written to by Mr. Walker on the 27th somewhat sharply, and at subsequent visits in 1905 the sheds were found in a better condition. In 1906 there seems to have been a relapse. Though the sheds were still somewhat dirty in Mr. Dixon's opinion, the cows themselves were cleaner than at his previous inspection. The shed was visited again by the ordinary inspector on the 9th of January, 1906, and found clean. It was visited again on the 8th of March, on the 14th of June, on the 24th of October, and again on the 8th of November, and was found clean on all these occasions. It was also visited by the veterinary inspector on the 21st of March and the 8th of November, and in both cases found clean. So that out of six visits paid in 1906 the shed and cattle were found clean on five. We may therefore safely conclude that our visits and notices have resulted in improvement.

On the following day, cowkeeper No. 170, in the North Ward, had some of his 22 cows dirty, and the walls and floors were also dirty. The previous record of this man in both 1904 and 1905 was good. His attention was drawn to the dirty condition, and on January 9th, 1906, the inspector found the place clean. On the 7th of February, the veterinary inspector

TABLE VIIIa.

Veterinary inspection of Cattle, year ended 29th Dec., 1906.

Date of Inspection	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Jan. 3.	964	E.	15	...	healthy	Satisfactory.
"	19	"	17	...	"	Do.
"	145	"	24	...	"	Do.
"	351	"	11	...	"	Walls and floor dirty
"	101	"	16	...	"	Satisfactory.
"	520	N.E.	15	...	"	Do.
"	478	"	18	...	"	Do.
"	295	"	10	...	"	Do.
Jan. 4.	67	N.	21	...	"	Do.
"	170	"	22	...	"	Some cows dirty. Walls and floors dirty.
Jan. 5.	256	A. & W.	12	...	"	Satisfactory.
"	38	"	23	...	"	Do.
"	104	"	21	...	"	Do.
"	431	"	32	...	"	One satisfactory, one requires better ventilation.
"	813	"	15	...	"	Satisfactory.
"	321	Hdy.	13	I (catarrh)	others healthy.	Do.
"	45	N.	20	...	healthy	Do.
Jan. 8.	136	N.E.	13	...	"	Do.
"	220	"	22	...	"	Do.
"	693	"	45	...	"	Dirty in places.
"	1108	"	32	...	"	Satisfactory
Jan. 10.	390	W.H.	13	I (sup. mast.)	others healthy.	Do.
"	135	"	10	I (sup. mast.)	others healthy.	Do.
"	64	"	12	...	healthy	Do.
"	150	Hol.	14	...	"	Do.
Jan. 11.	392	W.H.	16	...	"	Do.
"	43	"	39	...	"	Do.
"	332	"	55	...	"	Do.
Jan. 12.	67	N.	21	...	"	Do.
"	602	"	20	...	"	Do.
"	343a	"	14	I (sup. mast.)	others healthy.	Do.
Jan. 15.	284	N.W.	24	...	healthy	One satisfactory, one overcrowded.
"	559	"	4	...	"	Satisfactory.
"	88	"	26	...	"	Do
"	154	"	1	...	"	Dilapidated.
"	812	Hdy.	8	...	"	Satisfactory.
Jan. 17.	550	"	11	...	"	Do.
"	353	"	17	...	"	Do.
"	676	"	6	...	"	Do.
"	146	"	29	...	"	Do.
"	912	"	23	I (sup. mast.)	others healthy.	Do.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Jan. 17.	470	Hdy.	7	...	healthy	Satisfactory.
"	384	"	12	...	"	Do.
Jan. 26.	67	N.	21	...	"	Dirty walls.
Jan. 29.	35	W.	11	...	"	Satisfactory.
"	164	Hdy.	3	...	"	Do.
"	30	"	2	...	"	Do.
"	389	"	11	...	"	Do.
"	167	"	14	...	"	Do.
"	30	Bmy.	2	...	"	Do.
"	126	"	13	...	"	Do.
"	99	A. & W.	24	...	"	Do.
"	708	"	10	...	"	Do.
"	10	"	4	...	"	Do.
Jan. 31.	405	"	28	...	"	Do.
"	77	Bmy.	35	...	"	Do.
"	635	"	9	...	"	Do.
"	400	"	27	...	"	Clean, but dark.
"	73	"	23	...	"	Satisfactory.
"	249	"	7	...	"	Dirty.
"	92	"	4	...	"	Satisfactory.
"	406	"	6	...	"	Do.
"	407	"	4	...	"	Do.
Feb. 2.	39	N.	48	...	"	Do.
Feb. 7.	801	Bmy.	6	I (indurated)	others healthy.	Do.
"	372	A. & W.	3	...	healthy	Do.
"	67	N.	21	...	"	Do.
"	170	"	22	...	"	Some cows dirty, sheds cleaner.
"	96	W.H.	8	...	"	Dirty.
"	430	Bmy.	16	...	"	Some cows dirty, shed dirty.
"	1014	W.H.	19	...	"	Several cows dirty, shed in bad repair.
"	173	Bmy.	10	...	"	Satisfactory.
"	909	"	16	I (sup. mast.)	others healthy.	Do.
Feb. 9.	398	"	14	...	healthy	Do.
"	765	"	13	...	"	Walls dirty.
"	78	"	17	I (sup. mast.)	others healthy	Satisfactory. Ordered removal of utensils from shed.
"	199	"	15	...	healthy	Satisfactory
"	515	"	9	...	"	Do.
"	128	"	7	...	"	Do.
"	120	"	22	...	"	Floor Dirty.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Feb. 9.	127	Bmy.	24	...	healthy	Satisfactory.
"	318	"	24	...	"	Some cows dirty, shed satisfactory.
"	141	"	19	...	"	Some cows dirty, walls dirty.
Feb. 12.	21	N.	14	...	"	Satisfactory.
"	665	N.	15	...	"	Do.
"	67	N.	21	...	"	Do.
Feb. 14.	159a	E.H.	25	...	"	Do.
"	635	"	16	...	"	Fairly clean.
"	493	E.H.	34	1 (sup. mast.)	others healthy	Dirty. Defective water supply.
"	204	"	7	...	healthy	Satisfactory.
"	378	"	5	...	"	Do.
Feb. 16.	63	Bmy.	6	...	"	Do.
"	360	"	22	...	"	Several cows dirty. Shed dirty, drains stopped, yard dirty.
"	352	"	6	...	"	Satisfactory.
"	337	"	22	...	"	Do.
"	227	"	10	...	"	Do.
"	310	Bmy.	6	...	healthy	Cows dirty. Satisfactory.
"	322	"	5	...	"	Satisfactory.
"	147	"	6	...	"	Do.
"	410	"	6	...	"	Do.
"	70	"	5	...	"	Do.
"	148	"	10	...	"	Do.
Feb. 19.	67	N.	21	...	"	Do.
"	553	Bnk.	13	...	"	Do.
"	896	N.	9	...	"	Do.
"	343	"	25	...	"	Do.
Feb. 20.	85	Hol.	7	...	"	Do.
Feb. 21.	49	N.W.	22	...	"	Do.
"	213	Hdy.	5	...	"	Do.
"	609	"	14	...	"	Do.
"	94	Hdy.	7	...	"	Do.
"	833	N.	24	...	"	Do.
"	338	N.	2	...	"	Do.
"	75	Hdy.	14	...	"	Do.
"	714	"	8	...	"	Some cows dirty. Shed satisfactory.
"	644	"	2	...	"	Satisfactory.
Feb. 23.	544	N.	14	...	"	Some cows dirty. Walls dirty.
"	196	N.	22	...	"	Satisfactory.
"	347	Hdy.	7	...	"	Do.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Feb. 23.	738	Hdy.	7	...	healthy	Satisfactory.
"	393	"	32	...	"	Do.
"	195	N.	19	...	"	Do.
Feb. 26.	246b	A.&W.	6	...	"	Do.
"	402	"	10	...	"	Do.
"	246a	"	10	...	"	Do.
"	445	"	5	...	"	Do.
"	67	N.	21	...	"	Do.
Feb. 28.	557	E.H.	4	...	"	Do.
"	266	E.H.	2	...	"	Do.
Mar. 2.	360	Bmy.	...	...	Sec Feb 16th	Cows and shed fairly clean yard bad.
"	243	"	9	...	healthy	Satisfactory.
"	201	"	5	...	"	Do.
"	682	"	17	...	"	Do.
"	822	"	8	...	"	Do.
"	21	"	10	...	"	Do.
"	574	"	14	...	"	Do.
"	408	"	11	...	"	Do.
Mar. 5.	67	N.	21	...	"	Do.
Mar. 7.	209	Bmy.	7	...	"	Do.
"	835	S.	11	...	"	Do.
"	90	E.	17	...	"	Do.
"	145	"	28	...	"	Do.
"	964	"	16	...	"	Do.
Mar. 9.	543	N.	20	...	"	Do.
"	553	"	25	...	"	Do.
"	739	"	2	...	"	Do.
"	45	"	16	...	"	Do.
Mar. 12.	67	"	21	...	"	Do.
"	693	N.E.	46	...	"	Do.
Mar. 15.	1011	E.	6	...	"	Do.
"	329	"	14	...	"	Do.
"	172	"	28	...	"	Do.
Mar. 21.	295	N.E.	9	...	"	Do.
"	478	"	9	...	"	Do.
"	520	"	15	...	"	Do.
"	351	E.	11	...	"	Do.
"	101	"	15	...	"	Do.
"	136	N.E.	12	...	healthy except one*	Do.
"	220	"	22	...	healthy	Do.
"	1108	"	30	...	"	Do.
"	739	N.	21	...	"	Do.
Mar. 23.	153	C.	8	...	"	Insanitary.
"	151	"	3	...	healthy	Satisfactory.

* One cow emaciated, advised destruction.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Mar. 23.	7	C.	5	...	healthy	Satisfactory.
"	66	"	12	...	"	Do.
"	67	N.	21	...	"	Do.
Mar. 28.	256	A.&W.	12	...	"	Do.
"	38	"	24	I (sup. mast.)	others healthy.	Do.
"	104	"	21	I (sup. mast.)	others healthy.	Do.
"	431	"	30	...	healthy	Some cows dirty, ^{satisfactory}
"	813	"	21	I (? tuberculous)	others healthy.	Satisfactory.
"	167	Hdy.	14	...	healthy	Do.
"	389	"	11	...	"	Do.
"	321	"	16	...	"	Do.
"	35	W.	11	I (tuberculous)	others healthy.	Do.
Mar. 30.	67	N.	21	...	healthy	Do.
"	343 ^a	"	9	...	"	Do.
"	602	"	20	...	"	Do.
April 2.	801	Bmy.	6	...	1 pericarditis, others healthy	Do.
"	813	A.&W.	1	I (tuberculous)	(See March 28th)	Do.
April 3.	38	"	1	...	(See March 28th)	Do.
"	431	"	30	...	healthy	Cows and sheds cleaner.
April 6.	67	N.	21	...	"	Satisfactory.
April 9.	164	Hdy.	3	...	"	Do.
"	30	"	2	...	"	Do.
"	85	Hol.	7	...	"	Do.
April 11.	51	Bmy.	3	...	"	Do.
"	337	"	22	...	"	Do.
"	310	"	6	...	"	Do.
"	322	"	5	...	"	Do.
"	147	"	6	...	"	Do.
"	410	"	cows out.	...	...	Do.
"	70	"	5	...	healthy	Do.
"	148	"	cows out.	...	...	Do.
"	227	"	12	I (sup. mast.)	others healthy	Do.
April 19.	493	E.H.	36	...	healthy	Fairly clean.
"	633	E.H.	12	...	"	Satisfactory.
"	36	Bmy.	2	...	"	Do.
"	126	"	13	...	"	Do.
"	99	A.&W.	27	...	"	Do.
"	227	Bmy.	7	...	(See 11th instant).	Do.
April 20.	39	N.	47	...	healthy	Do.
"	67	"	21	...	"	Do.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
April 20.	170	N.	22	..	healthy	Some cows dirty. Sheds dirty.
"	543	"	20	...	"	Satisfactory.
April 23.	150	Hol.	12	...	"	Do.
"	64	W.H.	12	...	"	Do.
"	135	"	11	...	"	Do.
"	390	"	17	...	"	Do.
"	392	"	8	...	"	Do.
"	43	"	37	...	"	Do.
April 24.	515	Bmy.	10	...	"	Do.
"	128	"	7	...	"	Do.
"	120	"	22	...	"	Do.
"	127	"	23	...	"	Do.
"	318	"	23	...	"	Do.
"	141	"	18	...	"	Do.
April 26.	665	N.	15	...	"	Do.
"	4	"	14	...	"	Do.
"	67	"	21	...	"	Do.
"	553	Bnk.	12	...	"	Do.
May 1.	243	Bmy.	9	...	"	Do.
"	201	"	(cows out)	...	...	Do.
"	682	"	19	...	healthy	Do.
"	822	"	8	...	"	Do.
"	21	"	(cows out)	...	...	Do.
"	574	"	14	...	healthy	Walls dirty.
"	408	"	11	...	"	Satisfactory.
"	227	"	1	...	(See Ap. 11)	
May 2.	284	N.W.	12	...	healthy	Satisfactory.
"	559	"	5	1	others healthy.	Satisfactory.
"	88	"	26	(indurated)	healthy	Do.
"	812	Hdy.	8	...	"	Do.
May 3.	146	"	30	...	"	Do.
"	913	"	23	...	"	Do.
"	384	"	12	...	"	Do.
"	470	"	6	...	"	Do.
"	353	"	17	...	"	Do.
"	676	"	6	...	"	Do.
"	550	"	11	1	others healthy.	Do.
May 4.	227	Bmy.	1	(sup. mast.)	(See April 11).	
"	559	N.W.	1	...	(See May 2)	
"	67	N.	17	...	healthy	Satisfactory.
May 7.	559	N.W.	1	...	(See May 2nd)	
May 8.	430	Bmy.	14	...	healthy	Satisfactory.
"	332	W.H.	54	...	"	Do.
"	96	"	7	...	"	Do.
"	1014	W.H.	18	1	others healthy.	Quite unsatisfactory.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
May 9.	...	S.	3	...	healthy	Satisfactory (unregistered)
May 10.	67	N.	17	...	"	Satisfactory.
"	896	"	cows out	...	...	Do.
"	343	"	cows out	...	...	Do.
"	553	"	26	...	healthy	Do.
May 14.	550	Hdy.	1	...	(See May 3rd)	
May 16.	77	Bmy.	37	...	healthy	Satisfactory.
"	909	"	12	...	"	Do.
"	173	"	12	...	"	Do.
May 18.	550	Hdy.	1	...	(See May 3rd)	
"	67	N.	17	...	healthy	Satisfactory.
"	195	"	cows out.	...	...	Do.
"	896	"	8	...	healthy	Do.
"	343	"	24	...	"	Do.
May 23	835	S.	11	...	"	Do.
"	266	E.H.	2	...	"	Do.
"	557	"	cows out.	...	...	Do.
May 25.	609	Hdy.	"	...	...	Do.
"	644	"	"	...	...	Do.
"	213	"	5	...	healthy	Do.
"	49	N.W.	cows out.	...	...	Do.
"	393	Hdy.	32	...	healthy	Do.
"	347	Hdy.	7	...	"	Do.
"	195	N.	18	...	"	Do.
"	738	Hdy.	5	...	"	Do.
"	94	"	cows out.	...	...	Do.
May 28.	67	N.	17	...	healthy	Do.
"	543	"	17	...	"	Do.
May 30.	714	Hdy.	cows out	...	...	Do.
"	75	"	12	...	healthy	Do.
"	833	N.	25	...	"	Do.
"	338	"	cows out.	...	...	Do.
"	49	N.W.	21	...	healthy	Do.
June 8.	739	N.	19	...	"	Do.
"	45	N.	16	...	"	Do.
June 11.	67	N.	17	...	"	Do.
"	693	N.E.	41	...	"	Do.
June 13.	159a	E.H.	24	1 (sup. mast.)	others healthy	Do.
June 15.	196	N.	18	...	healthy	Do.
"	544	N.	14	...	"	Do.
June 16.	67	N.	2	...	"	Do.
June 19.	159a	E.H.	1	...	(See June 13th)	
June 22.	67	N.	19	...	healthy	Satisfactory.
"	170	"	cows out.	...	...	Cleaner.
June 25.	159a	E.H.	1	...	(See June 13th)	

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
June 27	67	N.	19	...	healthy	Satisfactory.
"	406	Bmy.	cows out.	...	...	Fairly clean.
"	407	"	5	...	healthy	Satisfactory.
"	398	"	11	...	"	Do.
"	175a	"	11	...	"	Do.
"	765	"	8	...	(One milk fever) others healthy.	Do.
"	92	"	cows out.	...	...	Do.
July 4.	159a	E.H.	1	...	(See June 13th)	
July 6.	765	Bmy.	1	...	(See June 27th)	
July 11.	21	"	10	I (tubercle)	others healthy.	Satisfactory.
"	209	"	cows out.	...	...	Do.
"	360	"	5	...	healthy	Sheds and yard dirty.
"	63	"	cows out.	...	...	Satisfactory.
July 12.	67	N.	17	...	healthy	Do.
July 17.	515	Bmy.	cows out.	...	...	Do.
"	21	"	1	...	(See July 11th)	
July 18.	405	A.&W.	28	...	healthy	Some cows dirty. Satisfactory.
"	1014	W.H.	17	...	"	Satisfactory.
July 20.	67	N.	17	...	"	Do.
July 23.	21	Bmy.	1	...	(See July 11th)	
July 26.	67	N.	19	...	healthy	Do.
"	543	"	cows out.	...	...	Do.
Aug. 9.	67	"	15	...	healthy	Do.
Aug. 10.	21	Bmy.	1	...	(See July 11th)	
Aug. 15.	67	N.	17	...	healthy	Do.
Aug. 16.	609	Hdy.	13	...	"	Do.
"	644	"	2	...	"	Do.
"	94	"	cows out.	...	...	Do.
"	338	N.	cows out.	...	...	Do.
Aug. 17.	739	"	17	...	healthy	Do.
Aug. 22.	21	Bmy.	1	...	(See July 11th)	
Aug. 27.	73	"	22	I (sup. mast.)	others healthy.	Do.
"	400	"	27	...	healthy	Do.
"	249	"	9	...	"	Dirty.
"	635	"	10	...	"	Clean. Another window wanted.
Aug. 30.	67	N.	18	...	"	Satisfactory.
Sept. 7.	45	"	16	...	"	Do.
Oct. 3.	204	W. H.	cows out.	...	...	Do.
"	378	"	cows out.	...	...	Do.
Oct. 10.	1011	E.	6	...	healthy	Do.
"	329	"	16	...	"	Do.
"	172	"	33	...	"	Do.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Oct. 11.	553	N.	25	...	healthy	Satisfactory.
Oct. 16.	78	Bmy.	16	...	"	Do.
"	199	"	cows out.	...	...	Do.
Oct. 30.	90	E.	32	...	healthy	Do.
Nov. 2	372	A.&W.	4	...	"	Do.
"	10	"	7	...	"	Dirty.
"	708	"	14	...	"	Satisfactory.
"	402	"	10	...	"	Dirty.
"	246b	"	6	...	"	Satisfactory.
"	246a	"	10	...	"	Do.
"	445	"	4	1 (indurated)	others healthy	Do.
Nov. 5.	445	"	1	...	(See Nov. 2nd)	
Nov. 7.	445	"	1*	(?)	"	
Nov. 8	295	N.E.	9	...	healthy	Satisfactory.
"	351	E.	9	1 (indurated)	others healthy	Do.
"	101	"	18	...	healthy	Do.
"	478	N.E.	20	...	"	Do.
"	136	"	18	...	"	Do.
"	220	"	22	...	"	Do.
"	137	N.E.	33	...	"	Do.
"	138	"	46	...	"	Do.
Nov. 13.	351	E.	1*	—	(See Nov. 8th)	
Nov. 14.	146	Hdy.	32	...	healthy	Satisfactory.
"	384	"	12	1 (tuberculous)	others healthy	Do.
"	912	"	23	...	healthy	Do.
"	353	"	18	...	"	Do.
"	550	"	11	...	"	Do.
"	676	"	7	...	"	Do.
"	75	"	16	...	"	Do.
"	714	"	cows out	...	...	Do.
"	338	N.	2	...	healthy	Do.
"	522	"	28	...	"	Do.
"	738	Hdy.	6	...	"	Do.
"	195	N.	18	...	"	Do.
"	592	Hdy	cows out	...	...	Do.
Nov. 16.	104	A.&W.	23	...	healthy	Do.
"	431	"	33	...	"	Do.
"	813	"	cows out	...	...	Do.
"	167	Hdy.	22	...	healthy	Do.
"	389	"	11	...	"	Do.
"	30	"	2	...	"	Do.
"	164	"	3	...	"	Do.

* Tuberculin test.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Nov. 16.	321	Hdy.	13	...	healthy	Satisfactory.
"	35	W.	9	...	"	Do.
Nov. 19.	384	Hdy.	1	1 (tuberculous)	(See Nov. 14th)	Do.
"	592	"	17	...	healthy	Do.
"	714	"	11	...	"	Do.
Nov. 21.	148	Bmy.	10	...	"	Do.
"	682b	"	8	...	"	Clean, but requires improvement.
"	360	"	cows out.	...	...	Satisfactory.
"	209	"	9	...	healthy	Do.
"	352	"	9	...	healthy	Do.
"	337	"	24	...	"	Clean, but one wants more ventilation.
"	227	"	13	..	"	Clean, but one overcrowded.
"	310	"	6	...	"	Satisfactory.
"	322	"	5	...	"	Do.
"	51	"	4	...	"	Do.
"	147	"	6	...	"	Do.
"	410	"	6	...	"	Do.
"	70	"	6	...	"	Do.
"	574	"	14	...	"	Do.
"	408	"	14	...	"	Do.
Nov. 23.	21	"	10	...	"	Do.
"	822	"	10	...	"	Do.
"	682	"	17	...	"	Do.
"	243	"	9	...	"	Do.
"	201	"	5	...	"	Walls Dirty.
"	360	"	cows out.	...	...	Satisfactory.
"	63	"	6	...	healthy	Do.
Nov. 28.	407	"	5	...	"	Do.
"	406	"	6	...	"	Do.
"	92	"	cows out.	...	...	Do.
"	249	"	9	...	healthy	Do.
"	73	"	24	...	"	Do.
"	400	"	27	...	"	Cows dirty, shed fairly clean.
"	635	"	10	...	"	Satisfactory.
"	175a	"	14	...	"	Do.
"	515	"	10	...	"	Do.
"	128	"	7	...	"	Do.
"	120	"	23	...	"	Cows dirty, shed dirty.
"	127	"	25	...	"	Satisfactory.
"	141	"	18	..	"	Do.

TABLE VIII a.—Continued.

Date of Inspection.	Register No.	Ward.	Cattle and Condition.			Condition of Shed.
			No. Examined	Udder diseased.	General Condition	
1906.						
Nov. 28.	318	Bmy.	24	...	healthy	Satisfactory.
"	398	"	14	...	"	Do.
"	765	"	11	...	"	Do.
Nov. 30.	835	S.	11	...	"	Dirty, shed and yard.
"	557	E.H.	5	...	"	Satisfactory.
"	266	"	4	...	"	Do.
Dec. 5.	49	N.W.	24	...	"	Do.
"	284	"	21	...	"	Do.
"	39	N.	46	...	"	Do.
Dec. 7.	553	Bnk.	15	...	"	Do.
"	896	N.	9	...	"	Do.
"	343	"	29	...	"	Do.
"	343 ^a	"	17	...	"	Do.
"	602	"	23	...	"	Do.
Dec. 10.	196	"	21	...	"	Do.
"	544	"	12	...	"	Do.
"	609	Hdy.	14	...	"	Do.
"	644	"	2	...	"	Do.
"	213	"	5	...	"	Do.
"	94	"	7	...	"	Do.
"	393	"	35	...	"	Some clean, but some dirty.
"	347	"	8	...	"	Satisfactory.
Dec. 13.	199	Bmy.	15	...	"	Do.
"	78	"	16	...	"	Do.
"	77	"	37	...	"	Do.
"	909	"	13	...	"	Do.
"	801	"	5	...	"	Dirty.
"	173	"	12	...	"	Satisfactory.
"	405	A.&W.	27	...	"	Do.
Dec. 18.	204	E.H.	6	...	"	Do.
"	378	W.H.	6	...	"	Do.
"	493	E.H.	36	...	"	Cows dirty, shed unsatisfactory.
Dec. 19.	445	A.&W.	1*	—	(See Nov. 7th)	
Dec. 21.	351	E.	1*	—	(See Nov. 13th)	

* Retested, no reaction in either case.

found some cows dirty, but the sheds cleaner. The man was cautioned, and on visiting again on February 15th, the place was found clean. On April 20th, this cowkeeper seems to have again relapsed into his dirty habits. Special attention was given to him and, on May 20th, the inspector was able to report that the cows were clean. On June 22nd the cows were out and the sheds were found cleaner. Later in the year certain partition walls within the cowshed were removed, since which time it has been easier for the occupier to keep the place clean, and this he seems to have done.

On January 5th cowsheds on farm No. 431 in the Armley and Wortley Ward, containing 32 cows, were visited. One was regarded as satisfactory. A note was made that the other required better ventilation. The occupier received written notice. On the 12th of February, the inspector reports that this has been secured and the place cleaned. On the 28th of March, the Veterinary Assistant to the Medical Officer of Health again visited, and found the sheds satisfactory, but some of the cows dirty. On the 3rd of April the veterinary assistant again visited, and found the sheds and cows cleaner. On the 10th of April the ordinary inspector enters them as clean, and again on November 16th, when everything was satisfactory. At the veterinary inspector's three visits in the previous year things had been satisfactory.

On the 8th of January, at farm No. 693, in the North-East Ward, where the veterinary inspector examined 45 cows all healthy, he found the sheds dirty in places. On January 23rd the ordinary inspector reports that on his visit he found the place clean. On March 12th another veterinary inspection was made; matters were satisfactory. At a similar inspection on June 11th, the sheds were also found clean. Mr. Walker also visited the cowshed on February 19th, March 14th (about a case of measles), July 23rd, and October 2nd, and found it clean on each occasion.

This shed had been visited by the veterinary inspector once in 1904 and three times in 1905 (under No. 138), and on all four occasions reported as satisfactory. In this case the man had probably been increasing his stock without securing sufficient assistance.

On the 15th of January one of the cowsheds at farm No. 284 was overcrowded. The matter was put into the hands of the ordinary inspector, who visited on January 23rd, and induced the occupier to erect another shed. On the 2nd of May the veterinary inspector reported matters as satisfactory, and again on a later visit on December 5th. Mr. Walker had, in addition to this visit on January 23rd just mentioned, when the sheds were both clean but one overcrowded, visited also April 7th and October 15th.

At a previous visit in 1905 the man had only 15 cows, and in January, 1906, he had not increased the accommodation in proportion with the increase of his cattle. The additional shed was nearly complete when Mr. Walker visited on April 7th, and was occupied before May 2nd. The place was clean and tidy on October 15th.

On January 15th cowshed No. 154 was visited. Only one cow remained, and the shed was becoming dilapidated. In the report for 1905, page 105, this cowshed is specially referred to. The single cow remaining on January 15th had been got rid of at the time that report was written, and the cowshed has since been entirely disused.

On the 26th of January cowkeeper No. 67, in the North Ward, was reported as having dirty walls. This farm was receiving special attention, as the Pure Milk Association were obtaining their supply there. The walls although reported upon as dirty, the veterinary inspector remarks were so in regard to the higher standard that was being maintained in this cowshed rather than to that prevailing in the Borough generally. The walls

were cleansed on the 30th of January. Frequent visits were paid to this farm. The farm was again visited on February 7th, 12th, 19th, 26th, March 5th, 12th, 23rd, 30th, April 6th, 20th, 26th, May 4th, 10th, 18th, 28th, June 11th, 16th, 22nd, 27th, July 12th, 20th, 26th, August 9th, 15th, and 30th, on each of which occasions the cattle and sheds were both satisfactory.

On January 31st Mr. Dixon, at farm No. 400, found 27 cows. The place was clean but dark. On the 24th of November the previous year, Mr. Walker had written to the occupier that more light was required. He saw the occupier personally later, who promised to speak to the owner. After that time but subsequent to January 31st, further visits were paid by the ordinary inspector, who found that on February 9th the work had still not been done. On May 12th he found that a large window had been made in the roof apparently a few weeks before. This farm was visited by the veterinary assistant on August 27th, and reported satisfactory, and again on November 28th, when the shed was fairly clean but the cows rather dirty. The owner was again cautioned.

On same day, farm No. 249, in the same Ward, was reported as dirty. The occupier was cautioned at the time, and a letter sent him on February 5th by the dairy inspector. On August 27th, at the veterinary inspection, an old shed was occupied by two cows. Orders were given for their removal. On a later visit on November 28th, the veterinary assistant found the premises satisfactory.

On February 7th, at cowshed No. 170, in the North Ward, some cows were dirty, but the sheds cleaner than at the previous visit. The occupier was cautioned, and the dairy inspector found them on February 15th clean. On April 20th the veterinary assistant to the Medical Officer of Health again reported that the sheds were dirty and also some of the cows. The occupier was again spoken to, and on the 20th May the dairies inspector

reported that some partitions had been removed, and the cows and sheds were clean. On June 22nd the veterinary inspector found the cows out and the sheds cleaner.

On the same day, February 7th, shed No. 96, in West Hunslet, was dirty. The occupier was warned. On February 20th, Mr. Walker found it clean. Both inspectors visited on May 8th, and found shed satisfactory.

On February 7th, at Bramley, the shed and some of the cows were dirty at the premises of cowkeeper No. 430. The occupier was cautioned, and the inspector reports since then that the place has always been clean. The next veterinary inspection was on May 8th, and the shed was clean.

On the same day at Armley and Wortley, farm No. 1014, several cows were found dirty and shed out of repair, Mr. Walker reports that he wrote the owner on the 19th of March, asking for better drainage. This was promised on the 21st, and the work was done in July when the cows were out. Mr. Walker found cows and sheds clean on April 9th. The further remark on May 8th of the veterinary inspector in regard to the sheds that they were quite unsatisfactory, was quite justified on that date. On the 17th, however, the occupier had them clean at Mr. Walker's visit. On July 18th the farm was again visited and the sheds again found satisfactory. That was of course after the owner had made the alterations asked for.

On February 9th, Mr. Dixon reported to the Medical Officer of Health that he found the walls of the cowshed No. 765, at Farnley, were dirty. Mr. Walker was with him and reported that in one shed, which the Medical Officer of Health had condemned as unfit, were three cows, which the occupier said were fat and ready for the market. He cautioned the occupier. Mr. Walker saw the occupier again on the 23rd, and ascertained that the three fat cows had been sent to market and that the place was now thoroughly clean. At the veterinary surgeon's

visits during the same year, on June 27th and November 28th, the sheds were satisfactory. On July 6th the Veterinary Inspector was also at this farm, re-visiting a single cow that seemed to have milk fever at his previous visit, but he made no remark at the time about the condition of the cowsheds.

