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REPORT

UPON THE

Health of Wolverhampton

FOR THE YEAR 1902,

BY

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Medical Officer of Health.

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MEDICAL OFFICER'S REPORT,

1902.

PREVALENCE AND PREVENTION OF INFECTIOUS DISEASE.

Table 2 gives the weekly numbers of cases of certain diseases certified by Medical Men under the Infectious Diseases Notification Act. The crosses represent the degree to which the disease heading those columns prevailed—these are only rough approximations. Any certificate detected as erroneous before the close of the week is not entered.

Table 1 gives the total number of cases about which enquiries were made and which were recorded; no erroneous cases are entered in this Table.

Small Pox.—Our last case was in June, 1900. In spite of a considerable prevalence in the country generally, we escaped this year until December 24th, when a case was detected in the tramp ward at the Workhouse, and at once removed to the Borough Hospital, where he died on January 3rd. On this same day (the last day of the statistical year of 53

weeks) another case was detected in a tramp and removed. Both these cases had been through infected districts in the North. The following are the particulars :—

Initial.	Sex and Age.	Vaccination.	Illness.
C	M. 49	Infancy. 3 marks, total area $1\frac{1}{8}$ square inch. Re-vaccinated 11 years ago, 1 mark, $\frac{1}{12}$ inch	Very debilitated, severe semi-confluent attack. Delirium and exhaustion. Died after ten days in Hospital
H	M. 49	Infancy. 1 mark, $\frac{1}{2}$ square inch	Rather severe attack, semi-confluent on face, profuse on body and limbs. Good recovery delayed by boils. 52 days in Hospital

Measles.—The quarterly cases of, and deaths registered as due to Measles since 1884 are as follows :—

	1884				1885				1886			
Cases	272	710	143	2	4	2	—	17	21	9	189	959
Deaths	11	66	20	1	1	—	—	—	—	—	8	103
	1887				1888				1889			
Cases	124	17	31	22	119	149	166	435	150	228	78	141
Deaths	19	4	7	1	9	6	5	19	10	11	11	8
	1890				1891				1892			
Cases	68	45	139	230	73	4	11	275	501	415	82	33
Deaths	3	10	5	14	5	—	—	20	21	16	3	1
	1893				1894				1895			
Cases	21	18	106	248	530	294	15	4	2	83	215	549
Deaths	6	—	5	10	46	27	—	—	—	—	7	33
	1896				1897				1898			
Cases	159	69	36	45	83	218	249	400	98	64	19	3
Deaths	6	—	1	1	3	11	16	19	4	10	5	—
	1899				1900				1901			
Cases	3	1	3	55	974	549	84	198	310	541	184	195
Deaths	1	—	1	—	38	32	2	4	16	15	10	7
	1902											
Cases	162	131	7	39								
Deaths	7	7	1	6								

We have no definite system of reporting Measles, and the great majority of our cases are seen by no doctor, hence there is some uncertainty about our cases, and the recorded numbers are only rough approximations. Our only definite source of information is from the reports of absentees

sent by the teachers in the various public schools, which are inquired into by our own Inspectors; these reports are frequently irregular unless some school attendance is seriously affected.

During the first and second quarters the known prevalence was almost altogether in the East, where thirteen out of the total fourteen deaths occurred. In the first week of the third quarter a death was registered in the East (the last in that Sub-district during the year), after this the Borough was remarkably free until the middle of the fourth quarter when there were a few cases heard of in the West, six deaths occurring in that Sub-district would suggest a much greater prevalence than the reported cases indicated. Until this outbreak there had been only one death from Measles in the West during 72 weeks.

Scarlet Fever.—We began recording our cases in 1884, but as we have only had notification since 1890 (inclusive) the returns before that year are less complete than those since. The death records in my possession go back to 1870; the following are the deaths since that year, and the known cases since 1884:—

	1870	1871	1872	1873	1874	1875	1876
Deaths	54	26	69	121	34	26	58
	1877	1878	1879	1880	1881	1882	1883
Deaths	226	40	17	39	64	27	24
	1884	1885	1886	1887	1888	1889	1890
Deaths	37	46	5	16	17	6	13
Cases	212	244	47	168	194	124	500
	1891	1892	1893	1894	1895	1896	1897
Deaths	14	3	25	55	34	21	24
Cases	419	242	623	1096	592	372	529
	1898	1899	1900	1901	1902		
Deaths	20	6	9	10	15		
Cases	359	177	242	408	549		

The fatality varies in different periods so that the deaths bear little ratio to the cases. During the present year the prevalence has been moderate and the mortality low.

The following Table gives quarterly particulars as to the cases in the two Sub-districts. The cases in the General Hospital were not sent in by us. The deaths are those of the cases reported in each quarter, and

sometimes occur later; excepting Table No. 2, they do not correspond to the deaths in the Mortality Tables, which are those registered in each quarter:—

		Quarters	1st	2nd	3rd	4th	Year.
EAST ..	Total	Cases ..	44	52	49	44	189
		Deaths ..	3	..	1	1	5
	Borough Hospital	Cases ..	38	49	49	40	176
		Deaths ..	3	..	1	1	5
	General Hospital	Cases ..	..	..	..	..	..
		Deaths ..	..	..	..	..	..
	At Home	Cases ..	6	3	..	4	13
		Deaths ..	..	..	..	..	..
WEST ..	Total	Cases ..	94	65	90	111	360
		Deaths ..	2	1	2	3	8
	Borough Hospital	Cases ..	62	51	63	80	256
		Deaths ..	2	1	2	..	5
	General Hospital	Cases ..	..	..	..	2	2
		Deaths ..	..	..	..	..	..
	At Home	Cases ..	32	14	27	29	102
		Deaths ..	..	..	..	3	3

At the close of 1901 there had been a considerable prevalence of Scarlet Fever, not only in the Borough, but in the country round. This prevalence continued in the Borough until about the middle of March, the West being the most affected; five deaths were registered in the East, but two were of last year's cases. The reduction continued until near the end of June, when there was a marked increase, affecting the Borough generally, there was no local outbreak. This increase continued to an alarming degree until the end of November; the West as usual being the most affected. There was a special incidence on the North West, owing to a number of mild cases being mistaken by their parents for Measles, and in consequence little care being taken with them. During the height of this prevalence our accommodation at the Borough Hospital was seriously tried, and we

had to exercise care in the admission of cases, only removing those who had the least chance of home isolation. Towards the end of November the prevalence declined, and before the close of the year all fear of any epidemic was dispelled.

On account of the larger size of many of the houses in the West a greater number of cases in this Sub-district have fair facility for home isolation; hence the greater proportion of cases so treated there. The following table gives the proportion of cases kept at home in the Sub-districts since 1884. I give the total deaths registered also, because the cases were imperfectly reported before 1890:—

	EAST.			WEST.		
	Total Deaths.	Cases.	Cases at home.	Total. Deaths.	Cases.	Cases at home.
1884	28	?	?	9	?	?
1885	37	146	78	9	98	70
1886	2	19	4	3	28	19
1887	5	52	25	11	116	82
1888	5	53	27	12	141	56
1889	0	45	16	5	79	29
1890	5	239	61	8	261	100
1891	7	154	28	7	265	74
1892	2	76	19	1	166	50
1893	17	301	20	8	322	47
1894	39	600	53	16	496	104
1895	16	234	28	18	358	98
1896	10	155	20	11	217	55
1897	11	219	37	15	310	77
1898	5	124	12	15	235	57
1899	4	52	6	2	125	33
1900	3	93	5	6	149	51
1901	5	131	21	5	277	75
1902	7	189	13	8	360	102

These figures are very remarkable; the greater child population of the East, and the far greater facilities which its larger proportion of poor and crowded areas afford for the spread of infection, would lead one to suppose that Scarlet Fever would be much more prevalent there than in the West. This was the case in 1884-5, and 1894. In 1884-5 there was very little Hospital isolation. (I have not been able to get the figures for the Sub-districts separately prior to this). Then followed a long period of peculiarly low prevalence of Scarlet Fever; during which we were increasing the amount of our Hospital isolation, until in the East it became fairly complete. During 1893 the prevalence became very heavy, and judging by the deaths, the prevalence in the East was more than in the West, although the reported cases were more in the latter. Probably the mortality was actually greater amongst the feebler children in the East, but most likely, too, a number of mild cases were overlooked in that Sub-district, and thus the proportion of cases unisolated would be much greater than appears from the Table. Next year, 1894, we find a very heavy prevalence of Scarlet Fever, the East far exceeding the West both in number of cases and mortality. Since this the prevalence has again declined, but much more in the East, which has had fewer cases than the West each year since. These facts apparently indicate that in spite of the greater facilities which exist for the extension of Scarlet Fever in the East, the fairly complete Hospital isolation attained there renders that Sub-district during ordinary years less affected than the West; but this protection fails when a more epidemic prevalence exposes the poorer and more crowded Sub-district to the danger of overlooked cases spreading infection; at a time, too, when the unknown epidemic conditions which favour infection are present. At the same time it is not improbable that the normal prevalence of Scarlet Fever may, in consequence of some conditions at present unknown be really greater in the West than in the East.

I am sorry to say that we have had an unusual number of instances of gross negligence or ignorance during the year. For many years these blunders have been remarkably few, giving rise to the hope that more intelligent ideas about infectious disease were gaining ground, but this year many of our cases were manifestly due to carelessness in visiting, neglect of slight cases which ought at least to have been treated with suspicion, and to similar lack of common caution.

The following is the summary of the apparent effects of removal and home care on the spread of the infection in the households attacked during the year. No account is taken of houses where there is no susceptible child after the first case attacked; children who have already had Scarlet Fever being counted as insusceptible:—

East Sub-District.—During the year there were 96 instances in which no second case occurred after the removal to the Hospital of first cases. In these 96 houses there remained 265 children who had not previously had Scarlet Fever.

In 9 instances secondary cases occurred without Hospital removal, there were 9 such cases; they occurred at the following intervals after the previous case was taken ill:—two days, 1 case; three days, 3 cases; four days, 2 cases; six, seven, and twenty-one days, 1 case each.

In most of these Hospital removal was ultimately effected, and in seven instances where 12 susceptible children still remained there was no further recurrence.

Thus in 103 instances there was no further case after Hospital removal, though 277 children remained in these houses.

In 3 instances further cases occurred *after* Hospital removal, there were 3 such cases at the following intervals after the previous removal:—four days, 2 cases; twenty-seven days, 1 case. In these houses 6 children still remained unaffected, so that in all 283 children escaped infection after Hospital removal.

In the East, cases were isolated at home in only eleven houses; one was a child in a house where a case was already being treated. In six instances there were no other children in the house, in four the other children were sent away. Thus no children remained where cases were being treated, but in two instances adults in the house took Scarlet Fever.

West Sub-District.—There were 131 instances in which the first cases of Scarlet Fever were removed, and no others occurred. In these 131 houses there remained 332 susceptible children.

In 21 instances secondary cases occurred without hospital removal; there were 26 such cases; they occurred at the following intervals after the preceding case had been taken ill:—One day, 10 cases; two days, 3 cases; three days, 6 cases; four days, 3 cases; six days, 2 cases; twenty days, 1 case; and about 6 weeks, 1 case.

In most of these houses hospital removal was ultimately effected. In ten instances where there were susceptible children there was no further recurrence, 29 children escaping.

Thus, in 141 houses there was no recurrence after hospital removal, 361 children escaping.

In sixteen houses cases occurred after hospital removal, 25 cases occurring at the following intervals after the previous removal:—One day, 3 cases; two days, 1 case; three days, 5 cases; four days, 2 cases; five days, 3 cases; six days, 4 cases; seven, eight, nine, twelve, sixteen, nineteen, and thirty-five days, 1 case each. In these houses 31 still remained unaffected; so that in all 392 children escaped infection after hospital removal.

In the West, cases were left at home in 78 houses during the year, in one instance three children were taken ill where there were last year's cases being treated; in one case death was very early; in 35 instances there were no other susceptible children in the house; in 8 instances the other children were sent away. Only in 33 houses were cases treated where other susceptible children were kept at home; there were 50 such children in these 33 houses. In 14 houses fresh cases occurred, 14 children being taken ill, at the following periods after the preceding attack; one day, 4 cases; three, five, six, eight, eleven, fifteen, twenty, twenty-one, thirty-two, and fifty-seven days, 1 case each.

The value of hospital isolation is most forcibly exemplified by comparing the numbers of the recurrent cases without it with those after it; but as some of the former occur before any care at all is taken I only compare the hospital cases with those cases in which home isolation is allowed, because there is reasonable facility for it.

The summary for the borough is as follows:—Hospital removal was effected in 263 houses. After the first removals there remained in these houses 703 children. In 244 of these houses there was no recurrence after removal, 638 children escaping. In 19 houses there was recurrence, 28 children being attacked. In these nineteen houses 37 children still escaped, after final hospital removals. Of the 28 secondary cases 9 were ill within three days of the previous removal, and probably infected before it; 2 were more than three weeks after the removal, and probably due to independent infection. This leaves only 17 cases, 4 of which were ill four days after the previous removal, and may have been infected before.

Cases were treated at home with reasonable facility for isolation in 33 houses, where there were 50 children besides the primary cases. Secondary cases occurred in 14 of these houses, 14 occurring. Five of these cases were ill within four days of the primary attack, and therefore probably infected before any care was taken. Thus, 9 cases were probably due to failure.

The following tabular statement shows the results at a glance:—

	Hospital Removal.	Home Isolation.
Total houses	263	33
Case recurred in	19	14
Number of children after primary cases ..	703	50
Number subsequently attacked ..	28, or 3·9%	14, or 28·0%
Number possibly due to failure ..	17, or 2·4%	9, or 18·0%
Number of children escaping.. ..	675, or 96·0%	36, or 72·0%

The following is the total for the nine years 1894-1902:—

	Hospital.	Home.
Total houses	2,021	261
Cases recurred in	202	103
Number of children after primary cases	5,567	518
Number of these attacked	260, or 4·7%	146, or 28·2%
Number possibly due to failure ..	123, or 2·2%	99, or 19·1%
Number of children escaping ..	5,307, or 95·3%	372, or 71·8%

The cases treated at home were, of course, in roomy houses, where isolation was possible; those removed to the hospital include a great majority from small and comparatively crowded houses; thus, the evidently greater protection afforded the latter is very striking. There is, however, one correction which should be made in estimating the amount of protection which hospital removal affords the children left in the houses. In some instances, after the return home of a hospital case fresh cases occur. This year we were particularly unfortunate in this respect, details will be given with the hospital report later; for the present it is sufficient to say that at the highest estimate we had 31 of these so-called return cases. If these are added to our 17 failures they make 48 such, or 6·8 per cent. of children attacked in houses after hospital removal, and apparently due to failure; this is still far less than the 18 per cent. in the home cases. During the nine years we had 160 return cases, added to the above 123 cases due to failure, these give 283, or 5·1 per cent. of total failure; much less than the 19·1 per cent. in home cases, in spite of the selection of the latter cases. It is, however, very serious that these return cases actually exceed in number the failures after removal; and at present it seems impossible to prevent these return failures; but with improved methods, and more accurate knowledge as to the duration and seat of infection in various cases we may reasonably expect to reduce them to a negligible quantity.

