ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

BOROUGH OF CREWE.

BY

ANDREW J. LAIRD, M.D., D.P.H. (Camb.),

Medical Officer of Health, and

Medical Superintendent of Borough Isolation Hospitals.

1907.

CREWE:

Wilmot Eardley, Limited, Borough Printing Offices.

BOROUGH OF CREWE.

HEALTH COMMITTEE,

1906 - 1907.

Chairman :

HIS WORSHIP THE MAYOR (ALD. H. HOPTROFF).

Members :

ALDERMAN A. H. BADGER.

" W. MCNEILL.

" G. WALLIS.

COUNCILLOR J. A. ATKINSON (deceased).

"	G. BAILEY.	COUNCILLOR	F. MANNING.
"	DR. T. H. BAILEY.	"	R. D. SHARPE.
"	J. BOOTH.	"	E. VAUGHAN.
"	A. JERVIS.	"	T. SMITH.
"	JOSEPH JONES.	"	W. WILLIAMS.
"	J. KNOTT.	"	C. R. WOOLDRIDGE.

Health Department,
Municipal Offices, Crewe,
March 25th, 1908.

To the Chairman and Members of the Health Committee.

Gentlemen,

I have the honour of presenting to you my Annual Report upon the health and sanitary condition of the Borough for the year 1907.

The general death-rate and infantile mortality rates are both extremely low, and are the lowest rates yet recorded.

At the same time the birth-rate, which for a number of years has shown a progressive decline, is also the lowest on record.

While it is satisfactory to be able to record considerable progress, there remains still much to be done to promote the public health. I would ask for a careful consideration of the various matters dealt with in this report.

The year has been an exceptionally busy one for the Health Department and the Hospital Staff, and I have to acknowledge my appreciation of the manner in which the work has been performed.

I am, Gentlemen,
Your obedient Servant,

Andw. F. Laird.

Part i.

Statistical.

Statistical Summary for 1907.

Area of Borough	2,185 acres	
Population at Census, 1901	42,074	
Estimated population to middle of 1907	47,904	
	1906	1907
Average number of persons per acre	21.5	21.9
Birth-rate per 1,000 living	26.7	26.1
Death-rate	11.8	11.1
Death-rate from zymotic diseases	1.16	0.79
Infant mortality, per 1,000 births	118	108
Total occupied houses	9,844	10,001
Plans of new buildings passed	100	91
Assessable value (General District Rate)	£157,807 0 0	
Rateable value (Borough Rate)	£168,826 0 0	
Amount raised by 1d. rate	£650 0 0	

Charter of Incorporation granted April 27th, 1877.

Commission of the Peace granted April 7th, 1881.

Adoptive Acts in force in Crewe.

Infectious Diseases (Prevention) Act, 1890, adopted January, 1891.

Public Health Act Amendment Act, 1890, adopted February, 1891.

Infectious Diseases (Notification) Act, 1889, adopted October, 1896.

Geology.

The soil upon which Crewe and the neighbouring villages are built consists wholly of drift deposit. The whole of the Borough is built upon a re-deposited boulder clay (red, blue, and yellow brick clays), intersected here and there with irregular lines and pockets of sand and gravel, probably the remains of old river and brook courses.

This clay deposit and an underlying bed of stratified clay lie in a hollow of stratified drift sand, and attain a depth of from 12 to 100 feet.

The drift sand rises to the surface in a bay-like curve in the outlying villages of Wistaston, Shavington, Weston, Crewe Green, and Haslington.

The whole of these deposits appear to be laid in a deep hollow in the Keuper; a brook which passes through the centre of the Borough, appearing to have cut down to this formation.

Elevation.

The Borough is situated upon the Valley Brook, a tributary of the river Weaver. The mean elevation is about 170 feet above sea level, and varies from 113 feet at the lowest part of the Sewage Farm to 200 feet at Hightown.

HEIGHT ABOVE SEA LEVEL.

Sewage Farm (West of Queen's Park)	113 feet
The Valley	145 ,,
Market Square (south-west corner)	184 ,,
Isolation Hospital	182 ,,
Nantwich Road (east end)	188 ,,
Hightown (St. Paul's Church—north side) ...	200 ,,

Area.

The Borough has a total area of 2,185 acres, comprising the Civil Parish of Monks Coppenhall and parts of the Civil Parishes of Church Coppenhall, Shavington-cum-Gresty, and Wistaston, the three last named parts being added on 24th March, 1894, by Order of the Local Government Board.

Density.

The average density of the Borough is equal to 21.9 persons to the acre.

Population.

The estimated population at the middle of 1907 was 47,904. This estimate is based upon the number of inhabited houses as ascertained from the rate-books, and the average number of

persons per house at the last census. This method of estimating the population differs from that of the Registrar General, who assumes that the same annual rate of increase will be maintained from 1901 to the next census in 1911, as existed in the period 1891 to 1901. The population as estimated by this method was 48,183 at the middle of 1907.

Both methods are subject to error, which increases with the length of time from the last census. The first method is probably best suited for our purposes, although one factor (the average number of persons per house) varies from year to year. At the census of 1891 it was 5.011, and in 1901 it was 4.79. During times of depression in trade, when wages are low, the average house population increases (by two families occupying one house, etc.), and the number of inhabited houses is diminished, with the result that there is shown an apparent check on the increase of the population.

The distribution of the population in the four wards is shewn below:—

Ward.	Population at Census, 1901.	Estimated Population.		
		Males.	Females.	Total.
Central	9,349	5,399	5,246	10,645
West	9,464	5,624	5,151	10,775
North	10,160	5,907	5,660	11,567
South	13,101	7,654	7,263	14,917
Borough ...	42,074	24,584	23,320	47,904

Housing.

In the Report of an Enquiry by the Board of Trade into the housing and cost of living of the working classes some interesting details regarding housing and rents in Crewe are given.

The report states that "the houses in Crewe are of modern construction and are generally well kept. Dilapidated property is not found, and the houses have a cleaner appearance externally than is common with industrial towns." "In 1901 only 0.5 per cent. of the population were living in houses of less than four rooms, a strikingly low figure for a town that is almost entirely industrial."

The following table of predominant rents is given:—

Number of Rooms per Tenement.	Predominant Weekly Rents, including all Rates, at October, 1905.
Four rooms.	3s. 6d. to 4s. 9d.
Five rooms.	4s. 9d. to 6s. 3d.

Compared with rents in London, which have been taken as equal to 100, the rent index number for Crewe is 48.

The Assistant Overseer (Mr. A. Maywhort) has kindly allowed me to extract from the rate books the following information with regard to the total number of houses, and the number of unoccupied houses, and their rateable values:—

Number of Houses on the Rate Book, September 30th, 1907.

Houses rated under					£5 per annum...				198
,,	,, at	£5	and under	£10	,,	,,	...	...	6,937
,,	,,	£10	,,	£20	,,	,,	...	...	2,629
,,	,,	£20	,,	£30	,,	,,	...	...	310
,,	,,	£30	,,	£40	,,	,,	...	...	93
,,	,,	£40	,,	£50	,,	,,	...	...	68
,,	,,	£50	,,	£60	,,	,,	...	...	20
,,	,,	£60	,,	£70	,,	,,	...	...	11
,,	,,	£70	,,	£80	,,	,,	...	...	7
,,	,,	£80	,,	£90	,,	,,	...	...	11
,,	,,	£90	,,	£100	,,	,,	...	...	5
,,	,,	£100	,,	£200	,,	,,	...	...	25
,,	,,	at £200 and above			,,	,,	...	...	8
				Total	...	...	...	...	10,322

From this it will be seen that 94.6 per cent. of the houses are rated at less than £20, and 69 per cent. at less than £10 per annum.

As compared with 1906, there has been some alteration in the rateable value of property in the Borough owing to new assessment of property.

Houses rated under £5	shew an increase of	25
,, ,, £5 and under £10	shew a decrease of	217
,, ,, £10 ,, ,, £20	shew an increase of	156
,, ,, £20 ,, ,, £30	shew an increase of	50
,, ,, £30 ,, ,, £40	shew a decrease of	1
,, ,, £40 ,, ,, £50	shew an increase of	26
,, ,, £50 ,, ,, £60	shew an increase of	3
,, ,, £60 ,, ,, £70	shew a decrease of	5
,, ,, £70 ,, ,, £80	shew an increase of	2
,, ,, £80 ,, ,, £90	shew an increase of	3
,, ,, £90 ,, ,, £100	shew a decrease of	1
,, ,, at £200 and above	shew an increase of	2

Empty Houses.

RATEABLE VALUE.	Under £5.	£5, and under £10.	£10, and under £20.	£20, and under £30.	£30, and under £80.	£80, and over.	TOTAL
Central Ward	2	43	8	9	5	...	67
West Ward	2	94	6	2	...	...	104
North Ward	9	73	11	1	...	1	95
South Ward	1	18	28	6	2	...	55
Borough of Crewe ...	14	228	53	18	7	1	321
Empty Houses, per cent. of Houses on Rate Books in each group.	7·1	3·1	2·01	5·8	3·5	2·04	3·1

There are 114 fewer empty houses than in 1906, the only increase of empty houses being among those rated at £20 and under £30, which shew an increase of 5.

The following figures denote the percentage of empty houses to total houses on the rate books for the last fourteen years—

1894	2.0	1900	2.6
1895	2.4	1901	3.3
1896	2.8	1902	3.0
1897	2.6	1903	2.6
1898	2.7	1904	4.2
1899	2.2	1905	4.4
		1906	4.2

1907 ... 3·1

New Houses.

In the columns shown below are given the number of plans passed every year since 1891, and the number of habitation certificates granted since 1897.

The number of plans passed is less than last year, and the number of habitation certificates granted is the lowest yet recorded.

Plans	passed	1891	139
,,	,,	1892	169
,,	,,	1893	157
,,	,,	1894	238
,,	,,	1895	283
,,	,,	1896	317
,,	,,	1897	441
,,	,,	1898	308
,,	,,	1899	385
,,	,,	1900	201
,,	,,	1901	243
,,	,,	1902	400
,,	,,	1903	225
,,	,,	1904	157
,,	,,	1905	89
,,	,,	1906	100
,,	**,,**	**1907**	**91**

Habitation Certificates:—

,,	,,	1897 (11 months)	234
,,	,,	1898	327
,,	,,	1899	248
,,	,,	1900	230
,,	,,	1901	226
,,	,,	1902	257
,,	,,	1903	304
,,	,,	1904	181
,,	,,	1905	135
,,	,,	1906	106
,,	**,,**	**1907**	**64**

Marriages.

The number of marriages during the year was 313, of which 206 took place in the Established Churches, and 107 in the Nonconformist and Catholic places of worship.