On the same day, cowshed No. 120, also at Farnley, had a dirty floor. Mr. Walker was also present at the inspection, and agreed that the place was dirty. Mr. Walker saw the occupier on the 16th, and again cautioned him with regard to cleanliness. On April 24th the veterinary inspector visited to examine the cattle, and reported the shed cleaner. On November 28th, both the veterinary inspector and the ordinary inspector agreed that both cows and shed were dirty. Mr. Walker therefore wrote on the same date to the occupier requiring him to wash and cleanse the udders of the cows at once, and the walls of the shed, which were very dirty. The floor he remarked was clean. He reminded the occupier that it had been his duty to caution him on more than one occasion, and pointed out that it was an injustice to the owner to keep the sheds in such a state, that the latter had spent money in cementing the walls so that they might be easily cleansed. He stated that he would report to the Medical Officer of Health if the shed was not kept clean, and that further action would result. No further visit seems to have been made that year, but early in 1907 the Veterinary Inspector at his next visit reported matters satisfactory.

On the same day, at the premises also in Farnley, of cowkeeper No. 318, some of the cows were dirty, though the shed was satisfactory. Mr. Walker cautioned him at the time, and saw the occupier's son again on the 17th. On April 24th, at the veterinary visit, the cattle and sheds were found clean, and also on November 28th.

On the same date, and in the same district, at farm No. 141, some of the 19 cows were found dirty and the

shed walls were dirty. The occupier was cautioned at the time. At this cowshed on April 24th and November 28th, the sheds and cows were reported satisfactory.

On the 14th February, farm No. 493, in East Hunslet, was dirty. The fault here was probably due to the defective water supply, on account of which the Town-Clerk and myself have been in communication with the owners. On April 19th the condition of the shed was regarded as fairly clean, but on December 18th both the cows and the sheds were in an unsatisfactory condition. I thought it necessary to advise the Committee to require this farm to be given up as a dairy farm on account of an inadequate water supply. Since then the owners have made an attempt to improve matters in this respect.

On February 16th, at farm No. 360, the Veterinary Inspector found several cows dirty, the shed dirty, and the yard dirty. Mr. Walker does not seem to have accompanied him on this visit. The following day however he wrote to the occupier, complaining that the walls and the floor had been reported to him as dirty on the 16th, and the manure not removed, although the visit was made at 11 a.m. He reminded him that he had previously complained of neglect, both personally and in writing. He required him to cleanse the dirty cows, keep the drainage open, and to take care the manure was placed inside the pit provided for that purpose, and directed him also to swill the floor and walls daily, pointing out that future neglect would be followed by legal proceeding. On March 2nd, the veterinary inspector found the cows and the shed fairly clean, but reported the yard as still bad. In conversation with the Medical Officer of Health, he explained that the shed had been whitewashed since his previous visit, that one floor was clean, that the cows were cleaner, but the manure was still in a heap in the yard. The Medical Officer directed that the owner should be written to again.

Mr. Walker himself visited on March 23rd, and found the place clean. Both Mr. Walker and the veterinary assistant to the Medical Officer of Health visited on July 11th. The sheds and yard were again dirty. On the 13th, Mr. Walker wrote to the occupier a very strongly worded letter. Later he reported a visit on August 1st, when he found the place clean. The manure pit had been rebuilt, the pig styes removed, and the drain opened. The farm was visited again both on the 21st and 23rd of November. The cows were out and the place was clean.

On the same day (Feb. 16th) at Bramley (No. 310), the sheds were found satisfactory but the cows dirty. Mr. Walker wrote to the owner on the 17th, drawing his attention to the condition of the cows found the previous day at the veterinary inspection. At further veterinary inspections on April 11th and November 21st, the reports were satisfactory.

On February 21st, farm No. 714, Headingley, was visited. There were eight cows, but some of them were dirty, though the condition of the shed was satisfactory. On the 2nd April, Mr. Walker seems to have visited this farm and recorded it as fairly clean. On May 30th, at the veterinary inspection, the cows were out and the sheds satisfactory. On November 14th the cows were still out, and the sheds clean. On November 19th there were 11 cows examined and the sheds were reported as satisfactory. Mr. Walker reports that he has frequently had to caution this cowkeeper. On one of the four veterinary inspections he was present.

On February 23rd, veterinary inspection was made of 14 cows at Moortown, in the North Ward (No. 544). Some were dirty and the walls of the shed were dirty. Mr. Walker wrote on the 27th, drawing the occupier's attention to the want of cleanliness, and also saw the occupier several times during the next few days. At inspections on June 15th and December 10th, the report was satisfactory. The man gave up the farm in February, 1907.

On March 23rd the veterinary inspector visited the cowsheds No. 153 in the Central Ward. He returned them as insanitary. They have received a great deal of attention from time to time; new ventilators have been put in. They are fairly well looked after but very cramped. I have urged upon the City Engineer the desirability of getting rid of this cowshed, which is in the Unhealthy Area, or rebuilding a proper place for the occupier.

No shed not already mentioned was complained of until May 1st, when at farm No. 574, in Farnley, the walls of the cowsheds were found dirty. On May 2nd Mr. Walker wrote to the occupier that the walls of his cowsheds had been found dirty; that they were to be washed and freed from filth at once; and that the cows in one shed were very near the back wall, and it would be well to ask the owner to arrange for the removal of them about three feet further from the wall. At a visit made on November 21st, the veterinary inspector returns the premises as satisfactory.

Again there was a long interval without any report against a shed not already mentioned. On July 18th, in Armley and Wortley Ward, at shed No. 405, some cows were found dirty, though the shed itself was in a satisfactory condition. Mr. Walker, who accompanied the veterinary surgeon, drew the occupier's attention to their condition, and instructed him to keep them cleaner. On August 20th, Mr. Walker visited and found the cows clean; and on December 13th, at the veterinary assistant's visit, the cows and shed were returned as satisfactory.

On August 27th, the cowshed at farm No. 635, Farnley, was reported as clean, but in want of another window. On August 28th, Mr. Walker wrote the owner asking for more light, and suggesting two glass slates in the roof, 4' 0" x 1' 6", about 8 feet from the end of the building. These windows

were put in, and at the next veterinary inspection, on November 28th, the report was "satisfactory." Mr. Walker was also there and confirmed this report.

On November 2nd, cowkeeper No. 10, at Wortley, was visited. The report to the Medical Officer of Health was that both cows and shed were dirty. This man had been an old dairyman, but had not kept cows until the year before. On referring to the report for 1905, I find that the cows he owned had been inspected by the veterinary surgeon on the 18th of September, and the condition of the premises returned as good. The place was given up as a dairy farm a few weeks after our visit in November, 1906.

On November 2nd, cowshed No. 402, containing 10 cows, "shed walls required scraping and whitewashing." Mr. Walker has an entry for November 17th, showing that this had been done.

On November 21st, at farm No. 682b, newly occupied, Mr. Dixon reported that he examined 8 cows, the udders of which were all healthy; that the sheds required a little attention, and there was no midden stead. Mr. Walker, who accompanied the veterinary inspector, wrote the occupier the following day, drawing his attention to the dirty condition of the yard, littered with manure, and requiring him to remove the manure at once, and to make arrangement for the early erection of a proper manure pit. On December 6th, Mr. Walker re-visited, and found that the yard had been cleansed as requested. A manure pit has since been built, but not till after a great deal of pressure had been put upon the owner.

On the same day, at farm No. 337, one of the sheds was found to be badly ventilated. This farm had been under observation for some time; new windows had been put in, and Mr. Walker was in hopes that these would have provided the necessary ventilation. After his visit with the veterinary

inspector on the 21st, he wrote again to the agent, telling him he thought more ventilation would be required, and asking for an interview. Later, as the agent seemed unwilling to do anything, the Medical Officer of Health wrote to the owner, who promised that the work should be done, but this was in 1907.

On the same day, at farm No. 227, one shed was overcrowded, but the cows were found healthy and the sheds themselves clean. Mr. Walker ordered the removal of cows from an unsatisfactory wooden shed. This was done, and the occupier sent in plans later for the conversion of a stable into a mistal. These plans were, at the instance of the Medical Officer of Health, rejected on the ground that the midden stead was too close to the proposed mistal. This farm is still receiving attention.

On November 23rd, at farm No. 201, the walls were found dirty. The owner's attention was drawn to this. On Mr. Walker's visit on December 20th, the shed was found clean.

On November 30th, cowshed (835) in the South Ward, containing 11 cows, was found dirty, as was also the adjoining yard. On December 3rd, Mr. Walker wrote to the owners, drawing their attention to a blocked drain, and on the 6th wrote to the occupier stating that the owners had promised at his request to cleanse the drain. He requested the occupier to deposit manure only in the pit built for that purpose; also to see that the internal walls of the sheds were thoroughly cleansed daily, at the same time as the floors. On the 11th, at a further visit, Mr. Walker found the shed clean, the yard in a tidier condition, and progress being made with the taking up of the drains.

On December 10th at farm No. 393, Headingley, Mr. Dixon examined the udders of 35 cows. Some of the sheds were clean and some dirty. The occupier was cautioned.

A visit was paid, on December 21st, by the assistant dairy inspector; he seems to have found the sheds clean, as they generally are on our visits. There are difficulties about this farm.

On December 13th, cowshed No. 801 was found dirty; not having been cleaned out at 11 a.m., and having dirty walls. The midden was also overflowing. Attention was drawn to the matter. Mr. Walker visited on the 17th January, 1907, and found the place clean.

Inspection of cattle.—It will be noticed that during the fifty-two weeks of the sanitary year 1906, the Veterinary Assistant to the Medical Officer of Health examined 6,063 cows. The great majority of these were examined at systematic visits to the farms. Twenty-three examinations are, however, included which were made further to examine single cows found diseased at an earlier visit. Deducting 23 such "return visits" we have 6,040 examinations made of cattle at 395 visits paid to cowsheds within the city. Adding to these the 23 special visits to individual cows, and 32 visits made to farms where the cows were found to be out at grass, and not therefore examined at that time, and one further visit paid simply to ascertain if certain instructions given had been carried out, we have a total of 451 visits to cowsheds by the veterinary assistant. These visits were made to 145 cowsheds or farms in the borough or an average of rather more than 3 visits to each cow-keeper. Deducting the visits where the cows were not examined, or where only one cow was examined, the 395 visits give an average of 2.7 systematic visits by the veterinary officer to each farm. This is a much larger number than I have ever had to report to you before.

Twenty-three cows were found at these visits to have some diseased condition of the udder. Some of these were put down at once to tubercle. The result of all the visits was that 19 of the cows with unhealthy udders were regarded simply as suffering from mastitis in one of its many forms, and 4 as having

TABLE VIII b.

Samples of Milk sent to the Bacteriological Laboratory
for Examination for Tubercle during 1906.

Date.	Where farm is situate.	No. of retailer.	Result of the test.
1906.			
Jan. 18.	Ryleston	421	Not tuberculous.
"	Do.	421	Incomplete.
"	Thornton-in-Craven ...	421	Not tuberculous.
"	Elslack	421	Do.
Jan. 24.	Goldsboro'	421	Incomplete.
"	Birstwith	421	Do.
"	Darley	421	Not tuberculous.
"	Menston	421	Do.
Jan. 31.	Grassington	116	Do.
"	Do.	616	Do.
"	Hellifield	483	Do.
"	Grassington	116	Do.
Feb. 7.	Barnoldswick	421	Do.
"	Elslack	421	Incomplete.
"	Thornton-in-Craven ...	471	Not tuberculous.
"	Do.	B.	Incomplete.
Feb. 14.	Pool	421	Pseudo-tuberculosis.
"	Do.	421	Not tuberculous.
"	Do.	421	Do.
Feb. 21.	Ripley	306	Do.
"	Arthington	421	Do.
"	Weeton	27	Do.
"	Do.	563	Incomplete.
Feb. 28.	Hawkesworth	421	Not tuberculous.
"	Grassington	421	Incomplete.
"	Steeton	421	Not tuberculous.
"	Ben Rhydding	2	Probably tuberculous.
March 7.	Lindley	421	Not tuberculous.
"	Stainburn	421	Do.
"	Leathley	421	Do.
"	Do.	421	Do.
March 21.	Earby	555	Incomplete.
"	Thornton-in-Craven ...	421	Do.
"	Earby	466	Not tuberculous.
March 29.	Grassington	418	Do.
"	Bell Busk	421	Do.
"	Settle	259	Do.
"	Hellifield	483	Incomplete.
Nov. 28.	Goldsboro'	421	Do.
"	Birstwith	421	Tuberculous.
Dec. 12.	Leeds... ..	142	Not tuberculous.
"	Seacroft	275	Do.
Dec. 18.	Horsforth	215	Do.
"	Leeds... ..	412	Do.

tuberculous mastitis. Two cows were tested with tuberculin. In one, on November 7th, farm No. 445, though the temperature rose to 103.8° , the rise was rather too gradual, and hardly sufficient in extent for the result to be looked upon as positive. This cow was tested again on December 19th with a negative result. This animal is included in the 19 with non-tuberculous mastitis. The other cow tested was at farm No. 351. The result in the first instance was regarded at the time as negative and a further test was made again on December 21st with again a negative result. This is also included in the 19 cases of non-tuberculous mastitis. Four cows had clearly tuberculous mastitis. In two of these post-mortem examination confirmed the diagnosis. Another cow examined March 21st at farm No. 136 was an emaciated animal in all probability tuberculous, but with no indication of udder disease. The animal had ceased to give milk, was isolated from the herd, and destruction recommended. Still another cow, examined at farm 801, Bramley, showed evidence of pericarditis. She was slaughtered, and the post-mortem showed the correctness of the diagnosis. She was free from tubercle. Other details will be found in Table VIIIa.

Compensation for loss of milk.—At farm No. 801, Bramley, on the 7th February, a cow was found with an indurated udder. It was suspected that the case might be one of tuberculosis. The farm was visited again on the 9th and 13th, though these visits do not seem to have been put down in the table. Strepto-cocci were found in the milk, which was kept out of the supply and compensation was made to the amount of £1 2s. 6d. for milk destroyed at our request.

On February 14th, at farm No. 493 in East Hunslet, a cow was discovered with suppurative mastitis. The milk was kept out of the supply and 18s. 0d. was paid as compensation

On March 28th, at farm No. 38, a cow was found with suppurative mastitis. It was thought not desirable that the

milk from this animal should go into circulation. It was therefore kept out of the supply and the owner compensated to the extent of £1 1s. 0d. for the loss sustained.

At farm No. 227, Bramley, visited on April 11th, another cow was found with suppurative mastitis, and was kept under close observation till May, when £3 1s. 8d. was paid for loss from milk kept out of the supply.

On the 2nd May, an indurated udder was discovered in one of five cows at farm No. 559. The animal was seen again on May 4th and 7th. Resolution occurred; 12s. 6d. was paid for compensation for milk kept out of the churn.

On the 3rd May, at Headingley, farm No. 550, amongst 11 cows examined, one was found with a suppurating udder due evidently to injury from a thorn. The milk was kept out of the supply and the cow seen again on the 14th and 18th, £2 3s. 9d. was paid for milk kept at our request from the market.

On the 13th June, at farm No. 159a, East Hunslet, of 24 cows examined one had a suppurating udder. The cow was seen again on the 19th and 25th of June, and the 4th July, when it was pronounced well and the milk allowed to be put upon the market, £2 12s. 6d. was paid for the loss of milk during the interval. An allowance of 28s. has also been made for milk of cow seen at farm No. 21 on July 11th.

A case of anthrax occurred at a farm at Thorner, 110½ gallons of milk were destroyed at our request and we compensated the owner to the extent of £3 18s. 3d.

Bacteriological examination of milk.—Table 8c has been continued, from sample 198 taken on the 26th of May, 1906, and printed in the report for 1905, up to sample No. 230, taken on the 6th of March, 1907. Some details were given in the report for 1905 but the criticism of the results was stopped at the end of the year which was being reported upon, that is to

say at sample No. 141. The specimens examined bacteriologically in the year 1906, were therefore from No. 142 to No. 224 inclusive, 83 in all. It will be remembered that during the last four months of 1905, and the first three quarters of 1906, a supply of milk was being obtained from a farm under somewhat strict conditions. All the milk taken from this farm in both years, after the experiment began, is marked H in the column headed "milkman." Where the milk was put over the cooler, the letter (*a*) follows the word "Potternewton" in the column headed "place of taking sample."

During the latter part of 1905, and the first three quarters of 1906, 70 samples of this particular milk as prepared for use by cooling and bottling, were examined.* The average bacterial content per cubic centimetre gave rise to 72,379 colonies.

During the same period 19 examinations (which did not however include any specimen taken in the third quarter of 1906), were made of milk taken from the can at the farm in Harehills Lane, or immediately on arriving at the dairy, at Potternewton Park, and cooled, if at all, in the sample bottle. The average number of colonies was 421,323.

This average of farm milk was brought up to this high figure by two specimens taken under what appear to have been peculiar circumstances. One specimen (No. 74 in the table) taken on the 13th October, 1905, and examined the same day gave rise to 6,660,000 colonies per c.c. Another specimen of milk taken from the same farm at the same time (No. 75) and put over the cooler gave only 91,300, whereas a specimen taken, a little earlier, gave 180,000. The probability therefore is that some accident had occurred to sample No. 74. Possibly some solid particle may have fallen into the can as suggested on pages 47 and 48 of the 1905 Annual Report.

* The experiment was carried out for a full year by a voluntary association in hopes that Mr. Burns' enabling Bill would become law and the matter taken in hand by the Corporation. See Annual Report, 1905, pp. 88, 91, 111, 112, and 1906 pp. 52 onwards.

TABLE VIII c.
Bacteriological examination of milk.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConke broth per c.c.
				Of air.			Time and place of sampling.	Of milk at time of sampling.		
				Philosophical Hall.						
				Min. previous night.	10 a.m.	4 p.m.				
		1905 July 7								
1†	Kirkgate (s)	10.50 a.m.	211	52°	66°	73°	..	..	1,460,000	100
2†	Potternewton (d) ..	10. 0 a.m.	39	52°	66°	73°	..	..	60,000	100
3†	Sheepscar (d)	10.25 a.m.	57	52°	66°	73°	..	..	610,000	100
4†	York Street (s)	10.55 a.m.	658	52°	66°	73°	..	..	1,380,000	1,000
		July 14								
5†	Harehills Lane (d) ..	10.40 a.m.	67	60°	73°	80°	..	77°	4,800,000	10
6†	Richmond Road (s) ..	11.25 a.m.	180	60°	73°	80°	..	71°	2,400,000	1,000
7†	Greenfield Road (s) ..	11.35 a.m.	68	60°	73°	80°	..	72°	8,000,000	1,000
8†	Moor Road (d)	9.30 a.m.	79	60°	73°	80°	..	79°	960,000	100
9†	Cottage Road (c)	9.45 a.m.	50	60°	73°	80°	..	81°	1,440,000	100
		July 28								
10†	Roundhay (f)	6.55 a.m.	67	50°	65°	67°	60°	81°	110,000	10
11†	Roundhay (f)	6.55 a.m.	67	50°	65°	67°	60°	80°	550,000	10
12†	Potternewton (h)	10.15 a.m.	91	50°	65°	67°	71°	72°	850,000	1,000
13†	Chapelton (h)	10. 5 a.m.	185	50°	65°	67°	67°	71°	1,640,000	1,000
14†	Harehills Lane (t j) {	Aug. 3 3. 0 p.m. Aug. 4	H. {	54° 53°	56° 63°	59° 66°	60° ..	89° ..	7,500	nil
15†	Potternewton (a) {	Aug. 3 3. 0 p.m. Aug. 4	H. {	54° 53°	56° 63°	59° 66°	60° ..	.. ..	5,000	nil
16†	Harehills Lane (f) {	Aug. 3 3. 0 p.m. Aug. 4	H. {	54° 53°	56° 63°	59° 66°	60° ..	89° ..	3,333	nil
17†	Richmond Street (h) {	Aug. 3 4.15 p.m. Aug. 4	564 {	54° 53°	56° 63	59° 66°	63° ..	59° ..	12,160,000	1,000
18†	Potternewton (x) {	Aug. 8 p.m. Aug. 11 a.m.	H. {	54° 52°	66° 58°	67° 62°	.. ..	.. ..	29,600,000	1,000
19†	Potternewton (a) ..	a.m.	H.	52°	58°	62°	..	..	23,000	nil
20†	Harehills Lane (t j) {	Aug. 10 3. 0 p.m. Aug. 11 a.m.	H. {	51° 52°	62° 58°	63° 62°	.. ..	.. ..	3,300	nil
21†	Dyer Street (s)	11. 5 a.m.	53	52°	58°	62°	58°	54°	820,000	1,000
22†	High Street (s)	11.15 a.m.	229	52°	58°	62°	57°	58°	90,000	100
23†	Potternewton (a) {	Aug 17 3. 0 p.m. Aug. 18 9. 0 a.m.	H. {	49° 57°	58° 58°	70° 64°	.. ..	.. ..	410,000	nil

TABLE VIII C.—Continued.

	Place of taking sample.	Time.	Milk- man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.				Of milk at time of sampling.		
				Philosophical Hall.			Time and place of sampling.			
				Min. previous night.	10 a.m.	4 p.m.				
24†	Potternewton (a)	Aug. 18 7. 0 a.m.	H.	57°	58°	64°	..	..	< 10,000	nil
25†	Potternewton (d)	7.30 a.m.	39	57°	58°	64°	58°	54°	3,720,000	1,000
26†	Metcalfe Street (h)	10.20 a.m.	321	57°	58°	64°	58°	55°	3,150,000	1,000
27†	Park Lane (d)	Aug. 26 9.30 a.m.	2	56°	58°	61°	64°	70°	153,000	100
28†	Harper Street (s)	9.45 a.m.	992	56°	58°	61°	62°	70°	1,950,000	100
29†	Harehills Lane (t)	5.45 a.m.	H.	56°	58°	61°	60°	(100°)	10,000	nil
30†	Potternewton (a)	7.15 a.m.	H.	56°	58°	61°	62°	56°	116,000	nil
31†	Harehills Lane (t)	Sep. 1 5.45 a.m.	H.	54°	58°	60°	58°	(100°)	< 10,000	nil
32†	Potternewton (a)	6.0 a.m.	H.	54°	58°	60°	62°	56°	143,000	nil
33†	Hunslet Road (s)	10.15 a.m.	321	54°	58°	60°	65°	62°	133,000	1,000
34†	Hunslet (c)	10.40 a.m.	458	54°	58°	60°	62°	75°	1,093,000	10
35†	Harehills Lane (t)	Sep. 8 5.45 a.m.	H.	51°	60°	61°	60°	(100°)	10,000	nil
36†	Potternewton (a)	7. 0 a.m.	H.	51°	60°	61°	62°	50°	23,000	nil
37†	Harehills Lane (c)	6.55 a.m.	1,120	51°	60°	61°	56°	78°	105,000	10
38†	Dyer Street (s)	10.15 a.m.	53	51°	60°	61°	63°	74°	90,000	100
39†	Harehills Lane (t)	Sep. 15 5.35 a.m.	H.	41°	53°	57°	63°	(100°)	none developed	nil
40†	Harehills Lane (c)	6.45 a.m.	137	41°	53°	57°	65°	72°	10,000	100
41†	Potternewton (a)	7. 0 a.m.	H.	41°	53°	57°	58°	50°	10,000	nil
42†	Wheeler Street (s)	10.40 a.m.	87	41°	53°	57°	60°	56°	none developed	10
43*	Potternewton (a)	Sep. 19 6.50 a.m.	H.	52°	56°	60°	54°	49°	9,000	nil
44*	Harehills Lane (t)	2.20 p.m.	H.	52°	56°	60°	63°	..	< 1,000	nil
45*	Potternewton (a)	2.45 p.m.	H.	52°	56°	60°	56°	50°	6,000	nil
46*	Quarry Hill (s)	10.40 a.m.	301	52°	56°	60°	63°	72°	3,000	nil
47*	Kirkgate Depot	{ Sep. 19 3. 0 p.m. Sept. 20 10. 0 a.m. }	{ H. }	{ 52° 51° }	{ 56° 59° }	{ 60° 60° }	{ .. 58° }	{ .. 46° }	{ 1,200 }	{ nil }
48*	Kirkgate (s)	Sep. 20 10.10 a.m.	211	51°	59°	60°	58°	73°	1,255,000	100
49†	Harehills Lane (t)	Sep. 22 5.15 a.m.	H.	49°	57°	59°	63°	..	10,000	10
50†	Potternewton (a)	6. 0 a.m.	H.	49°	57°	59°	53°	50°	25,000	10

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.				Of milk at time of sampling.		
				Philosophical Hall.			Time and place of sampling.			
				Min. previous night.	10 a.m.	4 p.m.				
51†	Richmond Road (h)	.. 10.30 a.m.	696	49°	57°	59°	62°	78°	42,000	100
52†	Wheeler Street (s)	.. a.m.	583	49°	57°	59°	65°	69°	430,000	1,000
53*	Potternewton (f.c)	.. Sep. 25 3. 0 p.m.	H.	49°	55°	56°	57°	92°	2,000	nil
54*	Potternewton (a)	.. 3.10 p.m.	H.	49°	55°	56°	57°	54°	14,000	nil
55*	York Road (a)	.. Sep. 26 10.55 a.m.	H.	48°	54°	56°	59°	53°	2,800	nil
56*	Freehold Street (h)	.. 11. 5 a.m.	279	48°	54°	56°	58°	62°	92,500	100
57†	Potternewton (x)	{ Sep. 27 3.30 p.m. Sep. 29 a.m. }	H. {	49° 52°	54° 55°	58° 55°	58° ..	50° ..	23,300	10
58†	Harehills Lane (x)	.. Sep. 29 6.30 a.m.	H.	52°	55°	55°	59°	72°	40,000	10
59†	Potternewton (a)	.. 7.15 a.m.	H.	52°	55°	55°	54°	48°	16,600	nil
60†	Hunslet (d)	.. 10. 0 a.m.	240	52°	55°	55°	56°	53°	2,570,000	100
61*	Potternewton (f.c)	.. Oct. 2 2.50 p.m.	H.	43°	48°	54°	51°	92°	700	nil
62*	Potternewton (a)	.. 3.10 p.m.	H.	43°	48°	54°	51°	56°	3,600	nil
63*	Duke Street (s)	.. Oct. 3 11.35 a.m.	229	40°	49°	51°	57°	59°	11,000	100
64*	Potternewton (a)	{ Oct. 2 2.50 p.m. Oct. 3 11.57 a.m. }	H. {	43° 40°	48° 49°	54° 51°	51° 59°	56° 59°	10,800	nil
65†	Potternewton (a)	.. Oct. 6 7.15 a.m.	H.	38°	47°	50°	44°	46°	complete liquefaction	100
66†	Cross Green Lane (x)	{ Oct. 5 7. 0 a.m. Oct. 6 9. 0 a.m. }	H. {	38°	47°	50°	..	..	complete liquefaction	nil
67†	Spring Close Street (s)	.. Oct. 6 9.25 a.m.	255	38°	47°	50°	60°	63°	complete liquefaction	10
68†	Cross Green Lane (s)	.. 9.35 a.m.	375	38°	47°	50°	54°	68°	complete liquefaction	100
69*	Potternewton (a.j)	.. Oct. 9 6.50 a.m.	H.	48°	56°	62°	52°	50°	24,000	nil
70*	Potternewton (a.ij)	.. 7.35 a.m.	H.	48°	56°	62°	52°	52°	3,600	nil
71*	Potternewton (x)	{ Oct. 9 7.15 a.m. Oct. 10 10.15 a.m. }	H. {	48° 47°	56° 52°	62° 57°	52° 59°	50° 60°	4,500,000	1,000

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk- man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.			Of milk at time of sampling.			
				Philosophical Hall.		Time and place of sampling.				
Min. previous night.	10 a.m.	4 p.m.								
72*	N. E. Station (x)	{ Oct. 9 9.15 a.m. Oct. 10 10.25 a.m. Oct. 13	{ 1,003	{ 48° 47°	{ 56° 52°	{ 62° 57°	{ 55° 59°	{ 60° 60°	{ 11,500,000	{ 1,000
73†	Harehills Lane (t.x)	.. 6. 0 a.m.	H.	44°	47°	48°	58°	(100°)	180,000	nil
74†	Harehills Lane (f.c)	.. 6.30 a.m.	H.	44°	47°	48°	58°	..	6,660,000	10
75†	Potternewton (a)	.. 7.15 a.m.	H.	44°	47°	48°	54°	52°	91,300	nil
76†	Hunslet (c)	.. —	216	44°	47°	48°	50°	56°	16,000,000	1,000
77*	Potternewton (a.x)	{ Oct. 16 6.50 a.m. 7.15 a.m.	{ H.	{ 35°	{ 41°	{ 46°	{ 40°	{ 49°	{ 14,000	{ 10
78*	Midland Station ..	.. 3.40 p.m.	1,013	35°	41°	46°	47°	78°	6,000	nil
79*	York Road (x), v. 77	{ Oct. 16 6.50 a.m. Oct. 17 10.45 a.m.	{ H.	{ 35° 33°	{ 41° 40°	{ 46° 47°	{ 40° 58°	{ 49° 57°	{ 240,000	{ nil
80*	Midland Station (x), v. 78	{ Oct. 16 3.40 p.m. Oct. 17 10.45 a.m.	{ 1,013	{ 35° 33°	{ 41° 40°	{ 46° 47°	{ 47° 58°	{ 78° 57°	{ 42,500	{ 10
81†	Potternewton (a)	{ Oct. 19 3.15 p.m. Oct. 20	{ H.	{ 39° 36°	{ 43° 42°	{ 45° 47°	{ 46° ..	{ 46° ..	{ 48,500	{ nil
82†	Potternewton (d.x)	{ Oct. 19 3.15 p.m. Oct. 20	{ H.	{ 39° 36°	{ 43° 42°	{ 45° 47°	{ 46° ..	{ 87° ..	{ 33,000	{ nil
83†	Richmond Road (s)	.. Oct. 20 9.40 a.m.	180	36°	42°	47°	54°	62°	25,000,000	100
84†	Wentworth Terrace (h)	.. Oct. 20 9.50 a.m.	63	36°	42°	47°	54°	60°	4,920,000	10
85*	Potternewton (a.x)	.. Oct. 23 6.40 a.m.	H.	36°	43°	47°	41°	46°	5,000	nil
86*	Mid. Station ..	.. 4.15 p.m.	1,009	36°	43°	47°	47°	72°	111,500	100
87*	Potternewton (a.x) v. 85	{ Oct. 23 6.40 a.m. Oct. 24 10.15 a.m.	{ H.	{ 36° 36°	{ 43° 44°	{ 47° 47°	{ 41° 66°	{ 46° 66°	{ 802,000	{ 100
88*	Mid. Station (x). v. 86	{ Oct. 23 4.15 p.m. Oct. 24 10.15 a.m.	{ 1,009	{ 36° 36°	{ 43° 44°	{ 47° 47°	{ 47° 66°	{ 72° 66	{ 2,050,000	{ 1,000
89†	Harehills Lane (t.j)	{ Oct. 26 2.15 p.m. Oct. 27	{ H.	{ 39° 44°	{ 45° 47°	{ 47° 52°	{ 57° ..	{	{ < 1,000	{ nil
90†	Harehills Lane (t.ij)	{ Oct. 26 2.55 p.m. Oct. 27	{ H.	{ 39° 44°	{ 45° 47°	{ 47° 52°	{ 58° ..	{	{ < 1,000	{ nil