Diphtheria.—The quarterly cases of, and deaths from, Diphtheria in the borough since 1890 have been :—

	1890.				1891.				1892.			
Cases ..	11	3	4	5	8	8	6	11	1	7	4	4
Deaths..	3	—	—	1	1	2	1	1	—	3	1	—
	1893.				1894.				1895.			
Cases ..	7	5	12	11	11	16	33	22	34	78	56	140
Deaths..	—	1	1	3	5	8	10	10	19	24	14	27
	1896.				1897.				1898.			
Cases ..	108	101	87	64	73	72	75	91	61	25	64	52
Deaths..	19	15	9	12	11	10	11	26	19	5	11	8
	1899.				1900.				1901.			
Cases ..	29	20	29	27	24	15	32	24	24	21	22	39
Deaths..	5	4	5	7	3	3	4	—	2	2	3	6
	1902.											
Cases ..	15	33	21	22								
Deaths..	3	6	3	6								

The annual cases and deaths in the sub-districts have been :—

		1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
East	Cases	11	8	3	14	36	88	114	121	76	37
	Deaths	2	1	2	2	20	29	21	21	18	12
West	Cases	12	25	13	21	46	220	246	190	126	68
	Deaths	2	4	2	3	13	55	34	37	25	9

		1900.	1901.	1902.
East	Cases	35	30	36
	Deaths	4	7	12
West	Cases	60	76	55
	Deaths	6	6	6

The returns this year are very moderate, there is the usual extraordinary disproportion between the cases and deaths, both in the two Sub-districts, and at different periods; there is little doubt but that this is due mainly to a number of mild cases, especially in the East, being seen by no doctor and therefore overlooked; and partly to errors in diagnosis, which is often very uncertain in Diphtheria. Very little advantage has been taken of the facilities afforded for Bacteriological examination in doubtful cases.

East.—During the first quarter the East was to all appearance practically free from Diphtheria, only six cases all separate were reported; one, a baby of 15 months, died; one case was a hospital nurse. In the second quarter only fifteen cases were reported, but six of these were fatal. The ages of the fatal cases were, 5 months, 1 year, 2, 2½, 4, and 5½ years. Three cases were in one family; one case was a hospital doctor in attendance on Diphtheria; the other eleven cases were separate; one was subsequent to Measles. In the third quarter only seven cases were reported; two were in one house, five were separate. Two cases were fatal, aged 9 months and 2½ years. In the fourth quarter only eight cases were reported all separate, two were fatal, aged 2 and 5 years; a third death was registered of a child aged 21 months, the case not having been reported.

West.—In the first quarter nine separate cases were reported, two were fatal, aged 6 months, and 2 years. In the second quarter eighteen cases were reported, only one was fatal, aged 7 years. In the third quarter only fourteen cases were reported, none fatal. In the fourth quarter only fourteen cases were reported, but three were fatal, aged 4, 6, and 8 years. The West was on the whole remarkably free from Diphtheria during the year.

Enteric Fever.—The cases and deaths for the last ten years are :—

		1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
East	Cases	22	34	22	53	27	78	89	51	76	115
	Deaths	6	5	6	7	10	10	24	9	13	23
West	Cases	22	64	53	83	54	56	49	45	41	79
	Deaths	3	11	9	16	7	8	13	12	7	21
Boro'	Cases	44	98	75	136	81	134	138	96	117	194
	Deaths	9	16	15	23	17	18	37	21	20	44

		1900.	1901.	1902.
East	Cases	106	50	49
	Deaths	22	7	12
West	Cases	89	39	44
	Deaths	17	10	3
Boro'	Cases	195	89	93
	Deaths	39	17	15

This year's returns are very moderate, the total deaths are low. The West deaths are remarkably low, but the East are very high in proportion to the number of cases, suggesting, as in Diphtheria, that there are many unknown cases. As regards the Sub-districts, last year's conditions are somewhat reversed.

The quarterly returns of cases were :—

East ..	Cases ..	14	8	9	18
	Fatal ..	5	2	2	2
West ..	Cases ..	14	10	7	13
	Fatal ..	0	0	0	4

The quarterly deaths registered do not tally with the above numbers of fatal cases, as some of the deaths occurred after the close of the quarter during which the case was reported.

East.—During the first quarter only fourteen cases were reported, but five of these were fatal. In the second quarter only eight cases were reported, two proving fatal; one case this quarter was the mother of a previous case; this was the only personal connection found during the two quarters. During the third quarter nine cases were reported, two fatal. During the fourth quarter eighteen cases, two fatal. Three cases were in

two houses in one court, and used the same pail-closet; this was the only suspicion of any direct infection. One case came ill from a distance. During the first quarter three cases, otherwise quite unconnected, had eaten mussels bought from a hawker; we could not trace them. During the fourth quarter two cases had been eating mussels, apparently from different sources, and one case had been eating oysters. Considering the number of persons who eat shell fish the above can hardly be more than coincidences.

West.—During the first three quarters thirty-one cases were reported, none were fatal. Four cases were from one house, four from another, two from another; twenty-one cases were separate. In the fourth quarter only thirteen cases were reported but four of these were fatal. In spite of the fourth quarter's bad record the freedom of the West from Enteric during the year has been remarkable.

Whooping Cough.—Whooping Cough, and also Measles, are epidemics of which little serious account is taken, and against which indeed, under present conditions, very little practical steps in the way of public prevention can be taken; but their gravity should not be overlooked. Table No. 8 shows that either of these diseases causes more deaths than either Diphtheria or Enteric Fever, and nearly double as many as Scarlet Fever with the care now taken. Ten years ago we had 80 deaths in one year from Whooping Cough, one half of that number from Scarlet Fever would have almost caused a panic. Of course this indifference is deplorable, as leading to the utter neglect of individ al care, and thus contributing to the continued spread of these diseases; although public effort can do little to check them; some degree of private care would undoubtedly prevent many of the cases now occurring. This year we were fairly free from Whooping Cough, but there was some general prevalence from February to July, and cases were common throughout the year, the greatest prevalence was in March and April.

Influenza.—Influenza was prevalent during the first two quarters, the recorded fatality was greatest in the West. There were some cases occurring during the last quarter, especially towards its close.

Diarrhœa.—The annual deaths returned as due to Diarrhœa since 1875 have been :—

1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
96	105	59	93	48	111	46	87	56
1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
140	50	149	105	60	84	68	105	55
1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
161	62	135	131	188	174	132	117	109	72

With the exception of the years 1875-6 and 1886-7 there were regular alternations of high and low returns up to 1895, since when the present is the first year in which there has been at all a low return.

Inasmuch as deaths from the same disease are also registered under several other terms (especially Enteritis, or Gastro-enteric Catarrh) the Diarrhœa returns by themselves do not give an accurate idea of the prevalence of this epidemic. In table No. 4 all such deaths are classified together under the heading Diarrhœal Diseases, and this return is the most instructive to consider. This return includes deaths due to ordinary bowel complaints, other than the special zymotic disease; it is practically impossible to exclude these other deaths. In the present, as in last year there was an exceptional number of occasional deaths from Diarrhœa registered all through the year, especially in the East Sub-district; it is not easy to say from our returns when the real summer epidemic began; in the West there were exceptional returns early in July; but in the East no regular fatalities until September. It has been fairly-well established that the prevalence of Zymotic Diarrhœa is in proportion to the temperature, and especially to the ground temperature. The following table gives our weekly deaths from Diarrhœal Diseases during twenty weeks, and the mean weekly temperatures of the air, and of the earth at one and four feet deep :—

Week ending	Deaths.	Temperature. Air degs.	1 ft. degs.	4 ft. degs.	Week ending	Deaths.	Temperature. Air degs.	1 ft. degs.	4 ft. degs.
July 5	—	59·8	62·7	53·2	Sep. 13	5	52·8	58·6	55·5
12	2	58·6	63·1	54·2	20	3	52·0	55·6	55·1
19	4	59·4	64·6	55·2	27	6	55·1	54·4	44·3
26	—	54·3	60·0	55·6	Oct. 4	2	47·7	53·8	54·0
Aug. 2	1	54·7	59·6	55·3	11	12	47·0	51·3	53·1
9	2	54·6	59·0	55·0	18	4	49·2	51·3	52·3
16	—	56·3	59·2	55·0	25	2	49·2	49·7	51·7
23	1	57·4	60·2	55·3	Nov. 1	7	49·6	50·7	51·2
30	3	56·9	59·3	55·5	8	2	47·5	49·2	50·9
Sep. 6	2	59·0	59·4	55·4	15	2	47·5	47·9	50·2

During the three years 1896-98 the above table indicated that when the 4 ft. temperature exceeded 52° or the 1 ft. 60° the epidemic commenced. During 1899-1900 apparently higher temperatures were required to develope the epidemic, and this appeared possibly due to heavy rainfalls. Last year, 1901, the figures were not very definite, but tended to the same inference as those of the previous years. In the present year there has evidently been but little real epidemic Diarrhœa, and it is not justifiable to put much weight on our scanty figures. But they certainly appear to indicate rather strongly the influence of rain-fall in modifying Diarrhœa. From the week ending July 5th the four feet temperature exceeded 52°, the one foot exceeded 60° the previous week. After this we had some Diarrhœal deaths; but in the week ending July 26th we had ·87 inches of rain, in that ending August 9th we had 2·62 inches, and the two following weeks ·65 and ·63 inches. This appears to have diminished the deaths. Week ending September 13th, ·69 inches of rain; then rather dry until week ending October 11th, ·78 inches; next week, 1·15 inches; then dry until November 8th, ·79 inches. Remembering that the deaths of any week indicate the effect of one or two weeks previous cause, there is a very strong indication that our disagreeable wet summer washed away our Diarrhœa.

The following Table gives the annual Diarrhœal deaths since 1890, and the weekly means of the 4 ft. deep earth temperature, the figures in the columns after the second give the number of weeks in each year during which this temperature exceeded the degree at the head of the column:—

		Deaths.	52°	53°	54°	55°	56°	57°	58°
1890	..	87	19	18	17	15	11	7	—
1891	..	120	18	15	12	3	—	—	—
1892	..	67	17	14	8	3	—	—	—
1893	..	227	22	19	15	13	10	5	1
1894	..	99	17	15	13	10	2	—	—
1895	..	255	20	18	16	14	10	—	—
1896	..	199	20	18	16	14	8	1	—
1897	..	319	20	17	14	11	7	4	—
1898	..	290	21	19	15	13	11	6	—
1899	..	239	19	18	16	13	11	9	6
1900	..	177	19	17	14	12	8	4	—
1901	..	144	20	16	14	12	7	2	—
1902	..	101	16	15	12	10	—	—	—

The following gives similar figures for the 1 ft. deep earth temperature :—

	Deaths.	60°	61°	62°	63°	64°	65°	66°
1890 ..	87	7	4	1	1	—	—	—
1891 ..	120	4	1	—	—	—	—	—
1892 ..	67	1	—	—	—	—	—	—
1893 ..	227	12	9	8	4	1	1	1
1894 ..	99	6	4	1	1	—	—	—
1895 ..	255	8	3	3	2	—	—	—
1896 ..	199	10	7	4	4	3	—	—
1897 ..	319	11	8	7	5	1	1	—
1898 ..	290	12	9	8	6	3	—	—
1899 ..	239	15	15	13	8	7	4	1
1900 ..	177	11	9	6	5	2	1	1
1901 ..	144	9	8	7	5	2	—	—
1902 ..	101	5	3	3	2	1	—	—

The general relation to temperature is fairly marked, but it is equally evident that other factors must operate, for the worst epidemics do not coincide with the highest temperatures. Even the rainfall does not explain the discrepancies, for in the year of heaviest epidemic 1897, the temperature was not most excessive, and the rainfall was very heavy. The whole subject was very fully dealt with in the 1897 annual report.

BOROUGH HOSPITAL.

The quarterly numbers dealt with have been as follows :—

Quarters.	Remaining in from previous Quarter.	Admitted for.		Total Discharged.		Died.		Average number of days in of the cases admitted.	Average daily number of Patients in Hospital.
		Scarlet Fever.	Small Pox.	Scarlet Fever.	Small Pox.	Scarlet Fever.	Small Pox.		
First ..	71	106*a*	..	144	..	7	..	46·6	65·4
Second ..	33	103	..	75	..	1	..	47·1	45·9
Third ..	61	133*b*	..	114	..	3	..	46·7	61·8
Fourth ..	80	135*c*	2	177	1	2	1	40·7	70·5
Year ..	71	477	2	510	1	13	1	45·7	60·9

Leaving 38 cases of Scarlet Fever and one of Small Pox in at the close of year.

(*a*) Four from the Tettenhall District.
(*b*) Twenty ,, ,, ,,
(*c*) Fifteen ,, ,, ,,

The following are the summaries of the cases admitted for Scarlet Fever during each quarter :—

First Quarter.—One hundred and six cases were admitted, two proved not to be Scarlet Fever. Five cases were fatal :—A, 18 months old ; severity of attack, Toxæmia, Convulsions ; 8 days in. B, 4 years old, admitted with very severe Cellulitis of neck, Sloughing, 6 days in. C, 4 years old, very severe double Adenitis, and Cellulitis of neck, 17 days in. D, 4 years old, severe Septic case, Suppuration, Toxæmia, 23 days in. E, 5 years old, severe Septic case, Toxæmia, 11 days in. Thirteen cases were very severe, and eighteen severe. The principal complications were :—Otorrhœa, 7 cases ; Rhinitis, 7 cases ; Adenitis, 9 cases ; Suppuration, 6 cases ; Skin Affections, 7 cases ; Albuminurea, 2 cases ; Onychia, 3 cases. Two cases had severe secondary throats ; two had Rheumatism. One case of Scarlet Fever had Whooping Cough when admitted. One case was found on admission to be Measles, another Chicken Pox. Two cases when admitted, one February 19th, the other March 18th, were found to have Chicken Pox as well as Scarlet Fever ; two cases developed Chicken Pox after admission, one admitted March 1st, Chicken Pox March 12th, probably infected before admission ; the other admitted February 26th, Chicken Pox April 27th, evidently taken in hospital.

Second Quarter.—One hundred and three cases were admitted, two were not Scarlet Fever. Of the 101 cases of Scarlet Fever one was fatal, A, 3 years old, very severe Naso-pharyngitis, Adenitis and Suppuration, 14 days in. Fifteen cases were very severe, and nineteen severe. Complications :—Otorrhœa, 3 cases ; Rhinitis, 5 cases ; Adenitis, 9 cases ; Suppuration, 2 cases ; Skin Affections, 7 cases ; Albuminurea, 7 cases, 3 very severe Nephritis, one case bad Uræmia. Rheumatism 3 cases. One case proved on admission to be a very severe attack of Measles, another was a case of Chicken Pox.

Third Quarter.—One hundred and thirty-three cases were admitted, one did not have Scarlet Fever. Of the 132 cases of Scarlet Fever 3 were fatal, A, 7 years old, very severe attack, collapsed and moribund on admission, only lived a few hours. B, 8 years old, severity of attack, Toxæmia, Dilirium, 4 days in. C, 5 years old, severity of attack, Toxæmia, Jaundice, 12 days in. Eleven other cases were very severe, and

eleven severe. Complications:—Otorrhœa, 5 cases; Rhinitis, 15 cases; Adenitis, 7 cases; Suppuration, 2 cases; Skin Affections, 9 cases; Onychia, 4 cases; Albuminurea, 6 cases, one very severe Uræmia; Keratitis, 1 case; Rheumatism, 2 cases. Three cases had Chicken Pox; A, admitted August 8th, Chicken Pox September 15th; B, admitted August 21st, Chicken Pox September 30th; C, admitted August 26th, Chicken Pox September 28th. One case had severe Tonsillitis 32 days after admission. Two cases apparently had second attacks; A, admitted July 22nd, typical Scarlet Fever, but no marked desquamation, Scarlet Fever August 27th; B, admitted August 18th, rather obscure; desquamation, but not very marked; Scarlet Fever September 16th.

Fourth Quarter.—One hundred and thirty-five cases of Scarlet Fever were admitted; 2 were fatal. A, 3 years old, very severe Septic case with bad Cellulitis of the neck, 6 days in. B, 4 years old, severe attack of Scarlet Fever, but had also on admission a very severe attack of Erysipelas of face, orbit, and neck from a recent wound in the face, this proved fatal in 11 days. Only 6 other cases were very severe; 13 were severe; but complications were many and very troublesome. Otorrhœa, 10 cases; Rhinitis, 11 cases; Adenitis, 4 cases; Suppuration, 6 cases; Skin Affections, 16 cases; Onychia, 7 cases; Albuminurea, 5 cases (one when admitted); Rheumatism, 2 cases; Conjunctivitis, 1 case; Cellulitis, 1 case; Tuberculosis, 1 case. One case, in which I had no suspicion of Diphtheria, had partial paralysis of the pharynx and larynx. One case had Whooping Cough when admitted. The most troublesome complication was the recurrence of Chicken Pox, we had 8 cases—A, admitted October 21st, Chicken Pox 24th. B, admitted November 4th, Chicken Pox 7th, both these cases of course had contracted Chicken Pox before admission, B's sister had it already at home. C, admitted October 28th, Chicken Pox November 23rd. D, admitted October 28th, Chicken Pox December 12th. E, admitted December 8th, Chicken Pox December 23rd. F, admitted November 26th, Chicken Pox December 24th. G, admitted December 18th, Chicken Pox January 9th. H, admitted December 20th, Chicken Pox January 15th. As each case was detected it was at once removed, but doubtless infection had sometimes spread to others before this was done.

