[Report 1904] / Medical Officer of Health, Oldham County Borough.

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

COUNTY BOROUGH OF OLDHAM.

REPORT

ON THE

HEALTH OF OLDHAM

FOR THE YEAR 1904,

BY

JAMES B. WILKINSON,

M.D., C.M., D.P.H., F.C.S.;

Medical Officer of Health;
Medical Superintendent of Westhulme and Strinesdale Hospitals;
Ex-President and Examiner to the Institute of Sanitary Engineers;
President N.W. Branch Society Medical Officers of Health.

OLDHAM:

W. E. CLEGG, PRINTER, STATIONER, ETC., 30, MARKET PLACE, AND PETER STREET.

MEMBERS of the HEALTH COMMITTEE, 1904:

Mr. Alderman Simister, Chairman.

,, Councillor Grime, Vice-Chairman.

The Mayor.	Mr. Councillor Clough.
Mr. Alderman Hanson.	,, ,, Cheetham.
,, Councillor Carson.	,, ,, Gartside.

Mr. Councillor Schofield.

HOSPITALS SUB-COMMITTEE
AND
INSANITARY DWELLINGS SUB-COMMITTEE:

All the Members of the Committee.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I have the honour of submitting for your consideration my Annual Report on the Health of the Borough of Oldham.

In order to facilitate comparison with the reports of previous years, the same arrangement has been adopted; thus Part I. deals with the Vital Statistics and Meteorological conditions of the town; Part II. with Infectious Diseases, and Part III. with the Departmental work which has been carried out to improve and maintain the sanitary condition of the Borough.

The Appendix contains a report of the treatment of the Sewage and a list of Midwives registered in the Borough.

It gives me great pleasure to again record, for the fourth time during my tenure of office, the lowest Death-rate which has ever been recorded in the Borough, and to a reduction in the Infantile Death-rate this lower figure is largely due.

The Death-rate from Phthisis is also the lowest which has been recorded in the Borough, and though improved sanitary conditions in the town are having an effect on this

disease, I believe much more could be done, if the disease were made voluntarily notifiable.

There is little doubt that school life, especially among the infants, is greatly responsible for the prevalence of certain infectious diseases, and the exclusion of children under the age of five years is being recommended by very high authorities, as well as a systematic inspection of the scholars.

The Departmental work has been considerably hindered by the prevalence of Smallpox in the town during most of the year, and as I, to a great extent, attended the patients in both the hospitals, besides visiting the cases of the disease before removal, and numerous cases of Chickenpox reported from the schools, the year has been personally a very busy one.

I must tender my sincere thanks to all the members of the staff for their hearty and willing co-operation, and to you, Gentlemen, for your continued support and confidence and also for providing me with medical assistance when necessary.

I have the honour to remain,

Your obedient Servant,

JAMES B. WILKINSON,

Medical Officer of Health.

Town Hall,
Oldham.

INDEX.

PART I.

VITAL STATISTICS.

In accordance with the instructions issued by the Local Government Board for the Medical Officer of Health's Annual Report a brief description of the town is required, though the following facts may seem superfluous locally.

The town is mainly situated on the south-western slopes of offshoots from the Yorkshire range of hills, the height of the surface varying from about 1,200 feet above the sea level at the highest point to 360 feet in the lower part of the town. The Old Market Place is 696 feet above the sea level.

The subsoil is chiefly rock or shale overlying the coal measures, and in the lower part of the town there are areas of clay with occasional sand pockets.

The country to the west and south west is open to the sea, which is about 50 or 60 miles distant. The situation of the town is thus naturally an exposed one, with a heavy rainfall.

The population of the town is chiefly industrial. The main industry of the town is cotton spinning, but there are also large engineering works, chiefly for cotton machinery, weaving mills, boiler works, gas meter works, and coal mines, &c.

The population at the 1901 census was 137,238.

POPULATION 1904.

The population of the town for the middle of the year is estimated to be 139,497. This is an increase of 711 over that of the previous year, and is based on the assumption that the population has increased during the past year at the same rate as it did during the ten years previous to the last census.

The natural increase or the excess of births over deaths in the town during the year is somewhat higher, giving an increase of 921.

The natural increase of males exceeds that of females by nearly 100, the figures being 508 males and 413 females.

In Westwood and Hollinwood Wards the natural rate of increase is the highest, while in Hartford there is a decrease, the deaths exceeding the births.

The number of new houses built during the past year is slightly fewer than in previous years.

BIRTHS.

The number of births registered during the year was 3,463, and of these 1,812 were males and 1,651 were females. This number is three fewer than in the previous year, and, as the population is estimated to have increased, the rate per 1,000 is only 24·9 instead of 25·6, and, with the exception of the year 1901, is the lowest rate ever recorded in the Borough.

With the exception of Blackburn, Oldham has a lower birth rate than the other large Lancashire towns, and Brighton, Huddersfield, Halifax, and Bradford are the other large towns in the country with lower rates.

In comparing the Wards of the town St. Mary's and Hollinwood, as usual, have both high rates, and tie with 31·6 per 1,000 of their population. St. Peter's and Hartford have very low rates, 18·6 and 19·3 respectively. In Hartford Ward the deaths again exceed the births; this year by 28. The birth rate for England and Wales during the year was 27·9, and in the 76 great towns 29·1.

The illegitimate births during the year numbered 162, or 4·6 per cent. of the whole. Westwood has an exceedingly high proportion of these births, which is most probably due to the Workhouse being situated in this ward, and the births occurring here not being relegated to their proper district.

DEATHS.

During the year 1904 there were 2,679 deaths registered in the Borough, but 137 of these were non-residents, giving a total of 2,542. The non-residents were chiefly persons belonging to Chadderton, Crompton, Royton, and Middleton who died in the Workhouse.

The above number of deaths of residents is 32 fewer than in the previous year, and is equal to a death rate of 18·3 per 1,000 of the population. This rate is once again the lowest death rate ever recorded in the Borough, being 0·3 per 1,000 lower than the previous record in 1903. The rate for England and Wales was 16·2, and for the 76 large towns 17·2 per 1,000. In comparing the death rates of the various parts of the town, St. James's, Werneth, and St. Peter's have the lowest rates with 15·8 and 15·9 per 1,000. The latter two Wards had the lowest rates in the previous year. St. Mary's and Hartford Wards have the highest rates.

Compared with other large Lancashire towns. Oldham has the same position as last year, viz., third ; the rates for the others being as follows :—Blackburn 16·9, Bolton 16·9, Preston 19·2, Burnley 19·5, Salford 21·2, Manchester 21·3, and Liverpool 22·6.

The principal causes of death are given in the summary on page 21, and a full list of the deaths from various causes in Table 15.

Out of the total number 328 are ascribed to the seven principal zymotic diseases, 278 to various forms of tuberculosis, and 70 to accidents.

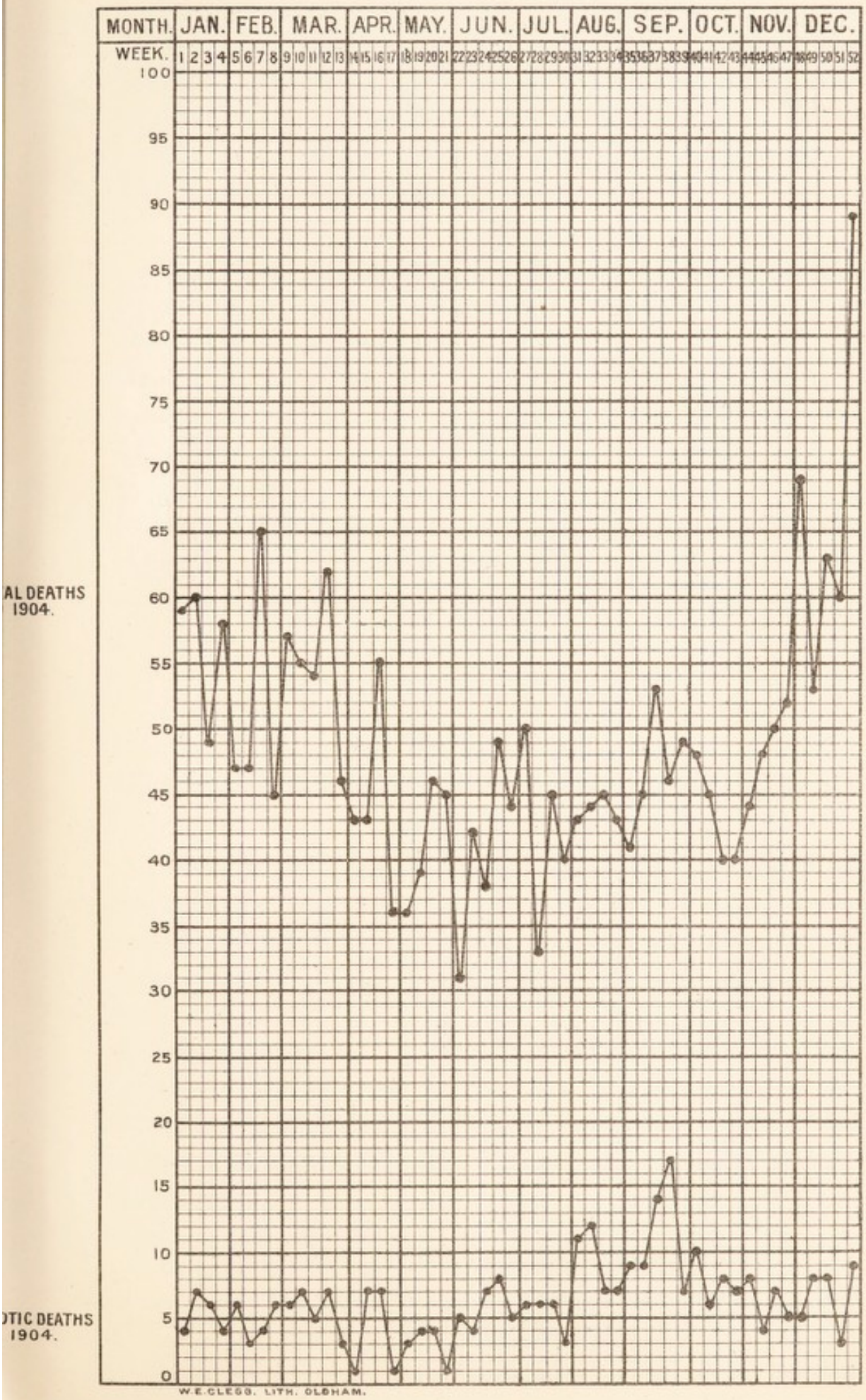
The average death rate for the last ten years is 20·6 per 1,000, and the death rate of 1904, compared with this, is equal to a saving of no less than 320 lives per annum ; surely a result which justifies the Health Department being placed in the best possible condition for carrying out its duties.

INFANTILE DEATHS.

The number of deaths under the age of one year is to some extent an indication of the sanitary condition of a district, but it is also influenced to a great extent by the manner in which the children are reared. It is the general custom to calculate these deaths to a ratio of 1,000 births.

During the past year there were 537 deaths of infants under the age of one year in the Borough. This is 31 fewer than in the previous year, and equal to a rate of 155 per 1,000 births. This rate, though still much higher than it ought to be, is considerably lower than the average

BOROUGH OF OLDHAM.



previous to the last three years, as will be seen by referring to Table No. 10. The last three years the rate has fallen something like 20 per 1,000, and this period is synchronous with the work of the Female Inspectors.

In looking through the principal causes of death it will at once be noticed that a very large proportion of them are due to diseases more or less of a preventible nature. The three diseases which are popularly looked upon as of a trivial nature, and hardly worth precautionary measures, are responsible as follows :—Measles 20, Whooping Cough 16, and Diarrhœa 78. Convulsions, Enteritis, and Wasting Diseases, probably in most instances due more or less to improper feeding, caused 134 deaths; while 107 were ascribed to Bronchitis and Pneumonia, and 70 to Premature Birth.

There has been a much larger number of deaths from Diarrhœa than in the previous year, and also more from Measles, but considerably fewer from Whooping Cough.

The consideration of the causes of these deaths only emphasizes what has so frequently been previously indicated, viz., the necessity for a system of domestic education for the older scholars in our schools. The work of the Female Inspectors is having a good effect, but too often the mischief is done before an intimation of the birth has been received by them. In referring to Table 3 it will be seen that the deaths, from causes more or less connected with the digestive system, greatly preponderate among those children artificially fed.

In comparison with the Infantile Death Rates of the other large Lancashire towns, Oldham holds the premier

position, the others being :—Bolton 167, Preston 183, Manchester 187, Blackburn 192, Salford 193, Liverpool 196, and Burnley 233.

The average rate for the 33 large towns was 166, and for the 76 large towns 160 per 1,000 births.

In comparing the various Wards in the town both Hartford and St. Paul's have a high rate, the former 204 and the latter 196, while the remainder do not vary greatly from the general average.

PHTHISIS.

During the year there were 193 deaths from Phthisis, and 85 from other forms of Tubercular Diseases, compared with 218 and 98 in the previous year, and it is most satisfactory to record once again the lowest death rate which has ever been recorded in the Borough from this disease.

Mumps Ward has by far the highest death rate in the town from Phthisis, viz., 2·4, while Westwood has only a rate of 0·5, the rate for the whole Borough being 1·4 per 1,000.

Beyond the endeavours made to improve the housing conditions of the Borough as regards sanitation and ventilation, and the careful control of the milk and meat supply of the town, it has been possible to carry out very little direct work in limiting the spread of this disease. Disinfection of rooms or houses in certain cases after removal or death, and occasional visitation of the few cases reported to me, has been about the limit of the work in this respect.

The evidence from those towns, where Phthisis is reported, is sufficient to show that in these towns the warfare which is being carried out against the disease is having a considerable effect in its reduction. I strongly again recommend that the disease should be made voluntarily reportable in this town, as even though only a small proportion of the cases are reported, those reported are usually the ones where some intervention is required. There is a popular idea that a person who suffers from consumption cannot recover, and until it is more generally known that a large proportion of persons do recover from this disease, and that if proper precautions are taken there is no necessity to spread it to others, the tendency to conceal its existence will continue.

DIARRHŒA.

Though properly coming under the head of Zymotic Diseases, my remarks are included in Part I.

For the Borough of Oldham there have been rather a large number of deaths from this disease, viz., 117, and the greater proportion of these were in young children, 78 under the age of one year, and 24 above one and under the age of five years.

The death rate from this disease was 0·91 per 1,000, and Oldham has a lower rate than any of the large Lancashire towns except Blackburn, and a lower rate than the average of the 76 large towns of England, which was 1·2 per 1,000.

None of the Wards are entirely free from deaths due to this disease, while St. Mary's Ward has a rather high death

rate from this cause. Mention has already been made of the large proportion of bottle-fed children who succumb to this disease compared with those who are breast fed.

INQUESTS.

The Coroner (Dr. G. Thomson) has again been kind enough to fill up Table 14, which relates to the inquests held in the town. It has been necessary to hold 16 fewer inquests than in the previous year, and no deaths have been ascribed to either murder or manslaughter. Fourteen have been returned as due to Suicide, 64 to Accidents, and 67 to Natural Causes.

METEOROLOGICAL REPORT.

JANUARY.—The mean barometric pressure was 29 90 and the mean temperature 39. The minimum temperature recorded on the grass was 27 degrees, and the maximum in the sun was 46 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 41 to 41 degrees. Rain fell on 17 days out of 28, the total rainfall amounting to 4·17 inches.

FEBRUARY.—The mean barometric pressure was 29·51 and the mean temperature 37. The minimum temperature recorded on the grass was 27 degrees, and the maximum in the sun 46 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 41 to 39 degrees. Rain fell on 18 days, the total rainfall for the month amounting to 5·58 inches.

MARCH.—The mean barometric pressure was 30·08 inches, and the mean temperature 37 degrees. The minimum temperature on the grass was 25 degrees, and the maximum temperature in the sun was 53 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 40 to 39 degrees. Rain fell on 12 days, the total rainfall being 2·43 inches.

APRIL.—The mean barometric pressure was 29·89 inches, and the mean temperature 57 degrees. The minimum temperature on the grass was 31 degrees, and the maximum temperature in the sun was 61 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 40 to 43 degrees. Rain fell on 25 days, the total rainfall amounting to 3·99 inches.

MAY.—The mean barometric pressure was 29·90 inches, and the mean temperature 50 degrees. The minimum temperature recorded on the grass was 36 degrees, and the maximum in the sun 66 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 45 to 46 degrees. Rain fell on 18 days, the total rainfall amounting to 3·00 inches.

JUNE.—The mean barometric pressure was 30·07 inches, and the mean temperature 55 degrees. The minimum temperature recorded on the grass was 40 degrees, and the maximum in the sun 72 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 48 to 51 degrees. Rain fell on 11 days, the total rainfall amounting to 1·84 inches.

JULY.—The mean barometric pressure was 30·05 inches and the mean temperature 76 degrees. The minimum temperature recorded on the grass was 46 degrees, and the maximum in the sun 83 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 51 to 55 degrees. Rain fell on 17 days, the total rainfall amounting to 1·64 inches.

AUGUST.—The mean barometric pressure was 30·03 inches, and the mean temperature 58 degrees. The minimum temperature recorded on the grass was 43 degrees, and the maximum in the sun 78 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 57 to 54 degrees. Rain fell on 20 days, the total rainfall amounting to 6·02 inches.

SEPTEMBER.—The mean barometric pressure was 30·06 inches and the mean temperature 56 degrees. The minimum temperature recorded on the grass was 42 degrees,

and the maximum in the sun 75 degrees The temperature recorded by the thermometer 4 feet below the surface ranged from 55 to 54 degrees. Rain fell on 12 days, and the total rainfall amounted to 1·99 inches.

October.—The mean barometric pressure was 30·07 inches, and the mean temperature 63 degrees. The minimum temperature recorded on the grass was 36 degrees, and the maximum in the sun 65 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 54 to 50 degrees. Rain fell on 12 days, and the total rainfall amounted to 3·92 inches.

November.—The mean barometric pressure was 30·06 inches, and the mean temperature 43 degrees. The minimum temperature recorded on the grass was 27 degrees, and the maximum in the sun 53 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 50 to 46 degrees. Rain fell on 13 days, and the total rainfall amounted to 4·54 inches.

December.—The mean barometric pressure was 29·87 inches, and the mean temperature was 47 degrees. The minimum temperature on the grass was 24 degrees, and the maximum in the sun 47 degrees. The temperature recorded by the thermometer 4 feet below the surface ranged from 45 to 41 degrees. Rain fell on 17 days out of 35, and the total rainfall amounted to 5·92 inches.

VITAL STATISTICS, 1904.

SUMMARY.

Population estimated by the Registrar General to the middle of the year			139,497
Births registered in the 52 weeks ending December 31st, 1904	Males ...	1,812	3,463
	Females ...	1,651	
Deaths registered in the 52 weeks ending December 31st, 1904... ...	Males ...	1,304	2,542
	Females ...	1,238	
Deaths from the seven principal Zymotic diseases...			316
Deaths under 1 per 1,000 Births			155
Annual Rate of Births per 1,000 living population.			24·9
Annual Rate of Mortality from all causes per 1,000 living population			18·3
Annual Rate of Mortality per 1,000 living population from the seven principal Zymotic diseases.			2·3

Of the 2,542 deaths registered during the year 1904, 871, or 34·2 per cent., were those of children under 5 years of age.

Principal Causes of Deaths.

Bronchitis	311	Debility, &c.	75
Pneumonia	207	Cancer	112
Phthisis	193	Convulsions	55
Heart Disease... ...	237	Diarrhœa...	117
Measles	70	Premature Birth ...	70
Apoplexy, &c.... ...	140	Whooping Cough ...	37
Diphtheria	34	Accidents...	59

TABLE No. 1.

HOUSES BUILT IN THE BOROUGH.

Year.	No. of Houses Built.
March, 1871, to March, 1872	277
,, 1872 ,, 1873	197
,, 1873 ,, 1874	588
,, 1874 ,, 1875	649
,, 1875 ,, 1876	867
,, 1876 ,, 1877	1181
,, 1877 ,, 1878	1010
,, 1878 ,, 1880	989
,, 1880 ,, 1881	746
,, 1881 ,, 1882	738
,, 1882 ,, 1883	644
,, 1883 ,, 1884	631
,, 1884 ,, 1885	737
,, 1885 ,, 1886	780
,, 1886 ,, 1887	657
,, 1887 ,, 1888	711
,, 1888 ,, 1889	371
,, 1889 ,, 1890	218
,, 1890 ,, 1891	214
,, 1891 ,, 1892	190
,, 1892 ,, 1893	227
,, 1893 ,, 1894	362
,, 1894 ,, 1895	284
,, 1895 ,, 1896	294
,, 1896 ,, 1897	360
,, 1897 ,, 1898	505
,, 1898 ,, 1899	455
,, 1899 ,, 1900	608
,, 1900 ,, 1901	543
,, 1901 ,, 1902	439
,, 1902 ,, 1903	375
,, 1903 ,, 1904	357

TABLE No. 2.

Deaths under 1 Year from Various Causes.

Ages	Premature Births	Congenital Malformation	Atrophy, Inanition, and Debility	Diarrhœa	Other Zymotics	Convulsions	Dentition	Tubercular Diseases	Pneumonia and Bronchitis	Other Causes	Totals
Under 1 mon.	63	3	22	4	3	18	...	1	5	31	150
1-2 months	3	1	11	7	4	5	...	1	11	16	59
2-3 ,,	1	1	11	9	2	5	1	1	10	12	53
3-4 ,,	...	...	9	11	2	...	...	3	12	9	46
4-5 ,,	...	...	6	13	1	1	...	1	5	17	44
5-6 ,,	...	...	4	5	1	1	...	1	7	7	26
6-7 ,,	...		1	6	1	1	..	2	5	...	16
7-8 ,,	...	...	1	3	4	1	...	...	13	3	25
8-9 ,,	...		2	4	4	2	3	2	9	8	34
9-10 ,,	...	...	1	5	4	4	2	2	10	3	31
10-11 ,,	...	...	1	2	6	2	2	1	7	5	26
11-12 ,,	...	...	...	2	8	3	...	...	10	4	27
Totals ...	67	5	69	71	40	43	8	15	104	115	537

TABLE No. 3.

Deaths under One Year of Age.

Nature of Diseases.	How Fed.					Occupation of Mother.			
	Breast.	Bottle.	Artificial food.	Both Breast and Bottle.	No Food.	Cotton Workers.	Charwoman or D'm'stic Servant	Other Occupation.	Housework.
Zymotic Diseases ..	23	16	16	1	...	1	1	...	38
Diarrhœa	11	50	50	10	...	14	2	5	150
Convulsions and Dentition	15	27	27	3	6	7	1	4	139
Congenital Malformation	...	4	4	...	1	1	1	...	3
Inanition, Debility, or Atrophy ..	13	40	40	8	8	10	2	1	56
Premature Birth	11	20	20	3	33	15	3	3	46
Tubercular Diseases	3	12	12	...	...	3	...	1	11
Bronchitis and Pneumonia	43	45	45	16	...	13	2	1	88
All other Diseases ...	38	50	50	15	12	23	8	1	83
Totals	157	264	264	56	60	87	20	16	414

TABLE No. 4.

INFANTILE MORTALITY IN THE 33 LARGE TOWNS PER 1000 BIRTHS.

	1904.	Ten Years, 1894-1903.
33 Towns	166	172
London	144	155
West Ham	165	167
Croydon	129	136
Brighton	133	151
Portsmouth	142	157
Plymouth	173	170
Bristol	134	142
Cardiff	144	153
Swansea	172	165
Wolverhampton	152	182
Birmingham	195	184
Norwich	180	177
Leicester	163	181
Nottingham	175	185
Derby	143	151
Birkenhead	181	168
Liverpool	196	184
Bolton	167	170
Manchester	187	185
Salford	193	198
OLDHAM	**155**	**174**
Burnley	233	209
Blackburn	192	191
Preston	183	221
Huddersfield	136	144
Halifax	130	143
Bradford	167	143
Leeds	176	174
Sheffield	159	185
Hull	181	172
Sunderland	165	172
Gateshead	174	173
Newcastle	156	172

TABLE No. 5.