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds	Growths in McCooky broth per c.c.
				Of air.			Time and place of sampling.	Of milk at time of sampling.		
				Philosophical Hall.		4 p.m.				
				Min. previous night.	10 a.m.					
91†	Potternewton (a)	{ Oct. 26 3.10 p.m. Oct. 27 }	H.	{ 39° 44° }	{ 45° 47° }	{ 47° 52° }	{ 49° .. }	{ 45° .. }	{ 85,000 }	nil
92†	Bridge Street (s)	{ Oct. 26 3.45 p.m. Oct. 27 }	953	{ 39° 44° }	{ 45° 47° }	{ 47° 52° }	{ 60° .. }	{ 53° .. }	{ 330,000 }	10
93*	Potternewton (a)	Oct. 30 6.45 a.m.	H.	41°	48°	51°	49°	48°	93,000	10
94*	Park Square (x)	{ Oct. 30 even. Oct. 31 9.35 a.m. }	2	{ 41° 41° }	{ 48° 44° }	{ 51° 48° }	{ .. 54° }	{ .. 54° }	{ 26,600,000 }	1,000
95*	Kirkgate (x) v. 93	{ Oct. 30 6.45 a.m. Oct. 31 9.15 a.m. }	H.	{ 41° 41° }	{ 48° 44° }	{ 51° 48° }	{ 49° 59° }	{ 48° 59° }	{ 1,117,000 }	10
96†	Potternewton (a)	{ Nov. 2 3.15 p.m. Nov. 3 morn. }	H.	{ 46° 43° }	{ 49° 46° }	{ 51° 49° }	{ 54° 44° }	{ 48° .. }	{ 10,650 }	10
97†	Potternewton (a)	Nov. 3 morn.	H.	43°	46°	49°	44°	46°	10,500	nil
98†	Upper Cross Street (s)	Nov. 3 9.30 a.m.	187	43°	46°	49°	50°	65°	206,000	10
99†	York Street (s)	9.45 a.m.	199	43°	46°	49°	52°	54°	20,000,000	100
100†	Potternewton (a)	Nov. 10 7.15 a.m.	H.	38°	40°	44°	44°	46°	24,300	10
101†	Elland Road (s)	9.15 a.m.	545	38°	40°	44°	55°	66°	226,700	10
102†	New Princess Street (s)	9.30 a.m.	208	38°	40°	44°	57°	62°	73,300	100
103†	Sweet Street (d)	10.15 a.m.	791	38°	40°	44°	48°	60°	3,330,000	100
104*	Lower Wortley (c)	Nov. 14 4.40 p.m.	78	40°	44°	45°	44°	72°	15,500	10
105†	Potternewton (a.j)	Nov. 17 7.15 a.m.	H.	34°	37°	39°	38°	40°	1,766	nil
106†	Potternewton (a.ij)	8. 0 a.m.	H.	34°	37°	39°	38°	40°	700	nil
107†	St. James' Place (s)	9.30 a.m.	14	34°	37°	39°	48°	54°	40,000	10
108†	St. James' Street (c)	9.45 a.m.	74	34°	37°	39°	48°	64°	60,000	10
109*	Harehills Lane (f)	Nov. 22 6.35 a.m.	H.	37°	42°	46°	32°	92°	3,950	nil
110*	Potternewton (a)	6.45 a.m.	H.	37°	42°	46°	32°	42°	7,000	10
111*	Midland Station	4.45 p.m.	1,232	37°	42°	46°	44°	72°	206,000	10

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.				Of milk at time of sampling.		
				Philosophical Hall.			Time and place of sampling.			
				Min. previous night.	10 a.m.	4 p.m.				
112†	Station, Headingley	{ Nov. 24 3.25p.m. Nov. 25 morn.	{ 1,012	{ 42° 41°	{ 44° 43°	{ 45° 46°	{ 48° ..	{ 85° ..	{ 12,000	{ 10
113†	Station, Headingley	{ Nov. 24 3.27p.m. Nov. 25	{ 1,025	{ 42° 41°	{ 44° 43°	{ 45° 46°	{ 48° ..	{ 76° ..	{ 16,000	{ 10
114†	Station, Headingley	{ Nov. 24 3.30 p.m. Nov. 25	{ 1,028	{ 42° 41°	{ 44° 43°	{ 45° 46°	{ 48° ..	{ 52° ..	{ 63,000	{ nil
115†	Potternewton (a)	{ Nov. 24 3. 0 p.m. Nov. 25 10. 0 a.m.	{ H.	{ 42° 41°	{ 44° 43°	{ 45° 46°	{ 48° ..	{ 42° ..	{ 103,000	{ nil
116*	Potternewton (a)	Nov. 28 6.45 a.m.	H.	40°	44°	46°	42°	46°	3,000	nil
117*	Midland Station ..	Nov. 29 10.10 a.m.	1,198	37°	40°	44°	45°	67°	142,000	100
118*	Kirkgate (a.x) ..	{ Nov. 28 6.45 a.m. Nov. 29 11.15 a.m.	{ H.	{ 40° 37°	{ 44° 40°	{ 46° 44°	{ 42° 67°	{ 46° 62°	{ 100,000	{ nil
119†	Station, Headingley	{ Nov. 30 3.25p.m. Dec. 1	{ 1,029	{ 39° 39°	{ 41° 41°	{ 45° 46°	{ 46° ..	{ 72° ..	{ 183,000	{ nil
120†	Station, Headingley	{ Nov. 30 3.27p.m. Dec. 1	{ 1,030	{ 39° 39°	{ 41° 41°	{ 45° 46°	{ 46° ..	{ 75° ..	{ 50,000	{ nil
121†	Midland Station	{ Nov. 30 4. 0 p.m. Dec. 1	{ 1,031	{ 39° 39°	{ 41° 41°	{ 45° 46°	{ 44° ..	{ 72° ..	{ 37,000	{ nil
122†	Potternewton (a)	{ Nov. 30 4. 0 p.m. Dec. 1	{ H.	{ 39° 39°	{ 41° 41°	{ 45° 46°	{ 44° ..	{ 46° ..	{ 19,000	{ nil
123*	Potternewton (a)	Dec. 4 7.15 a.m.	H.	39°	42°	45°	44°	42°	10,250	10
124*	Kirkgate (s) ..	4.30 p.m.	211	39°	42°	45°	63°	66°	150,000	100
125*	Kirkgate (v. 123)	Dec. 4 11.30 a.m.	H.	39°	42°	45°	52°	43°	35,000	10
126†	Moor Rd., Headingley (c)	{ Dec. 7 4.15 p.m. Dec. 8	{ 79	{ 45° 45°	{ 52° 48°	{ 53° 49°	{ 50° ..	{ 66° ..	{ 59,000	{ 10
127†	Potternewton (a)	{ Dec. 7 4.10 p.m. Dec. 8	{ H.	{ 45° 45°	{ 52° 48°	{ 53° 49°	{ 48° ..	{ 46° ..	{ 13,000	{ nil
128†	Harehills Lane (f)	Dec. 8 7.15 a.m.	H.	45°	48°	49°	52°	78°	1,189,000	10

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk- man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.				Of milk at time of sampling.		
				Philosophical Hall.			Time and place of sampling.			
				Min. previous night.	10 a.m.	4 p.m.				
129†	Potternewton (a)	Dec. 8 7.30 a.m.	H.	45°	48°	49°	52°	48°	11,000	nil
130*	Potternewton (a)	Dec. 11 6.45 7.15	H.	39°	40°	43°	34°	38°	6,050	nil
131*	Midland Station ..	10.55 a.m.	1033	39°	40°	43°	41°	60°	13,500	nil
132†	Potternewton (d)	Dec. 16 3.45 p.m. Dec. 17	H.	43 ..	45° ..	46° ..	46° ..	80° ..	7,000	nil
133†	Potternewton (a)	Dec. 16 4.10 p.m. Dec. 18	H.	43° ..	45° ..	46° ..	46° ..	48° ..	7,000	nil
134†	Harehills Lane (c)	4.55 p.m.	1034	43°	45°	46°	56°	76°	45,000	nil
135†	Gipton (c)	4.30 p.m.	137	43°	45°	46°	56°	85°	13,000	nil
136*	Potternewton (c)	Dec. 18 2.40 p.m.	H.	40°	42°	43°	43°	86°	11,000	10
137*	Potternewton (a)	3.40 p.m.	H.	40°	42°	43°	43°	44°	15,000	10
138*	Brownhill Crescent (h)	4.32 p.m.	496	40°	42°	43°	58°	68°	27,500	nil
139†	Potternewton (f.c)	Dec. 18 3.40 p.m. Dec. 19	H.	40° 38°	42° 43°	43° 45°	43° ..	86° ..	5,000	nil
140†	Potternewton (a)	Dec. 18 3.45 p.m. Dec. 19	H.	40° 38°	42° 43°	43° 45°	43° ..	44° ..	31,000	10
141†	Brownhill Crescent (h)	Dec. 18 4.50 p.m. Dec. 19	496	40° 38°	42° 43°	43° 45°	58° ..	68° ..	31500	nil
142†	Potternewton (c)	1906. Jan. 5 6.50 a.m.	H.	42°	46°	47°	42°	87°	3,000	nil
143†	Potternewton (a)	7. 0 a.m.	H.	42°	46°	47°	42°	39°	2,000	nil
144†	Park Lane (d)	11.15 a.m.	2	42°	46°	47°	54°	63°	10,000	nil
145*	Potternewton (c)	6.50 a.m.	H.	42°	46°	47°	42°	87°	8,600	nil
146*	Potternewton (a)	7. 0 a.m.	H.	42°	46°	47°	42°	39°	33,200	10
147*	Park Lane (d)	11.15 a.m.	2	42°	46°	47°	54°	63°	69,100	10
148*	Potternewton (c)	Jan. 12 7.0 a.m.	H.	40°	47°	48°	43°	88°	10,300	nil
149*	Potternewton (a)	7.15 a.m.	H.	40°	47°	48°	43°	40°	5,900	nil
150†	Potternewton (c)	7. 0 a.m.	H.	40°	47°	48°	43°	88°	16,400	nil
151†	Potternewton (a)	7.15 a.m.	H.	40°	47°	48°	43°	40°	18,200	nil
152†	Potternewton (c)	7.25 a.m.	H.	40°	47°	48°	43°	40°	8,200	nil

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.			Time and place of sampling.	Of milk at time of sampling.		
				Philosophical Hall.						
				Min. previous night.	10 a.m.	4 p.m.				
153†	Park Lane (s)	9.45 a.m.	994	40°	47°	48°	55°	65°	15,700	nil
154*	Potternewton (c)	Jan. 19 6.45 a.m.	H.	32°	39°	41°	32°	86°	6,000	nil
155*	Potternewton (a)	7. 0 a.m.	H.	32°	39°	41°	43°	39°	500	10
156†	Potternewton (a) {	Jan. 18 3. 0 p.m. Jan. 19 10.30 a.m.	H. {	37° 32°	40° 39°	42° 41°	44° ..	42° ..	28,000	nil
157†	Potternewton (a)	Jan. 19 7. 0 a.m.	67	32°	39°	41°	43°	39°	44,000	nil
158†	Mill Hill (d)	10. 0 a.m.	776	32°	39°	41°	45°	63°	1,600,000	100
159†	Midland Station	10.20 a.m.	1,018	32°	39°	41°	42°	68°	610,000	100
160†	Potternewton (a)	Jan. 26 7. 0 a.m.	H.	43°	50°	51°	47°	42°	10,000	nil
161†	Potternewton (d)	8.10 a.m.	39	43°	50°	51°	88°	80°	145,000	100
162†	Ellerby Terrace (d) ..	10.20 a.m.	34	43°	50°	51°	63°	68°	67,000	10
163†	Easy Road (h)	10.30 a.m.	917	43°	50°	51°	52°	50°	300 000	nil
164†	Potternewton (a)	Feb. 2 7.30 a.m.	H.	38°	42°	46°	44°	42°	20,000	nil
165†	Richmond Street (s) ..	10. 0 a.m.	564	38°	42°	46°	59°	68°	1,000,000	nil
166†	Richmond Street (s) ..	10.10 a.m.	750	38°	42°	46°	59°	72°	151,000	nil
167†	Ellerby Lane (kitchen) ..	10.20 a.m.	226	38°	42°	46°	59°	60°	137,000	nil
168*	Potternewton (a)	Feb. 7 6.50 a.m.	H.	33°	39°	44°	36°	42°	1,900	nil
169*	Park Lane (s)	10.45 a.m.	994	33°	39°	44°	54°	55°	35,000	10
170†	Potternewton (a)	Feb. 9 6.30 a.m.	H.	30°	31°	39°	38°	42°	70,000	10
171†	York Street (s)	10.10 a.m.	199	30°	31°	39°	51°	52°	350,000	nil
172†	York Road (s)	9.50 a.m.	413	30°	31°	39°	41°	55°	1,000,000	1,000
173†	York Road (s.g)	10. 5 a.m.	414	30°	31°	39°	48°	38°	92,000	nil
174*	Potternewton (a)	Feb. 15 6.45 a.m.	H.	32°	36°	41°	34°	42°	4,650	nil
175*	Richmond Street (s) ..	10.55 a.m.	750	32°	36°	41°	55°	60°	6,300	nil
176*	Harehills Lane (t.j) ..	Feb. 22 2.30 p.m.	H.	33°	35°	45°	55°	(100°)	< 1,000	nil
177*	Harehills Lane (f)	2.33 p.m.	H.	33°	35°	45°	55°	89°	4,050	nil
178*	Potternewton (a)	3. 5 p.m.	H.	33°	35°	45°	42°	42°	4,250	nil

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McCookey broth per c.c.
				Of air.				Of milk at time of sampling.		
				Philosophical Hall.			Time and place of sampling.			
				Min. previous night.	10 a.m.	4 p.m.				
179*	Harehills Lane (c) ..	March 9 3. 0 p.m.	H.	38°	40°	42°	45°	84°	8,600	nil
180*	Potternewton (x) ..	3.15 p.m.	H.	38°	40°	42°	45°	82°	2,850	nil
181*	Kirkgate Depot (x) ..	4.45 p.m.	H.	38°	40°	42°	54°	54°	404,500	10
182*	Kirkgate Depot ..	{ March 15 3. 0 p.m. March 16 10.40 a.m. }	H. {	{ 35° 33° }	{ 51° 49° }	{ 53° 56° }	{ .. 43° }	{ .. 44° }	16,650	nil
183*	Kirkgate ..	March 10.45 a.m.	H.	33°	49°	56°	43°	42°	41,350	10
184*	Kirkgate (s) ..	10.50 a.m.	422	33°	49°	56°	44°	45°	5,700	nil
185†	Potternewton (d.c) ..	March 30 7. 0 a.m.	H.	36°	45°	48°	40°	88°	26,000	nil
186†	Harehills Road (d.c.) ..	7.20 a.m.	543	36°	45°	48°	44°	83°	43,000	nil
187*	Potternewton (a) ..	7.20 a.m.	H.	36°	45°	48°	45°	42°	7,500	nil
188*	Potternewton Dairy	{ March 29 3. 0 p.m. March 30 7.30 a.m. }	H. {	{ 37° 36° }	{ 41° 45° }	{ 46° 48° }	{ .. 45° }	{ .. 44° }	63,400	nil
189*	Park Lane (d) ..	March 30 10.30 a.m.	2	36°	45°	48°	50°	60°	74,200	10
190*	Harehills Lane (t.j) ..	April 24 6.15 a.m.	H.	37°	43°	44°	59°	(100°)	600	nil
191*	Potternewton (a) ..	6.35 a.m.	H.	37°	43°	44°	48°	46°	2,800	nil
192*	Gipton Wood (a) ..	6.45 a.m.	543	37°	43°	44°	..	..	10,400	10
193*	Potternewton (d.c) ..	May 2 7. 5 a.m.	H.	36°	47°	48°	43°	90°	4,000	nil
194*	Potternewton (a) ..	7.15 a.m.	H.	36°	47°	48°	43°	46°	14,100	nil
195*	Templenewsam (b) ..	7.47 a.m.	1,116	36°	47°	48°	45°	71°	37,200	10
196*	Kirkgate Depot (a) ..	May 26 10.30 a.m.	H.	48°	53°	56°	50°	48°	2,550	nil
197*	Kirkgate Depot (a)	{ May 25 3. 0 p.m. May 26 10.35 a.m. }	H. {	{ 46° 48° }	{ 55° 53° }	{ 56° 56° }	{ .. 50° }	{ .. 44° }	3,000	nil
198*	Park Lane (d) ..	May 26 11.10 a.m.	2	48°	53°	56°	54°	58°	6,050	100

TABLE VIII c.—(Continued from 1905 report, p. 127).

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growths in McConkey broth per c.c.
				Of air.			Time and place of sampling.	Of milk at time of sampling.		
				Philosophical Hall.						
				Min. previous night.	10 a.m.	4 p.m.				
199†	Potternewton (a) ..	1906. June 29 6.15 a.m.	H.	50°	63°	65°	54°	48°	33,000	nil
200†	Wharf Street (s) ..	8.45 a.m.	611	50°	63°	65°	70°	68°	13,000	nil
201†	Richmond Street (s) ..	9. 0 a.m.	142	50°	63°	65°	70°	50°	36,000	nil
202†	Foster Street (s) ..	10.15 a.m.	621	50°	63°	65°	68°	53°	60,000	10
203†	Potternewton (a) ..	July 13 6.30 a.m.	H.	49°	63°	64°	63°	83°	83,300	nil
204†	Potternewton (a) ..	7. 0 a.m.	H.	49°	63°	64°	63°	50°	66,600	nil
205†	York Road (h) ..	9.30 a.m.	510	49°	63°	64°	75°	70°	1,770,000	100
206†	Dawlish Road (s) ..	9.45 a.m.	154	49°	63°	64°	75°	73°	60,000	100
207†	Potternewton (a) ..	July 20 3.30 p.m.	H.	53°	64°	67°	75°	50°	3,000	nil
208†	Harehills Road (d.s) ..	3.45 p.m.	415	53°	64°	67°	80°	72°	1,050,000	1,000
209†	Kirkgate Depot (x) ..	July 27 10.15 a.m.	H.	51°	65°	68°	75°	38°	376,000	10
210†	Dyer Street (s) ..	10.30 a.m.	607	51°	65°	68°	72°	75°	1,360,000	nil
211†	Potternewton (a) {	Aug. 2 3.20 p.m. Aug. 3 9.30 a.m. }	H. {	54° 61°	66° 69°	71° 72°	72° ..	50° ..	940,000	100
212†	Bramley's Yard (d) {	Aug. 2 5.15 p.m. Aug. 3 9.30 a.m. }	539 {	54° 61°	66° 69°	71° 72°	80° ..	79° ..	390,000	nil
213†	Bayswater Road (d) {	Aug. 2 4.30 p.m. Aug. 3 9.30 a.m. }	221 {	54° 61°	66° 69°	71° 72°	79° ..	78° ..	2,880,000	100
214†	Roundhay Road (c) ..	Nov. 30 10.25 a.m.	543	50°	59°	60°	46°	48°	7,000,000	nil
215†	Chapelton Road (d.s)	11.20 a.m.	572	50°	59°	60°	47°	53°	2,950,000	nil
216†	Quarry Hill (s) ..	Dec. 7 10.53 a.m.	335	38°	53°	58°	42°	53°	53,000	nil
217†	Templar Street (s) ..	10.35 a.m.	14	38°	53°	58°	40°	57°	69,000	nil
218†	Claypit Lane (s) ..	11.25 a.m.	502	38°	53°	58°	33°	50°	113,000	10
219†	Metcalf Street (d) ..	Dec. 14 9.50 a.m.	321	35°	47°	52°	45°	70°	280,000	10
220†	Roseberry Terrace (d) ..	10. 5 a.m.	556	35°	47°	52°	47°	65°	101,000	10
221†	Greenhow Road (s) ..	10.30 a.m.	118	35°	47°	52°	52°	66°	3,000,000	10

TABLE VIII c.—Continued.

	Place of taking sample.	Time.	Milk-man.	Temperature in degrees Fahrenheit.					No. of colonies in 1 c.c. All kinds.	Growth in McConk broth per c.c.
				Of air.			Time and place of sampling.	Of milk at time of sampling.		
				Philosophical Hall.						
				Min. previous night.	10 a.m.	4 p.m.				
222†	Blundell Street (h) ..	Dec. 21 9.20 a.m.	24	38°	54°	57°	45°	53°	496,000	nil
223†	Cavendish Street (d) ..	10. 0 a.m.	110	38°	54°	57°	59°	55°	230,000	100
224†	Florist Street (d) ..	10.15 a.m.	614	33°	54°	57°	59°	60°	116,000	10
225†	Hyde Park (d.s) ..	1907. Jan. 25 9.30 a.m.	538	28°	44°	49°	..	35°	130,000	nil
226†	Chapeltown Road (d.s)	10.15 a.m.	572	28°	44°	49°	..	32°	400,000	10
227†	Parkside Farm (f) ..	March 6 3.10 p.m.	493	31°	52°	59°	65°	77°	10,000	nil
228†	Parkside Farm (f) ..	3.10 p.m.	493	31°	52°	59°	65°	77°	160,000	nil
229†	Dewsbury Road (d.s) ..	4.25 p.m.	547	31°	52°	59°	60°	74°	7,040,000	10
230†	Dewsbury Road (d.s) ..	4.25 p.m.	547	31°	52°	59°	60°	74°	60,000	100

No. 88 has been corrected from 1905 to read 10.15 a.m. instead of p.m.; and No. 146, Colonies to 33,200 from 58,200.

Another specimen, with a large though not quite so exuberant a bacterial flora, was No. 128, taken on December 8th, 1905, and it gave 1,189,000 colonies per cubic centimetre. A specimen of the same milk No. 129, after passing over the cooler, contained only 11,000 colonies.

In neither of these cases (74 and 128) had the milk been subjected to the careful filtering employed later. If these two specimens be removed from the 19, the remaining 17 specimens had an average colony producing content of 3,528, less even than in the milk which went through the cooling and filtering process in the apparatus. In fact in several cases where we compared milk taken directly from the can at the farm, but filtered twice through cotton wool—once at the farm and again on bottling at the dairy—the bacterial content was very small indeed and was usually less in the specimen that had not been over the cooling apparatus but had been bottled directly from the filter and cooled in the same sterilized bottle. It seems a fair inference that a certain amount of dust had attached itself to the apparatus after it had been scalded and that a certain amount had also settled on the milk during the time that it was going through the process of cooling. (See paragraph at the bottom of page 270).

The 70 specimens mentioned on page 235 as having an average bacterial content of 72,379 contained all such specimens taken from August 3rd, 1905, to the end of September, 1906, except those where some experiment was being made in regard to the keeping qualities by submitting the milk to specially trying conditions. The 27 specimens, however, included in the 70 but taken during the year 1906—that is, in the three earlier quarters of that year—had an average of only 56,885. On the other hand the ten Harehills Lane farm specimens taken during the first and second quarter of 1906—no samples of milk from the farm can were examined in the third quarter—had an average content of 9,515.

A few specimens were taken directly from the cow. Unfortunately at the time that this was done we were not looking for less than 1,000 bacteria per cubic centimetre in any specimen. Counting as 1,000 those in which the number found was less than a 1,000 (excepting one case in which the number was counted and found to be 600) the average of 12 specimens taken direct from the teat was 4,617. In one of the four specimens of the first milk from the teat, the bacterial content was only 600. In two other specimens it was under 1,000. One of these was returned as showing no growth on the gelatine with dilution of 1 in 1,000. In seven later milks the average was 6,000. The remaining milk was one from two cows—first milk in both cases—bacteria 7,500 per c.c.

The only specimen in which the last milk was chronicled was taken in the fourth quarter of 1905, and contained less than 1,000. It will be understood that the milk from which the four early milk specimens were taken was rejected.

So far for milk taken under special supervision but omitting specimens for experimental purposes, some of them taken under disadvantageous circumstances. During the period from August, 1905, to the end of December, 1906, certain samples of milk as sold chiefly from the shops of retailers were examined. These differed a good deal in origin and may be conveniently separated in groups accordingly.

GROUP I.—From Leeds retailers of milk from farms within the city. This milk was in no case taken in the course of delivery or of house to house distribution to customers, but in every case from the house or shop of the retailer. In most of these cases this was not a dairy. There were 47 samples in this group. The average colony producing bacteria per cubic centimetre were 1,257,815. The period of collection, however, includes two Autumns. If we restrict our examination to the 24 samples taken during the four quarters of 1906 the average falls to 705,054.

GROUP 2.—During the latter part of 1905 and the whole of 1906, 30 samples of milk brought into Leeds by cart from farms just outside the City, were taken either directly from the cart or, more frequently from the shop or dairy, at which it had been delivered, and generally in these cases soon after its delivery. The bacterial flora of this milk averaged 2,707,590 per cubic centimetre. When, however, the 23 1905 samples are omitted the average of the seven taken in the four quarters of 1906 falls to 232,143. Seven samples is however a small number on which to take an average.

GROUP 3.—Nineteen samples taken during the larger period of 1905 and 1906, purchased at retailers' shops, principally of milk sent by rail and taken soon after delivery, had an average bacterial content of 494,440. Of these 9 were taken in 1905. The ten taken in 1906, pretty equally throughout the year, and including one specimen of the Wensleydale milk from Northallerton, had an average flora of 832,535.

GROUP 4.—Fifteen samples procured at railway stations on delivery in Leeds, 14 taken in the fourth quarter of 1905, and one in the first of 1906, gave an average of 1,001,300. The 15 samples, however, contained 3 not sent immediately for examination. One (No. 72) giving 11,500,000 colonies, was kept at room temperature from 9.15 a.m. on October 9th to 10.25 a.m. the following day. Another (No. 80) was afternoon milk examined the following day. Its content was 42,500. The third (No. 88), taken at 4.15 in the afternoon of October 23rd, kept at room temperature till 10.15 a.m. next day, gave 2,050,000 colonies. These experiments are mentioned again later. If the samples thus kept be excluded, the bacterial content becomes 118,083.

Summarizing the specimens of milk purchased from ordinary retailers in Leeds as detailed under the four groups as above, it will be found that in the longer period of 1905 and

1906, the average bacterial content was 1,484,314, or leaving out the 3 railway milks, 1,399,595. Dealing only with specimens taken in the four quarters of 1906, and excluding therefore the autumn of 1905, it was 654,325.

In these figures however we are dealing only with the total bacterial content of the specimens taken. Generally there was a pretty close relationship between these figures and those representing the numbers of the coliform group of bacteria present. The method in which these last named were estimated was given in pretty full detail in the Annual Report for 1905 at page 113. To avoid confusion, our figures as to coliforms deal in every case with the longest period for each group of samples.

Of the 70 specimens of milk that had been cooled at the apparatus at the Potternewton dairy from the middle of 1905 to the end of 1906, already mentioned (p. 235) as having an average bacterial content of 72,379, one, or 1·4 per cent. showed the presence of bacteria of the colon-group when a dilution of one in a hundred was added to McConkey broth. Sixteen or 22·9 per cent. showed it in the ten per cent. solution, whilst 53 or 75·7 per cent. gave no reaction with a ten per cent. solution in the taurocolic medium and might therefore be regarded as pretty free from colon bacilli.

Of the 19 specimens taken from the can (p. 235), either at the Harehills Lane farm or immediately on arrival at the Potternewton dairy, three or 15·8 per cent. showed the presence of bacteria of the colon-group in the 10 per cent. solution and 16 or 84·2 per cent. gave no reaction when a 10 per cent. solution was added to the McConkey broth, and therefore might be regarded as practically free from bacteria of the colon group.

Of the 12 specimens taken from the teats of cows at Harehills farm, and described, on (p. 248), as having an average bacterial content of 4,617 colony producing bacteria, 1 or 8·3 per

cent. showed the presence of bacteria of the colon group when added in 1 per cent. solution to McConkey broth, whilst 11 or 91·7 per cent. failed to show the presence of bacteria of the colon type when added in a 10 per cent. dilution to the bile salt medium.

Of the 47 milks belonging to group 1, with an average bacterial content of 1,258,815, supplied by cowkeepers within Leeds to retailers, and purchased almost without exception at the retailer's house or shop, and in no case in course of delivery, 10 or 21·2 per cent. showed the presence of bacteria of the colon group when a dilution of one in a thousand was added to the McConkey broth. Ten or 21·2 per cent. gave the reaction with McConkey broth when a dilution of one per cent. was added. Thirteen or 27·8 per cent. showed the presence of this group in a dilution of 1 in 10, whilst 14 or 29·8 per cent. which gave no reaction with the ten per cent. diluted milk, might be considered as fairly free from the colon group of bacteria.

As before mentioned (p. 249), 30 samples belonging to group 2, and having an average bacterial content of 2,707,590, which came from farms just outside the city in traps or floats, were taken either from the can during transit or soon after arrival at the retailer's premises. Of these 4 or 13·3 per cent. gave, with a dilution of one in a thousand, the reaction for the colon group. Twelve or 40·0 per cent. gave the reaction when a dilution of 1 in 100 was added to McConkey broth. The reaction was given with a dilution of 1 in 10 by 9 or 30·0 per cent., whilst 5 or 16·7 per cent. giving no reaction might be considered practically free from this form of contamination.

Of the 19 specimens of group 3 and described on p. 249 as having an average bacterial content of 494,440, and which had been taken from shops or dairies receiving milk by rail from farms outside the city, one or 5·3 per cent. gave the reaction for the colon group when a one in a thousand dilution of the milk

was added to McConkey broth. Six or 31·6 per cent., when a dilution to one per cent. was added to the bile salt medium, showed the presence of the colon group. In 7 or 36·8 per cent. a dilution of one in ten gave the reaction with the taurocolic medium, whilst five or 26·3 per cent. gave no evidence of the presence of the colon group when added to McConkey broth as a ten per cent. solution.

Of the fifteen specimens of group 4 described on page 249 as having an average bacterial content of 1,001,300, two or 13·4 per cent., when added as a one in a thousand dilution to the taurocolic medium, gave the reaction demonstrating the presence of the colon group. Three or 20·0 per cent. added as a one per cent. solution to the McConkey broth showed the presence of the colon group. The reaction with the bile salt medium was given by a ten per cent. solution in 3 or 20 per cent. of the total specimens taken. The practical absence of the colon group was shown by 7 samples or 46·6 per cent. which gave no reaction with McConkey's medium when added as a ten per cent. solution. Leaving out, however, the 3 samples not examined at once, the percentage of the remaining 12 giving no reaction with taurocolic broth in 10 per cent. was 58·3; giving the reaction with 10 per cent., but not with 1 per cent., 16·7; giving the reaction with 1 per cent., but not with 0·1 per cent., 25; and those giving a reaction in the 1 in 1,000 dilution, none.