Eight patients were attended during the year, four doctors attending. The total work done in the Hospital during the year was far greater than in 1901, 479 admissions as compared with 318; 511 patients discharged as compared with 271; but we had no time of such very heavy overwork as during the sudden increase we had then when there was great difficulty in increasing the Staff to meet the increase in patients. The results of the work this year have been exceedingly good, of 503 actual cases of Scarlet Fever discharged during the year only 13 were fatal, a *very* low percentage, of these 13, 1 was dying when admitted, and 1 died of Erysipelas, the result of a wound before admission. I feel bound to state that these excellent results are mainly due to the personal skill and care shown by the Matron and her Staff.

The following table gives the porportion of cases without definite signs of Scarlet Fever when seen on admission, and the results :—

Quarters.	Total admissions	Indefinite when admitted.				
		Total.	Apparently not had Scarlet Fever.			
			Total.	Safely Discharged	Caught Scarlet Fever.	Died.
First ..	106	6	2	2	..	..
Second ..	103	11	6	4	2	..
Third ..	133	12	4	1	3	..
Fourth ..	135	9	..	..	..	..
Year ..	477	38	12	7	5	..

Twelve mistakes out of 477 cases are remarkably few, especially considering the difficulties under which many of the cases are seen; of the twelve cases only five took Scarlet Fever in the Hospital, and all recovered.

Return Cases.—By these are meant cases that occur in a household to which a patient has lately returned from being in an Infectious Hospital, and which are supposed to be due to infection from such patient; these return cases represent the greatest failure of Hospital isolation. During

the year 490 Scarlet Fever patients returned to their homes from the Hospital; in 26 instances further cases occurred—A was 48 days in Hospital, 51 ill, returned home May 27th, had had Rhinitis early, no late complications, 2 other children had been away from home, they returned home June 16th, and were taken ill June 23rd and 24th, 27 and 28 days after A's return home. B, 47 days in, 50 ill, returned home October 28th, no complications; another child was away from home until November 11th, taken ill November 23rd, 26 days after B's return. C, after 58 days' illness, returned home on October 10th, had been in a separate ward on account of Varicella, 2 other children were taken ill 22 and 26 days after C's return. D, 48 days in, 50 ill, had Impetigo Capitis which recurred after returning home on January 28th, 21 days later another child was ill. I think it most unlikely that in any of these four instances the new cases were due to the old. E, 68 days in, 69 ill, very severe illness, Adenitis and Suppuration, returned August 6th, 19 and 20 days afterwards two other children were ill. F, 57 days in, 60 ill, Septic case, June 26th Intertrigo behind ear, July 8th returned home, 19 days later another child was taken ill. G, 55 days in, 57 ill, had Nephritis; returned home December 2nd, 18 days after another child was taken ill and removed; 5 other children remained at home with G, all well. H, 46 days in, 50 ill, Albuminurea, no other complications, well when returned home October 28th, 15 days later another child was taken ill; 2 other children remained in contact with H, both well. I, 48 days in, 50 ill, severe case, no complications, returned home August 19th, three other children were taken ill September 2nd, 11th, and 17th, 14, 23, and 31 days after I's return, each case was removed as it occurred. J, 43 days in, 47 ill, no complications, returned home June 6th, another case ill 14 days later. K, 36 days in, 39 ill, had Herpes on lip; returned December 10th, was kept apart for a week, had then profuse nasal discharge, 12 days after return, 5 days after mixing with other children another case occurred.

E, F, G, H, and J are rather unlikely to have caused the recurrent cases; I is also rather unlikely, the second and third cases do not increase the probability, they are too late to be directly due to I, but may have been infected one from another. In the case of K, the nasal discharge probably retained infection. L, 49 days in, only complication Rheumatism,

returned February 22nd, 9 days later a boy who lives five doors off, but does errands for L's mother, was taken ill. M, 46 days in, 47 ill, no complications, returned June 10th, 9 days later another case occurred. N, 46 days in, 50 ill, had Albuminurea, well and returned August 1st, 9 days later another case occurred; cases had occurred in the immediate vicinity on July 3rd, 10th, 14th, 26th. O, 87 and 84, mother and child, in 43 and 52 days, ill 45 and 55 days, 84 had Varicella, 87 no complications; both returned home April 22nd, a baby had been away from home since mother had been taken ill, brought home April 26th; 4 days later, 8 days after the others returned, was taken ill. P, 46 days in, 50 ill, Adenitis, slight Intertrigo over ear, well and returned May 27th, had cold after this, father taken ill 6 days later. Q, 52 days in, 53 ill, returned August 1st, after return had Adenitis and Rhinorrhœa, 6 days later another case (proved fatal). Q had a febrile attack 22 days before discharge, which may have been a relapse, or second attack of Scarlet Fever, if this was so the detention in hospital was too short. R, 39 days in, 41 ill, no complications, returned December 2nd, and called at a house on her way home, 6 days later a child here had Scarlet Fever; Two children at R's home remained well. The above cases from L possibly did infect the secondary cases, Q almost certainly did. In R's case the infection would seem to have been carried superficially.

S, 48 days in, 50 ill, no complications, returned December 31st, 1901, two others 5 and 6 days after return. T, 45 days in, 50 ill, very severe, no complications, returned August 12th, a child played with and was taken ill 5 days after return. U, 44 days in, 45 ill, no complications, returned September 17th, two other cases 5 and 7 days after return (many cases in the vicinity lately). V, 38 days in, 42 ill, no complications, returned October 28th, another child ill 5 days later and removed; five other children remained in contact with V, and well. W, 52 days in, 53 ill, had a slight scab in nostril October 23rd, on the 27th appeared well, returned home 28th, and immediately had profuse Rhinorrhœa; four other cases occurred, two 4 days, one 5, and one 10 days after return; these were all the children in the house. This was a typical example of undoubted 'return' cases. X, 51 days in, 52 ill, no complications, returned May 30th, a child played with was ill 3 days after return. Y, 36 days in, 38 ill, no complications; traces of skin on feet on December

16th when returned; after return had herpes on lip (which was rather prevalent in hospital) another case occurred in 3 days. Z, 64 days in, 65 ill, detained because of Adenitis, and later persistent nasal soreness; slight redness of nares when returned on September 24th, 2 days later her father was taken ill.

In some of the later cases infection seems incredibly rapid; in most of them it was probably carried superficially rather than in the body. I was suspicious that sufficient detailed care was not taken in discharging the patients but I could not confirm this. During the latter half of the year I gave up paying attention to the length of stay in, as soon as a case appeared clear and peeling fairly well over, I discharged it, no matter how short the period of detention. I do not think that this affected the amount of return cases one way or another.

METEOROLOGY.

(See Table 4).

First Quarter.—For the first fortnight the temperature was moderate, rather mild for the season; on January 13th there was sudden severe cold (mean temperature of January 14th was 26·3°); cold continued to January 21st; then, after four rather mild days, extreme cold again set in on the 25th; this continued through the first three weeks of February. During this period frost was almost incessant, being only broken by brief mid-day remissions. The fourth week of February was mild and wet, the change being abrupt; and milder weather continued to the close of the quarter; although many of the nights were still cold, there were night-frosts from the 21st to the 26th of March.

The total amount of wind was unusually low; the usual March gales were practically absent. January 1st was stormy, S.W.; on February 1st there was very high East wind; there was high North West wind on March 8th, and a South West storm on March 24th. The prevailing direction was, as usual, Westerly; during the colder weather there was very little wind, and the direction generally North East or South East; but during the coldest week of the quarter (ending February 15th, mean temperature 28·8°) the direction was North West, the amount being very low.

The total rainfall, 4·67 inches, was very low. The first week was very wet; the ninth and last weeks were rather wet; there was moderate rain during the eleventh week. During the rest of the quarter there were only slight occasional showers or snow. There was a hailstorm on March 21st.

The mean humidity, 84, was fairly moderate for the season; but does not include our driest period, when the freezing of the apparatus prevented observations.

The atmospheric pressure was very eccentric. The Barometer was very low during the first week, dropping suddenly for storm on January 1st. Second week, high and fairly steady. Third week, very high and variable. Fourth week, range over an inch; fifth, over one-and-a-half inches; sixth, nearly an inch; seventh and eighth weeks, moderate range; during these five weeks the mean range was moderately high. With the mild wet weather of the ninth week the Barometer fell very low, with slight variations. During the tenth and eleventh weeks it was moderately high and very steady. During the last fortnight the mean was low with extreme variations.

Second Quarter.—The temperature was very low, with the exception of a few days occassionally there was no really warm weather until the last week of the quarter. The first fortnight was very cold; in the third week the days were mild, nights still very cold; fourth week was moderately warm; then for three weeks it was very cold, with frequent night frosts. During the next five weeks there was occasionally a very warm day, from May 25th to the 28th was very mild; but the mean temperature was generally low; frequently very low. The last week was very warm, the sun at times very hot.

The total amount of wind was low; April 4th and 5th were stormy (S.W.); there was a gale (E.) on April 25th, 26th, and 27th. May 15th was stormy (S.W.) The prevailing direction was on the whole North East, but South East winds were frequent, and there was a considerable amount from the North West and South West. Owing to the erection of a temporary stand near the anemometer accurate records of amount were not possible after May.

The total rain-fall, 6·84 inches, was moderately heavy; it fell mostly in frequent moderate showers. There was very heavy rain on April 15th and May 3rd; the week ending May 17th was very wet, on the 17th there was a thunderstorm and very heavy rain; on May 30th there was very heavy rain. There was a severe thunderstorm on June 16th, but very little rain fell here.

The mean humidity was only 76, very low considering the amount of rain. There was really very little mist or fog.

The barometer was usually moderately low, and much less variable than usual.

Third Quarter.—The temperature during the quarter was remarkably low, the weekly mean never rose to 60°. For the first three weeks it was nearly 60°, then for three weeks fell to just below 55°; rose slightly during the next four weeks, to 59° in the tenth; then fell to about 52°. At no time was the temperature equal to that of the last week in June.

The amount of wind was not recorded, the direction was mainly West. During the ninth week it was mainly South East, during the eleventh East, thirteenth North East. The 25th, 26th and 27th of July were stormy; there was a thunderstorm on the 6th of August.

The total rain-fall, 7·53 inches, was very heavy; rain was fairly continuous. The first two weeks were moderately fine, but with showers; the third week was fine and dry; the next six weeks were very wet, the rain being frequent and heavy; there was very heavy rain on the 5th and 6th of August, and on the 7th the fall was 1·56 inches. The tenth week (the warm week) was fine, the next very wet, then dull and showery until the last four days which were bright and cool.

The mean humidity was 78, low considering the amount of rain.

The barometer as a rule was fairly steady, the general range about an average.

Fourth Quarter.—The peculiar absence of extremes which characterized our temperature during most of the year continued up to the middle of November; the weather was cool, without any great or sudden changes. The first intimation of a break was in the week ending November 22nd, when there was five nights' frost, and the mean temperature, which had only varied between 49° and 47°, fell to 35·6°; next week it was up to 44·4°; then there was a fortnight of extreme cold, the mean temperature being about 34°. This cold spell began very suddenly and intensely on December 4th, when the mean temperature for four days was only 26·7°, and the maximum temperature in the shade never reached as high as freezing point. The 12th and 13th weeks were mild; the 14th week cooler, but still temperate.

The amount of wind was still unrecorded; there was an exceptional amount of high wind, but little actual storm. For the first fortnight the prevailing direction was from the East; then for three weeks West, there was a gale from the West on October 14th. Then for five weeks the wind was Easterly, for the last two of these (our cold spell) it was North East. For the last three weeks the main direction was South West.

The total rain-fall, 6·62 inches, was moderately high, there was not much heavy rain, but moderate showers were very frequent. There was very heavy rain on October 13th, and on November 8th; there was a thunderstorm with heavy rain and hail on January 2nd, 1903.

The mean humidity, 89, was very high.

The barometer was generally rather high, but variable; on the ninth and fourteenth weeks it was very low, with extreme range.

The total rain-fall for the year was 25·66 inches, rather above the average.

EXPLANATORY REMARKS ON THE TABLES.

The returns made by the Registrar for the East Sub-district include all deaths occurring in the General Hospital and Workhouse; many of these are from outside the Borough, a few are returned as "no home," the others are of persons from the East and West Sub-districts. The numbers of these deaths appear at foot of Table 6. Throughout the tables the few cases returned as "no homes" are included in the East figures; the deaths from outside the borough are excluded altogether (except in the last two columns of Table 9), and the deaths from the East and West are referred to their own Sub-districts.

VITAL STATISTICS.

The following is from the 1901 report:—

"Disease rates and the consequent death rates depend partly on the "health conditions of people and their environments, partly on certain "other factors, climatic and unknown. The climatic and unknown "factors vary so greatly from time to time that any particular year's "mortality gives very little indication as to the actual conditions of health "in a district. To get any real information as to local health conditions "from vital statistics we would require to compare periods of at least "several years with each other. The climatic and unknown factors are "generally wide spread, and do not greatly affect the comparisons of "districts with each other in the same year."

"In the present year our mortality has been quite phenomenally "low, indeed the drop in the death rate is so great, and so sudden, that "it quite excludes the possibility of its being due to local improvements, "whose effects would be, as they are themselves, gradual. The com- "parison with the previous twenty years is seen in Table 9; we see "there considerable variations in the death rate, but the lowest it has "ever been, 19·3, in 1896, is a high rate compared with this years 16·7. "This rate is 4·7 below last years, 4·5 below the previous ten year's "average."

This extraordinary state of things which was so difficult to comment on has been more than maintained during the present year, see Table No. 9; the death rate is actually ·5 lower than in 1901; indeed 16·2 is a most remarkably low rate for a town like ours. It must be remembered that this great drop during two years is not altogether peculiar to Wolverhampton, as there has been an astonishing fall in the death-rate throughout the whole country; but the fall in our rate has been so peculiarly great that the fall itself is hardly so remarkable as the improved position which we bear in reference to the other 32 greater towns during the two years. For the nine years preceding 1901 our position in the 33 greater towns, and the *excess* of our death-rate over their total death-rate has been—

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Position ..	25th	24th	29th	26th	24th	26th	27th	26th	27th
Death rate excess	0·19	1·03	2·07	3·18	0·43	2·42	1·68	0·99	2·44

That is, during this nine years, on an average, 25 of the towns had a lower rate than ours, and only 7 had higher, and our rate was 1·6 higher than the total rate of the towns. During 1901 and 1902 our rate has been *less* than the 33 towns by 1·89 & 1·20, and our position has been 8th each year; that is, only 7 towns had a lower death-rate than ours. The maintenance of such an improved position for two consecutive years is a matter for some congratulation, especially when it is the case that the death-rate generally throughout has been very much reduced during that period.

Our birth-rate, 31·6, is also the lowest recorded. The birth-rate has a marked effect on the death-rate, but in our case the reduction in the former has been so trifling compared with that in the death-rate that it cannot have much to do with it. Again, as regards our comparison with the towns, our birth-rate is 2·2 higher than their collective rate. Only 10 have a higher birth rate than ours. Our infantile death-rate, 133, is 14 lower than the collective town rate, only 4 of the towns having a lower rate.

In the above comparison with the towns, use is made of the Registrar-General's figures given in Table No. 11, and those differ from ours, but only in slight details, and not so as to affect the comparisons.