SHOWING BIRTH, DEATH, AND ZYMOTIC DEATH RATES in 33 Large Towns during the year 1904.

CITIES AND BOROUGHS.	Estimated Population.	Birth Rates.	Death Rates.	Zymotic Death Rates.
33 Towns	11,888,002	28·4	17·7	2·57
London	4,648,950	27·9	16·6	2·18
West Ham	288,424	32·3	16·5	3·43
Croydon	144,419	26·0	13·8	1·42
Brighton	126,286	23·5	16·6	1·64
Portsmouth	198,038	28·3	16·9	2·13
Plymouth	114,003	25·4	18·5	2·53
Bristol	343,204	26·7	15·6	1·64
Cardiff	176,313	29·6	14·8	1·80
Swansea	95,931	31·3	18·0	2·23
Wolverhampton	98,194	29·9	15·5	2·71
Birmingham...	537,965	31·6	19·9	3·42
Norwich	115,538	27·6	18·2	2·91
Leicester	224,186	26·6	14·5	1·97
Nottingham...	248,811	27·7	17·7	2·58
Derby	120,449	27·4	15·3	1·40
Birkenhead	114,814	33·2	19·6	3·71
Liverpool	723,430	33·7	22·6	4·66
Bolton	175,744	26·8	16·9	2·28
Manchester	557,938	31·3	21·3	3.09
Salford	228,983	31·8	21·2	4·37
OLDHAM	**139,497**	**24·9**	**18·2**	**2·31**
Burnley...	100,569	26·6	19·5	3·93
Blackburn	132,134	23·4	16·9	2·36
Preston...	115,055	28·1	19·2	2·93
Huddersfield	94,925	23·7	17·5	1·91
Halifax	107,580	20·0	15·5	1·50
Bradford	285,089	22·1	17·6	2·42
Leeds	450,142	28·0	18·0	2·56
Sheffield	432,940	32·0	16·8	2·20
Hull	253,865	31·0	18·6	3·52
Sunderland	151,157	34·5	19·5	2·33
Gateshead	118,067	34·4	18·5	2·88
Newcastle	225,362	30·5	19·4	1·79

TABLE No. 6.—Showing Population, Births and Birth Rates, Deaths and Death Rates.—1904.

WARD.	Population.	Area in Acres.	Density (Persons to an Acre).	BIRTHS.			Birth Rate per 1,000 Population.	DEATHS.			Death Rate per 1,000 Population.
				Males.	Females.	Total.		Males.	Females.	Total.	
St. Mary's	10,737	113	95·0	181	157	338	31·6	112	120	232	21·7
St. Peter's	11,721	271	43·2	126	92	218	18·6	100	86	186	15·9
Werneth	12,245	262	46·7	172	140	312	25·5	96	97	193	15·8
Westwood	13,432	280	48·0	218	187	405	30·2	117	117	234	17·5
St. Paul's	12,335	457	27·0	151	155	306	24·9	112	117	229	18·6
Coldhurst	10,346	130	79·6	117	119	236	22·9	93	93	186	18·0
Hartford	12,473	207	60·2	126	114	240	19·3	141	127	268	21·5
Hollinwood.....	8,952	420	21·3	131	151	282	31·6	75	86	161	18·0
Clarksfield	15,300	623	24·5	195	178	373	24·4	136	134	270	17·7
Mumps	8,315	125	66·5	102	99	201	24·2	101	66	167	20·1
St. James'	10,660	1,015	10·5	123	120	243	22·9	90	78	168	15·8
Waterhead	12,981	826	15·7	170	139	309	23·9	130	118	248	19·2
Total.....	139,497	4,729	29·5	1,812	1,651	3,463	24·9	1,303	1,239	2,542	18·3

TABLE No. 7.

Death Rates per 1,000 population in the various Wards, from various Diseases.

1904.

Ward.	All causes	Seven Principal Zymotic Diseases	Phthisis	Bronchitis	Pneumonia	Deaths under 1 year to 1000 births
St. Mary's	21·7	3·5	1·2	2·9	1·6	148
St. Peter's	15·9	1·7	1·1	1·9	1·1	124
Werneth	15·8	1·6	1·4	2·4	1·3	122
Westwood	17·5	2·3	0·5	2·0	1·3	158
St. Paul's	18·6	2·8	1·0	2·1	1·6	196
Coldhurst	18·0	1·6	1·8	1·8	1·3	157
Hartford	21·5	2·6	1·6	2·5	1·9	204
Hollinwood	18·0	3·5	1·6	1·3	1·2	142
Clarksfield	17·7	2·3	1·3	2·4	0·6	161
Mumps	20·1	1·7	2·4	2·9	2·5	144
St. James'	15·8	1·7	1·8	2·0	1·2	148
Waterhead	19·2	1·9	1·4	2·3	2·3	152
Borough ...	18·3	2·3	1·4	2·2	1·5	155

Names of Localities.	Borough of Oldham.			
Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.
1895	133,888	3873	3092	737
1896	134,475	3969	2953	726
1897	135,045	3793	2786	696
1898	135,617	3749	2598	654
1899	136,210	3732	3078	739
1900	136,797	3691	3000	637
1901	137,382	3374	2696	584
1902	138,091	3659	2685	543
1903	138,786	3545	2576	568
Averages of Years 1895 to 1903	136,254	3709	2829	654
1904	139,497	3463	2542	537

Names of Localities.	St. Mary's.				St. Peter's.				Werneth.			
Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.
1895	10,520	335	297	85	11,770	287	269	59	11,903	298	215	41
1896	10,543	350	300	82	11,764	282	209	44	11,940	318	187	39
1897	10,567	347	238	48	11,758	290	209	57	11,978	321	205	48
1898	10,591	355	240	69	11,752	289	197	44	12,015	350	195	44
1899	10,614	373	249	68	11,746	297	228	43	12,053	342	220	50
1900	10,638	392	262	68	11,740	293	229	39	12,090	330	228	36
1901	10,662	369	252	51	11,730	275	201	44	12,128	358	203	40
1902	10,691	379	245	56	11,722	269	232	40	12,171	348	204	37
1903	10,717	370	227	52	11,759	240	178	23	12,231	384	191	38
Averages of Years 1895 to 1903	10,616	363	257	64	11,749	280	217	44	12,056	339	205	41
1904	10,737	338	232	50	11,721	218	186	27	12,245	312	193	38

	Westwood.				St. Paul's.				Coldhurst.			
1895	12,176	373	259	65	10,842	285	254	72	10,631	332	301	82
1896	12,306	371	268	68	11,000	325	238	83	10,592	328	276	61
1897	12,438	346	251	70	11,162	305	236	71	10,553	310	250	59
1898	12,571	324	238	77	11,326	317	208	53	10,514	298	249	63
1899	12,706	324	309	70	11,493	325	242	71	10,475	280	297	63
1900	12,842	334	266	66	11,661	345	243	66	10,437	289	314	62
1901	13,009	322	256	65	11,829	334	233	47	10,398	224	258	51
1902	13,166	401	232	41	12,017	294	202	52	10,358	224	233	44
1903	13,260	376	249	56	12,142	337	219	52	10,358	180	229	46
Averages of Years 1895 to 1903	12,719	352	259	64	11,497	316	231	63	10,480	276	268	59
1904	13,432	405	234	64	12,335	306	229	60	10,346	236	186	37

TABLE No 8—Continued.

Names of Localities.	Hartford.				Hollinwood.				Clarksfield.			
Year.	Population estimated to middle of each Year.	Births Registered	Deaths at all Ages.	Deaths under 1 Year	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.	Population estimated to middle of each Year.	Births Registered.	Deaths at all Ages.	Deaths under 1 Year.
1895	12,586	366	300	70	8,049	314	166	43	12,680	365	241	53
1896	12,572	349	274	61	8,145	297	149	42	12,952	409	264	65
1897	12,558	323	288	61	8,262	308	147	45	13,229	370	234	59
1898	12,544	283	254	51	8,342	280	145	26	13,513	397	231	69
1899	12,539	269	263	70	8,442	300	201	54	13,802	369	276	61
1900	12,516	230	286	49	8,543	286	191	40	14,098	357	291	64
1901	12,495	153	258	65	8,644	207	178	41	14,426	370	227	44
1902	12,477	214	252	56	8,760	298	173	45	14,752	400	275	45
1903	12,486	180	230	63	8,829	317	173	43	14,946	370	242	57
Averages of Years 1895 to 1903	12,530	263	267	61	8,446	296	169	42	13,821	379	254	57
1904	12,473	240	268	49	8,952	282	161	40	15,300	373	270	60
	Mumps.				St. James's.				Waterhead.			
1895	8,884	224	215	40	10,708	308	243	60	12,964	386	332	67
1896	8,805	240	227	53	10,702	308	232	54	12,966	392	329	74
1897	8,726	247	210	55	10 695	255	220	52	12,968	371	298	71
1898	8,648	220	211	51	10,688	281	193	40	12,970	355	237	67
1899	8 570	209	248	52	10,682	309	235	67	12,971	335	310	70
1900	8,494	222	210	38	10,676	272	209	41	12,973	341	271	68
1901	8,417	158	188	43	10,668	214	213	39	12,976	330	229	54
1902	8,337	207	185	37	10,661	283	192	28	12,979	342	260	62
1903	8,336	213	198	35	10,687	244	196	38	13,035	334	244	65
Averages of Years 1895 to 1903	8,580	216	210	45	10,685	275	215	47	12,978	354	279	67
1904	8,315	201	167	29	10,660	243	168	36	12,981	309	248	47

TABLE No. 9.—For Whole District.

Year.	Population estimated to middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents register'd in Public Institutions in the District.	Deaths of residents register'd in Public Institutions beyond the District.	Nett Deaths at all Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number	Rate.	Number	Rate per 1,000 Births register'd	Number	Rate.				Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1894	133,313	3768	28·4	610	162	2644	19·8	417	87	17	2574	19·4
1895	133,888	3873	29·0	737	190	3186	23·8	554	116	22	3092	23·1
1896	134,475	3969	29·1	726	183	3058	22·7	383	105	...	2953	21·6
1897	135,045	3793	28·2	696	183	2863	21·2	388	77	...	2786	20·7
1898	135,617	3749	27·7	654	174	2693	19·9	395	101	6	2598	19·2
1899	136,210	3732	27·5	739	198	3204	23·5	487	129	3	3078	22·7
1900	136,797	3691	27·1	637	173	3112	22·7	489	129	17	3000	22·0
1901	137,382	3374	24·6	584	173	2806	20·4	427	121	11	2696	19·7
1902	138,091	3659	26·1	543	148	2795	19·9	461	129	19	2685	19·1
1903	138,786	3545	25·6	568	160	2690	19·4	337	122	8	2576	18·6
Averages for years 1894-1903	135,960	3715	27·3	649	174	2905	21·3	434	111	10	2804	20·6
1904	139,497	3463	24·9	537	155	2666	19·2	516	137	13	2542	18·3

Area of District in Acres, 4,729.
At Census of 1901.—Total population at all ages, 137,246. Number of inhabited houses, 29,907.
Average number of persons per house, 4·588.

TABLE No. 10.

Showing the Birth-rates, also Rates of Mortality from all causes, from the seven principal Zymotic Diseases, and from Phthisis, Bronchitis, and Pneumonia, during the years 1877-1904.

Years	Population	RATES PER 1,000 POPULATION FROM						Deaths under 1 year to 1000 births
		Births	Deaths all causes	7 princip'l Zymotic Diseases	Phthisis	Bronchitis	Pneumonia	
1877	99,557	40·2	24·9	3·0	2·2	3·3	1·6	162
1878	102,573	39·8	26·9	5·7	2·3	3·5	1·5	175
1879	105,679	36·2	22·7	2·8	2·1	3·4	1·8	157
1880	108,880	35·4	24·6	4·3	2·3	3·3	1·7	181
1881	112,176	35·3	22·7	2·3	2·3	3·4	2·0	152
Average 5 y'rs		**37·4**	**24·3**	**3·6**	**2·2**	**3·4**	**1·7**	**165**
1882	114,017	35·3	24·9	2·8	2·3	3·4	2·1	182
1883	115,888	36·0	22·5	1·5	2·3	2·9	1·8	159
1884	117,791	37·4	25·9	3·7	2·6	2·8	2·3	182
1885	119,724	37·5	23·2	2·1	2·4	2·7	2·2	167
1886	121,690	34·7	24·2	3·0	2·3	3·1	1·9	175
Average 5 y'rs		**36·2**	**24·1**	**2·6**	**2·4**	**3·0**	**2·0**	**173**
1887	123,687	33·8	25·8	4·5	2·0	3·2	2·1	187
1888	125,717	33·3	22·3	2·2	1·9	2·6	2·6	151
1889	127,781	31·5	22·7	3·3	1·9	2·8	2·6	178
1890	129,878	31·0	24·4	2·5	2·0	3·4	3·1	180
1891	132,010	30·8	25·6	2·3	1·9	3·7	3·3	193
Average 5 y'rs		**32·1**	**24·2**	**2·9**	**1·9**	**3·1**	**2·7**	**178**
1892	132,171	29·5	22·3	2·7	2·1	2·8	2·3	177
1893	132,738	29·4	21·6	2·6	1·9	2·3	2·4	186
1894	133,313	28·4	19·4	1·9	2·0	2·1	1·9	162
1895	133,888	29·0	23·1	2·9	1·8	2·7	2·4	190
1896	134,475	29·1	21·6	2·9	1·7	2·5	2·3	183
Average 5 y'rs		**29·1**	**21·6**	**2·6**	**1·9**	**2·5**	**2·3**	**180**
1897	135,045	28·2	20·7	2·7	1·7	2·0	2·2	183
1898	135,617	27·7	19·2	2·4	1·7	2·1	2·2	174
1899	136,210	27·5	22·7	2·4	1·6	2·8	2·6	198
1900	136,797	27·1	22·0	2·7	1·9	2·8	2·3	173
1901	137,382	24·6	19·7	2·5	1·6	2·2	2·2	173
Average 5 y'rs		**27·0**	**20·9**	**2·5**	**1·7**	**2·4**	**2·3**	**180**
1902	138,091	26·1	19·1	2·0	1·5	2·1	2·0	148
1903	138,786	25·6	18·6	2·4	1·6	2·4	1·6	160
1904	139,497	24·9	18·3	2·3	1·4	2·2	1·5	155

TABLE No. 11.

Showing the number of deaths from the Seven Principal Zymotic Diseases in the Borough of Oldham, during the years 1877-1904.

Year	Population	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Fever Typhus and Typhoid	Diarrhœa	Total Deaths
1877	99,557	19	11	58	11	111	28	58	296
1878	102,573	1	114	240	26	77	36	93	587
1879	105,679	...	9	136	19	60	25	46	295
1880	108,880	..	96	131	9	70	28	142	476
1881	112,176	9	7	87	10	36	39	69	257
1882	114,017	4	69	58	10	77	26	74	318
1883	115,888	2	6	21	9	38	26	76	178
1884	117,791	..	193	33	7	36	22	149	440
1885	119,724	...	54	20	14	104	18	46	256
1886	121,690	.	89	32	29	57	30	134	371
1887	123,687	...	176	103	62	100	25	89	555
1888	125,717	13	53	66	36	40	24	43	275
1889	127,781	...	126	54	16	127	20	78	421
1890	129,878	...	95	25	6	82	15	96	319
1891	132,010	...	97	25	18	71	27	68	306
1892	132,171	15	139	42	18	68	16	56	354
1893	132,738	65	29	16	16	56	26	140	348
1894	133,313	22	56	21	39	58	15	46	257
1895	133,888	23	97	16	25	57	26	143	387
1896	134,475	...	165	56	34	53	23	72	403
1897	135,045	...	96	21	9	77	19	145	367
1898	135,617	.	87	24	10	65	23	114	323
1899	136,210	...	49	46	21	54	18	138	326
1900	136,797	3	108	54	20	89	17	76	367
1901	137,382	.	73	41	13	30	9	171	337
1902	138,091	7	103	39	49	29	13	42	282
1903	138,786	23	43	30	58	111	12	47	324
1904	139,497	14	70	22	34	37	22	117	316

TABLE No 12.

Weekly Means of Meteorological Observations for the year 1904.

Date 1904	Barometer reduced to Sea Level at 32·0	Thermometer	Hygrometer		% of Saturation	Temperatures.							Rainfall 12in. above ground.	Number of Days on which rain fell	Clouds covered = 10 clear = 0
			Dry	Wet		Maximum in Shade	Minimum in Shade.	Maximum in Sun Black Bulb	Maximum in Sun Black Bulb in Vacuo	Minimum on Grass.	Temperature 12in. below surface.	Temperature 4 ft below surface.			
January 9	29·85	39	39	37	86	42	33	43	47	27	33	41	1·44	4	7
16	29·35	41	41	39	85	44	35	46	49	32	36	41	2·14	6	9
23	30·51	38	38	37	94	42	34	42	46	31	35	41	·24	4	9
30	29·90	40	39	38	92	45	34	46	52	31	36	41	·35	3	8
February 6	29·40	36	36	35	91	40	34	43	51	29	35	41	2·24	6	9
13	29·07	38	38	36	83	40	36	45	46	28	34	41	·91	6	9
20	29·43	36	36	34	82	40	30	46	53	27	33	40	1·25	4	4
27	30·13	37	37	35	83	42	35	45	54	32	36	39	1·18	2	7
March 5	30 14	32	32	32	100	35	30	43	59	25	33	40	·49	1	7
12	30·05	38	39	37	86	43	32	49	62	28	33	40	·40	4	4
19	29·92	38	38	36	83	42	33	41	52	29	33	39	·83	3	7
26	30·20	40	40	38	85	47	36	53	73	29	38	39	·71	4	6
April 2	29·77	40	40	38	85	44	35	51	71	31	37	40	·63	6	5
9	29·86	44	43	40	78	49	40	54	76	35	40	40	1·31	7	6
16	29·73	47	47	44	79	52	41	55	75	36	41	42	·70	5	5
23	30·07	50	50	46	74	54	51	61	85	35	43	43	·58	1	7
30	30·04	48	48	47	93	51	42	57	74	39	45	43	·77	6	8
May 7	29·89	48	48	43	67	53	42	61	87	36	45	45	·70	5	3
14	29·84	50	50	45	68	51	42	55	71	37	44	45	·46	4	9
21	29·95	51	51	46	69	58	44	65	90	36	48	45	·16	3	5
28	29·93	53	53	51	86	58	49	66	83	42	49	46	1·68	6	9

June	4	30·12	57	57	52	70	61	48	68	89	40	52	48	.85	3	4
	11	30·14	55	55	51	75	61	46	72	101	43	53	49	...	..	3
	18	29·97	57	57	52	70	62	52	71	98	47	54	50	·75	5	6
	25	30·04	54	54	50	74	58	50	67	88	45	53	51	·24	3	8
July	2	30·01	59	59	52	61	65	49	72	98	46	55	51	·33	4	4
	9	30·11	58	57	54	77	62	51	71	97	47	54	53	·41	4	5
	16	30.09	65	65	60	73	73	57	83	110	51	60	53	·27	3	5
	23	30·15	65	65	57	62	70	55	79	106	48	44	45	·01	1	4
	30	29·90	61	61	58	82	68	57	73	93	54	60	55	·62	5	9
August	6	30·02	66	66	60	69	72	57	78	101	50	60	57	·81	5	5
	13	30·06	57	57	53	75	62	51	71	111	43	56	57	1·05	5	7
	20	29·95	55	55	52	79	65	49	68	91	45	56	55	2·93	6	7
	27	30·09	54	54	49	69	60	47	63	82	*	53	54	1·23	4	6
Septem.	3	29·99	63	63	57	69	70	53	75	96	48	56	55	1·08	4	3
	10	29·99	57	57	52	70	61	48	70	96	44	54	55	·60	5.	6
	17	30·01	58	58	53	69	61	49	69	79	43	53	55	·18	1	3
	24	30·26	59	59	50	49	62	49	70	95	42	52	54	·13	2	4
October	1	29·99	54	54	50	79	63	45	65	67	40	51	54	·95	1	5
	8	29·96	47	47	45	86	53	45	57	72	40	48	52	·87	4	8
	15	30·24	50	50	46	75	57	41	59	76	36	43	51	·44	2	4
	22	30·01	54	54	52	86	56	50	60	75	47	48	50	1·53	4	10
	29	30·15	50	50	47	79	55	42	59	74	36	46	50	·13	1	4
Novem.	5	30·25	48	48	46	86	51	45	52	60	43	45	49	·03	1	8
	12	29·84	46	46	44	83	51	38	52	58	35	45	50	3·88	7	6
	19	30·40	44	44	43	92	50	42	53	64	33	41	47	·55	4	5
	26	29·75	32	32	31	90	38	28	38	48	27	38	46	·08	1	5
Decem.	3	29·80	38	38	38	100	42	33	43	50	31	36	43	1·17	4	9
	10	29·48	40	40	38	88	43	35	44	50	32	38	45	1·58	6	7
	17	29·55	40	40	39	92	43	36	47	46	30	34	44	2·32	4	8
	24	30·38	31	31	31	100	39	28	37	41	24	36	43	·55	1	9
	31	30·13	38	38	37	91	41	33	41	45	29	32	41	·30	2	7
Means		29·12	50	50	48	86	54	41	59	64	36	44	47	Totals. 45·04	192	6

TABLE No. 13.

Prices of Coal, Bread, Flour, Butchers' Meat, and Potatoes, and the number of Paupers relieved in Oldham, 1885-1904.

	Coal per Ton.	Bread per dozen lbs.	Flour, per load of 280 lbs.	Meat per lb.	Potatoes, per load of 252 lbs.	Weekly No. of Indoor Poor.
	s. d.	d.	s. d.	d.	s. d.	
1885	7 9	11¼	. .	5	6 5	890
1886	8 0	11¼	...	5¼	7 4	931
1887	7 6	...	24 6	4½	8 10	910
1888	7 6	..	25 3	5	6 4	936
1889	8 4	..	26 10	5	7 6	946
1890	10 10	...	26 10	4⅞	6 11	921
1891	10 7	...	29 2	4⅞	10 2	901
1892	9 7	...	26 3	4⅝	7 4	937
1893	11 7	...	21 6	4½	6 6	1,011
1894	9 4	...	18 4	4¼	6 6	1,075
1895	7 8	...	17 0	4⅛	6 9	1,089
1896	7 4	...	20 0	3¾	5 11	1,037
1897	7 4	...	24 7	3½	6 5¾	1,061
1898	7 8	...	27 5	3½	9 5	1,131
1899	11 9	...	19 11	3¾	7 6	1,136
1900	13 7	...	21 4	4⅝	9 9	1,167
1901	12 7	...	21 4½	4⅜	9 0½	1,198
1902	10 9¼	...	21 9¾	4⅞	7 0½	1,175
1903	9 5	...	22 6	4¾	10 7½	1,213
1904	9 2	...	24 0	4¼	9 1½	1,361

TABLE No. 14.

Return of Inquests held in Oldham, touching the cause of death of any person, for the year ended 31st December, 1904.

