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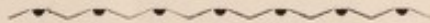


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23RD
ANNUAL REPORT
ON THE
HEALTH OF ST. HELENS

For the Year ending Dec. 31st, 1895,

BY
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M.D., B.Sc. (PUB. HEALTH), &C.,
Medical Officer of Health ;
AND
Public Analyst.



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1896.

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HEALTH COMMITTEE
OF THE
ST. HELENS CORPORATION.

NOVEMBER, 1895.

THE RIGHT WORSHIPFUL THE MAYOR (COUNCILLOR H. MARTIN, J.P.

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„ J. FISHER.

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SANITARY SUB-COMMITTEE:

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ALDERMAN J. C. GAMBLE, J.P.

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COUNCILLOR J. BURCHALL, J.P.

„ F. A. BURT.

„ J. FORSTER, J.P.

„ J. GREEN.

„ J. MASSEY.

„ J. POVEY.

STATISTICAL SUMMARY FOR 1895.

POPULATION—Estimated to the Middle of the Year—

	Males	...	41,406	} Total		
	Females	...	37,294		...	79,400
Natural increase during the year...					...	1,476

MARRIAGES	...	...	...	...	...	...	517
Annual Rate of Persons Married per 1000 of the Population							6·51

BIRTHS	...	...	Males	...	1,631	} Total		
			Females	...	1,534		...	3,165
Annual Rate of Births per 1000 of Population							...	39·8
Mean	„	„	during years 1885 to 1894			...	...	39·29

DEATHS	...	...	Males	...	914	} Total		
			Females	...	760		...	1,674
Annual Rate of Mortality (Males ... 22·0)						} Total		
per 1000 ... (Females 20·0)							...	21·08
Mean Rate during years 1885 to 1894 ...							...	22·10

Total Deaths from Zymotic Diseases	...	...	...	...	...	245
Annual Rate of Mortality from Zymotic Diseases						3·08
Mean Rate of Mortality from Zymotic Diseases for years						
1885 to 1894						3·84

Infantile Mortality Rate, 1895	...	...	...	...	...	181
Mean Rate for years 1885 to 1894						168·5

Much important work has been accomplished during 1895 by your Committee. This I have recorded in the detailed portion of this report.

I have to thank your Committee for the way in which they have supported my action during the year, and also the individual members for kindly advice and help given me in cases where I have been in doubt.

My thanks are also due to the Medical Practitioners in St. Helens for their assistance in reporting to me, when interference was necessary, and in so loyally supporting our efforts to improve generally the healthfulness of the town.

In conclusion, I have to report that the various Officials connected with my department have carried out their work in an energetic and conscientious manner.

I am, Gentlemen,

Your obedient Servant,

JOHN ROBERTSON.

POPULATION.

The population of St. Helens at the middle of 1895 (June 30) is estimated to have been 79,400 persons. Of this number 41,406 were males and 37,294 females.

An accurate estimation of the population is of primary importance, as on this depends the various mortality rates from which again are reckoned the progress made and the future line of action to be taken in the most important matters relating to the public health.

In a manufacturing town like St. Helens it is exceedingly difficult to arrive at a satisfactory estimate of the population for 1895, owing to the constantly recurring fluctuations in the prosperity of its staple trades and other more or less dependent causes.

The method adopted in arriving at the above figures is that used by the Registrar-General, and is based on the assumption that the same rate of increase will occur between 1891 and 1901 as occurred between 1881 and 1891—*i.e.*,

Population 1881	...	...	58,308* (April)
„ 1891	...	...	72,413* (April)
„ 1895	...	...	79,400* (June)

* Population within the enlarged Borough Area.

Although it is often thought that the extraordinary rate of increase of the population which occurred during the last intercensal period does not now maintain, yet there are many indications that no great falling off has actually occurred.

The birth rate still remains a very high one, giving as large a “natural increase” as in former years. Again the number of inhabited houses enumerated between June, 27th, and July 5th, 1895, corresponds proportionally to the population with that in former years.

There is an undoubted need in large and rapidly-growing towns like St. Helens for a five-yearly census. Such a quinquennial census is to be taken in London, and will be of real value in enabling correct statistics to be arrived at.

The main object of any general census is its value in calculating health statistics—but it is anomalous that the areas taken for census purposes (*i.e.*, ward and township boundaries in St. Helens) are quite unsuitable for purposes of localising specially unhealthy areas, and thus pointing to the place where the attention of the health authority is to be directed.

CAUSES OF INCREASE OF POPULATION.

The following figures show the various increases which have been registered as occurring in St. Helens during the past 13 years :—

Year.	Natural Increase.	Estimated Increase.	Increase due to Immigration.
1883	1152	1291	139
1884	1203	1321	118
1885	1062	1348	286
1886	1193	1379	186
1887	1030	1407	337
1888	1322	1440	118
1889	1236	1470	234
1890	1032	1504	472
1891	1094	1535	440
1892	1408	1574	166
1893	1236	1600*	364
1894	1482	1660	178
1895	1476	1710	234

* This number does not include the increase which took place in the new area during 1893.

A natural increase of 1476 in our population of 79,400 is at the rate of 18·5 per 1000.

In England and Wales during 1895 the natural increase was at the rate of 11·6 per 1000.

The increase due to Immigration is obtained by subtracting the natural from the estimated increases. The resultant is a number which by itself may be of doubtful value, but when compared with similar figures for past years is instructive and interesting.

INHABITED HOUSES.

The number of Inhabited Houses at the census of 1881 in the area corresponding to the Extended Borough is estimated to have been 10,165. In 1891 the actual number was 12,536. The number in 1895 (assuming the increase to have been going on uniformly) is estimated to have been 13,700. On June 27th the number counted was 13,416, but as the proportion of uninhabited was then found to have increased slightly since 1891, and in this respect to have approached the proportions of 1871 and 1881, 13,700 may be taken as the number of inhabited houses.

This gives 5·72 persons per house.

In 1891 there were 5·77 per house.

In 1881 there were 5·73 per house.

There has been an undoubted tendency for two families to occupy one house during the past year. A large number of cases of overcrowding from this cause came to the knowledge of the Health Department during the year 1895.

DISTRIBUTION OF THE POPULATION.

In the accompanying table are given the Statistics relating to the distribution and density of the Population.

WARDS.	Population Census, 1891.	Population estimated to June 30, 1895.	Area of each Ward, 1895.			Persons per Acre in 1895.
			Acres.	Ro.	Poles.	
Eccleston, North ...	8555	9472	234	2	30	40·4
Eccleston, South ...	6797	7739	617	3	32	12·5
Central ...	8219	8321	98	0	27	84·9
Windle, North ...	7481	8747	681	1	22	12·6
Windle, South ...	8438	8614	68	3	11	125·2
Hardshaw ...	9225	9970	341	0	0	29·2
Sutton, East ...	8250	9031	1300	2	18	6·9
Sutton, West ...	7418	8542	2424	1	22	3·5
Parr ...	8030	8964	1475	0	0	6·0
Whole Borough ...	72413	79400	7248	0	2	10·9

AGE DISTRIBUTION.

AGES.	CENSUS 1891, Old Borough Area.	Estimated Population at each Age in the Extended Borough, June 30th, 1895.
Under 1 year	2398	2674
1 to 2 years	2143	2390
2 „ 3 „	2140	2387
3 „ 4 „	2068	2306
4 „ 5 „	1967	2194
Total under 5 years	10716	11951
5 to 10 years	9221	10268
10 „ 15 „	8334	9281
15 „ 20 „	7441	8287
20 „ 25 „	6582	7329
25 „ 30 „	6023	6706
30 „ 35 „	5129	5711
35 „ 40 „	4465	4972
40 „ 45 „	3674	4092
45 „ 50 „	2685	2989
50 „ 55 „	2434	2710
55 „ 60 „	1620	1804
60 „ 65 „	1407	1567
65 „ 70 „	763	849
70 „ 75 „	461	513
75 „ 80 „	227	254
80 „ 85 „	83	92
85 „ 90 „	19	21
90 „ 95 „	4	4
95 „ 100 „	—	—
	71288	79400

BIRTHS.

The number of Births registered during 1895 was 3,165, this being the largest number ever registered in St. Helens in one year.

In the following table will be found the number of births registered during the years 1885 to 1895, and the Birth Rate in each year.

YEAR.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.	Rate per 1,000 per year.
1885	709	631	582	606	2528	39·9
1886	721	651	671	595	2638	40·7
1887	651	617	584	604	2456	37·0
1888	694	668	601	689	2652	39·2
1889	723	748	624	679	2774	39·8
1890	754	678	645	699	2776	38·9
1891	767	684	750	719	2920	40·7
1892	695	769	719	730	2913	39·7
1893	775	747	776	731	3029	40·1
1894	781	716	653	732	2882	37·0
Mean of } 10 years } ...	727	690	660	678	2756	39·3
1895 {						} 39·8
Males ...	447	407	397	380	1631	
Females.	437	389	378	330	1534	
Total ...	884	796	775	710	3165	
Rate per 1000 ...	44·4	40·1	39·0	35·7	39·8	

It will be observed from the above table that the birth-rate during 1895 was higher than the mean of the previous ten years. It exceeded that of the preceding year by 2·8 per 1000.

St. Helens has for a very long series of years had the highest, or one of the highest, birth-rates among towns of its own size or larger. The striking position which St. Helens continues to occupy in this respect is well seen in Tables "E" and "F," in which will be found the birth-rates in each of the large towns.

In England and Wales the birth-rate during 1895 was 30·3, or 9·5 per 1,000 below that in St. Helens. The birth-rate throughout the Country, with the exception of a few Districts, is a slowly decreasing one as is seen by the accompanying figures.

Year.	BIRTH RATES.	
	England and Wales.	St. Helens.
1886	32·8	40·7
1887	31·9	37·0
1888	31·2	39·2
1889	31·1	39·8
1890	30·2	38·9
1891	31·4	40·7
1892	30·5	39·7
1893	30·8	40·1
1894	29·6	37·0
1895	30·3	39·8
Mean	30·98	39·29

It will be observed, too, that during 1895, as in the preceding years, the highest birth-rate was registered during the 1st quarter.

Of the 3,165 children born during 1895, 1,631 were males, and 1,534 were females, this being in the proportion of 100 males to 93·9 females. At the Census of 1891 there were 100 males to every 91·7 females in St. Helens, whereas in England and Wales at the same period there were 100 males to every 106·4 females.

The facts which have been indicated regarding the birth-rate in St. Helens have a most important bearing on all mortality statistics.

1st—So large a proportion of young children in any population greatly raises its death-rates. As is well known, the mortality rates among the young are enormously greater than among middle-aged persons (see table on page 17), which shows the mortality rates in St. Helens at the various age groups.

2nd—The high birth-rate of Males also unfavourably influences mortality statistics. Not only is there a high birth-rate of males in St. Helens, but there is apparently an emigration of females with an immigration of males producing a population having relatively a very large proportion of males, among whom the death-rate is higher than among females.

It cannot be too often pointed out that in comparing the mortality statistics of two or more Districts, it is absolutely essential to bear in mind the above. When this is done in regard to St. Helens, mortality statistics become relatively much more favourable.

ILLEGITIMACY.

St. Helens has always had a comparatively low rate of illegitimacy, so low indeed that probably it does not influence the mortality statistics to any appreciable degree as it does in some other Districts.

Of the 3,165 births during 1895, 79 were illegitimate. This is at the proportion of 975·0 legitimate births and 24·9 illegitimate births in every 1,000.

Year.	Legitimate.	Illegitimate.
1886	974	26
1887	971	29
1888	970	30
1889	975	25
1890	976	24
1891	974	26
1892	981	19
1893	974	26
1894	968·5	31·5
1895	975·0	24·9

The above figures do not include the births which occurred in Whiston Workhouse.

It is satisfactory to know that the statistics for St. Helens regarding illegitimacy compare favourably with those of any other town in England.

MORTALITY RATE.

The deaths of 1,674 persons took place during 1895 within the Borough of St. Helens. This number is equal to an uncorrected death-rate of 21·08 per 1,000 of the population.

All the statistics regarding ages, distribution, and causes of death to be found in this Report are based upon the 1,674 deaths which occurred within the Borough Boundary during 1895.

For comparative purposes certain corrections have to be applied as follows :—

I. To be deducted—	MALES.	FEMALES.	TOTAL.
(a) Deaths in Rainhill Asylum (Main Building)	46	36	82
(b) Deaths of Haydock patients at the Isolation Hospital	1	0	1
(c) Deaths of patients at the Cottage Hospital who were admitted from Districts outside the Borough ...	3	0	3
(d) Deaths at the Providence Hospital under similar conditions ...	2	0	2
Totals ...	52	36	88

II. To be added—	MALES.	FEMALES.	TOTAL.
(a) Deaths of St. Helens patients in } Whiston Workhouse Infirmary.. }	55 ...	39 ...	94
(b) Deaths at Old Wint, Small-Pox } Hospital of patients from St. } Helens }	1 ...	0 ...	0
(c) Deaths at Rainhill Asylum of } patients from St. Helens ... }	8 ...	2 ...	10
Totals ...	64 ...	41 ...	105

The corrected number of deaths is therefore 1,691. In the four Quarterly Reports of the Registrar General, St. Helens is debited with 1,696 deaths. The 5 deaths which are not accounted for in the above figures are deaths which occurred in other institutions outside of St. Helens, or accident cases of which the Health Committee has no knowledge.

The Death-rate for St. Helens with these corrections was therefore 21·29 per 1,000 of the population. This number is 3·27 per 1,000 above the rate in the preceding year, when the lowest death-rate on record was registered in St. Helens.

The Death-rate for 1895 is however below that of the preceding 10 years by 1·11 per 1,000 of the population. It will be seen under the headings of Deaths from Diarrhœa, and Deaths from Typhoid Fever, that the year 1895 was an unfavourable one for these Diseases, yet, notwithstanding, the general mortality rate is below the average.

The saving of life which this reduction in the Death-rate of 1·11 per 1,000 indicates amounts to over 88 lives, with a corresponding saving in sickness.

If the Death-rate which occurred during 1894 continued in 1895, no less than 259 lives would have been spared.

On page 20 will be found the Death-rate for each year, for which the Health Department possesses records. It will be seen that on 5 occasions during the past 26 years the mortality rate was below that for 1895.

On page 23 will be found the Death-rates for each week during the year 1895, and it will be noticed that the weeks in the 3rd and 4th Quarters show the heaviest mortality rates. In Table C, at the end of this Report, will be found the causes of these higher weekly rates.

The Death-rate in England during 1895 was 18·7, which is an increase of 2·1 per 1,000 on the low rate of the previous year, but is 0·2 below the average of the previous 10 years. It will be noted that while the rate for England during 1895 is 0·2 below the average of the previous 10 years, that for St. Helens is 1·11 per 1,000. below the average for the ten years.

In Tables E and F, pages 21 and 22, will be found the Mortality Statistics in other towns. In comparing these with St. Helens Statistics, the social conditions,—the age and the sex distribution,—and the nature of the staple industries in each town should be taken into consideration.

The Death-rates in each Quarter of the past four years is seen below :—

	1892.	1893.	1894.	1895.
1st Quarter ...	23·6 ...	24·8 ...	17·5 ...	19·5
2nd „ ...	18·8 ...	22·7 ...	16·8 ...	19·3
3rd „ ...	19·6 ...	26·8 ...	17·4 ...	22·9
4th „ ...	19·6 ...	19·5 ...	20·2 ...	22·4

The Death-rates in the various Wards are shown below :—

WARDS.	Death Rate. 1892.	Death Rate 1893.	Death Rate 1894.	Death Rate 1895.
Eccleston, North ...	20·1	24·5	19·0	22·1
Eccleston, South ...	15·3	16·8	12·5	11·7
Central ...	19·9	24·5	14·4	19·2
Windle, North ...	16·5	19·7	14·1	18·4
Windle, South ...	21·6	20·6	15·5	16·4
Hardshaw‡ ...	21·7 ‡	31·0 ‡	27·5 ‡	21·9 ‡
Sutton, East† ...	15·6 †	20·1 †	15·2 †	17·1 †
Sutton, West * ...	27·8 *	39·0 *	26·8 *	36·4 *
Parr ...	22·2	22·7	16·6	22·3

* Including Deaths in Rainhill Asylum (main building) and in the Fever Hospital.

† Do. Do. The Cottage Hospital.

‡ Do. Do. The Providence Hospital.

The Death-rate of Males and Females during the past three years is given below :—

	Males.	Females.	Total.
1893 ...	24·4 ...	22·3 ...	23·7
1894 ...	17·8 ...	18·1 ...	18·0
1895 ...	22·0 ...	20·0 ...	21·0

MORTALITY AT VARIOUS AGES.

In the following table will be seen the Death-rates at each age groups during the years 1893-95; also the mean rate at each age.

AGES.	Death-Rate per 1,000 of the Population at each Age Group.			
	1893.	1894.	1895.	Mean.
Under 1 year ...	233·1	178·4	215·4	208·9
1 to 2 years ...	98·2	59·5	79·5	79·0
2 „ 3 „ ...	32·0	17·5	20·5	23·3
3 „ 4 „ ...	15·1	10·6	9·5	11·7
4 „ 5 „ ...	12·2	9·7	9·1	10·3
5 „ 10 „ ...	5·3	4·7	5·4	5·1
10 „ 15 „ ...	4·7	2·9	3·8	3·8
15 „ 20 „ ...	4·2	3·6	4·5	4·1
20 „ 25 „ ...	6·9	6·5	5·5	6·3
25 „ 35 „ ...	9·1	7·2	8·2	8·1
35 „ 45 „ ...	12·6	11·6	14·4	12·8
45 „ 55 „ ...	23·6	20·4	21·4	21·8
55 „ 65 „ ...	51·9	35·4	35·0	40·7
65 „ 75 „ ...	75·4	71·2	79·2	52·6
75 „ 85 „ ...	95·3	112·7	167·6	125·2
Upwards of 85 years..	400·0	80·0	280·0	253·3
All under 5 years ...	83·7	59·2	71·7	71·3
All over 5 years ...	13·0	10·7	12·1	11·9
All ages ...	23·4	18·0	21·0	20·8

The above figures show a condition of Mortality Statistics which requires very careful investigation. The enormous Death-rate which occurs during the first two years of life in St. Helens—as in other towns—is

undoubtedly mainly due to preventable causes. When considered from the point of view of preventive medicine it seems extraordinary that in the past so little value has been placed on infant lives, and so little has been done in preventing this great mortality.

Improvements in the mortality rates of St. Helens are to be looked for chiefly in improvements in the Death-rates at ages below two years.

In table D at the end of this Report will be found the number of deaths from each disease at each age group. The more important facts to be observed regarding that table may be briefly summarized as follows:—

I.—Under one year of age there were 2,674 children living in St. Helens in 1895, and 576 of these died—*i.e.*, out of every 4.6 children, one died and 3.6 survived. The chief causes of death were Diarrhœa, 64; Premature Birth, 75; Convulsions, 58; Bronchitis and Pneumonia, 96; Catarrh of Stomach and Bowels, 46; Debility and Marasmus, 123.

The great majority of deaths from Diarrhœa are due to preventable causes, as may be seen from the statistics on page 40, where the deaths from this cause are treated in detail. To a large extent a reduction would be made in deaths due to Premature Birth were such children looked after by persons who had the requisite appliances for the treatment of these unfortunate infants. It is often considered that it would be a fallacy to prevent the deaths of these immature children, but, both on the ground of morality and experience, every modern method should be used to prevent such deaths. It may be remembered in this connection that some of the greatest men who have ever lived were born prematurely, and that it does not necessarily follow that such children grow into feeble adults.

As regards the other causes of death it may be said that they too are to a very large extent preventable. Investigation shows in a most pointed manner that the three main factors to be dealt with are—

- 1st. The ignorance displayed by mothers of the most elementary principles in the rearing of young infants, especially as regards their food.
- 2nd. Among the lower classes there is a certain amount of carelessness, which although not culpable is most productive of harm.
- 3rd. Insanitary surroundings, although probably influencing the mortality of children from Marasmus, Debility, Diarrhœa, and some other Diseases, do not play in St. Helens such an important part as the first two factors do. Such insanitary surroundings have a far more deleterious influence on infants than on older children, however.