Table No. 8 gives the comparison with former years as regards certain details. The reduced deaths do not run on quite the same lines as last year. Then the dominant factor was the extraordinarily low death return from respiratory diseases. This year this return is much below the average, but is 86 above 1901. The greatest evident drop this year is in diarrhœa; and we have also low returns from constitutional diseases amongst children. But in point of fact almost all returns are fairly low with the total result of our unprecedented death-rate. There was really very little summer weather, the weather being rather more severe than in 1901, hence the increased respiratory deaths and the diminished diarrhœa. The most satisfactory item is the low return in child deaths between 1 and 5 years, 1901 was the only lower return (and we must remember that this year we are dealing with a period of 53 weeks), and of deaths under 1 year the present is by far the lowest return we have ever had. The infant death-rate is in consequence the lowest on record.

This feature is peculiarly gratifying inasmuch as child deaths are the best index of the health conditions in towns. Had we only before us the statistics of the town as a whole we might be fairly well satisfied with our two years' figures, even making all allowance for the effects of such natural conditions as absence of extremes of temperature, and the cleansing effects of extra heavy rains and of extra high winds we might conclude that our own sanitary efforts were almost sufficient for our needs. But the comparison of our sub-districts, as usual, gives us the best insight into our deficiencies. See Table No. 10. We see the East death-rate is exactly the same as last year's, the reduction being altogether in the West, which has fallen from 14·4 to 13·5. We have always found the evil of cold and wet weather most marked in the East, but the evil of heat is almost as much felt in the West. This is consistent with the drop from last year, which, as already noticed, was probably due to absence of heat, affecting the West. The West rate is really most satisfactory, for a district which includes some crowded property (although the proportion of such to the total district is yearly diminishing), a death-rate of 13·5 and an infant rate of only 113 is very nearly ideal. But in the East we have still a very high death-rate, 19·9, and our infant rate, 164, is very high; but both rates are far below the average, and the infant rate has fallen even from last

year's. These facts are very encouraging, but we cannot overlook the contrast with the West, which is almost more marked when both rates are lower than usual. It is well worth while looking through the quarterly figures in Table No. 6, but these have been already commented on in the quarterly reports, and I do not wish to delay over them now.

SANITARY CONDITION OF AND SANITARY WORK IN THE BOROUGH.

There is, of course, little new to add to what has been stated in recent reports as to the sanitary condition of the borough. That condition has in the past few years undoubtedly materially improved in several directions; much unhealthy property has been closed; some of it has been demolished, leaving more open space; thousands of defects, each one perhaps trivial in itself, but contributing to the general air contamination which is the essential unhealthy element in a town, have been remedied; many new and open streets have been built. All of these things render our town as a whole healthier; and I think our lower death-rate and improved position is, in part at least, due to this. But of course very much remains to be done. Our East statistics show this, and the business of this report is to be critical. We still have some in the West, but most in the East, very many houses so crowded in courts as to be unhealthy themselves, and by their obstruction to cause other houses to be also unhealthy. Many of our yards and courts have pervious and uneven surfaces, reeking with decomposing organic matter in wet weather, and even more dangerous in dry weather, from the foul dust they give off. We have still many foul ashpits, some emptied at long intervals, many with walls saturated with filth; and all a source of atmospheric impurity. We have still the pail (or pan) closets common in the town, and commonest in the most crowded properties, where their presence is most injurious. Much of the house property in the older parts is so badly constructed, or so worn out, as to need constant attention to keep it reasonably dry. Not a little of the house drainage throughout the town is seriously defective. It is doubtful if our water supply is sufficient. Some new streets have far too

little back-air space. All of these matters, and many more such, give ample scope for improvement in our sanitary condition. And our work is not, even the most of it, concerned so much with improvement as with maintaining the position we have already gained, and the higher this position is the more work will be needed to maintain it.

It is a very practical matter to consider in what directions this work of ours can be effectively carried on, and in what directions it must be limited by necessity; that is, financial necessity.

All Public Health work falls under two heads, that which is directly done by the Sanitary Authority, and paid for out of the rates; that which is done by private individuals, mostly property owners, at their own cost, and generally at the instigation, or by the compulsion, of the Sanitary Authority.

As instances of the former we may take the water supply, the provision of a destructor, the extension of the Borough Hospital for Diphtheria and Enteric Fever, the general assisted conversion of pail closets to water carriage under our Provisional Order. The need for any of these things must be balanced against its cost, if the burden imposed, by increasing poverty, were to cause ill-feeding and poor clothing, and thus to give rise to more ill-health than would be abolished by the end aimed at, then this end would be defeated. Briefly, the means of a borough are limited, and should be applied in the direction calculated to give the best results. But the same arguments cannot be used by the private individual when asked to remedy a matter which is injurious to his neighbour; and yet by a strange confusion of ideas the fact that there is a financial limit to public effort is used as a plea that private responsibility should be limited by expense. The Sanitary Authority is bound to insist that a man shall not sell unwholesome food, nor let unhealthy premises; he need neither sell food nor let premises, but if he does they must be wholesome and healthy, and no plea of personal cost can be entertained as an excuse for selling unwholesome food or letting unhealthy premises.

It is idle to say, as has been said, that the cost imposed on individuals in this way is in any sense damaging to the town; there are a few sad cases of small owners of bad property, without other means, and unable to work, on whom healthy provision for their tenants does fall heavily; but in the great majority of cases sanitary requisitions are only a small tax on profitable property, a tax demanded on behalf of the tenants by the law of the land, and by the laws of health, and a tax which usually improves the property.

I make the above statements because the increased activity in our department, during the last few years, has given rise to much unreasonable complaint on the part of a few individuals. These complaints are usually made by persons who are utterly ignorant of what constitutes healthy conditions, and as a rule, in technical matters, the greater the ignorance the more positive the opinion. What excites most opposition is the apparently trivial nature of many of our requirements; now it cannot be too often reiterated that the great mass of truly useful sanitary work in a town consists of apparently trivial matters; one defective drain, one offensive ashpit, one foul closet, one pig kept, one foul yard surface, each of these is itself trivial, but in number they are precisely the things that by air contamination cause the ill health of towns. No one member of the community can be allowed what is not allowed to all, and, therefore, certain members must, in justice to all, attend to trivial matters.

I must draw attention to the great increase in the work imposed on the Health Department by recent legislation. The most serious addition comes from the 1901 Factory and Workshop Act, which, amongst other requisitions, puts on us the duty of keeping a register of all workshops in the district. The register has been drawn up giving all details, cubic space, floor space, lighting area, ventilation, and all important particulars. One Inspector has been constantly engaged on this work, and has completed the register for the North-East, South-East, and South-West Divisions of the Borough. The North-West is being done; 487 workshops have been entered up, and already much important work has been done in connection with these, over and above the ordinary work of nuisance abatement in connection with the district inspection. The work requires the greatest care and tact. Most of our workshops are old and

not perfectly fitted for their purpose; but to try to make them at all ideal would in many instances mean closing them, and the remedy would be worse than the disease. We can only proceed gradually, and every step needs care and consideration. When the register is completed it will have to be kept up, as new workshops are constantly being opened and old ones closed. This will mean a great deal of work. The workshops on the register will need a more frequent and systematic inspection than has been possible hitherto, not merely the condition and surroundings, which do not change much, but the number of employés has to be kept note of. I believe most of this work would be best done by the district inspectors rather than by special inspectors. The latter plan involves different inspectors going over the same grouund; but if this work is to be properly done by them their districts must be smaller, and the number, of course, increased. The responsibility for the provision of suitable sanitary conveniences in both factories and workshops also falls on our department, and the difficulties in connection with it are very great. It would be ruinous to enforce even the minimum requirements in many of our smaller places, and even in the larger places the old conditions are often so bad that proper provision appears by contrast extravagant and unreasonable. In many instances we are simply the agent carrying out Government requisitions, and if we failed to do so H.M. Factory Inspector might take the matter up and charge us with the cost; but our department has to bear the odium. The work is, of course, an excellent one, and must eventually be thoroughly done, but the initiation is difficult.

More work might be done in connection with the inspection of food stuffs generally, and further legislation is urgently needed as regards all places where food is prepared for sale or public use. Many such places are a serious public danger, and we have little power to deal with them. As regards the destruction of unwholesome food stuff, our work is greatly hampered by the hardshlp inflicted on the individual who has purchased such in good faith, and has to bear the whole loss when it is found to be unfit for food. This loss is incurred on the public behalf, and the community should pay for it. If such compensation were legal it would do away with nearly all the temptation for concealment of doubtful food, and thus greatly increase our safeguards in that direction.

In conclusion, I would draw special attention to Mr. Peers' Report accompanying this, a brief study of it, and of the tables, which give precisely the details of the work being done, will show how enormous it is, and will carry the conviction that we are in a condition of steady improvement. It will show also what a wide field is covered by the work of the Health Department, and give some idea of the difficulty of carrying it on, and keeping its numerous divisions constantly in view.

INDEX OF TABLES.

TABLE No. 1.

Cases of Infectious Diseases recorded in 1902.

		East Sub-District. Population 40,434.					West Sub-District. Population 55,347.					Borough. Population 95,736.					Totals.			Rate per 10,000 of Popudation.		
		1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Year.	East Sub-District	West Sub-District	Borough.	East Sub-District	West Sub-District	Borough.
Small Pox ..	Under 5 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..						
	5 years & upwards	..	..	..	2	2	..	..	..	..	..	..	..	..	2	2	2	..	2	0·5	..	0·2
Measles ..	Under 5 years ..	81	82	3	2	168	14	8	1	18	41	95	90	4	20	209						
	5 years & upwards	48	34	2	3	87	19	7	1	16	43	67	41	3	19	130	255	84	339	63·0	15·2	35·4
Scarlet Fever	Under 5 years ..	19	22	12	10	63	29	25	20	35	109	48	47	32	45	172						
	5 years & upwards	25	30	37	34	126	65	40	70	76	251	90	70	107	110	377	189	360	549	46·7	65·0	57·3
Diphtheria ..	Under 5 years ..	4	6	3	1	14	5	4	2	3	14	9	10	5	4	28						
	5 years & upwards	2	9	4	7	22	4	14	12	11	41	6	23	16	18	63	36	55	91	8·9	9·9	9·5
Enteric Fever	Under 5 years ..	..	..	..	1	1	..	2	..	1	3	..	2	..	2	4						
	5 years & upwards	14	8	9	17	48	14	8	7	12	41	28	16	16	29	89	49	44	93	12·1	7·9	9·7

TABLE No. 2 (Table III, L.G.B.)

Cases of Infectious Disease Recorded during the Year 1902, and the Proportion Treated in Hospital.

	DISEASE.		CASES RECORDED.							CASES TREATED IN HOSPITAL.						
			At all Ages.	At Ages—Years.						At all Ages.	At Ages—Years.					
				0—	1—	5—	15—	25—	65—		0—	1—	5—	15—	25—	65—
EAST SUB-DISTRICT.	Scarlet Fever	Cases	189	3	60	105	15	6	..	178	2	59	100	12	5	..
		Deaths	5	..	3	2	..	..	..	5	..	3	2	..	..	..
	Diphtheria	Cases	36	4	10	10	4	8	..	14	..	4	5	3	2	..
		Deaths	11	2	7	2	..	..	..	3	..	2	1	..	..	..
	Enteric Fever	Cases	49	..	1	16	15	17	..	20	..	1	5	6	8	..
		Deaths	11	..	..	4	3	4	..	5	..	..	2	1	2	..
WEST SUB-DISTRICT.	Scarlet Fever	Cases	360	4	105	215	26	10	..	258	2	78	152	18	6	..
		Deaths	8	..	4	3	1	..	..	5	..	3	2	..	..	..
	Diphtheria	Cases	55	2	12	21	10	10	..	6	..	1	2	2	1	..
		Deaths	6	1	2	3	..	..	..	1	..	1	..	..	..	..
	Enteric Fever	Cases	44	..	3	13	10	18	..	22	..	1	8	5	8	..
		Deaths	4	..	..	..	..	4	..	2	..	..	..	..	2	..
BOROUGH.	Scarlet Fever	Cases	549	7	165	320	41	16	..	436	4	137	252	30	11	..
		Deaths	13	..	7	5	1	..	..	10	..	6	4	..	..	..
	Diphtheria	Cases	91	6	22	31	14	18	..	20	..	5	7	5	3	..
		Deaths	17	3	9	5	..	..	..	4	..	3	1	..	..	..
	Enteric Fever	Cases	93	..	4	29	25	35	..	42	..	2	13	11	16	..
		Deaths	15	..	..	4	3	8	..	7	..	..	2	1	4	..

Diphtheria includes "Membranous Croup"; and Enteric Fever includes "Continued Fever."

434 of the Scarlet Fever hospital cases were treated in the Borough Isolation Hospital, two cases in the West were treated in the General Hospital.

The Diphtheria hospital cases were all treated in the General Hospital, so were 39 of the Enteric Fever cases, 3 of the East cases (2 fatal) were in the Workhouse.

Of the General Hospital cases, 10 East, and 4 West Diphtherias; and 8 East and 13 West Enteric Fevers were treated by order of the Health Committee.

TABLE No. 3.

WEEKLY RETURNS under the Infectious Diseases Notification Act, and prevalence of certain other Diseases.

A few cases x. Prevalent xx. Very prevalent xxx.

1902. Week ending.	Small Pox	Scarlet Fever	Diphtheria	Enteric Fever	Puerperal Fever	Measles	Whooping Cough	Pneumonia	Influenza
January 4th..	..	24	2	5	..	x	x	xx	xx
,, 11th..	..	13	1	4	..	x	x	xx	xx
,, 18th..	..	13	1	2	..	x	x	xx	xx
,, 25th..	..	14	3	2	..	x	x	xx	xx
February 1st..	..	13	..	2	..	x	x	xx	xx
,, 8th..	..	17	..	2	..	x	x	xx	xx
,, 15th..	..	11	2	4	..	x	x	xx	xx
,, 22nd..	..	8	1	..	..	x	xx	xx	xx
March 1st..	..	7	1	..	..	x	x	xx	xx
,, 8th..	..	4	..	4	..	xx	x	x	xx
,, 15th..	..	6	1	..	..	x	xx	x	x
,, 22nd..	..	5	4	3	..	x	x	x	xx
,, 29th..	..	4	..	1	..	x	xx	x	xx
April 5th..	..	5	2	..	..	x	xx	xx	xxx
,, 12th..	..	16	1	4	..	xx	xx	xx	xxx
,, 19th..	..	9	1	2	..	xx	xx	xx	xx
,, 26th..	..	7	6	2	..	xx	xx	xx	xxx
May 3rd..	..	4	2	2	..	xx	xx	xxx	xxx
,, 10th..	..	2	2	1	..	xx	x	xx	xx
,, 17th..	..	10	2	2	..	x	x	x	xx
,, 24th..	..	10	1	1	..	x	x	x	x
,, 31st..	..	15	5	..	..	x	x	x	x
June 7th..	..	12	8	2	..	xx	x	x	x
,, 14th..	..	8	2	..	..	x	x	xx	xx
,, 21st..	..	11	2	2	..	x	x	x	x
,, 28th..	..	12	1	..	..	x	x	xx	x
July 5th..	..	6	1	1	..	x	x	xx	x
,, 12th..	..	8	1	..	..	x	x	..	..
,, 19th..	..	6	..	..	..	..	..	..	..
,, 26th..	..	9	5	..	..	..	..	..	..
August 2nd..	..	11	4	..	..	..	..	..	..
,, 9th..	..	8	3	..	..	..	..	..	..
,, 16th..	..	14	5	2	..	..	..	..	..
,, 23rd..	..	6	..	2	..	x	x	x	..
,, 30th..	..	9	3	1	..	x	x	x	..
September 6th..	..	15	1	4	1	..	..	..	..
,, 13th..	..	10	3	1	..	x	x	..	..
,, 20th..	..	17	5	2	..	x	x	x	..
,, 27th..	..	21	1	3	..	x	x	x	..
October 4th..	..	10	..	2	..	..	x	x	..
,, 11th..	..	8	2	3	..	..	..	x	x
,, 18th..	..	17	6	2	..	..	..	x	x
,, 25th..	..	11	3	..	..	..	x	x	x
November 1st..	..	10	1	6	..	..	x	x	x
,, 8th..	..	22	3	5	..	..	x	x	x
,, 15th..	..	15	3	1	..	..	x	x	x
, 22nd..	..	10	3	2	..	..	x	x	x
,, 29th..	..	8	..	3	..	x	x	x	x
December 6th..	..	8	2	6	..	x	x	x	x
,, 13th..	..	15	2	2	..	x	x	xx	xx
,, 20th..	..	11	1	2	..	x	x	xx	xx
,, 27th..	1	10	1	1	..	x	xx	xx	xx
1903. January 3rd..	1	6	..	2	..	x	x	xx	xx
YEAR ..	2	561	110	100	1				

Tables 1 and 2 do not tally: 1 including a few cases not reported by Doctors, and 2 including some cases which ultimately proved incorrect.