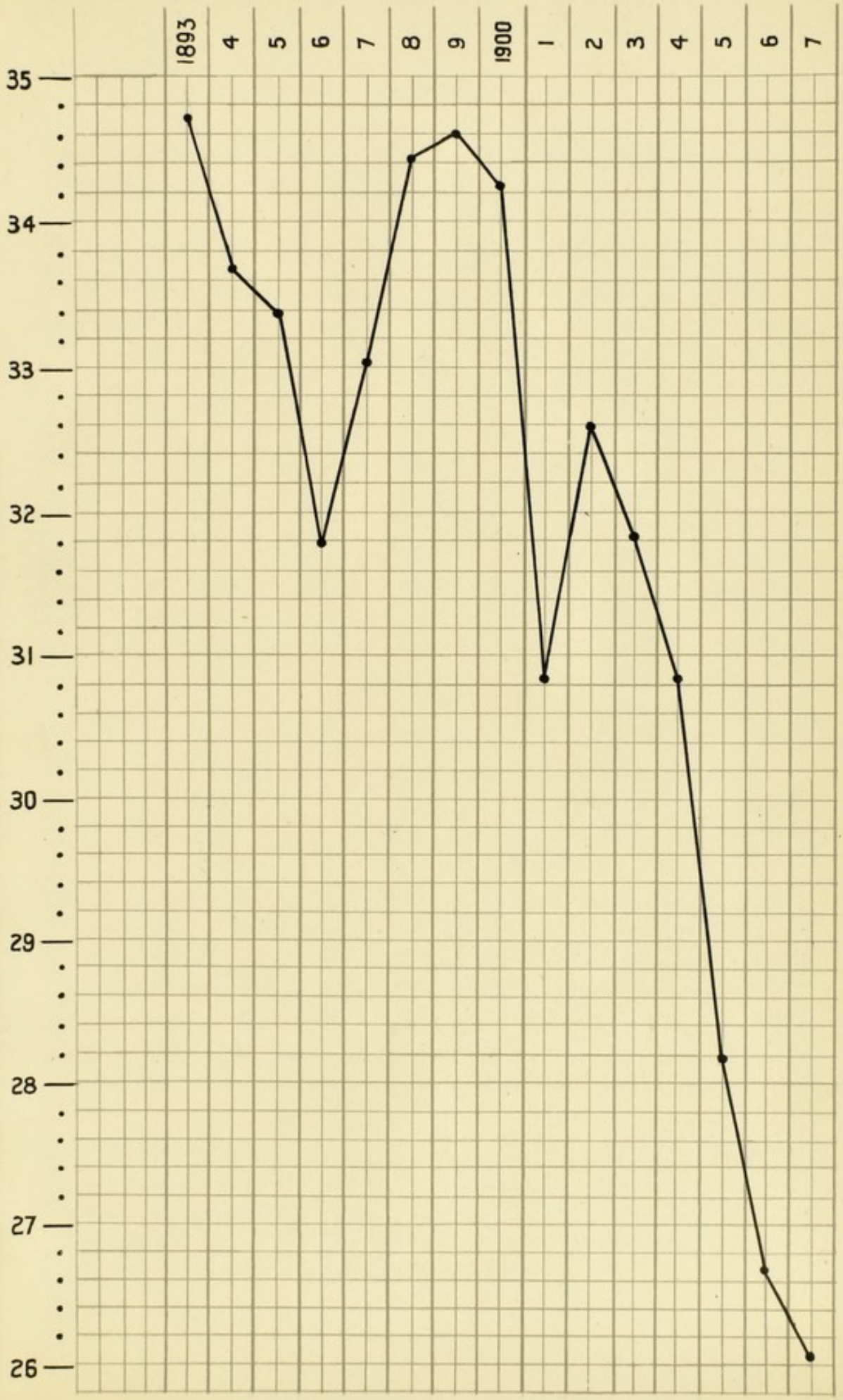
Year.	No. of Marriages.	Marriage-rate.	Marriage-rate in England and Wales.
1897	244	12.64	16.0
1898	272	13.76	16.2
1899	315	15.56	16.5
1900	304	14.68	16.0
1901	250	11.80	15.9
1902	310	14.32	15.9
1903	297	13.05	15.6
1904	242	10.50	15.2
1905	261	11.2	15.3
1906	285	12.0	15.6
1907	**313**	**13·0**	—

Births.

The total number of births registered within the Borough during 1907 was 1,251, of which number 632 were males and 619 females.

The birth-rate per 1,000 of the population was 26.1, being 0.6 per 1,000 lower than 1906.

The birth-rate for England and Wales in 1907 was 26.3 per 1,000 of the population, and is lower than the rate in any year on record.



Birth Rates per 1000 persons living for the Years 1893—1907.

Of the births registered 42 or 3.3 per cent. were illegitimate, as compared with 49 or 3.8 per cent. in 1906.

The following figures in parallel columns shew the birth-rate in the Borough of Crewe as compared with the rest of the country since 1893:—

Year.		Crewe.		England & Wales.
1893	...	35.2	...	30.7
1894	...	33.9	...	29.6
1895	...	33.6	...	30.3
1896	...	31.8	..	29.6
1897	...	33.1	..	29.6
1898	...	34.5	...	29.3
1899	...	34.6	...	29.1
1900	...	34.3	...	28.7
1901	...	30.9	...	28.5
1902	...	32.6	...	28.6
1903	...	31.9	..	28.4
1904	...	30.9	..	27.9
1905	...	28.2	...	27.2
1906	...	26.7	...	27.0
1907	...	**26·1**	...	**26·3**

From these figures it is seen that Crewe shares the steady diminution in the birth-rate with the rest of the country. The fall has been specially abrupt during the last two years, so that instead of being above that of the country generally the birth-rate of the Borough is now even lower than that of the country as a whole. The birth-rate is the lowest recorded in any year, and the number of births registered is 9 lower than the preceding year.

The natural increase of the population, or the number by which the births exceeds the deaths, shews an increase owing to the even greater proportionate fall in the number of deaths. The birth-rate has fallen 21.1 per cent. in the last ten years, while in the same time the death-rate has fallen 31.4 per cent.

Year.	Births.	Deaths.	Natural increase.
1893	1,228	694	534
1894	1,215	520	695
1895	1,237	608	629
1896	1,200	568	632
1897	1,278	627	651
1898	1,365	699	666
1899	1,400	695	705
1900	1,420	677	743
1901	1,311	710	601
1902	1,412	648	764
1903	1,454	651	803
1904	1,425	673	752
1905	1,318	629	689
1906	1,260	560	700
1907	**1,251**	**536**	**715**

Deaths.

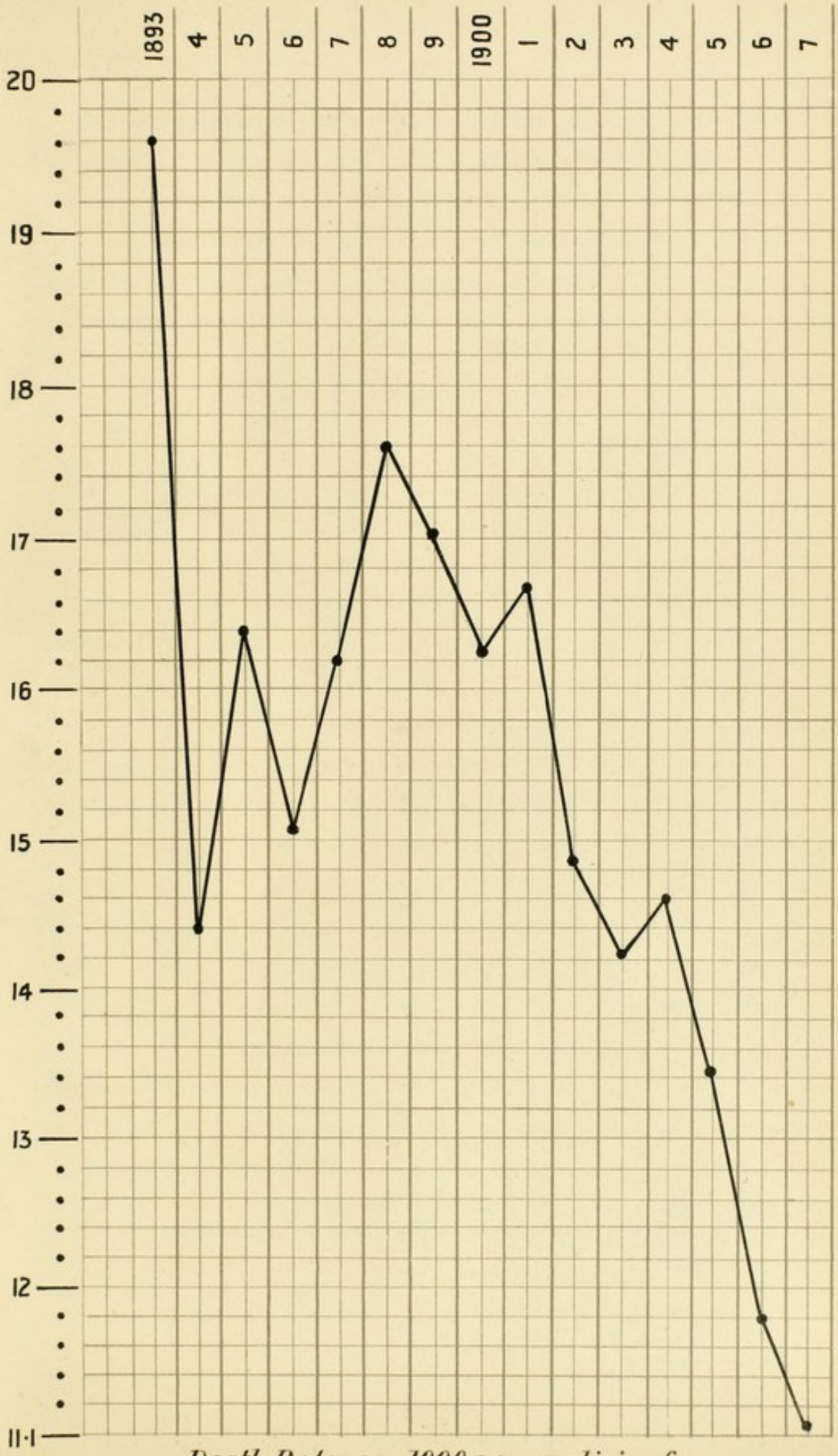
The total number of deaths registered within the Borough during 1907 was 518, giving a *gross* death-rate of 10.8 per 1,000.

Of the 518 deaths 267 were of males, and 251 of females.

Seven of the deaths were of persons belonging to other districts, and must therefore be deducted; while 25 deaths of persons belonging to the Borough, but who died outside, must be added. This gives a correct number of 536 and a *corrected* death-rate of 11.1 per 1,000.

This represents a fall of 4.2 per 1,000 below the average death-rate of the last ten years, and is 0.7 per 1,000 lower than the record death-rate of last year.