The figures from St. Helens are too small to base any conclusions as to the relative frequency of deaths of infants in different classes of society, yet they point in a remarkable manner to the fact that the better cared-for children of the middle and upper classes do not suffer from these preventable diseases to anything like the same extent as do the children of the lower classes.

II.—At ages 1-2 years there were living in St. Helens 2,390 children, of whom 190 died—giving a Death-rate of 79·5 per 1,000. Zymotic Diseases caused no less than 68 of these deaths—Measles accounting for 26, and Diarrhœa for 33. The mortality is high from Bronchitis and Pneumonia, due mainly to the fact that children at this age expose, without being able to protect themselves.

III.—The facts to be gleaned from the age groups over 2 years will be found under the headings of the various Diseases on Table D.

INFANTILE MORTALITY RATE.

This rate shows the number of deaths of children under one year of age per 1,000 births. In 1895 it was **181** as against 166 in the preceding 10 years.

In Tables E and F will be found the rates for other towns.

In England and Wales it was 161 in 1895.

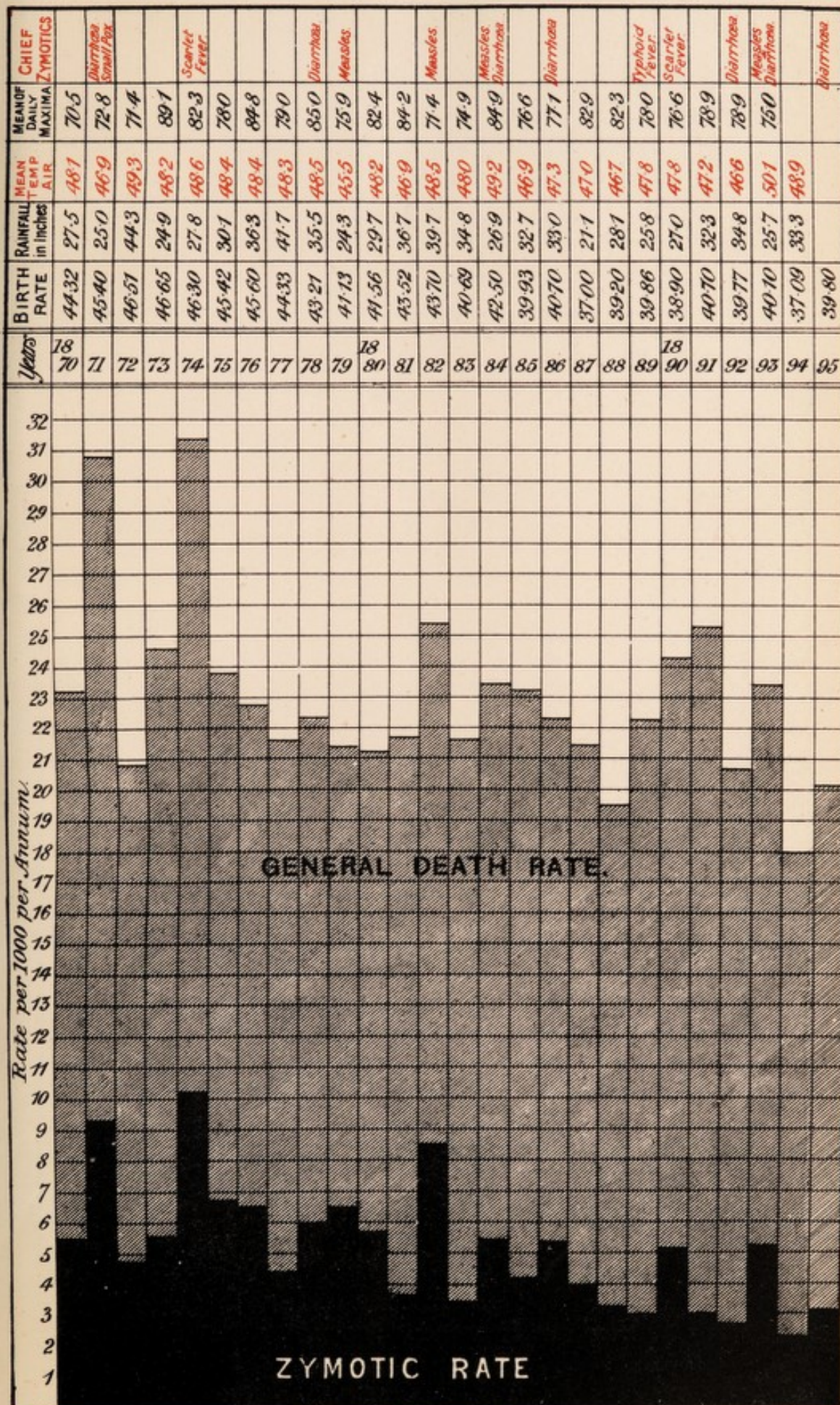
YEAR.	INFANT MORTALITY RATE.	
	England and Wales.	St. Helens.
1885	138	168
1886	149	172
1887	145	163
1888	136	151
1889	144	177
1890	151	170
1891	149	180
1892	147	147
1893	159	196
1894	137	161
1895	161	181

TABLE SHOWING THE VITAL AND MORTAL STATISTICS FOR
ST. HELENS DURING 26 YEARS.

YEARS.	Population.	Birth Rate.	Death Rate.	Zymotic Death Rate.	DEATHS FROM							
					Small Pox,	Measles,	Scarlet Fever.	Typhoid and Continued Fever.	Typhus Fever.	Diarrhoea.	Whooping Cough.	Diphtheria.
1870	44320	..	23.46	5.5	0	0	56	23	8	97	37	5
1871	45400	..	27.79	9.4	..	..	..	28	..	..	..	..
1872	46510	..	20.46	4.9	65	14	6	24	3	65	16	3
1873	47630	46.65	23.03	5.03	4	19	92	24	2	79	9	15
1874	48790	46.30	31.43	9.2	6	29	231	25	1	110	41	14
1875	49970	45.42	24.69	5.3	0	4	77	65	1	101	31	10
1876	51190	45.60	23.28	5.1	0	102	21	40	1	86	7	15
1877	52430	44.33	22.84	3.2	0	2	12	34	1	74	48	11
1878	53700	46.21	23.99	4.2	0	4	22	40	0	132	15	20
1879	55010	41.13	22.40	5.7	0	143	83	34	2	52	2	3
1880	56340	41.56	20.05	4.6	0	0	27	40	2	130	71	1
1881	57711	43.52	21.69	2.92	0	14	28	56	0	76	3	3
1882	58972	43.70	25.46	7.4	0	250	36	33	1	85	36	6
1883	60263	40.09	21.65	2.5	0	3	14	31	1	69	24	11
1884	61584	42.50	24.16	5.3	0	131	16	33	2	131	9	11
1885	62932	39.93	23.32	3.5	0	81	13	7	1	56	53	11
1886	64311	40.70	22.46	5.2	0	102	34	28	0	122	41	10
1887	65718	37.00	21.69	3.9	0	53	35	34	6	101	28	11
1888	67158	39.20	19.80	3.1	0	38	11	22	0	65	61	21
1889	68628	39.86	23.50	4.18	0	78	3	81	1	85	15	29
1890	70132	38.90	25.43	5.3	0	19	181	24	1	74	68	13
1891	71666	40.70	26.02	3.0	0	54	24	26	0	78	29	9
1892	73240	39.77	26.55	2.64	1	23	18	25	0	84	31	12
1893	*75390	40.10	23.46	5.3	5	135	6	52	0	168	19	16
1894	*77690	37.09	18.02	2.21	0	21	14	26	2	38	61	10
1895	*79400	39.8	21.08	3.08	1	54	9	59	0	101	14	8

* These figures include Population in Area added 1893.

C H A R T N o. 1.



FOR 26 YEARS.

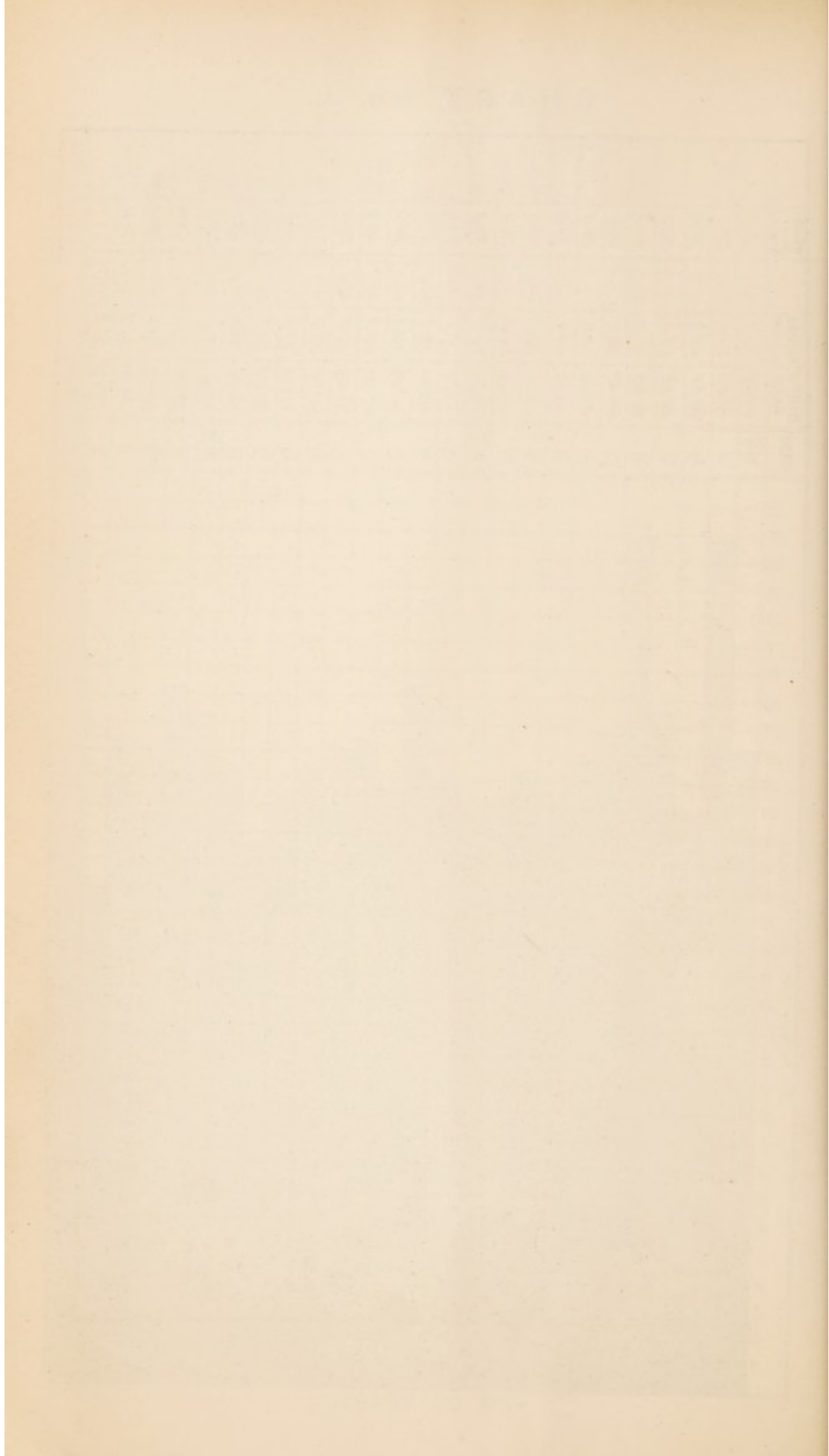


TABLE E.

TABLE COMPILED FROM THE REGISTRAR GENERAL'S QUARTERLY REPORTS IN ORDER TO SHOW THE COMPARATIVE MORTALITY OF ST. HELENS WITH 33 OTHER LARGE ENGLISH TOWNS IN 1895.

NAME OF TOWN.	Estimated Population middle of 1895.	Annual Rate per 1,000 living.			Deaths of Children under One Year of Age to 1000 Births.
		Births.	Deaths.	Principal Zymotic Deaths.	
London	4,392,346	30·5	19·8	2·63	165
West Ham	249,473	34·3	17·8	3·23	168
Croydon	114,923	25·2	14·4	1·31	133
Brighton	119,604	25·6	18·8	1·75	164
Portsmouth	174,751	27·9	17·8	2·13	174
Plymouth	89,096	28·7	20·0	1·92	180
Bristol	228,139	28·9	18·0	1·29	143
Cardiff	155,637	34·2	18·2	2·43	179
Swansea	97,008	33·4	18·2	1·68	178
Wolverhampton	85,780	35·3	24·3	4·23	221
Birmingham	496,751	32·3	20·2	2·66	183
Norwich	107,127	31·8	19·3	2·72	191
Leicester	193,839	30·8	17·2	2·98	205
Nottingham	226,658	29·7	19·0	2·23	191
Derby	100,272	29·1	16·7	1·95	161
Birkenhead	107,469	30·6	19·5	2·35	174
Liverpool	503,967	36·8	28·7	4·01	211
Bolton	119,337	32·9	24·0	4·45	213
Manchester	524,865	33·6	25·2	3·72	204
Salford	208,253	35·8	25·6	4·96	231
Oldham	141,079	27·5	21·9	2·79	189
Burnley	99,591	32·1	23·3	3·87	245
Blackburn	127,615	30·6	24·3	5·62	241
Preston	112,638	33·4	23·9	3·76	249
Huddersfield	99,482	21·6	16·9	1·20	156
Halifax	93,813	23·4	19·2	1·30	156
Bradford	226,384	26·1	19·8	2·50	203
Leeds	395,546	31·6	20·5	2·69	191
Sheffield	342,768	34·8	20·4	3·17	198
Hull	216,722	34·2	20·8	3·32	206
Sunderland	137,705	35·0	21·8	3·50	191
Gateshead	95,871	34·5	19·5	2·62	186
Newcastle-on-Tyne	207,021	31·1	20·4	2·52	187
St. Helens	79,400	39·8	21·0	3·08	181

TABLE F.

TABLE SHOWING COMPARATIVE STATISTICS BETWEEN
ST. HELENS AND OTHER SMALLER TOWNS DURING 1895.

NAME OF TOWN.	Population.	Birth Rate per 1,000.	Death Rate per 1,000.	Zymotic Rate per 1,000	Infantile Death Rate per 1,000 Births.
Southampton	67,694	32.2	20.0	1.9	154
Reading	65,356	28.0	15.0	1.4	142
Northampton	65,328	28.3	15.0	1.4	155
Hanley	57,990	36.0	19.6	2.0	204
Burton-upon-Trent	49,235	32.0	15.4	1.4	131
Walsall	77,749	34.1	19.6	2.7	200
West Bromwich	60,874	36.5	20.3	3.0	157
Dudley	45,509	38.2	23.0	2.8	195
Aston Manor	76,009	32.4	17.1	3.1	195
Coventry	56,454	28.6	16.9	2.2	155
Grimsby	57,942	34.3	17.8	3.1	207
Stockport	75,336	32.6	24.9	3.6	231
Bootle	53,909	33.8	20.8	2.9	187
Wigan	58,175	38.8	22.9	2.6	192
Warrington	57,727	36.7	21.6	4.7	198
Bury	58,302	26.1	22.8	2.9	203
Ashton-under-Lyne	42,004	29.9	23.2	4.5	223
Rochdale	72,504	23.8	22.9	2.4	176
Accrington	42,088	26.5	18.1	2.3	202
Darwen	36,263	31.2	18.9	2.0	158
Barrow-in-Furness	53,720	29.9	13.3	1.3	142
York	70,270	31.1	19.7	2.6	189
Middlesborough	85,607	32.2	18.4	2.7	194
South Shields	89,658	33.9	20.5	3.0	183
Carlisle	40,328	32.6	19.3	0.8	140
Ystradyfodwg	107,092	40.0	20.9	3.1	223
St. Helens	79,400	39.8	21.0	3.08	181

TABLE H.

WEEKLY RETURNS OF BIRTHS AND DEATHS FOR 1895.

1895.	Deaths from all causes.	Annual Rate per 1000.	Deaths from seven principal Zymotics.	Annual Rate per 1000, for Zymotics.	Births.	Annual Rate per 1000, Births.
Week ending January (5 days) 5	20	13.1	2	1.31	76	49.8
" " 12	27	17.8	2	1.31	70	45.9
" " 19	39	25.5	4	2.62	64	41.9
" " 26	23	15.0	2	1.31	68	44.6
" February 2	25	16.4	2	1.31	61	40.0
" " 9	25	16.4	4	2.62	67	43.9
" " 16	35	22.9	4	2.62	65	42.6
" " 23	28	18.3	4	2.62	70	45.9
" March 2	38	24.9	2	1.31	69	45.2
" " 9	32	20.9	2	1.31	81	53.1
" " 16	40	26.2	4	2.62	68	44.6
" " 23	32	20.9	4	2.62	64	41.9
" " 30	24	15.7	3	1.96	61	40.0
" April 6	27	17.8	2	1.31	59	38.7
" " 13	34	22.3	2	1.31	52	34.1
" " 20	37	24.2	2	1.31	57	37.3
" " 27	30	19.6	—	—	65	42.6
" May 4	41	26.8	2	1.31	70	45.9
" " 11	25	16.4	—	—	46	30.1
" " 18	21	13.7	1	.65	73	47.8
" " 25	35	22.9	1	.65	50	32.8
" June 1	29	19.0	3	1.96	73	47.8
" " 8	25	16.4	2	1.31	62	40.6
" " 15	29	19.0	3	1.96	66	43.2
" " 22	29	19.0	5	3.28	66	43.2
" " 29	23	15.0	6	3.93	57	37.3
" July 6	35	22.9	10	6.56	58	38.0
" " 13	31	20.3	6	3.93	59	38.7
" " 20	41	26.8	11	7.21	57	37.3
" " 27	49	32.1	18	11.80	65	42.6
" August 3	41	26.8	15	9.84	59	38.7
" " 10	44	28.8	14	9.18	49	32.1
" " 17	26	17.0	7	4.59	65	42.6
" " 24	42	27.5	14	9.18	61	40.0
" " 31	34	22.3	9	5.90	67	43.9
" September 7	32	20.9	4	2.62	67	43.9
" " 14	23	15.0	3	1.96	49	32.1
" " 21	19	12.4	5	3.28	58	38.0
" " 28	38	24.9	5	3.28	61	40.0
" October 5	30	19.6	8	5.24	33	21.6
" " 12	37	24.2	9	5.90	51	33.4
" " 19	28	18.3	6	3.93	74	48.5
" " 26	27	17.8	4	2.62	34	22.3
" November 2	41	26.8	7	4.59	71	46.5
" " 9	33	21.6	1	.65	59	38.7
" " 16	42	27.5	8	5.24	71	46.5
" " 23	34	22.3	4	2.62	61	40.0
" " 30	24	15.7	2	1.31	54	35.4
" December 7	28	18.3	2	1.31	50	32.8
" " 14	42	27.5	2	1.31	54	35.4
" " 21	21	13.7	1	.65	57	37.3
" " (10 days) 31	59	38.7	2	1.31	41	26.8

CAUSES OF DEATH.

THE ZYMOTIC DISEASES.

The mortality from the seven principal Zymotic Diseases, *i.e.*, Small Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever (including Typhus, Typhoid, and Continued), and Diarrhœa was at the rate of 3·08 per 1,000 per annum during 1895.

In England and Wales the rate of mortality for this Group was 2·14 per 1,000 per annum during 1895.

It will be noted that the rate of mortality for Zymotic Diseases was higher in St. Helens during 1895 than during the preceding year. The rate during 1894 was in St. Helens, as in other Districts in England, the lowest ever recorded.

The rate for 1895 compares favourably with that for the preceding 10 years—which was 3·83 per 1,000—and this, notwithstanding the fact that the year 1895 was owing to climatic and other conditions, one which was favourable to certain Zymotic Diseases.