INQUESTS.	Males	Females.
Infants (Legitimate), under 1 year	13	13
,, 1 year and under 7 years	7	4
Infants (Illegitimate or unknown) under 1 year	1	1
,, 1 year and under 7 years	...	...
Children, 7 years and under 16	2	1
Youths, 16 years and under 25	7	4
Adults, 25 years and under 60	45	23
Aged, 60 years and above	23	15
Total	98	61

VERDICTS.	Males.	Females.
Murder	...	...
Manslaughter	...	...
Suicide, while Insane	9	5
Accidental Death	44	20
Open Verdicts	6	4
Excessive Drinking	1	2
Natural Causes	38	29
Found Drowned	...	1
Stillborn	...	...
Disease aggravated by neglect	...	...
Total	98	61

Total Fees and Costs, £303 15s. 2d.

TABLE

COUNTY BOROUGH

Deaths Registered at Several Groups of Ages from Different Causes

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
Classes.														
I.—Specific Febrile, or Zymotic Diseases ...	149	163	312	63	52	70	57	43	14	21	17	6	...	655
II.—Parasitic Diseases ...	1	...	1	...	...	...	...	...	..	...	...	..	...	1
III.—Dietetic Diseases ...	...	...	...	...	...	...	...	3	..	...	2	...	...	5
IV.—Constitutional Diseases...	2	4	6	5	8	9	26	31	17	22	33	9	1	167
V.—Developmental Diseases...	80	...	80	...	...	...	...	...	...	...	18	38	7	143
VI.—Local Diseases	217	157	374	40	50	66	108	158	110	107	238	104	7	1362
VII.—Deaths from Violence	6	8	14	1	7	6	8	9	2	6	14	3	...	70
VIII.—Deaths from Ill-defined and Not Specified Causes ...	82	2	84	3	4	4	6	13	7	3	11	4	...	139
Totals	537	334	871	112	121	155	205	257	150	159	333	164	15	2542
I.—Specific Febrile, or Zymotic Diseases.														
1. *Miasmatic Diseases.*														
Smallpox	1	1	2	2	...	2	3	3	...	2	...	...	...	14
Measles	20	46	66	4	...	...	...	...	...	...	...	...	..	70
Scarlet Fever	...	17	17	5	...	...	...	...	...	...	...	...	...	22
Typhus	...	...	...	...		...	...	...	...	...	...	...	...	...
Whooping Cough	16	20	36	1	...	...	...	...	...	..	...	...	..	37
Diphtheria	3	18	21	13	...	...	...	...	...	..	...	...	...	34
Simple Continued and Ill-defined Fever	..	...	...	...	...	..	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever	...	...	...	3	5	7	5	2	...		...	...	...	22
Tabes Mesenterica	6	5	11	5	...	...	...	..	...	1	...	...	...	17
Tubercular Meningitis, Hydrocephalus	8	16	24	7	2	...	...	...	..	1	...	...	...	34
Phthisis	1	5	6	10	34	46	38	29	11	9	8	2	...	193
Other Forms of Tuberculosis, Scrofula	6	4	10	6	6	4	4	3	1	...	...	...	...	34
Other Miasmatic Diseases.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	1	3	4	5	1	3	1	3	1	3	5	1	...	27
2. *Diarrhœal Diseases.*														
Simple Cholera	..	...	...	...	...	..	...	...	...	...	...	..	...	...
Diarrhœa, Dysentery	78	24	102	2	...	1	2	2	...	2	4	2	...	117

No. 15.

OF OLDHAM.

during 53 Weeks ending December 31st, 1904.

WARDS.												
St. Mary's	St. Peter's	Werneth	Westwood	St. Paul's	Coldhurst	Hartford	Hollinwood	Clarksfield	Mumps	St. James'	Waterhead	Total Deaths in Public Institutions.
66	52	46	53	59	46	68	55	67	39	48	56	127
...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	...	1	...	...	1	...	...	...	...	3	2
14	15	13	15	15	11	14	7	23	12	10	18	31
16	2	11	15	18	6	16	5	22	6	9	17	7
114	106	109	133	118	106	149	73	128	101	89	136	282
5	5	6	3	4	7	6	6	7	3	9	9	45
17	6	8	14	15	10	13	15	23	6	3	9	22
232	186	193	234	229	186	268	161	270	167	168	248	516
...	2	1	1	...	1	3	...	...	2	2	2	12
9	3	6	3	8	2	10	17	4	1	1	6	...
4	1	...	4	5	1	...	1	1	2	...	3	13
...	...	...	...	...	...	...	...	...	...	...	...	...
1	3	8	2	7	2	3	1	5	1	3	1	1
1	1	2	11	1	...	3	2	7	1	2	3	...
...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	1	4	...	...	5	6	3	...	2	13
2	1	1	...	1	2	...	1	3	1	3	2	3
4	2	2	3	6	4	3	4	...	1	2	3	3
13	13	17	7	13	19	20	14	20	20	19	18	51
2	7	2	4	4	3	7	1	2	1	1	...	13
...	...	...	...	...	...	...	...	...	...	...		...
2	5	1	6	...	...	1	2	3	...	2	5	...
...	...	...	...	...	...	...	...	...	...	...	...	...
22	10	3	9	9	11	13	5	13	4	10	8	4

TABLE No. 15–

Cause of Death.	AGES.												
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards
3. *Malarial Diseases.*													
Remittent Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague	...	...	...	...	...	...	...	...	...	...	...	...	...
4. *Zoogenous Diseases.*													
Cowpox and Effects of Vaccination	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases, Hydrophobia, Glanders, Splenic Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
5. *Venereal Diseases.*													
Syphilis	6	3	9	...	...	...	1	1	1	1	...	...	...
Gonorrhœa, Stricture of Urethra	...	...	...	...	...	...	...	...	...	...	...	..	...
6. *Septic Diseases.*													
Erysipelas	2	..	2	...	...	1	1	...	...	1	...	...	...
Pyæmia, Septicæmia	1	1	2	...	...	...	...	...	...	1	...	1	...
Puerperal Fever	...	...	..	...	4	6	2	...	...	...	...	...	...
II.—Parasitic Diseases.													
Thrush, and other Vegetable Parasitic Diseases	1	...	1	..	...	...	...	...	...	...	...	...	...
Worms, Hydatids, and other Animal Parasitic Diseases.	...	...	...	...	...	...	...	...	...	...	...	...	...
III.—Dietetic Diseases.													
Want of Breast Milk, Starvation	...	...	...	...	...	...	...	.	...	...	...	...	...
Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...
Chronic Alcoholism	...	...	...	...	...	...	...	3	...	...	2	...	...
Delirium Tremens	...	...	...	...	...	...	...	...	...	...	...	..	...
IV.—Constitutional Diseases.													
Rheumatic Fever, Rheumatism of the Heart	...	...	...	2	2	2	...	3	1	...	...	...	...
Rheumatism	...	1	1	2	2	2	1	...	1	...	4	...	...
Gout	...	...	...	...	...	...	...	...	...	...	1	...	...
Rickets	2	2	4	...	...	...	...	...	...	...	..	...	...
Cancer, Malignant Disease	...	...	...	...	...	2	23	23	10	20	26	7	1
Purpura, Hæmorrhagic Diathesis	...	...	...	...	...	...	...	...	...	...	...	...	...
Anæmia, Chlorosis, Leucocythæmia	...	1	1	1	2	1	...	5	1	...	...	...	...
Glycosuria, Diabetes Mellitus	...	...	...	...	2	2	2	...	4	2	2	2	...
Other Constitutional Diseases	...	..	...	...	...	...	...	...	...	...	...	...	...

Continued.

WARDS.												
St. Mary's	St. Peter's	Werneth	Westwood	St. Paul's	Coldhurst	Hartford	Hollinwood	Clarksfield	Mumps	St. James'	Waterhead	Total Deaths in Public Institutions.
...	...	...	...	..	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	..	...	...	..	...
...	...	...	...	...	...	...	...	...	...	...	...	...
2	1	2	1	...	1	3	1	...	1	...	1	10
...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	1	...	1	...	...	...	...	1	1	...	2
...	...	...	...	...	...	1	1	2	...	...	...	1
2	3	...	1	...	...	1	...	1	...	2	2	1
...	...	...	...	...	..	1	...	...	...	...	...	...
..	..	...	..	...	...	...	...	..	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	...	...	1	...	...	...	...	3	2
...	..	...	...	...	..	...	...	...	...	...	...	...
...	...	...	...	2	...	1	...	1	1	2	3	...
3	1	3	...	...	1	...	...	3	2	...	...	3
...	...	...	...	...	...	...	...	...	...	...	1	1
...	...	...	1	1	...	2	...	...	...	...	...	...
8	13	7	12	7	9	11	5	14	9	7	10	26
...	...	...	...	...	...	...	...	...	...	...	...	...
2	...	...	1	4	...	...	...	2	..	...	2	1
1	1	3	1	1	1	...	2	3	...	1	2	...
...	...	...	...	...	...	...	...	...	...	...	..	...

TABLE No. 15—

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
V.—Developmental Diseases.														
Premature Birth	70	...	70	...	...	...	...	...	...	...	...	...	...	70
Atelectasis	7	...	7	...	...	...	...	...	...	...	...	...	...	7
Congenital Malformations	3	...	3	...	...	...	...	...		...	...	...	...	3
Old Age	...	...	...	...	...	...	...	...	...	...	18	38	7	63
VI.—Local Diseases.														
1. *Diseases of Nervous System.*														
Inflammation of Brain or Membranes	8	22	30	6	...	3	2	...	...	...	...	..	...	41
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis.	...	...	...	...	...	3	12	23	18	19	46	18	1	140
Insanity, General Paralysis of the Insane	...	...	...	...	...	1	1	2	1	...	1	...	...	6
Epilepsy	...	...	...	1	2	3	...	2	1	1	4	...	...	14
Convulsions	43	12	55	...	...	...	...	...	...	...	...	...	...	55
Laryngismus Stridulus (Spasm of Glottis)	2	2	4	...	...	...	...	...	...	...	..		...	4
Disease of Spinal Cord, Paraplegia, Paralysis Agitans	3	...	3	2	1	2	5	4	...	1	2	...	...	20
Other Diseases of Nervous System	...	...	...	1	...	1	...	2	...	1	2	...	...	7
2. *Diseases of Organs of Special Sense.*														
Of Ear, Eye, Nose	..	2	2	...	...	...	...	1	...	...	...	...	...	3
3. *Diseases of Circulatory System.*														
Pericarditis	...	...	...	...		...	...	...	1	...	1	...	...	2
Acute Endocarditis	...	...	...	1	...	2	1	...	...	...	...	...	...	4
Valvular Diseases of Heart	...	...	...	...	7	7	11	10	9	8	11	1	...	64
Other Diseases of Heart	4	1	5	2	10	6	13	28	24	25	40	19	1	173
Aneurism	...	...	...	...	...	...	1	1	...	1	1	...	...	4
Embolism, Thrombosis	...	...	...	...	...	...	...	1	...	...	..	...	...	1
Other Diseases of Blood Vessels	1	...	1	..	...	...	...	1	2	1	6	11	1	23
4. *Diseases of Respiratory System.*														
Laryngitis	1	4	5	1	...	...	...	...	...	...	...	...	...	6
Croup	2	5	7	...	...	...	..	..	...	...	...	...	...	7
Emphysema, Asthma	...	...	...	...	...	...	1	...	3	1	2	1	...	8
Bronchitis	63	44	107	4	2	7	16	29	22	23	69	28	4	311
Pneumonia	44	44	88	6	14	16	13	15	17	12	16	10	...	207
Pleurisy	1	1	2	...	...	...	...	...	...	...	...	...	...	2
Other Diseases of Respiratory System	...	3	3	1	1	...	...	6	...	2	1	1	...	15

Continued.

WARDS.												
St. Mary's	St. Peter's	Werneth	Westwood	St. Paul's	Coldhurst	Hartford	Hollinwood	Clarksfield	Mumps	St. James'	Waterhead	Total Deaths in Public Institutions.
4	1	4	10	11	1	5	4	13	5	4	8	5
1	...	...	1	1	...	1	...	1	...	2	...	...
...	...	2	...	...	...	...	...	1	...	...	...	...
11	1	5	4	6	5	10	1	7	1	3	9	2
3	5	5	1	3	4	6	1	3	7	1	2	3
17	17	13	12	11	10	22	7	10	5	6	10	37
...	1	..	...	...	2	1	...	...	1	1	...	12
...	...	2	1	1	1	3	1	1	1	3	...	17
4	3	2	13	7	4	4	3	3	2	4	6	...
...	...	...	1	...	...	...	1	2	...	...	...	1
4	2	1	1	...	1	2	2	1	3	1	2	7
...	1	1	1	1	...	1	...	1	1	...	...	5
...	...	...	...	1	...	...	...	...	1	...	1	...
...	...	1	...	...	...	1	...	...	...	...	...	1
...	2	...	...	...	...	1	...	1	...	..	...	...
7	7	6	6	...	2	8	1	7	6	8	6	3
17	12	11	15	14	18	19	12	18	11	8	18	65
...	...	...	1	1	1	1	...	...	...	...	...	1
...	...	...	...	...	1	...	...	...	...	...	...	..
1	2	1	6	...	4	1	2	1	2	1	2	35
1	...	...	1	...	...	1	...	1	1	...	1	...
...	...	1	1	2	...	...	1	1	1	...	...	...
...	1	...	...	...	2	...	...	...	1	2	2	7
31	23	29	27	26	19	31	13	37	24	21	30	17
17	13	16	18	20	14	24	11	10	21	13	30	14
...	...	...	...	...	...	1	...	...	...	...	1	1
...	...	...	1	4	3	...	...	3	2	...	2	9

TABLE No. 15—

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
5. *Diseases of Digestive System.*														
Dentition	5	4	9	...	...	...	...	...	...	...	...	...	...	9
Sore Throat, Quinsy	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diseases of Stomach	3	2	5	2	2	...	5	5	...	1	4	...	...	24
Enteritis	22	4	26	1	...	...	1	...	...	...	2	1	...	31
Obstructive Diseases of Intestines	...	1	1	4	...	1	3	1	...	1	4	3	..	18
Hernia	...	...	...	...	1	...	2	3	...	...	3	1	...	10
Peritonitis	...	3	3	2	...	3	2	2	...	...	...	...	...	12
Ascites	...	...	...	...	...	..	..	...	...	...	...	...	...	..
Cirrhosis of Liver	...	...	...	...	...	...	1	7	...	1	1	...	...	10
Jaundice and other Diseases of Liver	3	..	3	...	1	1	...	1	1	...	3	1	...	11
Other Diseases of Digestive System	5	1	6	..	...	...	..	2	1	...	1	...	...	10
6. *Diseases of Lymphatic System.*														
Of Lymphatics and of Spleen	1	...	1	...	...	...	...	...	1	...	...	...	...	2
7. *Diseases of Glandlike Organs of Uncertain Use.*														
Bronchocele, Addison's Disease	...	..	..	...	...	...	...	...	...	1	...	...	...	1
8. *Diseases of Urinary System.*														
Nephritis	1	1	2	1	3	4	4	3	...	2	3	2	...	24
Bright's Disease, Albuminuria.	...	...	...	3	2	2	8	7	4	4	10	2	...	42
Disease of Bladder or of Prostate	2	...	2	...	...	...	1	...	1	1	3	1	...	9
Other Diseases of the Urinary System	...	...	...	...	1	...	2	2	2	...	1	4	..	12
9. *Diseases of Reproductive System.*														
A. *Of Organs of Generation.*														
Male Organs	...	...	...	...	...	...	...	..	...	...	...	...	...	...
Female Organs	...	...	...	...	...	...	...	...	..	...	...	...	...	...
B. *Of Parturition.*														
Abortion, Miscarriage	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Puerperal Convulsions	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Placenta prævia, Flooding	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Accidents of Childbirth.	...	...	...	...	1	4	2	...	...	...	...	...	...	7
10. *Diseases of Bones and Joints.*														
Caries, Necrosis	...	...	...	1	...	...	...	...	...	...	1	...	...	2
Arthritis, Ostitis, Periostitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Diseases of Bones and Joints	...	1	1	...	1	...	...	...	1	1	...	...	...	4

Continued.

WARDS.												
St. Mary's	St. Peter's	Werneth	Westwood	St. Paul's	Coldhurst	Hartford	Hollinwood	Clarksfield	Mumps	St. James'	Waterhead	Total Deaths in Public Institutions
...	1	1	...	...	...	1	2	..	...	3	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...
1	1	3	3	5	2	2	...	...	3	...	4	1
2	...	3	3	3	...	5	3	5	1	3	3	...
1	3	2	2	...	2	1	2	2	...	2	1	4
...	1	1	...	1	...	1	1	3	..	2	...	10
1	1	1	1	5	1	...	...	2	...	...	...	3
...	...	...	...	...	...	...	..	...	...	...	...	...
...	1	1	...	2	1	1	2	...	1	...	1	2
1	...	...	2	...	..	...	1	5	...	1	1	3
...	1	...	4	...	1	2	...	1	...	1	...	1
1	...	...	...	...	...	...	1	...	..	...	...	1
...	...	...	..	1	...	...	..	...	...	...	...	...
1	1	1	2	2	3	2	2	3	2	2	3	6
3	4	3	4	3	3	5	3	7	2	2	3	1
1	2	1	...	2	...	...	...	...	1	...	2	5
...	...	2	1	2	2	1	1	...	...	2	1	5
...	...	...	...	...	...	...	...	...	...	...	...	...
...	..	...	...	...	...	...	..	...	...	...	...	..
...	1	...	...	...	...	...	...	..	...	...	...	...
...	...	...	1	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	..	...	...	...	...
...	...	1	1	1	1	1	...	...	1	1	..	...
...	...	...	1	...	1	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	..	...	...	...	...	1	3	2

TABLE No. 15—

Cause of Death.	AGES.													Totals.
	0 to 1	1 to 5	Total under 5 years.	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwards	
11. *Diseases of Integumentary System.*														
Carbuncle, Phlegmon	...	...	...	...	...	...	...	...	..	...	...	...	...	...
Other Diseases of Integumentary System	2	...	2	1	...	...	...	...	1	...	...	...	...	4
VII.—Deaths from Violence.														
1. *Accident or Negligence.*														
Fractures and Contusions	5	1	6	...	2	5	4	3	1	4	9	3	...	37
Gunshot Wounds	...	...	..	...	...	..	...	...	...	...	...	...	..	...
Cut, Stab	...	...	...	...		..	...	...	...	...	...	...	..	...
Burn, Scald	...	5	5	..	2	...	1	...	...	...	2	...	...	10
Poison	...	...	...	..	...	...	1		...	..	...	...	...	1
Drowning	...	1	1	...	...	...	...	...	...	1	...	...	...	2
Suffocation	2	1	3	...	...	...	...	...	...	...	1	...	...	4
Otherwise	...	...	...	1	2	...	...	2	...	...	...	...	...	5
2. *Homicide.*														
Manslaughter	...	...	...	...	...	...	...	...	...	..	...	...	...	...
Murder	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3. *Suicide.*														
Gunshot Wounds	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cut, Stab	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Poison	...	...	...	...	...	...	...	1	...	...	1	...	...	2
Drowning	...	...	...	...	1	1	...	1	...	...	...	...	...	3
Hanging	...	...	...		...	...	1	2	1	1	1	...	..	6
Otherwise	...	...	...	...	...	...	...	...	..	...	...	...	...	...
VIII.—Deaths from Ill-Defined and not Specified Causes.														
Dropsy	...	...	..	...	...	1	...	...	...	...	...	...	...	1
Debility, Atrophy, Inanition	69	1	70	1	1	...	...	...	...	2	1	...	...	75
Mortification	...	...	..	...	...	...	...	1	...	...	3	3	..	7
Tumour	...	...	...	...	...	...	1	4	2	1	...	...	...	8
Abscess	...	...	...	1	1	...	1	1	...	...	...	...	...	4
Hœmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden Death (cause not ascertained)	13	1	14	1	2	3	4	7	5	...	7	1	...	44
Causes not Specified or Ill-defined	..	...	...	...	...	...	...	...	...	...	...	...	...	...

Continued.

WARDS.												
St. Mary's	St. Peter s	Werneth	West-wood	St. Paul's	Cold-hurst	Hart-ford	Hollin-wood	Clarks-field	Mumps	St. James'	Water-head	Total Deaths in Public Institu-tions.
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	1	...	3	...	...	...	...	..	...	1
3	5	4	2	1	3	4	3	5	1	3	3	27
...	...	...	...	...	...	..	...	...	..	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	1
1	...	...	1	3	...	1	1	...	...	...	3	7
...	...	1	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	1	...	...	1	...	1
...	...	...	...	...	1	...	1	...	...	1	1	1
...	...	...	...	...	2	1	...	1	...	...	1	4
...	...	...	...	...	...	...	...	...	...	...	...	...
..	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	2
...	...	1	..	...	...	...	...	...	..	1	...	1
...	...	...	1	...	...	...	...	...	...	2	...	1
1	...	...	...	...	1	...	...	1	1	1	1	...
...	...	...	...	...	...	...	...	...	...	...	...	...
1	...	...	...	...	...	...	...	...	...	...	...	...
6	3	5	7	10	7	8	9	12	2	1	5	4
1	1	1	...	1	1	...	...	2	...	...	...	2
1	...	...	...	...	1	...	1	2	1	1	1	8
...	...	1	1	...	...	...	1	...	1	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	...
8	2	1	6	4	1	5	4	7	2	1	3	3
...	...	...	...	...	...	...	...	...	...	...	...	1

PART II.

INFECTIOUS DISEASES.

During the year 1904 there were in all 1,222 cases of Infectious Diseases reported in the Borough. This total consisted of: Smallpox 255, Scarlet Fever 638, Diphtheria 158, Typhoid Fever 76, Puerperal Fever 19, and Erysipelas 76 cases. This is an increase in the number of Scarlet Fever, but a decrease in the number of Diphtheria cases; there was also a slight increase in the number of Typhoid Fever cases.

The following is the total number of deaths which occurred from the various Zymotic Diseases: Smallpox 14, Scarlet Fever 22, Diphtheria 34, Typhoid Fever 22, Puerperal Fever 12, Measles 70, Whooping Cough 37, Erysipelas 5, and Diarrhœa 117.

There is a decrease in the number of deaths due to each of the above diseases, except in the case of Measles, Typhoid and Puerperal Fevers and Diarrhœa.

The total number of deaths from the seven principal Zymotic Diseases was 316, of which above one-third were due to Diarrhœa.

This number gives a Zymotic Death-rate for the Borough of 2·27, which is 0·07 lower than in the year

1903, and lower than the average for any previous five years.

The average Zymotic Rate for the large towns of England was 2·49 per 1,000, and compared with the other large Lancashire towns, Oldham takes the first position, the rate for the others being: Bolton 2·28, Blackburn 2·36, Preston 2·93, Manchester 3·09, Burnley 3·93, Salford 4·37, and Liverpool 4·36.

SCARLET FEVER.

As already mentioned, there were during the year 638 cases of Scarlet Fever reported, and out of this number only 17 cases proved fatal. The other five fatalities belonged to cases reported in the previous year.

The deaths were thus only 2·7 per cent. of the cases, which is an exceedingly low percentage.

The disease was about equally prevalent throughout the year, and the wards most affected were Clarksfield and St. Mary's, while Werneth and Coldhurst had the fewest cases.