In England and Wales the death-rate in 1907 was 15.0 per 1,000. The rates in the 76 large towns and the 142 smaller towns, were respectively 15.4 and 14.5.



Death Rates per 1000 persons living for the Years 1893—1907.

For the purpose of comparing the position of Crewe with that of other towns of about the same population the following table has been prepared. It is interesting to make such a comparison not only with working communities, but also with health resorts, and one or two of these are included in the table.

	Population estimated to middle of 1907.	Birth-rate per 1,000.	Death-rate per 1,000.	Zymotic Death-rate.	Respiratory Death-rate.	Phthisis Death-rate.	Deaths from other forms of Tuberculosis.	Infant Deaths per 1,000 Births.
England and Wales.	34,945,600	26·3	15·0	1·26	—	—	—	118
Acton	54,000	29	13·9	1.3	2·7	1·2	0·4	130
Blackpool ...	58,431	18·09	11·59	0·65	2·00	0·86	0·38	110
Burton-on-Trent	53,000	24·5	12·45	1·24	2·34	1·15	0·4	94
Bootle	69,200	31·3	15·7	1·8	3·54	1·1	0·33	123
Bury	58,901	22·68	15·94	1·27	2·80	1·12	0·49	135
Cambridge ...	39,904	20·4	12·9	0·32	2·00	1·02	0·40	90
Colchester ...	40,970	24·38	12·25	0·41	3·22	1·07	0·29	84
Darwen ...	41,864	20·92	12·58	0·69	3·63	0·83	0·19	118
Eccles	39,000	26·1	15·0	1·5	2·9	1·0	0·5	119
Gloucester ...	52,435	23·4	13·7	0·89	2·93	1·3	0·49	127
Hyde	34,165	21·89	16·27	1·49	2·82	1·17	0·52	169
Keighley ...	44,990	21·9	13·75	0·94	2·53	1·37	0·64	116
Rotherham ...	62,500	32·29	15·45	1·39	2·89	0·76	0·24	146
Stockton-on-Tees	55,023	30·2	17·3	1·7	3·4	1·2	1·0	115
Wakefield ...	43,292	23·6	14·7	0·69	3·14	1·43	0·5	124
Wimbledon ...	51,700	21·6	10·2	1·3	1·5	0·7	0·32	111
CREWE ...	**47,904**	**26·1**	**11·1**	**0·79**	**2·29**	**0·5**	**0·5**	**108**

The following Table indicates the actual number of **Deaths** in each Quarter, and the **Death-rate** of previous years. It shows that the mortality in each year is much below the average of the last ten years.

Year.	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Whole Year.	Death-rate for whole year.
1897...	182	141	166	138	627	16·2
1898...	196	164	190	149	699	17·6
1899...	209	142	182	162	695	17·1
1900...	212	159	148	158	677	16·3
1901...	156	163	193	198	710	16·7
1902...	173	161	135	179	648	14·9
1903...	173	151	166	161	651	14·3
1904...	159	145	171	198	673	14·6
1905...	190	163	129	147	629	13·5
1906...	147	117	138	158	560	11·8
Mean—10 years	179	150	161	164	656	15·3
1907...	150	117	116	153	536	11·1

THE PRINCIPAL CAUSES OF DEATH.—These are shewn in the following summary, while the figures for 1906 are also given for comparison:—

	1906.	1907.
Diseases of the Respiratory Organs (excluding Consumption)	76	110
Tubercular Diseases (including Consumption)	67	53
Diseases of the Circulatory system	72	52
Malignant Diseases (Cancer, etc.)	28	40
Diarrhœa and Enteritis	45	19
Premature Birth	27	28
Measles	15	2

MORTALITY AT VARIOUS AGES.—The number of deaths occurring at varying periods of life is shewn below, as well as the average mortality of each age period during the last ten years.

AGE GROUPS.	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	Average for 10 yrs.	1907
Under 1 year ...	189	232	231	196	238	186	211	228	173	149	203	136
1 and under 5 ...	95	100	87	68	81	81	72	89	92	66	83	54
5 " 15 ...	19	20	30	34	36	28	22	29	22	29	26	25
15 " 25 ...	19	41	27	27	29	21	28	27	28	11	25	23
25 " 65 ...	182	190	184	232	192	198	189	179	177	173	189	172
65 and upwards ...	123	116	136	120	134	134	129	121	137	132	128	126
All Ages	627	699	695	677	710	648	651	673	629	560	656	536

Ward Distribution of Mortality.—The following table gives the number of deaths and the death-rate in each of the Wards. The total number of deaths does not agree with that in some of the other tables on account of the fact that the addresses of residents who died in the Workhouse could not be ascertained, and therefore could not be allocated to their proper Wards. The total number of deaths in the Workhouse last year was 20.

	Central Ward.	West Ward.	North Ward.	South Ward.
Under 1 year	28	40	34	33
1 and under 5	13	15	14	12
5 and under 15	6	7	4	6
15 and under 25	5	4	6	7
25 and under 65	48	36	35	4
65 and upwards	35	25	26	30
All ages	135	127	119	134
Death-rate per 1,000 ...	12·6	11·7	10·2	8·9

Mortality in Relation to Season.

Month.	Total No. of deaths.	Death-rate.	Deaths under 1 year.	Infantile death rate.
January	49	12·2	7	68
February	45	11·2	11	101
March	56	14·02	14	128
April	32	8·01	7	56
May	43	10·7	8	83
June	42	10·5	7	64
July	41	10·2	15	118
August	43	10·7	18	168
September	32	8·01	13	134
October	51	12·7	15	154
November	45	11·2	7	76
December	57	14·2	14	179
Whole year ...	536	11·1	136	108

Infantile Mortality.—The number of deaths registered of children under one year of age was 136, as compared with 149 in the preceding year. The proportion of deaths to every 1,000 children born during the year was 108, against 118 for 1906. This is the lowest infantile death-rate yet recorded. The rate for England and Wales was 118 per 1,000 births. In the 76 large towns it was 127 per 1,000 births, and in the 142 smaller towns (of which Crewe is one), the rate was 122 per 1,000 births.

The extremely low mortality was due to the great reduction in the recorded number of deaths from diarrhœal diseases. This is to be attributed chiefly to the cool wet weather experienced during

the summer and autumn months. This had the effect also of slightly increasing the mortality from respiratory diseases, but the increased loss from this source was more than compensated by the immense reduction in the deaths from diarrhœa.

The Notification of Births Act, 1907, which was passed in August last, has for its object the reduction of infantile mortality, the means to be adopted being the speedy notification of all births to the Medical Officer of Health, so that, if necessary, advice may be given to the mother in regard to the rearing and nurture of her child.

The Act has been under the consideration of the Health Committee, and a Sub-Committee has been appointed to confer with the various ladies' visiting committees, mothers' meetings, etc., in the town, to ascertain whether they would be willing to co-operate with the Council in carrying out the provisions of the Act.

The chief causes of death among infants are stated below.

	1905.	1906.	1907.
Diarrhœal Diseases ...	22	35	14
Respiratory Diseases ...	30	23	28
Tubercular Diseases ...	19	9	12
Convulsions ...	5	7	6
Premature Birth ...	23	27	28
Debility and Wasting	29	20	21
Measles	7	0	0
Whooping Cough ...	14	5	7
Other Causes ...	24	23	20
TOTAL ...	173	149	136

Of the total deaths 51 (or 38 per cent.) occurred during the first month. Of these 23 were prematurely born, the majority only surviving a few hours, while of the remainder 8 were born with defects which were incompatible with life; 14 were not endowed with sufficient vitality to live longer than a month; 1 died from bronchitis, and 2 died from various other causes.

The causes of, and ages at, death are set out in detail in Table V. at the end of the report.

Uncertified Deaths.

These are deaths the causes of which have not been certified by a medical practitioner or by the Coroner after inquest.

Year.	Uncertified deaths.	Percentage of total deaths.
1893	8	1.1
1894	8	1.5
1895	6	0.98
1896	4	0.7
1897	3	0.4
1898	3	0.4
1899	8	1.1
1900	10	1.4
1901	11	1.5
1902	3	0.4
1903	6	0.9
1904	3	0.4
1905	3	0.4
1906	1	0.1
1907	2	0.3

Still-born Children.

The number of still-born children interred in the Cemetery and Coppenhall Churchyard during the year was 72 or 5.7 per cent. of the number of births; 26 were males and 26 females, and in 20 cases the sex was not stated.

	Total number	Percentage of total births		Total number	Percentage of total births
1890	36	3.9	1898	56	4.1
1891	30	3.0	1899	63	4.5
1892	51	4.8	1900	55	3.8
1893	48	3.9	1901	63	4.8
1894	37	3.0	1902	86	6.0
1895	71	5.8	1903	64	4.4
1896	65	5.4	1904	75	5.2
1897	56	4.2	1905	69	5.2
			1906	78	6.1
1907	**72**	**5·7**			

List of streets in which six or more deaths occurred during the year 1907.—

Class.	Name of Street.	No. of Deaths.
1	West Street ...	16
2	Alton Street ...	13
3	Market Street ...	11
4	Edleston Road ...	10
5	Flag Lane ... Meredith Street ... Walthall Street ...	9
6	Alexandra Street ... Mill Street ... Oakley Street ... Underwood Lane ...	8
7	Alfred Street ... Lincoln Street ... Naylor Street ... Peel Street ... Queen Street ... Sandbach Street ... Station Street ... Wistaston Road ...	7
8	Albert Street ... Beech Street ... Earle Street ... Nantwich Road ... Ruskin Road ... Vincent Street ...	6

Coroner's Inquests.

Inquests were held by the Coroner as to the cause of death in 36 cases. These were eventually returned as due to Natural Causes in 17 cases, Accident or Negligence (such as falls, burns, overlying, improper feeding, etc.) in 14 cases, and Suicide in 5 cases.

The proportion of inquests per 1,000 deaths was 67.1, as compared with 62.4 in the year 1906.

The number of inquests held and the proportion per 1,000 deaths in each year is shewn below:

Year.	Number of Inquests.	Proportion per 1,000 deaths.
1893	27	38.9
1894	30	57.6
1895	42	69.07
1896	34	59.8
1897	41	66.4
1898	54	78.9
1889	37	53.2
1900	49	72.3
1901	42	59.1
1902	34	52.4
1903	44	69.1
1904	45	68.2
1905	36	54
1906	35	62.4
1907	**36**	**67·1**

Particulars of Deaths of illegitimate children during 1907.

During the year six deaths among illegitimate children occurred:

Age.	Sex.	Cause of death.
28 days	M.	Premature Birth.
7 years	F.	Acute General Tuberculosis.
17 „	M.	Heart Disease, Dropsy.
11 months	F.	Bronchitis, Pneumonia.
10 „	M.	Bronchitis, Convulsions.
3 „	M.	Premature Birth, Debility from Birth.