TABLE No. 4.

Weekly Meteorological Report, from observations taken at 9 a.m. daily.

Week ending.	Barometer Reduced to 32° and Sea Level.		Humidity.	Temperature.					Rain.	Wind.		Death Rate per 1,000 per annum.
				Max.	Min.	Mean.	Earth.			Prevailing Directions.	Total in Week.	
	Mean.	Range					1ft.	4ft.				
1902.	in.	in.	0-100	o	o	o	o	o	in.		mls.	
January 4th	29·618	·722	89	53·4	37·0	46·1	40·1	43·1	1·58	SW	1884	16·3
,, 11th	30·289	·597	83	50·9	37·5	43·4	42·0	43·6	·13	NW, SW	1525	14·2
,, 18th	30·508	·704	89	46·7	21·1	34·7	38·9	44·1	—	W	627	23·4
,, 25th	29·991	1·179	83	52·5	27·4	42·7	40·6	43·4	·11	W	1480	15·3
Febru. 1st	30·102	1·643	85	43·8	23·3	33·1	37·8	43·5	·35	SW, E	1515	14·7
,, 8th	29·881	·936	?	39·3	24·0	32·0	35·9	42·6	·28	NE	875	15·3
,, 15th	29·915	·605	?	41·0	16·3	28·8	34·9	41·9	·02	NW	552	24·5
,, 22nd	30·083	·386	?	45·0	21·0	32·4	34·4	41·1	·10	S, E	989	24·5
March 1st	29·573	·477	94	51·2	33·0	42·9	38·6	40·7	·74	SE, SW	1307	18·5
,, 8th	29·999	·273	92	54·0	29·3	43·3	41·3	41·7	·03	SW, NW	835	12·0
,, 15th	29·950	·201	83	54·1	37·2	45·7	44·2	42·8	·49	NW, SW	1052	16·3
,, 22nd	29·736	·999	75	56·0	33·7	44·6	45·0	43·7	·13	W	1386	16·9
,, 29th	29·686	·500	73	56·6	31·0	42·8	43·5	44·0	·71	SW, NW	1392	12·5
April 5th	29·788	·316	80	59·0	33·1	43·7	45·4	44·3	·60	SW	1267	17·4
,, 12th	30·174	·581	71	49·5	30·1	38·3	44·2	44·8	·10	E	956	12·0
,, 19th	29·911	·271	74	61·7	32·6	46·0	44·9	44·6	·55	SE	952	26·2
,, 26th	29·875	·658	77	62·8	38·5	49·9	47·7	45·1	·41	SW, E	1552	15·8
May 3rd	29·945	·737	73	59·2	30·4	44·6	49·1	46·1	·55	E, NW	1370	19·1
,, 10th	30·179	·361	70	51·7	28·5	40·5	49·2	46·8	·26	N	869	21·2
,, 17th	29·808	·567	74	54·0	30·6	43·4	48·9	46·9	·85	NE, W	789	15·8
,, 24th	30·125	·839	80	66·0	33·0	47·2	51·7	47·2	·80	NW	837	14·7
,, 31st	29·975	·791	73	67·2	43·0	53·5	55·9	48·5	·91	W, E	554	18·0
June 7th	29·911	·578	82	72·0	43·6	54·2	56·1	49·8	·67	SW	Anemometer obstructed.	12·5
,, 14th	29·714	·384	80	59·2	37·0	48·7	54·8	50·5	·36	NE, W		18·5
,, 21st	29·840	·558	83	67·4	44·7	52·9	54·9	50·5	·73	SW		8·7
,, 28th	30·167	·186	70	82·2	48·2	62·6	60·8	51·2	·05	SE, E		18·0
July 5th	30·106	·326	72	80·3	41·5	59·8	62·7	53·2	·27	SE, SW		12·5
,, 12th	30·061	·590	75	77·0	40·6	58·6	63·1	54·4	·23	W, NW		10·3
,, 19th	30·063	·082	58	82·3	46·1	59·4	64·6	55·2	·07	NW		18·0
,, 26th	29·869	·434	76	69·5	44·5	54·3	60·0	55·6	·87	NW, SW		9·3
August 2nd	30·029	·573	77	67·0	45·9	54·7	59·6	55·3	·44	NW		13·1
,, 9th	29·890	·401	83	68·2	43·6	54·6	59·0	55·0	2·62	SW, SE		13·1
,, 16th	29·990	·202	84	73·0	42·9	56·3	59·2	55·0	·65	NW		7·6
,, 23rd	29·885	·514	82	69·3	47·1	57·4	60·2	55·3	·63	W, SW		7·6
,, 30th	29·905	·277	83	69·4	44·0	56·9	59·3	55·5	·51	SE		8·7
Septem. 6th	29·858	·571	78	70·7	48·0	59·0	59·4	55·4	·15	SW, NW		15·3
,, 13th	30·051	·493	86	70·9	34·3	52·8	58·6	55·5	·69	E		14·2
,, 20th	30·043	·709	80	63·6	37·6	52·0	55·6	55·1	·22	NW, SW		9·3
,, 27th	30·229	·634	84	67·4	38·6	55·1	54·4	54·3	·18	NE		16·3
October 4th	30·191	·494	84	59·4	38·1	47·7	53·8	54·0	·14	NE, E		10·9
,, 11th	29·832	·475	91	60·8	40·5	47·0	51·3	53·1	·78	NE, E		19·6
,, 18th	29·804	·723	86	59·3	40·1	49·2	51·3	52·3	1·15	SW, NW		18·5
,, 25th	30·159	·827	86	61·0	37·9	49·2	49·7	51·7	·29	NW, SW		10·9
Novem. 1st	30·108	·186	88	59·1	41·0	49·6	50·7	51·2	·11	SW, NW		19·6
,, 8th	29·808	·934	87	56·6	33·7	47·5	49·2	50·9	·79	SE		16·9
,, 15th	29·981	·886	89	55·5	42·0	47·5	47·9	50·3	·14	SW, SE		17·4
,, 22nd	30·267	·290	88	43·0	29·1	35·6	44·2	49·7	·02	E, SE		14·7
,, 29th	29·482	·829	93	50·6	33·0	44·4	44·1	48·2	1·08	SE		23·4
Decem. 6th	30·040	1·061	94	48·8	21·8	34·8	42·2	47·7	·46	NE		22·3
,, 13th	30·185	·359	89	50·4	20·0	33·7	38·0	46·2	·05	E		25·1
,, 20th	30·035	·525	86	56·0	37·7	46·1	42·8	45·1	·63	SW, NW		21·8
,, 27th	30·360	·427	87	59·0	44·6	45·2	44·0	45·5	·13	SW		18·0
January 3rd	29·382	·736	88	50·0	31·5	38·9	41·3	45·6	·85	SW		21·2

Total Rainfall in the year, 25·66 inches.

TABLE No. 5.—Weekly Returns of Deaths in the Sub-Districts.

	Week ending	January.				February.				March.					April.				May.					June.				July.				August.				Septem.				October.				November.				December					1902
		4	11	18	25	1	8	15	22	1	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	5	12	19	26	2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	6	13	20	27	3	Totals.
EAST SUB-DISTRICT.																																																				
Measles	Under 5 yrs.	1	..	1	1	..	..	..	1	..	1	1	1	..	..	..	1	1	1	1	..	..	1	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	Under 5 yrs.	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4
	5 & upwards	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Whooping Cough	Under 5 yrs.	..	..	..	..	1	1	2	..	1	..	1	..	..	2	1	..	..	1	..	..	..	..	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	15
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	..	..	1	1	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	10
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2
Enteric Fever	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5 & upwards	..	..	1	..	2	..	..	..	1	..	1	..	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	12
Diarrhœal Diseases	Under 5 yrs.	..	2	..	..	1	1	..	..	..	..	..	1	..	..	1	..	..	1	5	..	1	1	1	..	..	..	..	..	2	..	..	..	..	1	..	2	4	2	3	1	7	2	1	6	1	..	1	3	2	1	1	2	3	60
	5 & upwards	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4
Phthisis	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5 & upwards	2	..	2	..	2	3	..	1	1	1	3	1	2	1	2	2	2	1	1	1	1	..	3	1	2	..	3	..	..	..	1	1	..	1	..	1	..	2	2	..	1	1	..	..	1	..	..	3	1	2	2	..	55
Respiratory Diseases	Under 5 yrs.	2	4	1	1	1	1	2	1	4	..	..	..	4	3	..	8	5	1	2	4	1	1	..	..	1	2	1	..	1	..	..	..	..	1	..	1	..	..	..	1	..	2	..	..	1	2	5	..	3	5	5	3	1	3	84
	5 & upwards	2	2	5	1	1	..	2	5	4	1	3	3	2	4	..	5	2	3	2	1	..	5	1	3	1	5	..	1	2	..	..	..	2	1	1	2	2	1	1	..	5	3	1	..	2	..	4	4	1	6	3	..	4	109
WEST SUB-DISTRICT.																																																					
Measles	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	2	..	6
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Scarlet Fever	Under 5 yrs.	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	4
Whooping Cough	Under 5 yrs.	..	..	..	..	..	1	..	..	..	..	..	..	2	..	..	..	1	2	..	..	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	10
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	Under 5 yrs.	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	3
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	3
Enteric Fever	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5 & upwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	3
Diarrhœal Diseases	Under 5 yrs.	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	2	1	..	1	2	..	..	3	..	1	1	2	1	5	2	1	..	1	2	1	..	1	1	..	2	..	34
	5 & upwards	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Phthisis	Under 5 yrs.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	5 & upwards	1	1	..	1	1	4	..	3	3	..	1	..	..	1	1	..	1	..	..	..	1	1	1	..	3	1	..	1	..	1	2	..	..	1	..	1	1	1	1	1	2	..	..	1	1	2	2	..	1	47
Respiratory Diseases	Under 5 yrs.	1	..	1	2	1	..	2	3	4	..	2	..	..	..	1	4	..	1	1	1	1	1	..	..	..	..	..	1	..	3	3	1	1	..	..	..	..	..	..	..	..	1	..	1	1	..	4	1	..	3	3	2	2	4	57
	5 & upwards	2	..	3	1	1	2	3	5	4	2	2	3	2	2	3	1	1	4	1	1	2	2	1	3	..	1	2	..	1	1	3	1	..	..	2	1	1	..	..	..	1	3	1	..	1	1	2	1	1	4	2	2	1	84

TABLE No. 6.—Quarterly Births and Deaths during 1902.

	Quarters.	East Sub-District, 40,434.					West Sub-District, 55,347.					Borough, 95,736.				
		1st	2nd	3rd	4th	Year.	1st	2nd	3rd	4th	Year.	1st	2nd	3rd	4th	Year.
BIRTHS.	Males	194	162	179	185	720	204	218	237	199	858	398	380	416	384	1578
	Females	194	166	165	189	714	188	218	182	193	781	382	384	347	382	1495
	Total	388	328	344	374	1434	392	436	419	392	1639	780	764	763	766	3073
	Rate	38·5	32·5	34·1	34·5	34·9	28·4	31·6	30·4	26·4	29·2	32·7	32·0	32·0	29·8	31·6
DEATHS.	Males	108	121	75	133	437	88	93	66	118	365	196	214	141	251	802
	Females	103	100	72	106	381	113	86	72	121	392	216	186	144	227	773
	Total	211	221	147	239	818	201	179	138	239	757	412	400	285	478	1575
	Rate	20·9	21·9	14·3	22·3	19·9	14·6	13·0	10·0	16·1	13·5	17·3	16·8	11·9	18·6	16·2
	65 years and upwards	46	29	27	48	150	57	49	28	60	194	103	78	55	108	344
	Under 1 year ...	46	55	50	84	235	43	37	31	74	185	89	92	81	158	420
	1—5 years... ...	40	39	15	28	122	20	15	15	27	77	60	54	30	55	199
	Zymotics (7) ...	30	25	21	31	107	10	7	13	29	59	40	32	34	60	166
	Rate	3·0	2·5	2·1	2·9	2·6	0·7	0·5	0·9	2·0	1·0	1·7	1·3	1·4	2·3	1·7
	Small Pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	7	6	1	...	14	...	1	...	6	7	7	7	1	6	21
	Scarlet Fever ...	5	...	1	1	7	2	1	2	3	8	7	1	3	4	15
	Whooping Cough ...	6	7	1	1	15	3	5	1	1	10	9	12	2	2	25
	Diphtheria... ...	1	6	2	3	12	2	...	1	3	6	3	6	3	6	18
	Enteric Fever ...	5	3	2	2	12	...	...	..	3	3	5	3	2	5	15
	Diarrhœa	6	3	14	24	47	3	...	9	13	25	9	3	23	37	72
	Influenza	4	3	1	1	9	8	9	...	3	20	12	12	1	4	29
	Phthisis	16	17	9	13	55	15	10	8	14	47	31	27	17	27	102
	Respiratory Diseases	52	60	18	63	193	46	32	21	42	141	98	92	39	105	334
	Uncertified ...	...	1	1	1	3	1	...	...	2	3	1	1	1	3	6
	Inquests	17	10	16	16	59	16	15	6	20	57	33	25	22	36	116
Deaths in Public Institutions in the East Sub-District.	Hospital											38	51	33	40	162
	Workhouse											64	60	35	54	213
	From Outside the Borough											38	44	35	31	148
	From the West Sub-District											27	17	12	23	79
	No Home											4	13	6	8	31

TABLE No. 7.

DEATHS in the Sub-Districts during 1902, classified according to Ages and Diseases.