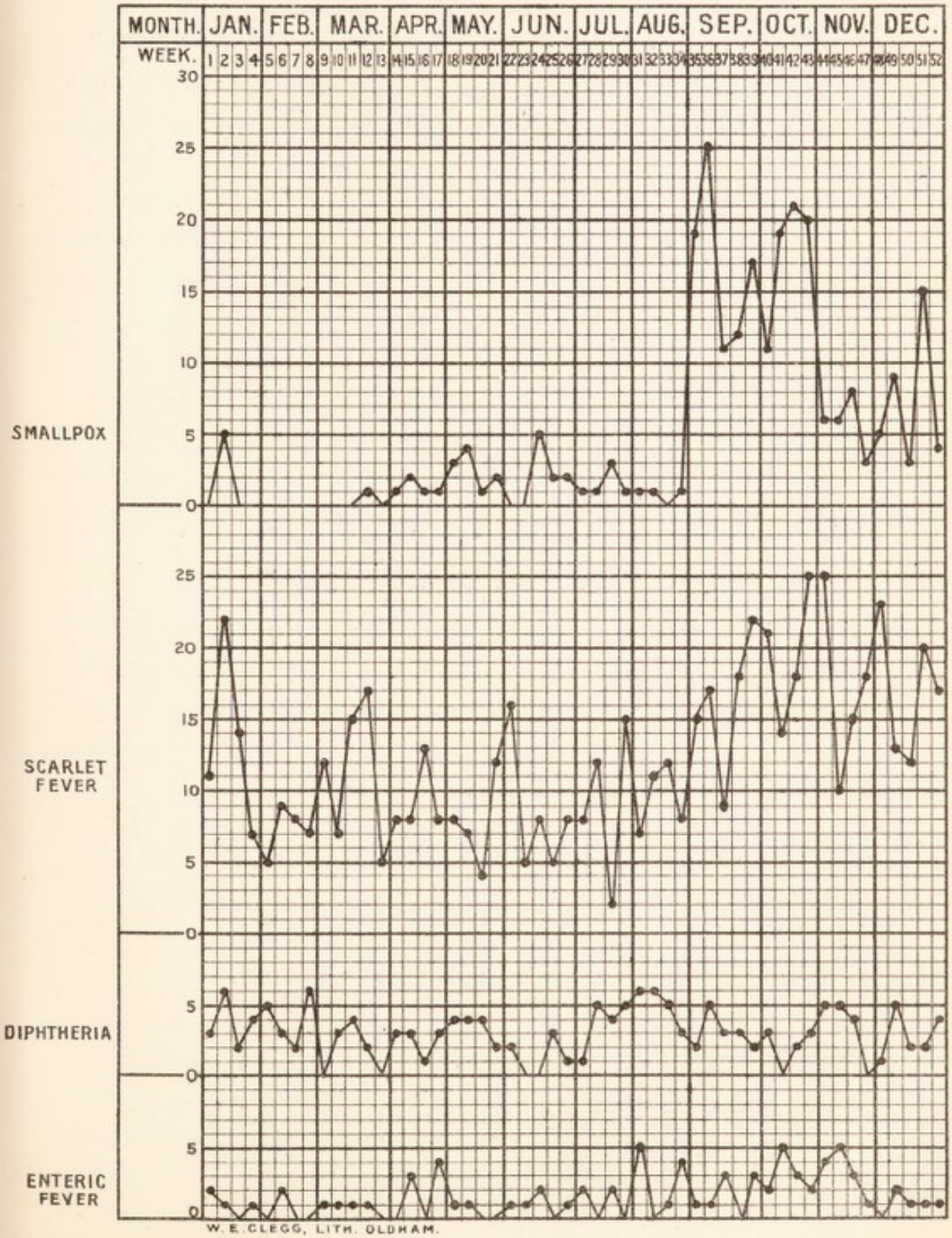
Out of the 22 deaths no less than 17 were of children under the age of 5 years. The other five deaths were in children under the age of 10 years, and all attending school.

Of the above number 348, or 54 per cent of the cases, were removed from the Borough for isolation at Westhulme Hospital. This is rather a larger percentage than in previous years, and in addition 43 cases were admitted to the Hospital from the surrounding townships.

BOROUGH OF OLDHAM.

CASES OF INFECTIOUS DISEASE

Notified during the Year 1904.



Of the 391 Hospital cases only 11, or 2·8 per cent, proved fatal, a result which, considering that the great majority of the cases were removed from the poorer houses in the town, can only be considered as exceedingly satisfactory.

The proportion of adults who have contracted the disease has been considerably larger than in previous years.

With the exception of a very small percentage of cases, the disease has either occurred in school children or as secondary cases, where the disease has been introduced into a family by school children.

Every care possible has been taken to ensure that the children discharged from Hospital have been free from infection, but in spite of this care a few return cases have occurred.

In one instance the secondary case in a house occurred the day before the first case was to be discharged from Hospital, and in another the day after it was discharged, both instances pointing strongly to some infected clothing being brought out ready for the child from Hospital.

The Scarlet Fever Death-rate for Oldham is 0·15, and that for the 76 large towns of England 0·12 per 1,000 people.

DIPHTHERIA.

It is satisfactory to be able to record a considerable reduction in the number of cases of Diphtheria, which occurred during the year, compared with the previous two years, but the number is still much above the average. It

is probable, however, that much of the apparent increase is due to improved methods of diagnosis (bacteriological), which allows mild cases to be detected and reported, which would formerly have been missed.

In all 158 cases were reported, and of these 33 proved fatal, compared with 201 and 54 in the year 1903.

The percentage of deaths has also been lower, 20·9, instead of 26·8.

Like scarlet fever, by far the larger proportion of cases occurred in school children, and 18 out of the 33 deaths were of children under the age of five years, while no less than 31 out of the 33 were under the age of 10.

The wards in the Borough in which the disease was most prevalent were Westwood, Clarksfield, and St. James's, while Hollinwood, St. Mary's, Coldhurst, and Mumps had very few cases. This distribution does not indicate any connection with insanitary conditions or density of the population, but rather the reverse.

The milk supply this year does not appear to have any connection with the incidence of the disease, and in only about 20 of the cases were there any insanitary conditions associated.

The Diphtheria Death-rate for Oldham is 0·25 per 1,000, which is slightly higher than the average, 0·19, for the large towns of England.

ENTERIC OR TYPHOID FEVER.

During the year 76 cases of this disease were notified in the Borough, and of these 22, or 29 per cent., proved fatal.

From these figures it will be seen that the disease was somewhat more prevalent than during the previous three years, and the percentage of deaths was also somewhat higher. As is almost always the case, the larger number of cases occurred during the months of August, September, October, and November. St. Peter's, St. Paul's, Clarksfield, and Waterhead were the wards in which the largest number of cases were notified, while only one case occurred in Hartford and 2 each in St. Mary's and Coldhurst Wards.

Forty-six cases, or 61 per cent., were removed to Westhulme Hospital for treatment, and in addition to this number 10 cases were received from the surrounding districts.

The death percentage of all the cases in the town was 29 per cent., and of the cases removed to Hospital slightly lower, 28 per cent.

A specimen of the blood is taken for Widdal s test in all the Oldham cases before removal to Hospital.

Out of the total number 13 were secondary cases, and contracted the disease from a previous case in the house, while three others were directly traced to persons whom they had been visiting or nursing.

Four of the patients almost certainly contracted the disease while visiting places outside Oldham, and in connection with 11 other cases insanitary conditions, which may have been the contributing cause, were found. No source of infection could be found in connection with the remaining cases.

The Death-rate from Typhoid in Oldham was 0·16 per 1,000 of the population. The large Lancashire towns having a lower rate from this disease are Manchester and Liverpool with 0·12 and 0·15 respectively.

PUERPERAL FEVER.

Nineteen cases of this disease were notified during the year, and 9 of them had a fatal ending. The largest number of cases (8) were reported in Clarksfield Ward, but only 1 of these proved fatal; while there were only 3 cases in St. Peter's and 2 in Waterhead reported, but all of which were fatal. The great variation in the percentage of deaths from this disease in various parts of the town strongly indicates that all cases of Puerperal Fever are not notified either by the householder or by the Medical Attendant. With the exception of two patients, when the same midwife was attending both cases simultaneously, there appeared to be no connection between the various cases.

ERYSIPELAS

Seventy-six cases, or two more than in 1903, of Erysipelas were notified during the year, and five terminated fatally. The cases were evenly distributed through the town and also throughout the year. All the patients except four were either young people or adults.

None of the four infants who were affected had undergone vaccination. The two who died were aged respectively 14 days and 9 months, and in both the sanitary surroundings were unsatisfactory.

Many of the other cases were of a very trivial nature, being more of the nature of an Erythema in connection with some wound or abrasion.

SMALLPOX.

Just at the close of the year 1903 this disease was introduced into the borough from Chadderton, and the members of one family who would not undergo Vaccination were removed to an Isolation Ward at Strinesdale, where five of them broke out with the disease. There were no further cases in the town until March 21st, when a tramp came to one of the Lodging Houses in the Borough, the rash appearing a day or two after his arrival. He contracted the disease either in Manchester or between that town and New Mills. There were no further cases at the lodging-house, but about a fortnight later five cases in the districts through which this man reached the town, occurred. In May the disease was again brought into the town by a young woman who had been working at a mill at Royton, where some cases of Smallpox had occurred.

During the early part of May there had evidently been an unrecognised case in the Waterhead district which infected several persons.

About the middle of June, four cases occurred in Cannon Street, all children, and who had evidently been infected by their father, who had returned a fortnight previously from Yorkshire, where he had been about six weeks in search of work. At the time of his arrival home he had some spots on his face and arms.

About the middle of July five cases occurred in one family, due to an overlooked case in the house ; and at the

close of the same month another case occurred in Westwood in a young woman who had been visiting a Smallpox case in Chadderton.

The town then remained free from the disease until the end of August, when it was introduced in two different parts of the town by two different men, both of whom had contracted the disease outside the town, one in all probability in Ashton, and the other near Marsden. The first patient introduced it into a lodging-house, where he directly infected seven others, and almost certainly three persons who were taken ill about the same time. From these three and probably from one or two other cases, which were not recognised, several secondary cases resulted, and to the close of the year there were patients who contracted the disease more or less indirectly from this source.

The other outbreak was in the Hollinwood district. On August 29th I received a message asking me to see two suspected cases of Smallpox in Copster Hill Road. On visiting the house I was informed there were similar cases next door which were being treated as Chicken-pox. On visiting these I found four cases of Smallpox, one almost confluent, and I was informed there were two similar cases in the next house also being treated as Chicken-pox, and on visiting them, found them also to be suffering from Smallpox.

The information I obtained was that at the centre house a young man who had been working near Marsden had come home ill about 18 days previous with a "bilious attack," and that about two days later broke out with an eruption. He got better and had left home again before I visited the house, and the parents could not (probably would not) say where he had gone. A fortnight after his

eruption appeared his four brothers contracted the disease, two persons in the house on one side and one in the house on the other side. The lads had infected several of their playmates and relations, and in the course of a week no less than 23 cases occurred directly traceable to this family. The medical man attending the four lads also contracted the disease from them. Some of the cases were also being attended by another medical man as Chicken-pox. It is only fair to say that neither of these medical men were Oldham Practitioners, but were acting as *locum tenens.*

The disease in all the cases proceeding from this source was exceedingly mild, and it is probable that, though a considerable amount of house to house inspection was undertaken, there were several unrecognised cases in the district. Though over 100 cases are known to have directly or indirectly contracted the disease from this source, there has not been a single death among them. The deaths all occurred in those cases connected with the patient from the lodging house. Most of the cases were in unvaccinated persons, a very moderate amount of vaccination appearing to confer protection.

On September 22nd Smallpox was introduced into another district of the town by a stranger, who had been travelling through several Lancashire towns. He was the direct cause of six cases.

At the close of the year sporadic cases were still occurring among children attending the Christ Church (Chadderton) and the Freehold Council Schools.

During the year 255 cases of the disease were reported to the Health Authority, and in addition to this number there were at least 8 others which were only recognised

when other members of their family, whom they had infected, broke out with the disease. All of these cases except nine were removed to Hospital. Two of those nine died before they were reported, and the others were so near convalescece when discovered that it was only necessary to remove them to the Health Yard, bath and disinfect the clothing, and discharge them.

The total number of deaths registered as due to Smallpox was 14; 13 in Strinesdale, and one which died at home. One other death occurred from Smallpox, but was registered as due to another cause. Both of these were in unvaccinated children.

Including Oldham cases and those from some of the surrounding townships, 269 cases were admitted to Strinesdale Hospital, and of this number 13 died. The following tables give their condition as to vaccination, age, and severity of the disease :—

FATAL CASES, 1904. VACCINATED IN INFANCY.

No.	Age. Years.	Vaccination Marks.	Severity of Disease.	Days in Hospital.
1	61	None	Confluent	6*
2	60	1 mark	Confluent	8
3	51	2 ,,	Severe Discrete	7
4	37	2 ,,	Semi-Confluent	6
5	34	2 ,,	Semi-Confluent	10
6	52	3 ,,	Semi-Confluent	11

* Doubtful if vaccinated.

NOT VACCINATED PREVIOUS TO CONTRACTION OF DISEASE.

No.	Age. Years.	Vaccination Marks.	Severity of Disease.	Days in Hospital.
1	4	.....	Semi-Confluent	10
2	49	.....	Moderate Discrete	14
3	9	.....	Semi-Confluent	25
4	40	... ..	Severe Confluent	6
5	7 days	.....	Severe Discrete	7
6	42	.. ...	Semi-Confluent	8
7	57	.. ...	Severe Discrete	7

The following table gives a summary of the vaccinal condition of the patients admitted to Strinesdale Hospital in 1904, and the number of cases and percentage of deaths at each age period. It is worthy of note that not a single vaccinated person under the age of 15 years is known to have contracted the disease; that there was not a death in a vaccinated person within 34 years of their vaccination, and that not a single member of the staff (all protected by recent vaccination) contracted the disease. The final table gives similar particulars of the total cases during the last three years :—

TOTAL CASES AND DEATHS IN VARIOUS AGE PERIODS IN 1904.

	Ages.	Under 5 years	5 and under 10	10 and under 15	15 and under 20	20 and under 40	40 and upwds	Total
Vaccinated in Infancy.	Cases	0	0	0	8	80	48	136
	Deaths	0	0	0	0	2	4	6
	Percentage	...	...	...	...	2·5%	8·3%	4·4%
Not Vaccinated.	Cases	17	45	43	11	13	5	134
	Deaths	2	1	0	0	0	4	7
	Percentage	11·8%	2·2%	...	...	...	80%	5·2%

TOTAL CASES AND DEATHS AT VARIOUS AGE PERIODS DURING THE YEARS 1902-3-4.

	Ages.	Under 5 years	5 and under 10	10 and under 15	15 and under 20	20 and under 40	40 and upwds	Total
Vaccinated in Infancy.	Cases	0	0	2	16	247	194	459
	Deaths	0	0	0	0	3	24	27
	Percentage	...	...	...	...	1·2%	12·4%	5·9%
Not Vaccinated before the Disease was contracted.	Cases	34	91	81	28	30	10	274
	Deaths	5	4	1	1	2	5	18
	Percentage	14·7%	4·4%	1·2%	3·6%	6·6%	50%	6·5%

MEASLES.

This disease, which is so commonly looked upon as a trivial ailment, and one which every child must undergo, is responsible for no less than 70 deaths, which is almost the same number as the total of those due to Scarlet Fever, Typhoid and Diphtheria.

The disease was principally epidemic in Hartford, Hollinwood and St. Paul's Wards, and its prevalence was very largely due to School infection.

From most of the Schools, reports are received respecting this disease from the teachers, and the cases are then visited by the Female Inspectors, who give instruction as to isolation, and leave a certificate when the patient or contacts may return to School.

Though this method of dealing with Measles is of considerable benefit in limiting the spread of the disease, it is too often the case that the disease has been spread to several before the Inspector visits the house. There is delay in the attendance officer reporting the cause of absence of any child to the teachers, there is further delay in the teachers reporting the case to the Health Authority, and as most of the reports reach the office on Saturday there is another day's delay before the case can be visited. There is, to my mind, no reason why, if properly instructed, the School Attendance Officer could not take exactly the same proceedings as the Inspector, and thus secure isolation of the patient before it has reached that stage when it is well enough to go about and spread the disease to others. The Inspectors would then be released for their most important duty, viz., the visits to those houses where births have taken place.

Not only does this disease cause a considerable number of deaths in some and injury to others, but it interferes more than any other disease with school attendance.

Out of the total of 70 deaths no less than 66 were of infants under the age of five years.

During the year 1034 cases were reported as suffering from Measles, and were visited by one or other of the lady inspectors.

CHICKEN POX.

No deaths were attributed to this cause, and the principal danger from this disease is the liability of a case of Smallpox being mistaken for it. In a typical case of either disease there is no difficulty in distinguishing them, but in the very mild cases it is occasionally almost impossible, without keeping the case under observation for a few days. 276 cases were reported and visited.

WHOOPING COUGH.

This disease, like Measles, is commonly looked upon as a trivial complaint, and yet is responsible for 37 deaths during the year. Thirty-six of these were in children under the age of five years.

The disease was most prevalent in Werneth and St. Paul's Wards.

The endeavours to prevent the spread of this disease have been the same as those adopted for Measles, and my remarks under that head will also refer to Whooping Cough.

In all 209 cases were reported and visited.

CANCER.

There is a slight increase in the number of deaths from this disease, the total reaching 112. All the deaths were those of adults, and the majority of them at ages between 45 and 65.

In spite of the researches, which have been carried out in respect to this disease, no definite cause has yet been discovered, and we are therefore able to carry out few (if any) measures for its prevention.

SKIN DISEASE.

During the year about 75 cases of various forms of Skin Disease were reported from the Schools. These were visited, and if no medical man was in attendance, advice given as to cleanliness, and how to avoid communicating the disease to others.

MEASURES ADOPTED TO PREVENT THE SPREAD OF INFECTIOUS DISEASE.

There are two Infectious Diseases Hospitals in the Borough, Westhulme for General Infectious Diseases, and Strinesdale for Smallpox.

Westhulme Hospital.—During the year 348 cases of Scarlet Fever, 46 cases of Typhoid, four cases of Diphtheria, and 7 cases of Measles were removed from the Borough to this Hospital for isolation and treatment, and in addition 43 cases of Scarlet Fever and ten of Typhoid have been received from the surrounding Townships. The benefits of the Hospital are becoming more and more appreciated, and in several cases application for the admission of children

was made, where they could be just as well isolated at home.

No complaints were received either in regard to the care or treatment of the patients.

The nominal accommodation at the Hospital is—

Scarlet Fever block (4 wards) 40 beds.
Typhoid block (4 wards) 48 beds.
Isolation block (4 wards) 10 beds.

STRINESDALE HOSPITAL.—246 cases have been removed to this Hospital from the Borough during the year, and 23 cases were also received into the Hospital from Failsworth and other neighbouring districts.

The old Hospital consists of two Wards, one of which has a small Ward partitioned off for use when only three or four patients are in Hospital.

The new portion consists of four Wards: three of six beds and one of eight beds, and another room which has been reserved for a Nurse's room, with baths, lavatories, &c.

The nominal accommodation is in the old Hospital 40 beds, and in the new portion 26 beds, making a total of 66 beds. An iron corridor connects the two buildings.

The small Wards in the new building have been very useful for isolating special cases or for families, and have been used several times for this purpose.

The small Ward in the old portion is always kept ready for patients, the beds being made and kept aired by hot bottles.

The whole of the new portion of the Hospital has not yet been furnished, but arrangements have been made so that all necessary furnishings could be obtained in a very few days.

Disinfection.—During the year 1,123 houses (or 2,013 rooms) have been disinfected, and 116 entirely stripped and cleaned.

Disinfection of the rooms after infectious disease is generally carried out by burning sulphur. This is probably not quite as effective as some other methods, but it has the advantage of compelling the householders to thoroughly clean and ventilate the rooms before they can be used again.

After Smallpox the walls, &c., of the rooms are all sprayed with a solution of formalin before fumigation.

Bedding, clothing, &c., are removed and disinfected by steam at the Central Depot, and over 17,000 articles have been either disinfected or destroyed during the year.

Disinfectants in the form of Izal, Sanitas, Carbolic Powder, and Soap are distributed to those houses where infectious disease exists, and Carbolic Powder where insanitary conditions are reported.

The excreta of Typhoid patients, where no water-closet exists, are received into special receptacles and burnt.

The drains of houses in which Typhoid, Diphtheria, or Puerperal Fever may occur are tested where possible by the smoke machine, and any defects found are remedied.

Schools.—During the year I have visited several of the schools, and examined the children in certain classes, with a view to discovering unsuspected cases of infectious disease,

where this course was deemed advisable. I am of opinion that if this could be carried out systematically a considerable number of cases of infectious disease could be prevented.

During the year the Head Teachers of many of the schools reported regularly, week by week, suspected cases of Measles, Whooping Cough, Chicken Pox, &c., and these were subsequently visited by the Female Inspectors. I am convinced that the spread of these minor ailments, especially the two former, is much restrained by these means.

A supply of Antitoxin has been kept for urgent or night cases of Diphtheria, and it is also stocked by a local firm of chemists.

A supply of Antetetanic Serum is also kept in stock.

In connection with Smallpox the usual measures of following up all .contacts and keeping them under observation for the period of 15 or 16 days are carried out.

A much larger number of the contacts than in previous years have availed themselves of vaccination, and in no case where the vaccination was performed within two or three days of contact has Smallpox subsequently resulted.

The necessity of measures for preventing false information in connection with this disease being given, was amply exemplified in the Copster Hill case.

TABLE No. 16.

SCARLET FEVER.

Ages	Cases Reported.	Deaths of such Cases.	
		Total.	Percentage.
Under 5 years ...	187	11	5·9
5 to 10	278	5	1·8
10 to 15...	123	1	0·8
15 to 25...	34	...	...
25 to 35...	11	...	...
35 to 45...	3	...	...
45 to 55...	2	...	...
Over 55	...	...	...
Total	638	17	2·7

TABLE No. 17.

DIPHTHERIA.

Ages.	Cases Reported.	Deaths of such Cases.	
		Total.	Percentage.
Under 5 years ...	67	18	27·0
5 to 10...	60	13	21·7
10 to 15...	9	1	11·1
15 to 25...	4	...	...
25 to 35...	11	1	9·0
35 to 45...	5	...	...
45 to 55...	1	...	...
Over 55...	1	...	...
Total	158	33	20·9

TABLE No. 18.

TYPHOID OR ENTERIC FEVER.

Ages.	Cases Reported.	Deaths of such Cases.	
		Total.	Percentage
Under 5 years ...	5	...	...
5 to 10...	9	2	22·2
10 to 15...	8	1	12·5
15 to 25...	19	4	21·0
25 to 35...	16	8	50·0
35 to 45...	12	6	50·0
45 to 55...	7	1	14·3
Over 55...	...	...	...
Total	76	22	29·0

TABLE No. 19.

Showing the number of **Cases of Sickness** and the **Deaths Registered** during the several months of the year 1904 in Oldham.

Months.	Smallpox.		Scarlet Fever.		Diph-theria.		Typhoid Fever.		Puer-peral Fever.		Typhus Fever		Erysipelas		Mem-branous Croup		Relapsing Fever		Continued Fever	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases	Deaths	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.
January ...	5	...	56	5	17	2	4	...	3	3	...	...	9	...	...	...	...	...	...	...
February..	...	...	29	3	16	5	2	...	1	..	...	...	7	...	...	...	...	...	...	...
March	1	...	55	3	9	2	4	1	1	1	...	...	4	1	...	...	...	...	...	...
April	5	1	38	...	10	2	7	2	1	..	...	...	6	1	...	..	...	...	...	...
May	10	1	40	2	15	1	2	2	...	1	...	...	4	...	...	...	...	...	...	...
June	8	...	32	1	5	1	5	3	1	1	...	...	3	...	...	...	...	...	...	...
July	7	1	38	...	15	4	4	1	1	...	...	...	7	1	...	...	...	...	...	...
August ...	17	..	44	1	20	5	10	...	6	2	...	...	4	...	...	...	...	...	...	...
September.	70	4	73	1	15	5	6	3	1	...	...	...	12	1	...	...	...	...	...	...
October ...	75	5	88	3	9	3	14	5	2	...	...	...	8	...	...	...	...	...	...	...
November..	22	1	77	1	14	2	14	3	...	1	...	...	4	1	...	...	...	...	...	...
December..	35	1	68	2	13	2	4	2	2	3	..	...	8	...	...	...	...	...	...	...
Totals ...	255	14	638	22	158	34	76	22	19	12	...	...	76	5	...	...	...	...	..	...