The 108 specimens of the four groups of retailers' milk had an average bacterial content of 1,399,595. Taken altogether they yielded the following results with the taurocolic medium. No change with 10 per cent. dilution in 31 or 28·5 per cent., re-action with 10 per cent. dilution in 31 or 28·5 per cent., with 1 per cent. dilution in 31 or 28·5 per cent., and with 0·1 per cent. dilution in 16 or 14·6 per cent. The 3 experimental Station milks are excluded from these averages.

	Average bacterial content per c.c.	REACTION WITH TAUCOLIC MEDIUM.			
		None in milk diluted to 10 per cent.	With milk diluted to 10 per cent.	With milk diluted to 1 per cent.	With milk diluted to 0·1 per cent.
Cooled over apparatus (70 samples)	72,379	75·7	22·9	1·4	..
Farm milks (19 samples)	421,323	84·2	15·8	..	..
Ditto, rejecting two (17 samples)	3,528	94·1	5·9	..	..
Milk from teats (8 after, 4 first milk)	4,617	91·7	8·3	..	..
Shops and houses from Leeds farms (47 sam- ples)	1,257,815	29·8	27·8	21·2	21·2
Retailers' milk from farms near Leeds (30 samples)	2,707,590	16·7	30·0	40·0	13·3
Railway milk at dairies (19 samples)	494,440	26·3	36·8	31·6	5·3
Station samples (12 samples)	118,083	58·3	16·7	25·0	..
Retailers, all four groups (108 samples)	1,399,595	28·5	28·5	28·5	14·6

The figures in each of the four later columns are mutually exclusive. Thus in the first line 22·9 per cent. of the 70 samples did give a coliform reaction with a 10 per cent. solution of the milk, but not with a 1 per cent., while 1·4 per cent. did give the reaction with a 1 per cent. solution, but not with a 0·1 per cent.

Milk under trying conditions.—Reference was made in the report for 1905, at p. 114 to certain experiments marked (x) in the table after the name of the place where the sample was taken. It will be remembered that * against the number of the

sample means examined in the laboratory of the Medical Officer of Health by Dr. A. E. Porter, now of Reigate, and † at the Pathological laboratory at the University.

Sample 18† Potternewton (x) was milk collected in the afternoon of August 8th, passed at the time over the cooler belonging to the Pure Milk Association and kept until the 11th, before being sent for examination to the Medical School. Unfortunately we have no record of the temperature of the place in which the milk was kept during the interval. The experiment was one of the earlier ones, and the probability is that the sample was not kept in ice the whole of the interval. Probably from the afternoon of the 8th, to the morning of the 9th, it was kept in ice along with similar bottles to be sent out for distribution on the 9th, and not being sold was fetched away on the 10th, as was the practice in regard to all the unsold milk of the previous day, and sent for examination the following day again, that is the 11th, to see what changes might have occurred in the eighty hours during which it had been kept. The bacteria had increased so as to produce 29,600,000 colonies, and the milk gave a re-action with McConkey's broth when diluted to one thousandth. On the same day on which the sample 18 was examined, the 11th, a sample was examined which had been taken directly from the teat of one of the cows on the previous afternoon, that is the afternoon of the 10th, two days later than number 18. This contained only 3,300 colonies per cubic centimetre, and a ten per cent. dilution gave a negative result with McConkey's broth. Another specimen taken on the morning of the 11th, and passed over the cooling apparatus, yielded 23,000 colonies. It also gave no evidence of colon bacilli. The object in examining number 18 was to see what changes would occur in a three days old sample not kept rigidly in ice the whole period. The average bacterial content of the only three samples of the Association's milk examined up to that time had been 5,278 per cubic centimetre and no coliforms. All three were afternoon samples kept in or near ice till the following morning, and then sent to the School.

Sample 57†, Potternewton (x). This specimen was taken on the afternoon of September 27th, and sent for examination on the forenoon of September 29th. The milk had been passed over the cooler in the ordinary way, bottled in a six oz. bottle, put into a bucket with ice, and taken the same afternoon to the Medical School, and placed in the ice safe until the day but one following. It yielded 23,300 colonies per cubic centimetre, and showed the presence of the coliform group in 10 per cent. solution. This sample, kept some 44 hours after sampling at the bottling room, compares favourably with number 58. Its bacterial content was greater than that of numbers 53 and 54, afternoon samples examined the same afternoon.

Sample 58†, Harehills Lane (x). This was a specimen of milk taken at 6.30 a.m. on the 29th September, the day when sample 57 was examined. It was a sample of the milk first drawn from the teats of 9 cows into an enamelled jug, and poured from the jug into a six oz. sterile bottle. The bottle was then placed in ice and taken to the Medical School about 11 a.m. This sample (which must not be confounded with others in which milk was taken directly from the teat into the sample bottle) gave 40,000 colonies and the coliform re-action in the 10 per cent. solution. The ordinary cooled milk, number 57, when kept nearly two days, contained fewer bacteria. The first drawings from the teats were rejected from the supply, and the specimen from the jug was not filtered.

Sample 66†, Cross Green Lane (x). This was a sample of milk cooled and bottled at the Potternewton dairy, in the early morning, on October 5th. It was then taken in the bottle to a shop in Cross Green Lane the same morning, and left there until 9 a.m. on the following morning, the 6th. It was then transferred (but whether in the same bottle or in a small ounce specimen bottle is not recorded) to the Medical School in ice. The complete liquefaction of the gelatin which occurred, was probably due to an accident in the preparation of the jelly, for

the same result occurred in all four specimens examined that day. The milk, however, did not yield any evidence of coliform organisms when a 10 per cent. solution was added to the McConkey broth.

Sample 71*, Potternewton (x). This milk was treated with some amount of indignity. It was bottled from the cooler at Potternewton at 7.15 a.m. on the 9th of October, but does not seem to have been cooled below 50° F., and as the air at that time was 52° F., it had not been cooled much below the temperature of the atmosphere. It was then taken, thus cooled but not in ice, and given into the charge of the caretaker at the Sanitary offices. She was directed to keep it in the ordinary place where she kept her own milk, and to use it from time to time during the day, replacing the stopper on each occasion. The bottle was thus opened, and some of its contents removed at noon and again at 4 p.m. The following morning an ounce from what was left in this bottle was transferred to a sterilized ounce stoppered bottle. The transfer was made just outside the kitchen door, that is in the corridor of the offices. The ounce bottle was then placed in ice, and transferred to our own laboratory. Regarding this as a milk collected and sold on the 9th, and used during the 9th and 10th, it had been exposed to the ordinary vicissitudes of use for 24 hours, except that instead of being kept in an ordinary basin, it was kept in a stoppered sterilised bottle. This specimen caused a growth of 4,000,000 colonies, and a 0.1 per cent. solution showed coliforms. This milk had come from the same quantity as numbers 69 and 70, except that 69 was the first drawn over the cooler. Number 70, drawn over the cooler a little later than number 69, had only 3,600 colonies. Neither 69 nor 70 gave any coliform re-action with a 10 per cent. solution of the milk.

Sample 72*, North Eastern Station (x). This was of the nature of a control experiment to the last with railway milk. A sample was taken at the North Eastern Station from a fifteen

gallon can which had travelled from Darley, in Nidderdale. The milk in the large can was mixed by means of a large stirring rod, specially constructed for this purpose. This piece of apparatus had been previously sterilized by being boiled. It was then wrapped in a sterilized sheet of paper, and carried in a bag to the station. The milk was taken from the churn by means of a sterilized spouted dipper, and poured into a twenty ounce sterilized stoppered bottle. It was then taken to the caretaker at the Sanitary Offices, and treated by her in the same way as the other sample from the similar bottle of the Association milk, except that instead of being kept in the bottle, it was placed in an ordinary basin covered with a plate. It was used from time to time for her own domestic purposes, like the Association milk. On the following day, at 10.25 a.m., a sterilized ounce bottle was filled from the milk remaining in the basin. The sterilized stopper was placed in the bottle, the transfer from the basin to the bottle being made in the same place as the last specimen. The bottle was then placed in ice and taken to our own laboratory, where it was examined, like the other specimen, immediately on arrival. Both specimens of milk were used at 12 noon and at 4 p.m. on the 9th, and the specimens of the remainders were collected between ten and half-past on the 10th. The examination in both cases was made almost immediately after. This railway milk contained 11,500,000 colonies, and also gave a re-action for coliforms in a 0.1 per cent. solution. The Association milk, treated as the mothers of the East Ward infants were directed to treat it for their infants, came out of the ordeal with comparative honour. Neither specimen was improved by its ill-treatment. Compare again numbers 69 and 70.

Sample 73,[†] Harehills (fx). This was a sample of milk taken directly from the cow in the mistal. It was a specimen of the last milk from the teat, that is the strippings. It was taken into a one ounce sterile bottle, which was put into the

sample box in ice. Though the number of colonies was rather large (180,000), there was no evidence of coliforms. This milk is not included in any of the teat samples mentioned earlier.

Sample 77,* Potternewton (ax). This was a sample of milk that had been over the cooler. A sterilized one ounce bottle was half filled with the first milk through the syphon tubes, and then placed in ice whilst the bottling was going on. Then as the milk was running towards the end, the bottle was filled to the top with the later milk from the syphon tubes, and again placed in ice in the sample box. The milk, so far as our notes go, was all from the first can brought down from the farm to the dairy. The number of colonies was 14,000, and a 10 per cent. solution showed the presence of the coliform group. The sample represents a mixture in the sample bottle of specimens of milk taken like numbers 69 and 70 separately. The bacterial content, curiously, was the average of those two samples. They showed, however, no coliforms in the 10 per cent. solution. They were taken a week earlier.

Sample 79,* York Road (x). This milk was taken under the same circumstances as number 77, but into a 20 ounce bottle instead of a one ounce bottle. The bottle, which had a porcelain stopper, had been sterilized, and was sealed and taken along with the distribution milk to a shop in York Road, where it was left, along with other milk for distribution, on the morning of the 16th. It remained in the shop till the morning of the 17th. At 10.45 a.m. on the 17th, the bottle was shaken, and a sample of the contents put into a sterilized one ounce bottle at the shop. The small bottle was placed in the sample box in ice, and taken to the laboratory, where it was examined forthwith. The temperature of the milk remaining in the 20 oz. bottle was 57° F. The temperature at the time of bottling the previous day had been 49° F. The temperature of the air at the dairy at the time the milk was first bottled was 40° F. (7.15 a.m., 16th). The temperature of the air in the

shop when the transfer was made from the original to the sample bottle was 58° F. This sample had therefore been kept in the ordinary distribution bottle unopened for 28 hours. It gave rise to 17 times as many bacterial colonies as the same milk bottled on the 16th, and examined on the same morning, but curiously enough did not give any evidence of coliforms in a 10 per cent. solution. The milk was with the bottles withdrawn from sale, or rather which had they been asked for would not have been sold later than the evening of the 16th.

Sample 80,* Midland Station (x). This sample was taken at the Midland Station out of a fifteen gallon can, on October 16th, at 3.40 in the afternoon, the temperature of the air at the time of sampling being 47° F., that of the milk itself 78° F. It had come by train from Guiseley. The milk was taken from the large can by means of a sterilized dipper, after the contents of the can had been stirred by means of the sterilized stirring rod mentioned under number 72. Two samples of milk were taken at the same time. A small sterile one ounce bottle was filled first from the dipper, and placed in the iced sample box. A twenty ounce sterilized bottle was then filled from the same dipper, the porcelain stopper was re-inserted, but the bottle was not put into ice. Both samples were taken to our own laboratory, and a specimen from the small bottle (78*) was put into the medium at once, and gave 6,000 colonies but no re-action in 10 per cent. solution with McConkey's broth. The contents of the large bottle were emptied into a clean sterilized beaker in the laboratory. A recently washed and dried evaporating dish was placed on the top of the beaker, which was left on the laboratory table until next morning. At 10.45 a.m. on the 17th, the milk had a temperature of 57° F., and the temperature of the air in the laboratory was 58° F., and cultures were made, with the result that the milk gave evidence of 42,500 colonies. A 10 per cent. solution showed coliforms. The milk therefore, as compared with the other specimen (78*) examined the previous afternoon, and taken directly from the

can to the laboratory in ice, contained seven times as many bacteria, and showed evidence of coliforms in the 10 per cent. solution, whereas the control sample gave none. The conditions under which this milk was kept were not very different from what would obtain in an ordinary cottage house, except that the beaker was sterilized.

Sample 82,† Potternewton (d x). This was a specimen taken at the Potternewton dairy, at 3.15 p.m., on October 19th. Our notes are that the small sample bottle was filled as the milk was being poured from the large fifteen gallon can, just arrived, into the hand can, from which it would have been poured on to the cooler. The attendant had washed his hands before removing the porcelain stopper from the sterilized bottle. The air in the dairy was 46° F., and the milk remaining in the can after the sample had been taken was 87° F. The sample was kept in ice and sent to the Medical School, in the ordinary way, next morning. The bacterial content was 33,000, and there was no evidence of coliforms. The experimental part here was that the milk had not been over the cooler. It was exposed to any dust there might be in the dairy in pouring out, and is comparable with the specimen taken about the same time (81†), which had been over the cooling apparatus. The apparatus milk gave an average content of 48,500, and, like the milk bottled directly, contained no evidence of coliforms in 10 per cent. dilution. It will be noticed that the milk which had not been over the apparatus contained less than three quarters of colony producing germs in the apparatus milk. The time of taking and the time of examining were the same in both cases. Although the temperature of the milk at the time of bottling was 87° F. in the one case and 46° F. in the other, it must be remembered that the temperature of the milk that did not go over the cooler was lowered by placing in the bottle in ice.

Sample 85*, Potternewton (a x). Milk taken on the morning of October 23rd, in a similar manner to the specimen described under number 77. The sterilised sample bottle was half-filled

with the first milk that came through the apparatus at 6.40 a.m. and, at 7.15 it was quite filled with the milk towards the end of the filling process. The milk was of course cooled over the cooler and the sample bottle put in ice, between 6.40 and 7.15, and kept in ice until it went to our own laboratory. The temperature of the milk which came over the apparatus was 46°F. and the temperature of the air in the dairy 41°F. The number of colonies was 5,000, and there was no reaction in McConkey's broth with a 10 per cent. solution.

Sample 87*, Potternewton (a x). This was a sample taken at the dairy at the same time and in the same manner as sample 85. The milk had been cooled as in that sample to 46°F., and like that sample it was taken to our own laboratory the same morning but instead of being examined like number 85, it was left in its bottle on the laboratory table, not in ice. Next morning about 10.15 a.m., it was shaken and a culture taken from the bottle, 28 hours after collection. The number of colonies was 802,000, but the one per cent. solution gave the reaction with the taurocolic broth. If we suppose the samples 85* and 87* to be fairly comparable, the milk kept 24 hours in the laboratory in the original bottle, contained sixteen times as many ordinary bacteria as the sample examined forthwith. Coliforms also appeared ten times as many.

Sample 88*, Midland Station (x). Like number 86, this milk had been collected at the station from a large 15 gallon can at 4.15 p.m. The milk was from Guiseley. The same precautions as to stirring and using a sterilised dipper were taken as in samples previously mentioned. Instead of being put into the ice box at the station like number 86, it was carried in the 20 oz. sterilised bottle to our own laboratory at the same time as number 86. Number 86 was then added to the culture medium with the result that 110,500 colonies per cubic centimetre were found and McConkey's broth reacted with a one per cent. solution. Number 88, which had been 72° F. at the time of

sampling, was decanted at the laboratory from the 20 oz. bottle into a sterilised beaker, and placed to stand on the laboratory table at laboratory temperature, overnight, covered only by a porcelain vessel. At 10.15 a.m. on the following morning, when the cultures were made, the temperature of the milk and of the laboratory were both 66° F. The colonies found in this milk, thus kept at a temperature of about 66° from 4.15 on the 23rd to 10.15 on the 24th, were 2,050,000 per cubic centimetre, and a 0.1 per cent. solution gave an acid gas re-action with the taurocolic medium. This milk had therefore, between 4.15 p.m. on the 23rd and 10.15 a.m. on the 24th, increased its bacterial content more than 18 times, and the re-action with McConkey broth occurred in a dilution 10 times greater than in the milk taken in the ice box direct from the station.

Sample 94,* Park Square (x). The milk of which this was a sample was purchased by the caretaker at 41, Park Square, from her own milkman at the evening delivery on October 30th. It had been partly used in the ordinary way and an ounce of it was obtained at 9.35 a.m. on the morning of the 31st. It was taken not with a view to furnish us with a sample but in the ordinary course of domestic life. The keeping place in which it had been placed was 54° at 9.35 a.m. on the 31st, and the temperature of the milk the same. It gave 26,600,000 colonies, and a dilution of one in a thousand re-acted to the McConkey broth.

Sample 95,* Kirkgate (x). This milk was taken under the same circumstances as 93,* and in a similar manner to numbers 85 and 87; that is to say, the milk was sent over the apparatus, the one ounce and six ounce sterilised bottles were each half filled at the beginning of the cooling and completely so at the last part of the cooling. Number 93 was then put into ice and taken to our own laboratory where it began to be examined at 11.15 a.m.—the culture plates then taken giving 93,000 colonies per cubic centimetre of milk and a 10 per cent.

solution re-acting to the taurocolates. Number 95 was also cooled to 48° F. at the apparatus, was also taken from the first and the last part of the process. It was then sent down in the ordinary way in ice to the Kirkgate Milk Depot. It was kept, but not in ice, until the following morning at 9.15, when it was collected and a sample taken in ice to our own laboratory. The temperature at the Kirkgate Depot, at the time the milk was transferred to the small bottle was 59° F., and the temperature of the milk left in the larger bottle was also 59° F. The examination at the laboratory began at 11.10. This milk gave 1,117,000 colonies, twelve times the number given by similar specimens similarly taken on October 30th, but examined the same morning, and kept in ice until examined. This sample also gave the re-action with McConkey's broth when a 10 per cent. solution was added. The increase of the ordinary bacteria had apparently taken place in the milk during the time when not in ice, but the coliforms do not seem to have proportionately increased.

Sample 118,* Kirkgate (a x). This is a sample of milk taken at about the same time as 116.* Number 116 was a sample of the first and last milk through the syphons from the first churn sent to the cooler on the morning of November 28th. Number 118 was one of the bottles filled, probably continuously, during the interval between taking the first and last part of the sample 116. The air at the Potternewton dairy at the time of sampling was 42° F., and the milk in the syphon trough 46° F. Number 116 was taken into an ounce sterilized stoppered bottle and put into the iced carrier, then taken in the course of the morning to our own laboratory for examination. The number of colonies found was 3,000, and, when diluted to 10 per cent., there was no coliform re-action with McConkey's broth. Number 118 on the other hand, was taken in the ordinary stoppered bottle of the Pure Milk Association, sent in the ordinary way to the Kirkgate Depot, and there placed with the bottles for distribution in the ice box in the front shop. This ice box stood in a corner between the fire place and the wall of the bottle washing room

and was frequently opened during the day for the distribution of milk. There would be a fire in the room at this time of the year. The bottle containing this sample remained in this box the rest of that day and the whole of the following night until 11.15 a.m. on the 29th. The bottle was then shaken up, opened, and a portion decanted into a small one ounce sterilized sample bottle which was then stoppered, placed in the ice carrier, and taken to our own laboratory, where its examination commenced at 11.35 a.m. The temperature of the milk remaining in the larger bottle at the depot, after the sample had been taken from it, was 62° F., and the temperature of the shop at the time of sampling was 67° F. The number of colonies in this sample, which had been kept about twenty-nine hours at a cool but not freezing temperature, was 100,000; while a 10 per cent solution gave no coliform re-action. Assuming that the milk in numbers 116 and 118 was practically identical at the time of bottling, the ordinary bacteria had increased 33 times.

The object of this experiment was to ascertain the state of the milk the day after it should have been sold; the practice of the Association being not to sell any milk kept over the first day, at least for the use of children. The bacterial content of 100,000 was after all not large. It was not larger, for instance, than in sample 115†, which was collected on the afternoon of November 24th, kept in the bottling room the rest of that afternoon and all night, and sent to the Medical School at 10 o'clock on the morning of the 25th. The cooling of that specimen (115) seems to have been greater than in the case of 116 and 118 a few days later. The milk in 115 was bottled at 42° F., whereas in 116 and 118 it was at 46° F. The temperature of the air in the Potternewton dairy on the afternoon of the 24th was 48° F., on the morning of the 28th it was 42° F., and it is probable that it did not exceed 48° F. at any time between the taking of sample 115 and its transfer next morning to the Medical School. Sample 115 was kept under ordinary conditions for afternoon milk, the milk bottled in the afternoon being put

into a large drained box, containing sawdust between the inner and outer walls. Into this box ice was placed, but the ice was, generally speaking all gone in the morning. It would therefore appear, comparing numbers 118 and 115, as if the sample taken to the Kirkgate Depôt, and kept there under the ordinary circumstances, did not differ very much in regard to its bacterial content from the sample of milk bottled in the afternoon of the 24th and kept in box at the dairy at Potternewton until the morning of the 25th, but both of them differed from the morning sample (116*) examined the same day as it was bottled.

Sample 180*, Potternewton (x), was collected on March 9th, 1906, at 3.15 p.m. It was filtered through a Ulox filter at the farm and again at the Potternewton dairy, but instead of going over the cooler at the latter place, the milk was run from the Ulox filter directly into the bottling trough and bottled without any cooling. The temperature of the milk in the bottling trough at the time of sampling was 82° F, and of the bottling room 45° F. The sample was collected directly from the syphon into a sterilised ounce bottle and placed at once in the ice carrier in which it was taken direct to our own laboratory. It gave rise to 2,850 colonies and gave no coliform reaction with a ten per cent. solution. This result may be compared with that of 179*. Sample 179* was taken from the can which had come directly from the farm. The sample was received in a bottle as the milk was being poured from the can into the Ulox filter in the bottling room. It had been filtered at the farm through the Ulox, but was not twice filtered like sample 180. Unlike sample 180, it did not go through the bottling trough. The temperature of the milk was 84° F., the can having been cooled at the farm to that temperature by running water through a perforated ring fitted round the neck during the time that the can was being filled. The temperature of the milk seems to have fallen two degrees during the time it was in the bottling room, which had as already stated a temperature of 45° F. The samples 180 and 179 therefore differ only in the fact that the last mentioned was

only once filtered and did not go into the bottling trough. Both were collected in small one ounce sterilised bottles, and both put directly into ice in the carrying box, and both conveyed forthwith to our own laboratory. The once filtered milk contained 8,600 colonies, the twice filtered milk, 2,850. Of course the difference in the result may be partly experimental and may have had nothing to do with the twice filtering. It had, however, by this time become our usual practice to receive the milk into the large churn at the farm through the Ula^x filter, and to filter it again at the dairy whether it went over the apparatus or went directly into the bottling trough. The milk prepared for distribution at the same time as number 180, was like it, cooled in the bottle, not over the cooler, and like it went a second time through the Ula^x filter.

Sample 181,* Kirkgate Depot (x). This was a sample of milk which had been procured on the morning of the 9th, passed over the cooling apparatus in the ordinary way, and sent with the rest of the morning's milk and that which had been cooled and bottled the previous afternoon, to the various distribution places. Sample 181, however, which went to the Kirkgate Depot, was not placed in ice at all after it left the cart, but was put in a cupboard, under the staircase and opening into the bottle washing room. It was kept there until 4.45 p.m. At 4.45 p.m. the temperature of this cupboard was 54° F. The original bottle was first shaken and an ounce sterile sample bottle filled from it. The temperature of the milk remaining in the large bottle was 54° F. The small sample bottle was put at once into the iced carrier, and transferred to our own laboratory. The milk contained 405,500 colonies per cubic centimetre, and re-acted in the 10 per cent. dilution to McConkey's test. All the samples 179, 180 and 181 would arrive at our own laboratory about the same time, 179 and 180 having been collected that afternoon and placed in ice at the bottling room, number 181 having been collected in the morning of the same day after the ordinary cooling process, and sent to the Depot and there placed

not in ice but in a cupboard in the back room, and not again placed in ice until the sample was taken. The colonies in 179 and 180 were 8,600 and 2,850 respectively as mentioned in the previous paragraph. The increase of bacteria was probably chiefly due to the keeping of the bottle at the depot not in ice. It must be remembered, however, that the afternoon milks examined at once generally give a lower bacterial content than those taken and examined in the morning.

Sample 209†, Kirkgate Depot (x). There is nothing very distinctive about this experiment. The milk was carried about to all the other shops at which milk was left. It left the Potternewton dairy at 7.45 a.m. on July 27th, 1906, and was travelling until 10.15 a.m. It was supposed to be in ice in the cart. At the time the sample was decanted into the small bottle, its temperature was only 38° F. The number of bacteria seems to have been rather large, and the coliform group were distinctly present. This specimen compares very badly, for instance, with number 207, taken in the afternoon about a week earlier and examined the following day. The bacteria in this specimen, not carted so much about, and probably carried in the iced specimen box, contained only 3,000 colony producing bacteria instead of 376,000, and there was no evidence of the colon group. Number 209 was evidently a somewhat polluted specimen. The carrying about in ice would not account for the great increase of bacilli. It will be noted that it was a morning milk.

The exact enumeration of colonies in isolated samples does not go for very much. It is only when several samples give a nearly similar result that value can be attached to the figures. Compare for instance numbers 182 and 183. Number 182 was an afternoon milk collected on March 15th, probably in the ordinary way, taken down to Kirkgate the same afternoon and probably placed in the ice box. At 10.40 the following morning

TABLE IX.

Samples of food sent to the City Analyst for examination during the 52 weeks ended 29th December, 1906.

Article.	Genuine.	Poor in quality.	Adulterated.	Total.	Summoned.	Convicted.	Dismissed
Milk	437	...	51	488	16	16	...
Butter	28	...	13	41	12	12	...
Cream	1	...	1	2	..	...	...
Vinegar	8	4	6	18	2	1	1
Beer	13	...	1	14	...	...	...
Jam	4	...	3	7	...	...	...
Pepper	10	8	3	21	1	1	...
Lard	15	...	2	17	...	...	...
Tinned Meat	10	...	...	10	...	...	...
Glycerine	2	...	...	2	...	...	...
Aerated Water	3	...	...	3	...	...	...
Pine Apple	1	...	...	1	...	...	...
Dripping	1	...	...	1	...	...	...
Cinnamon... ..	2	...	...	2	...	...	...
Jellied Brawn	1	...	...	1	...	...	...
Pearl Barley	1	...	...	1	...	...	...
Pellits	1	...	...	1	...	...	...
Infant Preservative	3	...	...	3	...	...	...
Total	541	12	80	633	31	30	1

TABLE IXa.

Summonses issued during the 52 weeks of 1906 under the Sale of Food and Drugs Acts, 1875, 1879 and 1899*, for articles other than butter.

No. of sample.	Article.	Percentage of adulteration.	Fines.			Remarks.
			£	s.	d.	
6	Milk ...	20% added water ...	2	0	0	skim
9	Do. ...	20% do. ...	1	0	0	
66	Do. ...	13% do. ...	1	0	0	skim
82	Do. ...	32% fat removed ...	—			to pay costs
124	Do. ...	13% added water ...	3	0	0	and costs
155	Do. ...	11½% do. ...	5	0	0	do. 3rd conviction
220	Do. ...	15% fat removed ...	—			to pay costs
250	Do. ...	32% added water ...	1	0	0	and costs
259	Do. ...	12% do. ...	1	0	0	do.
330	Do. ...	55% do. ...	5	0	0	do.
385	Do. ...	33% do. ...	20	0	0	do. 3rd conviction
387	Do. ...	20% fat removed ...	—			to pay costs
527	Do. ...	19% added water ...	0	5	0	
617	Do. ...	7½% do. ...	—			to pay costs
618	Do. ...	15% do. 17% fat removed	2	0	0	
624	Do. ...	17% added water ...	2	0	0	
95	Vinegar	85% other than malt ...	1	0	0	
96	Do. ...	90% do. ...	—			dismissed
300	Pepper...	25% husk and starch ...	1	0	0	
			£	45	5 0	

* For cases under Margarine Act see table IXb.

a portion of milk from this bottle was transferred to a sterilised one ounce sample bottle and put into ice in the iced carrier. The room in which this transfer took place had a temperature of 43° F., and the milk left in the bottle from which the sample was taken of 44° F.

The compared sample No. 183 was one collected and cooled in the usual way on the 16th of March, and delivered the same forenoon at the Kirkgate Depot, there transferred at 10.45 from the 20 ounce bottle to the ounce sample bottle, the temperature of the room being again 43° F., and the temperature of the milk left in the 20 ounce bottle 42° F., two degrees cooler than the milk that had been in the dairy all night. Notwithstanding this, the bacteria in that morning's milk were nearly three times as great as in the sample that had been kept from the previous afternoon. Not only was this the case, but the fresher sample showed coliforms in a 10 per cent. solution, which the previous afternoon's sample did not. The difference probably was not a question of temperature but a question of cleanliness in collecting.

On the other hand, the large increase of colonies in number 181 where the milk was kept at what might be called ordinary temperature, in number 71 where the milk was not only kept at ordinary temperature but the bottle opened occasionally, in 87 where the milk was kept over-night at the dairy without ice, and in 95, where the milk was kept at Kirkgate, not in ice, indicate that milk taken under pretty much the same conditions as samples giving less than 10,000 bacteria, gave the larger figures under the less favourable circumstances.

The difference between milk passed over the cooler and milk taken directly from the can and cooled in bottle, under otherwise similar circumstances was spoken of in an earlier paragraph. In thirteen samples in which these conditions were comparable, the average bacterial content of milk from the cooler was 15,020, and on three out of the thirteen, the one-

tenth dilution reacted with McConkey's broth. In the milk taken directly from the can the average bacterial content was 8,260 and on one occasion only, the McConkey reaction was obtained from the 10 per cent. solution.

MEAT AND MARKETS.

Slaughter houses and meat shops.—The inspectors paid 6,062 visits to 91 private slaughter houses, 2 public abattoirs, and 2 knackers' yards. They also visited the general market, the wholesale meat market, and the cattle market, the shops in the town in which meat, fish and fruit are sold, railway stations, and potted meat factories. Their visits to these numbered 4,425.

Sunday trading.—These visits include work done on 17 Sundays during the year. On Sunday morning, January 28th, shops in Marsh Lane, York Street, and High Street were visited. The contents of 12 butchers' carts, 4 rabbit stalls, and 2 vegetable carts in Prospect Row were examined. The goods found were all fit for food.

On February 25th, four weeks later, shops in Marsh Lane, York Street, and High Street were again visited, and the goods exposed for sale on 10 butchers' carts, 2 rabbit stands, and 1 vegetable cart in Prospect Row examined and found fit for food.