The following table shows the yearly rate from Zymotic Diseases during each of the past 26 years, and also the rate for each quinquennial period. It will be seen that there is a gradual diminution taking place in the number of deaths from this group of eminently preventable Diseases.

Year.	Rate.	Year.	Rate.	Year.	Rate.	Year.	Rate.	Year.	Rate.
1870	5·5	1875	5·3	1880	4·6	1885	3·5	1890	5·3
1871	9·4	1876	5·1	1881	2·92	1886	5·2	1891	3·0
1872	4·9	1877	3·2	1882	7·4	1887	3·9	1892	2·64
1873	5·03	1878	4·2	1883	2·5	1888	3·1	1893	5·3
1874	9·2	1879	5·7	1884	5·3	1889	4·18	1894	2·21
Mean	6·80		4·70		4·54		3·97		3·69

1895 3·08

In Tables E and F will be found the Zymotic rates for 1895 of other towns. In comparing the St. Helens rate with that in other towns it is essential to bear in mind,—1st, that in towns like St. Helens, with a very high proportion of children in the population, Zymotic Diseases are more prevalent than in those towns with a smaller proportion of children; 2nd, that in working-class towns like St. Helens, Zymotic Diseases are not only more prevalent but the mortality from such Diseases is higher than in towns where the proportion of well cared for children is greater.

The Zymotic Rate of 3.08 during 1895 was made up as follows :

Small Pox	...	...	...	0.00
Measles	...	...	...	0.68
Scarlet Fever	...	...	...	0.11
Diphtheria	...	...	...	0.10
" Fever "	...	...	...	0.74
Whooping Cough	...	...	...	0.17
Diarrhœa	...	...	...	1.27
Total	...	...	...	3.08

The relative prevalence of the Diseases in this Group in 1895, compared with that during the 23 years—1872-1894—is set out in the following table.

DISEASE.	Per cent. of Zymotic Deaths.	
	23 years, 1872-1894.	1895.
Small Pox	1.32	0.40
Measles	21.37	21.95
Scarlet Fever	16.39	3.65
Diphtheria	4.32	3.25
Fever	11.03	23.98
Whooping Cough	11.72	5.69
Diarrhœa	33.65	41.05
	100%	100%

It will be observed from the above figures that while Small Pox, Scarlet Fever, Diphtheria, and Whooping Cough Mortality was relatively below the average in 1895, the Mortality from Fever and Diarrhœa was greatly in excess, no less than 65% of the deaths from Zymotic Diseases being due to Fever and Diarrhœa.

Zymotic Rates during each of the 4 Quarters of the years 1891-1895.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
1891	2.5	2.9	3.2	3.1
1892	2.0	1.2	3.9	2.4
1893	6.4	4.2	10.3	2.0
1894	2.26	1.39	2.62	2.57
1895	2.00	1.45	6.06	2.80

In Table D will be found certain details regarding the deaths from Zymotic Diseases as to Age Groups and Localities.

The following gives the number of deaths in each Ward during the 5 years 1891 to 1895.

WARDS.	Total Deaths from 7 Principal Zymotics in each year.					Persons per acre 1895.	Estimated Population 1895.
	1891	1892	1893	1894	1895		
Eccleston, North ...	32	24	55	20*	33*	40.4	9472
Eccleston, South ...	12	13	34	16*	19*	12.5	7739
Central ...	23	17	47	13	36	84.9	8321
Windle, North ...	17	9	32	14*	20*	12.6	8747
Windle, South ...	22	37	50	14	20	125.2	8614
Hardshaw ...	31	23	40	35	19	29.2	9970
Sutton, East...	21	11	23	15	17	6.9	9031
Sutton, West (+)	36	24	61	26	59	3.5	8542
Parr ...	28	36	60	19	22	6.0	8964
TOTALS ...	222	194	402	172	245	10.9	79400

* Including Deaths in the Area added to these Wards in August, 1893.

(+) Including Deaths in Fever Hospital.

CHOLERA.

As a result of the efficient measures taken by the Local Government Board in 1893 and 1894, and of the better Sanitary condition of England, the few imported cases during these years did not spread. It was not necessary in 1895 to revert to the special precautions which were adopted in the previous year.

SMALL POX.

Two importations of this Disease occurred during the year, resulting in 10 cases in all.

On April 11th a lad was notified as suffering from a mild attack of Small Pox. He was at once removed to the Small Pox Hospital—those who had been in daily contact with him were vaccinated, and the house lime-washed and thoroughly disinfected. On April 24th a servant in the same house contracted the disease. No further cases occurred from this house. It was not possible to trace the source of infection in this case. It transpired that the lad had undoubtedly contracted the disease outside the Borough. He had been assisting a relation as a hawker of greengroceries, and it is most probable that he came in contact with the infection in this way.

On April 17th a letter was received from the Medical Officer of Health of Liverpool, stating that a tramp had been admitted into the Small Pox Hospital who had lodged on the previous two nights in a Common Lodging House in Greenbank, and who undoubtedly was in an Infectious condition whilst in St. Helens. On inquiry it was found that, of the 16 or 18 persons who had lodged in this house over Sunday, all but eight had gone on their journeys and that none of them had left an address. It therefore became impossible to give information to any surrounding districts as to the presence of these infected tramps. It afterwards transpired that cases

occurred in Lincolnshire, in Derbyshire, and in Warwickshire as a result of the infection contracted in the Lodging House in St. Helens.

The precautions adopted in St. Helens were—1st, to remove every case to Old Wint Small Pox Hospital; 2nd, to detain all who remained in the Lodging House; 3rd, to allow no new lodgers to be taken in; and 4th, to lime-wash and thoroughly disinfect the house. Eight cases occurred directly or indirectly as a result of this importation. All except two of the patients were inmates of the Lodging House, and all made good and uninterrupted recovery except a man, aged 35, who had either not been vaccinated or had been imperfectly vaccinated. This man died on the eighth day of the stage of eruption.

This outbreak illustrates very well the necessity for a better supervision over tramps. They so frequently act as carriers of disease that the desirability of having each keeper of a Common Lodging House to enter in a book the name of each and the name of the town to and from which each tramp is journeying is very evident. Had such information been available in this case probably very few cases would have occurred outside St. Helens.

The cases of Small Pox which have occurred in recent years in St. Helens are set out in the following table.

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Cases of Sickness } from Small Pox }	0	0	5	0	1	0	23	40	2	10
Cases of Death ...	0	0	0	0	0	0	1	5	1	1

VACCINATION.

The following table shows the Vaccination Returns for 9 years. It compares favourably with that of other towns.

YEARLY RETURNS ON VACCINATION FOR 9 YEARS IN ST. HELENS.

YEAR	1 Births. *	2 Vaccinated.	3 Insus- ceptible	4 Dead.	5 Postpon'd	6 Removed	7 Un- accounted	Percentage not Vaccinated including Columns 5, 6, 7.
1886	2616	2180	2	320	17	92	5	4.3
1887	2559	2118	—	331	14	91	5	4.2
1888	2660	2226	1	316	12	100	5	4.3
1889	2774	2279	4	319	16	107	11	4.8
1890	2669	2190	4	369	—	99	7	3.9
1891	2827	2341	15	386	—	73	12	3.0
1892	2817	2423	6	318	—	58	12	2.4
+1893	2856	2362	13	370	2	89	20	3.8
+1894	2711	2261	10	308	4	101	27	4.8

* The above Returns are for St. Helens Sub-District of the Prescott Union, which does not include quite the whole of the Borough.

† The Returns in Columns 5, 6, and 7, will still further be reduced for these years.

The Vaccination Officer (Mr. Welch) states that during the year 1895 this work was carried on by the various Public Vaccinators in a most satisfactory manner, and that the percentage of non-vaccinated children continues to remain a low one.

The above figures are supplied through the courtesy of Mr. Welch. It appears anomalous that this Department of Preventive Medicine should not in any way be required to be recognised by the Sanitary Authority of a district. The Sanitary Authority are none the less held responsible for the prevention of Small Pox, although one of the chief means of preventing it is entirely beyond their control.

MEASLES.

This Disease was more or less prevalent during the whole year and caused 54 deaths.

The following figures show the past history of Measles in St. Helens compared with similar figures for the whole of England and Wales.

		1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Mean of 14 years
ST. HELENS	Total Deaths from Measles	250	3	145	70	102	53	41	75	16	54	23	135	21	54	74
	Death Rate per 1000	4.10	.04	2.35	1.11	1.58	.80	.61	1.09	.22	.75	.31	1.8	.27	.68	1.05
England & Wales Death Rate		.48	.34	.41	.52	.43	.59	.34	.50	.43	.43	.30	.36	.37	.36	.41

The following figures show very well the period of prevalence of Measles in each of the 14 years—1882-95.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total Deaths in each year
1882	16	42	80	83	10	2	7	3	2	5	0	0	250
1883	0	0	0	0	0	1	1	0	0	0	1	0	3
1884	0	0	2	3	1	0	0	0	3	16	45	75*	145
1885	36	10	10	3	2	5	2	1	0	0	0	1	70
1886	3	3	1	8	3	2	16	8	3	15	29	11	102
1887	4	2	6	6	2	1	1	4	1	6	10	10	53
1888	3	0	0	0	0	0	0	0	1	3	7	27	41
1889	10	13	8	11	5	11	3	3	1	7	2	1	75
1890	0	0	0	0	0	0	0	0	0	6	5	5	16
1891	4	3	3	14	11	6	3	0	2	3	5	0	54
1892	0	0	0	1	0	0	0	1	0	1	5	15	23
1893	31	30	31	28	5	4	2	1	2	0	0	0	135
1894	0	0	1	0	0	0	0	0	0	8	11	1	21
1895	3	10	5	3	2	11	9	6	1	1	3	0	54
Totals...	110	114	147	160	41	43	44	27	16	71	123	146	1042

From the previous figures it will be seen how extremely fatal Measles is in St. Helens, and how it has during the 14 years, 1882-1895, been almost continuously prevalent in the town. Another very important point to be observed is the high mortality during November, December, January, February, March, and April, compared with the remaining six months, the deaths being as 4 in the colder six months to one in the warmer half of the year. Undoubtedly, the reason for this unequal mortality is that a very large proportion of children are not nursed with sufficient care. A great benefit would be derived from the Hospital treatment of Measles, not only by reason of efficiently isolating the disease, but also by the better nursing and care which the children would get, lessening the number of deaths from the disease.

The greatest difficulty which the Health Department experienced during the year in dealing with Measles was to get early notification of the disease. It was found during the epidemic of 1893 that in over 60% of the affected houses no Medical man was called in during the whole course of the illness, and, therefore, if Measles were included among the Notifiable Diseases a large percentage of cases would not be reported. The earliest information was generally obtained by the District Sanitary Inspectors. Later, the School Attendance Officers reported each child absent from School with Measles. It was in most instances found, however, that by the time information was received a large number of children had become infected by attending School.

With a few exceptions every house was disinfected after the recovery of cases of Measles during 1895, and this, along with a more or less complete isolation and the closing of affected Schools, was most beneficial in checking the spread of Measles.

The Schools which were closed on account of Measles were—

- I—National Schools, Peasley Cross, closed from October 2nd to October 28th, 1895.
- II—St. Joseph's R. C. Schools, Peasley Cross, closed from October 22nd to November 11th.
- III—British Schools, Peasley Cross, closed from October 30th to November 20th.

SCARLET FEVER.

This Disease caused 222 cases of sickness with 9 deaths during the year 1895.

Only during two of the previous 25 years was so low a mortality rate registered from Scarlet Fever, and only once since the adoption of the Infectious Diseases Notification Act has so small a number of cases of sickness been registered.

These results were obtained notwithstanding the facts—1st, that Scarlet Fever was severely prevalent in surrounding Districts and was frequently imported; and 2nd, that Scarlet Fever has not been severely epidemic in St. Helens since 1890-91, so that there has grown up in the meantime a large susceptible population.

It threatened to become epidemic on several occasions, but with the better Hospital accommodation which we now possess there was no difficulty in isolating 53·1% of the cases at the Peasley Cross Hospital, and thus speedily removing the infection from the affected houses.

The Death-rate from Scarlet Fever in England and Wales was 0·14 per 1,000 per annum in 1895.

The cases of sickness, deaths, and Death-rates from Scarlet Fever are shown in the following table for the years 1885 so 1895.

	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Mean 11 yrs.
Cases of Sickness ..	*	*	*	*	*	1234	210	438	237	342	222	447‡
No. of Deaths	13	34	35	11	3	181	24	18	6	14	9	31·6
Death-rate per 1,000 per annum .. ..	.25	.52	.52	.16	.04	2·52	.33	.24	.08	.18	.11	.495

* Notification of Cases of Sickness not in operation. ‡ Mean for 6 years.

The ages at which the 222 cases occurred is shown below.

AGES.	No. of Cases of Sickness from Scarlet Fever.	No. of Deaths.	Per Cent. of Deaths.
0 to 1 year	5	1	20·0
1 to 5 years	78	2	2·5
5 to 10 years	91	4	4·3
10 years and upwards ...	48	2	4·1
TOTAL	222	9	4·0

The cases were distributed over the town, as is shown below. It will also be seen in the Table that the greatest number of cases occurred in Hardshaw, Sutton East, and Parr Wards.

WARDS.	No. of Cases of Sickness from Scarlet Fever.					
	1890	1891	1892	1893	1894	1895
Eccleston, North	209	48	58	32	29	12
Eccleston, South	73	14	28	35	29	19
Central	141	20	29	24	43	8
Windle, North	115	18	35	10	81	24
Windle, South	78	23	27	27	21	19
Hardshaw	186	25	43	17	46	45
Sutton, East	244	46	118	13	19	35
Sutton, West	105	9	48	35	35	25
Parr	83	7	52	44	39	35
Totals	1234	210	438	237	342	222
No. of cases to 1 death ...	6·8	9·0	24·3	39·5	24·4	24·6

The following Table shows the periods of greatest prevalence of Scarlet Fever during the past 3 years in St. Helens.

YEAR	January	February	March	April	May	June	July	August	September	October	November	December	Totals
1893	33	33	16	23	12	3	10	13	7	21	31	35	237
1894	16	37	61	58	39	24	17	27	16	14	12	21	342
1895	7	12	19	19	18	19	8	19	12	12	39	38	222
Total.	56	82	96	100	69	46	35	59	35	47	82	94	804

The type of Scarlet Fever was a mild one compared with that which prevailed in 1890 and 1891 in St. Helens.

The 222 cases of Scarlet Fever occurred in 160 houses. In 122 houses single cases of the disease occurred. In 29 houses two cases were reported. 10 houses had three cases each, and 3 houses had four cases in each.

In the 160 affected houses there were 527 children who were said not to have suffered from Scarlet Fever previously, and who escaped contracting the disease when it occurred in their houses in 1895.

The means taken to prevent the spread of this disease appear to have been fairly effective during the year. In two instances fresh cases of Scarlet Fever occurred after 6 days from the time when the patient had been removed to Hospital and the house disinfected. In both of these instances it is probable that the secondary cases were not due to imperfect disinfection. In one instance a second case occurred in a house where a child (the first case) had been sent home from Hospital 15 days previously. In this instance, too, there were other possible sources of infection than that of the clothes of the first child.

The only alteration in procedure relating to the prevention of Scarlet Fever, which was made during 1895, was the authority given to the Medical Officer of Health by resolution of the Council on May 22nd, 1895, to serve the Managers of Schools with an order (under sec. 88 of the Education Code) to exclude from School Attendance each child from an infected house. This alteration has worked admirably, and has been much appreciated by School Managers and Teachers. The following is a copy of the order issued:—

TOWN HALL, ST. HELENS.

To the Managers

.....Schools, St. Helens.

Gentlemen,

On behalf and by the instruction of the Mayor, Aldermen, and Burgesses of the Borough of St. Helens acting as the Sanitary Authority for the District of the said Borough, I hereby give you Notice requiring you, with a view to preventing the spread of disease to exclude from school attendance.....

.....
.....
.....
.....

for a period of.....weeks from the date hereof.

Dated this.....day of.....189

(Signed)

.....

Medical Officer of Health.

The following prosecutions were instituted against persons for infringement of the Laws relating to the prevention of Infectious Diseases.

Monday, April 8th—For exposing Clothing, infected with Scarlet Fever, which had not been previously disinfected, Ellen Pennington, 3, York Place, was fined 5/- and costs or seven days. She had sent her child on April 3rd to a butter shop in Duke-street.

June 21st—For exposing her two daughters in a public place while they were suffering from Scarlet Fever, Elizabeth Rigby, 152, Robins-lane, was fined 5/- Mrs. Rigby and her two daughters were standing in a passage between Highfield-street and Robins-lane.

DIPHTHERIA.

The Death-rate from this Disease was 0·10 per 1,000 of the population of St. Helens during 1895. In England and Wales it was ·25 during 1895.

The following Tabular Statements show the deaths and cases of sickness per annum, and the distribution of the cases of sickness.

Year.	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Deaths	11	11	11	10	11	21	29	13	9	12	18	9	8
Cases of Sickness	Before Notification Act.							104	69	81	79	86	66

DISTRIBUTION OF CASES OF SICKNESS FROM DIPHTHERIA AND
MEMBRANEOUS CROUP.

WARDS.	1890	1891	1892	1893	1894	1895	Total
Eccleston, North ...	8	8	14	9	7	10	56
Eccleston, South ...	9	3	3	6	8	5	34
Central ...	5	9	5	7	5	3	34
Windle, North ...	12	15	6	13	20	13	79
Windle, South ...	23	10	15	6	3	6	63
Hardshaw ...	12	4	6	16	9	10	57
Sutton, East ...	17	8	10	15	9	4	63
Sutton, West * ...	8	7	12	4	10	6	47
Parr ...	19	5	10	3	15	9	52
Totals ...	104	69	81	79	86	66	485

* Including Deaths in Fever Hospital.

The mortality among children under 1 year was 50 per cent.

“ “ “ 1 and under 5 years was 21·0 per cent.

“ “ “ 5 “ 10 “ 9·5 “

“ “ “ 10 years and upwards 4·1 “

Diphtheria is one of the few Zymotic Diseases which never has been so prevalent nor so fatal in St. Helens as in other parts of England. The tendency which Diphtheria has shown in recent years to increase in the larger towns has not been noticed in St. Helens. It is specially interesting to note this in regard to the way in which Diphtheria and Typhoid Fever are often grouped as Diseases more or less dependent on similar causes.

In continuation of the work commenced in 1893, Swabs taken from the throats of 43 patients were examined Bacteriologically for the presence of the Bacillus of Diphtheria by the Medical Officer of Health.

In 27 of the 43 cases the diagnosis was confirmed by this examination, in the remaining 16 the organism was not found.

The value of this work is undoubtedly great. It is the only known means in a certain number of cases of diagnosing Diphtheria from other allied diseases of the throat. It is the mild cases which are difficult to recognise—it is just these cases which spread the disease.

WHOOPING COUGH.

This Disease caused 14 deaths during the year, equal to a death-rate of 0·17 per 1,000 as against 0·78 per 1,000 in the preceding year.

In England and Wales the rate was ·29 per 1,000 during 1895.

In former years the deaths from this disease were as follows:—

1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
24	9	53	41	28	61	15	68	29	31	18	61	14

Of the 14 deaths, 5 occurred in the 1st quarter, 1 in the 2nd quarter, 1 in the 3rd quarter, and 7 in the 4th quarter. The reason for this greater fatality in the 1st and 4th quarters is mainly that during the colder months serious bronchial complications are liable to supervene due to exposure.

No attempt has ever been made in St. Helens to limit the spread of this highly infectious and fatal disease among children, on account of the many difficulties which would be encountered. The injury produced by it is in nowise to be measured by the number of deaths which it causes, for a large number of children are left with sequelæ or with impaired health after an attack of whooping cough.

It is sincerely to be hoped that some practical method will soon be found for dealing with this as a preventable disease.

TYPHOID FEVER.