The death-rates per 1,000 births of each class among legitimate and illegitimate children are shewn below.

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Infantile death-rate of legitimate children ...	144	166	162	138	180	130	147	159	131	118	108
Infantile death-rate of illegitimate children ...	172	255	228	125	200	156	166	162	256	224	142

Vaccination.

I am obliged to the Registrar of the Sub-District of Crewe (Mr. T. W. Lovatt) for his kindness in supplying the following information.

Year.	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Births registered ...	1365	1400	1420	1311	1412	1454	1425	1318	1260	1251
Sucessfully vaccinated ...	913	945	990	900	1016	1060	1050	1014	922	860
Certificates of insusceptibility	1	3	5	6	3	2	5	3	3	2
Certificates of exemption (Conscience Clause) ...	35	66	40	33	22	33	21	44	60	113
Had small-pox ...	...	...	...	...	...	...	...	...	...	...
Died unvaccinated ...	159	155	133	143	128	140	133	101	100	114
Postponed by medical certificate	75	61	43	24	33	43	35	30	53	28
Removal to other districts	52	44	59	49	51	56	50	49	55	75
In abeyance	130	126	150	156	159	120	142	77	69	59
Percentage successfully vaccinated	66	67	69	68	71	72	73	77	73	68
Percentage successfully vaccinated excluding those who died unvaccinated	75	75	76	77	79	75	80	83	80	75

Part ii.

Records of Disease.

Zymotic Diseases.

The principal diseases belonging to this group are small-pox, diphtheria, scarlet fever, enteric fever, typhus fever, measles, whooping-cough, and epidemic diarrhœa.

The mortality from the seven principal diseases in this group, known as the Zymotic death-rate, shews a considerable decrease, and is below the average of the last ten years.

The number of deaths from the principal zymotic diseases during 1907 was as follows:—

	Under 5 years.	Over 5 years	Total	Rate per 1,000
Smallpox	...	...	...	...
Diphtheria and Membranous Croup	3	3	6	0·125
Scarlet Fever	2	4	6	0·125
Enteric Fever	...	3	3	0·062
Measles	2	...	2	0·041
Whooping Cough	7	5	12	0·250
Diarrhœa	7	2	9	0·187
Totals	21	17	38	0·79

The mortality from these diseases was in England and Wales 1.26; in the 76 large towns 1.54, and in the 142 smaller towns 1.29, and in rural England and Wales 0.91.

The Zymotic Death-rates for several years are shewn in the following table:—

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Small-pox	—	—	—	—	—	—	—	—	—	—	—
Diphtheria and Membranous Croup	0·28	0·07	0·34	0·09	0·37	0·64	0·39	0·06	0·08	0·084	0·125
Scarlet Fever ...	0·17	0·07	0·02	0·19	0·14	0·06	0·19	0·23	0·08	0·106	0·125
Enteric Fever ...	0·10	0·17	0·09	0·24	0·07	0·04	0·08	0·02	0·08	0·0	0·062
Measles	0·02	0·88	0·24	0·41	0·07	0·41	0·0	0·28	0·47	0·318	0·041
Whooping Cough ...	0·67	0·22	0·64	0·12	0·44	0·20	0·37	0·26	0·06	0·148	0·250
Diarrhœa	1·57	1·21	0·98	0·82	1·46	0·67	0·24	0·76	0·34	0·504	0·187
	2·81	2·62	2·31	1·87	2·55	2·02	1·27	1·61	1·11	1·16	0·79

The following gives the number of deaths from these diseases occurring in each of the Wards:—

	Central	West	North	South
Smallpox	...	...	...	...
Diphtheria & Membranous Croup	3	2	1	...
Scarlet Fever ...	2	2	...	2
Enteric Fever ...	...	1	2	...
Measles	...	2	...	...
Whooping Cough ...	4	3	1	4
Diarrhœa	2	2	2	3
Totals	11	12	6	9

The diseases, which are compulsorily notifiable under the Infectious Diseases (Notification) Act, 1889, are Small-pox, Cholera, Diphtheria, Membranous Croup, Erysipelas, Scarlatina or Scarlet Fever, and the fevers known as Typhus, Typhoid, Enteric, relapsing, continued, and puerperal. Notification has been in force in the Borough since October, 1896, when the Act of 1889 was "adopted." In 1900 Bubonic Plague was added to the list by order of the Local Government Board, and on May 18th, 1907, the provisions of the Notification Act were extended to cerebro-spinal fever for a period of twelve months.

The number of notifications received each year from Medical Practitioners is shewn below:—

1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1970
421	183	198	320	329	295	424	459	245	181	507

The number of notifications received each month during the year was as follows:—

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	24	20	22	34	30	25	21	43	98	97	77

The ages of those who suffered from these diseases were:—Under 5 years of age, 129 cases, or 25.4 per cent.; 5 years old and under 15, 310 cases, or 61.1 per cent.; 15 years old and over, 68 cases, or 13.4 per cent. The number of cases notified in each ward was: In the Central Ward 103 cases, or 20.3 per cent.; in the West Ward 84 cases, or 16.5 per cent.; in the North Ward 145 cases, or 28.5 per cent.; and in the South Ward 175 cases or 34.5 per cent.

The amount paid to Medical Practitioners for notifications, and the cost of notification per 1,000 of the population, has been as under:—

		Cost per 1,000 of the population
1896	(three months)	£19 5 0	
1897	... ...	£52 15 0	£1 7 4
1898	... ...	£22 17 6	£0 11 7
1899	... ...	£24 12 4	£0 12 1
1900	... ...	£38 7 8	£0 18 9
1901	... ...	£41 0 7	£0 19 4
1902	... ...	£36 6 0	£0 16 9
1903	... ...	£52 0 7	£1 2 10
1904	... ...	£53 11 0	£1 3 2
1905	... ...	£31 7 6	£0 13 5
1906	... ...	£22 2 3	£0 9 4
1907	... ...	£52 17 7	£1 1 9

Disinfection.

During the year 488 houses were disinfected, the number of houses disinfected after the occurrence of notifiable infectious diseases being 444; after deaths from Measles, 3; after deaths from Phthisis, 26; after deaths from Whooping Cough, 9; Influenza, 5; Diarrhœa, 1. In addition to the above seven schools were disinfected during the year.

The bedding and clothing from these houses, as well as forty-seven sets of bedding from the Cottage Hospital, were removed to the Isolation Hospital, and disinfected by passing through the Washington Lyon disinfector.

The following quantities of disinfectants were used during the year:—

Carbolic Powder	1 ton.
Izal Powder	10 cwts.
Izal Fluid	20 gals.
Formalin Tablets	70 lbs.

The number of persons supplied with disinfectants on application at the Sanitary Office was 1,025.

Bacteriological Examinations.

The number of specimens received from Medical Practitioners in the Borough for examination during the year was 67, of which 19 proved positive and 48 negative.

Specimen.	Number received.	Result	
		Positive.	Negative.
Typhoid Fever—Blood ...	10	3	7
Diphtheria—Swab ...	10	1	9
Phthisis—Sputum	42	15	27
Others	5	...	5
Totals	67	19	48

Small-pox.

There were no cases notified during the year. The last occasion upon which this disease appeared in the Borough was in 1903.

The number of deaths from Small-pox which have occurred in the Borough during each year since 1874 is as follows:—

1874	...	4 deaths	1882	...	0 deaths.
1875	...	1 ,,	1883	...	1 ,,
1876-1879		0 ,,	1884	...	1 ,,
*1880	...		1885-1907		0 ,,
1881	...	0 ,,			

* No record.

Cerebro-Spinal Fever.

A case of cerebro-spinal meningitis in a girl aged eight years was brought to the notice of the Medical Officer of Health, as it was thought that owing to the prevalence of the epidemic variety of this disease, precautions should be taken to establish the diagnosis.

Lumbar puncture was performed and a quantity of cerebro-spinal fluid drawn off for examination. This was sent to Professor Delépine, and in due course the report was received that "microscopical examination of the fluid showed very few cells and no organisms. There is therefore no bacteriological evidence to shew that the patient was suffering from epidemic cerebro-spinal meningitis."

It was considered desirable that the Infectious Diseases (Notification) Act should be extended to include this disease, and the Local Government Board, on the application of the Council, ordered that the Act should apply for a period of twelve months from the 18th of May.

Diphtheria.

Cases notified	37
Deaths	6
Fatality per cent.	16.2
Cases removed to hospital	19

Cases and deaths in previous years since 1897:

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Cases	66	40	46	36	112	136	150	53	47	32
Deaths	11	3	14	4	16	28	18	3	4	4
Fatality %	16·6	7·5	30·4	11·1	14·2	20·5	12·0	5·6	8·5	12·5

The number of cases notified was 5 more than in 1906, and is 52 under the average yearly number reported since notification began. The number of deaths was 6, two more than in 1906, and the fatality is consequently higher. The average annual number of deaths since 1874 has been 7.

At no time during the year did the disease show any tendency to become epidemic, the largest number notified during any month being nine. The number of cases notified each month was:—

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
3	3	2	1	4	9	1	3	2	4	4	1

From the South Ward 15 cases were notified, 10 from the Central Ward, 7 from the North Ward, and 5 from the West Ward.

There was very little evidence of a tendency to spread, for in only two instances out of the total number notified did a secondary case occur in the same house, although in the majority there were susceptible persons coming into contact with the patient. The same child was notified twice during the year—in June and again in November. A bacteriological examination of the throat was made in June and proved negative. No examination was made in November.

Nineteen cases were removed to Hospital, of whom one died; eighteen were treated at home, of whom five died.

In addition to the usual measures for dealing with Diphtheria, hospital isolation, disinfection, bacteriological diagnosis, etc., since 1900, the Health Committee have provided Antitoxin, first at cost price and since 1901 free of cost to all unable to afford it. During the year 103 vials, each containing 2,000 units, were used in this way.

The number of deaths from Diphtheria each year since 1874 is given below :—

1874... 0 deaths	1885... 4 deaths	1896...10 deaths
1875... 7 ,,	1886... 5 ,,	1897...11 ,,
1876... 7 ,,	1887...16 ,,	1898... 3 ,,
1877... 2 ,,	1888...14 ,,	1899...14 ,,
*1878...	1889... 8 ,,	1900... 4 ,,
1879... 2 ,,	1890... 4 ,,	1901...16 ,,
*1880...	1891... 3 ,,	1902...28 ,,
1881... 1 ,,	1892... 9 ,,	1903...18 ,,
1882... 4 ,,	1893...19 ,,	1904... 3 ,,
1883... 6 ,,	1894... 2 ,,	1905... 4 ,,
1884... 4 ,,	1895... 2 ,,	1906... 4 ,,

1907 ... 6 deaths

* No record.

Scarlet Fever.