On June 10th, also a Sunday, Prospect Row was again visited, and the goods upon 11 butchers' carts and 3 rabbit stands examined. The butchers' shops open in High Street, York Street, St. Peter's Street, and Marsh Lane were also visited and the goods exposed for sale examined. At one shop in the

last named, Marsh Lane, the shopman was in the act of sorting some meat brought to him from another shop belonging to the same firm. Some of it was bad and he was allowed to destroy it. It was at this shop that we made a very large seizure in 1904. With the exception just named, all the meat found was fit for food.

TABLE IXb.

Other Summonses taken out under the Margarine Act, 1887, and the Sale of Food and Drugs Acts, 1875, 1879 and 1899, during the 52 weeks ended 29th December, 1906.

No. of sample.	Article.	Percentage of adulteration.				Fines.			Remarks.
						£	s.	d.	
40	Butter ...	32%	foreign fat...	...	...	0	10	0	
108	Do. ...	82%	do.	...	...	2	0	0	
154	Do. ...	86%	do.	...	...	2	0	0	
167	Do. ...	87%	do.	...	...	2	0	0	and costs
187	Do. ...	85%	do.	...	...	1	0	0	and costs
189	Do. ...	87%	do.	...	...	5	0	0	and costs
247	Do. ...	83%	do.	...	...	1	0	0	
248	Do. ...	87%	do.	...	...	0	10	0	
312	Do. ..	85%	do.	...	...	—			to pay costs
472	Do. ...	84%	do.	..	...	0	10	0	and costs
573	Do. ...	84%	do.	...	..	—			to pay costs
574	Do. ...	90%	do.	...	...	1	0	0	and costs
						£	15	10	0

On June 17th, the following Sunday, Prospect Row was again visited, and the contents of 11 meat carts, 1 vegetable cart, and 2 rabbit stands examined. Calls were made at Paley's, High Street, Sowden's, York Street, Hartley & Slater's, York Street, Sykes', and Nelsons' Ltd., Marsh Lane, and Davis', St. Peter's Street.

TABLE IXc.

Adulterated Samples where no proceedings were taken.

No. of Sample.	Article.	Adulteration.	Remarks.
8	Milk	2½% added water	purchased officially
29	Do.	2½% do.	do.
43	Do.	4% do.	do.
51	Do.	5% do.	do.
64	Do.	9% fat removed	cautioned by Dr. Cameron
74	Do.	13% added water	private sample, see No. 90
107	Do.	2½% do.	purchased officially
110	Do.	4% do.	do.
112	Do.	1½% do.	do.
125	Do.	6% do.	see No. 124, table IXa
130	Do.	4½% do.	purchased officially
146	Do.	51% do.	private sample, see No. 155
172	Do.	16% do.	private sample
180	Do.	4% do.	purchased officially
210	Do.	4% do.	do.
249	Do.	2% do. 3% fat removed	do.
304	Do.	4% do. 3% do.	do.
329	Do.	40% added water	private sample, skim, see No. 330
331	Do.	59% do.	private sample, skim
332	Do.	5% do. 3% fat removed	purchased officially
345	Do.	6½% added water	do.
353	Do.	4½% do.	do.
354	Do.	3% do. 2% fat removed	do.
356	Do.	4½% added water	do.
359	Do.	4% do.	do.
360	Do.	20% do.	private sample, see No. 385
404	Do.	1½% do.	purchased officially
522	Do.	1½% do. 7% fat removed	do.
592	Do.	2½% do. 6% do.	do.
611	Do.	12% fat removed	cautioned by Dr. Cameron
612	Do.	3½% added water	purchased officially
613	Do.	6½% fat removed	cautioned by Dr. Cameron

The following Sunday, June 24th, the whole of the north end of the town was visited looking for meat hawkers and shops. On this occasion tinned herrings were seen in the window of a shop. In consequence of this a visit was paid in the course of the week, and 18 ten-pound tins destroyed by the owner.

On July 1st, Meadow Lane, Sweet Street, Marshall Street, Holbeck Lane, Wortley Lane, and the district of Holbeck generally were visited. Eight butchers' shops were open; the food exposed was wholesome.

On the 29th Prospect Row was again visited, and the goods on 14 butchers' carts, 2 rabbit stands, 1 ice cream cart, and 1 vegetable cart examined. Calls were also made at Paley's, High Street, Thackray's, High Street, Sowden's, York Street, Hartley and Slater's, York Street, Sykes', Marsh Lane, Nelsons' Ltd., Marsh Lane. The goods examined were all sound.

On August 19th (Sunday), 14 butchers' carts, 3 rabbit stands, 1 vegetable barrow were examined at Prospect Row, and the following shops: Hartley & Slater's, York Street; Grayson's, York Road; Swales', Ellerby Lane; Pickersgill's, Ellerby Lane; Hepworth's, Ellerby Lane; Sykes', Marsh Lane; Nelsons' Ltd., Marsh Lane. The goods found were regarded as fit for food.

On the following Sunday, August 26th, 13 butchers' carts, 3 rabbit stalls and 1 vegetable cart were again examined at Prospect Row, and the following shops were visited: Paley's, High Street; Grayson's, York Road; Ward's, Mabgate; and another shop at which some doubtful sausages were found, and which the owner was allowed to destroy.

On September 2nd, at Prospect Row, 12 butchers' carts, 4 rabbit stalls, 1 vegetable barrow were examined. Calls were made on Sykes' and on Nelsons', Marsh Lane; Hartley and Slater's, York Street; Grayson's, York Road; Tutin's, Joy's Fold; and Paley's, High Street. This was a hot day and at three of the places named some of the butcher's meat was found unfit, as well as three rabbits on a cart. Mr. Dixon, the Veterinary Assistant to the Medical Officer of Health consented to the destruction by the owners of this meat.

On September 16th, 14 butchers' carts and 4 rabbit stalls were examined at Prospect Row. Visits were paid to Paley's, High Street; Hartley & Slater's, York Street; Sykes', Nelson's Ltd., and Clarke's, Marsh Lane; and Davis', St. Peter's Street. The food examined was all found fit for consumption.

On October 7th, also a Sunday, 13 butchers' carts, and 7 rabbit stalls were examined at Prospect Row. On one of the carts 3 pieces of meat were going bad, in another 6 sheep's hearts and 2 beasts' hearts and several pieces of liver were discovered in a state unfit for food. The latter, however, had been put away in a cloth, purposely according to the owner to be out of the way, and not for sale. The owners were allowed to destroy the food, in both cases under our superintendence.

On October 21st, 12 butchers' carts, 13 rabbit stands, and 2 vegetable carts were examined at Prospect Row; and the following shops: Paley's, Thackray's, High Street; Hartley and Slater's, York Street; Sykes', Nelson's Ltd., and Clarke's Marsh Lane, and Davis', St. Peter Street.

On November 11th, Prospect Row was again visited; 11 butchers' carts and 6 rabbit stands were examined, and their contents found fit for food as well as goods sold by several hawkers in the neighbouring streets. Visits were also paid to the shops kept by Paley, High Street; Hartley and Slater, York Street; Sykes, Nelson Ltd., and Clarke, Marsh Lane.

On November 25th, Sunday, 12 butchers' carts and 9 rabbit stands and carts were examined at Prospect Row, and the following shops were visited: Paley's, High Street; Hartley & Slater's, York Street; Sykes', Nelson's Ltd., and Clarke's, Marsh Lane. The food examined was found fit.

On December 9th, the following shops were visited: Paley's, Hartley & Slater's, Sykes', and Clarke's; 10 butchers' carts and 10 rabbit stands or carts, and 2 vegetable carts were found at Prospect Row. Food at all of these was found fit.

On the 30th December, Paley's, Hartley & Slater's, Sykes', and Clarke's shops were all visited, and the contents of 4 butchers' carts and 3 rabbit stands examined at Prospect Row. In every instance the food was found fit.

TABLE X.

Slaughter House and Meat Inspection, 52 weeks ended
29th December, 1906.

Class of meat seized and des- troyed.	Weight in stones of 14 lb.	No. of seizures.	No. of persons sum- moned.	No. of convic- tions.	Penalties.
Beef... ..	12	1	1	1	£5 and costs.

Food unfit.—It will be seen (Table X) that one official seizure was made during the year. This was on July 12th, by Mr. Dixon and myself at a shop in High Street. The carcase had been slaughtered at a slaughter house in the East Ward, the property of the Industrial Dwellings Co., and conveyed to High Street. It was destroyed by order of the Magistrate, and on August 1st, a conviction against the owner was secured for having it on his premises, and a fine of £5 and costs inflicted.

On the 5th April, the screw butcher mentioned on page 133 of the report for 1905, who had been summoned and had not appeared, was brought up on a warrant and sentenced to 3 months' imprisonment without the option of a fine. The man had disappeared from Leeds from the previous November.

In addition to the above seizures, 96,364 lbs. of beef, 6,124 lbs. of mutton, 2,099 lbs. of veal, and 5,403 lbs. of pork were destroyed by the owners, with our cognisance and consent—in all 7,856½ stones. Fish, 3,864 lbs., equal to 276 stones, were also destroyed in the same manner. Besides this 1,602 lbs. of English offal, 3,139 lbs. of foreign offal, and a quantity of offal not usually sold by weight estimated to weigh 552 lbs., making in all 5,293 lbs. of offal or 378 stones were sacrificed.

Nine cases of foreign hares, each case holding a dozen, 229 English and foreign rabbits, 72 foreign pheasants, in all 204½ brace, weighing approximately 1,330 lbs. or 95 stones, were destroyed.

Eighteen tins of preserved herrings from Holland, already mentioned, weighing 180 lbs., and 1,160 pound tins of salmon made about 1,340 lbs. or 96 stones of tinned fish destroyed by consent. Eighteen hundred and fifty-one lbs. of vegetables, and 786 lbs. of fruit were also destroyed, equal to 188 stones.

Country dressed carcasses.—A large number of country dressed carcasses were sent in during the last six months of 1906. They amounted altogether to 203, of which 53½ were destroyed, or 26·4 per cent. These 203 carcasses included those of 30 pigs, of which 5½ were destroyed; 19 calves, 12 destroyed; 44 sheep and lambs, 14 destroyed; 9 bulls or bullocks, 2 destroyed; 86 cows, 18 destroyed; 15 heifers or stirks, 2 destroyed. Two hundred and three carcasses came in, 20 in July, 22 in August, 37 in September, 43 in October, 37 in November, and 44 in December.

REMOVAL AND DISINFECTING WORK.

Removals.—Table XIII shows the cases removed to hospital during the year according to the diagnosis at the time they were sent. It will be noticed in comparing Table XIII with Table XIV, that the 808 cases of scarlet fever removed by our staff, corresponded to 796 cases admitted to the hospital, whilst the 415 cases of diphtheria dropped down to 379. Quite a great change took place in the cases of enteric fever, which were 224 as removed, 182 as admitted. On the other hand, the "other diseases" sent to hospital were 79, but those admitted 274. Fifteen hundred and twenty-nine cases altogether were sent to hospital by our ambulance, and 1,633 admitted. Cases sent

TABLE XI.
Smoke, 1906 (52 weeks).

Complaints received	...	...	...	...	...	28
Furnaces inspected	...	...	...	...	...	8,063
Observations taken of chimneys (for a period of sixty minutes each)	...	...	...	...	...	1,712
Total number of minutes dense smoke	...	...	...	...	...	2,995
Average minutes duration of dense smoke during each observation of one hour (1 minute 45 seconds)	...	...	...	...	...	
Smoke prevention appliances adapted to furnaces	...	...	...	...	...	60
Chimneys newly erected	...	...	...	...	...	15
Furnaces in connection with new chimneys	...	...	...	...	...	30
Notices served upon manufacturers	...	...	...	...	...	26
Do. do. stokers	...	...	...	...	...	15
Persons summoned before the magistrates	...	...	...	...	...	1
(Withdrawn on payment of costs ; 8 furnaces having in the meantime been reconstructed).						
Total amount in fines	...	...	...	...	...	
Costs	...	...	...	...	4s. od.	

TABLE XII.
Work done by Disinfecting Staff, 1906 (52 weeks).

Houses disinfected	...	...	...	...	2,921
Rooms disinfected (stripped 188, limewashed 485)	...	...	...	...	7,926
Beds and mattresses disinfected	...	...	...	...	10,161
Articles of bed clothing disinfected	...	...	...	...	20,529
Articles of wearing apparel disinfected	...	...	...	...	44,636
Miscellaneous articles disinfected	...	...	...	...	57,072

from outside the town were not always removed by us, and the cases of illness amongst the staff would not usually appear in Table XIII at all. Most of them would be entered in column 6 of Table XIV, thus accounting for the larger part of the discrepancy between that column and the corresponding column in Table XIII.

In addition to the work shown in Tables XII. and XIII., our staff also removed 90 contacts to Manston Hall Cottages, Seacroft. They took two persons from Manston Hall to the General Infirmary; six from home to the Bramley Union Workhouse. They also conveyed 125 persons from the hospital, or cottages, to their own homes, making a total of 223 other removals. There were also 39 other ambulance journeys where removal did not take place.

Disinfection.—It is not mentioned in Table XII. that 329 persons went, or were taken, to one of our disinfecting stations. Each had a bath, and his or her clothes disinfected. Since the opening of the laundry in Beckett Street, in May, 1906, 4887 articles of bedding, clothing, etc., from infected houses, have been washed, as well as disinfected.

TABLE XIII.

Cases removed to hospital by our own staff.

Classified according to diseases certified.

Small-pox.	Scarlet fever.	Diphtheria.	Typhus fever.	Typhoid fever.	Other diseases.	Total, 1906.
3	808	415	...	224	79	1,529

(52 weeks).

The work of the disinfecting staff included some disinfections on account of phthisis, which it may be again interesting to separate from the details given in Table XII. The houses disinfected on account of this disease were 196, ten more than in 1905, whilst 430 rooms were stoved, and one lime-washed. Beds and mattresses to the number of 512; articles of bed clothing to the number of 1,016; articles of wearing apparel and miscellaneous articles to the number of 625 and 369 respectively, were removed and disinfected at the station.

Flushing.—During the 52 weeks of the year, 9 carts, each with 2 attendants, have been employed flushing drains. In this period 80,683 house drains, 42,009 water closets, and 49,235 gullies have been flushed, chiefly on account of illness. The above mentioned figures include the flushing of drains in connection with 276 schools. In addition to this, 2 men with a horse and cart have been engaged putting an iron solution into tanks connected with the sewers, and in this manner 27,390 gallons of disinfecting solution have been allowed to trickle into certain of the sewers. This again shows a considerable increase of this part of our work in the year.

CANAL BOATS AND TEMPORARY DWELLINGS.

The work done in connection with canal boats, houses let-in-lodgings, common lodging houses and students' lodging houses, will be found in Tables XV., XVI., XVII. and XVIII. A few words about the last named may be interesting. As the table had not been struck off till late in the autumn it was not included amongst those sent to the Local Government Board along with the report. It has, therefore, been thought well to include the examinations made in 1907, before the end of August, at which time our examination for the following term was concluded. Twenty-nine houses were examined in 1906, the occupiers of which resolved to discontinue taking lodgers. The vertical black lines between the columns of 1906 and 1907 indicate these.

TABLE XIV.

Return for the 52 weeks ended 29th December, 1906,
of patients in hospital.

	1 Small-pox.	2 Scarlet fever.	3 Diphtheria.	4 Typhus fever.	5 Enteric, or typhoid fever.	6 Other or doubtful cases.	7 Total.
No. in Hospital on Saturday, 30th December, 1905	...	95	19	...	22	26	162
No. since admitted ...	2	796	379	...	182	274	1,633
No. discharged ...	2	724	280	...	141	243	1,390
No. died ...	...	26	40	...	29	29	124
No. remaining in Hospital, 29th December, 1906...	...	141	78	...	34	28	281

TABLE XV.

Canal Boats (52 weeks).

Registered during the year 1906	...	...	...	8
Transferred to fresh owners	...	...	...	5
Struck off register	...	...	...	5
On register, 29th December, 1906	...	...	...	401
Visits of inspection to wharves and locks	...	...	...	904
Boats completely inspected	...	...	...	425

Thirteen of these 29 had been examined in previous years, and any defects discovered made right. In these 13 the drains of 4 were found faulty on testing, in 9 the result of the test was negative. Sixteen had not been examined previous to 1906. They were newly added in 1906 and were removed from the list at the end of the academic year. In 6 of these, drain defects revealed themselves on testing, in 10 the result was negative.

In 1906, including the 29 already mentioned, 81 houses were tested, 31 of them for the first time in connection with this enquiry. Fifteen of the 81 had been examined for the first time in 1905, and 35 had been examined more than once

TABLE XVI.
Houses Let in Lodgings.

	Houses.	Rooms
Registered during the year ; let as furnished rooms	11	40
Struck off register	7	15
On register, 29th December, 1906	214	419
Houses let in lodgings visited, but not registered	258	532
Visits for registration purposes	22	80
Visits for additional inspection	7,216	
Nuisances found and abated—		
Overcrowded rooms	Found. 99	Abated. 99
Dirty rooms	219	219
Dirty and bad bedding	16	16
Dilapidated dwellings	65	64
Defective drains	43	42
Dirty closets	8	8
Total	450	448

previously. Of the latter, 10 responded to our test (or 29 per cent.), 25 did not show any positive sign at either of the two tests made. Of the 15 examined for the first time in 1905, one (or 7 per cent.) responded to the test. Of the 31 examined for the first time in 1906, 10 gave a positive result (or 32 per cent.) Of the whole 81 tested in 1906, 19 (or 26 per cent.) showed evidence of faulty drainage.

TABLE XVII.**Other work of Temporary Dwellings Inspector.**

Visits to common lodging-houses	509
„ „ „ as to small pox	52
„ furnished rooms as to small pox	...
„ vans	183
„ tents	10
„ cellar dwellings	28
„ „ „ closed	3
„ overcrowded houses	4
„ infectious diseases	61
„ test drains	19
„ for other causes	754
University lodging houses—	
Houses inspected, 31 ; containing 117 rooms.	
Drain testings, 36 in 31 houses ; (defects found 15, in 10 houses).	
Retestings of above, 43.	
Retesting of drains of houses previously examined 50 (defects found 13, in 11 houses).	
Total visits to these houses	173
Total ...	1,796

TABLE XVIII.

Shewing results of examination of students' lodgings since 1901.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.		1901.	1902.	1903.	1904.	1905.	1906.	1907.
1	+							34	+	.	-				
2	-	.	+	-	-	+		35	-	.					
3	-	.	-	-				36	-	.	-	-	-		
4	+	.	+	-	.	+		37	-						
5	+	.	-	-	-	-		38	-						
6	-	.	-	-				39	-						
7	-							40	-	.	-	-	-	-	+
8	+	.	-	-	-	+	-	41	-						
9	-							42	+						
10	+	.	-	-				43	+	.	-	-			
11	-							44	+	.	-	-	-	-	-
12	+	.	-	-	-	-	-	45	+	.	-				
13	-							46	+	.	-				
14	+							47	+	.	-	-	-	-	-
15	-							48	+						
16	-	.	-	-	-			49	+	.	-	-	-	+	-
17	-							50	+	.					
18	-							51	-						
19	+	.	+	+				52	+						
20	+							53	+	.	-	-	-	+	-
21	-							54	-	.	-	-	-	-	-
22	+	.	-	-	-			55	+	.	-				
23	-							56	+						
24	+	.	+	-	-	-	-	57	-	.	-	+	-		
25	-	.						58	+	.	-	-	-		
26	-							59	-	.	-	-	-	+	
27	+	.	-	-	-			60	-	.	-				
28	+	.	-					61	+	.	-	-	-	+	+
29	+							62		+	-				
30	+	.	-	-	-			63		-					
31	-	.	-	-	-	-	-	64		+	-	-	-	-	-
32	-							65		-	+				
33	-	.	+					66		+					

TABLE XVIII.—Continued.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.		1901.	1902.	1903.	1904.	1905.	1906.	1907.
67		+	-					100				-			
68		-						101				-			
69		+	-	+	-			102				-			
70		-						103				+	-	-	
71		+	-	-				104				-	-	-	-
72		+	-	-	+	-	-	105				+	-	-	
73		-						106				-	-	+	-
74			-	-	-	-	-	107				+	-		
75			+	-	-			108				-	+	-	-
76			+	-	-	-	-	109				-	-	-	-
77			+					110				-	-	-	-
78			+	-	-	-	-	111				+			
79			-					112				-			
80			-					113				-			
81			+	-				114				+			
82			+	-				115				+	-		
83			-	-	-	-		116				+			
84			+	-	-	+	-	117				+			
85			-	.	-	-	+	118				-			
86			-	-	-	-	-	119					+		
87			+					120					-	-	
88			+					121					-	-	-
89				-	-	-	-	122					-	+	
90				-	-	-	-	123					+		
91				-	-	-	-	124					-		
92				+				125					-	-	-
93				+	-			126					-	-	
94				-				127					+	-	
95				+				128					+	-	-
96				+				129					-	-	-
97				+				130					-		
98				-				131					+	-	
99				-	+	+	-	132					+		

TABLE XVIII.—Continued.

	1901.	1902.	1903.	1904.	1905.	1906.	1907.		1901.	1902.	1903.	1904.	1905.	1906.	1907.
133					+	-		166						+	
134					-	-	-	167						-	-
135					-	-	-	168						-	+
136					-	-	-	169						+	+
137					+			170						-	
138					+			171						-	
139					+	-	-	172						-	
140					+	-	-	173						-	
141					-			174						+	
142					-			175						-	
143					-			176						-	
144					+			177						+	
145					-			178						-	
146					-			179							+
147					-			180							-
148						-	-	181							+
149						-	-	182							+
150						-		183							+
151						-	+	184							-
152						+		185							-
153						+		186							+
154						-	-	187							+
155						+		188							-
156						+	-	189							-
157						-	-	190							-
158						-	-	191							+
159						-	+	192							-
160						+	-	193							+
161						-	-	194							-
162						-		195							+
163						-									
164						-	-								
165						+	+								

In 1907, 69 houses were examined, the occupiers of 29 of these first examined in 1906 having, as already mentioned, discontinued taking lodgers at the end of the academic year. Of the 69 examined in 1907, 17 were on the list for the first time, 15 had been put on the list for the first time the year before, and 37 had been on the list for longer. Of these latter, which we might call the old stagers, three (or 8 per cent.) responded to the test, although in every case they had been twice examined the previous year, as well as on previous occasions. Of the 15 first examined in 1906, five (or 33 per cent.), responded to the test, although in these cases also they had all been carefully examined the previous year, and all faults detected remedied. Of the 17 examined in 1907 for the first time, nine (or 53 per cent.) showed drainage defects.

Taking the two years together, first examinations in these two years were made of 48 houses. Of these, 40 per cent. gave a positive, 60 per cent. a negative result. The houses previously examined in pursuit of this enquiry, including in 1907 those first examined in 1906, numbered 102. Seventeen of these, 9 in 1906 and 8 in 1907, gave a positive and 85 a negative result. Thus of previously tested houses, 17 per cent. gave a positive, 83 per cent. a negative answer.

The positive results on drain testing were thus obtained in 40 per cent. of the first examined, and in 17 per cent. of the re-examined. It is quite clear therefore that, in the class of property to which these lodging houses belong, it is necessary that their drains should be tested every year. I therefore again emphasize the recommendation of last year, that all old property should be frequently tested and re-tested, and especially the class of property containing water closets within the building.

J.S.C.

TABLE A, Part I.

Table shewing deaths recorded in the City of Leeds during the fifty-two weeks ended 29th December, 1906, classified according to cause, age, and the registration sub-districts in which they occurred.

[illegible]

† Including 16 deaths in the Constitutive Heeritz. A model (see structure, volume)

TABLE A, Part 2.

Table of populations, registered births, and mortality at certain ages,
in the registration sub-districts.

(Public institutions regarded as sub-districts.)

Population estimated to middle of 1906 at each age group.				463,495	12,140	41,748	95,020	93,284	194,965	11,438	14,900	
REGISTRATION SUB-DISTRICTS OF LEEDS CITY.	Population at all ages.		Registered Births.	Mortality from all causes, at subjoined ages.								Death- rate per 1,000 for each district.
	Census 1901	Estimated to middle of 1906.		At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and under 65	65 and upwards	
Leeds Township—North ..	59,281	58,866	1,686	790	264	138	19	32	199	42	96	13.47
Do. do. West ..	84,340	85,186	1,869	1,147	280	144	31	30	305	82	275	13.51
Do. do. South ..	34,299	34,949	1,240	668	225	124	25	25	147	38	84	19.18
Hunslet	69,064	75,901	2,143	1,113	368	182	36	31	248	54	194	14.71
Holbeck	31,572	35,189	1,002	526	183	76	11	21	124	28	83	15.00
Wortley	59,328	64,837	1,605	810	219	125	35	25	195	51	160	12.54
Kirkstall	41,561	47,911	1,020	448	97	57	14	14	101	34	131	9.38
Bramley	17,299	18,709	465	204	43	15	10	8	61	10	57	10.94
Chapelton	31,845	41,594	964	421	79	44	13	19	114	26	126	10.16
Osmondthorpe ..	379	353	11	7	2	..	..	..	2	1	2	19.90
Infirmary	..	..	..	543	49	45	48	59	278	34	30	..
*Fever Hospitals ..	..	..	..	121	2	34	40	14	30	1	..	..
WORKHOUSES	Leeds ..	..	72	436	22	7	2	12	195	44	154	..
	Hunslet ..	..	..	53	3	2	..	1	14	10	23	..
	Holbeck ..	..	5	34	1	1	..	..	11	7	14	..
	Bramley ..	..	11	68	..	3	..	2	20	6	37	..
Consumptive Hospital ..	..	..	..	16	..	..	..	10	6	..	..	..
For the whole City ..	428,968	463,495	12,093	7,405	1,837	997	284	303	2,050	468	1,466	16.03

* There were 121 deaths at Manston Hospital (outside the city boundary). See note to table B.

1906.—FIRST QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 31st March, 1906, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIP &c. Estimated Population— 463,495	LEEDS.						WORKHOUSES.												Con- sumptive Hos- pital.	TOTAL Mortality in City.		Annual rate per 1,000 pop.	Deaths of Out- siders occurring in City. und. ov. 5 5														
	North.		West.		South E.		Fever Hospitals *.				In- firmary, etc.				Osmond- thorpe.		Chapel- town.			Kirkstall.				Wortley.		Holbeck.		Hunslet.		Leeds.		Hunslet.		Holbeck.		Bramley.	
	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5		und. 5	ov. 5			und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5		
Under and over 5.	58,866	85,186	34,949	75,901	35,189	64,837	47,911	18,709	41,594	353																											
Smallpox	23	23	13	23	3	28	4	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Measles	3	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Scarlatina	3	3	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Diphtheria	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Croup (membr.)	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
" undefined	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Whooping Cough	2	7	7	14	7	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Typhus	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Enteric	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Other or doubtful	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Diarrhoea	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Cholera	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Rheumatic Fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Acute & Sub- acute Rheu- matism	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Erysipelas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Pyæmia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Puerperal Fever	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Ague	19	1	24	7	10	15	5	2	12	12	18	25	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
Phthisis	22	30	38	38	30	18	4	4	6	10	18	25	4	12	5	10	6	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
Bronchitis	20	41	6	10	1	6	1	5	12	12	21	6	1	12	5	3	1	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12				
Pneumonia	3	4	6	3	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
Heart Disease	59	67	66	86	74	53	16	36	5	16	69	36	16	36	5	16	18	38	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18				
Injury, &c.	51	49	56	67	81	52	24	49	9	13	64	24	49	24	9	13	17	48	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17				
Total of above causes	226	333	179	308	132	238	125	43	121	2	27	152	2	121	43	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121				
All other causes	51	49	56	67	81	52	24	49	9	13	64	24	49	24	9	13	17	48	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17				
Total ..	226	333	179	308	132	238	125	43	121	2	27	152	2	121	43	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121				
Mortality per 1,000 per an.	15.4	15.7	20.6	16.3	15.1	14.7	10.5	9.2	11.7	22.7																											

* There were twenty-seven deaths at Manston Hospital during this quarter.

1906.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 30th June, 1906, classified according to cause, age, and the registration sub-districts in which they occurred.

[illegible]

* There were twenty-four deaths at Manston Hospital during this quarter. * English.

1906.—THIRD QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 29th September, 1906, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIP &c. Estimated Population—	LEEDS.						Hunslet.	Holbeck.	Wortley.	Kirkstall.	Bramley.	Chapel- town.	Osmond- thorpe.	In- firmary, etc.	Fever Hospitals *	WORKHOUSES.								Con- sumptive Hos- pital.	TOTAL Mortality in City.			Annual rate per 1,000 pop.	Deaths of Out- siders occurring in City.							
	North.		West.		South E.											Leeds.		Hunslet.		Holbeck.		Bramley.			und.	ov.	und.			ov.	und.	ov.	und.	ov.	All Ages	
	und.	ov.	und.	ov.	und.	ov.										und.	ov.	und.	ov.	und.	ov.	und.	ov.													und.
463,495	58,866	5	5	85,186	5	5	34,949	5	5	75,901	5	5	35,189	5	5	64,837	5	5	47,911	5	5	18,709	5	5	41,594	5	5	353								
Under and over 5.	3	..	7	1	1	..	2	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlatina	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup (membr.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" undefined	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whooping Cough	1	..	6	..	5	..	4	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric	..	1	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other or doubtful	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	71	5	43	1	53	3	94	7	35	..	5	1	6	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute & Sub- acute Rheu- matism	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pyæmia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Ague	1	15	..	20	..	15	..	8	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Phthisis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bronchitis	13	6	6	13	12	19	17	12	6	10	4	3	2	4	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Pleurisy	..	7	..	18	..	5	..	..	1	6	1	12	..	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Heart Disease	..	3	2	4	1	2	1	8	1	1	..	4	1	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Injury, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..														

There were parents, like Jack & Nancy, Harold Levine, and Melvin

1906.—FOURTH QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 29th December, 1906, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIP &c. Estimated Population— 463,495	LEEDS.						Fever Hospitals * In- firmary, etc.	WORKHOUSES.								Con- sumptive Hos- pital.	TOTAL Mortality in City.			Annual rate per 1,000 pop.	Deaths of Out- siders occurring in City.					
	North.		West.		South E.			Hunslet.	Holbeck.	Wortley.	Kirkstall.	Bramley.	Chapel- town.		Osmond- thorpe.		In- firmary, etc.	Leeds.	Hunslet.			Holbeck.	Bramley.	und. 5	over. 5	All Ages
	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5							und. 5	ov. 5												
Under and over 5.	58,866	85,186	34,949	75,901	35,189	64,837	47,911	18,709	41,594	353																
Smallpox	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Measles	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Scarlatina	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Croup (membr.)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
" undefined	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Whooping Cough	1	5	3	6	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Typhus	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Enteric	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Other or doubtful	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Diarrhoea	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Cholera	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Rheumatic Fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Acute & Sub- acute Rheu- matism	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Erysipelas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Pyæmia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Puerperal Fever	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Ague	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Pinthisis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Bronchitis	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Pneumonia	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Pleurisy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Heart Disease	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Injury, &c.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
Total of above causes	29	62	30	88	33	33	42	70	13	43	17	49	14	34	5	20	6	35	..	9	34	13	27			
All other causes	35	44	42	102	29	39	80	69	27	32	46	69	20	45	16	19	9	42	..	14	67	..	2			
Total ..	170	262	133	153	131	112	95	129	89	..	124	42	103	19	8	20	..	537	1174	1482	33	..	..			
Mortality per 1,000 per an.	11.6	12.3	15.3	13.8	13.1	11.2	9.5	12.9	8.9	..	12.4	42	103	19	8	20	..	40.0	11.5	14.8	..	..	..			