TABLE No. 20.

Cases of Infectious Disease notified during the Year 1904.

Notifiable Disease.	Cases Notified in Whole District.						
	At all Ages.	At Ages—Years.					
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwds
Small-pox	255	4	11	88	37	111	4
Cholera	...	...	...	...	...	..	...
Diphtheria	158	5	62	69	4	18	...
Membranous Croup	...	...	..	...	...	...	...
Erysipelas	76	4	...	8	11	47	6
Scarlet Fever	638	3	184	401	34	16	...
Typhus Fever	...	...	...	...	...	...	...
Enteric Fever	76	1	4	17	19	35	...
Relapsing Fever	...	...	...	...	...	...	..
Continued Fever	...	...	...	...	...	...	...
Puerperal Fever	19	...	...	...	7	12	...
Plague	...	...	...	...	...	..	...
Totals	1222	17	261	583	112	239	10

TABLE No. 20—Continued.

Cases of Infectious Disease notified during the Year, 1904.

Notifiable Disease.	Total Cases Notified in each Locality.											
	St. Mary's Ward	St. Peter's Ward	Werneth Ward	Westwood Ward	St. Paul's Ward	Coldhurst Ward	Hartford Ward	Hollinwood Ward	Clarksfield Ward	Mumps Ward	St. James's Ward	Waterhead Ward
Small-pox	10	17	18	21	33	5	43	38	4	14	24	28
Cholera	...	...	...	...	...	...	...	...	...	...	..	...
Diphtheria...	6	8	8	44	9	7	10	4	22	7	19	14
Membranous Croup ..	...	...	...	..	...	....	...	...	...	...	...	...
Erysipelas...	7	3	7	9	7	10	3	1	12	3	8	6
Scarlet Fev'r	80	44	13	52	49	30	35	27	108	57	51	92
Typhus ,,	...	...	...	...	....	...	...	...	...	...	...	...
Enteric ,,	2	10	3	4	11	2	1	8	14	6	4	11
Relapsing ,,	...	...	...	...	....	...	...	...	...	...	...	...
Continu'd ,,	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal ,,	1	3	...	..	1	...	1	...	8	2	1	2
Plague	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	106	85	49	130	110	54	93	78	168	89	107	153

TABLE No. 20—Continued.

Notifiable Disease.	No. of Cases Removed to Hospital from each Locality											
	St. Mary's Ward	St. Peter's Ward	Werneth Ward	Westwood Ward	St. Paul's Ward	Coldhurst Ward	Hartford Ward	Hollinwood Ward	Clarksfield Ward	Mumps Ward	St. James's Ward	Waterhead Ward
Small-pox ...	10	17	17	21	31	5	42	34	4	14	23	28
Cholera ...	..		...	...	.	...	...	..	...	...	...	..
Diphtheria...	2	...	1	1	...	...	...	...	...	...	...	...
Membranous Croup ...	...	.	...	...	...	...	...	...	...	..	...	...
Erysipelas...		...	...	...	...	...	...	...	...	...	...	...
Scarlet Fev'r	55	12	7	28	34	20	18	14	47	36	22	55
Typhus ,,	...	...	...	...	...	...	...	...	...	..	...	...
Enteric ,,	1	4	1	1	9	2	1	7	8	1	3	8
Relapsing ,,	...	...		...	...	..	...	...	...	...		.
Continu'd ,,	...	...	.	...	.	...	...	...	.	...	...	.
Puerperal ,,	...	...	...	...	...	...		...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	.	...
Totals ...	68	33	26	51	74	27	61	55	59	51	48	91

TABL

SUMMARY OF CASES ADMITTED INTO WESTHUL

	1880		1881		1882		1883		1884		1885		1886		1887		1888		1889		189
	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted
Smallpox ...	5		39	9	18	2	6	..	2	...	5	...	5	...	3	..	123	16	1	...	...
Measles	2	..	...	...	2	...	1	...	5		.	..	.	.	1	1	..	...	...	..	3
Scarlet Fever	73	12	60	15	30	2	91	3	111	10	90	8	205	10	571	27	203	8	222	13	134
Diphtheria...	...	...	2	1	...	...	...	...	...	..	..	...	...	..	...	...	...	...	...	...	...
Typhus	...	..	1	1		.	...	..	1	..	...	...	12	4	2	1	..	...	.	...	1
Typhoid Fever.	28	5	56	8	29	4	32	7	36	4	31	7	52	8	40	6	23	7	12	5	28
Simple Continued Fever	2	...	4	1	2	...	.	..		...	1		1	...			...		...	...	...
Puerperal Fever.	...	...	...	.	...	...	...	...	...	...	...	.	...	...	1	1	...	...	...	...	...
Erysipelas ..	...	..	...	...	...	...	5	1	4	2	1	...	2	1	1	...	1	...	...	...	.
Ill-defined ...	...		...	...	.	...	...	...	6	...	4	3	...	...	...		4	...	1	..	...
	110	17	162	35	81	8	135	11	165	16	132	18	277	23	619	36	354	31	236	18	166

21.

ITAL DURING THE YEARS 1880 TO 1904.

1892		1893		1894		1895		1896		1897		1898		1899		1900		1901		1902		1903		1904	
Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died	Admitted	Died
136	16	638	63	28	1	8	.	...	...	...	...	...	...	...	.	...	.	...	...	...	...	...	...	...	...
1	...	.	...	...	..	18	5	12	3	43	3	22	6	9		2	...	50	6	26	6	18	2	7	...
246	15	..	..	20	2	67	5	371	18	140	8	164	14	400	23	585	30	425	27	405	23	250	13	391	11
1	...	...	..	...	.	...	...	...	...	...	...	1		2	...	2	...	..	...	3	...	6	2	4	...
1	...	..		...	...		...	8	2	...	...	...		...	...	1	1	...	...	...	...	...	...	...	...
12	2	...		15	3	41	10	27	5	31	6	29	7	34	9	37	9	22	4	22	7	33	8	56	13
...	..	..	...	..		..	...	...	...	...	...	..	...	...	...	.	...	...	.	...	..	...	...	...	...
...	...	...	...	.	.	..	...	...	...	...	...	...		...	...	.	...	..	.	...	...	...	...	...	...
..		...		.	...	...	...	...	...	...	...			...	...	...	...	...		...	...	...	...	...	...
...	...	...		...	..	...	...	.	...	...	...	...	...	...	...	..	..	...	...	...	...	...	...	...	...
397	33	638	63	63	6	134	20	418	28	214	17	216	27	445	32	627	40	497	37	456	36	307	25	458	24

TABLE No. 22.

Showing the number of new Cases of Sickness coming to the knowledge of the Medical Officer of Health during the years 1881 to 1904.

Year.	Small-pox.	Scarlet Fever.	Diph-theria.	Typhus Fever.	Typhoid Fever.	Puer-peral Fever.	Total Cases.
1881	15	434	20	...	131	3	603
1882	13	465	27	...	117	3	625
1883	6	301	15	...	96	3	421
1884	2	289	20	1	100	...	412
1885	4	229	28	...	58	2	321
1886	5	391	44	12	100	7	559
1887	3	1,775	127	2	119	5	2,031
1888	104	985	86	...	106	3	1,284
1889	1	680	39	...	56	5	781
1890	...	320	11	2	63	7	403
1891	...	238	29	...	112	4	383
1892	75	667	27	...	83	9	861
1893	416	442	25	...	70	9	962
1894	165	264	67	...	69	9	574
1895	137	216	70	...	109	5	537
1896	27	785	61	8	114	17	1,012
1897	...	332	38	2	86	10	468
1898	1	346	39	...	68	20	474
1899	2	822	71	...	92	11	998
1900	8	1065	94	...	72	21	1260
1901	2	679	56	...	40	18	795
1902	178	704	187	..	63	15	1147
1903	256	507	201	...	52	9	1025
1904	255	638	158	...	76	19	1146

TABLE No. 23.

Summary of Smallpox Cases treated in the various Hospitals during the years 1894 to 1904.

Hospitals.	1894.		1895.		1896.		1897.		1898.		1899.		1900		1901		1902		1903		1904	
	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted.	Died.	Admitted	Died.	Admitted.	Died.
Moscow	74	9	94	14	8	...	..	...	...	...	..	..	...	..	...	...	...	.	..	..	...	...
Cinder Hill.....	57	8	30	8	..	...	...	...	..	...	..	...	..	...	...	...	9	1	1	...	...	...
Strinesdale.....	...	...	...	...	19	...	...	...	1	...	2	...	27	7	2	..	175	9	278	22	269	13
Oldham Cases	..		...	..	...	..	...	...	..	...	...	...	8	3	...	..	175	9	255	21	246	13
Out-Township Cases	..	..	...	..	...	...	...	..	..	...	...	..	19	4	...	...	9	1	24	1	23	...
Totals	131	17	124	22	27	...	...	...	1	...	2	...	27	7	2	...	184	10	279	22	269	13

Moscow Temporary Hospital was closed in 1896.

PART III.

WORK OF THE HEALTH DEPARTMENT, 1904.

STAFF.

With the exception of the resignation of one of the Assistant Clerks and the appointment of a junior to supply his place, no alteration has taken place in the *personnel* of the staff during the year.

At the close of the year, nothing had been done to remedy the insanitary and unsatisfactory conditions of the Health Office, but at the time of writing I am very pleased to say, that plans have been passed and sanction given by the Council, for such alterations as will at least make the premises sanitary, and will also give very fair accommodation, provided nothing arises to cause any great increase of the staff, for some years. The officers of the Corporation will at last have healthy, though by no means large rooms in which to perform their duties, and the Health Committee and Council are to be congratulated on remedying what has for some years been a disgrace to the Borough.

The present staff is as follows :—

Chief Inspector of Nuisances—
THOMAS RUSHWORTH.

Meat Inspector and Inspector of Nuisances—
†*GEORGE WINTERBOTTOM.

Sanitary Inspectors and their Districts—
NAPOLEON BRIERLEY—St. Peter's (part of), Clarksfield and Waterhead Wards.

W. A. HOPKINSON—Werneth, Hollinwood, St. Paul's, and St. Peter's (part of) Wards.

JAMES BURNETT—Hartford, Westwood, and Coldhurst Wards.

*WILLIAM TAYLOR—St. Mary's, Mumps, and St. James's Wards.

Inspector for the Factories, Workshops, Bakehouses, &c.—
*WM. G. WRIGHT.

Lady Inspectors for Shop Seats, Shop Hours, Female Workshops, &c.—
§‡*MISS SMITH.
‖*MISS ROTHWELL.

Chief Clerk—
JOHN WHIPP.

Assistant Clerks—
E. JACKSON, L. WHIPP, and J. H. WRIGHT.

Disinfectors—
*WM. CLARKE,
N. SCHOFIELD.

Matron Westhulme Hospital—
MISS WHITEHEAD.

Medical Officer of Health—
JAMES B. WILKINSON, M.D., D.P.H., F.C.S.

---

* Sanitary Inspector's Certificate of the Royal Sanitary Institute.
† Meat Inspector's " " " "
‖ Certificate of Hygiene of School Life " "
‡ Certificate of the Sanitary Inspectors' Conjoint Board, London.
§ Certificate of Sanitary Science Vict. and Liverpool Univ.

HOUSE INSPECTION.

During the year about 2,900 houses have been visited and inspected, and the drainage of 139 of these has been thoroughly tested. Altogether 1,982 Reports of Nuisances and Notices to remedy the same were served on owners or occupiers. Of this number 1,538 were complied with on the Inspector's notice, and the remaining 445 were reported to the Health Committee.

After the usual order, 359 were complied with, making a total of 1,897 nuisances which have been remedied during the year.

Probably owing to the bad state of trade, during a considerable portion of the year, there were numerous empty houses throughout the town, and fewer new houses have been built,

Towards the close of the previous year, notices were issued under the Housing of the Working Classes Act, for four small blocks of property, with a view to securing their alteration or demolition.

One of these blocks was improved by the removal of the ashpits and other alterations, and the notices were then rescinded. A second block was, after much correspondence, eventually taken over by the mortgagees and sold, and is now being entirely renovated and such alterations carried out as will bring it to a very satisfactory condition.

A third block was also altered and improved, while the remaining block is still under consideration pending the settlement of legal proceedings.

Owing to the prevalence of Small-Pox, no special house-to-house visitation could be undertaken.

COMMON LODGING HOUSES.

These premises are supervised by the Police Force, and are under the control of the Watch Committee. The accommodation is as follows :—

Number of Registered Lodging Houses.	17
Total accommodation at Night	1,323
Number of persons occupying them ...	252,110
Average occupation per night	690

The largest lodging house has accommodation for 285 persons.

There are also 33 common lodging houses in which the rooms are let for a week or longer periods.

On reference to the report on Smallpox, it will be seen that the lodging houses played a considerable part in the dissemination of this disease. The proprietors of the lodging houses were usually very active in watching for any suspicious cases, and thus gave me much valuable assistance, but until there is some power of controlling the residents in these premises, after contact with a case, they will continue to convey the disease to others.

OFFENSIVE TRADES.

With the exception of one or two Tripe-dressing Establishments, a Grease Works, and a Hide Depot, these premises in the borough are small places. During the year 1,070 visits have been paid by the Inspectors to these places, and 12 notices for nuisances, all of which have complied with, have been served.

The following is a list of these trades in the Borough :—

Tripe Boilers...	15
Marine Stores	10
Grease Works	5
Gut Scrapers...	3
Fat Sorters	1
Hide and Skin Depots...	2
Soap Boilers	1
Total	37

SLAUGHTER-HOUSES.

These premises have all been personally visited during the year. The number is the same as in the previous year, viz., 56, one having lapsed, and a new one, most admirably arranged and built, has been licensed.

The number of visits to these premises by the Food Inspector during the year was 2,592, and by the Chief Inspector 2,734.

With very few exceptions these places are kept in a clean and satisfactory condition. There are, however, about half a dozen by no means structurally fitted for the use to which they are put, and whose condition should be improved before they are again licensed ; otherwise the defects which have been found are of a very trivial nature, and all of them were remedied on the usual notice being served.

The quality of the meat which comes from the Oldham slaughter-houses is of a high standard, and compares favourably with that brought in from outside. The Meat Inspector gives in his report a summary of the diseased conditions found.

Not only are the slaughter-houses visited by the Inspector, but butchers' shops, fish, and fruit shops; the market and cattle wharves, are regularly visited by him.

SMOKE NUISANCES.

During the year 368 half-hourly observations have been taken of smoke emissions from the various mill chimneys in the borough.

These observations are taken by the District Inspectors, and, it necessarily follows, that when there is an excess of infectious disease, they are not so regularly taken. Towards the close of the year the prevalence of more fog than usual limited the number of observations which could be taken.

A smaller percentage than in the previous year have exceeded the limit of 4 minutes in the half-hour, and only nine firms had to be reported to the Committee.

Table 30 contains a list of these firms. In three cases it was the first offence, and the usual notice was served. Four firms had a letter of caution forwarded to them, while the remaining two were summoned before the Magistrates, and fines of 40s. and costs and 10s. and costs were inflicted.

FARMS, COWSHEDS, AND DAIRIES.

These premises are specially under the supervision of the Food Inspector, and there are on his register 71 Farms, 2 Cowsheds, and 73 Dairies within the Borough. Fourteen notices have been issued for the removal of various defects, and all but one were complied with at the close of the year.

A considerable proportion of these premises do not contain the cubic capacity imposed by the local bye-laws,

and with the view of a personal visit, and an endeavour to bring them up to the requirements, they have all been measured up, and I hope during the present year to be able to inspect all of them.

RETAIL DAIRIES AND MILKSHOPS.

The number of these premises on the register at the close of the year was 364, being an increase of 14 over the previous year; 848 visits were paid to them, and 21 notices for defective conditions were issued. A list of the defects is given in Table No. 27.

There was no outbreak of infectious disease in connection with any of these premises.

FACTORIES AND WORKSHOPS ACT.

Factories.—The Mill Reservoirs have been kept under regular supervision; the year being somewhat drier than the previous one has necessitated an increased number of visits. Owing to the conversion of the pail closets into waste water closets, the sewage in the sewers has necessarily become fouler, and some of those millowners, who are in the habit of using sewer water for their reservoirs, have raised the foulness of the sewage as an excuse when the water in them putrifies and becomes a nuisance. This can be obviated to some extent by taking the sewage only at night and by proper filter beds, but it can hardly be expected that the sewers should be kept clean and not put to their proper use. A number of duplicates of notices, issued by the Factory Inspector, have been received in respect to the sanitary conveniences, &c., at the Factories, and the work required has been kept under observation.

WORKSHOPS.—There are on the register 476 workshops, an increase of 54 from the previons year, 12 having lapsed and 64 fresh ones being put on the register. The workshops where females are employed are visited by the Female Inspectors The following is a list of these premises which are registered in the borough .—

Bakers	6	Ice Cream Manufacturers	1
Blacksmiths	6	Joiners	8
Blind Manufacturers	2	Laundries	1
Bookbinders	2	Machine Brokers	4
Bottlers (Beer)	2	Mackintosh Manufacturers	1
Brush Makers	2	Mantle Makers	9
Cabinet Makers	5	Marine Stores	2
Cane Workers	1	Milliners	56
Carriage Builders	3	Mineral Water Manufacturers	2
Cart Sheet Manufacturers	1	Paper Bag Makers	1
Cloggers	55	Plumbers	4
Coffin Makers	2	Roller Coverers	1
Confectioners	40	Saddlers	3
Cotton Waste Dealers	14	Shoe Makers	58
Curriers	3	Skip Makers	5
Cycle Makers	3	Straw Workers	2
Drapers (Underwear and Skirts)	3	Tailors	45
Dress Makers	51	Tinsmiths	10
Dyers	2	Upholsters	2
Drysalters (Chemists)	5	Watch Makers	4
Electro-Platers	1	Wheelwrights	6
French Polishers	1	Wringing Machine Manufacturers	1
Heating Apparatus Manufacturers	1	Wood Carvers	1
Hosiery & Stocking Knitters	12		

It will be noticed that in Table 25 a large number of defects have apparently not been remedied. This is due to a number of notices received from the Factory Inspector just at the close of the year respecting the sanitary conveniences at two of these places.

BAKEHOUSES.

In Table 26 will be found a summary of the work done in connection with the bakehouses in the borough. There were 28 Certificates issued for underground bakehouses which had been put into a condition satisfactory to the Health Committee. The total number of bakehouses registered is 363, four more than in the previous year.

SHOP HOURS AND SHOP SEATS ACTS.

Visits are made both by the Workshop and Female Inspectors, to the various Shops in the town, to ascertain that the provisions of those Acts are being observed. Although 462 visits were paid for this purpose, it was necessary to serve only 15 notices, which were at once complied with.

LADY INSPECTORS.

The Two Lady Inspectors have compiled a summary of their work in Table 24. It has already been mentioned that a considerable portion of their time was taken up in visiting the cases of minor infectious disease which were reported from the various schools. This has especially been the case in the part of the town allotted to Miss Rothwell, where measles was epidemic. From this cause the visits to houses where births occur have been considerably curtailed, and no time has been available for "Cottage Lectures" on health subjects. Several lectures on various hygienic matters have, however, been given to larger assemblies of women, such as mothers' meetings, girls' clubs, &c.

The duties of these inspectors was detailed in my last report, and there is no necessity to repeat it. It is worthy

of notice that, during the three years they have been at work, the infantile mortality has decreased considerably.

I am glad to be able to announce that the Registrar-General has now given permission for the Registrar to supply the Health Authorities with lists of the Births as they are registered.

Miss Smith reports :—

"I have much pleasure in stating that my visits continue to be received in a kindly manner, and I often find that my advice on domestic matters is passed on to friends and neighbours. In all cases of sickness I recommend that Medical Advice be obtained.

When visiting, permission is readily granted to inspect the bedrooms, except in a few cases when I have been asked to call again, because the persons have not wished me to see their rooms untidy. I find that the condition of the bedrooms has improved in respect to more frequently opened windows and fire-places, and also as to cleaner bedding In reference to the Feeding of Infants much persuasion is still required to convince many nurses that boiled bread and water is not suitable food for an infant. I find that in the majority of Infantile deaths the children have died before reaching the age of 3 months.

In conclusion, I wish to thank the people of Oldham for their kindly reception of my visits, and their ready co-operation in carrying out my recommendations."

Miss Rothwell reports :—

"The year 1904 has been marked by the prevalence of Measles in my district, which has taken up more than half of my time during the year.

This disease, which is looked upon by Medical Men as a dangerous infectious disease, is thought, by the parents, to be a very trivial ailment, which every child must have sooner or later, and, in their opinion, the sooner the better. I visited homes where the parents appeared to do their utmost to assist the other young members of the family to contract the disease and " get it all done with at once."

Some of these mothers found that they did not "get it all done with at once," but that some of their little ones suffered much and long, for in many cases bronchitis or pneumonia followed the measles, and in some cases proved fatal. If such an epidemic prevails again, it cannot fairly be attributed to ignorance on the mothers' part, but to negligence, for during the months of May, June, July and August, over 900 homes were visited for the disease, and instruction given respecting it.

The following is the history of the epidemic. The first knowledge of the outbreak was received on February 8th from Hollinwood Council School. A second report was received on February 19th, and a third on February 29th, and afterwards reports were received almost daily.

The way in which the disease travelled was remarkable, for it appeared to take each school in turn, commencing at Hollinwood Council School, and thence to Hollins Wesleyan School. From there it branched out in two directions, taking in one branch Werneth and Hathershaw Council and St. Paul's Schools, and in the other branch Freehold Council School, and from there travelling on to Westwood Council, Northmoor Church, and Northmoor Wesleyan Schools. In the two former schools the disease could not be said to become epidemic, although the two schools were attacked

during the months of July and August, having about 20 to 30 cases in each school.

I must not omit to say that these were not the only schools affected, but those in Chadderton, viz., Corpus Christi and Christ Church Schools. Although some of the scholars attending these schools were affected with the disease and resided in Oldham (especially those attending Corpus Christi School). only a very few cases were reported by the teachers, thus making it impossible to check the disease, for neither instruction nor disinfectants could be given when the cases were not reported. The epidemic lasted from February until August, when the schools closed for the summer holidays, and the epidemic gradually disappeared.

Owing to Measles being so prevalent the births in my district could not be visited as they were in the previous year. Amongst those visited I found that there were more naturally fed infants than in the previous year. No doubt this was due to bad trade, as the mothers could not afford the extra and needless expense of artificial feeding, but were thus compelled to nurse their own infants. There are still cases which require constant visitation, and which will always require such if the homes and children are to be kept clean.

The shopkeepers comply with the law in having the required number of shop seats for their assistants, but it must be borne in mind that, although the law enforces seats, it does not enforce their *use*.

The female workshops still maintain, on the whole, a satisfactory condition, but I find that the employers are more ready to fulfil the requirements of the Workshops Act than the employees are in availing themselves of it."

THE MIDWIVES ACT.

The execution of this Act has entailed a considerable amount of work which had to be personally attended to.

In the first place, early in the year measures were taken to secure a list of the names and addresses of those Midwives who either resided, or practised, in the borough.

A notice was then sent to each one, requesting them to attend a meeting in the Town Hall, on February 23rd, and to ask other Midwives whom they might know, to attend also. A very large number were present at this meeting. I explained the Act to them, informing them of their duties and liabilities under it, and replied to a number of questions put to me respecting it. Instructions were also given as to the procedure necessary to obtain registration, and the few registration certificates which I had received were presented. After the meeting a very general request was made that I should arrange a course of lectures. This I consented to do in the autumn months, but the outbreak of Small Pox entailed so much additional work that the course was postponed until the present year, when I hope to be able to make the necessary arrangements.