Cases notified	442
Deaths	6
Fatality per cent.	1.3
Cases removed to Hospital	394

Cases and deaths in previous years since 1897.

Year.	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Cases	201	57	50	211	160	96	212	351	147	120
Deaths	7	3	1	8	6	3	9	11	4	5
Fatality per cent.	3·4	5·2	2·0	3·7	3·7	3·1	4·2	3·1	3·7	4·1

The number of cases notified is greatly in excess of any previous year, being a hundred per cent. above the yearly average. The monthly notifications were considerably above the average from the beginning of February, but it was not until September that the epidemic began to assume unusual proportions. The notifications suddenly increased during the first week of September, rising

rapidly to a maximum toward the end of October. The number of cases notified during the last four months of the year was 293, or nearly 67 per cent. of the total for the year.

Monthly Notifications of Scarlet Fever, 1897-1907.

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	Monthly Average, 1897 to 1906	1907
January ...	28	16	5	5	25	13	29	16	24	7	16	11
February ...	20	10	1	—	13	14	20	14	26	8	12	20
March	15	6	2	1	12	3	12	24	16	12	10	15
April	22	2	—	7	11	2	4	30	11	7	9	17
May	14	—	2	4	14	3	11	42	16	14	12	28
June	10	6	2	3	7	12	15	23	16	9	10	21
July	13	1	2	19	4	1	8	19	7	1	7	21
August	21	2	5	17	6	5	19	42	4	6	12	16
September ...	17	2	1	21	13	9	21	37	10	6	13	38
October	12	3	6	54	13	12	22	46	5	16	18	93
November ...	19	5	17	34	19	11	31	19	9	23	18	88
December ...	11	4	7	46	23	11	20	39	3	11	17	74

In the Central Ward 87 cases were notified; in the West Ward 73; in the North Ward 133; and in the South Ward 149 cases. The West Ward probably owes its comparative freedom to the fact of its having had a very large proportion of the cases occurring in 1904—104 out of 351, and 1906—50 out of 120. Coppenhall also had a very small proportion of sickness from Scarlet Fever from the same cause.

The only year which approaches 1907 in the number of cases is 1904, and from that date the prevalence of the disease has steadily diminished. Since 1897, when the disease first became compulsorily notifiable, it will be seen that, roughly, the experience has been that a year of unusual sickness from the disease has been followed by two years of comparative immunity. This accords

with what is known of Scarlet Fever in this country and elsewhere, and although the precise reasons for such periodic cycles are not definitely known, it is probable that one is the steady growth of a susceptible population during the inter-epidemic periods.

The fatality of the disease was extremely low, 1.3 per cent., as compared with 4.1 per cent. in the preceding year. One of these deaths was of a child who sickened while away from home and died in the Isolation Hospital at Carlisle. Of the remaining five who died in Crewe, the period elapsing between removal to hospital and death was—1 day, 2 days, 5 days, 9 days and 25 days. One occurred in February, one in June, two in August, and two (including the Carlisle case) in September. During the last quarter of the year 255 cases were notified without a single death occurring. The ages of the fatal cases varied from 3 to 12 years. With one exception they were females.

Of the total number 244 were males, and 198 females. The ages of those attacked were:—

Under 5 years	115 cases.
5—10 „	198 „
10—15 „	92 „
15—20 „	15 „
20 and over	22 „

The number of families affected was 339, and in 84 of these two or more cases occurred. Fifteen of these secondary cases were notified in 1908.

255	families	had	1 case	each.
58	„	„	2 cases	„
20	„	„	3 „	„
4	„	„	4 „	„
2	„	„	5 „	„

The efficacy of isolation depends very largely upon the period of the illness at which it is recognised and isolation commenced.

The following table shows the period in the disease during which the cases were notified:—

Period of Illness.	Number of Cases Notified.
1st day	25
2nd „	102
3rd „	109
4th „	76
5th „	56
6th „	17
7th „	14
2nd week	16
3rd „	14
4th „	11
5th „	1
6th „	1

Among the factors contributing to the spread of the disease probably none was of more importance than the type of the disease. This was extremely mild, and led to a large number of cases being altogether overlooked until a late period. Some of these were only recognised after the occurrence of a second case of a more unmistakable character, or only after desquamation aroused suspicion as to the real nature of the sickness. With few exceptions these overlooked cases had been going about freely, some to the week-day and Sunday schools, and several were detected by their teachers while sitting among their class-mates.

The influence however which school attendance had on the spread of the disease was comparatively slight. It was chiefly at home that the disease was contracted, and this must be attributed to cases being able to go about during the early stages, and visitation by sympathetic neighbours whenever a child became ill. It is a fairly common practice for a neighbour to be called in to give an opinion as to the nature of any illness in a child, or to assist in nursing, and in this way many opportunities for the transference

of the disease from house to house arise. The following summary of cases illustrates those points:—

1.—A.F., aged 7, sickened about February 1st, was found on February 16th by the teacher sitting among other scholars desquamating.

2.—W. L., aged 8, sickened February 9th; doctor called in February 22nd, only after a second case had occurred; W. L. was kept at home but not isolated, and the other children went to school.

3.—F. P., aged 7, sickened February 13th, removed to hospital February 28th; not seen by doctor until his brother sickened on the 27th.

4.—E. M., aged 6, sickened March 1st, not recognised as scarlet fever and not isolated until March 12th, when desquamation began.

5.—Brother and Sister, G. and D. L., aged 4 and 2 years, recognised to be suffering from scarlet fever 15 and 12 days respectively after its onset, when desquamation began.

6.—J. E., aged 9, was found desquamating freely at end of three weeks; case discovered owing to having infected a child two doors off; going about during whole time.

7.—L. O. was absent from School April 16th to 20th with "sore throat." Was found by teacher on May 17th in school desquamating.

8.—F. M., aged 14, message boy, removed to hospital May 21st desquamating freely. Onset of illness nearly a month before; at work in shop until May 18th.

9.—H. W., aged 12, found desquamating after three weeks' illness; had been kept from school but no doctor called; supposed to be measles; case reported by neighbour.

10.—R. S., aged 8, sickened September 8th, recognised as scarlet fever September 23rd, when a doctor was called to see two brothers who had contracted the disease.

11.—A. P., aged 6, sickened September 6th, notified and removed to hospital September 16th.

12.—V. H., aged 5, sickened about September 9th, notified September 24th and removed to hospital next day.

13.—A. M., aged 5, sickened about September 9th; sister aged 7, sicked September 20th; both found playing in street September 24th.

14.—D. B., aged 5, sickened September 28th, found at home desquamating October 16th, with second case which had just sickened.

15.—H. F., aged 7, at home desquamating at end of three weeks; doctor then called on account of second case.

16.—R. P., aged 14, sickened October 6th, not recognised as scarlet fever until the 21st; going about all that time.

17.—J. W. A., aged 7, recognised at end of three weeks after a second case had occurred.

18.—W. B., aged 2½, sickened September 14th; doctor called in October 24th, and case notified as scarlet fever October 29th.

19.—E. W., aged 9, sickened October 22nd, at school until November 5th, when the head mistress found her desquamating.

20.—R. T., aged 35, sickened October 30th; went about at home until November 14th, when four of her children contracted scarlet fever, and a doctor was called in.

21.—N. P., aged 12½, came to Crewe from Newcastle-under-Lyme at the beginning of November suffering from scarlet fever; was found desquamating on November 21st. The parents of this child were prosecuted by the Newcastle Rural District Council and fined £1 and costs for wilful exposure of the child. The child had been removed to Crewe after the parents had been informed of the nature of the disease and warned not to remove her.

22.—E. H., aged 3, was going about at home for 3 weeks before being seen by a doctor.

23.—J. C., aged 3, ill for a month before being seen by a doctor; two other cases had by that time occurred in the same house.

24.—W. H. B., aged 15, sickened December 1st; notified December 15th; going about the town during that time.

25.—F. H., aged 4, sickened September 23rd; notified October 14th.

26.—H. M., aged 42, sickened September 30th; was found walking in public street on October 21st while still desquamating. Prosecuted for wilful exposure, and convicted.

In addition to a large number of cases being overlooked until late in the illness, it is not at all impossible that a few may never have been recognised at any period. In a very large number of the families invaded a history of sore throats having occurred among other members of the family was obtained, and it is probable that some of these may have acted as carriers of infection.

Enquiries were made in every instance into the possibility of other sources of infection, e.g., milk, but it was readily seen that this bore no part in spreading the disease. There was, it is true, in at least two instances, some tendency to grouping around schools, but this was also a comparatively insignificant factor in its spread. The evidence, which was carefully sifted as each case arose, pointed conclusively to personal infection at home as the all-important cause of the epidemic, and to its prolonged continuance being due to a series of overlooked cases going about during the actively infective period among a susceptible population.

While this was undoubtedly the great cause of the outbreak, it was not the only one. Among the minor causes there is noted the apparently too early release of cases from isolation, with the result that subsequent or "return" cases arise. This is a phenomenon which occurs among cases whether treated at home or in hospital, but as the facts are more readily obtainable, it is chiefly among hospital cases that they are recorded.

The following is a list of cases dismissed from hospital during 1907, which on returning home were followed by one or more subsequent cases in the same house.

Name.	Age.	Date of Admission.	Date of Discharge.	Next Case.
O.C.	5	January 24th	March 26th	April 2nd
A.J.	5	June 10th	July 30th	August 12th
W.J.	3	August 12th	September 23rd	October 3rd
A.W.	10	October 15th	November 22nd	January 6th
C.W.	5	September 21st	October 28th	November 3rd
E.W.	8	October 7th	November 8th	,, 13th
D.R.	3	,, 2nd	October 28th	,, 28th
E.B.	6	,, 28th	December 3rd	December 6th
J.H.	5	,, 29th	November 29th	,, 7th
J.B.	9	September 17th	October 21st	,, 7th
A.D.	4	October 31st	December 20th	,, 22nd
O.J.	3	,, 29th	,, 10th	,, 23rd
A.P.	8	November 11th	,, 24th	,, 27th
B.W.	16½	October 12th	November 22nd	,, 12th

The proportion which these cases bears to the total number discharged during the year is 4.2 per cent. In the hospitals of the Metropolitan Asylums Board the proportion was found to be 4.1 per cent.

In some of these cases it was found that after returning home, the child had developed nasal catarrh. This resulted probably from the change of surroundings, from a hospital ward where the temperature is maintained at a uniform level night and day to a fireless bedroom at home. Not infrequently, too, children who have had every care in hospital are allowed to run about in the cold immediately they return home. This nasal catarrh apparently creates an increased virulence in organisms which have lain dormant in the nose or throat, and fresh infections result.

It is impossible to ascribe this continued or recurrent infection to inefficient disinfection before dismissal from hospital. The skin and hair of each patient receive most careful treatment, ears, mouth, and nose are douched with an antiseptic lotion, and a disinfectant bath is given before dismissal.