No.	DISEASES.	EAST SUB-DISTRICT.								WEST SUB-DISTRICT.							
		Ages.							All Ages.	Ages.							All Ages.
		0—	1—	5—	15-	25-	65-	75-		0—	1—	5—	15-	25-	65-	75-	
	ALL CAUSES	235	122	26	26	259	95	55	818	185	77	29	33	239	109	85	757
2	Measles	1	13	..	..	..	..	..	14	..	6	1	..	..	..	..	7
3	Scarlet Fever	..	4	2	1	..	..	..	7	..	4	3	1	..	..	..	8
5	Epidemic Influenza	..	..	..	..	7	1	1	9	2	..	2	2	6	3	5	20
6	Whooping Cough	5	10	..	..	..	..	..	15	1	9	..	..	..	..	..	10
7	Diphtheria	2	8	2	..	..	..	..	12	1	2	3	..	..	..	..	6
8	Enteric Fever	..	..	4	3	5	..	..	12	..	..	..	..	3	..	..	3
10	Diarrhœa, Dysentry	14	2	..	..	..	2	..	18	11	3	1	..	..	..	1	16
11	Epidemic Enteritis	24	5	..	..	..	..	..	29	7	2	..	..	..	..	..	9
18	Syphilis	2	..	..	1	1	..	..	4	..	..	..	..	..	..	..	..
19	Gonorrhœa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
21	Erysipelas	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	1
22	Puerperal Fever	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
23	Pyæmia	1	..	..	..	2	..	..	3	..	..	..	..	..	..	..	..
26	Malarial Fever	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
27	Rheumatic Fever	..	..	..	1	..	..	..	1	..	..	..	1	..	..	..	1
29	Tuberculosis of Brain ..	1	2	..	..	1	..	..	4	2	1	..	..	1	..	..	4
30	Tuberculosis of Larynx ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
31	Phthisis	..	..	2	6	47	..	..	55	..	..	2	12	31	1	1	47
32	Abdominal Tuberculosis ..	7	3	1	..	..	..	..	11	1	6	1	..	2	..	..	10
33	General Tuberculosis	..	3	3	..	2	..	..	8	..	1	1	..	4	..	..	6
34	Other forms Tuberculosis ..	..	1	1	..	1	..	..	3	..	3	2	..	1	..	..	6
40	Improper Feeding	..	..	..	..	..	.	..	..	4	..	..	..	..	..	..	4
42	Chronic Alcoholism	..	..	..	..	3	..	..	3	..	..	..	..	2	1	..	3
43	Lead Poisoning	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
45	Osteo-arthritis	..	..	..	..	..	1	..	1	..	..	..	..	..	1	..	1
47	Cancer	..	1	..	..	20	12	1	34	..	..	..	..	30	5	2	37
48	Diabetes Mellitus	..	..	..	..	4	..	..	4	..	..	..	..	1	1	1	3
49	Purpura Hæmorrhagica ..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..
51	Anæmia	..	..	..	..	..	..	..	..	..	..	..	2	..	1	..	3
52	Lymphadenoma	..	1	..	..	..	..	..	1	..	..	..	..	1	..	..	1
53	Premature Birth	26	..	..	..	..	..	..	26	19	..	..	..	..	..	..	19
55	Debility at Birth	28	..	..	..	..	..	..	28	25	..	..	..	..	..	..	25
56	Atelectasis	2	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..
57	Congenital Defects	2	..	..	..	..	..	..	2	3	..	..	..	..	..	..	3
59	Atrophy, Debility, Marasmus ..	28	..	..	..	..	..	..	28	29	2	..	..	..	..	..	31
60	Dentition	2	1	..	..	..	..	..	3	4	1	..	..	..	..	..	5
61	Rickets	..	2	..	..	..	..	..	2	..	1	1	..	..	..	..	2
62	Old Age, Senile Decay ..	..	..	..	..	4	22	30	56	..	..	..	..	..	26	43	69
63	Convulsions	15	2	..	..	..	..	..	17	19	4	..	..	..	..	..	23
64	Meningitis	2	5	2	1	..	..	..	10	1	1	1	3	..	..	..	6
66	Apoplexy	..	..	..	1	19	8	6	34	..	..	..	1	22	14	4	41
69	General Paralysis of Insane ..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
70	Insanity	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
72	Cerebral Tumour	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..
73	Epilepsy	..	..	..	2	5	..	..	7	..	1	2	..	..	..	..	3
75	Locomotor Ataxy	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
76	Paraplegia	..	..	..	..	3	..	..	3	..	..	..	..	..	2	..	2
77	Other forms, Nervous Diseases ..	..	..	1	..	1	..	..	2	..	..	..	..	4	3	1	8

TABLE No. 7.—Continued.

No.	DISEASES.	EAST SUB-DISTRICT.								WEST SUB-DISTRICT.							
		Ages.							All Ages.	Ages.							All Ages.
		0—	1—	5—	15-	25-	65-	75-		0—	1—	5—	15-	25-	65-	75-	
78	Otitis	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
81	Pericarditis	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
82	Endocarditis	..	1	..	2	25	2	2	32	..	1	1	2	35	11	2	52
85	Aneurism	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
86	Senile Gangrene	..	..	..	..	1	..	..	1	..	..	..	..	..	..	1	1
90	Cardiac Failure	..	..	1	..	11	1	1	14	..	..	..	2	10	5	1	18
	Graves' Diseases	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
91	Laryngitis	..	3	..	..	..	1	..	4	..	2	..	..	..	..	..	2
94	Acute Bronchitis	24	8	..	..	30	23	7	92	18	9	1	..	21	18	10	77
98	Pneumonia	16	33	3	2	25	9	..	88	17	11	..	1	14	9	4	56
99	Asthma..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	1	1
100	Pleurisy	..	..	1	..	4	1	..	6	..	..	..	..	1	..	1	2
101	Other Diseases, Respiratory System	..	..	..	..	1	..	..	1	..	..	1	..	1	1	..	3
102	Diseases of Mouth and Annexa ..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..
103	Diseases of Pharynx	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	1
104	Diseases of Œsophagus ..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
105	Ulcer of Stomach	..	..	..	..	..	1	..	1	..	..	..	1	..	..	..	1
106	Other Diseases of Stomach ..	8	2	..	..	..	..	..	10	4	1	..	..	..	..	1	6
107	Enteritis	11	1	..	1	1	..	..	14	8	1	2	..	..	..	..	11
108	Appendicitis	..	..	..	..	1	..	..	1	..	..	..	2	1	..	..	3
109	Obstruction of Intestine ..	..	..	..	..	1	..	2	3	..	1	1	..	4	1	1	8
110	Other Diseases of Intestine ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
111	Cirrhosis of Liver	..	..	..	..	3	..	..	3	..	..	..	..	8	1	..	9
112	Other Diseases of Liver ..	1	..	..	..	1	..	..	2	..	..	..	..	4	..	..	4
113	Peritonitis	..	1	..	..	1	..	..	2	..	..	2	1	4	..	..	7
114	Other Diseases, Digestive System..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
	Parotid Abscess	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
116	Nephritis	..	..	1	1	10	1	..	13	..	..	..	1	6	..	..	7
119	Diseases of Bladder and Prostate ..	..	..	..	..	1	1	..	2	..	..	..	..	..	..	..	..
120	Other Diseases, Urinary System ..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	1	3
123	Diseases of Uterus and Appendages	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
129	Placenta Prævia, Flooding ..	..	..	..	..	2	..	..	2	..	..	..	..	..	..	..	..
131	Childbirth	..	..	..	..	2	..	..	2	..	..	..	..	1	..	..	1
	Peritonitis	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
134	Ulcer, Bedsore	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..
135	Eczema	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
136	Pemphigus	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..
137	Cellulitis	1	..	..	..	..	..	1	2	..	..	..	..	..	..	1	1
	Accidents and Negligence.																
139	In Vehicular Traffic	..	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..
140	On Railways	..	..	..	1	..	..	..	1	..	..	..	..	..	1	..	1
143	By Machinery	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..
145	Burns and Scalds	..	4	..	..	1	1	..	6	..	3	..	..	1	..	..	4
146	Poisons, Poisonous Vapours ..	..	..	..	..	1	..	..	1	..	..	..	..	..	1	..	1
147	Surgical Narcosis	..	1	..	..	..	..	..	1	..	..	..	1	..	..	..	1
150	Drowning	..	1	2	1	..	1	..	5	..	..	..	..	..	..	..	..
151	Suffocation, Overlaid in Bed ..	6	..	..	..	..	..	..	6	3	1	..	..	..	..	.	4
152	,, Otherwise ..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
153	Falls not specified	..	1	..	..	..	3	1	5	..	..	..	..	1	..	..	1
154	Other injuries	..	..	..	..	1	1	..	2	..	..	..	..	..	..	..	..
155	Otherwise, not stated	..	1	..	..	1	..	1	3	1	..	..	..	1	..	..	2
	Suicides.																
157	By Poison	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
161	By Shooting	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
162	By Cut	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	2
168	Ill defined and unspecified causes ..	4	..	..	..	2	..	..	6	2	..	..	..	2	..	1	5

TABLE No. 8.—Eleven Years' Annual Deaths, &c.

	1892	1893	1894	1895	*1896	1897	1898	1899	1900	1901	*1902	A
Small Pox	...	1	5	...	...	...	...	...	1	...	..	0·7
Measles	41	21	73	40	8	49	19	2	76	48	21	37·7
Scarlet Fever	3	25	55	34	21	24	20	6	9	10	15	20·7
Whooping Cough	80	4	28	53	28	39	9	21	70	29	25	36·1
Diphtheria	4	5	33	84	55	58	43	21	10	13	18	32·6
Enteric Fever	16	23	17	18	37	21	20	44	39	17	15	25·2
Diarrhœa	55	161	62	135	131	188	174	132	117	109	72	126·4
Phthisis	144	135	133	110	89	103	105	111	110	98	102	113·8
Respiratory	438	425	387	443	361	324	319	374	444	248	334	376·3
65 years and upwards... ...	313	351	293	375	309	285	315	367	383	302	344	329·3
Under 1 year	482	600	484	659	561	671	634	575	622	487	420	577·5
1—5 years	275	212	310	353	220	308	232	209	301	193	199	261·3
Under 1 year, per 1,000 births ...	171	206	167	217	185	219	202	184	207	162	137	192·0
Total Deaths	1716	1853	1719	2069	1740	1900	1845	1908	1993	1577	1575	1832·0
Rate per 1,000	20·5	21·8	20·0	23·7	19·3	21·2	20·4	20·8	21·4	16·7	16·2	20·58
Zymotics	220	282	314	437	312	402	330	293	389	282	166	326·1
Rate per 1,000	2·6	3·3	3·7	5·0	3·5	4·5	3·6	3·2	4·2	3·0	1·7	3·66
Births	2805	2902	2889	3027	3023	3054	3140	3113	2997	3000	3073	2995·0
Rate per 1,000	33·5	34·2	33·6	34·7	33·6	34·2	34·7	33·9	32·2	31·9	31·6	33·65

* This year contains 53 weeks. A—Annual averages for the ten years preceding 1901.

TABLE No. 9 (Being Table I, L.G.B.)

Vital Statistics during 1902 and 21 Previous Years.

Year.	Population estimated to middle of each year	Births		Deaths belonging to the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Total Deaths Registered.	
				Under 1 year of age.		At all Ages.					
		Number	Rate.	Number	Rate per 1,000 Births regist'd	Number	Rate.			Number	Rate.
1	2	3	4	5	6	12	13	9	10	7	8
*1881	75,932	2769	35·9	410	148	1552	20·1	272	96	1648	21·3
1882	76,596	2762	36·1	433	156	1634	21·4	266	79	1713	22·4
1883	77,266	2804	36·4	419	149	1542	20·0	329	101	1643	21·3
1884	77,942	2691	34·6	509	189	1734	22·3	287	123	1857	23·9
*1885	78,624	2806	35·1	390	138	1564	19·5	322	106	1670	20·9
1886	79,311	2803	35·4	490	174	1701	21·5	301	121	1822	23·0
1887	80,005	2675	33·5	469	175	1664	20·8	329	128	1792	22·4
1888	80,705	2674	33·2	445	166	1595	19·8	295	117	1712	21·2
1889	81,411	2666	32·8	479	179	1620	19·9	291	119	1739	21·4
*1890	82,124	2735	32·8	477	174	1772	21·2	364	136	1908	22·8
1891	82,932	2820	34·1	531	188	1914	23·1	351	122	2036	24·6
1892	84,022	2805	33 5	482	171	1716	20·5	308	125	1841	22·0
1893	85,126	2902	34·2	600	206	1853	21·8	398	137	1990	23·4
1894	86,244	2889	33·6	484	167	1719	20·0	392	124	1843	21·4
1895	87,377	3027	34·7	659	217	2069	23·7	404	138	2207	25·3
*1896	88,525	3023	33·6	561	185	1740	19·3	329	121	1861	20·7
1897	89,688	3054	34·2	671	219	1900	21·2	371	127	2027	22·7
1898	90,866	3140	34·7	634	202	1845	20·4	373	145	1990	22·0
1899	92,060	3113	33·9	575	184	1908	20·8	420	138	2044	22·3
1900	93,270	2997	32·2	622	207	1993	21·4	448	188	2181	23·5
1901	94,495	3000	31·9	487	162	1577	16·7	356	132	1709	18·1
Averages for years 1892-1901	89,167	2995·0	33·65	577·5	192·0	1832·0	20·58	379·9	137·5	1969·3	22·24
*1902	95,736	3073	31·6	420	137	1575	16·2	392	148	1723	17·7

* These years contain 53 weeks. Area of District in acres, 3,525.

Census, 1901 { Total Population at all ages 94,187
Number of Inhabited Houses 19,285
Average number of persons per house .. 4·9

Institutions within the Borough receiving sick and infirm persons from without the Borough—the Wolverhampton and Staffordshire General Hospital; the Workhouse; the Wolverhampton Borough Hospital; the Wolverhampton Eye Infirmary; the Wolverhampton and District Hospital for Women; the Victoria Nursing Institution.

TABLE No. 10

(Which includes Table II, L.G.B.)

Year.	EAST SUB-DISTRICT.							WEST SUBDISTRICT.						
	Population estimated to middle of each Year.	Births.		Deaths.				Population estimated to middle of each Year.	Births.		Deaths.			
				At all ages.		Under 1 year of age					At all ages.		Under 1 year of age	
		Number.	Rate.	Number.	Rate.	Number.	Rate per 1,000 Births regist'd.		Number.	Rate.	Number.	Rate.	Number.	Rate per 1,000 Births regist'd.
	a	*b*		*c*		*d*		*a*	*b*		*c*		*d*	
1884	38,748	1382	35·8	981	25·4	275	199	39,146	1309	33·5	753	19·3	231	176
*1885	38,791	1451	36·8	844	21·4	210	145	39,779	1355	33·5	720	17·8	178	131
1886	38,834	1464	37·8	955	24·6	271	185	40,423	1339	33·2	746	18·5	218	163
1887	38,876	1399	36·1	944	24·3	294	210	41,077	1276	31·2	720	17·5	174	136
1888	38,919	1408	36·3	827	21·3	254	180	41,741	1266	30·4	768	18·5	118	149
1889	38,962	1417	36·5	883	22·7	270	190	42,417	1249	29·5	737	17·4	209	167
*1890	39,005	1403	35·4	977	24·6	270	192	43,103	1332	30·4	795	18·1	207	155
1891	39,067	1507	38·7	1026	26·3	310	206	43,856	1313	30·0	888	20·3	220	168
1892	39,190	1493	38·2	935	23·9	273	183	44,794	1312	29·4	781	17·5	209	159
1893	39,312	1497	38·2	1040	26·5	360	240	45,752	1405	30·8	813	17·8	240	171
1894	39,435	1487	37·8	975	24·8	276	186	46,730	1402	30·1	744	16·0	208	148
1895	39,559	1505	38·2	1106	28·0	383	254	47,729	1522	32·0	963	20·2	276	181
*1896	39,683	1595	39·6	899	22·3	310	194	48,750	1428	28·8	841	17·0	251	176
1897	39,807	1543	38·9	1022	25·7	363	235	49,792	1511	30·4	878	17·7	308	204
1898	39,931	1561	39·2	951	23·9	354	227	50,856	1579	31·2	894	17·6	280	177
1899	40,057	1508	37·8	1030	25·8	310	206	51,944	1605	31·0	878	16·9	265	165
1900	40,182	1404	35·1	1030	25·7	318	226	53,054	1593	30·1	963	18·2	304	191
1901	40,307	1408	35·5	800	19·9	271	192	54,188	1592	29·5	777	14·4	216	136
Averages for years 1892-1901	39,746	1500·1	37·85	978·8	24·65	321·8	214·3	49,359	1494·9	30·33	853·2	17·33	255·7	170·8
*1902	40,434	1434	34·9	818	19·9	235	164	55,347	1639	29·2	757	13·5	185	113

Census, 1901.	EAST SUB-DISTRICT.	WEST SUBDISTRICT.
Area	1,501 acres	.. .. 2,024 acres
Population	40,278	 53,909
Number of Inhabited Houses	7,875	 11,410
Number of Persons per house	5·1	.. .. 4·7

* These Years contain 53 weeks.

TABLE No. 11.

Birth Rate, Death Rate, and Analysis of the Zymotic Death Rate in 33 of the largest English Towns for the year, comprising 53 weeks, ending 3rd January, 1903. Compiled from the Registrar General's Returns.