There are now 79 Midwives registered for practice in the borough, and the majority have, at the time of writing, received their certificates. All of them have had to be visited, and their books and bags examined.

The future administration of the Act will, even after the preliminary arrangements have been made, necessitate each year much extra work, as regular visits of inspection must be made to each member on the roll. Eighteen out of the 79 Midwives only have Diplomas, or Certificates, after a

regular course of training. Eleven have Diplomas from St. Mary's Hospital, and one from the Southern Hospital, Manchester, and 6 have the Certificate of the London Obstetric Society. Several others have had a more or less complete course of training, and about a dozen or fifteen are entirely illiterate.

At the end of this report a list of those registered is appended.

SALE OF FOOD AND DRUGS ACT.

The number of samples purchased under this and the Margarine Acts during the year was 237, a larger number than in any previous year. Of this number 9·7 per cent. were found not to be of the nature asked for, viz., Milk 8, Butter 8, Coffee 2, Spirits 2, Vinegar 1, Pearl Barley 2.

Legal proceedings were taken in Seven Cases. Two for milk adulteration. One offender was fined 10s. and costs, and the summons was withdrawn in the other case, the defendant having given up his farm owing to poverty. In one case, where a chemist sold diluted Acetic Acid for Vinegar, which he made while the purchaser waited, the magistrates only inflicted a fine of 10s., including costs. Two vendors were summoned for selling a mixture of coffee and chicory, containing an excess of chicory in one case of 75 per cent., and in the other 70 per cent. The presiding Justices looked upon this as a technical offence only, and dismissed one case and fined the other defendant 2s. 6d.

In the prosecution which was instituted for selling Margarine as butter the defendants were members of one of the fraudulent firms, who have carried on this business in most of the large towns in the North during the past few years.

The procedure they adopt is to open a shop and sell almost entirely Margarine, until a sample is purchased, and the summons issued, when the shop is closed, and the defendants are wanting. In this case a warrant was issued, and Police Notices were circulated in all the Lancashire and adjoining towns, with a full description of the man, and offering £5 reward for his apprehension, but he has not yet been heard of.

The other cases of adulteration were principally a slight excess of water in butter, and from 2 to 7 per cent. of added water in milk. In these cases the vendors were either cautioned by letter or were personally cautioned by the Health Committee.

A sample of Pearl Barley was found to be coated with white mineral matter, probably talc. The wholesale dealers took the whole responsibility of this, and appeared before the Committee, and promised that the whole of this special barley should, as far as possible, be withdrawn from these customers.

SEWERAGE AND DRAINAGE.

There is a complete system of sewerage in the town, a large proportion of which consists of properly constructed sewers and pipe drains. There are, however, a considerable number of stone drains still in existence. These, when opportunity allows, are gradnally being converted to a more satisfactory type. On two sides of the town there are main intercepting sewers, which convey the sewage of the town to the sewage works. Except in one small portion of the town the sewage finds its way by natural gravitation to the works. From this lower portion the sewage is lifted to a higher level by a Shone's Ejector, the

air being automatically compressed by the sewage coming from the higher levels. The combined system of drainage is in vogue.

The works for the purification of the sewage are outside the area of the town.

A considerable number of defective and blocked drains have been dealt with during the year, details of which will be fonnd in the Inspector's report.

No less than 524 waste-water closets have received attention from their defective condition during the year.

REMOVAL OF REFUSE.

The system in general use is that of pan closets, but the west and southern portions of the town are now almost entirely converted to the waste water system, and in consequence one of the depots for dealing with the nightsoil has been entirely done away with.

The contents of the remaining pans are collected at night by the Corporation's own staff of men and horses, removed to the depot, and then mixed with shoddy dust and sold as manure, for which there is a great demand, and about 14,000 tons were sold during the year.

Offal from Butchers, Fishmongers, &c., is collected at frequent intervals, a small charge being made.

During the year there has been an increase of about 1,500 Water, Waste Water Closets, and Latrines, and a decrease of about 1,200 Sanitary Pans.

There has also been an increase of about 700 Ashcans, and a decrease of 200 in the number of Ashpits in use.

The contents of these are almost entirely taken to the destructors and there burnt. The resulting clinker is used for the bacterial beds at the Sewage Works, for mortar, and at one destructor for making into paving flags.

The Ashcans are emptied once or more times a week, and the Ashpits as often as required. It would be a great advantage to the town, from a sanitary point of view, if all the Ashpits were replaced by Ashcans.

WATER SUPPLY.

The water supply is from upland gathering grounds, either owned or under the control of the Corporation It is of great purity, but in some portions of the gathering area there is a considerable amount of peaty soil, and the water from this area has a tendency to dissolve the lead in the service pipes. To remedy this the water is treated as it enters the reservoir.

Several analyses of the water have been made at houses where there has been any suspicion of lead poisoning, and, owing to a report that several persons in one district were suffering from lead poisoning, a considerable number of samples were taken in this district. Some of these contained a small amount, and a few rather a large quantity of lead when the water had been standing in the pipes. The matter was reported to the Waterworks Committee, who gave instructions that the water should be specially treated. Since that time several samples have been taken, but none contain an injurious quantity of lead, though traces are found in most samples where lead pipes are used.

The capacity of the various storage reservoirs amounts to about 2,000,000,000 gallons, or a supply for the borough and supply area of about 30 weeks.

The reservoirs at the close of the year comtained about 21 weeks supply.

EDUCATION AND THE EDUCATION ACT.

In my last report I indicated the opportunity the Council had, of limiting the spread of infectious diseases and improving the health of the borough, owing to the control of the schools coming under the administration of the Council, which is also the Sanitary Authority. In the past year the Epidemic of Measles, and the deaths resulting, has been almost entirely due to school contact. The continuance of Small Pox in the town has also been, to a large extent, due to the schools, and several small outbreaks of other diseases have been due to unrecognised cases of the disease attending school.

Most of the towns in the van, as regards Public Health administration, are now instituting measures for preventing the spread of infection, and improving the health of the children through the instrumentality of the schools, and it is to be hoped that Oldham will, as usual, be in the fore-front, and make similar arrangements.

The question of medical supervision of the schools and the children may be looked at from two aspects. Either that it is mainly for the benefit of the school by securing as large an attendance as possible, and by ensuring that all those not certified as unfit shall attend school, or that it is for the benefit of the children themselves by excluding those who are injurious to their companions by communicating disease, or who are injuring their own health by education under unsatisfactory conditions either bodily or domiciliary.

At a very early period of school life general hygienic principles can also easily be impressed on the children.

I must again suggest the following measures by which the health of the children in our schools may be benefited.

1. The teachers should be induced to attend a course of lectures on Hygiene, and thus gain a general acquaintance with infectious diseases and hygienic principles. No teacher who had done this would attempt to diagnose whether a case was Small Pox or some other disease, or would pass unnoticed a pustular eruption on a child's face, as has been the case during the past year.

2. Evening Classes for both boys and girls should be arranged, and Hygienic Subjects treated somewhat popularly in these classes. In some other towns such lectures have been much appreciated; too often, however, the lectures on these subjects are made too scientific and technical.

3. Special lessons to the older girls on Home Management, Care of Infants, and Infectious Disease.

4. Object lessons in the schools on such subjects as Personal Cleanliness, Home Cleanliness, Ventilation, &c.

As regards the Medical Inspection of the schools, the procedure for limiting the spread of infection can only properly be carried out by the Medical Officer of Health and his staff, as he is the only person who has the power to deal with any such case, or to remedy any insanitary conditions which may be found to exist. By following home dirty or unkempt children a vast number of unsatisfactory

conditions would be discovered, and there is not the slightest doubt that a great proportion of the dull, listless, and inattentive children are rendered so, by the insanitary conditions under which they live. The limitation of minor infectious disease would also tend to ensure a more regular attendance. The examination of children, alleged to be ill or defective, of pupil teachers or other officials, can or need not be carried out by the same department.

The examination of eye, ear, or special cases, would be best carried out by a Specialist on these subjects, and it would be wise also that a Special Consultant should be available for those few cases where there is any dispute likely to lead to legal proceedure.

I am convinced that the Educational Authority have in their hands the power to exercise an immense influence on the health of the Borough, which, I trust, they will use.

REPORT OF THE CHIEF INSPECTOR OF NUISANCES, 1904.

To the Medical Officer of Health.

Sir,—

In submitting the accompanying tables, which summarise the Sanitary Work performed in this Borough during the year 1904, and also indicate the great variety of duties performed by the different members of your Staff of Inspectors, it only remains for me to say, how diligently and successfully each one has striven to carry out the work allotted to him. The continued prevalence of infectious disease in the Borough, from the beginning to the end of the year, has necessitated the Inspectors giving a considerable portion of their time to the visiting and removal of patients to Hospital, and in rendering further assistance in stoving and the extra dissinfections, which have been necessary.

The Number of Patients removed to the Hospitals has been 699, showing an increase of 120 more than in the previous year.

Notwithstanding the extra pressure caused by the immediate attention which cases of this urgent nature require, it cannot be said that any neglect has been shown in dealing with nuisances which interfere with the health and comfort of the public. By their frequent inspections throughout the various wards and districts, the Inspectors come across many insanitary conditions, which receive immediate attention, without giving the public occasion to lodge complaints at the office.

Such nuisances as blocked water closets, overflowing soil-pans, ashpits, or ashcans, and objectionable accumulations requiring immediate removal, are frequently discovered by them, and their attention will also be directed to blocked drains in yards and cellars, defective roofs, damp walls, broken downspouts and eaves gutters, and occasionally to an insufficient water supply. The various Tables will indicate the attention that all these matters have received. The Inspection of Bakehouses, Dairies, Cowsheds, Farms, Pigsties, Slaughterhouses, and other similar premises, has been systematically carried out, and in addition, the mill lodges and the sanitary conveniences of the Factories and Workshops, as well as the general condition of the latter, have been kept under regular supervision.

Fortunately, no recognised outbreak of Contagious Disease among Animals has occurred during the year.

Increased attention has been given in regard to the general supervision of foods offered for sale and a larger number than usual of samples (234) have been purchased and submitted for analysis.

The vigilance which has been given during the year to the special inspection of animals arriving for slaughter and preparation for human food, has fully justified the wisdom of an appointment, whereby more frequent visits and time can be devoted to the detection of unsoundness of food in meat, fish, and other edibles intended for human consumption, and has undoubtedly been beneficial in the interests of the public health.

It will be noticed that close upon 14 Tons of unsound foods of various kinds, in fish, flesh, fruit, poultry, and animals of all sorts, and from various causes, have been destroyed.

Thanking you, on behalf of the whole staff, for the confidence and support accorded us in the discharge of important and onerous duties, which are not always of the most amiable character, where the conflicting interests of tenants and owners of property, and vendors of saleable foods of one kind and another are concerned.

I remain,

Your Obedient Servant,

THOMAS RUSHWORTH,

Chief Inspector of Nuisances.

TABLE No. 24.

LADY INSPECTORS' REPORT, 1904.

	Visits paid.	Re-Inspection.	Notices served.	Notices complied with.
Births	2153	529	1	1
Deaths of Infants (under 12 months)	518	97	...	...
Defective Houses found	168	205	166	117
Workshops	307	16	12	10
Shop Hours Act	58	32	15	15
Enquiries for Shop Seats	12	...	...	...
Infectious Diseases...	373	77	11	11
School Notifications	1952	91	1	1
Special Cases	251	48	2	2
Cottage Lectures	...	...	...	...

TABLE No. 25.

SHOWING THE NUMBER OF WORKSHOPS REGISTERED, VISITS MADE, AND DEFECTS REMOVED.

* The work of the two Female Inspectors, with regard to Workshops and Shop Hours, will be found on Table 24.

No. of Workshops on Register December, 1903			424
,, ,, Discontinued during 1904			12
,, ,, Registered during 1904			64
,, ,, on Register December, 1904			476
* ,, Visits Paid	Female Inspectors	307	1765
	Male Inspector	1458	
,, Notices Served (Male Inspector)			104
,, ,, Complied			46
* ,, Visits under Shop Hours Act (Male Inspector)			392
,, Notices Served and Complied			5
Re-Inspections of Work in Progress or Under Notice			319
Miscellaneous Visits (to Owners, Agents, &c.)			236

Nature of Defects.	Notices Served.	Notices complied.
Workshops Repaired	6	6
Dirty Workrooms	10	7
Damp, Defective Roof, &c.	5	4
Defective Ventilation	9	3
Defective Water Supply	3	3
Defective Cellars	—	—
Overcrowding	2	2
Insufficient or no Closet Accommodation	38	6
Defective Closets	7	4
Privy Nuisances	213	8
Untrapped Drains	2	2
Defective Drains	4	4
Defective or Short Slop Pipes	2	2
Directly connected with Sewer	2	1
Fire Escapes	15	12
Defective Chimneys	2	2
Accumulations	4	4

6 Gully Traps have been fixed and 15 Yards of Channel Tiles and Drain Pipes laid or re-laid.

TABLE No. 26.

SHOWING THE NUMBER OF BAKEHOUSES REGISTERED, VISITS MADE, AND DEFECTS REMOVED.

No. of Bakehouses on Register, December, 1903	359
,, ,, discontinued during 1904	7
,, ,, registered during 1904	11
,, ,, on Register, December, 1904	363
,, Visits paid	902
,, Notices served	28
,, ,, complied	19
Re-inspections of work in progress or under notice	88
Miscellaneous Visits (to Owners, Agents, etc.)	64

Nature of Defects.	Notices Served	Notices Complied
Bakehouses Repaired	6	6
Dirty Bakehouses	3	3
Damp, Defective Roof, etc.	6	5
Defective Ventilation	2	2
Accumulations	3	3
Defective Cellars	4	4
Directly connected with Sewer	1	1
Defective Closets	1	1
Untrapped Drains	6	4
Defective Drains	8	4
Defective or Short Slop Pipe	2	2

3 Gulley Traps have been fixed, and 10 yards of Channel Tiles and Drainage Pipes laid or re-laid.

District	No. on Register	Where Baking is Done.					Kind of Oven Used.				
		Living Room	Living Room and Kitchen	Out Kitchen	Cellar	Bakehouse	Ordinary	Special Iron	Gas	Brick	Stove
No. 1	82	31	12	13	8	18	27	48	10	7	1
,, 2	77	27	8	15	9	18	27	42	6	2	2
,, 3	85	20	23	23	5	14	17	52	17	4	1
,, 4	49	18	4	14	4	9	15	28	7	5	1
,, 5	70	24	20	9	2	15	29	39	16	1	1
Totals	363	120	67	74	28	74	114	211	56	19	6

TABLE No. 27.

RETAIL MILK SHOPS.

No. of Milk Shops on Register, December, 1903	350
,, ,, Discontinued during 1904	13
,, ,, Registered ,, ,,	27
,, ,, on Register, December, 1904	364
No. of Visits Paid	848
No. of Notices Served	21
No. of ,, Complied	20
Re-inspections of work in progress or under notice	67
Miscellaneous Visits (to Owners or Agents, etc.)	49

Nature of Defects.	Notices Served	Notices Complied
Houses Repaired	4	4
Dirty Houses	1	1
Damp, Defective Roof, etc.	2	2
Defective Ventilation	1	1
Defective Water Closets	1	1
New W.C. provided	1	1
Defective Cellars	2	1
Yards and Passages repaired and flagged	3	3
Directly connected with Sewer	1	1
Untrapped Drains	1	1
Defective Drains	2	2
Defective or Short Slop Pipes	2	2

2 Gulley traps have been fixed and 8 yards of Channel tiles and drain pipes laid or re-laid.

TABLE No. 28.

Showing the number of Smoke Observations taken and Inspections of Mill Lodges and Slaughter-Houses made during the years 1903-1904.

Fortnight ending		Smoke Observations.		Mill Lodges Inspections.		Slaughter-Houses Inspections.	
1903.	1904.	1903.	1904.	1903.	1904.	1903.	1904.
Jan. 17	Jan. 16...	21	3	196	200	137	155
,, 31	,, 30...	17	16	185	300	131	136
Feb. 14	Feb. 13...	29	6	140	278	155	126
,, 28	,, 27...	24	24	241	264	97	143
Mar. 14	Mar. 12...	27	22	111	269	99	139
,, 28	,, 26...	21	25	243	157	115	69
Apr. 11	Apr. 9...	10	...	113	91	60	61
,, 25	,, 23...	17	20	289	216	129	124
May 9	May 7...	10	18	245	299	143	144
,, 23	,, 21...	24	28	214	350	160	149
June 6	June 4...	16	13	163	235	133	124
,, 20	,, 18 ..	16	18	321	312	137	129
July 4	July 2...	26	31	244	337	165	158
,, 18	,, 16...	17	23	198	270	123	143
Aug. 1	,, 30...	23	21	274	364	141	126
,, 15	Aug. 13...	22	17	164	170	129	64
,, 29	,, 27...	14	14	262	300	99	108
Sep. 12	Sep. 10...	...	...	115	195	85	111
,, 26	,, 24...	15	11	214	286	55	113
Oct. 10	Oct. 8...	...	4	189	234	121	114
,, 24	,, 22...	15	9	231	165	108	86
Nov. 7	Nov. 5...	26	11	225	331	128	99
,, 21	,, 19...	5	...	241	251	105	113
Dec. 5	Dec. 3...	14	14	216	130	95	...
,, 19	,, 17...	11	20	222	122	127	...
,, 31	,, 31...	7	...	277	136	118	...
January 3, 1903 ...		...	...	...	...	...	...
Totals		427	368	5524	6262	3095	2734

TABLE No. 29.

HALF-HOURLY SMOKE OBSERVATIONS,

taken from December 31st, 1903, to December 31st, 1904.

Total Observations taken.	No Black Smoke.	Under 1 Minute.	Under 2 Minutes.	Under 3 Minutes.	3 and 4, both inclusive.	Over 4 Minutes.
368	91	70	81	56	61	9
Percentage ...	24·7	19·0	22·0	15·2	16·5	2·4

TABLE No. 30.

LIST OF FIRMS REPORTED TO HEALTH COMMITTEE DURING THE YEAR 1904.

NAME OF MILL	Where Situated	No of Boilers	Length of Boilers	Diameter of Boilers	Coal Consumption Weekly	No. of Boilers Working	Nature of Appliances Fixed.	How disposed of
			ft.	ft. in.	tons.			
Westwood	Washington Street	3	30	7 6	40	2	Procter's Sprinkling Stokers.....	Notice Served
Gresham.....	Main Road	4	30	7 0	40	3	Hollow Bridges	do. do.
Featherstall	Featherstall Road	3	30	7 6	35	2	No Appliances.....	do. do.
Boothill Brick Wks.	Boothill Lane	1	30	7 6	18	1	do. do. ...	Cautioned by Committee
Highfield Mill...	Chadwick Street ...	3 1	28 30	7 0 8 0	...	...	Broadbent's Louvre Doors.....	do. do.
Hathershaw ,,	Hollins Road	2	32	8 6	65	2	No Appliances.....	do. do.
Britannia ,,	Briton Street	2 3	30 30	7 6 7 0	85	4	do. do.	do. do.
Pine ,,	Sherwood Street...	5	30	8 0	75	4	Caddy's Tubular Bars, with Induced Draught	Fined 40/- and Costs
Highfield ,,	Chadwick Street...	3 1	28 30	7 0 8 0	...	...	Broadbent's Louvre Doors	Fined 10/- and Costs

TABLE No. 31.

SMOKE PROSECUTIONS DURING 1904.

No. of Firms Fined.	Amount of Fine.	No. of times previously prosecuted.
1	40/- and Costs	2
1	10/- ,,	2

TABLE No. 32.

NATURE OF SMOKE APPLIANCES IN USE IN THE BOROUGH OF OLDHAM, 1904.

Name of Appliances.	No. of Mills.	No. of Boilers.
Cass's Coking Machines	3	10
Dyson & Williamson's Coking Machines...	1	3
McDougall's do. ...	1	1
Bennis's Sprinkling Stokers	1	1
Proctor's do.	6	18
Meldrum Bros.' Forced Draught Furnace	5	5
Granger's do. do. ...	1	1
Wilton's do. do. ...	1	5
Broadbent's Louvre Air Regulators... ...	15	51
†Broadbent's Steam Pokers	1	6
Caddy's Induced Draught Furnace... ...	3	13
Caddy's Tubular Bars	5	16
Yates & Thom's Rocking Bars	5	12
Butterworth's Sectional Bars	6	33
Holden's Hollow Bars and Dead Plates	1	2
Hollow or Split Bridge Walls	6	12
Taylor's Patent Bridge Walls	1	3
†Whittle's Steam Injectors	1	7
Martin's Swing Doors	3	21
Sanger and Webster's Patent	1	2
Whitehead's Seating Blocks	4	9
	71	231

Where no Appliances are fixed—101 Mills; 234 Boilers. There are also about 70 Workshop Chimneys not on books.

†Not used at present.

TABLE No. 33.

SAMPLES OBTAINED UNDER THE "SALE OF FOOD AND DRUGS ACT."

Year.	Total.		Milk.		Butter.		Bread and Flour.		Other Groceries.		Wines, Spirits and Beer.		Sundries.	
	No. of Samples	Percentage Adulterated	No. of Samples	Percentage Adulterated	No. of Samples.	Percentage Adulterated	No. of Samples.	Percentage Adulterated.	No of Samples.	Percentage Adulterated.	No. of Samples.	Percentage Adulterated.	No. of Samples.	Percentage Adulterated.
1876	74	27·0	38	42·1	7	...	6	...	23	17·4	...	...	...	...
1877	81	23·4	34	26·5	...	...	21	...	...	...	20	50·0	6	...
1878	74	25·7	55	21·8	..	..	...	...	12	8·3	6	100·0	1	...
1879	77	14·3	54	20·4	...	...	12	...	6	...	3	..	2	...
1880	87	21·8	43	27·9	8	12·5	8	...	22	18·2	6	33·3	...	...
1881	100	10·0	67	10·4	13	...	...	...	10	10·0	7	28·6	3	...
1882	100	19·0	44	22·7	15	33·3	4	...	17	...	13	30·8	7	...
1883	101	12·9	43	16·3	8	37·5	2	...	20	..	18	16·6	10	..
1884	85	8·2	47	2·1	11	18·2	...	..	8	37·5	8	12·5	11	...
1885	63	15·9	43	18·6	17	11·7	...	...	3	..	..	...	...	...
1886	62	9·7	40	5·0	9	1·1	.	...	13	23·1	..	...	...	...
1887	75	8·0	57	8·8	4	...	4	...	6	16·6	4	..	...	...
1888	90	8·9	70	8·6	4	25·0	...	...	4	25·0	8	...	4	...
1889	98	6·1	80	6·2	5	20·0	...	..	4	..	6	...	3	...
1890	98	6·1	75	6·6	7	...	...	.	6	16·6	4	...	6	...
1891	119	5·9	75	4·0	13	23·1	...	..	27	...	4	25·0	...	...
1892	90	1·1	68	1·5	3	...	...	...	7	...	4	...	8	...
1893	106	10·4	84	8·3	7	42·8	...	...	6	...	3	33·3	6	..
1894	139	2·1	83	3·6	18	...	6	.	26	...	3	.	3	...
1895	147	6·1	120	5·0	11	...	...	...	1	...	6	...	9	33·3
1896	154	6·5	138	6·5	9	..	...	...	1	...	6	16·6	...	...
1897	169	3·0	150	2·0	8	25·0	...	...	7	...	.	.	4	...
1898	75	4·0	61		14	21·4	.	...	...	...	..	..	...	
1899	86	4·6	59	1·7	27	11·1	...	...	..	...	..	..	...	...
1900	127	12·6	72	8·3	29	*24·1	...	...	8	...	18	16·6	.	...
1901	155	7·1	109	6·9	34	11·8	...	...	8	...	...	...	4	...
1902	174	2·3	118	1·7	26	3·8	...	...	23	4·3	5	...	2	...
1903	201	7·0	149	2·7	20	x30·0	...	...	23	8·7	9	22·2	..	...
1904	237	9·7	161	5·0	13	x61·5	...	...	41	12·2	22	9·1	...	...