It was thought that if the conditions in hospital were made to approximate more nearly the home conditions, the tendency to cause return cases would be diminished. With this object in view, the patients are encouraged to go out as much as possible, and the bath on dismissal is now given the day before, and the patient transferred to another ward. During the latter months of the year when all the wards were fully occupied, it was unfortunately impossible to continue this practice.

Before dismissal of each case the parents receive a printed warning to the effect that, while every precaution has been taken, freedom from infection cannot be guaranteed. Instructions are also given to keep the discharged case apart from other children for a fortnight at least, or at least not to sleep in the same bed as other children, and for kissing to be prohibited. It is to be feared however that in few instances are these instructions carried out.

The measures taken to deal with the outbreak consisted chiefly of:—

1.—Immediate visitation of the case when notified and careful enquiry into all the circumstances, more particularly the probable source.

2.—Removal to hospital, or when possible isolation at home; 93.8 per cent. of the cases were removed to hospital.

3.—Disinfection of the house by formalin lamp or spray; steam disinfection of clothing and bedding.

4.—Distribution of printed circulars with information as to symptoms of onset, etc.

5.—Notification by school teachers of children absent with sore throat, swollen glands; and subsequent visits or warnings to parents.

6.—Exclusion from school of susceptible children from infected homes.

7.—In a number of instances persons were persuaded to stay away from work for a week or so, when employed in such places as clothing factories and laundries.

8.—Visitation of schools or localities when any tendency to grouping was observed among the cases notified.

The number of deaths from Scarlet Fever in each year since 1874 is as follows:—

1874...	9	deaths	1884...	0	deaths	1894...	8	deaths
1875...	43	„	1885...	13	„	1895...	22	„
1876...	4	„	1886...	9	„	1896...	18	„
1877...	22	„	1887...	7	„	1897...	7	„
1878...	many	„	1888...	8	„	1898...	3	„
1879...	77	„	1889...	16	„	1899...	1	„
*1880...			1890...	0	„	1900...	8	„
1881...	28	„	1891...	2	„	1901...	6	„
1882...	7	„	1892...	3	„	1902...	3	„
1883...	7	„	1893...	19	„	1903...	9	„

1904	11	deaths
1905	4	„
1906	5	„
1907	**6**	**deaths**

* No record.

Enteric Fever.

Cases notified	5
Number of deaths	3

Cases and deaths in previous years since 1897.

Year.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Cases	28	32	30	22	15	17	11	2	10	3
Deaths	3	7	4	10	3	2	4	1	4	0
Fatality per cent.	10·7	21·8	13·3	45·4	20·0	11·7	36·4	50	40	0

One case notified proved to be suffering from Broncho-pneumonia, so that only four undoubted cases of Enteric Fever were notified.

In two instances there was only one case in the family. The other two cases were sisters living in the same house. The history of these latter showed that about three weeks before the onset of the first case their mother had sickened from an illness which proved fatal. The illness was of a somewhat obscure nature, but in the light of subsequent events, the medical attendant considered that it also was Enteric Fever.

In the other two cases there was a history of a visit paid to another town one or two months before the onset of symptoms, but it was impossible to trace any definite source of infection.

The number of deaths from Enteric Fever in each year since 1874 is as follows:—

1874...	4	deaths	1884...	13	deaths	1894...	5	deaths
1875...	15	,,	1885...	4	,,	1895...	6	,,
1876...	8	,,	1886...	7	,,	1896...	9	,,
1877...	12	,,	1887...	11	,,	1897...	4	,,
*1878...			1888...	6	,,	1898...	7	,,
1879...	6	,,	1889...	0	,,	†1899...	4	,,
*1880...			1890...	11	,,	1900...	10	,,
1881...	9	,,	1891...	4	,,	1901...	3	,,
1882...	10	,,	1892...	3	,,	1902...	2	,,
1883...	4	,,	1893...	9	,,	1903...	4	,,

1904	1 death
1905	4 deaths
1906	0 ,,
1907	3 ,,

* No record. † Death also occurred in a non-resident.

The average annual number of deaths from Enteric Fever for 32 years since 1874 is six.

Diarrhœa.

Number of deaths	16
Death-rate per 1,000	0.33

The diseases grouped under this heading include all the forms of diarrhœa, known variously as epidemic and zymotic enteritis; epidemic and summer diarrhœa; dysentery and dysenteric diarrhœa, cholera (not Asiatic) and cholera nostras; and in addition as regards deaths under one year of age, enteritis (non-tuberculous); muco-enteritis, gastro-enteritis, and gastritis and gastro-intestinal catarrh.

The designation recommended by the Royal College of Physicians in the fourth edition of "The Nomenclature of Disease," for the specific infectious disease commonly known as epidemic diarrhœa,

is Infective Enteritis. It is to be hoped that this name will now be used generally by medical men, as the many names used in the past have led to much confusion and difficulty in classifying the disease.

The number of deaths registered from these causes was 16, as compared with 35 in 1906. The average number of deaths each year since 1874 is 26.

Although fatal diarrhœa occurs at all periods of the year, it is only when there is a sustained high temperature accompanied by a deficient rainfall that the disease becomes excessive. This happens generally during the third quarter of the year, and a glance at the table given below shows that in Crewe it is chiefly in the Autumn that this extremely fatal disease prevails.

The years of exceptionally low mortality from this cause previous to 1907, were 1902 and 1905, and an examination of the meteorological returns shows that the Summer and Autumn months in these years were cold and wet. It is to this that the low mortality is chiefly to be attributed.

A high temperature and a deficient rainfall seem to favour the growth of the organism producing the disease, and this, together with rapid putrefactive changes in food, explain the exceptionally high share of the mortality borne by artificially fed infants.

Enquiries into the method of feeding in every case showed that all the children had been hand-fed.

The seasonal incidence is shewn in the following table:—

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
January			1		2	1	3			
February		1	1	1	1	1				3
March					1	2			1	2
1st Quarter ...		1	2	1	4	4	3		1	5
April		1			3		2	1	1	
May		1	1	1			2	3		1
June	1	3	1	3	2	3	1	1	1	
2nd Quarter ...	1	5	2	4	5	3	5	5	2	1
July	5	4	7	8	2	3	2	3		
August	15	26	9	26	2	7	18	4	6	2
September	17	17	12	10	6	11	10	6	22	5
3rd Quarter ...	37	47	28	44	10	21	30	13	28	7
October	9	1	4	8	4	2	4	5	2	2
November	3	2	2		2	2			1	
December	1	1		5	4	1	1		1	1
4th Quarter ...	13	4	6	13	10	5	5	5	4	3

The number of deaths in each Ward was:—6 in the Central, 4 in the West, 3 in the North, and 3 in the South.

The ages at death are shewn below, and it will be seen that the disease is one which is especially fatal to infants and young children :—

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Under 3 months	10	14	9	9	7	10	9	4	8	4
3 and under 6 months ...	13	22	8	22	5	15	11	6	15	5
6 and under 12	15	15	11	17	10	7	19	9	7	5
1 year and under 2 years ...	8	3	5	7	4	1	3	2	1	1
2 „ 3 „ ...	...	...	1	...	1	...	...	1	2	...
3 „ 4 „ ...	...	...	...	1	...	...	...	...	...	...
4 „ 5 „ ...	...	...	1	...	...	...	...	...	...	...
5 years and over	5	3	3	6	2	...	1	1	2	1

The number of deaths occurring from Diarrhœa each year since 1874 is as follows :—

1874 ... 21 deaths	1885 ... 6 deaths	1896 ... 22 deaths
1875 ... 19 „	1886 ... 39 „	†1897 ... 61 „
1876 ... 21 „	1887 ... 14 „	1898 ... 47 „
1877 ... 5 „	1888 ... 7 „	‡1899 ... 41 „
1878 ... 41 „	1889 ... 14 „	†1900 ... 35 „
1879 ... 2 „	1890 ... 15 „	1901 ... 62 „
*1880 ...	1891 ... 11 „	1902 ... 29 „
1881 ... 0 „	1892 ... 24 „	1903 ... 11 „
1882 ... 16 „	1893 ... 93 „	1904 ... 34 „
1883 ... 10 „	1894 ... 13 „	1905 ... 16 „
1884 ... 32 „	1895 ... 49 „	1906 ... 35 „

1907 ... 16 deaths.

* No record. † One case of Dysentery included in each year.
‡ One death of a non-resident included.

Measles.

Number of deaths 2
Death-rate per 1,000 ... ... 0.04

The town has been remarkably free from Measles during the year, the number of deaths recorded being thirteen less than in 1906. The average annual number of deaths since 1874 is eleven.

There were 25 certificates granted for the exclusion of children from school on account of Measles, as compared with 326 in 1906.

The number of deaths from Measles in the Borough each year since 1874 is as follows:—

1874	...	21 deaths	1885	...	31 deaths	1896	...	9 deaths
1875	...	11 „	1886	...	0 „	‡1897	...	1 „
1876	...	2 „	1887	...	32 „	1898	...	35 „
1877	...	0 „	1888	...	7 „	1899	...	10 „
†1878	...	30 „	1889	...	8 „	1900	...	17 „
1879	...	1 „	1890	...	14 „	‡1901	...	3 „
*1880	...		1891	...	1 „	1902	...	18 „
1881	...	9 „	1892	...	5 „	1903	...	0 „
1882	...	1 „	1893	...	34 „	1904	...	13 „
1883	...	18 „	1894	...	0 „	1905	...	22 „
1884	...	1 death	1895	...	7 „	1906	...	15 „

1907 ... 2 deaths.

* No record. † The second half of the year only.

‡ One also occurred in a non-resident.

Whooping Cough.

Number of deaths	12
Death-rate per 1,000	0.25

The number of deaths registered is 5 more than in the preceding year, 12 as against 7 in 1906. The average annual number of deaths since 1874 is eleven. The number of certificates granted for the exclusion of children from school on account of Whooping Cough was 93, as compared with 81 in 1906.

The number of deaths from Whooping Cough each year since 1874 is as follows:—

1874	...	1 death	1885	...	11 deaths	1896	...	8 deaths
1875	...	9 deaths	1886	...	8 „	1897	...	26 „
1876	...	2 „	1887	...	4 „	1898	...	9 „
1877	...	9 „	1888	...	4 „	1899	...	26 „
*1878	...	0 „	1889	...	17 „	1900	...	5 „
1879	...	9 „	*1890	...	0 „	1901	...	19 „
*1880	...	0 „	1891	...	13 „	1902	...	9 „
1881	...	4 „	1892	...	23 „	1903	...	17 „
1882	...	9 „	1893	...	14 „	1904	...	12 „
1883	...	4 „	1894	...	19 „	1905	...	28 „
1884	...	14 „	1895	...	7 „	1906	...	7 „

1907 ... 12 deaths.