Name of Town.	Population.	Birth-rate.	Death-rate.	Zymotic Death Rate.								Deaths under one year to 1,000 Births.
				Small-Pox	Measles.	Scarlet Fever.	Diph-theria.	Whoop-ing Cough.	Fever.	Diarr-hœa.	Total.	
London	4,579,107	28·5	17·7	0·28	0·50	0·12	0·25	0·40	0·12	0·54	2·23	140
Croydon	137,917	26·0	13·9	0·08	0·21	0·04	0·20	0·22	0·06	0·49	1·32	131
West Ham	275,404	34·1	17·0	0·54	0·50	0·16	0·45	0·41	0·28	0·84	3 20	149
Brighton	124,539	24·2	15·8	0·00	0·24	0·02	0·28	0·22	0·11	0·38	1·26	125
Portsmouth	191,909	27·0	16·7	0·00	0·33	0·07	0·34	0·48	0·28	0·80	2·32	150
Norwich	113,178	27·8	16·6	0·00	0·31	0·19	0·08	0·57	0·04	0·62	1·83	166
Plymouth	110,057	26·9	17·0	0·01	0·42	0·10	0·12	0·23	0·04	0·86	1·80	154
Bristol	334,632	27·5	17·3	0·00	1·20	0·18	0·54	0·31	0·16	0·37	2·79	131
WOLVERHAMPTON ..	**95,712**	**31·6**	**16·3**	**0·00**	**0·21**	**0·16**	**0·19**	**0·24**	**0·13**	**0·77**	**1·71**	**133**
Birmingham	528,181	31·8	18·6	0·00	0·33	0·54	0·24	0·50	0·19	0·70	2·52	157
Leicester	216,389	29·1	14·8	0·02	0·34	0·05	0·15	0·32	0·05	0·58	1·54	152
Nottingham	243,190	27·8	16·6	0·00	0·02	0·10	0·11	0·14	0·20	0·71	1·30	158
Derby	116,982	28·0	13·9	0·00	0·33	0·06	0·10	0·24	0·11	0·41	1·27	124
Birkenhead	112,396	32·7	17·7	0·00	0·31	0·17	0·23	0·52	0·39	0·59	2 25	148
Liverpool	692,495	34·2	22·4	0·03	0·46	0·45	0·29	0·58	0·30	0·93	3·07	162
Bolton	171,082	27·3	16·9	0·03	0·16	0·67	0·24	0·32	0·19	0·39	2·02	134
Manchester	549,169	32·8	19 9	0·00	0·44	0·26	0·21	0·44	0·11	0·52	1·99	152
Salford	224,007	33·8	19·2	0·00	0·66	0·21	0·32	0·51	0·27	0·63	2·62	156
Oldham	138,091	26·0	19·0	0·04	0·75	0·25	0·33	0·21	0·09	0·31	2·00	147
Burnley	98,383	29·1	19·4	0·03	1·51	0·70	0·45	0·15	0·19	0·59	3·63	177
Blackburn	130,318	25·6	16·9	0·01	0·61	0·23	0·17	0·19	0·16	0·39	1·77	159
Preston	113,766	28·8	19·0	0·00	0·50	0·18	0·23	0·25	0·19	1·41	2·77	188
Huddersfield	95,000	24·3	17·7	0·01	0·60	0·11	0·13	0·47	0·06	0·18	1·58	138
Halifax	105,932	21·2	15·6	0·00	0·37	0·14	0·08	0·14	0·14	0·21	1·08	144
Bradford	281,770	22·9	15·8	0·00	0·56	0·16	0·29	0·11	0·11	0·18	1·42	138
Leeds	437,036	29·8	17·5	0·01	0·41	0·12	0·21	0·45	0·17	0·59	1·98	159
Sheffield	418,177	33·3	17·0	0·00	0·46	0·12	0·27	0·17	0·11	0·55	1·69	149
Hull	245,448	32·0	17·1	0·00	0·79	0·07	0·35	0·44	0·17	0·41	2·23	136
Sunderland	148,007	35·8	19·4	0·00	0·56	0·16	0·10	0·32	0·23	0·48	1·87	152
Gateshead	113,024	36·7	17·7	0·03	0·72	0·30	0·10	0·45	0·05	0·36	2·04	136
Newcastle	219,150	32·6	19·8	0·05	0·62	0·26	0·10	0·45	0·04	0·25	1·75	138
Cardiff	168,909	31·4	16·7	0·00	1·04	0·21	0·52	0·55	0·05	0·27	2·66	146
Swansea	95,059	31·0	16·0	0·34	0·07	0·17	0·24	0·01	0·06	0·48	1·39	134

County Borough  of Wolverhampton.

REPORT

OF THE

Chief Sanitary Inspector

JOHN PEERS, R.P., Assoc. San. Inst.,

UPON THE

Work of the Inspection Department

FOR THE YEAR 1902.

PRINTED BY ORDER OF THE HEALTH COMMITTEE.

REPORT OF THE CHIEF SANITARY INSPECTOR,

FOR THE YEAR 1902.

HEALTH OFFICES,

TOWN HALL,

WOLVERHAMPTON,

May, 1903.

To the Chairman and Members of the Health Committee.

Gentlemen,

I have the honour of presenting a Report of the work executed by your Inspectorial and Clerical Staff during the year 1902.

This forms my fourth Annual Report here, and, as in the previous years, I propose for the purposes of review, following the principle of briefly summarising the four quarterly Reports already submitted to you.

These summaries appear in Tables A, B, C, D, and E, and in addition there is (for the first time) an extract from your Veterinary Inspectors' Quarterly Reports. There is also attached the record of the work executed under the provisions of the Canal Boats Acts.

Reviewing the tables seriatim, I find the grand totals A, B, and C, each show a decrease in numbers as compared with those of 1901. This reduction is, however, readily explained by reason of the resignation of one of the District Inspectors, the vacancy occasioned thereby extending over the greater portion of the last quarter.

GENERAL SANITARY WORK.

BRIEF COMMENTS UPON THE TABLES.

COMPLAINTS.

(Table A).

580 written complaints alleging sanitary defects have been received. This appears to be the largest number of *bona-fide* complaints yet recorded, and may, I think, be taken as an index of the steadily increasing interest the general public have of late manifested in sanitary matters.

The written complaints made in respect of closet pails or ash receptacles was 519 against 354 during 1901.

The requests made relative to closet pails or ash receptacles reached a total of 1,745 against 1,754 in 1901.

It is somewhat remarkable that these latter figures should so nearly coincide.

INSPECTIONS.

(Table A).

44,066 inspections have been made by the District Inspectors during the year. This number is almost identical with that recorded in 1900. Every one of the more important items in the table shows a substantial increase of work done, except those which are entered under the heading "Re-inspections, calls made, &c.," and "Inspections of courts, outdoor closets, drains, &c."

These two latter items alone account for the reduction shown in the grand total compared with last year. The absence of the District Inspector already referred to would more than account for this deficiency.

A large number of special inspections was also made by the Medical Officer of Health and myself, one result of this being the closure, by order of the Council, of eighty cottages unfit for habitation.

Subsequently nine of these buildings were re-opened after substantial improvements had been made.

NUISANCES.

Discovered and dealt with.—(Table B.)—The above-named inspections resulted in the discovery of 5,419 nuisances, being 346 less than in 1901.

The number of damp and dilapidated houses reported appears to have far exceeded those of any previous year.

Overcrowing was found to have been only slightly on the increase. The nuisances arising from choked or stopped w.w.c.'s still continue to be excessive, whilst the nuisances inseparable from old privies have nearly disappeared.

Defective drains and untrapped or improperly trapped drain inlets are nuisances of a serious character, and are constantly being unearthed. The number discovered during the year exceed those of any previous year except 1900. On the other hand, nuisances in connection with improperly drained sinks, i.e., sinks without proper earthenware waste pipes, &c., appear to be fast disappearing, for in 1899 no less than 600 were found, whilst this year the number is less than 300.

Perhaps the only other form of nuisance calling for special comment relates to "Open and foul ashpits," or the want of proper ash accommodation, 697 cases of this kind having been dealt with.

Smoke nuisances do not appear to have been particularly pronounced, and when met have been dealt with by special letter, which has invariably led to improvement.

NOTICES.

Notices Served.—(Table B.)—4,073 notices (2,879 being intimation or preliminary, and 1,194 being duly authorised Statutory) were served in respect of the nuisances discovered. This is the smallest number of notices yet served in any one year, and is less by 964 than in 1901. Of this number 964 intimations or preliminary notices, and 229 of the Statutory, were occupiers' notices.

There were also 619 communications in connection with the work of the department. Only a partial idea is thus conveyed of the very large amount of clerical work entailed.

IMPROVEMENTS.

Improvements.—(Table C.)—6,657 improvements have been secured in connection with 3,969 premises during the year. Here again a reduction is apparent compared with the figures of 1901; and this is, of course, to be expected since a less number of inspections was made and less nuisances were discovered. Still, a vast amount of good work has been accomplished, as will readily be seen on reference to the table, wherein is set out the number and type of improvement secured in compliance with notices served.

Drainage.—866 drains were dealt with, 248 having been entirely re-constructed and 618 improved or repaired. There have also been 819 proper self-cleansing gully traps fixed in connection therewith.

This is the largest number of drain gully traps fixed in any one year.

Privies.—It is now very rare that these insanitary structures are met with, and the number discovered and abolished this year has fallen to the low figure of 49, against 128 in 1901.

Privy-middens or cesspits deserve little mercy at the hands of a progressive Sanitary Authority, and there can be little excuse for their retention where a sewer and water supply are reasonably available. The same applies to many of our ill-situated pail closets, of which we have, unfortunately, a very large number, but for many reasons only moderate progress can be made in the direction of their conversion.

The charges made for water necessary for flushing purposes (referred to in the Medical Officer's report last year) undoubtedly acts as a great deterrent in the conversion of privies and pails into water closets; yet, notwithstanding this, it will be seen on reference to the table that there has been a greater proportion of conversions into w.c.'s than into w.w.c.'s.

Ash Receptacles.—520 open and foul ashpits have been abolished in favour of the more sanitary galvanized iron ash-bin. This number far exceeds that of any year, and is a highly satisfactory feature deserving of special notice.

To replace an open foul gaping ashpit situate in a confined area, with a perfectly efficient sanitary bin, is a simple improvement of no small importance, and probably has a greater bearing on the health conditions of the vicinity than would at first sight appear to be the case.

Many of the advantages accruing are, however, much dependent upon proper use by the public and attention to details by the Cleansing Department.

Surfaces of Courts, &c.—The surfaces of courts, yards, and channels have received increased attention, the number re-laid or re-paved during the year under review being 464, against 386 in 1901, increase 78. This also is a work of far-reaching importance, and is well worth encouraging. Particularly does this apply to court surfaces, where, for the lack of other and better open space accommodation, groups of poor children are too often found making use of the court surface as their only available playground.

Water Supply.—11 drinking water wells have been closed after having been duly certified by the Borough Analyst as "unsafe" for drinking, and the water of 2, which were, after analysis, pronounced satisfactory, remain in use. The polluted wells were, in every case, closed after receipt of formal application in this behalf, no Court proceedings being necessary. It is perhaps worthy of note that during the past four years no less than 106 duly certified polluted sources of drinking water have been closed.

Houses Cleansed, &c.—509 houses have been thoroughly cleansed and limewashed or repairs executed thereto, and in addition repairs and limewashing have been carried out in connection with 905 outbuildings.

The defective guttering or down-spouting of 356 premises have been repaired or new provided where necessary.

Overcrowding was abated in 77 dwellings.

Animals Removed.—Only 224 animals were removed from improper positions, against 1,024 during 1901. It would therefore appear that this form of nuisance is largely on the wane.

Workshops.—On reference to Table A it will be seen that 1,327 visits have been recorded by the District Inspectors to the workshops of the borough. The special visits made by the Workshop Inspector engaged measuring the workrooms and procuring full sanitary details for entry into special registers, which, since the advent of the Factory and Workshops Act, 1901, it is encumbent upon us to keep, are not included in this number.

The workshops or workplaces dealt with in this behalf, so far, are :—

N.W.	District—	Inspection not yet completed.
S.W.	,,	219.
N.E.	,,	156.
S.E.	,,	112.

Bakehouses.—780 visits have been made to the various bakehouses within the borough, and special circulars were delivered to the occupiers, setting forth the provisions of the law relative to the necessary systematic cleansing of all the inside walls and all the ceilings or tops of a bakehouse, and all the passages and staircases in connection therewith.

Slaughter-Houses.—2,318 visits have been made to the 60 slaughter-houses existing within the borough at the end of the year, and this is the highest number of slaughter-house visits ever recorded in one year.

Three applications were made for the transfer of licenses, but none were acceded to, though, in one instance, where the business and licensed premises in connection therewith changed ownership, the license was ultimately granted to the new occupier. No new licenses were granted during the year.

On the occasion of the annual renewal of licenses six were refused, but one of these was subsequently granted for the usual term of 12 months. The licenses in connection with three premises lapsed, thus the total number of licenses now on the register is 52.

By order of the Health Committee special circulars were addressed to nine license holders relative to the unsuitable situation of their premises.

Cowsheds and Milk Supply.—1,076 visits were made to the various cow-houses, dairies, and milk shops within the borough, against 965 visits during the previous year, increase 111.

Owing to the unsatisfactory position and condition of several of the cow-houses, and having regard to the Recommendations of the Royal Commission on Tuberculosis, exception was taken to seven of the buildings being used as cow-houses, and ultimately they were discontinued. Prosecution ensued in one instance for the unlawful occupation of a wooden shed as a cow-house, and the defendant was fined £2 10s., and costs 18s., in default one month's imprisonment.

Food Inspection.—(Table D.)—3 tons 2 cwts. of diseased or unsound "food stuff" was destroyed during the year. This appears to be the largest quantity dealt with in any one year, and full details in connection therewith are given in the table referred to.

In this connection 29 Justices' orders for destruction were obtained.

Prosecution ensued in regard to the seizure of some unsound fruit, and a fine was inflicted to the amount of £1, and costs £1 8s.

Offensive Trades.—No addition has been made to the number of the premises used in the trades usually recognised as "offensive." In one case, however, in a court, one was found to have been commenced, but was discontinued by the owner upon being informed of the penalties, &c., attaching to the establishment of "any noxious or offensive trade" without the consent in writing of the Local Authority. One business of this type, of somewhat long standing, was also discontinued.

Prosecutions.—(Table E.)—Legal proceedings were instituted in 30 cases, entailing 41 attendances at the Court. This number represents a slight increase in the prosecutions taken in past years.

Seven of the summonses were against occupiers for nuisances in connection with w.w.c.'s.

Canal Boats.—H.M. Inspector of Canal Boats paid his usual visit and made the customary examinations. In his Annual Report to the Local Government Board a high compliment was paid to Wolverhampton. Appended is a copy of our Annual Report to the Local Government Board, showing the work executed under the provisions of the Canal Boats during the year 1902.

Veterinary Inspector's Report.—This year we have had the benefit of the services of a fully qualified Veterinary Surgeon in connection with the inspection of Milch Cows, &c., and attached hereto is a summary of his reports.

CANAL BOATS.

The following is a Copy of the Report submitted to the Local Government Board, showing the work executed under the provisions of the Canal Boats Acts.

CANAL BOATS ACTS, 1877—1884.

BOROUGH OF WOLVERHAMPTON REPORT FOR THE YEAR 1902.

1. The duties of Canal Boat Inspection and Examination within this Borough devolve upon the Chief Sanitary Inspector and mainly one of his assistants. Name and address of Chief Inspector, JOHN PEERS, Health Offices, Town Hall, Wolverhampton.

   There is no separate remuneration specified for this work.

2. 214 Boats have been inspected during the year, and with the exception of Boat "Suakim," registered at Chester, No. 322, the condition of the Boats generally can be said to have been satisfactory.

3. Infringements discovered and dealt with :—

(a)	Registration	0
(b)	Notification of Change of Master ..	0
(c)	Certificates	20
(d)	Marking	6
(e)	Overcrowding	8
(f)	Separation of the Sexes	2
(g)	Cleanliness	7
(h)	Ventilation	1
(i)	Painting	1
(j)	Provision of Water Cask	8
(k)	Removal of Bilge Water	0
(l)	Notification of Infectious Disease ..	0
(m)	Admittance of Inspector	0
	Total	53

4. Legal proceedings have been taken in the cases mentioned hereunder :—

Name of Boat	Registration Number and Place.	Nature of infringement.	Result.
"John."	129. Brierley Hill.	Certificate not identifying the Owner.	Summons withdrawn, Owner paying costs, 6s. 6d., and submitting the Boat for Re-registration.
"Truro."	535. Stoke.	Ditto, and Water Vessel being of insufficient capacity.	Summons withdrawn, Owner paying costs, 5s. 6d., and submitting the Boat for Re-registration.