* Excess Water.

x Two of these samples were not taken under the Food and Drugs Act.

TABLE No. 34.

MAGISTERIAL PROCEEDINGS, 1904.

No. of Cases.	Particulars of Complaint.	How Disposed of.	Penalties. £	s.	d.
2	Smoke Nuisance ..	One fined 40/- and costs and one 10/- and costs	2	10	0
1	Failing to Notify Small-pox	Fined 10/- and costs ...	0	10	0
2	Milk Adulteration	One fined 10/- and costs and one withdrawn ...	0	10	0
2	Butter Adulteration.....	No Appearance. Warrant issued	...	...	...
2	Unlabelled Margarine ...				
1	Vinegar Adulteration ...	Fined 10/-.....	0	10	0
2	Coffee Adulteration	One fined 2/6 and costs and one withdrawn ...	0	2	6
12		£	4	2	6

FOOD INSPECTOR'S REPORT.

Visits to Markets	832
Do. Cattle Wharves...	973
Do. Meat Shops	4,490
Do. Fish Shops	713
Do. Fruit and Vegetable Shops	1,688

SLAUGHTER HOUSES.

VISITS MADE AND DEFECTS REMEDIED.

No. on Register, December, 1903	56
No. lapsed during 1904	1
No. newly licensed during 1904	1
No. on Register, December, 1904	56

Nature of Defects.	Notices Served.	Notices Complied.
Defective Manure Pit	1	1
Without Name Plate	7	7
,, Copies of Bye-Laws	11	11
,, Refuse Receptacles	1	1
Defective Floor	2	2
Dirty	2	2

FARMS, COWSHEDS, AND DAIRIES.

VISITS MADE AND DEFECTS REMEDIED.

No. of Farms on Register, December, 1904	71
No. of Cowsheds ,, ,, ,, ...	2
No. of Dairies ,, ,, ,, ...	73

Nature of Defects.	Notices Served.	Notices Complied.
Dirty Shippon	2	2
Do. Pigsty	1	1
Blocked Drains...	2	2
Defective Floors	2	2
Do. Water Supply	2	1
Do. Privy...	1	1
Do. Drain	1	1
Untrapped ,, ...	1	1
Waste Pipe connected with Drain	1	1
Dampness	1	1

The number of the Shippons in connection with the Farms and Cowsheds, and the amount of cubic space per head :—

Total number of Shippons, 133.

	No. of Skippons.
200 cubic feet and under 300 cubic feet per head	9
300 ,, ,, 400 ,, ,, ...	35
400 ,, ,, 500 ,, ,, ...	43
500 ,, ,, 600 ,, ,, ...	20
600 ,, ,, 700 ,, ,, ...	8
700 ,, ,, 800 ,, ,, ...	4
800 ,, ,, 900 ,, ,, ...	1
900 ,, ,, 1000 ,, ,, ...	0
1000 ,, ,, 1100 ,, ,, ...	1
	121
Number not yet measured	12
Total ...	133

SUMMARY.

	Visits paid.	Notices served.	Notices complied with.
Slaughterhouses	2,592	24	24
Farms	187	9	9
Dairies	185	5	4

DISEASED OR UNSOUND FOOD DESTROYED.

	Tons.	Cwts.	Qrs.	Lbs.
3 Oxen	0	17	2	12
8 Sheep	0	4	3	27
18 Pigs	1	7	0	9
3 Calves	0	1	2	3
98 Rabbits	0	2	1	14
19 Poultry	0	1	3	4
Meat	2	6	3	6
Offal	5	7	2	12
Fish	1	14	1	6
Fruit	1	12	1	14
Total	13	16	1	23

The following is a summary of diseased, etc., animals reported to or found by the Meat Inspector during the year :—

Diseased Conditions.	No. Reported.	No. Found by Inspector.	Total.
Tuberculosis	93	75	168
Hydatids	2	33	35
Pleuritis	1	6	7
Injured in transit	10	9	19
Smothered	4	4	8
Overkept Foods	25	144	169
Liver flukes	0	16	16
Strongylus	0	5	5
Fevered Meat	2	0	2
Garget	1	4	5
Actinomycosis	0	1	1
Nephritis	2	0	2
Starved	11	6	17
Staggers	1	0	1

INSPECTORS' ANNUAL REPORT, 1904.

Total Number of Reports of Nuisances and Notices Served	1982
Total Number of Notices complied with	1538
Total Number of Notices complied with Order of Committee in 1904	359
Number of Complaints Received and Visited	673
Re-Inspection of Nuisances under Notice	6892
Number of Cases dealt with by Health Committee in 1904 ...	445
Number of Cases remaining unabated	6
Number of Cases dealt with by the Magistrates in 1904	12

House-to-House Inspection	—
Total Number of Houses Inspected on Complaint	370
Houses Repaired...	38

	Notices Served.	Notices Complied with
Dirty Houses	52	37
Damp, Defective Roof, &c....	458	389
Defective Ventilation	22	11
Defective Cellars	42	48
Privy Nuisances	679	431
Ashpits	84	54
Defective Water Supply	223	176
Overcrowding	4	3
Unfit for Habitation	8	3

DRAINAGE DEFECTS.

	Notices Served.	Notices Complied with
Blocked Drains	489	475
Defective Drains	218	181
Gully Traps improperly laid	...	...
Drain inlets untrapped or defectively trapped	88	128
Waste Pipes and Sloppipes directly connected with drain	32	28
Waste Pipes improperly trapped	2	1
Slop Pipe, defective or improperly ventilated	159	141
Defective Water Closets	24	21
Defective Waste Water Closets	524	523
New Water Closets Provided	42	8

No. of Smoke or other Tests, 122. No. of Houses Tested, 139.
No. of Defects found, 60. 771 yards of Channel Tiles and Drainage Pipes have been laid or re-laid during the year.
Traps fixed, 129. Ventilating Grids, 4.
Houses connected with Main Sewer, 12.

	Visits Paid.	Notices Served.	Notices Complied with
Bakehouses	977	28	19
Dairies and Cowsheds	924	21	10
Farms	121	...	...
Pigsties	951	..	...
Slaughter Houses	2734	..	...
Offensive Trades	1070	12	12
Mill Lodges	6262	14	14
Factories and Workshops	1458	104	46
Shop Hours Act	394	5	5

Inspections under Contagious Diseases (Animals) Act	1
Samples taken under Food and Drugs Act	234
Letters written to Property Owners or Agents, &c.	53
Miscellaneous Visits, &c	2924
Privies inspected	7526
New Privies built	4
Ashpits built, or new Ashcans provided	37

Yards and Passages Repaired and Flagged	39
Erections in Yards reported	2
Defective Urinals	5
Accumulation of Offensive Matter	102
Carcases of Animals in Water	20
Stagnant Water	18
Manure Heaps	18
Manure Pits built	1
Poultry in Houses	4
Dust and Fly from Mills	1
Low or Defective Chimneys	11
Dangerous Places reported	53
Coal Gas Nuisances and Escapes reported	5
Dead Bodies removed to Mortuary	26
Fire Escapes	20

Visits to Cases of Infectious Diseases	1971
Visits to Cases of Phthisis	4
Visits to Deaths under 1 year of age	537
Cases removed to Hospitals	699
Houses Stripped or Cleansed after Infectious Disease	116

HOUSES AND CLOTHING DISINFECTED, 1904.

Number of Houses Disinfected	1123
Number of Rooms do.	2013
Number of lots of Clothing	1102
Number of Articles do.	16895
Number of Articles destroyed	181

CLOTHING, &c., 1903-1904.

Articles.	Disinfected.		Destroyed.		Totals.	
	1903.	1904.	1903.	1904	1903.	1904.
Blankets	1232	1601	1	1	1233	1602
Sheets	827	1224	15	5	842	1229
Pillows	1478	2393	22	15	1500	2408
Bolsters	700	1141	3	5	703	1146
Quilts...	1263	2075	3	2	1266	2077
Mattresses	58	105	40	35	98	140
Beds	968	1592	39	52	1007	1644
Carpets	7	40	2	2	9	42
Rugs	105	157	...	2	105	159
Curtains...	53	190	13	...	66	190
Clothes	2502	5554	22	56	2524	5610
Sundry Articles ...	359	823	39	6	398	829
Total	9552	16895	199	181	9751	17076

SANITARY DEPARTMENT, 1904.

RHODES BANK.

Number of Sanitary Pans in the Borough	... ...	14524
Do. Cesspools, &c., in the Borough	... ...	25
Do. Water Closets do.	... ...	2770
Do. Waste-water Closets do.	... ...	11813
Do. Latrines do.	... ...	1420
Do. Ashpits do.	... ...	9513
Do. Ash Cans, &c. do.	... ...	6721
Do. Houses represented	... ...	34260
Do. Mills, Workshops, &c. do.	... ...	549
Do. Churches, Schools, &c. do.	... ...	207

NIGHTSOIL DEPARTMENT.

Number of Sanitary Pans Emptied during the night	... ...	784370
Do. Cesspools, &c., do. do.	... ...	14
Do. Collections of Butchers' Offal during the night	...	4030
Do. do. Fish Offal do.	...	11968
Do. Loads of Excreta collected	...	8178
Do. do. Butchers' Offal collected	...	617
Do. do. Fish Offal collected	...	705
Do. do. Shoddy Dirt collected	...	3708
Do. Tons of Manure sent out from Higginshaw	... ...	14062
Do. do. do. Bower Clough	... ...	110

ASHES DEPARTMENT.

Number of Ashpits Emptied during the day	... ...	38491
Do. Ash Cans do. do.	... ...	328362
Do. Loads of Ashes taken to Destructors	... ...	25770
Do. do. do. Corporation Tips	... ...	4702
Do. do. do. Other Tips	... ...	2281
Do. do. Clinker removed	... ...	5549
Total No. of Loads removed	...	38302

DESTRUCTORS.

Quantity of Ashes, Fish Offal and Garbage consumed :—	Tons	Cwt
Rhodes Bank Destructor	15193	9
Robin Hill ,, ...	7556	12
Hollinwood ,, ...	7092	19
Total	29843	0

Quantity of Mortar Sold :—	Tons	Cwt.
Rhodes Bank Destructor	946	12
Robin Hill ,, ...	544	14
Hollinwood ,, ...	543	13
Total	2034	19

FLAG MAKING DEPARTMENT.

	Sq. Yds.
Quantity of Flags made	22010
Do. sold	13721

LIST OF MIDWIVES

REGISTERED under THE MIDWIVES' ACT TO PRACTICE in the BOROUGH OF OLDHAM.

JUNE 1st, 1905.

OLDHAM:

W. E. Clegg, Printer, Stationer, Etc., 30, Market Place, and Peter Street.

LIST OF MIDWIVES.

Name	Address.	Number of Certificate	Date of Certificate.	
Andrew, Hannah	43, Limeside Street	484	Dec. 17/1903	
Ashton, Mary Ann	476, Manchester Road	775	Jan. 28/1904	
Barker, Margaret Hannah	2, Crown Street	167	Nov. 26/1903	
Bennett, Francis	21, Lady Street	3818	April 28 1904	(1)
Britland, Mary	355, Rochdale Road	58	Oct. 29/1903	(1)
Broadbent, Mary	Vineyard Street	618	Jan. 28/1904	
Brown, Ellen	9, Cheviot Street	7100	Sept. 29/1904	
Brownhill, Betsy	38, Main Road	482	Dec. 17/1903	
Buckley, Mary	456, Lees Road	485	Dec. 17/1903	
Bullows, Hannah	567, Hollins Road	894	Jan. 28/1904	
Bunting, Mary Ellen	3, Welbeck Street	4650	May 26/1904	
Cecil, Elizabeth Ellen	27, Railway Road	1951	Feb. 25/1904	
Challinor, Elizabeth	26, Dickenson Street	480	Dec. 17/1903	
Chisholme, Mary Elizabeth	Nursing Home, Union Street West	12797	Jan. 26/1905	(2)
Clarkson, Emily	Nursing Home. Union Street West			(2)
Cope, Elizabeth	5, Lower Edward Street.	2304	Feb. 25/1904	
Cryer, Hannah Rowbottom	17, Emily Street	2305	Feb. 25/1904	
Denton, Jane Ann	212, Oldham Rd., Royton	18831	April 27/1905	
Dewhurst, Elizabeth	73, Lee Street	1161	Jan. 28/1904	
Dixon, Ann	14, Shaw Road	60	Oct. 29/1903	
Downs, Ann Elizabeth	185, Moorhey Street	162	Nov. 26/1903	
Dyson, Mary	12, Spring Street	164	Nov. 26/1903	(1)
Ford, Ann	170, Featherstall Rd., S.	6978	Sept. 29/1904	
Foster, Sarah	17, Sarah Street	5758	June 30/1904	
Green, Ann	207, Greenacres Road			(1)
Green, Mary Alice	7, Darwin Street	61	Oct. 29/1903	(1)
Greenall, Lydia	690, Chamber Road			
Guest, Alice	87, Wrigley Street	75	Oct. 29/1903	
Hamer, Martha Ann	14, Cornhill Street	62	Oct. 29/1903	
Haslam, Alice	175, Coldhurst Street	3941	April 25/1904	
Heywood, Caroline	406, Hollins Road	76	Oct. 29/1903	
Heywood, Matilda	382, Lees Road	77	Oct. 29/1903	
Hill, Ann Lyndon	41, Carnarvon Street Hollinwood	481	Dec. 17/1903	

LIST OF MIDWIVES—Continued.

Name.	Address.	Number of Certificate	Date of Certificate	
Holden, Elizabeth	105, Greenwood Street	165	Nov. 26/1903	
Holden, Polly	Nursing Home, Union Street West	13650	Feb. 23/1905	
Hutchings, Margaret	1, Belmont Street	11858	Jan. 26/1905	(2)
Hyde, Mary Alice	228, Greenacres Road			(2
Jackson, Sarah Jane	9, Norman Street	63	Oct. 29/1903	(1)
Jones, Mary Catherine	Nursing Home, Union Street West	2849	March 24/1904	
Kay, Ellen	264, Shaw Road			(1)
Kershaw, Hannah	20, Minton Street	1712	Feb. 25/1904	
Kershaw, Sarah Ann	106, Rochdale Road	3354	Mar. 24/1904	(1)
Lees, Jane	100, Featherstall Rd., N.	2582	Mar. 24/1904	
Lisset, Annie	49, Eldon Street	9633	Nov. 24/1904	
Longden, Alice	12, John Booth St., Lees.	306	Nov. 26/1903	
Markwell, Elizabeth Ellen	2, Hesse Street	10733	Dec. 22/1904	(1)
Mayall, Eliza Ann	11, Hesse Street	142	Nov. 26 1903	
Meadowcroft, Jane	15, Robson Street	5759	June 30/1904	
Mills, Mary Ellen	235, Ashton Road	483	Dec. 17/1903	
Morris, Charlotte	Nursing Home, Union Street West	13654	Feb. 23/1905	
Morris, Mary	53, Block Lane	2761	Mar. 24/1904	
Nichols, Hannah	125, Honeywell Lane	770	Jan. 28/1904	
Nichols, Rachel	333, Ashton Road	166	Nov. 26/1903	
Nursey, Maud Alice	Nursing Home, Union Street West			(2)
Pearson, Rose Hannah	7, Walshaw Street	159	Nov. 26/1903	(1)
Platt, Ann	4, Mitchell Street	2763	Mar. 24 1904	
Platt, Susan	3, Barton Street	2764	Mar. 24/1904	
Potts, Mary	51, Station Rd., Cheadle Hulme, Stockport	78	Oct. 29/1903	(2)
Radakin, Catherine	13, Davies Street	79	Oct. 29/1903	
Radcliffe, Maria	378, Chadderton Road			
Rigby, Lucy	72, Chadderton Road	80	Oct. 29/1903	
Roberts, Mary Ann	4, Flora Street	591	Dec. 17/1903	
Rowe, Sarah	92, King Street			(1)
Russell, Mary	4, Mossley Road, Ashton	2193	Feb. 25/1904	

LIST OF MIDWIVES—CONTINUED.

Name.	Address.	Number of Certificate	Date of Certificate.
Schofield, Hannah	7, Bradbury Street	3803	April 28/1904
Shaw, Mary Ann	5, Old Lane, Austerlands	505	Dec. 17/1903
Shepherd, Elizabeth	83, Derby Street	1866	Feb. 25/1904
Simpson, Hannah Maria..	81, Acre Lane	81	Oct. 29/1903
Smith, Ada	Nursing Home, Union Street West		
Smith, Charlotte	12, Higginshaw Road ...	64	Oct. 29/1903
Taylor, Mary Ann	3, Canal St., Hollinwood	2592	Mar. 24/1904
Whalley, Mary	46, Spencer Street	216	Nov. 26/1903 (3)
White, Hannah	440, Ashton Road.....	151	Nov. 26/1903
Whittaker, Sarah	31, Eldon Street	609	Dec. 17/1903
Whyatt, Hannah	6, Prince Albert Street...	11065	Dec. 22/1904
Wright, Ann	646, Hollins Road ...	1216	Jan. 28/1904
Wright, Kitty	92, Bolton Street	65	Oct. 29/1903
Wright, Mary	782, Huddersfield Road..	5444	June 30/1904
Wrigley, Alice	58, Godson, Street ...	518	Dec. 17/1903

(1) Holds the Certificate of St. Mary's Hospital, Manchester.
(2) Holds the Certificate of the London Obstetric Society.
(3) Holds the Certificate of the Southern Hospital, Manchester.

EXTRACTS FROM THE MIDWIVES' ACT:—

"Any woman who, not being certified under this Act, shall take or use the name or title of Midwife (either alone or in combination with any other word or words) or any name or title implying that she is certified under this Act or is a person qualified to practice Midwifery, shall be liable, on conviction, to a fine not exceeding five pounds."

"The Certificate under this Act shall not confer upon any woman any right or title to grant any Medical Certificate, any Certificate of Death or Still-birth, or to undertake the charge of cases of abnormality or disease in connection with parturition."

"Every woman certified under this Act shall, before commencing to practise as a Midwife in the Borough, give notice to the undersigned of her intention to do so, and shall give a like notice in the month of January in every year during which she continues to practise within the Borough."

County Borough of Oldham.

THE

TREATMENT

— OF —

OLDHAM SEWAGE

During the Year 1904.

JAMES B. WILKINSON,
M.D., C.M., D.P.H., F.C.S.,
Medical Officer of Health.

Town Hall, Oldham.

OLDHAM SEWAGE WORKS.

POPULATION - - -	139,497.
AREA - - - - - - -	4,729 acres.

	Dec., 1903.	Dec., 1904.
No. of Waste Water Closets in Borough -	10,573 . .	11,846
,, ,, Trough Closets - ,, ,,	1,203 ...	1,420
,, ,, Clean Water Closets ,, ,,	2,669 ...	2,797
Total Water Closets -	14,445	16,063
,, ,, Sanitary Pans in Borough - -	15,696 ...	14,497

Increase in number of Water Closets -	1,618
Decrease in number of Sanitary Pans -	1,199

The system in vogue for treating the Oldham Sewage remains the same as in previous years except for the gradual increase in the area of filter beds, and consists of—

(1) Two Detritus Tanks, with coarse and fine screens, each fitted with revolving rakes and chains, and buckets for removing the detritus deposited in these tanks.

(2) Twelve Sedimentation Tanks, 128 feet long by 36 feet wide and 6 feet deep, each having a capacity of about 176,000 gallons. One of these is used as a covered in Septic Tank.

(3) Thirty-two Filter or Bacterial Contact Beds, of an area of about $10\frac{1}{4}$ acres.

All the sewage reaching the works passes through both Detritus and Sedimentation Tanks, and then through the contact beds as far as their capacity will allow.

The sewage undergoes sedimentation during the continuous flow through the tanks, and no chemicals were used, except for a very short period during the hot weather in the summer, when the sewage became very concentrated. The beds are used as single contact beds, remaining full, as a rule, about three hours, and are usually filled twice daily, except Sunday.

During the year three new filter beds have been completed, and others are in course of construction; the additional area thus gained during the year is about 6,000 square yards, capable of dealing with about half a million gallons of sewage per day.

These beds have all been filled with crushed and screened clinker from the Refuse Destructors in the town, with a very small proportion of screened mill ashes.

The former material appears to give very satisfactory results, and does not show the same tendency as the mill ashes to disintegrate or to grow weeds on the surface.

The sewage during the year has shown a tendency to increase in quantity, and there is also a considerable increase in the amount of organic material which it contains, the average analysis giving 4·2 grains of oxygen instead of 3·6 grains consumed in the four hours' test.

The largest amount of sewage which reached the works on one day was over 24,440,000 gallons on August 22nd, and the smallest flow was during the same month, on the 7th, when only 1,400,000 reached the works.

When it is considered that the contents of about 55,000 sanitary pans, which previous to the year 1904 were conveyed to the depôts, now enter the sewers and come to the works, it will be expected that the sewage must be considerably fouler, and it is found that the standard has considerably risen in this respect. The worst sewage, taking the day's average, was on July 18, when it reached 15·6 grains of oxygen consumed in the four hours' test.

Owing to the insufficiency of filter bed area and the pressure to treat as much of the sewage as possible, I am of opinion that the beds have been somewhat overworked, and the capacity of some of the beds has, in consequence, been diminished and their working life shortened. This is not an economical treatment, though it has been absolutely necessary, and it will ere long be necessary to renew these beds at some cost.

Generally the resulting effluent of the sewage, completely treated, has been satisfactory, and the analyses show that only on very few occasions has the limit been exceeded, and then during a continuation of very dry and hot weather, chiefly in July, August, and September.

Throughout most of the year simple sedimentation in the tanks has been the method adopted previous to sending the sewage on to the beds, but in July, owing to the rapid septic action, which took place in the tanks, it was found necessary, for a few weeks, to use precipitants to induce a more rapid precipitation of the solids, and thus allow fewer tanks to be used. As soon as the storm water can be separately dealt with an improved method of working the tanks can be adopted, and I have indicated to the Committee a method of working the tanks which I consider would be a great improvement not only in facilitating the

pressing but also in the nature of the tank effluent supplied to the filter beds.

This method consists in working the tanks in sequence, so that all the heavy solids are removed while fresh, and only the tank effluent allowed to undergo a septic action. The tanks can be arranged temporarily for a trial of this method at a cost of a few pounds.

The treatment of the storm water is a matter which has received considerable attention during the year, but the method to be adopted has not yet been decided. In my opinion no method will be found satisfactory which does not provide large storage facilities to receive the first rush of sewage after a storm. This sewage is almost invariably exceedingly foul and contains a large amount of solids, and unless time is allowed for these solids to settle in the tanks through which it flows, the filters where it is treated will very soon become clogged. I have reason to believe that in a future report of the Royal Commission on Sewage this arrangement will be recommended.

Both the provision of some method for treating the storm water and the supply of additional filter beds are matters which require urgent attention. The extension of the Waste Water Closet system without increased facilities for dealing with the fouler sewage only tends to clog the beds, and will necessitate, at some considerable cost, their renewal.

The total amount of sewage which has reached the works during the year is about 1,682,954,000 gallons, or a daily average of 4,610,833 gallons, and the total cost of treatment was £2,451 15s. 11d. This sum is equal to a cost of £1 9s. 2d. per million gallons, compared with £1 4s. 9d. in the year 1903.

The total cost of treatment during 1904 was £98 less than in 1903, but owing to the excessive rainfall in 1903 the cost per million gallons is higher.