It has now become generally recognised that, given favourable meteorological conditions, Typhoid Fever will spread in St. Helens in a most alarming manner.

Such favourable conditions were present during 1895 for a much longer period than usual, with a result that a large number of cases of Typhoid Fever were reported. Unfortunately the type of the disease was an unusually severe one, so that relatively, also, a large number died of the disease.

It is almost certain that but for the increased precautions taken during the year, and the gradual improvement in the sanitary condition of the town, a much larger number of cases would have occurred.

In the following table is shown the number of cases of sickness and the death-rates from Typhoid Fever for each year.

Year.	No. of Cases.	Death Rate.	Year.	No. of Cases.	Death Rate.		
1874	No. of Cases not known.	·51	1885	No. of Cases not known.	·11		
1875		1·30	1886		·43		
1876		·78	1887		·51		
1877		1·46	1888		·32		
1878		·74	1889		558	1·18	
1879		·61	1890		150	·34	
1880		·70	1891		185	·36	
1881		·97	1892		138	·34	
1882		·55	1893		315	·68	
1883		·51	1894		172	·33	
1884		·53	1895		257	·74	
Mean			·78		Mean	253	·48

The following table shows the distribution of deaths in St. Helens during the past 12 years.

WARDS.	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Total
Eccleston, North....	3	1	1	5	7	16	6	—	1	4	2	6	52
Eccleston, South....	3	—	—	1	1	8	4	2	3	5	3	5	35
Central	1	1	5	7	3	7	3	4	1	2	2	2	38
Windle, North.....	2	1	5	2	2	7	2	3	—	6	2	3	35
Windle, South.....	6	—	6	3	1	15	2	1	5	2	—	3	44
Hardshaw.....	4	2	4	5	2	4	3	2	2	4	5	1	38
Sutton, East	5	—	3	4	1	12	2	1	3	3	1	2	37
Sutton, West *.....	5	1	1	3	3	9	2	12	6	18	10	34	104
Parr	4	1	3	4	2	3	—	1	4	8	1	3	34
Totals	33	7	28	34	22	81	24	26	25	52	26	59	417

* Including Deaths at Fever Hospital.

As in former years the largest number of deaths occurred in the 3rd and 4th quarters as is seen below.

Year.	Deaths 1st Qtr.	Deaths 2nd Qtr.	Deaths 3rd Qtr.	Deaths 4th Qtr.	Total.
1890	6	4	8	6	24
1891	3	6	16	11	26
1892	5	6	6	8	25
1893	12	1	17	22	52
1894	13	2	4	7	26
1895	12	2	19	26	59
Totals	51	21	60	80	212

The cases of Sickness from Typhoid Fever occurred as is shown in the accompanying Table, where also the number occurring in each of the months of the preceding 5 years is set out.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1890	20	4	7	4	4	12	10	15	31	23	15	5	150
1891	5	5	18	17	11	3	4	31	32	30	16	13	185
1892	7	9	10	18	9	5	14	11	13	11	21	10	138
1893	10	11	18	0	3	10	26	41	73	70	34	19	315
1894	19	11	18	9	6	5	15	17	25	24	11	12	172
1895	9	9	10	2	9	9	12	37	42	43	53	22	257
	1st Qtr. 1895			2nd Qtr. 1895			3rd Qtr. 1895			4th Qtr. 1895			
	28			20			91			118			

The following Table shows the Distribution of the Notified Cases over the Borough during each year since "Notification of Cases of Sickness" came into force.

WARDS.	1889	1890	1891	1892	1893	1894	1895	Total
Eccleston, North	133	22	52	17	36	21	68	349
Eccleston, South	64	22	36	20	22	17	25	206
Central	46	14	9	12	19	16	27	143
Windle, North	46	16	11	13	51	29	26	192
Windle, South	67	10	26	22	40	12	24	201
Hardshaw	42	9	13	18	57	22	23	184
Sutton, East	66	14	8	19	10	26	8	151
Sutton, West	57	24	18	9	33	10	43	194
Parr	37	19	12	8	47	19	13	155
Totals	558	150	185	138	315	172	257	1775

The following Table shows the ages at which the various cases of Sickness and Deaths from Typhoid Fever occurred.

	Under 5 Yrs.	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	Over 55	Total.
Cases of Sickness ..	22	93	65	44	22	9	2	257
Deaths ..	2	14	16	15	8	2	2	59
Percentage Mortality 1895 ..	9.0	15.0	24.6	34.0	36.3	22.2	100	22.9
Do. 1894 ..	16.6	7.0	14.8	16.1	28.5	30.0	100	15.1
Do. 1893 ..	16.1	13.3	15.2	19.3	25.0	14.2	50.0	16.5

It will be seen from the above figures how much more fatal Typhoid Fever was during 1895 than during either of the preceding two years. The percentage of persons between 5 and 15 years of age who were affected was larger than during any previous years. The reason of the exceptional incidence at ages 5 to 15 is not easy of explanation.

The following rates are calculated from the Weekly Returns sent to the Local Government Board. They show the number of cases of sickness from Typhoid Fever per 1,000 of the Population in each of the great towns.

TOWN.	No. of Cases of Typhoid Fever notified.	Sickness— Rate per 1000 of the Population.	TOWN.	No. of Cases of Typhoid Fever notified.	Sickness— Rate per 1000 of the Population.
London ...	3513	.79	Manchester ...	505	.96
West Ham ...	315	1.26	Salford ...	383	1.83
Croydon ...	45	.39	Oldham ...	108	.76
Plymouth ...	28	.31	Burnley ...	106	1.06
Bristol ...	87	.38	Blackburn ...	117	.91
Cardiff ...	80	.51	Preston ...	127	1.12
Swansea ...	160	1.64	Huddersfield ...	60	.60
Wolverhampton ...	126	1.46	Halifax ...	59	.62
Birmingham ...	438	.88	Bradford ...	117	.78
Norwich ...	223	2.08	Leeds ...	414	1.04
Leicester ...	265	1.36	Sheffield ...	480	1.40
Nottingham ...	428	1.88	Hull ...	287	1.32
Derby ...	96	.95	Sunderland ...	855	6.20
Birkenhead ...	176	1.64	Gateshead ...	129	1.34
Liverpool ...	1169	2.31	Newcastle-on-Tyne ...	221	1.06
Bolton ...	217	1.81	St. Helens ...	257	3.2

In Chart No. 2 will be found a graphic representation of the weekly number of cases of Typhoid Fever and their relationship to the Mean Temperature of the air and of the soil. It will be noted that, after an allowance has been made for the two or three weeks of the Incubation Period of Typhoid Fever, there is a relationship between the temperature of the soil, at 4 feet, and the incidence of Typhoid Fever, strongly suggesting that the soil (using the term in its widest sense) plays a very important part in the spread of Typhoid Fever in St. Helens.

It is popularly believed that Typhoid Fever is not an Infectious Disease in the ordinary use of the term "infectious." In 1895, however, as in former years, a very considerable number of cases could be traced directly to infection from previous cases. In one instance a servant girl went home suffering from the disease and infected four persons in her home. Several other similar instances occurred during the year.

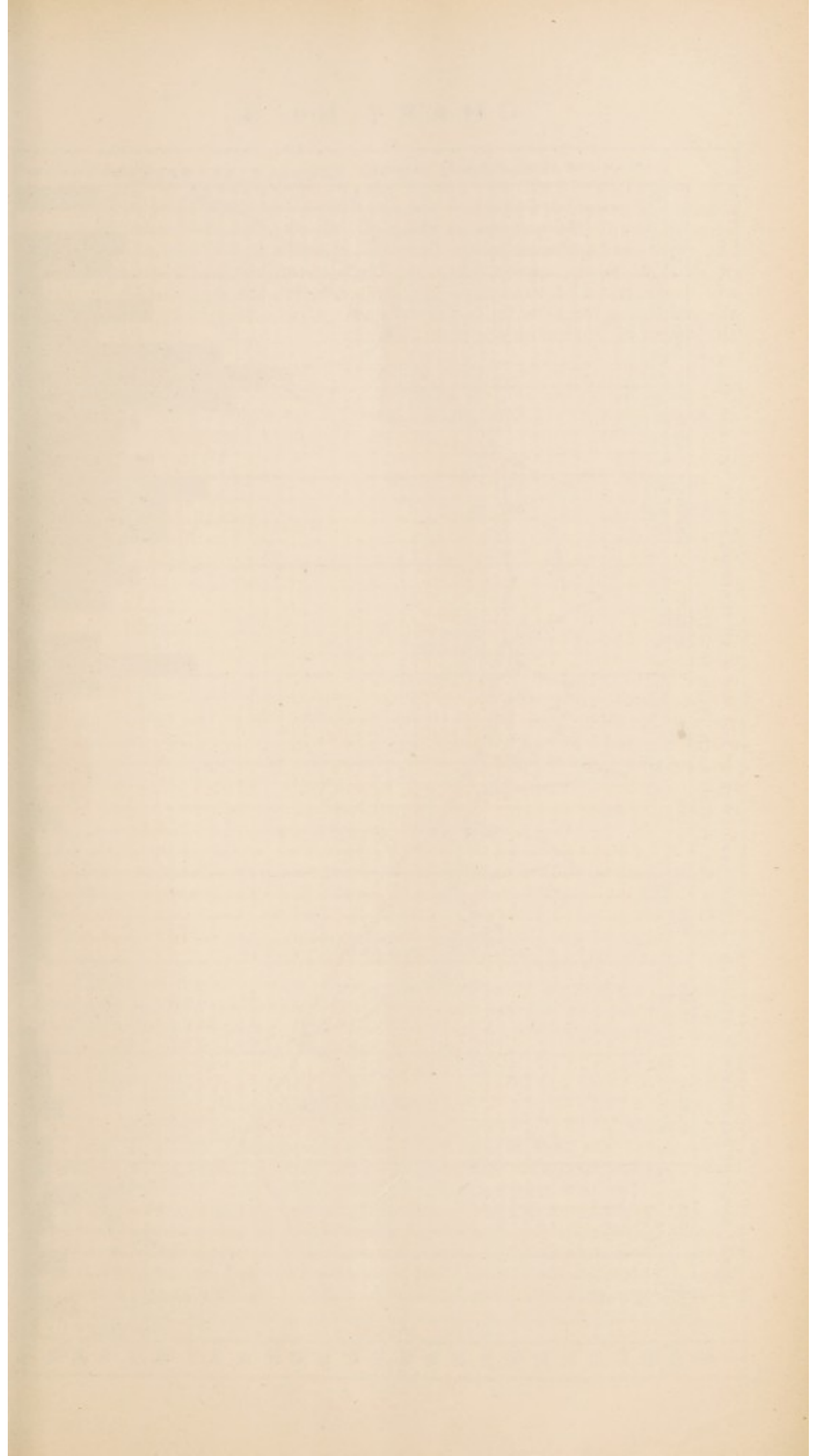
In 32 houses there was more than one case of Typhoid Fever in 1895. Probably, the majority of the 41 persons who had secondary attacks in these houses became infected from the first case. There was ample evidence of direct infection in a considerable number of the cases.

Inquiry was made in every case as to the probable origin of the infection. It may be well to point out in this respect that Typhoid Fever is a disease which, in the first place, runs a very indefinite and irregular course. The period of incubation varies in duration; so also the character of the disease varies very much in different cases, making it not always easy for the Medical attendant to form an accurate opinion as to the date of commencement. For such reasons as these it is often impossible to arrive at the probable date of infection, and as a consequence it is equally impossible to do more than examine the house of the sufferer. It is almost certain that in a large number of cases the infection is acquired away from home.

The facts gathered on inquiry into each case are, as in former years, most instructive, and point, without any doubt, to the incidence of Typhoid in specially insanitary houses. As in past years, the greater number of cases occurred in old houses. In 1895—out of 257 cases—54 occurred in houses under 10 years old, 86 in houses varying from about 10 to about 30 years old, and 117 in houses over 30 years old.

Overcrowding, although not capable of producing Typhoid Fever aided in spreading it, several of the houses in which more than one case occurred being small houses occupied by large families. The average number of persons occupying each affected house was 6·8; at the census in 1891 the number per house was found to be 5·77. It is almost impossible to tabulate the number and variety of insanitary conditions which existed. As in former years one of the most evident dangerous nuisances was the condition of the privy. On page 65 will be found an account of the work that is being done to remedy the present state of the privy middens in St. Helens.

In one instance it was found that an unregistered cowkeeper was spreading Typhoid Fever by his milk. Ten cases in all were due to this cause. Three weeks after the first of these cases occurred this cowkeeper himself contracted the disease. On November 14th an order was served on the cowkeeper prohibiting him from selling any of the milk from his cows.



In the following table are placed, side by side, certain statistics relating to Diarrhoea and Typhoid Fever, and also certain Meteorological Statistics.

YEAR.	Total Deaths from Diarrhoea.	Total Deaths from Typhoid and Continued Fever.	Death Rate from Diarrhoea per 1,000.	Death Rate from Typhoid and Continued Fever per 1,000.	Death Rate from Diarrhoea in England and Wales.	Mean Temperature of the Air for the year.	Mean of the Maximum Air Temperature for the year.	Rainfall.
1870	97	23	2.18	.51	1.16	48.1	70.5	27.5
1871	89	28	1.96	.61	1.09	46.9	72.8	25.0
1872	65	24	1.39	.51	.99	49.3	71.4	44.3
1873	79	24	1.65	.50	.96	48.2	89.1	24.9
1874	110	25	2.25	.51	.92	48.6	82.3	27.8
1875	101	65	2.02	1.30	1.02	48.4	78.0	30.1
1876	86	40	1.69	.78	.91	48.4	84.8	36.3
1877	74	34	1.41	1.46	.61	48.3	79.0	41.7
1878	132	40	2.45	.74	1.00	48.5	85.0	35.5
1879	52	34	.94	.61	.45	45.5	75.9	24.3
1880	130	40	2.30	.70	1.17	48.2	82.4	29.7
1881	76	56	1.31	.97	.55	46.9	84.2	36.7
1882	85	33	2.12	.55	.65	48.5	71.4	39.7
1883	69	31	.89	.51	.59	48.0	74.9	34.8
1884	131	33	2.12	.53	.27	49.2	84.9	26.9
1885	56	7	.89	.11	.49	46.9	76.6	32.7
1886	122	28	3.01	.43	.89	47.3	77.1	33.0
1887	101	34	1.53	.51	.72	47.0	82.9	21.1
1888	65	22	.96	.32	.45	46.7	82.3	28.1
1889	85	81	1.27	1.18	.64	47.8	78.0	25.8
1890	74	24	1.05	.34	.60	47.8	76.6	27.0
1891	78	26	1.08	.36	.46	47.2	78.9	32.3
1892	84	25	1.14	.34	.50	46.6	78.9	34.8
1893	168	52	2.20	.68	.95	50.1	75.0	25.7
1894	35	26	.48	.33	.35	48.9	...	33.3
1895	101	59	1.27	.74	.88	47.3	...	28.0

As in former years by far the larger number of deaths occurred during the 3rd Quarter as is seen below:—

DEATHS IN ST. HELENS FROM DIARRHŒA.

	1887	1888	1889	1890	1891	1892	1893	1894	1895	Mean of 9 years.
January ...	4	0	2	1	2	2	1	0	0	
February ...	2	1	0	0	1	3	0	0	0	
March ...	2	3	1	0	4	2	2	2	0	
1st Quarter ...	8	4	3	1	7	7	3	2	0	3·8
April ...	1	2	3	2	1	2	1	0	1	
May ...	1	2	2	0	2	1	5	0	1	
June ...	5	1	2	3	4	2	32	0	4	
2nd Quarter ...	7	5	7	5	7	5	38	0	6	8·8
July ...	19	4	28	3	4	10	71	5	29	
August ...	37	14	23	19	11	29	32	14	39	
September ...	23	24	17	26	30	25	21	7	12	
3rd Quarter ...	79	42	68	48	45	64	124	26	80	64·0
October ...	3	10	3	15	13	4	2	8	12	
November ...	4	3	2	4	5	3	1	1	3	
December ...	0	1	2	1	1	1	0	1	0	
4th Quarter ...	7	14	7	20	19	8	3	10	15	11·4
Total each year...	101	65	85	74	78	84	168	38	101	88·2

The ages at death of the 101 persons who died of Diarrhœa during 1895 are shown in the following table, as well as the similar returns for the 4 previous years.

AGE.	1891	1892	1893	1894	1895	Total.
0 to 3 months ...	18	14	34	8	19	93
3 „ 6 „ ...	16	13	36	5	19	89
6 „ 12 „ ...	20	31	41	17	26	135
1 „ 2 years ...	13	14	35	4	33	99
2 „ 3 „ ...	—	4	10	—	2	16
3 „ 4 „ ...	—	—	—	—	—	—
4 „ 5 „ ...	—	—	1	—	1	2
Over 5 „ ...	11	8	11	4	1	35
Totals ...	78	84	168	38	101	469

Out of the 469 persons who died during these five years over 88 per cent. were under 2 years of age.

The different Wards in which the cases occurred, are shown in the following table:—

	1891	1892	1893	1894	1895	Total
Eccleston, North ...	13	11	32	9	18	83
Eccleston, South ...	5	6	14	4	7	36
Central	13	10	20	2	18	63
Windle, North	5	6	8	2	9	30
Windle, South	6	19	29	5	11	70
Hardshaw	9	8	12	5	11	45
Sutton, East	5	2	8	4	5	24
Sutton, West	9	11	23	3	11	57
Parr	13	11	22	4	11	61
Total	78	84	168	38	101	469

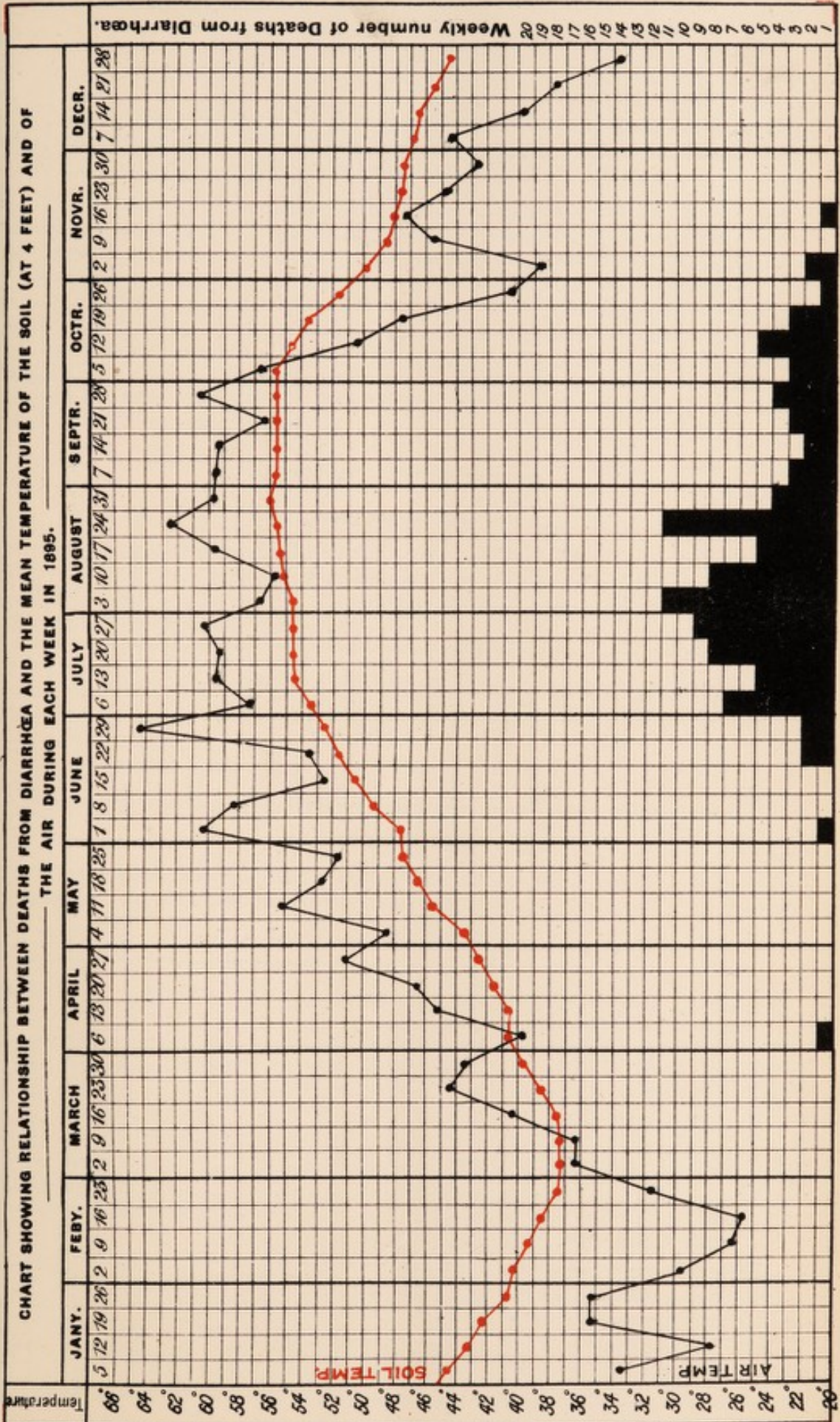
In Chart No. 3 will be found a graphic representation of the relationship between Deaths from Diarrhœa and the Mean Temperature of the Soil and of the Air. The Chart shows a connection between the condition of Soil Temperature and Summer Diarrhœa similar to that in previous years. The form of Intestinal disturbance which produces death from Diarrhœa in Autumn is now almost universally recognised as a disease set up by Micro-organisms. These organisms are apparently capable of living outside of the human body. It is probable that they live in the soil, &c., and that their growth there depends very largely on the amount of warmth present. In St. Helens it is found that year after year, when the Soil Temperature reaches a certain point (quite irrespective of the Air Temperature) deaths from Diarrhœa begin to be recorded, and that they continue till the temperature of the soil again falls.