* There were forty-two deaths at Manston Hospital during this quarter. ¶ English.

1907.—FIRST QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 30th March, 1907, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIP &c.	LEEDS.						Hunslet.	Holbeck.	Wortley.	Kirkstall.	Bramley.	Chapel- town.	Osmond- thorpe.	In- firmaries, etc.	Fever Hospitals	WORKHOUSES.								Con- sumptive Hos- pital.	TOTAL Mortality in City.		Annual rate per 1,000 pop.	Deaths of Out- siders occurring in City.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
	North.		West.		South E.											Leeds.	Hunslet.	Holbeck.	Bramley.	und.	ov.	und.	ov.		und.	ov.			und.	ov.	und.	ov.	All Ages																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	und.	ov.	und.	ov.	und.	ov.																												und.	ov.	und.	ov.	und.	ov.	und.	ov.	und.	ov.	und.	ov.	und.	ov.	und.	ov.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Estimated Population— 470,288	58,106	85,376	35,085	77,237	35,893	65,915	49,144	18,996	43,477	349																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

B. I.

TABLE B, Part I. (SUB-DISTRICTS.)

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the 52 weeks of 1906, in the Urban Sanitary District of Leeds; classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics.	Population at all ages.		Registered Births.	Aged under 5, 5 under 15, 15 upwards.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such Cases Removed from their Homes in the several Localities for Treatment in the Isolation Hospitals.														
	Census, 1901.	Estimated to middle of 1906.			Small-pox.	Scarlatina.	Diphtheria.	Membranous Group.	Fevers.					Cholera.	Erysipelas.	Other.	Total.	Small-pox.	Scarlatina.	Diphtheria.	Membranous Group.	Fevers.					Cholera.	Erysipelas.	Other.	Total.		
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.						
North ..	59,281	58,866	1,758	Under 5, 5 under 15, 15 upwards.	..	33	22	..	..	..	4	..	..	..	..	2	16	77	..	29	14	..	..	3	..	..	..	..	..	10	56	
West ..	84,340	85,186	1,869	Under 5, 5 under 15, 15 upwards.	..	48	27	8	..	..	11	..	..	7	..	5	7	98	..	40	19	..	..	8	..	..	..	..	2	13	74	
South-East ..	34,299	34,949	1,240	Under 5, 5 under 15, 15 upwards.	..	43	22	1	..	..	32	..	..	..	..	43	13	111	..	29	13	..	..	22	..	..	..	..	..	9	51	
Hunslet ..	69,064	75,901	2,143	Under 5, 5 under 15, 15 upwards.	..	117	31	..	..	..	9	..	..	5	..	10	30	197	..	90	16	..	..	6	..	..	..	..	..	13	125	
Holbeck ..	31,572	35,189	1,007	Under 5, 5 under 15, 15 upwards.	..	26	23	2	..	..	44	..	..	..	..	72	13	183	..	18	9	..	..	23	..	..	..	..	6	11	68	
Wortley ..	59,328	64,837	1,616	Under 5, 5 under 15, 15 upwards.	..	12	16	2	..	..	1	..	..	..	..	4	9	41	..	11	9	..	..	6	..	..	..	..	..	5	25	
Kirkstall ..	41,561	47,911	1,020	Under 5, 5 under 15, 15 upwards.	..	6	8	..	..	..	28	..	..	1	..	27	4	74	..	35	16	..	..	14	..	..	..	..	..	4	27	
Bramley ..	17,299	18,709	465	Under 5, 5 under 15, 15 upwards.	2	57	32	3	..	..	2	..	..	..	..	6	10	110	..	32	16	..	..	15	..	..	..	..	..	2	56	
Chapelton ..	31,845	41,594	964	Under 5, 5 under 15, 15 upwards.	..	160	57	..	..	..	24	1	..	..	..	13	20	257	..	132	20	..	..	38	..	..	..	..	..	9	79	
Osmondthorpe ..	379	353	11	Under 5, 5 under 15, 15 upwards.	..	19	15	..	..	..	1	..	..	..	..	1	16	52	..	13	11	..	..	1	..	..	..	..	..	7	32	
Totals ..	428,968	463,495	12,093	Under 5, 5 under 15, 15 upwards.	..	49	27	..	..	..	4	..	..	2	..	21	5	71	..	45	17	..	..	10	..	..	..	..	2	5	42	
Grand total ..	..	..	..	All ages.	..	34	14	1	..	..	4	..	..	..	..	3	6	62	..	26	7	..	..	5	..	..	..	..	4	38	38	
					..	69	26	1	..	..	7	..	..	5	..	41	8	90	..	51	14	..	..	10	..	..	..	..	5	7	7	
					..	16	7	..	..	..	13	..	..	..	..	5	14	15	..	11	2	..	..	10	..	..	..	..	2	5	34	
					..	46	120	..	..	..	1	..	..	5	..	5	14	15	..	11	2	..	..	1	..	..	..	..	3	8	34	
					..	14	34	15	..	..	11	..	..	4	..	2	15	184	..	36	98	..	..	1	..	..	..	..	1	14	149	
					..	20	10	..	..	..	1	..	..	..	..	24	10	97	..	14	17	..	..	6	..	..	..	..	2	8	48	
					..	38	24	..	..	..	2	..	..	..	..	2	2	35	..	15	7	..	..	1	..	..	..	..	1	2	24	
					..	4	1	..	..	..	2	..	..	1	..	15	1	22	..	3	18	..	..	1	..	..	..	..	2	2	54	
					..	32	11	1	..	..	2	..	..	..	..	2	6	50	..	18	3	..	..	..	..	..	..	..	1	2	5	
					..	53	24	1	..	..	18	..	..	1	..	2	6	87	..	32	9	..	..	6	..	..	..	..	2	2	23	
					..	14	14	..	..	..	..	..	..	..	..	17	3	68	..	1	3	..	..	..	..	..	..	..	1	2	43	
					..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
					..	269	173	9	..	..	15	..	..	..	..	26	112	604	..	188	97	..	..	4	..	..	..	..	1	49	339	
					..	622	359	1	..	..	69	..	..	..	..	31	92	1174	..	494	227	..	..	45	..	..	..	..	4	60	830	
					2	127	123	1	..	..	215	1	..	30	..	324	72	900	..	103	53	..	..	129	..	..	10	19	60	376		
					2	1018	660	11	..	..	299	1	..	30	..	381	276	2678	2	785	377	..	..	178	..	..	10	24	169	1545		

Notification has been compulsory since the first of May, 1894. The Small-pox Hospital is at Killingbeck, outside the town. New wards for general fever cases were opened on the Manston estate in October, 1888, and further extensions were made and completed in October, 1904. The use of the Fever Hospital in Beckett Street (the old House of Recovery) was discontinued in November, 1904, the fever cases being treated entirely in the new hospital at Manston, except that, for a short time during the furnishing, the hitherto unused Small-pox hospital at Killingbeck was utilised for the purpose. The wards of the new Small-pox hospital at Killingbeck are a quarter of a mile away from any of the buildings on the Manston estate. The whole of the fever accommodation for Leeds is now in the township of Seacroft, only a few hundred yards from the boundary of the borough itself. Fifteen hundred and forty-three of the 1,545 were admitted to Manston during 1906. Three cases of scarlet fever, one of diphtheria, and one of "other" disease, admitted to Manston Hospital, came from outside the city, and are not included in this table. Also seventeen members of the Manston Hospital staff were admitted to Manston, eleven for scarlet fever, two for diphtheria, and four for typhoid fever, all over fifteen. None of these seventeen are counted, as they could not be classified under any district of the city. The one case of erysipelas, mentioned in note to Table B for 1905, reported in 1905, but hospitalised in 1906, is not included above.

B. 2.

TABLE B, Part 2. (Wards).

Names of Localities adopted for the purpose of these Statistics.	Population at all ages.		Aged under 5, 5 under 15, 15 upwards.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.												
	Census, 1901.	Estimated to middle of 1906.		1	2	3	4	5	6	7	8	9	10	11	12	13
				Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers.					Cholera.	Erysipelas.	Other.	Total.
								Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.				
(a)	(b)	(c)	(d)													
Central ..	20,996	20,037	Under 5, ..	..	17	12	..	..	1	..	..	..	..	..	6	36
			5 under 15, ..	..	24	13	..	..	2	..	..	..	..	1	2	42
			15 upwards, ..	..	3	4	..	..	11	..	..	..	..	11	5	34
North ..	38,762	45,370	Under 5, ..	..	14	12	1	..	..	..	..	..	..	8	35	
			5 under 15, ..	..	34	21	..	..	6	..	..	..	..	2	3	66
			15 upwards, ..	..	10	11	1	..	20	..	..	4	..	32	6	84
North-East ..	29,084	31,808	Under 5, ..	..	34	6	..	..	3	..	..	..	..	2	8	53
			5 under 15, ..	..	41	15	..	..	6	..	..	..	..	4	8	74
			15 upwards, ..	..	8	9	..	..	22	..	..	1	..	16	5	64
East ..	28,297	29,860	Under 5, ..	..	11	13	2	..	1	..	..	..	..	3	9	39
			5 under 15, ..	..	38	22	..	..	8	..	..	..	..	9	9	77
			15 upwards, ..	..	6	7	..	..	24	..	..	..	..	24	4	65
South ..	15,047	13,956	Under 5, ..	..	3	5	..	..	2	..	..	..	..	1	..	9
			5 under 15, ..	..	13	8	..	..	2	..	..	..	..	..	..	23
			15 upwards, ..	..	1	2	..	..	7	..	..	1	..	12	2	25
East Hunslet ..	33,450	37,868	Under 5, ..	..	32	13	1	..	2	..	..	..	..	5	7	60
			5 under 15, ..	2	32	25	..	..	6	..	..	..	..	3	4	120
			15 upwards, ..	..	15	8	..	..	27	1	..	2	..	37	6	98
West Hunslet ..	23,267	32,299	Under 5, ..	..	22	19	2	..	..	..	..	..	..	1	6	50
			5 under 15, ..	..	72	27	..	..	17	..	..	..	..	1	12	129
			15 upwards, ..	..	15	8	..	..	24	..	..	2	..	23	6	78
Holbeck ..	27,871	31,334	Under 5, ..	..	19	13	..	..	1	..	..	..	..	1	13	47
			5 under 15, ..	..	46	25	..	..	3	..	..	..	..	3	2	79
			15 upwards, ..	..	8	16	..	..	9	..	..	2	..	18	6	59
Mill Hill ..	7,736	6,996	Under 5, ..	..	8	3	..	..	..	..	..	..	..	2	9	22
			5 under 15, ..	..	12	7	..	..	..	..	..	..	..	6	6	31
			15 upwards, ..	..	3	6	..	..	3	..	..	..	..	13	..	25
West ..	23,914	23,635	Under 5, ..	..	17	7	1	..	..	..	..	..	..	1	7	33
			5 under 15, ..	..	47	6	..	..	4	..	..	..	..	..	7	64
			15 upwards, ..	..	4	6	..	..	12	..	..	3	..	22	4	51
North-West ..	32,239	34,443	Under 5, ..	..	7	5	..	..	1	..	..	..	..	..	..	13
			5 under 15, ..	..	35	10	..	..	..	..	..	..	..	4	2	51
			15 upwards, ..	..	14	6	..	..	11	..	..	..	..	22	5	58
Brunswick ..	22,893	23,075	Under 5, ..	..	12	7	..	..	..	..	..	..	..	..	17	36
			5 under 15, ..	..	24	9	..	..	5	..	..	..	..	15	53	53
			15 upwards, ..	..	5	3	..	..	19	..	..	2	..	16	4	49
New Wortley® ..	18,734	18,469	Under 5, ..	..	13	3	..	..	1	..	..	..	..	2	2	21
			5 under 15, ..	..	10	4	..	..	2	..	..	..	..	2	..	18
			15 upwards, ..	..	8	1	..	..	4	..	..	4	..	16	4	37
Armley and Wortley	36,243	41,594	Under 5, ..	..	17	10	1	..	3	..	..	..	..	1	4	36
			5 under 15, ..	..	50	17	1	..	3	..	..	..	..	..	4	75
			15 upwards, ..	..	5	6	..	..	9	..	..	1	..	23	4	48
Bramley ..	21,650	23,483	Under 5, ..	..	24	11	..	..	1	..	..	..	..	2	2	40
			5 under 15, ..	..	47	29	..	..	4	..	..	..	..	3	3	86
			15 upwards, ..	..	7	1	..	..	2	..	..	1	..	15	1	27
Headingley ..	42,785	49,268	Under 5, ..	..	19	34	1	..	1	..	..	..	..	5	14	74
			5 under 15, ..	..	47	121	..	..	1	..	..	..	..	2	15	196
			15 upwards, ..	..	15	34	..	..	11	..	..	4	..	24	10	98
Totals ..	428,968	463,495	Under 5, ..	..	269	173	9	..	15	..	..	..	..	26	112	604
			5 under 15, ..	..	622	359	..	..	69	..	..	..	..	31	92	1174
			15 upwards, ..	2	127	128	1	..	215	1	..	30	..	324	72	900
Grand total ..	..	..	..	2	1018	660	11	..	299	1	..	30	..	381	276	2678

TABLE B, Part 2.—Wards (continued).

Names of Localities adopted for the purpose of these Statistics.	Population at all ages.		Aged under 5, 5 under 15, 15 upwards.	Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospitals.													
	Census, 1901.	Estimated to middle of 1906.		1 Small-pox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Group.	Fevers.						10 Cholera.	11 Erysipelas.	12 Other.	13 Total.
								5 Typhus.	6 Enteric or Typhoid.	7 Continued.	8 Relapsing.	9 Puerperal.					
(a)	(b)	(c)	(d)														
Central	20,996	20,037	Under 5, 5 under 15, 15 upwards.	..	13 20 3	7 9 3	..	..	1 2 7	..	..	..	..	..	1	1 2 5	22 34 18
North	38,762	45,370	Under 5, 5 under 15, 15 upwards.	..	10 16 7	5 9 4	..	..	3 3 10	..	..	..	..	..	3	4 2 5	19 30 29
North-East	29,084	31,808	Under 5, 5 under 15, 15 upwards.	..	23 36 7	4 10 2	..	..	2 4 14	..	..	..	2	..	..	7 4 5	36 54 30
East	28,297	29,860	Under 5, 5 under 15, 15 upwards.	..	11 33 5	6 15 2	..	..	..	5 5 11	..	..	..	..	..	5 7 4	22 60 22
South	15,047	13,956	Under 5, 5 under 15, 15 upwards.	..	2 10 1	4 5 1	..	..	..	1 5 ..	..	..	1	..	..	..	6 16 9
East Hunslet	33,450	37,868	Under 5, 5 under 15, 15 upwards.	..	17 65 2	4 9 13	..	..	..	4 .. 16	..	..	..	..	3	1 3 5	22 81 39
West Hunslet	29,267	32,299	Under 5, 5 under 15, 15 upwards.	..	19 62 12	11 8 2	..	..	10 .. 19	..	..	..	..	..	3	7 7 3	31 87 39
Holbeck	27,871	31,334	Under 5, 5 under 15, 15 upwards.	..	13 42 8	11 16 12	..	..	1 3 8	..	..	..	2	..	1	7 1 5	32 63 36
Mill Hill	7,736	6,996	Under 5, 5 under 15, 15 upwards.	..	4 11 3	3 6 3	..	..	..	..	..	..	..	..	2	3 5 ..	10 22 8
West	23,914	23,635	Under 5, 5 under 15, 15 upwards.	..	10 39 2	4 3 1	..	..	2 .. 8	..	..	..	1	..	..	6 4 ..	50 16 ..
North-West	32,239	34,443	Under 5, 5 under 15, 15 upwards.	..	4 25 9	2 1 2	..	..	..	4	..	..	..	..	1	2 4 ..	6 28 20
Brunswick	22,893	23,075	Under 5, 5 under 15, 15 upwards.	..	12 15 4	4 6 1	..	..	..	4 .. 11	..	..	..	..	3	4 3 ..	20 25 22
New Wortley	18,734	18,469	Under 5, 5 under 15, 15 upwards.	..	10 10 4	2 2 1	..	..	..	2 4 ..	..	..	2	..	..	1 3 ..	13 15 14
Armley and Wortley	36,243	41,594	Under 5, 5 under 15, 15 upwards.	..	13 33 4	5 9 1	..	..	..	2 6 ..	..	..	1	..	1	4 4 ..	22 48 17
Bramley	21,650	23,483	Under 5, 5 under 15, 15 upwards.	..	18 41 6	7 21 1	..	..	..	2	..	..	..	..	1	2 3 1	27 68 8
Headingley	42,785	49,268	Under 5, 5 under 15, 15 upwards.	..	9 36 15	18 98 17	..	..	..	1 .. 6	..	..	1	..	2	8 14 8	35 149 49
Totals	428,968	463,495	Under 5, 5 under 15, 15 upwards.	..	188 494 2	97 227 53	..	..	4 45 129	..	..	..	10	..	19	49 60 60	339 830 376
Grand total	..	..	..	2	785	377	..	..	178	..	..	10	..	24	169	1545	

New cases of Infectious Sickness heard of in the several
Sub-districts and Wards of the City of Leeds during the
thirteen weeks ended 31st March, 1906.

		Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhus fever.	Typhoid fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North	Hosp.	...	21	15	...	...	9	...	...	...	...	7	52
		Home	...	3	5	...	...	3	...	2	14	...	6	33
	West	Hosp.	...	25	9	...	...	3	...	...	2	...	12	51
		Home	...	17	9	1	...	7	...	2	23	...	5	64
	South-East	Hosp.	...	6	2	...	...	3	...	...	...	...	4	15
		Home	...	2	4	2	...	3	...	...	9	...	...	20
	Hunslet	Hosp.	2	18	10	...	...	15	...	...	3	...	5	53
		Home	...	7	17	2	...	8	...	2	14	...	5	55
	Holbeck	Hosp.	...	13	1	...	...	4	...	...	...	...	6	24
		Home	...	...	4	...	...	...	...	...	6	...	8	18
	Wortley	Hosp.	...	21	2	...	...	5	...	...	1	...	4	33
		Home	...	10	6	...	...	1	...	...	14	...	1	32
WARDS.	Kirkstall	Hosp.	...	14	29	...	...	...	...	1	...	...	11	55
		Home	...	7	20	...	...	2	...	...	7	...	5	41
	Bramley	Hosp.	...	19	1	...	...	1	...	...	...	...	3	24
		Home	...	3	1	...	...	2	...	...	4	...	...	10
	Chapelton	Hosp.	...	10	3	...	...	1	...	...	...	...	2	16
		Home	...	4	10	...	...	4	...	1	8	...	1	28
	Osmondthorpe	Hosp.	...	...	...	...	...	...	...	...	...	...	...	...
		Home	...	...	...	...	...	...	...	...	...	...	...	...
	Central	Hosp.	...	12	4	...	...	1	...	...	...	...	4	21
		Home	...	2	4	...	...	1	...	...	3	...	5	15
	North	Hosp.	...	5	9	...	...	2	...	...	...	...	1	17
		Home	...	2	7	...	...	3	...	1	9	...	1	23
	North-East	Hosp.	...	12	7	...	...	7	...	...	...	...	4	30
		Home	...	3	2	...	...	3	...	2	9	...	1	20
	East	Hosp.	...	6	2	...	...	3	...	...	...	...	4	15
		Home	...	2	4	2	...	3	...	...	9	...	...	20
	South	Hosp.	...	...	4	...	...	3	...	...	...	...	1	8
		Home	...	1	1	...	...	1	...	...	1	...	...	4
	East-Hunslet	Hosp.	2	10	1	...	...	7	...	...	2	...	2	24
		Home	...	4	13	1	...	6	...	...	10	...	...	34
	West-Hunslet	Hosp.	...	11	5	...	...	6	...	...	1	...	3	26
		Home	...	2	3	1	...	1	...	2	4	...	9	22
	Holbeck	Hosp.	...	10	1	...	...	3	...	...	...	...	5	19
		Home	...	...	4	...	...	...	...	...	5	...	4	13
	Mill Hill	Hosp.	...	2	2	...	...	...	...	...	...	...	6	10
		Home	...	2	1	...	...	1	...	...	5	...	...	9
	West	Hosp.	...	12	2	...	...	1	...	...	...	...	3	18
		Home	...	7	3	1	...	3	...	...	9	...	3	26
	North-West	Hosp.	...	8	2	...	...	...	...	...	1	...	1	12
		Home	...	2	4	...	...	2	...	...	6	...	1	15
	Brunswick	Hosp.	...	4	1	...	...	2	...	...	1	...	2	10
		Home	...	6	1	...	...	1	...	2	4	...	1	15
	New Wortley	Hosp.	...	4	...	...	...	1	...	...	...	...	1	6
		Home	...	1	1	...	...	...	...	...	7	...	1	10
	Armley & Wortley	Hosp.	...	15	2	...	...	3	...	...	1	...	3	24
		Home	...	9	4	...	...	...	...	...	6	...	...	19
	Bramley	Hosp.	...	21	1	...	...	2	...	...	...	...	3	27
		Home	...	3	2	...	...	3	...	...	5	...	...	13
	Headingley	Hosp.	...	15	29	...	...	...	...	1	...	...	11	56
		Home	...	7	22	...	...	2	...	...	7	...	5	43
CITY		Hosp.	2	147	72	...	...	41	...	1	6	...	54	323
		Home	...	53	76	5	...	30	...	7	99	...	31	301
		Cases	2	200	148	5	...	71	...	8	105	...	85	624

A nurse at Manston Hall contracted scarlet fever, and was treated in the hospital. The case is not included in the 147 given above. Manston Hall is outside the city. In addition to the 323 cases hospitalised (out of the 624 reported during the quarter) 1 case of erysipelas which had been reported in previous quarter was also taken to hospital.

B. 4.

New cases of Infectious Sickness heard of in the several Sub-districts and Wards of the City of Leeds during the thirteen weeks ended 30th June, 1906.

	Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhus fever.	Typhoid fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North	{ Hosp. ... 18	3	...	...	3	...	1	1	...	11	37	62
	Home ... 3	4	...	...	1	...	2	14	...	1	25		
	West	{ Hosp. ... 44	5	...	...	6	...	1	1	...	9	66	121
	Home ... 11	5	...	...	6	...	1	23	...	9	55		
	South-East	{ Hosp. ... 9	5	...	...	3	...	1	...	...	5	23	35
	Home ... 1	3	...	...	1	...	...	4	...	3	12		
	Hunslet	{ Hosp. ... 39	7	...	...	13	...	...	...	...	5	64	127
	Home ... 15	17	1	...	4	...	...	21	...	5	63		
	Holbeck	{ Hosp. ... 11	5	...	...	3	...	1	3	...	3	26	43
	Home ... 6	1	...	...	...	...	...	6	...	4	17		
	Wortley	{ Hosp. ... 15	1	...	...	1	...	1	1	...	4	23	55
	Home ... 11	5	2	...	3	...	2	8	...	1	32		
Kirkstall	{ Hosp. ... 13	17	...	...	...	...	...	...	...	5	35	63	
Home ... 5	10	1	...	1	...	2	6	...	3	28			
Bramley	{ Hosp. ... 6	5	...	...	...	...	...	...	...	...	...	11	18
Home ...	...	...	...	...	2	...	...	5	...	...	7		
Chapeltown	{ Hosp. ... 19	4	...	...	1	...	...	...	...	...	...	24	49
Home ... 14	7	...	...	3	...	...	1	...	...	25			
Osmondthorpe ...	{ Hosp. ...	...	...	...	...	...	...	...	...	...	...	...	...
Home ...	...	...	...	...	...	...	...	...	...	...	...		
WARDS.	Central	{ Hosp. ... 12	1	...	...	2	...	...	...	...	1	16	20
	Home ...	...	2	...	...	...	...	...	2	...	...	4	
	North	{ Hosp. ... 10	3	...	...	1	...	...	1	...	6	21	43
	Home ...	8	5	...	...	2	...	2	5	...	...	22	
	North-East	{ Hosp. ... 15	3	...	...	3	...	1	...	...	4	26	50
	Home ...	9	4	...	...	2	...	...	8	...	1	24	
	East.....	{ Hosp. ... 9	5	...	...	1	...	...	...	...	5	20	30
	Home ...	...	3	...	...	1	...	...	3	...	3	10	
	South	{ Hosp. ... 5	1	...	...	...	...	1	...	...	...	7	13
	Home ...	1	1	...	...	...	...	...	4	...	...	6	
	East-Hunslet	{ Hosp. ... 12	4	...	...	6	...	...	...	...	4	26	61
	Home ...	11	8	...	...	2	...	...	9	...	5	35	
	West-Hunslet.....	{ Hosp. ... 22	2	...	...	7	...	...	1	...	1	33	58
	Home ...	4	8	1	...	2	...	...	9	...	1	25	
	Holbeck	{ Hosp. ... 11	5	...	...	3	...	1	2	...	3	25	41
	Home ...	6	1	...	...	...	...	...	6	...	3	16	
	Mill Hill.....	{ Hosp. ... 8	2	...	...	...	...	...	1	...	...	11	26
	Home ...	2	...	...	...	1	...	...	7	...	5	15	
	West	{ Hosp. ... 26	...	...	...	2	...	1	...	...	3	32	44
	Home ...	4	1	...	...	...	...	1	3	...	3	12	
	North-West	{ Hosp. ... 5	...	...	...	1	...	...	...	...	2	8	27
	Home ...	5	2	...	...	2	...	...	10	...	...	19	
Brunswick	{ Hosp. ... 5	3	...	...	3	...	...	...	...	4	15	24	
Home ...	...	2	...	...	3	...	...	3	...	1	9		
New Wortley	{ Hosp. ... 6	...	...	...	1	...	...	1	...	2	10	23	
Home ...	5	1	...	...	...	...	2	4	...	1	13		
Armley & Wortley	{ Hosp. ... 7	1	...	...	...	...	1	...	...	2	11	29	
Home ...	6	4	2	...	3	...	...	3	...	...	18		
Bramley	{ Hosp. ... 8	5	...	...	...	...	...	...	...	...	13	21	
Home ...	...	...	...	...	2	...	...	6	...	...	8		
Headingley.....	{ Hosp. ... 13	17	...	...	...	...	...	...	...	5	35	63	
Home ...	5	10	1	...	1	...	2	6	...	3	28		
CITY	{ Hosp. ...	174	52	...	...	30	...	5	6	...	42	309	573
	Home ...	66	52	4	...	21	...	7	88	...	26	264	
	Cases ...	...	240	104	4	...	51	...	12	94	...	68		573

A nurse contracted scarlet fever, and another nurse contracted enteric fever. Both were the test in the hospital. They are not included in the 174 and 30 given above. Mauston Hall is outside the City. In addition to the 309 cases hospitalised (out of 573 reported during the quarter) 1 case of scarlet fever and 1 case of "other" disease, which had been reported in the previous quarter, were also taken to hospital.

B. 6.

New cases of Infectious Sickness heard of in the several Sub-districts and Wards of the City of Leeds during the thirteen weeks ended 29th December, 1906.

thirteen weeks ended

	Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhus fever.	Typhoid fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.		
SUB-DISTRICTS.	North	{ Hosp. ... Home ...	19 2	10 8	...	...	12 5	...	...	2 9	...	3	46 25	71	
	West	{ Hosp. ... Home ...	19 12	15 17	...	...	11 8	...	...	1 20	...	8 26	54 84	133	
	South-East	{ Hosp. ... Home ...	16 ...	13 8	...	...	8 5	...	...	...	...	4 1	41 23	64	
	Hunslet	{ Hosp. ... Home ...	67 14	10 25	...	...	15 10	...	...	2 20	...	5 2	99 73	172	
	Holbeck	{ Hosp. ... Home ...	20 3	28 7	...	...	5 2	...	...	...	...	5 2	58 20	78	
	Wortley	{ Hosp. ... Home ...	25 6	17 9	...	...	6 1	...	...	1 14	...	4 1	53 31	84	
	Kirkstall	{ Hosp. ... Home ...	15 4	26 13	...	...	3 2	...	...	...	...	3	47 25	72	
	Bramley	{ Hosp. ... Home ...	11 7	5 5	...	...	...	...	...	...	...	...	1 18	17 35	
	Chapelton	{ Hosp. ... Home ...	18 14	4 17	2	...	2 4	...	...	1 6	...	1 6	26 49	75	
	Osmondthorpe	{ Hosp. ... Home ...	...	...	...	...	...	...	...	...	...	...	...	...	
	WARDS.	Central	{ Hosp. ... Home ...	7 1	8 4	...	...	3 2	...	...	1 3	...	...	19 10	29
		North	{ Hosp. ... Home ...	9 12	2 11	2	...	5 3	...	...	2 7	...	2 4	20 40	60
North-East		{ Hosp. ... Home ...	21 2	3 8	...	...	6 3	...	...	...	...	2 2	32 20	52	
East		{ Hosp. ... Home ...	15 ...	10 8	...	...	8 5	...	...	...	...	4 1	37 21	58	
South		{ Hosp. ... Home ...	4 ...	3 3	...	...	3 1	...	...	...	...	...	10 8	18	
East-Hunslet		{ Hosp. ... Home ...	39 8	4 8	...	...	4 3	...	...	1 2	...	2 2	50 37	87	
West-Hunslet		{ Hosp. ... Home ...	27 6	7 17	...	...	9 8	...	...	1 6	...	3 1	47 38	85	
Holbeck		{ Hosp. ... Home ...	18 3	27 4	...	...	4 ...	...	...	...	...	5 1	54 12	66	
Mill Hill		{ Hosp. ... Home ...	...	7 1	...	...	...	...	...	...	...	1	8 6	14	
West		{ Hosp. ... Home ...	4 4	3 5	...	...	1 3	...	...	...	...	5	13 19	32	
North-West		{ Hosp. ... Home ...	11 7	1 8	...	...	3 2	...	...	...	...	2	17 23	40	
Brunswick		{ Hosp. ... Home ...	4 1	4 4	...	...	7 3	...	...	1 4	...	...	16 38	54	
New Wortley		{ Hosp. ... Home ...	2 ...	4 ...	...	...	2 ...	...	...	...	...	...	8 6	14	
Armley & Wortley		{ Hosp. ... Home ...	14 4	11 9	...	...	4 1	...	...	...	...	4	33 23	56	
Bramley		{ Hosp. ... Home ...	20 9	7 5	...	...	...	...	...	1 6	...	1	29 20	49	
Headingley		{ Hosp. ... Home ...	15 5	27 14	...	...	3 2	...	...	...	...	3	48 27	75	
CITY		{ Hosp. ... Home ...	210 62	128 109	...	2	62 37	...	...	7 96	...	34 38	441 348	789	
		Cases	272	237	2	...	99	...	4	103	...	72	789		

A nurse and two maids contracted scarlet fever, one nurse diphtheria, and three nurses typhoid fever. All were treated in the hospital. They are not included in the 210, 128, and 62 given above. Manston Hall is outside the City. In addition to the 441 cases hospitalised (out of 789 reported during the quarter) one case, which had been reported as typhoid in the previous quarter, was also taken to hospital and counted in "other" disease column.