The total amount of sludge pressed at the works during the year was 5,898 tons, or 142 tons more than in the previous year, and about 60 tons less lime has been used. In addition two large tanks full of thin sludge have been removed from the sewage without pressing.

The table below shows the amount of pressed sludge (of about 50 per cent. moisture) dealt with at the works :—

	Weight of Pressed Sludge containing Slaked Lime.	Weight of Quick Lime.		
	Tons	Tons	Cwts.	Qrs.
January	472	27	11	0
February	456	31	0	2
March	550½	30	11	3
April	671½	39	4	2
May	594¼	38	12	0
June	522½	27	5	0
July	429½	22	2	0
August	418¼	24	18	0
September	467½	21	15	0
October	388½	20	15	0
November	439	21	18	0
December	488½	20	15	0
	5898	326	7	3

Mr. Valentine has furnished me with a summary of the analyses, which is contained in the following tables. Throughout the year he has continued his researches in connection with the extraction of Fat from the sludge, but informs me that he has little to add to the results given in last year's report, and he is confirmed, by the further experiments, in his opinion that it may be profitably extracted from the Oldham sludge.

No. I. GROUP.

No. 1 Group consists of Filters Nos. 1, 2, 3, 4, with a total area of 5,300 square yards.

No. 1 Filter was filled for the first time in Sep., 1897. Depth of Filter, 2ft. 9in.
No. 2 ,, ,, ,, Oct., 1897. ,, 2ft. 9in.
No. 3 ,, ,, ,, Oct., 1897. ,, 2ft. 3in.
No. 4 ,, ,, ,, Oct., 1897. ,, 2ft. 6in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·53	·34	·55	·75	·78	·90	·99	·78	·84	·79	·49	·48	·68
Percentage of Purification from Tank Effluent to Filtrate	79⅓	80¼	77	76⅓	73½	73½	75	72½	73	73	79⅓	79	76
Total Percentage of Purification from Sewage to Filtrate	87⅓	87	83¾	84½	81¼	82	82½	82½	82	82	85½	85¾	84

The average amount of Albuminoid Ammonia present (121 experiments) was ·19 grains per gallon.

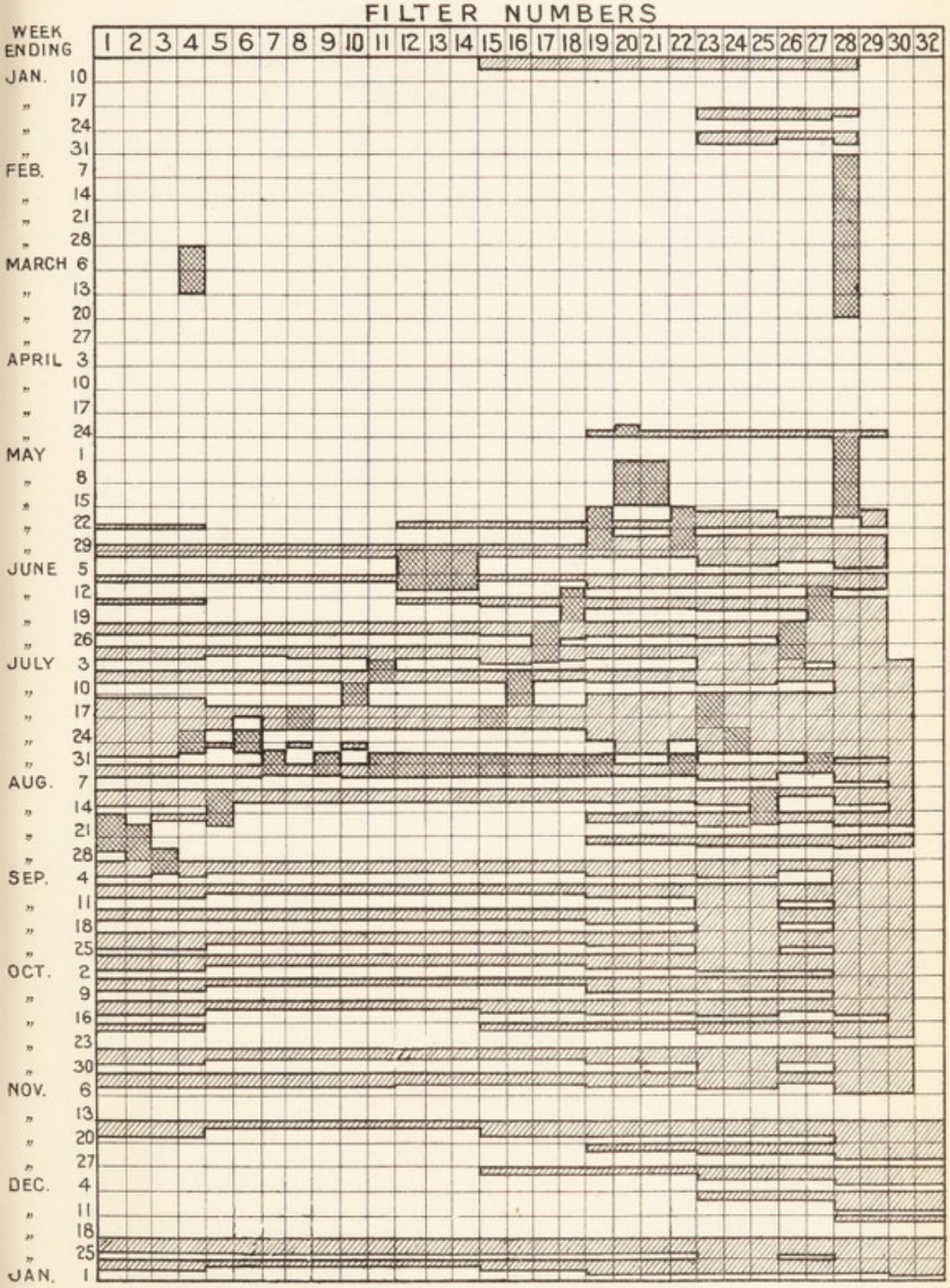
The average amount of Nitrates, estimated as NH_3 (149 experiments), was ·26 grains per gallon.

486 samples were incubated, of which 10 were doubtful, and 19 became putrid.

CHART

Shewing the amount of rest, and rate of working of each Filter

DURING THE YEAR 1904.



A Blank space ☐ indicates that a filter has been filled twice daily.
A space marked ▨ " " " " " " " once "
A space marked ▩ " " " " " rested entirely.

Filter 28 rests from Feb. 1st to March 21st owing to repairs on under drains.
" " " " Apr. 25th " May 18th " " constructional work.
Filters 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 22, 27 rest from July 27th to Aug. 3rd on account of constructional work on new tank effluent carrier.

Filter 29 began to work on March 21st
" 30 " June 30th
" 32 " " " " Nov. 7th

No. II. GROUP.

No. II. Group consists of Filters Nos. 5, 6, 7, with a total area of 4,726 square yards.

No. 5 Filter was filled for the first time in Mar., 1898. Depth of Filter, 2ft. 3in.
No. 6 ,, ,, ,, Apr., 1898. ,, 2ft. 3in.
No. 7 ,, ,, ,, May, 1898. ,, 2ft. 3in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·53	·33	·53	·70	·71	·88	·99	·80	·83	·74	·49	·46	·67
Percentage of Purification from Tank Effluent to Filtrate	79¼	80⅓	78	76⅓	75½	74⅓	75	71½	75	74½	79⅓	79⅔	76
Total Percentage of Purification from Sewage to Filtrate	87⅓	86¾	84¼	84½	82½	83	82¾	81¾	83¼	82¾	85½	85¾	84

The average amount of Albuminoid Ammonia present (139 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (172 experiments), was ·25 grains per gallon.

510 samples were incubated, of which 13 were doubtful, and 10 became bad.

No. III. GROUP.

No. III. Group consists of Filters Nos. 8, 9, with a total area of 2,951 square yards.

No. 8 Filter was filled for the first time in June, 1898. Depth of Filter, 2ft. 6in.

No. 9 ,, ,, ,, Aug., 1898. ,, 1ft. 9in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·52	·33	·53	·71	·72	·92	1·03	·78	·90	·80	·49	·48	·68
Percentage of Purification from Tank Effluent to Filtrate	80	81	78	77½	75⅓	73¼	73¾	72¼	73	72⅓	79¼	78¾	77
Total Percentage of Purification from Sewage to Filtrate	87¾	87⅓	84¼	85	82½	82	82	82¼	81¾	81⅓	85¾	85½	84

The average amount of Albuminoid Ammonia present (130 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (160 experiments), was ·27 grains per gallon.

510 samples were incubated, of which 13 were doubtful, and 15 became bad.

No. IV. GROUP.

No. IV. Group consists of Filters Nos. 10, 11, with a total area of 2,420 square yards.

No. 10 Filter was filled for the first time in Sep., 1898. Depth of Filter, 2ft. 3in.

No. 11 ,, ,, ,, Nov.,1898. ,, 2ft. 0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·53	·33	·53	·72	·75	·94	1·09	·83	·93	·85	·50	·49	·71
Percentage of Purification from Tank Effluent to Filtrate	79⅓	81	78	77	74¼	72⅔	72¼	70½	72	70½	79	78½	75½
Total Percentage of Purification from Sewage to Filtrate	87½	87⅓	84¼	85	81¾	81½	81	81	81	80	85½	85½	83⅓

The average amount of Albuminoid Ammonia present (136 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (160 experiments), was ·25 grains per gallon.

509 samples were incubated, of which 17 were doubtful, and 16 became bad.

No. V. GROUP.

No. V. Group consists of Filters Nos. 12, 13, 14, with a total area of 4,259 square yards.

No. 12 Filter was filled for the first time in July, 1901. Depth of Filter, 3ft.0in.
No. 13 ,, ,, ,, Aug., 1900. ,, 3ft.0in.
No. 14 ,, ,, ,, Oct., 1900. ,, 3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·45	5·10	5·99	4·34	5·03	4·35	3·36	3·31	4·24
Tank Effluent.	2·56	1·71	2·38	3·16	3·01	3·43	3·94	2·79	3·32	2·90	2·35	2·25	2·82
Filtrate from Group	·56	·36	·54	·76	·82	·90	1·06	·76	·88	·79	·51	·48	·70
Percentage of Purification from Tank Effluent to Filtrate	77¾	79	76½	75⅔	72½	73½	74½	73	73½	72¾	78⅓	79	75½
Total Percentage of Purification from Sewage to Filtrate	86¾	86½	83¼	84	81½	82⅓	83	82⅔	82	81¾	85	85¾	83⅔

The average amount of Albuminoid Ammonia present (134 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (174 experiments), was ·26 grains per gallon.

511 samples were incubated, of which 13 were doubtful, and 16 became bad.

No. VI. GROUP.

No. VI. Group consists of Filters Nos. 15, 16, with a total area of 2,859 square yards.

No. 15 Filter was filled for the first time in Feb., 1901. Depth of Filter, 3ft.0in.

No. 16 ,, ,, ,, May, 1902. ,, 3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	6·12	4·34	5·03	4·35	3·36	3·31	4·22
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	4·01	2·79	3·32	2·90	2·35	2·25	2·82
Filtrate from Group.....	·54	·36	·59	·78	·84	1·08	1·20	·82	1·01	·89	·47	·48	·75
Percentage of Purification from Tank Effluent to Filtrate	78¾	79	75¼	75¼	71½	68⅓	70	71	69½	69¼	80	78¾	73¾
Total Percentage of Purification from Sewage to Filtrate	87⅓	86	82⅓	84	79¾	78¾	80¼	81¼	79¼	79¼	86	85½	82½

The average amount of Albuminoid Ammonia present (107 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (169 experiments), was ·23 grains per gallon.

488 samples were incubated, of which 24 were doubtful, and 28 became bad.

No. VII. GROUP.

No. VII. Group consists of Filters Nos. 17, 18, with a total area of 2,524 square yards.

No. 17 Filter was filled for the first time in July, 1902. Depth of Filter, 3ft.0in.

No. 18 ,, ,, ,, Sept., 1901. ,, 3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	6·12	4·34	5·03	4·35	3·36	3·31	4·22
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	4·01	2·79	3·32	2·90	2·35	2·25	2·82
Filtrate from Group	·54	·35	·60	·80	·84	1·02	1·23	·80	·97	·88	·48	·50	·75
Percentage of Purification from Tank Effluent to Filtrate	78¾	79¼	75	74⅔	71½	70¼	69¼	71⅔	70¾	69½	79⅓	78	73¾
Total Percentage of Purification from Sewage to Filtrate	87⅓	86¼	81¾	83¼	79⅔	80	79⅔	81¾	80¼	79½	85⅔	85	82½

The average amount of Albuminoid Ammonia present (109 experiments) was ·19 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (167 experiments), was ·22 grains per gallon.

488 samples were incubated, of which 17 were doubtful, and 30 became bad.

No. VIII. GROUP.

No. VIII. Group consists of Filters Nos. 19, 20, 21, 22, with a total area of 6,063 square yards.

No. 19 Filter was filled for the first time on May 28th, 1902. Depth of Filter, 3ft.0in.

No. 20	,,	,,	,,	Dec. 1st, 1902.	,,	3ft.0in.
No. 21	,,	,,	,,	Oct. 20th, 1902.	,,	3ft.0in.
No. 22	,,	,,	,,	May 1st, 1903.	,,	3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·56	·38	·59	·92	·98	1·24	1·33	·89	1·09	·94	·58	·56	·84
Percentage of Purification from Tank Effluent to Filtrate	78¼	77½	76¼	70¾	66¾	64	66⅓	68½	67¼	67¾	75	75	71
Total Percentage of Purification from Sewage to Filtrate	86⅔	85¼	82¼	80¾	76½	75½	77	79¾	77½	78½	82¾	83	80⅓

The average amount of Albuminoid Ammonia present (95 experiments) was ·21 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (132 experiments), was ·22 grains per gallon.

451 samples were incubated, of which 19 were doubtful, and 30 became bad.

No. IX. GROUP.

No. IX. Group consists of Filters Nos. 26, 27, with a total area of 2,503 square yards.

No. 26 Filter was filled for the first time on Jan. 26th, 1903. Depth of Filter, 3ft. 0in.

No. 27 ,, ,, ,, April 16th, 1903. ,, 3ft. 0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·71	·42	·66	1·02	1·03	1·25	1·40	·97	1·20	1·00	·58	·56	·90
Percentage of Purification from Tank Effluent to Filtrate	72	75¼	72	67⅔	65	63⅔	64⅓	65¾	64	65½	75	75	68¾
Total Percentage of Purification from Sewage to Filtrate	83	83½	80	78½	75	75½	75½	78	75⅓	77	82¾	83	79

The average amount of Albuminoid Ammonia present (66 experiments) was ·22 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (115 experiments), was ·28 grains per gallon.

450 samples were incubated, of which 22 were doubtful, and 30 became bad.

No. X. GROUP.

This Group consists of Filters Nos. 23, 24, 25, with a total area of 2,849 square yards.

No.23 Filter was filled for the first time on May 19th, 1903. Depth of Filter, 3ft.0in.
No.24 ,, ,, ,, July 8th, 1903. ,, 3ft.0in.
No.25 ,, ,, ,, July 29th, 1903. ,, 3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·86	·51	·74	1·06	1·15	1·36	1·56	1·08	1·34	1·09	·64	·58	1·00
Percentage of Purification from Tank Effluent to Filtrate	66½	70½	68¾	66⅔	61	60½	60½	61½	59½	62½	72¾	74	65½
Total Percentage of Purification from Sewage to Filtrate	79⅓	80	77⅔	78½	72¼	73¼	72⅔	75½	73	75⅓	81	82½	76¾

The average amount of Albuminoid Ammonia present (42 experiments) was ·22 grains per gallon.

The average amount of Nitrates, estimated as NH_3 (85 experiments), was ·21 grains per gallon.

411 samples were incubated, of which 25 were doubtful, and 43 became bad.

No. XI. GROUP.

This Group consists of Filters Nos. 28, 29, with a total area of 3,256 square yards.

No.28 Filter was filled for the first time on Nov. 13th, 1903. Depth of Filter, 3ft.0in.

No.29 ,, ,, ,, Mar. 21st, 1904. ,, 3ft.0in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	...	...	...	...	...	...	5·76	4·34	5·03	4·35	3·36	3·31	4·36
Tank Effluent.	...	...		...	...	...	3·95	2·79	3·32	2·90	2·35	2·25	2·93
Filtrate from Group	...	...	...	...	...	...	1·74	1·16	1·47	1·24	·77	·64	1·17
Percentage of Purification from Tank Effluent to Filtrate	...	...	...	...	...	...	56	$58\frac{3}{4}$	$55\frac{2}{3}$	$57\frac{1}{4}$	$65\frac{1}{2}$	$72\frac{1}{4}$	61
Total Percentage of Purification from Sewage to Filtrate	...	...	...	...	...	...	$69\frac{1}{2}$	$73\frac{3}{4}$	$70\frac{1}{3}$	$71\frac{3}{4}$	77	$81\frac{1}{3}$	74

The average amount of Nitrates, estimated as NH_3 (26 experiments), was ·14 grains per gallon.

184 samples were incubated, of which 12 were doubtful, and 17 became bad.

No. 30 FILTER.

No.30 Filter was filled for the first time on June 30th, 1904. Depth of Filter, 3ft.0in.

Area of Filter, 2,600 square yards.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	...	..	...	...	...	...	...	...	5·09	4·35	3·36	3·31	4·03
Tank Effluent.	...	..	...	...	...	..	..	...	3·39	2·90	2·35	2·25	2·72
Filtrate from Group	...	..	..	..	..	...	...	..	1·59	1·26	·86	·72	1·11
Percentage of Purification from Tank Effluent to Filtrate	..	...	...	..	...	..	...	...	53	56¾	63⅓	68½	60⅔
Total Percentage of Purification from Sewage to Filtrate	...	...	...	...	..	.	...	...	68¼	71¼	74¼	79	73¼

The average amount of Nitrates, estimated as NH_3 (18 experiments), was ·15 grains per gallon.

112 samples were incubated, of which 7 were doubtful, and 17 became bad.

B AND C FILTERS.

B and C Filters have a total area of 2,982 square yards.

B Filter was filled for the first time on Nov. 29th, 1898. Depth of Filter, 2ft. 6in.
C ,, ,, ,, Nov. 30th, 1898. ,, 2ft. 6in.

Grains of Oxygen absorbed per Gallon in Four Hours' Test.

Month.....	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Av'ge for Year
Sewage	4·20	2·58	3·33	4·85	4·12	5·10	5·76	4·34	5·03	4·35	3·36	3·31	4·20
Tank Effluent.	2·56	1·71	2·38	3·16	2·94	3·43	3·95	2·79	3·32	2·90	2·35	2·25	2·81
Filtrate from Group	·57	·36	·58	·79	·82	·86	1·13	·79	·86	·78	·46	·44	·70
Percentage of Purification from Tank Effluent to Filtrate	77½	79	76¼	75	72½	75	71¼	72¼	74	73	80½	80¼	75½
Total Percentage of Purification from Sewage to Filtrate	86⅓	86	82¾	83⅓	80½	83	80⅓	81⅔	82½	82	86⅓	86⅔	83½

The average amount of Albuminoid Ammonia present (10 experiments) was ·18 grains per gallon.

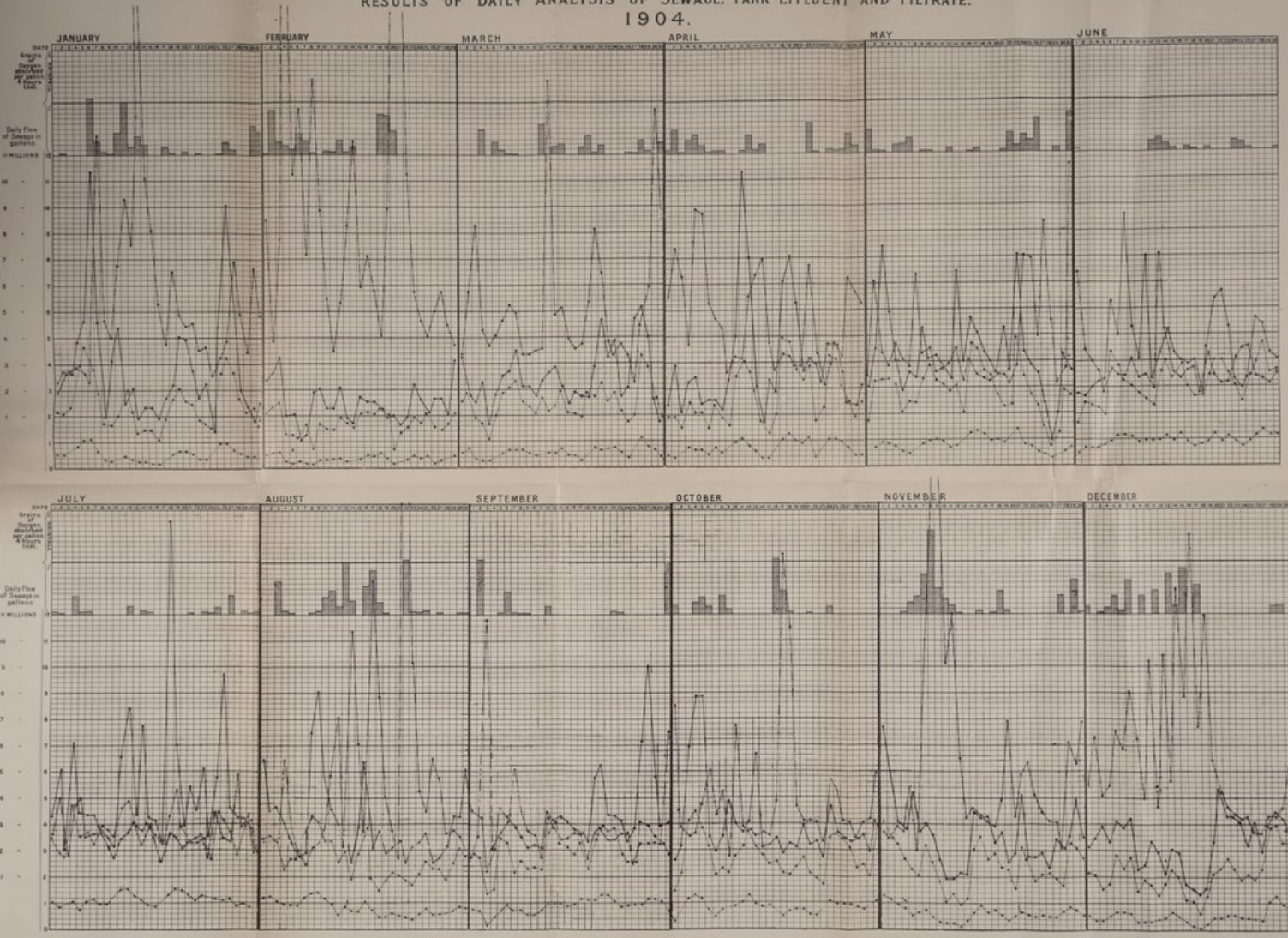
The average amount of Nitrates, estimated as NH_3 (64 experiments), was ·28 grains per gallon.

520 samples were incubated, of which 16 were doubtful, and 16 became bad.

OLDHAM CORPORATION SEWAGE WORKS.

RESULTS OF DAILY ANALYSIS OF SEWAGE, TANK EFFLUENT AND FILTRATE.

1904.



The Thick Line represents the amount of Oxygen absorbed by the SEWAGE *in 4 hours Test.*
The Thin - - - - - - - - - - - - TANK EFFLUENT - - - -
The Dotted . . . . . FILTRATE . . . .
The Daily flow is represented by

LIMIT OF IMPURITY ALLOWED BY MERSEY AND IRWELL JOINT COMMITTEE
1 GRAIN PER GALLON IN 4 HOURS TEST.