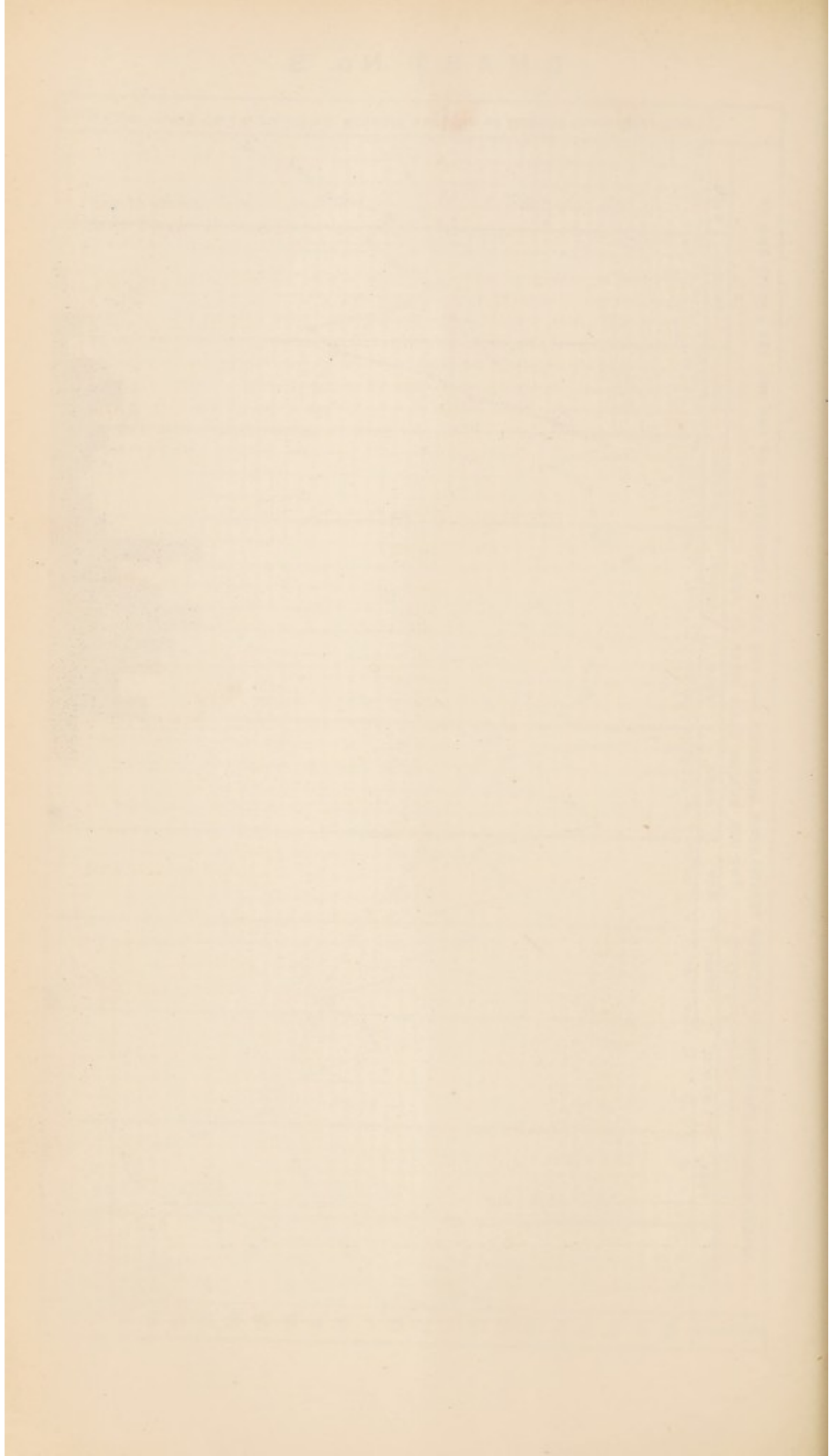
It appears that the organisms gain access to the human body by means of food and, especially, by means of milk. Milk is one of the best possible breeding grounds for most micro-organisms, and there is good evidence that it forms the main vehicle for the conveyance of the exciting cause of Diarrhœa. An inquiry was made into the Sanitary condition, &c., of the premises where each case of Diarrhœa occurred during 1895, as in the two previous years. It was found that of the 307 deaths from Diarrhœa which were registered during these three years, the following percentages were "bottle fed" and "breast fed."

- | | | |
|-----|-------------------------------------|---|
| I. | Of Children
under 3 months old | { 85·16 per cent. of deaths were of Children
who were "Bottle fed."
14·8 per cent. were "Breast fed." |
| II. | Of Children
between 3 & 6 months | |
| | | { 85·6 per cent. were "Bottle fed."
14·4 per cent. were "Breast fed." |

These figures correspond closely with the results obtained in other towns, and they are very suggestive of the injury done by contaminated milk.

CHART No. 3.





Until those who have the charge of young infants become aware of the danger there exists in giving infants contaminated milk, it is feared that little can be done in reducing the great mortality from Diarrhœa.

The points of importance in this respect, regarding our milk supplies, are enumerated under the heading of "Milk Supplies." It need only here be pointed out that given a pure milk there is no great difficulty in storing it even in cottage property in such a way as to prevent contamination. It was found that very often the milk was received by the cottager in unclean vessels, that it was kept in filthy surroundings, and that the feeding bottle of the infants was often very filthy. Again, the type of feeding bottle which is almost in universal use in St. Helens is one which it is almost impossible to keep clean. It is popular, however, on account of the ease with which it is manipulated.

MINOR ZYMOTICS.

INFLUENZA.

Eight deaths were due to this disease in 1895. All of the deaths, with one exception, were of persons under 10 years of age. Five deaths occurred in March, and one in each of the months of May, June, and December. In the previous years the deaths were—

YEAR.	1889	1890	1891	1892	1893	1894	1895
Deaths from Influenza ...	0	3	32	19	3	7	8

ERYSIPELAS.

Erysipelas caused 1 death among the 69 cases of sickness from this disease which were notified during the year.

The cases were distributed over the Borough as follows:—

WARDS.	1890	1891	1892	1893	1894	1895	Totals.
Eccleston, North ...	6	10	10	11	8	6	51
Eccleston, South ...	3	3	7	9	6	5	33
Central ...	7	6	9	12	6	3	43
Windle, North ...	4	4	4	5	12	12	41
Windle, South ...	4	8	8	10	4	3	37
Hardshaw ...	4	5	13	8	11	15	56
Sutton, East ...	6	9	6	16	12	5	54
Sutton, West ...	3	9	8	8	7	6	41
Parr ...	5	4	11	19	9	14	62
Total cases of Sickness ...	42	58	76	98	75	69	418
Total No. of Deaths in each year ...	5	2	5	2	2	1	17

PUERPERAL FEVER.

Only seventeen cases of sickness from Puerperal Fever were notified during 1895. This number corresponds to the mean of the numbers reported during the previous five years. It almost certainly does not represent accurately the prevalence of this disease. The main causes for this discrepancy are—1st, that midwives, who attend probably 90 per cent. of confinements in St. Helens, do not recognise the milder cases; and, 2nd, that medical men are not agreed as to what cases should be included under the above title.

In every case the midwife or nurse was recommended to cease attending any other women for 14 days, to send her wearing apparel to the disinfecting station, and to have a series of baths. It was pointed out that were these precautions not followed accurately, action would be taken against her should any further cases occur in her practice.

The following shows the notified cases of deaths during the past six years:—

	1890	1891	1892	1893	1894	1895
Cases of Sickness ...	11	16	14	19	26	17
Deaths ...	6	15	7	10	6	9
*No. of Births to each Death ...	462	194	416	302	480	351

* This does not include Still Births, Abortions, &c., which are followed by Puerperal Fever occasionally.

When it is recollected how extremely filthy are the surroundings of a number of women in St. Helens at the time of their confinement, it is surprising that more acute cases are not reported. Although insanitary surroundings were undoubtedly the cause of some of the cases, the relationship which existed was not found so close as in former years.

Every reported case was carefully inquired into during the year.

ANTHRAX.

One death occurred from this comparatively rare disease in St. Helens. The case was one of considerable interest, both from a Public Health and Veterinarian point of view. The man who died from the disease was a worker in a bone manure works, and he undoubtedly inoculated himself whilst scratching a "pimple" on his neck. It is thought that he got the infection either from shoddy dust, dried blood, or dry Bombay bones. A careful investigation was made into this case, but no definite proof could be obtained as to the source from which he derived his infection.

ISOLATION HOSPITAL.

This institution is becoming increasingly useful every year. It is the most important means which can be possessed by a town of cottage property like St. Helens of checking the spread of many Infectious Diseases.

The inhabitants are realising its value, and are availing themselves of it, as will be seen by the following figures which show the percentages of all notifiable diseases which were isolated during each of the past six years.

1890	...	8·4	per cent.	admitted to Hospital.
1891	...	18·4	"	"
1892	...	17·1	"	"
1893	...	18·65	"	"
1894	...	22·50	"	"
1895	...	40·21	"	"

It should also be pointed out that, except in three or four instances, no pressure was brought to bear to obtain removal to Hospital of the sufferer. Also, that had the accommodation been greater in 1895 a much larger percentage of cases would have been isolated in Hospital.

The following table gives the yearly number of admissions, &c., since the Hospital was opened in 1881.

YEAR.	No. remaining in Hospital on Dec. 31st.	Number Admitted.	No. who died in Hospital.	No. remaining in Hospital Dec. 31st.	Total Days in Hospital of Patient.
1882	—	9	3	—	—
1883	—	14	1	—	—
1884	—	36	6	—	—
1885	—	9	0	—	—
1886	—	17	3	—	—
1887	—	38	11	—	—
1888	—	25	4	—	—
1889	—	116*	15	—	—
1890	—	128†	20	—	—
1891	—	89	10	—	—
1892	—	134	15	—	—
1893	—	150	25	—	—
1894	19	182	22	—	6184
1895	—	259	54	44	8962

* Enteric Fever Epidemic. † Scarlet Fever Epidemic.

Eighteen of the above 259 patients were admitted from Haydock, and 9 were sent to the Old Wint Small Pox Hospital from St. Helens.

Cases admitted during 1895.	Males.	Females.	Totals.	Deaths.	Average Duration of Cases in Hospital.
					Days
Small Pox	6	4	10	1	28.1
Scarlet Fever	60	65	125	5	36.5
Diphtheria	3	5	8	1	21.1
Enteric Fever	70	51	121	32	29.8
Erysipelas	3	1	4	0	24.0
Puerperal Fever	—	6	6	4	19.83
Other Diseases (including Observation Cases)	3	1	4	0	9.75
	145	133	278	43	

It has already been pointed out, when dealing with the various Infectious Diseases, how valuable the Hospital has been both as regards Scarlet Fever and Typhoid Fever.

The following shows the number of cases of each Notifiable Infectious Disease which were treated in Hospital during 1895.

Disease.	Total Cases in Borough.	Number of such removed to Hospital.
Small Pox	10	10
Scarlet Fever	222	102
Diphtheria, &c.	66	6
Typhoid Fever	257	117
Puerperal Fever	17	6
Erysipelas	69	4

On September 13th, Miss Rothwell, who had acted as Matron for 8½ years with most praiseworthy devotion, resigned her appointment, and on October 15th, Miss MacCarthy commenced her work as Matron.

On November 18th it was reported that there was need of further additions to the Hospital in order to accommodate the numbers who applied for admission. After careful inspection of the buildings and consideration of the Medical Officer's report the Health Committee recommended —

- 1st—That an additional 24 bedded pavilion be erected.
- 2nd—That an isolation block, containing 4 beds, be erected.
- 3rd—That extra accommodation be built for nurses and servants.
- 4th—That the Laundry be extended so as to provide a drying room.
- 5th—That the Sewage Tanks be extended.

REMOVAL OF PATIENTS AND INFECTED CLOTHING.

The new Brougham-shaped Ambulance, which was ordered by the Health Committee in 1894, was brought into operation on April 29th, 1895, and has proved satisfactory.

The Disinfection of Houses has been carried out systematically after every case of Infectious Disease. It is highly satisfactory to record that in only one case was a secondary case of Infectious Disease in a house probably attributable to imperfect disinfection. This result was obtained despite the fact that some reliance is placed on the now much discredited fumigation of houses by Sulphurous Acid. Possibly, the fact that all infected clothing is passed through the "Warner's" disinfecting apparatus, and that there is a subsequent—more or less imperfect—washing and cleaning of the house is of greater value than the fumigation with Sulphurous Acid.

The following shows the work done during the past two years.

	1894	1895
No. of Days on which the Disinfecting Apparatus has been used	154	136
No. of Articles Disinfected—		
Beds	428	366
Pillows	831	861
Blankets	1261	1791
Other Articles	330	366
Children's Clothing	1611	3643
Hospital Clothing... ..	1461	1394
Books from Library and Schools...	396	83
Total	6318	8474
No. of Journeys of Van for Collection and Delivery	324	351
No. of Houses visited	1019	1024

CLASS II.—PARASITIC DISEASES.

Two deaths were registered as due to "Thrush," both were of young children.

CLASS IV.—CONSTITUTIONAL DISEASES:

Rheumatic Fever caused 7 deaths, against 10 in 1894, 6 in 1893, 8 in 1892, and 6 in 1891.

CANCER AND MALIGNANT DISEASES.

A larger number of deaths from this cause were registered during 1895 than during any previous year.

1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
25	20	14	8	22	25	27	37	23	36	36	42

The deaths from Cancer in any organ of the body are referred to this Group. How far the increase during the past five years is due to the better recognition of the disease from improved methods of diagnosis cannot be ascertained, but it is probable that this is a factor in the production of the supposed increase of cases of Cancer.

TUBERCULAR OR CONSUMPTIVE DISEASES.

Under this heading are included Tabes Mesenterica, Tubercular Meningitis, Hydrocephalus, Phthisis, and other Tubercular Diseases.

The following are the number of deaths during each of the past five years.

1891	1892	1893	1894	1895
177	160	160	164	179

The 179 deaths from Consumptive Diseases were distributed over the Borough as below. It will be seen that the distribution of deaths is uneven, varying from 6·19 per cent. in South Eccleston to 17·0 per cent in Hardshaw Ward. It will also be seen that each Ward has a number very similar year by year.

WARD ^s .	1891	1892	1893	1894	1895	Total.	Per Cent.
Eccleston, North ...	25	18	32	16	25	116	13·8
Eccleston, South ...	9	11	15	9	8	52	6·19
Central ...	25	17	11	12	16	81	9·6
Windle, North ..	21	18	6	17	19	81	9·6
Windle, South ...	15	19	13	16	15	78	9·2
Hardshaw ...	38	22	33	24	26	143	17·0
Sutton, East... ..	12	18	13	15	22	80	9·5
Sutton, West ...	19*	23*	24*	39*	33*	131*	16·4*
Parr	13	14	13	16	15	71	8·4
Total ...	177	160	160	164	179	840	100

* Including Deaths from Tubercular Diseases occurring in Rainhill Asylum.

The mortality from "Phthisis" during 1895 was at the rate of 1.60 per 1,000, being a rate which is identical with the mean of the previous 14 years.

The table of comparative statistics relating to this disease is here set out.

DEATH RATES PER 1,000 OF THE POPULATION FROM "PHTHISIS."

Year.	Liverpool *	Manchester *	Salford *	Bootle *	Warrington *	Bolton *	Oldham *	Blackburn *	Burnley *	Rochdale *	Preston *	County of Lancaster	England and Wales	St. Helens
1881	2.33	2.46	2.5	1.92	1.20	1.65	2.3	1.9	1.6	2.3	1.9	2.08	1.82	1.76
1882	2.4	2.41	2.4	2.06	1.76	1.66	2.3	1.8	1.7	2.2	1.8	2.05	1.84	1.66
1883	2.6	2.54	2.7	2.24	1.27	1.81	2.3	1.9	1.7	2.9	2.2	2.14	1.87	1.60
1884	2.3	2.34	2.6	2.37	1.50	1.90	2.6	1.7	1.9	1.9	2.1	2.04	1.81	1.92
1885	2.3	2.34	2.6	2.22	1.47	1.78	2.4	1.3	1.8	1.8	1.9	1.95	1.75	1.58
1886	2.4	2.44	2.6	1.52	1.66	1.69	2.3	1.8	1.4	1.4	1.8	1.93	1.71	1.55
1887	2.2	2.19	2.3	1.86	1.29	1.61	2.0	1.5	1.4	2.1	2.0	1.77	1.59	1.36
1888	2.1	2.14	2.3	1.58	1.18	1.64	1.9	1.5	1.2	1.6	1.8	1.69	1.54	1.44
1889	2.1	2.12	1.9	1.48	1.36	1.38	1.9	1.5	1.0	1.8	1.4	1.64	1.54	1.41
1890	2.2	2.33	2.1	1.84	1.68	1.61	2.0	1.8	1.2	2.1	1.6	1.87	1.68	1.79
1891	2.15	2.20	2.2	2.27	1.47	1.56	1.9	1.3	1.4	2.0	1.7	1.81	1.59	1.93
1892	1.9	2.05	1.9	1.80	1.44	1.32	2.1	1.0	1.7	1.6	1.6	1.64	1.46	1.52
1893	2.3	2.05	1.9	1.92	1.28	1.46	1.9	1.0	1.6	1.5	1.7	1.65	1.46	1.45
1894	2.1	1.97	1.8	1.61	1.19	1.39	1.9	1.1	1.9	1.8	1.4	1.57	1.38	1.41
1895				Not published yet.										1.60
	2.24	2.25	2.27	1.90	1.41	1.60	2.12	1.50	1.53	1.92	1.77	1.84	1.63	1.60

* From information kindly supplied by the Medical Officer of Health.

LOCAL DISEASES.

The various Local Diseases are classified according to ages, Wards, and dates on Tables C and D.

DISEASES OF THE NERVOUS SYSTEM caused 178 deaths, against 172 in 1894, 191 in 1893, 187 in 1892, and 226 in 1891. Convulsions, which is classed under this heading, caused 72 of the 178 deaths. 70 of them were of children under five years.