Table shewing deaths recorded in the City of Leeds during the fifty-two weeks ended 29th December, 1906, classified according to cause, age, and the registration sub-districts to which the patients belonged. Deaths in institutions allocated to districts to which patients belonged.

TOWNSHIPS, &c. ..	LEEDS.												Deaths of outsiders occurring in City.	TOTAL mortality in City.			Annual rate per 1,000 pop.	
	North. 58,886				West. 85,186				South E. 34,949					under	over	All ages.		
	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5						
Estim. Pop., 463,495 ..																		
Under and over 5 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Small-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles ..	44	..	47	3	..	..	..	47	2	14	2	54	5	19	1	10	15	0'60
Scarlet fever ..	4	2	4	2	..	..	..	6	2	3	2	1	1	1	..	2	10	0'07
Contin. { Typhus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Contin. { Enteric ..	2	7	..	12	..	..	7	..	7	..	5	1	2	..	2	..	46	0'11
Contin. { Other or ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Contin. { doubtful ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza ..	12	7	..	9	..	..	5	30	..	18	..	11	6	4	..	13	37	0'08
Whooping-cough ..	4	1	4	5	..	..	2	7	2	..	5	3	3	10	15	2	141	0'32
Diphtheria ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37	0'16
Cholera (English)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea, &c. ..	82	5	..	53	..	2	..	107	9	40	..	48	5	13	3	7	420	0'97
Ague ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Zoogenous diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis ..	3	..	6	..	..	..	4	..	..	1	..	1	2	2	..	1	18	0'04
Gonorrhoea ..	..	..	..	3	..	..	..	..	..	..	..	..	2	..	1	..	..	0'02
Stricture of urethra	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ..	1	2	..	1	..	1	1	2	2	..	1	1	1	..	1	..	5	0'03
Pyæmia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phagedæna ..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	0'01
Septicæmia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phlebitis ..	..	..	..	..	..	2	..	..	3	..	..	..	1	..	3	..	..	0'03
Puerperal fever ..	..	1	..	2	..	..	2	..	..	..	..	..	..	..	..	1	..	..
Parasitic diseases ..	..	..	2	..	..	..	2	..	..	..	..	..	..	..	..	..	4	0'01
Starvation, &c. ..	13	2	8	1	..	..	7	17	..	9	..	18	..	4	..	1	79	0'18
Alcoholism ..	..	3	..	8	..	..	..	..	4	..	3	..	2	..	1	..	..	0'05
Rheumatic fever	..	1	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	0'01
Acute and Sub-acute } rheumatism	..	3	..	3	..	..	..	..	2	..	1	..	1	..	1	..	..	0'04
Rheumatism ..	..	2	..	3	..	..	..	..	2	..	4	..	6	..	3	..	..	0'05
Gout ..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	..	..	..	0'01
Rickets ..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	0'08
Cancer ..	10	1	7	88	..	..	3	6	..	3	26	2	..	3	41	1	38	0'04
	1	32	..	..	..	..	..	73	..	..	..	50	..	..	..	..	2	432

TABLE C (continued).

TOWNSHIPS, &c. ..	LEEDS.						Hunslet.		Holbeck.		Wortley.		Kirkstall.		Bramley.		Chapeltown.		Osmond- thorpe.		Deaths of outsiders occurring in City.		TOTAL mortality in City.			Annual rate per 1,000 pop.	
	North.		West.		South E.																						
	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	under 5	over 5	all ages.				
Under and over 5	3	7	5	10	4	2	30	13	2	8	10	6	2	1	1	1	1	1	1	1	1	1	56	2	58	0'13	
Tabes mesenterica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	57	25	82	0'18	
Tub. meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	2	10	0'02	
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17	553	570	1'23	
Phthisis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	21	43	0'09	
Tub. peritonitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	48	65	113	0'24	
Other tuberculous	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	3	0'01	
Scrofula ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	20	22	0'05	
Anaemia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	53	53	0'11
Diabetes, &c. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Premature birth	28	..	48	..	19	..	53	..	27	..	26	..	15	..	7	..	15	..	1	..	..	..	239	..	239	0'52	
Malformations and atelectasis (27)	7	..	16	..	5	..	15	..	10	..	13	..	4	..	..	..	5	..	..	..	..	..	76	..	76	0'16	
Old age ..	..	24	..	54	..	16	..	70	..	2	..	50	..	37	..	14	..	40	..	..	..	..	3-9	329	..	329	0'71
Brain disease	..	53	..	61	1	55	..	44	2	24	1	8	4	1	20	12	27	..	..	..	..	..	5	340	345	0'75	
Meningitis	..	9	2	6	8	2	5	16	13	1	8	4	1	2	2	4	2	3	..	..	..	..	56	24	80	0'17	
Apoplexy	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	75	75	75	0'16
Paralysis	..	1	7	1	14	2	1	9	..	5	6	..	..	..	5	..	6	..	..	..	..	..	3	59	62	0'13	
Gen. paralysis— Insanity	..	..	..	..	..	..	..	..	..	2	2	..	3	..	..	1	1	..	..	..	..	..	..	12	12	12	0'03
Epilepsy	..	1	2	..	4	1	..	2	..	2	2	..	1	..	3	..	2	..	..	..	..	..	1	19	20	0'04	
Convulsions	..	16	..	22	1	19	..	20	7	1	17	1	6	..	..	1	8	..	..	..	..	..	116	3	119	0'26	
Laryngismus stridulus	..	1	..	1	..	..	..	..	1	..	2	..	..	..	1	1	..	..	..	..	..	..	6	1	7	0'02	
Other diseases of nervous system	2	4	..	3	..	2	..	5	1	2	1	3	2	2	2	1	..	..	..	..	..	..	5	24	29	0'06	
Dis. of organs of special sense	..	1	1	2	1	1	..	2	2	1	..	..	..	2	..	..	2	..	..	..	..	..	6	14	20	0'04	
Endocarditis, &c.	..	30	..	45	..	9	..	32	1	18	..	28	..	17	..	15	..	17	..	..	..	1	215	216	0'47		
Pericarditis	..	..	..	..	..	1	..	2	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	5	5	5	0'01
Heart disease	..	62	1	94	..	40	..	47	..	23	1	58	1	21	1	15	..	32	..	..	..	..	4	396	400	0'87	
Angina pectoris	..	..	..	..	..	1	..	1	..	3	..	..	..	3	..	..	..	1	..	..	..	..	..	9	9	9	0'02
Syncope ..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	1	1	..	..	..	..	..	..	..	6	6	6	0'01
Aneurism	..	1	..	3	..	2	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	8	8	8	0'02
Other circulatory	..	10	..	10	..	3	..	4	..	..	..	..	..	..	..	..	3	..	..	..	..	..	33	33	33	0'07	
Laryngitis	1	1	..	2	..	..	3	3	3	..	1	..	..	..	1	..	..	1	..	..	..	10	7	17	0'04		
Croup (membranous)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	2	8	0'02		
Croup (undefined)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5	0'01		
Bronchitis	26	48	20	72	45	54	36	55	14	30	29	52	6	30	7	18	22	..	..	..	..	189	385	574	1'24		
Broncho-pneumonia	35	6	38	14	51	3	35	6	32	1	16	6	14	2	2	1	8	1	..	..	..	231	40	271	0'59		
Pneumonia ..	9	29	8	39	8	33	31	36	1	16	1	18	4	13	1	4	3	9	..	..	..	66	201	267	0'58		
Pleuro-pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	7	7	0'02
Pleurisy ..	1	1	..	3	..	3	..	1	..	..	..	3	1	3	..	1	..	..	..	..	..	..	2	15	17	0'04	
Other respiratory	..	7	..	13	1	4	..	3	1	1	..	11	1	3	..	..	9	..	..	..	..	4	52	56	0'12		

NOTES TO TABLE C.

This table is printed for the first time in the report for 1892. In it the causes of death are more detailed than in the other tables. They are classified as in Table A, part 2, according as the deaths were those of persons under or over the age of five. All the deaths which occurred in the following public institutions: the Infirmary, the Women and Children's Hospital, the Borough Fever and Small-pox Hospitals, the Leeds, Hunslet, Holbeck, Bramley Workhouses, and the Home for Consumptives at Armley (the latter for the first time in 1905), have been classified under the districts to which the patients belonged. The 183 deaths of persons who belonged to no district in the city have been separated in two columns by themselves, as deaths of outsiders; these deaths are, however, included in the total mortality of the city. As far as possible, the order of the Registrar-General has been followed in the arrangement of this table. The horizontal lines correspond with the groups in the Registrar-General's annual report.

Septicæmia includes deaths from pyæmia (0), phlebitis (1), phagedæna (0), septicæmia (not puerperal) (4). *Parasitic* diseases include thrush (4). *Starvation* includes purpura hæmorrhagica (4), scurvy (1), privation and want of breast milk (6), malnutrition (22), and inanition (49 deaths). *Rheumatic fever* in reports previous to 1892 had only the deaths ascribed in those terms to this disease by the medical attendant. Deaths from acute and sub-acute rheumatism had previously been classed under "rheumatism." A separate line has been given, both in Table C and Table A, to prevent confusion and enable comparison. "*Rheumatism*" includes chronic rheumatism and disease simply described as "rheumatism" (see Report, 1893, page 144). *Anæmia* includes chlorosis (0), hæmophilia (2), but not leucocythemia; deaths from the latter have been referred to diseases of the ductless glands. In *malformations* are included cyanosis (1), patent foramen ovale (3), spina bifida (10), atelectasis (27), imperforate anus (2), cleft palate (5), harelip (0), and (28) other congenital defects.

Brain disease includes deaths registered from such causes as cerebral congestion, cerebral hæmorrhage, and softening of the brain. *Meningitis* includes diseases classified as meningitis (78), and spinal (2) meningitis, but not tuberculous. *Apoplexy* includes all apoplexies not otherwise defined. *Paralysis* includes hemiplegia, paraplegia, and "paralysis." *General paralysis* (3) is included under insanity, and does not include deaths from "softening of the brain." *Convulsions* includes diseases so certified, and deaths (2) due to "fits." Fits of apoplexy, &c., come under other headings. We have tried, as far as possible, to keep to the old headings.

Endocarditis, &c., includes valvular disease of the heart. "Heart disease" includes such diseases as hypertrophy, atrophy, fatty degeneration, weak heart, cardiac disease or degeneration and "disease of the heart." *Angina pectoris* includes only those deaths in which the symptom but no disease is stated. *Aneurism* includes all the aneurisms so stated. *Other diseases of the circulatory system* includes atheroma. *Other respiratory diseases* includes asthma (14), emphysema (13), empyæma (6), pulmonary congestion (10), "lung disease" (7), and others (6). *Tonsillitis, &c.* includes pharyngitis (1), parotiditis (0). *Diseases of the stomach* includes dyspepsia, hæmatemesis, gastritis. *Disease of liver* includes hepatitis (5). *Diseases of the bowels* includes melæna (1), ulcer of intestines, obstruction of bowels, strangulation not due to hernia, intussusception, appendicitis. *Kidney disease* includes deaths from granular kidney (7), Bright's disease (43), other kidney diseases (20), and uræmia (5). *Albuminuria* includes only deaths in which the symptom without any pathological cause was registered. *Diseases of the urinary system* includes calculus, hæmaturia, cystitis and other diseases of the bladder. *Disease of the generative organs* includes uterine disease (1), ovarian disease (5), and "other diseases" of the generative organs, male (16), female (6). *Childbirth* includes all the accidents of parturition, except puerperal fever.

Diseases of the bones and joints includes disease of the spinal column, but not, of course, such diseases as spinal sclerosis, which are now referred to disease of the nervous system. A comparison of mortality previous to 1890 is difficult, as the term spinal disease was used to include both diseases of the spinal column and of the spinal marrow. *Abscess* includes cellulitis (7), carbuncle (3). *Injury* includes deaths from accident or negligence, homicide, misadventure, suicide, and execution.

TABLE D, Part 1.—Shewing death-rates from certain causes for the years 1890 to 1906.

	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping cough.	"Fever."	Diarrhoea.	All seven.	Croup (membranous and undefined)	Phthisis.	Influenza and diseases of the air-passages other than consumption.
1890 (53 wks.)	0'00	0'27	0'28	0'07	0'50	0'30	0'98	2'39	0'09	1'66	5'62
1891 (52 wks.)	0'00	0'71	0'18	0'04	0'41	0'20	0'86	2'41	0'08	1'79	6'11
1892 (52 wks.)	0'02	0'20	0'20	0'08	0'42	0'17	1'10	2'18	0'13	1'42	4'56
1893 (52 wks.)	0'08	0'90	0'08	0'15	0'44	0'30	1'60	3'55	0'18	1'70	4'60
1894 (52 wks.)	0'01	0'75	0'13	0'15	0'34	0'14	0'45	1'98	0'17	1'49	3'64
1895 (52 wks.)	...	0'35	0'13	0'10	0'29	0'22	1'58	2'65	0'12	1'55	4'34
1896 (53 wks.)	0'00	0'48	0'18	0'10	0'60	0'21	0'69	2'27	0'09	1'50	4'02
1897 (52 wks.)	...	0'40	0'23	0'13	0'24	0'21	1'58	2'79	0'10	1'44	3'90
1898 (52 wks.)	0'00	0'45	0'29	0'49	0'39	0'23	1'24	3'10	0'12	1'39	3'41
1899 (52 wks.)	...	0'37	0'15	0'71	0'38	0'17	0'96	2'73	0'12	1'41	3'72
1900 (52 wks.)	0'00	0'58	0'12	0'55	0'39	0'20	1'09	2'93	0'06	1'41	4'19
1901 (52 wks.)	...	0'58	0'19	0'38	0'33	0'19	1'47	3'14	0'07	1'41	3'46
1902 (53 wks.)	0'01	0'43	0'13	0'18	0'46	0'18	0'61	2'00	0'05	1'31	3'52
1903 (52 wks.)	0'05	0'28	0'25	0'14	0'27	0'13	0'62	1'74	0'03	1'27	3'09
1904 (52 wks.)	0'00	0'77	0'13	0'09	0'46	0'11	1'01	2'57	0'05	1'40	3'21
1905 (52 wks.)	0'01	0'24	0'09	0'08	0'27	0'12	0'80	1'60	0'03	1'23	3'07
1906 (52 wks.)	...	0'60	0'07	0'16	0'32	0'11	0'97	2'23	0'03	1'23	2'70

See note to table D, part 2.

TABLE D, Part 2.
For whole District.

Year.	Population estimated to middle of each year. *	Births.		Deaths under one year of age.		Deaths at all ages. Total.		Deaths in Public Institutions.	Deaths of non-residents registered in district.	Deaths of residents registered beyond district.	Deaths at all ages net.	
		Number.	Rate.*	Number	Rate per 1,000 births registered.	Number	Rate.*				Number	Rate.*
†	2	3	4	5	6	7	8	9	10	11	12	13
†1890	363,018	12,336	33·5	2,128	173	8,370	22·7	819	132	No return	8,238	22·3
1891	369,034	12,538	34·1	2,216	177	8,429	22·9	869	144	do.	8,285	22·5
1892	375,081	12,546	33·6	2,114	168	7,403	19·8	789	129	do.	7,274	19·5
1893	381,157	12,348	32·5	2,542	206	8,512	22·4	874	147	24	8,365	22·0
1894	387,259	12,502	32·4	1,945	156	6,935	18·0	772	142	7	6,793	17·6
1895	393,387	12,478	31·8	2,384	191	8,101	20·7	882	167	No return	7,934	20·2
†1896	399,535	12,573	31·0	2,120	169	7,682	18·9	908	161	8	7,521	18·5
1897	405,716	12,912	31·9	2,454	190	8,148	20·2	881	175	1	7,973	19·7
1898	411,895	12,971	31·6	2,372	183	7,996	19·5	940	142	9	7,854	19·1
1899	418,101	12,939	31·1	2,222	172	8,105	19·5	1,005	181	26	7,924	19·0
1900	424,322	13,091	31·0	2,397	183	8,619	20·4	1,084	184	90	8,525	20·2
1901	430,575	12,898	30·1	2,429	188	8,283	19·3	1,176	171	92	8,204	19·1
†1902	437,036	13,245	29·8	2,113	160	7,814	17·6	1,154	211	96	7,699	17·3
1903	443,559	12,996	29·4	1,992	153	7,334	16·6	1,094	184	113	7,263	16·4
1904	450,142	12,561	28·0	2,207	176	8,096	18·0	1,185	173	116	8,039	17·9
1905	456,787	12,337	27·1	1,875	152	7,124	15·6	1,225	178	102	7,047	15·5
Averages for years 1896-1905		12,852	30·1	2,218	173	7,920	18·6	1,065	176	65	7,805	18·3
1906	463,495	12,093	26·2	1,837	152	7,405	16·0	1,271	183	128	7,350	15·9

* Rates calculated per 1,000 of estimated population. The populations given in column 2 for the 11 years, 1890 to 1900, are those estimated by the method of interpolation from the census figures for 1881, 1891 and 1901. The rest are those of the Registrar-General.

The deaths included in column 7 of this table are the whole of those registered during the year as having actually occurred within the City or of Leeds persons in the fever hospital at Seacroft or the Hunslet workhouse at Rothwell. The deaths included in column 12 are the numbers in column 7, corrected by the subtraction of the numbers in column 10 and the addition of the numbers in column 11. Column 11 is, however, incomplete in some of the years.

By the term "Non-residents" is meant persons brought into the district on account of illness, and dying in some public institution, and paupers from townships outside the City dying at the Workhouse; and by the term "Residents" is meant persons who have died outside Leeds in some public institution, other than our own fever hospitals, and inmates of the County Asylums from the City townships.

† 53 week years, the others 52.

TABLE E.
VITAL STATISTICS FOR 1906.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the fifty-two weeks ended 29th December, 1906. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	7 Zymotics.
LEEDS. { North ...	1,758	<i>29.97</i>	1,010	<i>17.22</i>	<i>2.80</i>
{ West ...	1,869	<i>22.02</i>	1,388	<i>16.35</i>	<i>1.93</i>
{ South-East ...	1,240	<i>35.60</i>	844	<i>24.23</i>	<i>3.82</i>
Hunslet ...	2,143	<i>28.33</i>	1,244	<i>16.45</i>	<i>2.93</i>
Holbeck ...	1,007	<i>28.71</i>	595	<i>16.97</i>	<i>2.54</i>
Wortley ...	1,616	<i>25.01</i>	917	<i>14.19</i>	<i>2.10</i>
Kirkstall ...	1,020	<i>21.36</i>	513	<i>10.74</i>	<i>1.42</i>
Bramley ...	465	<i>24.94</i>	233	<i>12.50</i>	<i>0.97</i>
Chapelton ...	964	<i>23.26</i>	471	<i>11.36</i>	<i>1.04</i>
Osmondthorpe ...	11	<i>31.27</i>	7	<i>19.90</i>	...
<i>Outsiders</i> ...	...	...	183	...	...
Totals ...	12,093	<i>26.18</i>	7,405	<i>16.03</i>	<i>2.24</i>

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central	...	310	15.52	Mill Hill	...	111	15.92
North	...	559	12.36	West	...	491	20.85
North-East	...	603	19.02	North-West	...	482	14.04
East	...	707	23.76	Brunswick...	...	327	14.22
South	...	345	24.80	New Wortley	...	341	18.53
East Hunslet	...	598	15.85	Armley	...	529	12.76
West Hunslet	...	508	15.78	Bramley	...	280	11.96
Holbeck	...	500	16.01	Headingley	...	531	10.81

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were 121 deaths at Manston Hospital during the year.

E. 2.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 31st March, 1906. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.		Births.	Birth Rate.	Deaths.	Death Rate. All causes. 7 Zymotics.	
LEEDS.	North ...	480	32·7	290	19·8	2·6
	West ...	445	21·0	405	19·1	2·0
	South-East ...	334	38·4	229	26·3	2·9
	Hunslet ...	564	29·8	340	18·0	3·0
	Holbeck ...	259	29·5	146	16·7	1·3
	Wortley ...	392	24·3	265	16·4	2·3
	Kirkstall ...	286	24·0	148	12·4	1·9
	Bramley ...	109	23·4	45	9·7	0·4
	Chapelton ...	241	23·3	134	12·9	1·3
	Osmondthorpe ...	2	22·7	2	22·7	...
	<i>Outsiders</i> ...	...	...	50	...	...
Totals ...		3,112	26·9	2,054	17·8	2·1

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.			Deaths.	Death Rate.	Wards.			Deaths.	Death Rate.
Eastern Division.					Western Division.				
Central	...	...	90	18·0	Mill Hill	...	...	36	20·7
North	...	...	156	13·8	West	...	...	137	23·3
North-East	...	...	172	21·7	North-West	...	...	144	16·8
East	...	...	190	25·5	Brunswick	...	...	94	16·4
South	...	...	90	25·9	New Wortley	...	...	91	19·8
East Hunslet	...	...	177	18·8	Armley	...	...	163	15·7
West Hunslet	...	...	139	17·3	Bramley	...	...	56	9·6
Holbeck	...	...	115	14·7	Headingley	...	...	154	12·5

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were twenty-seven deaths at Manston Hospital during this quarter.

E. 3.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 30th June, 1906. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	Zymotics.
LEEDS. { North	451	30·8	224	15·3	1·6
{ West	460	21·7	342	16·1	1·6
{ South-East	294	33·8	184	21·1	2·5
Hunslet	502	26·5	279	14·8	1·5
Holbeck	240	27·4	152	17·3	2·7
Wortley	419	25·9	241	14·9	2·2
Kirkstall	260	21·8	147	12·3	1·6
Bramley	126	27·0	67	14·4	0·4
Chapeltown	237	22·9	122	11·8	1·4
Osmondthorpe	3	34·1	4	45·4	...
<i>Outsiders</i>	...	...	41	...	...
Totals	2,992	25·9	1,803	15·6	1·8

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.			Deaths.	Death Rate.	Wards.			Deaths.	Death Rate.
Eastern Division.					Western Division.				
Central	...	...	78	15·6	Mill Hill	...	...	27	15·5
North	...	...	131	11·6	West	...	...	133	22·6
North-East	...	...	136	17·2	North-West	...	...	108	12·6
East	...	...	155	20·8	Brunswick	...	...	77	13·4
South	...	...	75	21·6	New Wortley	...	...	103	22·4
East Hunslet	...	...	129	13·7	Armley	...	...	124	12·0
West Hunslet	...	...	115	14·3	Bramley	...	...	81	13·8
Holbeck	...	...	137	17·5	Headingley	...	...	153	12·5

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were twenty-four deaths at Manston Hospital during this quarter.

E. 4.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 29th September, 1906. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	7 Zymotics.
LEEDS. { North	409	27·9	278	19·0	5·9
{ West	505	23·8	321	15·1	3·1
{ South-East	320	36·7	247	28·4	7·9
Hunslet	549	29·0	329	17·4	6·2
Holbeck	256	29·2	158	18·0	4·4
Wortley	426	26·4	192	11·9	3·1
Kirkstall	251	21·0	87	7·3	1·4
Bramley	120	25·7	53	11·4	2·1
Chapeltown	266	25·7	112	10·8	1·0
Osmondthorpe	4	45·4	1	11·4	...
<i>Outsiders</i>	...	...	59	...	...
Totals	3,106	26·9	1,837	15·9	4·0

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Eastern Division.			Western Division.		
Wards.	Deaths.	Death Rate.	Wards.	Deaths.	Death Rate.
Central	72	14·4	Mill Hill	21	12·0
North	154	13·6	West	108	18·3
North-East	164	20·7	North-West	116	13·5
East	208	28·0	Brunswick	85	14·8
South	104	29·9	New Wortley	75	16·3
East Hunslet	144	15·3	Armley	111	10·7
West Hunslet	133	16·5	Bramley	59	10·1
Holbeck	135	17·3	Headingley	89	7·3

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were twenty-eight deaths at Manston Hospital during this quarter.

E. 5.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 29th December, 1906. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	Zymotics.
LEEDS. { North	418	28·5	218	14·9	1·1
{ West	459	21·6	320	15·1	1·0
{ South-East	292	33·5	184	21·1	2·0
Hunslet	528	27·9	296	15·7	1·1
Holbeck	252	28·7	139	15·9	1·7
Wortley	379	23·5	219	13·6	0·9
Kirkstall	223	18·7	131	11·0	0·8
Bramley	110	23·6	68	14·6	0·9
Chapeltown	220	21·2	103	9·9	0·5
Osmondthorpe	2	22·7	...	...	...
<i>Outsiders</i>	...	...	33	...	...
Totals	2,883	25·0	1,711	14·8	1·0

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central	...	70	14'0	Mill Hill	...	27	15'5
North	...	118	10'4	West	...	113	19'2
North-East	...	131	16'5	North-West	...	114	13'3
East	...	154	20'7	Brunswick	...	71	12'3
South	...	76	21'9	New Wortley	...	72	15'6
East Hunslet	...	148	15'7	Armley	...	131	12'6
West Hunslet	...	121	15'0	Bramley	...	84	14'4
Holbeck	...	113	14'5	Headingley	...	135	11'0

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were forty-two deaths at Manston Hospital during this quarter.

E. 6.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 30th March, 1907. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.			Births.	Birth Rate.	Deaths.	Death Rate.	
						All causes.	Zymotics.
LEEDS.	North	...	463	31.6	287	19.6	0.5
	West	...	471	22.1	424	19.9	1.0
	South-East	...	312	35.7	218	24.9	1.1
	Hunslet	...	518	26.9	315	16.4	0.7
	Holbeck	...	293	32.8	148	16.5	0.6
	Wortley	...	413	25.1	318	19.4	1.4
	Kirkstall	...	238	19.4	172	14.0	0.4
	Bramley	...	94	19.9	65	13.7	0.4
	Chapelton	...	288	26.6	139	12.8	0.3
	Osmondthorpe	...	2	23.0	...	...	...
Outsiders	...	...	...	55	...	...	
Totals			3,092	26.4	2,141	18.3	0.8

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows:—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central ...	...	87	17·6	Mill Hill ...	...	29	17·0
North ...	...	161	13·9	West ...	...	147	25·0
North-East	...	166	20·6	North-West	...	161	18·5
East ...	...	179	23·8	Brunswick...	...	105	18·2
South ...	...	69	20·1	New Wortley	...	115	25·1
East Hunslet	...	149	15·4	Armley ...	...	183	17·2
West Hunslet	...	152	18·5	Bramley ...	...	85	14·3
Holbeck ...	...	123	15·4	Headingley	...	175	13·9

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There were thirty-four deaths at Manston Hospital during this quarter.

TABLE F (1).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds: with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 30th December, 1905.

1905.		OCTOBER.				NOVEMBER.					DECEMBER.				TOTALS OR AVERAGES.	YEAR.
		7th.	14th.	21st.	28th.	4th.	11th.	18th.	25th.	2nd.	9th.	16th.	23rd.	30th.		
		Oct.	Oct.	Oct.	Oct.	Nov.	Nov.	Nov.	Nov.	Dec.	Dec.	Dec.	Dec.	Dec.		
Total Births	1	218	214	220	244	203	223	192	214	216	227	216	234	166	2,787	12,337
Total Deaths	2	110	105	99	123	142	142	146	157	139	170	155	150	157	1,795	7,124
Under 1 year	3	26	26	25	31	37	30	38	43	30	49	34	34	34	437	1,875
1 to 2 years.....	4	11	6	5	9	14	7	5	10	9	11	20	10	13	130	439
2 to 5 years.....	5	6	3	1	7	5	8	12	13	11	16	15	15	18	130	380
5 to 60 years	6	35	47	41	46	56	53	49	53	44	36	41	50	54	605	2,489
60 yrs. and upwards	7	32	23	27	30	30	44	42	38	45	58	45	41	38	493	1,941
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Measles	9	3	1	...	2	2	7	4	4	7	5	16	8	15	74	109
Scarlet Fever	10	...	1	1	...	...	1	...	2	...	1	1	...	...	7	39
*Diphtheria	11	3	...	...	...	...	2	1	1	...	...	1	1	...	9	44
Whooping-cough..	12	1	3	2	...	5	2	1	6	4	3	2	5	4	38	121
Typhus Fever.....	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Typhoid Fever ...	14	...	1	...	2	1	1	2	3	1	1	1	2	1	16	52
Other or doubtful	15	...	...	...	...	...	...	1	...	...	...	...	...	...	1	2
Diarrhoea or Dysent.	16	5	4	3	1	3	1	...	...	1	3	3	...	2	26	365
All seven.....	17	12	10	6	5	11	14	9	16	13	13	24	16	22	171	736
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
Croup	19	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Dis. of Resp. System	20	14	24	20	22	34	35	39	41	32	56	40	34	37	428	1,396
Influenza†	21	1	1	1	1	1	2	1	...	1	1	...	1	...	11	66
Phthisis	22	6	9	10	8	13	7	9	14	12	11	10	8	9	126	558
Dis. of Circul. System	23	13	11	6	10	11	11	16	17	11	13	10	14	15	158	563
Violent Deaths	24	7	5	...	8	1	5	6	9	2	5	7	3	6	64	273
Inquest cases	25	14	14	4	11	9	17	18	20	8	12	20	7	16	170	654
Deaths in Pub. Inst.	26	22	18	24	23	16	22	24	20	20	31	22	23	19	284	1,225
Dispensary: visits pd.	27	269	342	375	410	343	371	486	431	510	416	527	501	292	5,273	15,784
Cases admitted to our own hospitals	28	32	20	20	28	29	21	32	34	26	21	21	25	26	335	1,391
Barom. (inches)	29	29.69	30.18	29.87	30.00	29.23	29.53	29.76	29.81	29.80	29.93	30.54	30.13	29.86	29.87	29.85
Attached Ther. °F...	30	53.08	53.38	44.00	46.62	49.08	48.00	45.31	44.00	46.69	48.62	47.15	47.15	42.92	47.38	52.69
Dry bulb.....	31	51.62	52.08	44.00	46.38	47.00	46.08	41.31	42.77	44.54	46.69	44.62	44.92	39.08	45.47	52.16
Wet bulb.....	32	50.23	50.69	42.62	44.77	45.77	44.46	39.46	40.69	42.77	44.15	42.77	43.15	37.46	43.77	48.48
Humidity	33	90.38	90.46	89.54	88.23	91.23	88.38	85.31	84.08	86.85	82.15	86.23	86.85	86.54	87.40	78.01
Mn. of highest reading	34	57.57	58.29	52.43	50.57	53.86	50.29	46.00	45.43	48.29	49.86	47.14	47.86	42.57	50.01	56.74
" lowest "	35	43.14	45.57	36.86	38.29	42.29	40.57	37.71	35.86	39.57	42.00	40.71	39.86	34.00	39.73	43.99
" daily range ...	36	14.43	12.72	15.57	12.28	11.57	9.72	8.29	9.57	8.72	7.86	6.43	8.00	8.57	10.28	12.75
Total rainfall (inches)	37	0.38	0.57	0.34	0.05	1.28	0.78	0.34	0.33	0.81	0.12	...	...	0.14	5.14	20.75
Wind { Direction ...	38	NW	NW	NW	NW	SW SE	SW NW	NW NE	NW SW	SW SE	SW	NW	SE SW	NE SE	...	...
Force 0-6 ...	39	3	2	2	1	1	1	1	2	2	2	2	2	2	2	2
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birth-rate (Leeds) ...	41	24.9	24.4	25.1	27.9	23.2	25.5	21.9	24.4	24.7	25.9	24.7	26.7	19.0	24.5	27.1
Death-rate (Leeds)...	42	12.6	12.0	11.3	14.0	16.2	16.2	16.7	17.9	15.9	19.4	17.7	17.1	17.9	15.8	15.6
Death-rate (76 towns)	43	13.5	13.7	14.1	14.8	15.6	15.6	15.5	17.9	16.7	16.1	17.0	17.8	17.4	15.8	15.7
Birth-rate (76 towns)	44	26.6	26.7	27.4	27.2	27.5	27.5	26.1	26.1	25.8	28.1	27.3	27.8	21.4	26.6	28.2
D.R. lung dis. (Leeds)	45	1.6	2.7	2.3	2.5	3.9	4.0	4.5	4.7	3.7	6.4	4.6	3.9	4.3	3.8	3.1
D.R. 7 Zymotics ..	46	1.4	1.1	0.7	0.6	1.3	1.6	1.0	1.8	1.5	1.5	2.7	1.8	2.5	1.5	1.6

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent us by Mr. Crowther. They are uncorrected readings, made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs.