5. All infringements are first dealt with by means of the usual complaint notes or notices.

6. The undermentioned cases of Infectious Disease have been notified :—

Date of notification.	Name of Boat.	Registration Number, and Place.	Nature of Disease. Number of Cases.
21st January.	"Heron."	84. Chester.	2 Cases. Scarlet Fever.
28th June.	"Matebele."	461. Chester.	1 Case. ,,
18th July.	"Caleb."	311. Chester.	1 ,, ,,
22nd July.	"Martha."	522 Chester.	1 ,, ,,
1st August.	"Amy."	288. Chester.	1 ,, ,,
1st October.	"Martha."	522. Chester.	1 ,, ,,

In every case the patient was removed to the Borough Infectious Disease Hospital.

7. In every case where Infectious Diseases have been notified from a Canal Boat, the boat has been detained, and the cabin or cabins disinfected forthwith after removal of the patient.

8. The number of Boats now on the Register is 897.

9. 11 Boats have been registered during 1902. In four cases fresh registration has been rendered necessary owing to structural alteration of the boat, viz., the provision of Fore Cabin.

One boat has been re-registered in consequence of the change of ownership; and the registration of one boat has been cancelled at the request of the owner. In this latter case the Certificates of Registration were returned.

JOHN PEERS,

Chief Sanitary Inspector and Examining Officer under the Canal Boats Acts.

SUMMARY OF VETERINARY INSPECTOR'S REPORTS.

The number of Cowsheds in the Borough is 15, and the average number of Cows found occupying them was 167. During the year 675 Cows have been inspected.

15 Cows have been condemned as Tuberculous.
6 ,, ,, ,, for Infected Udders.
8 ,, ,, ,, ,, Chronic Mammitis.

The result of the 12 months' inspection shews that the great sources of danger to the milk supply are :—

I. Cows affected with Tuberculous Udders.
II. ,, ,, ,, General Tuberculosis.
III. ,, ,, ,, Chronic Mammitis.
IV. That milk may be contaminated with Tuberculous dust or dirt in the Cowsheds, or by fouling of the Udders by infected excreta.

With the object of ensuring a supply of pure milk, I am continually impressing upon Cowkeepers the imperative necessity of keeping the Cows as clean as possible, as the accumulation of dung, &c., on the hind quarters is a source of infection, and during the process of milking some finds its way into the cans.

I have examined sediment taken from the bottom of milk cans and found it to consist of dirt, small hairs, scales of outer layer of the skin, and numerous small organisms which may possibly be dangerous to infants and young children.

Inflammation of the Udder may result from cold, injuries, or Tubercular infection; and I have requested Cowkeepers not to use the milk from a Cow with even one quarter of the Udder affected ever so slightly, as even if the disease is not of a tuberculous nature it is obvious that milk containing inflammatory products must be absolutely poisonous for infants, and doubtless many cases of dysentery and enteric trouble result from using it.

The only remedy is to keep the Cows and Cowsheds scrupulously clean; frequent inspection of Cows and removal of suspected animals, and special attention to scalding of all dairy utensils.

(Signed) JOHN E. CARTWRIGHT, M.R.C.V.S.,
Veterinary Inspector.

TABLE A.

Public Complaints or Requests received and dealt with.

Complaints in respect of:—Alleged or Suspected Sanitary Defects	..	580
,, ,, Closet Pans or Ash Receptacles	..	519
Requests ,, ,, ,, ,,	..	1745
TOTAL	..	..2844

Summary of District Sanitary Inspectors' Routine Work.

	Districts.				Total for Borough
	N.W.	S.W.	N.E.	S.E.	
Cases of Certified Infectious Diseases investigated	199	281	140	152	772
Number of Houses inspected	574	525	277*	513	1889
Re-inspection, Calls made, &c.	5146	4761	3327	4768	18002
Inspections of— Workshops	432	281	311	203	1327
,, Bakehouses	174	306	137	163	780
,, Cowhouses	102	172	11	15	300
,, Dairies and Milkshops ..	342	169	126	139	776
,, Slaughter-houses	764	455	395	704	2318
,, Stables and Stable Yards ..	962	623	552	894	3031
,, Courts, Outdoor Closets, Drains, &c.	2113	1557	1869	2504	8043
,, Piggeries, Fowls, and other ,, Animals kept	929	661	616	847	3053
,, Meat and Food	588	478	536	958	2560
Ashpits reported for Clearing	163	113	89	227	592
Dangerous Buildings, Street Gullies, &c., reported	86	87	35	108	316
Waste of Water	38	36	26	123	223
Miscellaneous	18	20	7	39	84
TOTAL INSPECTIONS, &c... ..	12630	10525	8454	12457	44066

* Also inspected 190 Canal Boats.

TABLE B.

Nuisances Reported by Sanitary Inspectors.

	Sanitary Defects.	Districts.				Total for Borough
		N.W.	S.W.	N.E.	S.E.	
1.	The house or part of the house in a dirty condition ..	48	77	67	135	327
2.	,, ,, ,, ,, damp condition ..	73	46	56	149	324
3.	,, ,, ,, ,, dilapidated condition ..	12	39	4	66	121
4.	,, ,, ,, ,, being overcrowded	6	16	32	33	87
5.	The water closet or waste water closet so foul as to be a nuisance	93	47	34	44	218
6.	,, ,, without a water supply	4	2	4	5	15
7.	,, ,, with a defective flush of water ..	6	1	4	2	13
8.	,, ,, improperly constructed so as to be a nuisance	20	5	—	1	26
9.	,, ,, or waste-water closet being stopped or partially stopped	67	42	25	41	175
10.	Insufficient or improper closet accommodation ..	5	9	14	17	45
11.	The pail closet being improperly situated	10	11	33	38	92
12.	The privy, midden, or cesspit being a nuisance ..	10	18	4	6	38
13.	The soil pipe defective	12	3	2	--	17
14.	,, ,, unventilated or ill-ventilated ..	12	6	1	—	19
15.	The bath or lavatory waste pipe being improperly drained	5	—	3	1	9
16.	The sink being improperly constructed or drained ..	40	114	50	90	294
17.	The premises being without proper drainage ..	11	30	27	19	87
18.	The drain inlet untrapped or improperly trapped ..	15	53	22	16	106
19.	The drain foul	64	66	56	98	284
20.	,, choked or stopped	64	66	58	98	286
21.	,, defective	47	55	31	19	152
22.	,, unventilated or ill-ventilated	20	3	1	9	33
23.	The rain-water pipe being in direct communication with drain	2	5	2	4	13
24.	The rain-water pipe being defective	20	18	18	65	121
25.	The guttering being defective	45	26	34	87	192
26.	The roof of house being defective	10	32	15	20	77
27.	The soft-water cistern being so foul as to be a nuisance	12	7	3	7	29
28.	The floor of yard, or court, or closet being in an insanitary condition for want of proper paving ..	41	32	18	43	134
29.	The walls or floor of outbuildings, yard, or court, or closet being foul	95	65	126	154	440
30.	The outbuildings being dilapidated	18	33	16	28	95
31.	The ash bin being defective, or ashpit foul or defective	115	82	150	84	431
32.	The premises being without proper ash accommodation	91	81	35	59	266
33.	The premises being without a proper manure receptacle	4	5	11	8	28
34.	An animal or animals kept so as to be a nuisance ..	47	26	48	67	188
35.	An accumulation of offensive matter	44	41	46	60	191
36.	The urinal being improperly constructed, drained, or offensive	10	20	9	18	57
	Miscellaneous	112	71	84	112	379
	TOTALS	1310	1253	1133	1723	5419

Notices served requiring the abatement of aforesaid Nuisances.

	Form of Notice.	Districts.				Total for Borough
		N.W.	S.W.	N.E.	S.E.	
	Intimation (Preliminary)	695	592	599	993	2879
	Statutory	372	226	265	331	1194
	TOTALS ..	1067	818	864	1324	4073

TABLE C.

Improvements made in Compliance with Notices served.

	Districts.				Total for Borough
	N.W.	S.W.	N.E.	S.E.	
Drains (Reconstructed)	51	105	50	42	248
Drains (Improved or Repaired)	171	235	76	136	618
Drains (Traps fixed)	251	301	187	80	819
Cesspools Abolished	—	39	3	—	42
Privy Middens Ditto	13	21	10	5	49
Privies Altered to (Waste Water Closets)	6	9	22	1	38
Privies Altered to (Water Closets)	25	20	35	10	90
Water Closets (Constructed)	30	35	10	9	84
Water Closets (Improved or Repaired)	124	52	29	39	244
Ashpits (Altered to Bin or Tub)	141	157	149	73	520
Ashpits (Improved or Repaired)	9	14	28	21	72
Courts, Yards, and Channels Relaid or Repaved	136	162	97	69	464
Water (Wells Closed)	3	3	3	2	11
Water (Water laid on)	2	3	14	2	21
Water (Soft Water Cisterns Cleansed)	32	30	2	10	74
Houses (Cleansed or Limewashed)	57	86	85	68	296
Houses (Generally Repaired)	49	65	59	40	213
Houses (Lighted or Ventilated)	1	18	4	6	29
Houses (Spouting, etc., provided to)	119	57	94	86	356
Overcrowding Abated	4	11	41	21	77
Out-door Premises Limewashed or Repaired	359	248	182	116	905
Animals Removed	47	48	65	64	224
Offensive Accumulations Removed	100	131	48	111	390
Other Amendments or Nuisances Abated	549	47	102	75	773
Total Improvements	2279	1887	1395	1086	6657
Total Premises Improved	1359	964	1042	604	3969

Disinfection.

Number of houses disinfected	378
,, Schools ,,	1
,, Canal Boats ,,	6
,, Articles ,, in Steam Disinfector	8884
,, ,, ,, by Sulphurous Fumes	1040

TABLE D.

Unwholesome Food Destroyed.

Voluntarily Surrendered and Destroyed.

Nature of Article.	Why Destroyed.
Carcases of :—	
1 Bullock	Unwholesome
2 Cows	Suffocated
1 Cow	Diseased
4 Calves	Suffocated
1 Calf	Emaciated
7 Sheep	Suffocated
2 „	Unsound
2 Lambs	Suffocated
4 Pigs	Suffocated
2 „	Diseased
Breast of Mutton	Bruised
Leg of Bullock	„ „
Hind-quarters of 2 Sheep	„ „
Leg, Shank, and Fore-quarters of 2 Sheep	„ „
Flank and Hind-quarter of Lamb	„ „
Head of Pig	Diseased
Lungs of 1 Bullock	„ „
Livers of 4 „	„ „
Lungs of 14 Cows	„ „
Livers „ 6 „	„ „
Lungs of 12 Sheep	„ „
Livers „ 3 „	„ „
Lungs of 5 Pigs	„ „
Liver „ 1 „	„ „
Kidney „ 1 „	„ „
Quantity of :—	
Apples	Unsound
Bananas	„ „
Tomatoes	„ „
Pears	„ „
Box of Fish	„ „
Bag of Mussels	„ „

Condemned and Destroyed by Justices' Order.

Nature of Article.	Why Destroyed.
Carcases of :—	
2 Cows	Diseased
9 Sheep	Suffocated
1 Lamb	Unsound
5 Pigs	Diseased
3 Pigs	Suffocated
The Fore-quarters and flanks of 2 Lambs	Unsound
Liver of Bullock	Diseased
Liver of 1 Pig	Diseased
Lungs of 2 Pigs	Diseased
Quantity of :—	
Peaches	Unwholesome
Cherries	Unsound
Apples	„ „
Oranges	„ „
3 Boxes of Oranges	„ „

For the destruction of the above 44 Justices' Orders were obtained.

	Tons.	Cwts.	Qrs.	lbs.
Approximate Weight Surrendered ..	1	12	2	7
„ „ Seized ..	1	9	1	27
Total ..	3	2	0	6

TABLE E.

Prosecutions.

PREMISES.	NATURE OF OFFENCE.	RESULT.
Court 2, Brunswick Street	Non-Compliance with Statutory Notice, re—W. W. C.'s being choked and foul	Summons withdrawn, work subsequently done
Ditto	Ditto	Ditto
Ditto	Ditto	Ditto
Ditto	Ditto	Ditto
Ditto	Ditto	Ditto
Ditto	Ditto	Ditto
Ditto	Ditto	Ditto
12 & 13, Vicarage Road	Non-Compliance with Statutory Notice, re—Premises being without proper ash accommodation	Summons withdrawn on payment of Costs, 4/6. Work completed
Canal Boat ..	Boat being used as a dwelling by the owner, and not having been duly registered	Summons withdrawn, owner paying Costs 6/6, and submitting the boat for registration
Retail Market Hall	Exposing unsound oranges for sale	Defendant fined 20/-, and Costs 28/-
Rear of Nos. 1 to 4, Duke Street	Unlawfully occupying a wooden shed as a cowhouse	Defendant fined 50/-, and Costs 18/6, or one month's imprisonment
29, Art Street, and 78 to 82, Salop Street	Non-Compliance with Statutory Notices, re— Insufficient and improper closet accommodation, and outpremises being dilapidated and foul	After two adjournments, Order made for work to be completed within seven days, defendant to pay 10/6 Costs
30 & 31, Art St., and 78 to 82, Salop Street	Non-Compliance with Statutory Notices, re—Open and foul ashpit	Ditto
175 to 183, Newhampton Road West	Non-Compliance with Statutory Notices, re— Premises being without proper ash accommodation	After one adjournment, Summons withdrawn, work having been done, and defendants agreeing to pay costs, 6/6.
8 to 13, Lime St.,	Non-Compliance with Statutory Notice, re— Premises being without proper ash accommodation	Summons withdrawn, work having been done, defendant paying Costs, 4/6
Stables rear of 2, Clifton Street	Non-Compliance with Statutory Notice, re—Premises being without a proper manure receptacle	Order made for proper receptacle to be provided within fourteen days, defendant to pay Costs 7/6

TABLE E (continued)

Prosecutions.

PREMISES.	NATURE OF OFFENCE.	RESULT.
30, Ash Street	Non-Compliance with Statutory Notice, re—Privy midden being a nuisance	Summons withdrawn, work having been done. Defendant paying costs, 4/6
31, Ash Street	Ditto	Ditto
59 to 67, Maxwell Road	Non-Compliance with Statutory Notice, re—Guttering being defective	Summons withdrawn, work having been done. Defendant paying costs, 4/6
161, Newhampton Road West	Non-Compliance with Statutory Notice, re—Surface of yard being foul, and fowls being kept	Summons withdrawn, work having been done. Defendant paying costs, 4/6
Wholesale Market	Having a quantity of unsound oranges deposited for sale	Summons dismissed, it being held that "custom of trade" went to shew that the oranges were not intended for food of man.
Ditto	Ditto	Ditto
Yard adjoining 2, Salisbury Street	Disobeying Justices' Order, re—Pig keeping	Defendant fined 20/-, and costs 10/-
Ditto	Disobeying Justices' Order, re—Offal boiling	Case not adjudicated upon.
79 to 81, Herbert Street	Non-compliance with Statutory Notice, re – Open, deep, and foul Ashpit	Order made for work to be done in 7 days. Defendant to pay costs, 11/6
26 to 28, Art St.	Non-compliance with Statutory Notice, re—Pail Closets and Ashpit being improperly situated and roof of out-premises being defective	After two adjournments summons withdrawn, work having been done. Defendant paying costs, 4/6
Court 1, Art Street	Ditto, ditto, and paving of court being defective	Ditto
Canal Boat	Registration Certificate not identifying the owner, and water vessel being of insufficient capacity	After being adjourned, summons withdrawn, boat having been submitted for re-registration. Defendant paying costs, 5/6
6, Warwick Street	Non-compliance with Statutory Notice, re—Fowl being kept and outbuildings being used as a stable	After two adjournments, order made to abate nuisance and prohibiting recurrence, but order to stand over three weeks.