DISEASES OF RESPIRATORY SYSTEM caused the following deaths:—

1891	1892	1893	1894	1895
568	380	390	302	344

The Deaths from Bronchitis and Pneumonia are set out in the following table.

	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
Bronchitis ..	167	142	212	170	299	210	221	177	219	232	300	243	215	154	164
Pneumonia ..	62	96	111	104	115	83	103	87	133	172	218	141	147	118	148

The following figures show the distribution of cases of Bronchitis and Pneumonia over the Borough.

WARDS.	BRONCHITIS.					PNEUMONIA.				
	1891	1892	1893	1894	1895	1891	1892	1893	1894	1895
Eccleston, North ...	39	27	23	31	22	20	16	14	5	17
Eccleston, South ...	22	10	12	11	15	13	10	9	6	13
Central ...	45	36	29	15	18	23	12	18	13	8
Windle, North ...	18	16	20	10	13	17	18	16	11	12
Windle, South ...	51	26	20	16	11	13	8	8	8	10
Hardshaw ...	45	26	42	23	21	33	29	23	15	15
Sutton, East ...	23	19	28	9	13	37	23	28	22	24
Sutton, West ...	33	16	24	22	25	30	19	17	24	30
Parr ...	27	24	17	17	26	31	18	14	14	19

YEAR.	DEATH RATES FROM ALL RESPIRATORY DISEASES PER 1,000.	
	All England & Wales	St. Helens.
1882	3.56	3.29
1883	3.67	5.52
1884	3.34	4.51
1885	3.73	6.72
1886	3.64	4.82
1887	3.62	5.31
1888	3.50	4.54
1889	3.30	5.37
1890	4.12	5.78
1891	4.47	7.81
1892	3.96	5.18
1893	3.60	5.17
1894	—	3.89
1895	—	4.32
Mean	3.70	5.15

DISEASES OF THE DIGESTIVE SYSTEM caused 146 deaths, against 115 in 1894, 147 in 1893, and 132 in 1892.

No less than 104 out of this number were of children under 5 years of age. This group is most prevalent during the Autumn months, and is closely related to Diarrhœa both in the causes producing it and the time of its prevalence.

SANITARY STAFF.

This consists of

The Medical Officer of Health.		
Chief Inspector of Nuisances ...	}	These Offices are held
Canal Boats Inspector ...			by the Surveyor.
Three Male Assistant Nuisance Inspectors.		
One Female " " "		
A Meat Inspector.		
An Inspector under the Sale of Food and Drugs Act.		
One Clerk.		
Two Disinfecting Men.		

GENERAL SANITARY WORK DURING 1895.

At the fortnightly meetings of the Health Committee a report was presented dealing with the Health Statistics for the previous fortnight, and in these reports special attention was drawn to points requiring consideration.

The following Special Reports were also submitted during the year:—

Report on Prevalence of Measles, January 9th.

Report on Small Pox, 24th April.

Report on School Attendance, in relation to Compulsory Isolation of Children suffering from Infectious Diseases, May 22nd.

Report on Meat Hawking, September 25th.

Report on Cases of Typhoid Fever probably spread by milk, 13th November.

Report on the advisability of undertaking a special research as to some of the causes of the continued prevalence of Typhoid Fever in St. Helens, 13th November.

Report on the necessity for further Hospital Accommodation, 27th November.

MAIN SEWERAGE, DRAINAGE, AND SEWAGE DISPOSAL.

It is very satisfactory to put on record the very important work which has been accomplished in this respect during the year 1895. On July 27th, 1895, the whole of the sewage from the area drained by the Main Intercepting Sewer was run into the new length of sewer extending from Ashcroft Street Bridge to the Outfall Works at Double Locks.

The negotiations with the Local Government Board as regards the best method of treating Sewage having the unique composition of that in St. Helens, have proceeded very slowly, but, undoubtedly, some progress has been made during the year. It is to be hoped that this point will be settled at an early date.

The area known as Dentons Green District has been efficiently sewered during the year, thus doing away with a pollution of the Windle Brook, which was a real danger to the Public Health.

The district of Windle City has also been connected with the Main Drainage System of the Borough. The beneficial effects of this Sewer will not be evident until the Tributary Sewers are connected along its course, as these, for the most part, at present discharge into brooks.

WATER SOFTENING WORKS.

Samples have been taken from these Works daily, and tested as to their hardness, by the Medical Officer of Health. Each sample is obtained by allowing the softened water to drop for twenty-four hours into a glass vessel. At the end of this time, the contents are well mixed, and the sample taken. In this way a true sample is obtained.

The 3 well waters which go to the Softening Works contain 26, 22, and $18\frac{1}{2}$ degrees of hardness respectively.

	No. of Samples Tested.	Mean Hardness.
January	31	13.2°
February	27	14.1°
March	30	13.3°
April	29	13.6°
May	31	13.9°
June	30	13.6°
July	30	13.6°
August	28	13.4°
September	30	13.4°
October	31	13.4°
November	30	13.6°
December	31	14.6°
358 Mean for year		13.6°

ALKALI AND OTHER CHEMICAL WORKS.

It was not found necessary to keep such a careful watch on the effluent drains, or the condition of the Alkali Waste heaps as in former years, owing to the fact that better precautions are now taken to prevent acid liquids running away from the works, and, also, as regards the Waste Heaps, because, practically, no waste is now deposited which has not been de-sulphurised.

On several occasions serious nuisance was caused by the escape of noxious gases, especially H_2S , from the chimneys of various works. On each occasion the time was communicated to the District Inspector of Alkali Works, and the matter was investigated and measures taken to prevent its recurrence.

The drainage from the Alkali Waste Heaps is still the cause of a nuisance which is probably the most serious which St. Helens has to deal with. Unfortunately, no reasonable means have as yet been discovered of dealing with this nuisance. Not only does the drainage from these Waste Banks pollute the streams, but it also pollutes the Subsoil Water in several districts, and also gets into the Sewers.

MILK SUPPLIES.

A considerable amount of attention has been given to this subject during the year with a view to the adoption of means to prevent milk becoming a carrier of infection or breeding ground for organisms which produce gastric and intestinal disturbance in young children.

It is sincerely to be desired that the great improvements which have taken place within recent years in the Milk Supplies of many Continental and American cities, with such beneficial results to the consumers and financial success to the milkman, will soon be adopted in this country.

The principle aimed at is the supply of milk which is free from contamination of any kind, which has been derived from cows free from Tuberculosis and other diseases, and cows which are fed in the most wholesome and suitable manner for the production of milk.

The picture which can be drawn as to the present condition of our Milk Supplies from its Public Health aspect is not a pleasant one, but it is one which ought to be viewed by the consumer most carefully.

The condition of the cowsheds in St. Helens is improving since the adoption of Regulations in regard to them,—yet many cowsheds do not comply with the requirements—many are overcrowded—others are imperfectly ventilated, and yet others are not kept in a clean condition. It has been most difficult to get the old ideas prevalent in St. Helens regarding the ventilation of cowsheds altered. It is the custom in South Lancashire—as in so many other districts in England—to keep cowsheds very warm, and to attain the required heat, all the ventilators are blocked up and as few windows are introduced as possible, so that cold may not get through them. It is supposed that this condition keeps cows from catching cold and enables them to give a larger supply of milk. This condition of defective ventilation and lighting is probably the chief means by which Tuberculosis is spread from one animal to another, and it therefore produces a loss to farmer or butcher, and a danger to the Public from the consumption of the meat and milk of such Tubercular cows. It is injurious in another way also, and one which is not always apparent,—it tends to produce an atmosphere which is most pollute and which contains enormous numbers of micro organisms. When it is remembered that in the process of milking the milk is exposed in fine streams to this pollute atmosphere,

the amount of contamination which it can absorb will be obvious. The most valuable horses and cows which England possesses are housed in the most perfectly ventilated buildings—there can be no reason why more perfect ventilation and lighting should not become general in St. Helens Cowsheds

Cleanliness in milking is not carried out as it ought to be, with a result that probably little of the milk which is supplied to St. Helens is free from contamination with cow-dung and other filth from the hands of the milkers. In a few of the Cowhouses in St. Helens the udders of the cows are wiped first with straw and afterwards with a damp cloth, and the hands of the milker are then washed. Unfortunately, this is not the custom in nine-tenths of the Cowhouses, where, with filthy hands wetted with milk, a dangerous contamination takes place.

Another improvement which is much to be desired is that all milk should be cooled by means of a refrigerator before being sent out. This prevents the multiplication of the various micro-organisms which are found in milk, many of which are harmful. Milk so treated will keep sweet for twice as long in summer-time as milk which has not been cooled. It cannot be too widely known that milk, and especially warm milk, is one of the best, if not the very best, fluid in which organisms can grow. The expense of such a cooling is not great. It is said that the general public prefer warm milk as cream rises better in such than when it has been cooled.

The methods of delivery and storage of milk in the small Milk-shops and in the cottages of St. Helens is not all that can be desired. Contamination, undoubtedly, is produced in this way.

Every milk vendor can tell how frequently he has to ask that the milk vessel into which he has to pour his milk should be cleaned.

The damage done to health by means of contaminated milk is infinitely greater than that done by any form of adulteration which takes place. It is one, however, the results of which are very difficult to estimate. It is impossible to say that a particular infant received the poison which caused its death by milk. On account of this difficulty little or no attention has been devoted to Milk Supplies. Modern scientific research into this subject is bringing to light the importance of securing pure Milk Supplies for young children.

In order that a more systematic inspection of Dairies and Cowsheds should be carried out, each District Inspector has been supplied with a pocket inspection book, with printed inquiries, to be filled up regarding each Cowshed he inspects. The following is a copy of the Instructions and Queries contained in the book :—

INSTRUCTIONS TO INSPECTORS.

In Examining and Reporting on any Cow whose Milk is being sold, it must be understood that no opinion is to be expressed to the Owner or his Servant under any condition whatever.

The Medical Officer will, if necessary, direct the Veterinary Inspector to visit and Report on any such cow.

The Inspector will notice especially whether the Udder shows any signs of tubercular disease (usually to be felt as a hard lump or lumps in the back end of the Udder). 2nd—Whether any ulceration or inflammation of the teats exist. Whether the Glands under the skin of the skin or armpit are enlarged.

He will also enquire whether any Cow has Calved during the previous 7 days, and if any such exist, he will enquire as to whether the Milk is being sold.

Careful observations and enquiries made with discretion will often elicit the fact that some of the Cows are suffering from other diseases, which render it undesirable that the milk should be sold.

Situation of Cowshed

Date and time of inspection

No. of Cows for which registered

No. of Cows at time of inspection

No. of other Animals

No. of Cows stated to be sick

Report on any stated or observed to be sick.

Are Cows Udders cleansed before milking?

Are hands of milkers cleansed before milking?

Is Lighting sufficient?

Are Ventilators in Working Order?

Condition of Walls

Condition of Floors

Condition of Drainage

Is Water Supply sufficient and good?

Condition of Middenstead

Has it been emptied sufficiently often?

Filth Nuisances within 50 feet of a Cowshed or Dairy?

Is Milk cooled before being sent out?

Is Milk Store kept clean?

Has Floor been Washed daily?

Condition of Walls

No. of Milk Vessels which do not appear to have been "scalded" daily

Report fully any contravention of regulations, orders, or statutes

Signed,

INSPECTOR.

There are at present 149 registered premises under the Dairies, Cowsheds, and Milkshops Order, against 203 in 1894, and 191 in 1893.

During the year 25 premises were registered, after having been first inspected by the Medical Officer of Health.

PROPERTY UNFIT FOR HUMAN HABITATION.

The following is a list of Houses which have been closed by order of the Health Committee during 1895.

139, Chancery Lane	}
141, " "	
2, Back Chancery Lane	

11, Assam Street	}
11, Back do.	
1, Ravenhead Hall, Hall Lane	}
2, " "	
3, " "	
4, " "	
5, " "	

Total 11, against 26 in 1894.

On March 11th, the Agent for property at 8, Copperas Street was fined £2 and costs for allowing houses that were condemned as unfit for human habitation to be occupied.

CANAL BOATS ACTS.

The following is a copy of the Annual Report of the Inspector under this Act to the Local Government Board.

In compliance with section 3 of the Canal Boats Act, 1894, I have to present to you my annual report as to the execution of the Canal Boats Acts, 1877 and 1884, for the year ending 31st December, 1895.

(1) The Corporation of St. Helens have appointed me to be Inspector under the Canal Boats Acts in addition to my duties as Borough Surveyor and Chief Inspector of Nuisances. No special remuneration is made for my duties under the Canal Boats Acts.

(2) The number of boats inspected in 1895 was 16, against 22 in 1894. The short length of the Canal within this registration district was closed for traffic, either on account of the Canal being empty for repairs, or blocked by ice on 56 days during 1895.

(3) Of the 16 boats inspected during the year, one was found to contravene Section 3 of the Acts of 1877, by having no certificate on board and by not being numbered, as directed by the Regulations made under the Act. Another was found to contravene the same section—the registration marked on the boat not corresponding with the certificate produced, and a third was found to contravene clause 9 of the Local Government Board Regulations, 1878. Cautions were given in each case, and these were attended to. No other infringements of the Acts occurred during the year.

(4) It was not necessary to take any legal proceedings for infringements.

(5) Nor was it necessary to take any other steps to secure compliance with the Acts or Regulations.

(6) No case of Infectious Disease was discovered on any Canal Boat during the year, nor was any case reported to the Medical Officer of Health.

(7) It was not found necessary to detain any boat for cleansing or disinfection.

(8) No boats are at present on the Register.

(9) No boat was registered during 1895.

I herewith append a table showing the foregoing facts.

I am, gentlemen,

Your obedient servant,

GEO. J. C. BROOM.

BLACK SMOKE NUISANCE.

Thirty-seven chimneys were "timed" during 1895 for periods lasting from a few minutes to over an hour.

It was considered by the Health Committee that if Black Smoke issued from any chimney for a longer period than five minutes at one time, that a nuisance that was preventable was thereby caused.

Of the 37 observations taken, in 11 Black Smoke was sent out for over five minutes—the longest time being 11 minutes.

In each of these 11 cases the works were communicated with and a reply obtained as to the cause, and an assurance obtained that means were being taken to prevent such from happening again.

SWINE FEVER.

The prevalence of this disease has no very direct bearing on the Public Health, but from the fact that so many pigstyes exist, even in populous areas in St. Helens, it is not uninteresting to note the number of outbreaks from year to year. Again the destruction of the affected animals in the Refuse Destructor at Parr and the cleansing of the premises have been carried out by the Health Committee.

The number of outbreaks reported in each of the past five years are as follows:—

1891	1892	1893	1894	1895
57	23	48	10	27

OFFENSIVE TRADES.

The following offensive trades are on the register:—

Tripe Boilers	...	...	...	...	...	7
Gut Scrapers	...	...	...	...	...	1
Manure Manufacturers	...	...	...	...	...	2
Soap Boilers	...	...	...	...	...	1
						<hr/>
Total	...	...	...	...	...	11

COMMON LODGING HOUSES.

There are 16 Registered Common Lodging Houses in St. Helens, against 19 in the previous year. These contain 67 Registered Sleeping Rooms, having beds for 226½ lodgers.

These have been inspected regularly during the day by the Nuisance Inspectors, and at night by the Police.

Proceedings were taken against 3 keepers for not complying with the Bye-laws.

One was fined 5/- and 4/6 costs for neglecting to erect a screen between two beds which were in one room and occupied by two married couples.

Another was fined 5/- and costs for suffering to be received in a room a greater number of lodgers than she was authorised to receive.

And another was fined 2/6 and costs for suffering a person of the Female Sex to occupy a room which was occupied by a married couple and child.

HOUSES SUBLET IN LODGINGS.

REGISTERED DURING 1896.

8, Sandfield Crescent	12, Short Street
22, "	13, "
24, "	14, "
30, "	16, "
1, Short Street	18, Glover Street
3, "	88, Phythian Street
4, "	83, Bold Street
5, "	24, "
6, "	66, "
8, "	7, Canal Bank East
9, "	11, "
10, "	14, Sandfield Crescent
11, "	10, "

Total 26.

SLAUGHTER HOUSES.

There are at present 19 Licensed Slaughter Houses, together with the new Public Abbatoir and one Knacker's Yard.

The Licenses of six of the above slaughter houses have been renewed during the year, and the license of four butchers to kill in premises, which were already licensed, was renewed.

The New Abattoir was opened on November 28th. It will, undoubtedly, fill a long felt want, and will do away with the necessity of licensing Slaughter Houses in close proximity to dwelling houses.

It has been erected on the most approved plans and contains all modern appliances in its Lairages, Killing Rooms, and Cooling House.

The following figures show the number of Cattle Beasts killed in the Corporation Slaughter House and in the rest of the Borough:—

Year	Corporation Slaughter House		In other Slaughter Houses	
1889	...	117	...	2470
1890	...	276	...	2429
1891	...	995	...	2714
1892	...	959	...	2959
1893	...	1321*	...	2859
1894	...	1203*	...	2847
1895	...	1226	...	2026

* Owing to want of accommodation, butchers had to kill elsewhere who would have killed here.

The following gives the number of Animals slaughtered in St. Helens during 1895, and five preceding years:—

ANIMALS KILLED.	1890	1891	1892	1893	1894	1895
No. of Beasts killed within the Borough in public and private slaughter-houses for market purposes ...	2705	3709	3918	4180	4050	3252
„ Sheep ...	4335	3923	3370	4264	3614	3177
„ Calves ...	306	371	369	1281	588	471
„ Pigs ...	1304	774	872	772	3410	3348
„ Lambs ...	987	1155	1015	1101	871	471
Total ...	9638	9932	9544	11598	12533	11332
Beasts killed in the Corporation slaughter-house, which are included in the above number ...	276	995	959	1321	1203	1226

INSPECTION OF DEAD MEAT.

This has been periodically carried on by the Meat Inspector. Practically, the whole of the meat that has been killed in St. Helens has been inspected by him before being put on the Market.

The following table gives the amount of various articles that have been seized during each year as unfit for human food.

MEAT, Etc., CONDEMNED AS UNFIT FOR HUMAN FOOD.

Articles.	1891	1892	1893	1294	1895
Meat	4 cwt. 107 lbs.	36 cwts. 36 lbs.	34 cwt. 111½ lbs	38 cwt. 65 lbs.	62 cwts. 25 lbs.
Fish	9 ton 11 cwt.	4 tons 7½ cwts.	10 tons 2 cwts 40 lbs	4 tons 10¾ cwts.	6 tons 4¾ cwts.
Mussels	7 Bags	35 Bags	16 bags	44 Bags	19 Bags
Herrings	76 Boxes & Barrels	36 Boxes	54½ boxes	114 Boxes	43 Boxes
Rabbits	40	31	15	174	55
Fowl	—	3	—	10	2
Geese	40	14	—	5	—
Prawns	2 Baskets	4 Baskets	—	—	—
Haddock	—	246 Boxes	64 Boxes	343 Boxes	191 Boxes
Kippers	—	124 Boxes	263 Boxes	138 Boxes	176 Boxes
Shrimps	—	1 Basket	—	51 Crabs	1 Barrel Shrimps
Ducks	—	20	—	27	—
Mackerel	—	—	732	135	60
Milk	—	—	2 Tanks	—	—
Tripe	—	—	118 lbs.	—	—
Tongues	—	—	—	8	—
German Yeast..	—	—	—	40 Packages	8 Packages
Cow Heels	—	—	—	1 Bag	5 Bags Bellies & Feet
Pigs Feet	—	—	—	—	1 Barrel Pigs Feet
Mushrooms	—	—	—	—	3 Boxes Mushrooms

Proceedings were taken against the undermentioned :—

Against a butcher for having a diseased beast deposited for the purpose of preparation for sale.—Withdrawn. Also against a Farmer for being the owner of the above.—Withdrawn.

Against a Butcher for having putrid meat exposed for sale.—Fined £10 and costs, or two months.