* Includes membranous croup. Line 19 includes non-spasmodic croup not returned as membranous. † Line 20 includes line 21.

TABLE F (2).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds: with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 31st March, 1906.

1906.		JANUARY.					FEBRUARY.					MARCH. ☾				TOTALS OR AVERAGES.
		6th. Jan.	13th. Jan.	20th. Jan.	27th. Jan.	3rd. Feb.	10th. Feb.	17th. Feb.	24th. Feb.	3rd. Mar.	10th. Mar.	17th. Mar.	24th. Mar.	31st. Mar.		
Total Births	1	233	231	210	257	244	256	227	244	221	281	220	248	240	3,112	
Total Deaths	2	194	172	154	156	142	154	180	155	157	165	140	145	140	2,054	
Under 1 year	3	40	32	33	44	33	37	31	36	22	32	30	44	33	447	
1 to 2 years	4	23	21	17	17	17	11	19	12	19	13	10	10	14	203	
2 to 5 years	5	19	12	9	9	8	10	14	10	14	15	5	6	10	141	
5 to 60 years	6	62	66	59	53	46	52	64	53	62	52	60	51	47	727	
60 yrs. and upwards	7	50	41	36	33	38	44	52	44	40	53	35	34	36	536	
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	9	15	16	9	15	8	11	14	7	12	14	7	11	7	146	
Scarlet Fever	10	...	1	1	...	...	1	...	...	...	...	...	...	1	4	
*Diphtheria	11	1	3	4	5	2	3	1	2	4	3	...	3	3	34	
Whooping-cough..	12	8	5	1	3	2	3	2	4	5	2	3	2	2	42	
{ Typhus Fever	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
{ Typhoid Fever	14	...	1	1	...	2	1	1	1	...	1	2	1	1	12	
{ Other or doubtful	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhoea or Dysent.	16	1	1	1	1	2	...	2	1	...	...	1	...	...	10	
All seven.....	17	25	27	17	24	16	19	20	15	21	20	13	17	14	248	
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Croup	19	...	...	...	...	...	1	...	...	...	...	...	...	...	1	
Dis. of Resp. System	20	43	43	38	36	28	19	33	36	24	22	29	29	32	412	
Influenza†	21	2	1	1	3	...	2	...	...	...	...	1	2	...	12	
Phthisis	22	11	14	15	12	7	10	18	10	19	9	17	11	16	169	
Dis. of Circul. System	23	17	19	12	10	10	15	19	15	13	22	23	6	6	187	
Violent Deaths	24	10	4	1	4	4	4	11	4	7	4	5	4	1	63	
Inquest cases	25	20	15	5	9	12	18	19	9	12	12	15	13	9	168	
Deaths in Pub. Inst.	26	32	31	24	25	17	30	29	24	32	15	31	32	25	347	
Dispensary: visits pd.	27	363	365	359	352	332	260	264	258	278	252	295	288	240	3,906	
Cases admitted to our own hospitals	28	20	30	27	18	27	26	22	31	34	24	24	26	36	345	
Barom. (inches)	29	29.64	29.51	29.78	30.11	30.02	29.88	29.51	29.84	29.57	29.90	29.70	30.05	30.04	29.81	
Attached Ther. °F ...	30	42.00	44.77	52.46	52.69	55.23	51.69	50.00	52.23	52.08	57.08	54.85	57.77	57.69	52.35	
Dry bulb	31	38.92	43.85	41.62	43.92	45.38	39.31	38.23	38.08	40.50	47.77	44.31	42.15	43.69	42.14	
Wet bulb	32	37.62	41.69	39.23	42.00	43.31	37.23	36.23	36.15	38.25	44.54	41.69	38.08	38.92	39.62	
Humidity	33	88.69	84.23	82.15	85.46	84.62	82.62	82.92	84.31	82.58	78.31	81.69	71.08	68.62	81.32	
Mn. of highest reading	34	42.14	47.29	46.29	46.86	49.00	43.29	45.00	44.71	44.43	52.71	47.29	46.71	47.00	46.36	
„ lowest „	35	34.57	37.43	35.57	38.14	40.71	33.00	33.43	32.71	34.71	42.14	33.86	35.14	35.57	35.92	
„ daily range ...	36	7.57	9.86	10.72	8.72	8.29	10.29	11.57	12.00	9.72	10.57	13.43	11.57	11.43	10.44	
Total rainfall (inches)	37	1.05	0.58	1.06	0.13	0.08	0.49	0.18	0.46	0.75	0.42	0.31	0.36	0.19	6.06	
Wind { Direction ...	38	SE	SW	SW	NW SW	NW SW	NW SW	NW SW	SE NE	W SW	SW	SW	NE	NW NE	...	
{ Force 0-6 ...	39	2	2	2	2	2	2	2	1	2	2	2	2	2	2	
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Birth-rate (Leeds) ...	41	26.2	26.0	23.6	28.9	27.5	28.8	25.6	27.5	24.9	31.6	24.8	27.9	27.0	26.9	
Death-rate (Leeds)...	42	21.8	19.4	17.3	17.6	16.0	17.3	20.3	17.4	17.7	18.6	15.8	16.3	15.8	17.8	
Death-rate (76 towns)	43	18.3	16.7	15.8	15.9	15.5	15.5	17.2	17.3	17.4	16.7	16.2	15.8	17.0	16.6	
Birth-rate (76 towns)	44	29.9	30.3	26.7	29.3	28.2	28.4	29.4	28.4	28.1	29.2	28.0	28.1	29.5	28.7	
D. R. lung dis. (Leeds)	45	4.8	4.8	4.3	4.1	3.2	2.1	3.7	4.1	2.7	2.5	3.3	3.3	3.6	3.6	
D. R. 7 Zymotics „	46	2.8	3.0	1.9	2.7	1.8	2.1	2.3	1.7	2.4	2.3	1.5	1.9	1.6	2.1	

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent us by Mr. Crowther. They are uncorrected readings, made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs. On January 17th, 1906, the barometer was removed into an inner room in which there was a fire.

* Includes membranous croup. Line 19 includes non-spasmodic croup not returned as membranous † Line 20 includes line 21.

For total of line 23 read 191.

TABLE F (3).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds; with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 30th June, 1906.

1906.		APRIL.				MAY.					JUNE.				TOTALS OR AVERAGES.
		Apr. 7th.	Apr. 14th.	Apr. 21st.	Apr. 28th.	May 5th.	May 12th.	May 19th.	May 26th.	June 2nd.	June 9th.	June 16th.	June 23rd.	June 30th.	
Total Births	1	239	244	204	235	233	215	221	218	249	198	242	242	252	2,992
Total Deaths	2	131	177	156	151	162	148	122	140	141	130	114	123	108	1,803
Under 1 year	3	28	32	24	26	37	28	32	25	27	23	23	22	21	348
1 to 2 years	4	13	19	19	15	18	17	10	10	7	8	4	7	8	155
2 to 5 years	5	10	8	21	8	12	14	5	10	7	13	9	3	6	126
5 to 60 years	6	37	70	55	51	57	47	39	61	61	52	42	56	46	674
60 yrs. and upwards	7	43	48	37	51	38	42	36	34	39	34	36	35	27	500
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	9	10	8	11	8	11	15	13	13	2	4	3	3	1	102
Scarlet Fever	10	1	...	...	1	...	...	1	1	1	...	...	...	...	5
*Diphtheria	11	...	3	3	1	1	1	...	1	1	2	...	...	1	14
Whooping-cough..	12	3	2	7	7	7	7	3	5	2	8	2	4	5	62
Typhus Fever	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	14	...	3	...	...	...	...	...	1	...	1	...	...	...	5
Other or doubtful	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea or Dysent.	16	...	2	...	...	2	1	1	5	1	...	1	1	1	15
All seven	17	14	18	21	17	21	24	18	20	7	15	6	8	8	203
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	19	1	...	...	1	...	...	...	...	...	...	...	...	...	2
Dis. of Resp. System	20	28	41	42	33	31	34	26	27	26	19	19	21	16	363
Influenza†	21	...	3	1	...	...	4	2	1	2	...	...	...	...	13
Phthisis	22	10	16	11	11	13	9	8	9	12	9	11	12	9	140
Dis. of Circul. System	23	11	19	22	16	7	14	7	6	19	15	14	17	11	178
Violent Deaths	24	5	13	10	3	10	6	4	7	6	3	6	6	6	85
Inquest cases	25	12	27	24	8	16	14	8	13	10	12	9	12	13	178
Deaths in Pub. Inst.	26	15	35	17	18	26	24	14	30	34	27	21	21	20	302
Dispensary: visits pd.	27	284	354	190	303	301	293	259	239	213	187	180	208	191	3,202
Cases admitted to our own hospitals	28	20	30	18	27	35	20	33	34	25	23	18	21	24	328
Barom. (inches)	29	30.23	30.32	29.90	29.73	29.61	29.82	29.63	29.80	29.76	30.24	30.12	30.13	29.89	29.93
Attached Ther. *F... ..	30	60.69	60.33	60.00	55.92	56.54	61.38	60.92	58.77	63.31	63.83	64.38	66.00	65.23	61.32
Dry bulb	31	49.77	53.83	49.46	43.77	50.38	56.62	50.85	52.54	57.77	63.83	61.08	66.77	61.62	55.21
Wet bulb	32	43.46	46.50	44.23	39.62	45.23	52.08	46.15	48.54	53.92	55.83	55.23	59.92	54.92	49.65
Humidity	33	64.23	60.92	67.69	71.00	68.08	73.46	70.54	74.92	77.08	60.33	69.08	66.62	64.77	68.45
Mn. of highest reading	34	57.28	62.71	55.71	49.57	54.14	61.00	57.57	56.29	63.71	71.43	67.43	72.14	64.71	61.06
„ lowest „	35	37.14	39.86	38.43	35.71	39.43	48.00	42.86	44.00	51.71	48.00	50.71	54.43	51.14	44.73
„ daily range ...	36	20.14	22.85	17.28	13.86	14.71	13.00	14.71	12.29	12.00	23.43	16.72	17.71	13.57	16.33
Total rainfall (inches)	37	...	0.03	0.10	0.26	0.41	0.19	0.60	0.52	0.21	...	0.08	1.41	0.08	3.89
Wind (Direction) ...	38	E	NE	NE	NW	NE	SW	SW	NW	NE	SE	NE	SW	SW	...
Force 0-6 ...	39	1	1	2	1	1	1	2	1	2	1	1	1	1	1
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birth-rate (Leeds) ...	41	26.9	27.5	23.0	26.5	26.2	24.2	24.9	24.5	28.0	22.3	27.2	27.2	28.4	25.9
Death-rate (Leeds) ...	42	14.7	19.9	17.6	17.0	18.2	16.7	13.7	15.8	15.9	14.6	12.8	13.8	12.2	15.0
Death-rate (76 towns)	43	17.0	17.2	17.3	16.8	16.3	15.5	14.5	14.2	13.8	12.9	12.9	13.2	12.4	14.9
Birth-rate (76 towns)	44	29.5	26.6	27.5	31.1	29.0	28.6	28.6	28.2	28.4	23.9	30.0	29.2	27.8	28.3
D.R. lung dis. (Leeds)	45	3.2	4.6	4.7	3.7	3.5	3.8	2.9	3.0	2.9	2.1	2.1	2.4	1.8	3.1
D.R. 7 Zymotics ..	46	1.6	2.0	2.4	1.9	2.4	2.7	2.0	2.9	0.8	1.7	0.7	0.9	0.9	1.8

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent us by Mr. Crowther. They are uncorrected readings, made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs. On January 17th, 1906, the barometer was removed into an inner room in which there was a fire.

* Includes membranous croup. Line 19 includes non-spasmodic croup not returned as membranous † Line 20 includes line 21.

For total of line 23 read 184.

TABLE F 4).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds: with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 29th September, 1906.

1906.		JULY.				AUGUST.					SEPTEMBER.				TOTALS OR AVERAGES.
		7th. July	14th. July	21st. July	28th. July	4th. Aug.	11th. Aug.	18th. Aug.	25th. Aug.	1st. Sep.	8th. Sep.	15th. Sep.	22nd. Sep.	29th. Sep.	
Total Births	1	257	228	235	253	247	188	242	238	253	241	250	260	214	3,106
Total Deaths	2	111	113	122	117	146	125	158	172	165	149	177	140	142	1,837
Under 1 year	3	35	18	33	30	50	58	71	65	77	58	77	53	45	670
1 to 2 years.....	4	6	5	10	10	19	8	12	9	10	7	23	12	10	141
2 to 5 years.....	5	3	7	6	7	3	4	8	11	5	4	4	2	2	66
5 to 60 years.....	6	38	44	38	41	45	34	44	55	47	53	42	43	52	576
60 yrs. and upwards	7	29	39	35	29	29	21	23	32	26	27	31	30	33	384
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	9	1	5	...	2	2	2	4	5	...	2	2	...	...	25
Scarlet Fever	10	3	...	2	3	1	1	1	...	1	...	...	1	...	13
*Diphtheria	11	...	1	...	2	1	...	...	1	1	2	...	...	2	10
Whooping-cough..	12	1	2	3	1	2	...	1	3	3	1	1	1	2	21
Typhus Fever.....	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever ...	14	...	1	1	...	...	2	1	...	1	3	2	1	...	12
Other or doubtful	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea or Dysent.	16	2	5	6	17	27	37	51	42	52	43	53	29	20	384
All seven.....	17	7	14	12	25	33	42	58	51	58	51	58	32	24	465
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	19	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dis. of Resp. System	20	17	11	20	12	12	19	10	11	7	8	14	9	10	160
Influenza†	21	...	...	...	...	...	...	...	1	...	...	...	...	...	1
Phtisis	22	6	13	10	7	9	3	11	13	11	10	10	9	23	135
Dis. of Circul. System	23	10	10	14	8	14	7	10	11	14	11	8	8	10	135
Violent Deaths	24	3	7	3	4	5	7	4	3	1	4	2	6	4	53
Inquest cases	25	12	11	6	7	7	11	9	7	5	10	8	11	8	112
Deaths in Pub. Inst.	26	20	29	18	21	21	19	23	20	30	26	25	24	22	298
Dispensary: visits pd.	27	219	174	182	148	148	135	143	137	160	160	131	146	160	2,043
Cases admitted to our own hospitals	28	35	43	32	48	36	26	31	27	32	37	34	48	60	489
Barom. (inches)	29	29.99	30.09	29.80	29.91	29.85	29.91	29.66	29.89	30.15	29.99	29.95	30.23	30.46	29.99
Attached Ther. °F ...	30	63.62	64.62	65.00	66.46	68.54	68.23	66.08	67.54	69.62	72.00	67.08	63.08	60.00	66.30
Dry bulb.....	31	63.62	62.77	64.08	67.31	68.08	65.23	62.85	65.31	70.08	65.92	60.38	58.46	56.00	63.85
Wet bulb.....	32	58.23	55.38	57.46	60.62	61.46	59.92	57.54	59.77	61.62	60.31	54.62	54.38	51.23	57.89
Humidity	33	72.15	62.46	65.69	66.62	66.62	72.77	71.08	70.00	62.77	70.23	68.62	75.85	72.46	69.10
Mn. of highest reading	34	68.71	67.86	69.00	73.00	74.43	70.00	68.00	69.29	78.71	73.43	66.14	63.29	61.71	69.51
„ lowest „	35	52.29	51.57	53.71	53.00	57.86	55.29	54.14	55.29	54.86	56.71	47.43	51.14	44.57	52.91
„ daily range ...	36	16.42	16.29	15.29	20.00	16.57	14.71	13.86	14.00	23.85	16.72	18.71	12.15	17.14	16.60
Total rainfall (inches)	37	0.24	0.12	0.08	0.23	0.57	0.31	0.45	0.63	...	0.05	0.37	0.04	...	3.09
Wind / Direction ...	38	NW	SW NE	SW	SW SE	SW SE	NW	SW	NW SW	SW	SW W	SW	NW NE	W SE	...
Force 0-6 ...	39	1	1	2	1	1	1	2	2	1	1	1	1	1	1
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birth-rate (Leeds) ...	41	28.9	25.7	26.5	28.5	27.8	21.2	27.2	26.8	28.5	27.1	28.1	29.3	24.1	26.9
Death-rate (Leeds)...	42	12.5	12.7	13.7	13.2	16.4	14.1	17.8	19.4	18.6	16.8	19.9	15.8	16.0	15.9
Death-rate (76 towns)	43	12.3	11.7	12.0	12.6	13.8	14.6	17.0	18.4	18.3	22.3	21.1	19.3	17.4	16.2
Birth-rate (76 towns)	44	28.7	27.5	28.8	27.5	29.6	24.3	29.3	29.0	28.6	27.5	27.5	27.6	27.7	28.0
D. R. lung dis. (Leeds)	45	1.9	1.2	2.3	1.4	1.4	2.1	1.1	1.2	0.8	0.9	1.6	1.0	1.1	1.4
D. R. Diarrhoea ..	46	0.2	0.6	0.7	1.9	3.0	4.2	5.7	4.7	5.9	4.8	6.0	3.3	2.3	3.3

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent us by Mr. Crowther. They are uncorrected readings, made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs. On January 17th, 1906, the barometer was removed into an inner room in which there was a fire.

* Includes membranous croup. Line 19 includes non-spasmodic croup not returned as membranous † Line 20 includes line 21.

For total of line 23 read 139.

TABLE F (5).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds: with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 29th December, 1906.

1906.	OCTOBER.					NOVEMBER.				DECEMBER.				TOTALS OR AVERAGES.	YEAR.	
	6th. Oct.	13th. Oct.	20th. Oct.	27th. Oct.	3rd. Nov.	10th. Nov.	17th. Nov.	24th. Nov.	1st. Dec.	8th. Dec.	15th. Dec.	22nd. Dec.	29th. Dec.			
Total Births	1	246	237	206	247	210	243	231	229	226	195	204	236	173	2,883	12,093
Total Deaths	2	168	135	115	107	118	122	105	135	133	112	148	150	163	1,711	7,405
Under 1 year	3	42	31	33	22	24	23	25	34	26	21	35	25	31	372	1,837
1 to 2 years.....	4	13	10	9	7	3	3	4	5	4	10	12	5	10	95	594
2 to 5 years.....	5	7	1	7	2	5	7	...	4	8	4	8	9	8	70	403
5 to 60 years	6	65	52	42	40	55	47	48	55	51	45	54	56	50	660	2,637
60 yrs. and upwards	7	41	41	24	36	31	42	28	37	44	32	39	55	64	514	1,934
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	9	...	...	...	...	...	1	...	...	...	1	...	...	...	2	275
Scarlet Fever	10	...	...	...	2	2	1	...	1	1	...	2	...	...	11	33
*Diphtheria	11	3	1	1	2	1	...	3	2	8	3	1	1	...	26	84
Whooping-cough..	12	4	...	1	1	...	...	2	3	1	4	2	3	...	21	146
Typhus Fever	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	14	3	2	...	1	4	1	2	3	1	1	...	2	...	20	49
Other or doubtful	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea or Dysent.	16	10	8	7	6	4	1	...	1	1	2	1	...	...	41	450
All seven.....	17	20	11	9	12	11	4	5	9	14	8	8	5	5	121	1,037
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	19	...	...	...	...	...	1	...	...	...	...	...	...	1	2	5
Dis. of Resp. System	20	26	27	19	16	17	14	15	29	23	21	32	33	39	311	1,246
Influenza†	21	...	...	...	...	...	1	2	1	1	4	...	2	...	11	37
Phthisis	22	10	15	11	7	10	7	12	7	9	7	12	12	7	126	570
Dis. of Circul. System	23	12	10	13	14	14	14	6	13	12	13	7	15	20	163	667
Violent Deaths	24	9	8	2	3	5	7	3	6	12	4	4	9	8	80	281
Inquest cases	25	25	16	12	8	10	12	5	13	22	12	12	19	21	187	645
Deaths in Pub. Inst.	26	32	18	15	21	21	32	19	26	31	29	27	33	20	324	1,271
Dispensary: visits pd.	27	143	182	253	249	224	260	243	279	247	234	245	268	174	3,001	12,152
Cases admitted to our own hospitals	28	28	39	48	39	40	45	44	38	39	35	32	23	21	471	1,633
Barom. (inches)	29	29.80	29.70	29.65	29.97	29.36	29.67	29.92	29.75	29.99	29.82	29.56	30.39	29.54	29.78	29.88
Attached Ther. *F ...	30	60.92	62.77	56.92	59.77	56.38	58.62	56.00	57.54	59.23	55.92	49.46	54.38	46.00	56.52	59.13
Dry bulb	31	58.38	56.77	49.38	52.85	46.08	46.38	45.38	47.92	49.31	45.38	36.38	42.54	33.58	47.03	52.07
Wet bulb.....	32	55.23	53.62	46.23	50.38	44.69	45.00	42.38	45.46	45.92	43.15	34.54	41.23	32.17	44.69	47.97
Humidity	33	81.46	80.77	78.62	83.75	89.77	89.85	78.54	83.08	77.31	83.77	83.23	89.69	83.00	83.29	75.54
Mn. of highest reading	34	63.00	61.00	53.43	57.86	49.00	49.57	48.14	51.86	51.71	48.86	41.14	43.71	37.29	50.51	56.86
" lowest "	35	50.43	51.86	40.86	45.86	41.86	41.71	40.57	41.71	43.71	39.86	32.43	38.86	28.00	41.36	43.73
" daily range ...	36	12.57	9.14	12.57	12.00	7.14	7.86	7.57	10.14	8.00	9.00	8.71	4.85	9.29	9.15	13.13
Total rainfall (inches)	37	0.78	0.87	1.10	0.66	1.64	0.66	0.75	0.39	0.38	0.72	0.65	0.20	0.63	9.43	22.47
Wind (Direction ...	38	SE SW	SW SE	SW	SW	NE NW	NK	NW SW	SW	SW NW	W NW	NW	SE NE	NW W	...	...
Force 0-6 ...	39	1	1	2	1	1	1	1	2	2	2	1	1	1	1	1
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birth-rate (Leeds) ...	41	27.7	26.7	23.2	27.8	23.6	27.4	26.0	25.8	25.4	22.0	23.0	26.6	19.5	25.0	26.2
Death-rate (Leeds)...	42	18.9	15.2	12.9	12.0	13.3	13.7	11.8	15.2	15.0	12.6	16.7	16.9	18.3	14.8	16.0
Death-rate (76 towns)	43	17.1	15.5	14.6	14.6	14.6	14.9	15.4	16.3	15.8	15.8	17.4	19.1	19.7	16.2	16.0
Birth-rate (76 towns)	44	25.8	27.1	27.9	28.6	27.4	27.4	27.4	27.9	26.7	26.6	25.1	28.7	18.9	26.6	27.9
D.R. lung dis. (Leeds)	45	2.9	3.0	2.1	1.8	1.9	1.6	1.7	3.3	2.6	2.4	3.6	3.7	4.4	2.7	2.7
D.R. 7 Zymotics ..	46	2.3	1.2	1.0	1.4	1.2	0.5	0.6	1.0	1.6	0.9	0.9	0.6	0.6	1.0	2.2

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* Includes membranous croup. Line 19 includes non-spasmodic croup not returned as membranous † Line 20 includes line 21.

For total of line 23, read 677.

TABLE F (6).

Shewing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death-rates from certain causes in Leeds: with the Birth and Death-rates from all causes in the 76 large English towns for each of the thirteen weeks ended 30th March, 1907.

1907.		JANUARY.					FEBRUARY.				MARCH.				TOTALS OR AVERAGES.
		5th. Jan.	12th. Jan.	19th. Jan.	26th. Jan.	2nd. Feb.	9th. Feb.	16th. Feb.	23rd. Feb.	2nd. Mar.	9th. Mar.	16th. Mar.	23rd. Mar.	30th. Mar.	
Total Births	1	243	259	243	234	261	237	221	226	231	243	248	212	234	3,092
Total Deaths	2	171	182	146	169	170	222	159	137	163	147	172	150	153	2,141
Under 1 year	3	21	27	26	18	33	28	25	16	23	34	38	34	30	353
1 to 2 years.....	4	7	5	8	7	5	10	6	8	10	8	8	16	7	105
2 to 5 years.....	5	4	4	8	10	10	12	7	9	6	6	11	4	10	101
5 to 60 years	6	54	76	48	76	57	89	57	51	59	49	61	52	59	788
60 yrs. and upwards	7	85	70	56	58	65	83	64	53	65	50	54	44	47	794
Deaths: Small-pox..	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	9	...	...	1	2	1	1	...	...	...	2	...	1	...	8
Scarlet Fever	10	...	2	...	3	1	...	3	1	...	2	1	...	2	15
*Diphtheria	11	...	1	...	2	5	2	1	2	1	4	3	1	3	25
Whooping-cough..	12	1	1	...	...	1	8	3	3	1	...	4	2	2	26
{ Typhus Fever.....	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...
{ Typhoid Fever ...	14	...	1	...	...	...	...	2	1	1	...	...	1	2	8
{ Other or doubtful	15	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea or Dysent.	16	...	1	...	...	1	1	...	...	1	2	1	1	...	8
All seven.....	17	1	6	1	7	9	12	9	7	4	10	9	6	9	90
Cholera (English) ...	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Croup	19	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Dis. of Resp. System	20	52	50	41	48	41	63	41	30	45	50	44	28	36	569
Influenza†	21	2	4	5	7	6	6	4	2	7	2	4	1	1	51
Phthisis	22	13	11	14	20	15	20	8	9	14	8	15	10	14	171
Dis. of Circul. System	23	25	24	17	17	27	18	18	20	18	15	12	10	19	240
Violent Deaths	24	...	5	4	6	8	12	7	6	6	3	8	7	7	79
Inquest cases	25	8	15	17	20	16	31	12	13	16	13	15	19	10	205
Deaths in Pub. Inst.	26	40	38	18	35	27	45	28	20	27	22	30	21	25	376
Dispensary: visits pd.	27	282	287	296	221	284	209	332	285	252	198	223	254	208	3,421
Cases admitted to our own hospitals	28	30	39	41	24	32	18	23	30	28	39	27	36	39	406
Barom. (inches)	29	29.53	30.30	30.43	30.52	29.93	30.00	29.71	29.54	30.28	30.04	29.87	29.95	30.22	30.02
Attached Ther. °F...	30	51.69	56.31	56.23	50.77	48.62	49.69	52.54	54.00	54.62	54.46	56.00	59.23	60.50	54.16
Dry bulb	31	38.69	46.08	42.62	33.92	35.69	35.08	40.46	40.15	45.00	41.85	44.85	47.23	52.17	41.76
Wet bulb	32	36.77	43.77	40.38	32.62	33.77	33.31	38.23	38.00	42.15	39.08	41.38	43.15	48.25	39.24
Humidity	33	83.31	83.54	82.77	84.23	81.31	81.85	82.46	81.77	79.92	78.85	75.00	73.85	77.17	80.48
Mn. of highest reading	34	40.43	48.43	45.57	37.00	41.14	39.43	45.71	44.57	49.29	45.86	49.29	52.14	62.14	46.23
„ lowest	35	32.43	41.57	38.57	29.29	29.57	29.29	34.43	34.29	36.86	34.43	37.14	39.14	36.29	34.87
„ daily range ...	36	8.00	6.86	7.00	7.71	11.57	10.14	11.28	10.28	12.43	11.43	12.15	13.00	25.85	11.36
Total rainfall (inches)	37	0.53	...	...	0.10	0.21	0.12	0.59	0.56	0.07	0.50	0.43	0.64	...	3.75
Wind (Direction) ...	38	SW	SW W	W	NE SE	NW W	SW	NW W	W	W	W	W	NW	SW	...
{ Force 0-6 ...	39	1	2	1	2	2	1	2	2	1	1	2	2	1	2
Amount of Cloud	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Birth-rate (Leeds) ...	41	27.0	28.7	27.0	26.0	29.0	26.3	24.5	25.1	25.6	27.0	27.5	23.5	26.0	26.4
Death-rate (Leeds)...	42	19.0	20.2	16.2	18.8	18.9	24.6	17.6	15.2	18.1	16.3	19.1	16.6	17.0	18.3
Death-rate (76 towns)	43	22.4	20.7	18.1	18.2	19.8	20.9	20.4	17.8	18.4	18.2	17.8	16.8	17.7	19.0
Birth-rate (76 towns)	44	31.6	30.6	28.5	25.6	27.8	28.0	27.6	26.9	28.4	26.8	27.7	27.8	26.4	28.0
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D. R. 7 Zymotics ..	46	0.1	0.7	0.1	0.8	1.0	1.3	1.0	0.8	0.4	1.1	1.0	0.7	1.0	0.8

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