* No record.

Erysipelas.

Cases notified	23
Number of deaths	1
Fatality per cent.	4.3

Cases and Deaths in the previous years since 1897.

Year ...	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Cases ...	115	49	62	44	40	40	40	52	31	21
Deaths ...	9	3	2	0	3	4	7	5	1	2
Fatality per cent.	7	6	3	0	7·5	10	17	9·6	3·2	9·5

In 4 cases there was a history of injury. The parts affected were:—The face, 19 cases; other parts, 2 cases.

Puerperal Fever.

There were no cases of this disease notified during 1907.

Cases and Deaths in the previous years since 1897.

Year ...	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Cases ...	7	4	10	7	1	4	6	1	10	5
Deaths ...	3	2	7	5	0	2	2	3	5	1
Fatality per cent.	42	50	70	71	0	50	33	?	50	20

As those are cases which no medical man or midwife wishes to have in his or her practice, it not infrequently happens that such patients do not receive quite such careful attention as the serious nature of the disease necessitates, while at the same time there is always the risk to which other lying-in women may be exposed. It was for these reasons that the Health Committee decided early in 1905 that whenever the accommodation was available, cases of Puerperal Fever should be admitted to the Isolation Hospital.

Tuberculous Phthisis.

Number of deaths	27
Death-rate per 1,000	0.5

The number of deaths is 12 less than the preceding year, and is one less than the average yearly number of deaths since 1874.

Sixteen of the deaths were of males, and 11 of females. No deaths from Phthisis occurred under ten years of age.

Ages at death from Phthisis:—

Years ...	1	—5	—10	—20	—30	—40	—50	—50 upwards
Deaths ...	0	0	0	3	3	7	9	5

The North Ward had the largest number of deaths, viz., 8. In the Central and West Wards there were 7 each, and in the South Ward 4 deaths. One death of a Crewe resident occurred in the Workhouse.

The occupations were:—

Labourer	... 3	Carter ...	... 1
Billiard Marker	... 1	Engine Fitter	... 2
Forgeman	... 1	Clerk ...	... 1
Chainmaker	... 1	Grocer's Assistant	1
Tinsmith	... 1	Newsvendor	... 1
Insurance Agent	... 1	Boilermaker	... 1

In the remainder the designation under this heading is that of Wife, Son or Daughter.

In 1906 the Health Committee were unsuccessful in their application to the Local Government Board to have Consumption made a compulsorily notifiable disease. During the present year it was decided therefore that an attempt should be made to have cases notified voluntarily, and to induce medical men to do so by offering the use of spare accommodation in the Isolation Hospital when available, for training such patients in methods of prevention. Owing however to the epidemic of scarlet fever, this plan had to be postponed, but it is hoped that it will soon be possible to go on with the scheme.

The number of deaths from Phthisis occurring in the Borough each year since 1874 is as follows:—

1874 ... 31 deaths	1885 ... 33 deaths	1896 ... 33 deaths	
1875 ... 30 „	1886 ... 34 „	1897 ... 29 „	
1876 ... 17 „	1887 ... 39 „	1898 ... 24 „	
1877 ... 19 „	1888 ... 22 „	1899 ... 29 „	
*1878 ... „	1889 ... 38 „	1900 ... 42 „	
1879 ... 28 „	1890 ... 36 „	1901 ... 38 „	
*1880 ... „	1891 ... 23 „	1902 ... 22 „	
1881 ... 26 „	1892 ... 24 „	1903 ... 36 „	
1882 ... 28 „	1893 ... 31 „	1904 ... 29 „	
1883 ... 45 „	1894 ... 34 „	1905 ... 24 „	
1884 ... 25 „	1895 ... 42 „	1906 ... 39 „	

1907 ... ... 27 deaths.

* No record.

Other Tubercular Diseases.

Number of deaths 26
Death-rate per 1,000 ... ... 0.5

The number of deaths registered from these diseases is 1 less than in 1906. The record for previous years is shewn below:—

	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Tubercular Meningitis	4	7	13	6	9	23	7	10	12	12	9	5
Tubercular Peritonitis and Tabes Mesenterica	7	14	23	15	12	18	13	18	20	16	5	14
Other forms	2	2	5	6	18	7	14	7	13	16	13	7
	13	23	41	27	39	48	34	35	45	44	27	26

Females contributed 15 deaths and males 12—these were chiefly children, there being only six deaths over 10 years of age.

Ages at death:

Years ...	1—5	5—10	10—20	20—30	30—40	40—50	50—50 upwards
Deaths ...	9	8	4	2	1	2	1

Influenza.

Number of deaths 9
Mortality per 1,000 of population 0.18

The number of deaths registered from this cause was four more than in 1906.

Cancer and other Malignant Diseases.

From this cause 40 deaths were registered. The number of deaths each year since 1897 is as follows:—

Years	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Deaths	15	21	25	19	32	35	24	25	29	28	40

Death-rate per 1,000 during the last ten years.

Years	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Deaths	0·38	0·53	0·61	0·45	0·75	0·80	0·52	0·52	0·60	0·59	0·83

Ages at death:—

Years	—15	15—25	25—35	35—45	45—55	55—65	65 upwards
Deaths	1	–	2	2	7	11	17

Twenty-four of the deaths were of females, and 16 of males. Thirty-eight were registered as Carcinoma and two as Sarcoma. The parts affected and deaths from each were:—Stomach, 15; Intestine, 7; Uterus, 6; Liver, 4; Tongue, Neck and Breast, each 2; Larynx and Bladder, each 1.

Diseases of the Respiratory System.

The deaths recorded from the three most important members of this group of diseases are given in the following table.

	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Bronchitis	86	68	64	71	54	56	47	41	57	38	27	44
Pneumonia...	71	61	57	55	43	70	40	38	42	25	14	26
Broncho-Pneumonia							25	25	23	31	26	28
Others	5	16	4	10	6	3	9	10	14	14	9	12
Totals ...	162	145	125	136	103	129	121	114	136	108	76	110

The cold wet weather experienced during summer and autumn, which proved so beneficial to the infant portion of the community, had the effect, however, of increasing the mortality from respiratory diseases, more especially among persons over 60 years of age.

The following table shews the age distribution of the deaths:—

	0–1	1–5	5–10	10–20	20–30	30–40	40–50	50–60	60 and upwards
Bronchitis ...	11	7	—	—	1	1	2	2	20
Pneumonia ...	3	3	2	2	2	3	4	4	3
Broncho-Pneumonia	13	9	2	—	—	—	—	1	3
Others ...	1	1	—	—	—	—	3	5	2
Totals ...	28	20	4	2	3	4	9	12	28

Deaths from Violence.

Death was registered as due to Violence in 21 cases, 16 of which resulted from accident and 5 from suicide. The average number registered yearly from this cause has, during the last ten years, been 16. The figures for former years are given below.

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Accident	11	4	16	27	13	19	14	16	9	9	16
Suicide	2	—	1	1	6	2	4	5	3	4	5
Homicide	—	—	—	1	—	—	—	—	—	—	—
Totals	13	4	17	29	19	21	18	21	12	13	21

Gains and Losses during 1907.

In the following tables of gains and losses, the death-rate per 1,000 from each cause is compared with the average death-rate of the preceding decennium. The death of one person in a population of 47,904 corresponds to a rate of 0.020 per 1,000. Hence the reduction or increase of the annual death-rate by this amount means the saving or loss of one life, and similarly a fall or rise in the rate of 0.100 means the saving or loss of five lives, and so on. The difference between the death-rate from all causes in 1907 and the decennium, 1897—1906 is 4.2 per 1,000. This represents the net gain and is equivalent to the saving of 210 lives.

GAINS.

Name of Disease.	Average Rate during ten years 1897–1906	Rate during 1907	Gains per 1,000	Probable number of lives saved during 1907	Lives Lost or Gained during 1906
Diarrhœa	0·83	0·18	0·65	32	17 gained
Respiratory Diseases ...	2·76	2·29	0·47	23	64 gained
Erysipelas	0·08	0·02	0·06	3	2 gained
Diphtheria	0·23	0·12	0·11	5	8 gained
Scarlet Fever ...	0·12	0·12	—	—	3 gained
Typhoid Fever ...	0·09	0·06	0·03	1	5 gained
Whooping Cough ...	0·30	0·25	0·05	2	8 gained
Old Age	0·78	0·77	0·01	—	1 gained
Influenza	0·20	0·18	0·02	1	4 gained
Premature Birth ...	0·60	0·58	0·02	1	—
Nervous Diseases ...	1·49	0·93	0·56	28	19 gained
Digestive Diseases ...	1·03	0·73	0·30	15	4 gained
Tubercular Diseases (excluding Tabes Mesenterica) ...	0·44	0·25	0·19	9	2 gained
Tabes Mesenterica ...	0·30	0·29	0·01	—	9 gained
Ill-Defined	1·06	0·45	0·61	30	29 gained
Violence	0·43	0·33	0·10	5	9 gained
Measles	0·27	0·04	0·23	11	—
Heart Diseases ...	1·28	0·96	0·32	16	5 lost
Phthisis	0·71	0·56	0·15	7	4 lost

LOSSES.

Name of Disease.	Average Rate during ten years 1897–1906	Rate during 1907	Losses per 1,000	Probable number of lives lost during 1907	Lives Lost or Gained during 1906
Cancer	0·57	0·83	0·26	13	1 lost
Urinary Diseases ...	0·23	0·33	0·10	16	1 lost

Part iii.

General Sanitation.

Hospital Accommodation.

The accommodation provided for the isolation of Infectious Diseases (apart from Small-pox) consisted originally of two ward pavilions and an observation block, containing in all 28 beds. This has been in use since October 16th, 1897, and was erected at a cost of £9,500 (including the cost of the site). Owing to the rapid increase in the population, and the increasing number of patients treated, it was found necessary to enlarge the Hospital by the addition of a two ward pavilion for Diphtheria, together with extra housing accommodation for the nursing staff. The additions were commenced at the beginning of 1903, and were ready for ocupation on the 30th March, 1904. The plans for the extension were prepared by George Bolshaw, Esq., of Southport, who was the architect for the original Hospital, and the work was carried out by Messrs Garner and Son, of Crewe. The total cost of the pavilion and addition to the house was £3,066.

The Small-pox Hospital is situated upon the Corporation Farm, on the North side of Pym's Lane, off Minshull New Road. As it originally existed, excluding the part occupied by the caretaker and his family, there were two bedrooms available for patients, with suitable accommodation for a nurse. During 1903 further accommodation was provided by fitting up a small galvanised iron pavilion alongside the farm house. The Hospital has been unoccupied during the year, but has been kept ready for any emergency.