Against a Butcher for having exposed and deposited for sale putrid and maggoty meat.—Fined £2 and costs.

REPORT OF PUBLIC ANALYST FOR YEAR 1895.

The following table shows the work done by the Public Analyst during the year 1895 :—

Name of Sample Analysed.	Number of Samples Analysed.	Number of such Samples which were found to be genuine.	Number of such Samples which were found to be adulterated.	Number of cases in which a Summons was taken out.
Milk	82	74	8	8 (5 convicted)
Whiskey	6	5	1	1 (dismissed)
Butter	30	30	—	—
Cheese	1	1	—	—
Lard	3	3	—	—
Paregoric	3	3	—	—
Tincture of Opium ...	1	1	—	—
Spirits of Nitre ...	2	2	—	—
Totals	128	119	9	9 (5 convicted)

APPENDED IS A TABLE SHOWING THE NUMBER OF SAMPLES SUBMITTED FOR ANALYSIS SINCE 1889, THE NUMBER OF SUCH SAMPLES WHICH WERE ADULTERATED, AND THE PERCENTAGES OF ADULTERATED SAMPLES DURING EACH YEAR.

Articles Purchased.	1889		1890		1891		1892		1893		1894		1895	
	Total Samples	No. Adulterated	Total Samples	No. Adulterated	Total Samples	No. Adulterated	Total Samples	No. Adulterated	Total Samples	No. Adulterated	Total Samples	No. Adulterated	Total Samples	No. Adulterated
Milk	24	4	33	1	30	3	23	2	23	2	25	2	82	8
Whiskey	19	5	8	1	11	3	9	1	—	—	12	3	6	1
Butter	9	2	14	—	15	3	23	—	6	1	12	2	30	—
Bread	1	—	—	—	—	—	1	—	—	—	—	—	—	—
Cream of Tartar	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Coffee	1	—	1	—	—	—	1	—	—	—	—	—	—	—
Cheese	1	—	1	—	1	—	—	—	—	—	—	—	—	—
Vinegar	2	—	—	—	—	—	—	—	—	—	—	—	1	—
Cocoa	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Lard	2	—	3	—	7	—	1	—	—	—	—	—	3	—
Pepper	—	—	2	—	—	—	1	—	—	—	—	—	—	—
Beer	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Mustard	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Paregoric	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tincture of Opium	—	—	—	—	—	—	—	—	—	—	—	—	3	—
Spirits of Nitre	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Totals	62	11	62	2	64	9	61	3	29	3	49	7	128	9
Percentage of Adulterated Samples— St. Helens	17.7		3.2		14.0		4.9		10.3		14.3		7.03	
Percentage of Adulterated Samples— All England	11.5		11.2		12.2		12.4		12.9		Not yet published		Not yet published	
Average Amount of Fine in	s. d. 7 11 5/11		s. d. 7 6		s. d. 12 9 1/2		s. d. 10 0		s. d. 7 6		s. d. 4 7 5/7		s. d. 12 2 2/3	
each Case exclusive of Costs	£1 7 4		£1 9 0		£1 11 3		£1 16 2		£1 17 11		Not yet published		Not yet published	

BAKEHOUSES.

Each of the Bakehouses which were in use during 1895 were inspected, and although instructions were given in several cases as to more or less unhealthy conditions, it was not found necessary to prosecute in any case.

No Bakehouse was erected during the year which was in direct communication with the dwelling-house.

It is much to be desired that the type of Bakehouse which is so prevalent in St Helens, *i.e.*, a Bake Oven attached to the Scullery which is used for all household purposes, as well as for bread baking, will soon be done away with.

WORKSHOPS.

The number of Registered Workshops in St. Helens on December 31st, 1895, was 284.

All of these were visited during the year. No prosecution was instituted in regard to their Sanitary condition.

NUISANCE INSPECTORS WORK DURING 1895.

Systematic house to house inspections have been carried on during the year by the Assistant Nuisance Inspectors, and the following table gives a list of the numbers of cases in which nuisances were found, and for which notices had to be served.

SANITARY NOTICES.

Number of Sanitary Notices served:—

	1890	1891	1892	1893	1894	1895
To Clean Choked Drains or						
repair Drains ...	298 ...	276 ...	357 ...	447 ...	353 ...	303
" " Filthy Drains ...	49 ...	26 ...	48 ...	57 ...	86 ...	63
" " Backyards and Pas-	— ...	54 ...	11 ...	46 ...	72 ...	30
sages ...						
" " Ditches, Cesspools,	— ...	1 ...	2 ...	5 ...	11 ...	29
or Wells ...						
" provide Slopstones ...	— ...	— ...	— ...	28 ...	61 ..	13
" " Privy, Ashpit, and	40 ...	157 ...	179 ...	59 ...	306 ...	258
Pail Closet Doors ...						
" " Trapped Gullies ...	61 ...	77 ...	91 ...	28 ...	1 ...	21
" " Down Spouts and	— ...	— ...	37 ...	14 ...	83 ...	0
Eave Spouts ...						
" " Ventilation Pipes to	— ...	— ...	— ...	19 ..	7 ...	4
w.c. ...						
" repair Down Spouts and	— ...	11 ...	39 ...	93 ...	126 ...	182
Eave Spouts ...						
" " w.c.'s, Baths, and	— ...	— ...	— ...	43 ...	11 ...	18
Basins ...						
" " Ashpit, Privy, Dwell-	15 ...	150 ...	115 ...	142 ...	272 ...	258
ing-house, and						
Pantry Roofs ...						
" " Backyards ...	89 ...	239 ...	291 ...	252 ...	193 ...	94
" " drain Dwelling-houses ...	— ...	— ...	— ..	17 ...	2 ...	25

To provide, or disconnect, or lengthen Slopstone Pipes	17	101	148	144	133	55
„ provide, or disconnect, or lengthen Down Spouts...	—	29	2	—	0	0
„ rehang Privy or Ashpit Doors	—	42	49	92	2	0
„ caulk Down Spouts...	—	9	—	—	0	0
„ remove Pigs	2	21	14	39	37	27
„ „ Manure	42	—	16	5	29	15
„ „ Rubbish	—	—	17	16	18	25
„ Overcrowding	27	—	37	26	56	153
„ Miscellaneous	184	237	396	389	229	206
Foul Ashpits to be reconstructed to Tub and Pail and No. 2 System	435	117	192	196	487	39
To provide w.c.'s	—	—	—	3	0	4
„ „ Ashboxes	—	—	—	—	194	179
„ repair Privies and Ashpits	—	—	—	—	96	21
„ clean and limewash dwelling-house	—	—	—	—	18	42
„ remove Fowls from dwelling-houses	—	—	—	—	—	11
	1259	1560	2041	2157	2820	2065

WORK OF THE FEMALE SANITARY INSPECTOR.

It is almost impossible to narrate in detail the work done by the Female Sanitary Inspector. Her efforts have been devoted to the districts where the greatest amount of squalor and filth existed. The following table contains an outline of her work during each month.

	January.	February.	March.	April.	May.	June.	{ July and August.	September.	October.	November.	December.	Total.
Houses visited in the districts of Pocket Nook, Greenbank, Smithy Brow, and Gerards Bridge ..	431	557	868	1553	2116	1594	2816	1305	450	531	105	13272
Instructions given <i>re</i> Feeding and Cleansing of Children ..	300	308	297	607	503	498	906	500	104	397	601	5021
Houses Limewashed ..	13	17	21	39	55	44	76	36	27	25	46	399
Houses visited respecting Measles ..	341	535	125	116	85	129	—	—	591	492	—	3214

REMOVAL OF EXCRETA.

It may be said that up till the year 1884 all houses in St. Helens, with the exception of a few having water-closets, were on the Privy Midden system.

In 1884 the Health Committee, as a result of very careful enquiries in other towns, and having in view the facts that there was no main drainage system in existence, no sewage disposal works, and a somewhat limited water supply, advised the introduction of the pail system.

The number of houses which have been put on this system are shown in the accompanying table:—

	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Total.
Old System ..	49	..	..	..	..	..	..	..	..	..	..	..	..	49
New Houses ..	..	97	180	352	397	338	349	275	221	268	347	277	175	3186
Converted Privies and Ashpits ..	..	161	526	380	328	415	602	435	117	192	196	487	358	4197
	49	258	706	732	635	753	951	710	338	460	543	764	533	7432

It will be seen that a large number of privies and ashpits have been converted during these years, and it may be stated generally that the most dilapidated privies have been abolished.

There still remains an enormous number of privies in St. Helens, nearly all of which are a standing danger to the public health.

Perhaps the most important decision come to by the Health Committee during 1895 was their resolution appointing a Sub-Committee to enquire into the different methods of excrement removal with a view to improving the present methods if possible.

MONTHLY METEOROLOGICAL SUMMARY FOR 1895.

JANUARY.—The weather during January was cold, with south-easterly and northerly winds prevailing. The maximum temperature was 42.8° on 24th. The minimum was 15.7° on the 28th. The mean temperature was 32.1° . The number of days on which frost was registered was 22. The barometer ranged from 28.788 to 30.464. The total rainfall was 2.775 inches. This amount of rain fell on 14 days.

FEBRUARY.—The weather during February was very dry and extremely cold. Only once during the whole month was a minimum temperature above 32° registered. The maximum temperature was 41.3° on the 25th; the minimum temperature being 12° on the 9th. The mean temperature was 29.4° . The number of days on which frost was registered was 27. Only .22 inches of rain fell, and this amount fell on 3 days only. The prevailing winds were easterly, north-easterly, and south-easterly. Probably the duration of cold during January and February is unprecedented.

MARCH.—The weather in March was cold until the 15th, with dull, foggy weather occurring at intervals during the whole month. The maximum temperature was 55.3° on the 17th, the minimum 27° on the 13th. The mean temperature was 41.05° . The number of days with frost was 9. The total rainfall was 2.865. This amount fell during 16 days. The prevailing winds were north-westerly, south-westerly, and south-easterly.

APRIL.—The weather in April was on the whole good, the days being bright with a considerable amount of sunshine. The maximum temperature was 61.5° on the 22nd, the minimum being 31.1° on the 12th. The mean temperature was 46.2° . On 5 days frost was registered. The total rainfall was 1.815 inches. The total number of days on which rain fell was 12. South-westerly winds prevailed.

MAY.—The weather during May was mild and sunny. The maximum temperature of the air reached 79.6° on the 31st, the minimum being 35.3° on the 17th. The mean temperature was 53.8° . The total amount of rain was .545, which fell on 7 days. The prevailing winds were south-easterly and north-westerly.

JUNE.—The weather during June was fine, bright, and sunny. The Maximum temperature of 81.9° was registered on the 26th, the minimum being 39.5° on the 15th. The mean temperature was 57.4° . 1.157 inches of rainfall was registered on 8 days during the month. The prevailing winds being north-westerly.

JULY.—The weather during July was warm and bright, with occasional heavy showers. The maximum temperature registered was 76.9° on the 9th, the minimum being 44.6° on the 31st. The mean temperature was 58.6° . The total amount of rainfall registered was 3.96 inches, and this amount fell on 15 days. The prevailing winds were north and south-westerly.

AUGUST.—The weather during August was damp and dull. The maximum temperature was 76.0° on the 18th, the minimum was 46.0° on the 25th. The mean temperature was 59.6° . 3.31 inches of rain fell on 16 days during the month. The prevailing winds were south-westerly and north-westerly.

SEPTEMBER.—The weather during September was dull and warm during the whole month. The maximum temperature registered was 79.6° on the 28th and 29th. The minimum was 42.5° on the 21st. The mean temperature was 59.4° . The total rainfall was 1.24 inches, and this fell on 4 days. The prevailing winds were south-easterly and south-westerly.

OCTOBER.—The weather during October was dull and damp until the 21st, when it became exceedingly cold and remained so until the 31st. The period between the 21st and the 31st is remarkable, on account of its having been preceded and followed by periods of warm weather. The maximum temperature was 72.3° on the 1st; the minimum 22.7° on the 29th. The mean temperature was 45.6° . The rainfall was 4.61 inches. This amount fell during 21 days. The winds were variable during the month.

NOVEMBER.—The weather during November was dull, mild, and damp. The maximum temperature was 60.7° on the 17th; the minimum 29.7° on the 23rd. On one night only did the minimum thermometer register below freezing point. The mean temperature was 45.2° . The total rainfall was 2.73 inches, and this amount fell on 16 days. The prevailing winds were easterly and south-westerly.

DECEMBER.—The weather during December was dull and gloomy, with strong winds. The maximum temperature was 53.2° on the 5th; the minimum was 24.0° on the 21st. The mean temperature was 39.0° . The number of days with frost was 7. The total rainfall was 3.225 inches. This amount fell on 18 days. The prevailing winds were south-easterly and north-westerly.

RAINFALL

AT ECCLESTON HILL WATERWORKS FOR 30 YEARS.

	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875
January ..	2.91	1.28	2.38	1.78	2.40	.50	*	2.54	2.78	*
February ..	3.11	2.08	1.91	3.12	.60	.84	*	.27	.62	*
March ..	1.98	1.04	3.41	1.47	1.94	.84	4.69	1.46	2.02	.63
April ..	.59	3.61	1.94	2.31	1.47	2.42	2.91	1.88	1.01	.34
May ..	.77	1.60	1.74	4.04	1.07	1.45	1.27	1.85	1.44	2.30
June ..	4.15	.96	.36	1.28	1.47	2.84	5.56	1.69	.96	3.80
July ..	3.02	4.70	.47	1.18	.81	4.07	7.46	3.53	2.65	3.26
August ..	4.12	1.78	4.47	2.27	1.96	1.53	2.72	3.01	3.24	3.35
September ..	5.49	2.39	2.01	6.49	2.99	2.93	7.03	1.52	2.43	5.65
October ..	2.45	3.10	4.40	3.07	7.31	4.81	5.40	4.24	4.26	5.81
November ..	4.11	.81	2.15	3.61	2.76	1.08	2.73	2.31	4.50	4.10
December ..	2.57	4.29	7.08	3.13	2.79	.02	3.97	.88	1.51	.78
Totals ..	35.47	27.64	32.32	33.75	27.59	23.33	43.77	25.18	27.42	30.02

* Gauge broken.

	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885
January ..	1.70	1.70	3.54	*	.49	.08	2.72	2.58	3.51	1.78
February ..	3.60	4.50	1.77	*	.80	4.17	1.73	3.38	2.33	2.35
March ..	2.34	2.43	1.13	1.42	1.37	2.41	2.15	.53	2.49	1.94
April ..	3.25	3.13	2.20	1.14	.66	1.23	4.06	1.09	1.07	1.38
May ..	.42	2.69	4.34	1.58	1.90	3.35	1.71	.68	0.82	2.14
June ..	2.61	1.07	3.32	3.10	2.15	2.60	6.07	2.90	2.11	3.32
July ..	2.74	5.32	1.40	4.53	5.82	3.47	5.27	3.32	3.30	1.91
August ..	3.50	6.16	4.87	5.15	2.38	6.60	4.41	2.25	2.02	1.98
September ..	3.96	3.01	5.06	3.77	2.90	2.46	3.10	6.41	3.09	4.58
October ..	2.90	3.46	3.94	2.07	3.13	3.14	3.00	5.81	1.49	5.99
November ..	4.96	2.5	3.94	.64	2.03	2.91	3.43	2.60	1.57	3.18
December ..	4.38	2.90	*	.61	6.16	4.30	2.12	1.65	3.12	2.18
Totals ..	36.36	38.87	35.51	24.37	29.79	36.72	39.77	33.20	26.92	32.73

* Gauge broken.

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895
January ..	3.99	0.98	0.93	0.65	3.17	1.01	1.80	0.89	1.87	2.06
February ..	0.80	0.61	0.61	1.53	0.19	0.08	1.54	3.07	4.02	0.04*
March ..	1.84	1.33	1.89	1.27	2.28	0.76	0.73	0.77	2.21	0.89*
April ..	1.12	1.06	1.09	1.92	1.31	1.95	1.15	0.39	1.59	1.74
May ..	4.25	2.03	0.66	2.47	1.58	2.13	3.36	1.30	2.48	0.54
June ..	1.68	0.91	2.54	0.35	2.27	3.39	4.08	1.74	2.23	0.82
July ..	3.03	1.17	6.87	2.98	2.43	3.26	3.20	3.32	3.66	3.72
August ..	1.74	1.50	3.31	4.75	3.67	6.50	4.15	2.79	4.77	3.31
September ..	3.47	5.36	1.56	2.25	1.48	2.92	3.80	3.85	0.72	1.17
October ..	4.05	2.37	1.85	2.84	2.09	3.49	6.25	2.18	3.79	5.13
November ..	3.04	1.17	4.98	2.49	6.41	2.92	2.44	1.88	2.56	2.65
December ..	4.00	2.61	1.89	2.39	0.14	3.93	1.96	3.55	3.44	2.88
Totals ..	33.01	21.10	28.18	25.89	27.02	32.34	34.84	25.73	33.34	25.35

* Rain Gauge out of order.

APPENDIX A.

Showing the work done during 1895 in the erection of Buildings and the Paving and Sewering of Streets and Passages.

This information is supplied by

MR. GEO. J. C. BROOM, M.I.C.E.

Plans Deposited and Approved by the Health Committee.

	1890	1891	1892	1893	1894	1895
For Dwelling-houses... ..	285	238	401	563	310	253
„ Other Buildings... ..	90	66	47	35	45	24
„ Alterations to Existing Buildings	47	49	29	59	73	48
Total	422	353	477	657	438	325

The following Table shows the several Wards of the Borough in which Buildings have been erected during the year:—

North Eccleston	South Eccleston	North Windle	South Windle	East Sutton	West Sutton	Central	Hardshaw	Parr	Total
22	49	49	4	6	32	—	16	24	202

PASSAGES.**Sewering, Levelling, Paving, and Channelling.**

Passage between Birchley and Brynn-streets.

STREETS.**Sewering, Levelling, Paving, Flagging, and Channelling.**

Brynn Street
Charles Street

Levelling, Paving, Flagging, and Channelling.

Vincent Street

Sewering and Draining.

Sandy Lane

Paving and Flagging.

Salisbury Street

Main Sewers.

Bishop Road, Cowley Hill Lane, and Windle City
Kirkland Street, Lingholme Road
Denton's Green Lane, Windleshaw Road
Greenfield Road, Rivington Street
Hammill Street, Hard Lane, and
Passages between Denton's Green Lane and Greenfield Road

Storm Water Sewers.

Boundary Road
Duke Street, Lowe Street, and Wilson Street
Lingholme Road, Denton's Green Lane
Windleshaw Road, Greenfield Road
Rivington Street, Tennis Street
Carr Street, Hammill Street, and Hard Lane

TABLE D.—CONTINUED.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
(b) HOMICIDE.																												
Manslaughter .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murder .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) SUICIDE.																												
Gunshot Wounds ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cut, Stab .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poison .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Drowning .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hanging .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Otherwise .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Deaths from ill-Defined and not Specified Causes.																												
Dropsy .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Debility-Atrophy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marasmus	68	8	6	5	1	..	..	..	..	..	..	..	..	..	..	..	..	13	11	9	14	10	6	4	10	12	89	
Mortification	18	11	12	6	..	..	1	2	..	..	..	..	..	..	..	..	..	5	3	4	8	3	6	1	6	14	50	
Tumour .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Abscess .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
Hemorrhage .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sudden Death (cause not known)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other causes not specified ..	3	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SUMMARY																												
ZYMOTIC DISEASES	22	21	40	68	16	7	6	19	7	9	12	24	13	4	3	5	..	..	33	23	40	22	21	23	18	69	27	276
PARASITIC .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DO.	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DIETIC .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DO.	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CONSTITUTIONAL DO. ..	4	6	14	11	5	6	2	8	12	11	17	37	40	39	16	8	5	..	29	13	19	26	25	38	32	42	17	241
DEVELOPMENTAL DO. ..	85	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	27	4	10	18	10	14	8	18	13	122
LOCAL	85	65	99	97	23	9	11	19	12	16	6	31	66	73	89	71	33	2	101	56	70	68	69	113	79	148	103	807
DEATHS FROM VIOLENCE ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ILL-DEFINED OR NOT SPECIFIED ..	89	20	20	13	2	..	..	1	5	2	..	..	1	5	2	4	2	3	..	15	18	22	15	17	7	24	31	169
Totals	287	114	175	190	49	22	20	56	26	38	41	102	131	122	118	108	58	7	210	114	160	161	142	219	157	311	200	1674

APPENDIX B.

Showing the number of **Cases of Sickness from Typhoid Fever** which have occurred in each Street during the years 1891 to 1895.

In judging of the relative incidence of Typhoid Fever in the various Streets, it is necessary to know the population of each Street for each year. Unfortunately, no accurate record is obtainable—hence this apparent omission here.

STREET.	YEARS.					STREET.	YEARS.				
	1891	1892	1893	1894	1895		1891	1892	1893	1894	1895
Albion street	6	1	1	0	2	Binney street	0	0	0	1	0
Albert street	0	0	0	0	1	Birchley street	0	0	4	0	1
Alma street	0	0	0	0	1	Blackhorse street	1	0	0	0	0
Allinson street	0	0	0	0	0	Blackbrook road	0	0	0	0	0
Alma place	0	0	0	0	2	Blinkhorn street	0	0	0	0	0
Anne street	1	0	0	0	0	Boundary road	1	2	2	0	3
Appleton street	1	2	2	0	3	Borough road	0	0	1	0	0
Arthur street	1	1	0	0	1	Bold street	0	0	0	2	1
Argyle street	0	1	1	1	0	Bolton street	0	0	0	2	0
Ardwick street	0	0	2	0	1	Boardman's lane	0	0	0	0	0
Arnold street	0	1	0	0	0	Bold lane	0	0	0	0	0
Asheroft street	1	10	0	0	0	Bold road	0	0	0	0	0
Ashton street	0	0	0	0	0	Booth street	0	1	6	1	4
Ashton's green	0	0	0	0	0	Bruce street	2	1	0	1	3
Assam street	0	0	0	0	0	Bridgeman street	0	0	0	0	0
Atherton street	1	1	0	1	1	Brown edge	0	0	0	0	0
Atlas street	0	0	0	0	0	Bridge street	0	0	0	0	1
Atlas court	0	0	0	0	0	Bridgewater street	0	0	0	0	1
Ada street	0	0	0	1	0	Brook street	0	0	2	1	1
Alice street	0	0	0	1	1	Brynn street	2	0	0	1	2
Bank street	0	1	1	1	0	Broad Oak road	1	1	2	0	1
Banner street	0	0	0	0	0	Bronte street	0	0	0	0	3
Bath street	0	0	0	1	0	Burton Head road	0	0	1	0	0
Back Albert street	0	0	2	1	0	Blackbrook	0	0	0	0	0
Back lane	0	5	1	0	0	Campbell street	3	1	2	1	1
Baldwin street	1	0	0	0	0	Carlton street	0	0	0	0	0
Barton street	0	0	1	1	0	Carlow street	0	0	0	0	1
Barrow street	0	0	1	0	0	Canal Bank west	0	0	0	0	1
Back Bolton street	1	0	0	0	0	Canal Bank east	0	0	2	0	0
Barber's court	0	0	0	0	0	Carnarvon street	0	0	0	0	1
Ball street	0	0	0	0	0	Cairne street	0	0	0	0	1
Baxter street	0	0	0	0	0	Cedar street	0	0	0	0	0
Baxter's lane	0	0	0	1	1	Cecil street	0	0	0	0	0
Back Grove street	0	0	0	0	0	Chester street	2	0	0	0	0
Balmer street	0	0	0	1	0	Church street	0	1	0	0	1
Barber street	1	0	1	0	1	Chapel street	1	0	0	3	2
Bewsey street	0	0	0	0	0	Chorley street	3	1	0	0	0
Berry's lane	0	0	0	0	0	Charles street	0	0	3	1	0
Beasley street	0	0	0	0	0	Chancery lane	1	0	1	8	4
Bickerstaffe street	0	0	1	0	1	Church street (Sutton)	0	3	0	0	0
Bishop street	0	1	0	0	0	Clyde street	2	0	3	1	2
Biram street	0	0	0	0	0	Cloughton street	2	2	2	0	0

APPENDIX B.—CONTINUED.

STREET.	YEARS.					STREET.	YEARS.				
	1891	1892	1893	1894	1895		1891	1892	1893	1894	1895
Clifton street ..	0	0	0	0	0	Eldon street ..	2	1	5	6	7
Clock Face ..	0	0	0	0	0	Elliott street ..	1	0	1	0	0
Clock Face road ..	1	0	0	0	2	Epsom street ..	0	0	0	0	0
Clarence street ..	0	0	1	0	1	Essex street ..	0	0	0	0	1
Copperas street ..	0	0	1	0	0	Exeter street ..	0	1	0	0	1
College street ..	1	0	10	4	1	Exchange street ..	0	0	0	0	0
Cooper-street ..	2	2	2	0	2	Edgar street ..	0	0	0	0	1
Cowley hill lane ..	4	0	4	0	2	Endowment row ..	0	0	0	0	0
Cowley street ..	1	1	3	0	0						
Corporation street ..	0	0	2	0	2						
Cotham street ..	0	0	0	0	0	Factory row ..	0	0	0	0	1
Cresswell street ..	0	0	0	1	1	Fenton street ..	0	2	1	0	0
Crispin street ..	0	0	0	0	0	Fenney street ..	0	0	0	0	1
Cropper's hill ..	9	3	0	1	0	Fenney's lane ..	0	3	0	0	0
Crowthor street ..	0	0	0	2	0	Fidler street ..	1	0	0	0	1
Crook street ..	0	0	0	0	1	Fisher street ..	0	0	0	0	0
Cross street ..	0	0	0	0	0	Fleet lane ..	5	1	12	1	0
Crab street ..	2	0	0	1	0	Fox street ..	1	3	2	0	1
Critchley street ..	0	0	2	1	0	Foster street ..	0	1	0	0	0
Crossley road ..	0	1	0	1	1	Frederick street ..	0	2	9	0	1
City road ..	1	0	0	0	0	Frazer street ..	0	0	0	0	0
Cyril street ..	2	5	1	0	1	Frazer's court ..	0	0	0	0	0
Chester lane ..	1	0	0	0	1	Frederick street (Sutton) ..	0	0	0	0	0
Cansfield street ..	0	0	0	0	0	Fir street ..	0	0	0	0	1
County Asylum ..	5	1	0	1	2	Fever Hospital ..	0	0	1	0	0
*Cottage Hospital ..	1	2	2	3	0						
City Gardens ..	0	0	1	0	0						
Cairo square ..	0	0	0	0	0	Garden street ..	0	0	0	0	0
						Garnett street ..	0	0	0	0	0
Davies street ..	0	0	0	0	0	Gerard street ..	1	0	0	0	0
Dam row ..	0	0	0	0	0	George street ..	0	0	1	2	0
Devon street ..	1	0	0	1	0	Gerard's lane ..	0	0	0	0	0
Denton's green lane ..	1	0	0	2	1	Gilbert street ..	0	0	0	0	0
Derby street ..	0	0	0	0	0	Gladstone street ..	2	0	0	0	0
Derbyshire hill road ..	0	0	0	0	1	Glover street ..	2	0	1	0	1
Ditch hillock ..	0	0	0	0	0	Goss street ..	0	0	0	0	0
Dixon street ..	0	0	0	0	0	Grafton street ..	0	0	0	0	2
Doulton street ..	1	0	2	0	0	Grant street ..	0	0	3	0	0
Dunriding lane ..	3	2	0	0	0	Green street ..	0	0	0	5	2
Duke street ..	0	1	5	7	4	Graham street ..	0	0	0	0	0
Dudley street ..	0	0	1	1	1	Grimshaw street ..	0	0	0	0	0
Dyson street ..	0	0	0	0	0	Greenough street ..	0	0	0	0	0
Drake street ..	0	0	0	2	0	Grove street ..	0	0	1	0	0
Dorothy street ..	0	0	0	0	2	Grove place ..	0	0	0	0	0
						Gerard's bridge ..	0	1	2	0	1
East road ..	4	0	1	0	0	Glades hill ..	0	0	0	0	0
Earle street ..	0	0	1	1	0	Greenfield road ..	0	0	2	4	2
Eccleston street ..	4	1	0	0	0						
Edward street ..	0	1	1	0	0	Hanover street ..	2	2	2	1	2
Edgeworth street ..	0	1	0	0	0	Havelock street ..	0	0	1	0	1
Eliza street ..	0	0	0	0	0	Hardy street ..	0	1	0	1	2
Ellamsbridge road ..	0	0	1	0	0	Harris street ..	0	0	0	0	2
Ellbess lane ..	0	0	1	0	0	Halefield street ..	0	1	0	0	0
Elephant lane ..	0	1	11	1	8	Hamer street ..	1	0	4	2	0
						Hall street ..	1	0	3	0	4

* All of these cases were of Patients admitted suffering from Typhoid Fever.

APPENDIX B.—CONTINUED.

STREET.	YEARS.					STREET.	YEARS.				
	1891	1892	1893	1894	1895		1891	1892	1893	1894	1895
Hardshaw street	0	0	2	1	0	Lea Green	0	0	0	0	0
Haydock street	2	0	0	0	0	Leicester street	0	0	0	0	0
Hammond street	0	0	5	0	0	Liverpool road	1	0	1	0	1
Harrison street	0	0	0	0	0	Liverpool street	0	0	1	0	4
Hawthorne road	0	0	0	0	0	Lingholme road	0	0	1	0	3
Heath street	0	0	0	0	0	Lowe street	2	1	1	3	1
Henry street	0	0	0	0	2	Lord street	1	0	3	4	0
Helena road	0	1	0	0	0	Lugsmore lane	1	0	0	0	0
Helsby street	0	0	0	1	0	Lyon street	7	2	0	1	11
Herbert street	0	0	1	0	0	Leach lane	0	0	0	0	0
High street	0	0	1	0	0						
Hill street	0	0	1	0	0	May place	0	0	0	0	0
Higher Parr street	0	1	5	3	1	Maxwell street	0	0	0	0	0
Highfield street	1	0	0	0	0	Manning street	0	0	0	0	1
Hillmoss road	1	1	0	0	0	Market street	0	0	3	0	0
Hope street	0	0	8	0	6	Marsh street	0	0	0	0	0
Houghton street	1	0	0	0	0	Marshall's Cross road	1	0	0	0	0
Hudson street	0	0	0	0	0	Marsland street	0	0	0	0	0
Hughes street	0	0	0	0	0	Manor street	0	0	1	2	1
Hule bank	1	0	0	0	0	Merton Bank road	0	0	0	2	0
Havannah	0	0	0	0	0	Merton street	0	0	0	0	0
Haswell street	1	0	0	0	1	Milk street	0	0	0	0	1
Hill place	0	1	0	0	0	Mill street	2	1	0	1	1
Hall lane	0	0	0	0	1	Mill lane	0	0	0	0	0
Hard lane	0	0	2	0	0	Micklehead green	0	0	0	0	0
						Moxon street	0	0	0	0	0
Islands brow	0	1	1	0	1	Mount street	0	0	0	0	0
						Morley street	1	0	1	0	3
John street	0	0	0	1	0	Moss Bank street	0	0	0	0	0
Jackson street	0	0	0	0	0	Monastery lane	0	0	0	0	0
Johnson street	0	0	0	0	1	Morris street	0	1	0	0	1
Junction street	0	1	1	5	0	Moss Nook	0	0	0	0	0
Jockeys brow	0	0	0	0	0	Market place	0	0	0	0	0
Jubbitts lane	0	0	0	0	2	Mill Place	0	0	0	0	0
Kirkland street	7	0	1	1	0	Napier street	1	1	3	4	2
Knowsley road	0	0	0	0	0	Naylor street	0	1	0	0	0
King's road	0	0	0	0	0	New Cross street	2	2	0	1	2
Keswick road	0	0	0	0	0	New Market place	0	0	0	0	0
Keates street	0	0	0	0	0	Newton road	0	0	2	0	0
Knobstick hall	0	0	0	0	1	New street	0	0	0	0	0
King street	0	0	2	0	0	North road	0	0	1	2	1
						Norman's lane	0	0	0	0	0
Lawrenson street	0	0	0	0	0	Norman's road	0	1	0	0	0
Laurel road	0	0	0	1	0	North John street	0	1	0	0	0
Langtree street	0	0	0	2	0	Nutgrove road	0	0	2	2	2
Laffak	0	0	0	0	0	Nuttall street	0	0	1	0	0
Latham street	0	0	0	0	0	Nook lane	0	0	0	0	0
Lancots lane	0	0	1	0	0						
Lewis street	0	1	0	0	2	Oldfield street	1	6	2	0	1
Leach street	0	0	0	0	0	Oldfield lane	0	0	0	0	0
Lee street	0	0	0	1	0	Old Market place	0	0	0	0	0
						Old nook	0	0	0	0	0

APPENDIX B.—CONTINUED.

STREET.	YEARS.					STREET.	YEARS.				
	1891	1892	1893	1894	1895		1891	1892	1893	1894	1895
Ormskirk street ..	0	0	9	1	0	Regent's road ..	0	0	0	0	0
Orrell street ..	0	1	0	0	0	Reservoir street ..	0	0	0	0	0
Ormonde street ..	0	0	0	0	0	Rigby street ..	2	1	1	0	2
Oxley street ..	0	0	0	0	0	Rimmer street ..	0	0	2	0	0
Oxford street ..	2	1	4	1	1	Rodney street ..	1	0	1	0	2
Owen street ..	0	1	3	1	0	Ross street ..	0	0	0	0	0
						Robin's lane ..	1	1	0	1	1
Park lane (now Laurel rd)	1	1	0	0	0	Rolling mill lane ..	1	1	0	0	0
Parade street ..	0	0	0	0	0	Royal street ..	0	0	0	0	0
Parr street ..	2	0	0	0	0	Russell street ..	0	0	1	1	0
Park road ..	1	2	1	3	0	Rutland street ..	0	1	0	0	0
Parr Mount street ..	0	0	0	0	1						
Parr Mount ..	0	0	0	0	0	Sandfield crescent ..	2	1	0	0	0
Park street ..	0	0	0	0	0	Salisbury street ..	0	0	1	0	0
Parr hall ..	0	0	0	0	0	Sandon street ..	0	0	5	0	0
Parr mill ..	0	0	1	0	0	Scholes lane ..	0	0	0	0	0
Parr mcss ..	0	0	3	0	2	School street north ..	0	0	0	0	0
Parr Stocks road ..	0	1	1	1	0	School street east ..	0	0	0	0	1
Parliament street ..	1	0	0	0	0	Short street ..	0	0	0	0	0
Parr mill road ..	0	0	0	0	0	Shaw street ..	0	0	0	0	0
Peter street ..	8	1	1	5	4	Sorogold street ..	0	0	0	1	0
Peel street ..	0	0	0	0	0	South John street ..	0	0	2	2	0
Picker's hill road ..	1	0	0	0	0	South street ..	0	0	2	0	0
Penlake lane ..	0	0	0	0	0	Springfield row ..	1	0	1	1	1
Peasley Cross lane ..	2	1	2	0	3	Spray street ..	0	0	0	0	0
Phythian street ..	0	0	1	0	1	St. Paul's street ..	0	0	0	0	2
Pitt street ..	0	0	2	0	0	St. Ann's road ..	0	0	0	0	1
Pilkingten street ..	0	0	0	0	0	Stafford road ..	0	0	0	0	0
Pottery street ..	0	0	0	0	0	St Thomas' street ..	0	0	0	0	0
Pocket Nook street ..	0	0	3	0	0	Stanhope street ..	1	1	0	0	2
Prescot road ..	1	0	1	2	0	Stanley street ..	0	0	4	0	0
Prospect row ..	0	0	0	0	0	Stone street ..	0	1	0	0	0
Prescott street ..	0	0	0	0	0	Station road ..	0	0	0	0	0
Pye street ..	0	0	0	0	0	Sutton leach ..	0	0	0	0	0
Parr mill cottages ..	0	0	0	0	0	Sutton moss ..	0	0	0	0	0
Parr Flat ..	0	0	1	0	0	Sutton road ..	2	3	4	4	3
Platt street ..	0	0	2	0	0	Sutton street ..	0	0	4	1	0
Providence Hospital ..	0	0	0	1	1	Sutton heath road ..	0	0	0	0	0
						St. Ann's ..	3	2	1	1	0
Queen's road ..	0	0	0	0	0	Sutton green ..	0	0	0	0	0
Queen street ..	1	0	1	1	1	Silver street ..	0	1	0	0	0
						Sidney street ..	0	0	0	0	1
Raglan street ..	3	2	2	2	2						
Ravenhead ..	0	0	0	0	0	Talbot street ..	2	1	3	0	6
Raven street ..	0	0	1	0	0	Taylor street ..	0	0	0	0	0
Randon street ..	1	0	1	1	2	Tamworth street ..	0	0	1	0	0
Ramford street ..	0	0	7	0	1	Tickle street ..	0	0	3	0	0
Ravenhead road ..	0	0	0	0	0	Tontine street ..	1	2	1	0	0
Railway terrace ..	0	0	1	0	0	Tolver street ..	0	0	0	0	0
Railway cottages ..	0	0	0	0	0	Top grove street ..	0	0	1	0	0
Ravenhead hall ..	0	0	0	0	1	Tullis street ..	0	0	0	0	0
Railway street ..	0	0	0	0	0	Traverse street ..	0	2	1	2	3
Reginald road ..	0	0	0	0	0	Twyford street ..	0	0	0	0	0
						Thatto Heath ..	0	1	0	0	2

APPENDIX B.—CONTINUED.

STREET.	YEARS.					STREET.	YEARS.				
	1891	1892	1893	1894	1895		1891	1892	1893	1894	1895
Union street (Windle) ..	1	0	2	0	0	Westfield street ..	1	1	2	1	6
Union street (West Sutt'n)	0	0	0	0	0	West street ..	0	0	0	0	0
Vernon street ..	0	0	1	1	2	Wellington terrace ..	0	1	0	0	1
Virgil street ..	0	0	1	0	1	Webb street ..	0	0	0	0	0
Victoria street ..	1	0	8	0	1	Weymouth street ..	0	0	2	0	0
Vincent street ..	0	0	2	2	2	Whittle street ..	0	1	1	0	1
Volunteer street ..	0	0	0	0	0	Wilson street ..	2	1	3	2	12
Waterloo place ..	0	0	0	0	0	Windle street ..	0	0	1	0	0
Waterloo street ..	0	1	1	0	1	Wilcock street ..	0	0	0	0	0
Water street ..	1	1	1	0	2	Williamson street ..	0	0	2	1	0
Ward street ..	0	1	3	0	0	Windle city ..	0	0	0	1	0
Warrington new road ..	0	0	1	0	0	Wood street ..	0	0	0	0	1
Warrington old road ..	1	0	0	0	0	Worsley's brow ..	0	1	0	0	0
Waine street ..	0	0	0	1	0	Wright street ..	0	0	1	0	0
Walker street ..	0	0	0	0	1	Wilfred street ..	0	0	0	0	0
Watery lane ..	0	1	0	7	0	Watson street ..	0	0	0	0	0
Walker's lane ..	2	0	1	0	0	Windleshaw road ..	0	0	1	3	3
						York street ..	0	1	2	0	0
						York terrace ..	1	0	0	0	0

MAP OF THE COUNTY BOROUGH OF ST. HELENS.



MAP OF ST. HELENS
SHOWING
DISTRIBUTION OF CASES OF SICKNESS
FROM
TYPHOID FEVER IN 1895.

NOTE.—Houses in which single cases of sickness from Typhoid occurred, are marked thus ●
Houses in which more cases than one occurred, are marked thus ○, the number of cases being inserted in the centre.

Scale—Six Inches to One Statute Mile

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BOROUGH ENGINEER

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