The full staff consists of the Matron, 8 nurses (2 charge, 4 assistant, and 2 probationer nurses), and 6 maids (cook, housemaid, scullery maid, 2 ward maids, and laundry maid). There is a non-resident ambulance attendant, who also acts as disinfector for the Health Department, and a gardener. Occasional extra assistance has to be obtained in the laundry and grounds, and during 1907 the nursing staff was augmented in order to cope with the epidemic of Scarlet Fever.

A much needed improvement has been effected during the year by the introduction of electric power into the laundry. The water pipes also have been entirely replaced by tin-lined pipes.

The following statement shews the number of cases dealt with during 1907:—

	In Hospital December 31st, 1906.	Admitted.	Discharged	Died.	In Hospital, December 31st, 1907.
Scarlet Fever ...	16	394	328	4	78
Diphtheria ...	—	19	18	1	—
Enteric Fever ...	1	2	2	1	—
Erysipelas ...	—	1	1	—	—
For Observation	—	4	4	—	—
Totals ...	17	420	353	6	78

In addition to the disinfection of bedding and clothing taken from infected houses or from the Hospital Wards, it will be seen (page 31) that a considerable amount of work has been done for the Cottage Hospital in disinfecting bedding which has become infected with septic discharges.

The following shews the annual number of patients admitted to the Hospital since its opening, and the percentage of cases of Scarlet Fever removed to Hospital:—

	Total Number of Cases admitted.	Percentage of Scarlet Fever cases removed.
1897 (from October) ...	26	—
1898	68	64%
1899	73	76%
1900	158	65%
1901	129	69%
1902	102	74·5%
1903	169	76%
1904	298	81%
1905	160	81%
1906	141	92%
1907	420	93·8%

For the following statement of expenditure for the year ending 31st December, 1907, I am indebted to the kindness of the Borough Accountant:—

Expenditure.

	£	s.	d.	£	s.	d.
Salaries of Matron, Nurses, etc.				344	13	4
Porters' Wages (proportion)				72	14	0
Nurses' Uniform				10	7	11
Maintenance of Patients and Staff:—						
Groceries	233	11	7			
Butchers' Meat	152	11	9			
Fish, Ice, etc.	19	16	9			
Vegetables	23	12	8			
Milk	119	19	4			
Bread	51	16	2			
				601	8	3
Druggists' Sundries				34	16	0
Drapery, Crockery, Hardware, Cleaning Materials, etc.				117	11	3
Repairs to Vans, Laundry Fittings, Disinfector, Electric Light Fittings, etc.				27	11	8
Maintenance of Buildings, Painting, etc.				58	12	4
Gas				19	8	8
Electricity				84	6	11
Water				12	6	0
Rates and Taxes				49	14	8
Insurance				7	2	7
Telephone Charges				11	4	0
Fuel				147	11	11
Cultivation of Grounds				55	19	10
Horse Hire for Ambulance, etc.				91	10	0
Rent of Small-pox Hospital				20	0	0
Interest on cost of Electric Main				13	11	9
Printing, Stationery, Advertising, and Postages				6	16	9
Electric Motor, etc., for Laundry				48	9	10
Asphalting walks				13	1	8
Renewal of water pipes				36	13	7
Furniture and Repairs				21	13	0
Sundries				6	3	2
				£1,913	9	1

Income.

	£	s.	d.
Removal and Maintenance of Patients	131	16	0
Rent of Land	2	5	0
Repayment by Cheshire County Council	262	10	2
	£396	11	2

The cost of maintenance per case; the average daily number of patients, and their average residence, etc., since the opening of the Hospital are shewn in the following table:—

Year.	Patients.			Total Expenditure.	Average cost per patient.	Daily cost per head for provisions.	Provisions.
	Total treated.	Average daily number.	Average residence in days.				
				£ s. d.	£ s. d.	s. d.	£ s. d.
1898	68	9·1	48·0	1020 2 0	15 0 0	2 4	378 19 6
1899	73	9·6	48·0	1083 7 1	14 16 9	1 11½	347 4 9
1900	158	20·3	47·0	1161 11 8	7 7 0	1 1½	417 19 0
1901	129	17·0	48·0	1367 0 10	10 12 0	1 5½	452 18 0
1902	102	11·7	42·0	1173 5 9	11 10 0	1 5½	314 10 7
1903	169	22·4	48·5	1404 6 7	8 6 2	0 11½	398 19 7
1904	298	34·2	42·0	1642 14 3	5 10 3	0 10¾	561 2 4
1905	160	16·7	38·5	1592 0 3	9 19 0	1 7¼	488 19 2
1906	141	16·0	41·6	1408 12 9	9 19 9	1 3½	384 15 8
1907	420	38·8	32·7	1893 9 1	4 10 1	0 10¾	601 8 3

N.B.—The above calculations of cost do not include repayment of principal, nor payment of interest on capital. The rent of the Smallpox Hospital is also deducted.

The Average Length of Stay in Hospital.

	Days
Scarlet Fever Patients, excluding cases which died	30.0
Scarlet Fever Patients, including cases which died	32.7
Diphtheria and Membranous Croup Patients, excluding cases which died	27.2
Diphtheria and Membranous Croup Patients, including cases which died	27.6
Enteric Fever Patients, excluding cases which died	32.3
Enteric Fever Patients, including cases which died	27.0

School Hygiene.

The Schools have been visited periodically, and special visits have been made at the request of School Teachers. A large number of children have been brought for examination by Teachers and School Attendance Officers.

The following were the only Schools closed during the year on account of epidemic sickness. New Street Infants' School was closed four days before the beginning of the Easter holiday, so that it did not re-open until the 8th April.

School.	Closed.	Re-opened.	Disease.
Pedley Street Infants' ...	January 28th.	February 11th.	Measles
New Street Infants' ...	March 25th.	March 29th.	Mumps

The following table shews the number of children excluded from school on account of infectious diseases, and whose absence was notified to the Health Department by the Head Teachers and School Attendance Officers:—

	Totals 1906	Totals 1907
Measles	326	25
Whooping Cough	81	93
Chicken-pox	71	90
Ringworm	22	9
Mumps	125	219
Skin Disease	40	14
Miscellaneous	151	168
Totals	816	618

The following certificates have also been issued in respect of diseases compulsorily notifiable:—

Preliminary Certificates	393
Final Certificates	115
	508
Certificates for diseases notified by Teachers and Attendance Officers	618
Total number of Certificates issued by M.O.H. ...	1126

Playgrounds and Open Spaces.

These owned by the Corporation are—:

The Queen's Park—Area, a little over 35 acres; situate in the South Ward, at the extreme South West boundary of the town.

South Ward Playground, area 11,501 square yards. West Ward playground, area 8,356 square yards. North Ward playground, area 16,429 square yards.

Inspections and General Work.

The premises which have been kept under regular supervision include 15 private slaughter-houses, 51 cowsheds, 125 dairies and milkshops, 7 common lodging-houses, 2 houses let in lodgings, 291 factories and workshops, and also premises which are specially liable to create nuisances, viz.: pig-styes, stables, marine stores, fried fish shops, etc.

Reconstruction of Privies, &c.

The following figures give the approximate numbers of the different forms of closets, etc., existing in the town at the end of 1907:—

Water Closets	6,297
Waste Water Closets	1,016
Pail Closets	3,143
Fixed Receptacles	2

Covered Privy Middens	851
Uncovered Ashpits	69
Covered Ashpits	2,379
Dustbins	6,863
Baths	1,771

The work of converting privy middens, etc., into water-closets shows a very considerable increase, the total being 312, as compared with 171 in the previous year. It was necessary to take proceedings in seven instances before the work was done.

The following shews the number and nature of the re-constructions effected during the year—:

	Dust-bins	Covered Ashpits	Privy Pails	Water Closets	Waste Water Closets
243 Mixens were converted into ...	103	140	31	212	—
7 Cesspools ,, ,, ,, ...	5	2	—	7	—
12 Fixed Receptacles were converted into	—	—	—	12	—
33 Privy Pails were converted into	—	—	—	34	—
16 Ashpits were converted into	16	—	—	—	—
1 Waste Water-closet was converted into ...	—	—	—	1	—

The total number of re-constructions was therefore 312, these being converted into 212 clean water closets, and 31 privy pails, with 103 dustbins and 140 covered ashpits. With the demolition of 4 houses in George Street 4 mixens were abolished.

Offensive Trades.

There are now two gut-scraping businesses carried on in the Borough. One of these was established in 1905, in Richmond Road, and the premises are of modern construction. Both businesses from a sanitary point of view are well regulated and have been conducted so as to be free from nuisance.

Cowsheds.

There are 51 Cowsheds in the Borough. These have all been frequently inspected during the year, and in several some slight improvements effected. Their structure, however, leaves much to be desired, and it is hoped that the attention which is given to them will impress upon their occupiers the necessity for greater cleanliness.

Dairies and Milkshops.

There are 125 premises on the register where a retail trade in milk is carried on. Here also, as with the cowsheds, the need for greater cleanliness is very apparent.

The following additional regulation prescribing precautions to be taken by purveyors of milk and persons selling milk by retail in the Borough, against infection or contamination, came into force on August 1st, 1906.

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

The Royal Commission on Tuberculosis issued a second interim report during the year, and some of the conclusions are of the utmost importance in relation to milk supplies.

The following is a Summary of the results which the Commission has arrived at:—

"There can be no doubt but that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there also can be

no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk. Cows' milk containing bovine tubercle bacilli is clearly a cause of tuberculosis, and of fatal tuberculosis in man.

A very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cows' milk containing tubercle bacilli. The presence of tubercle bacilli in cows' milk can be detected, though with some difficulty, if the proper means be adopted, and such milk ought never to be used as food. There is far less difficulty in recognising clinically, that a cow is distinctly suffering from tuberculosis, in which case she may be yielding tuberculosis milk. The milk coming from such a cow ought not to be used as food at all.

Our results clearly point to the necessity of measures more stringent than those at present enforced being taken to prevent the sale or the consumption of such milk."

These conclusions are of far reaching importance, and it is hoped that the legislation promised by the Local Government Board will provide Local Authorities with the powers necessary to protect the public health by securing a pure and wholesome milk supply.

Common Lodging Houses.

There are 7 houses in the Borough now registered as common lodging-houses. Every effort is made to see to these being kept in a sanitary condition, and the houses are fairly well conducted. Their defective structural character makes it difficult for the keepers to maintain them in a thoroughly satisfactory state.

Houses Let in Lodgings.

There are 2 houses on the register, which have been kept in a satisfactory condition.

Slaughter Houses and Meat Inspection.

The number of slaughter-houses is fifteen. These are all kept in a fairly satisfactory condition. Efficient meat inspection is an impossibility, practically the only control exercised over the quality of the meat sold in the Borough being exercised by the butchers themselves acting through their Vigilance Association. There is no doubt of the good effect which this has upon the trade, and the quality of the meat exposed for sale.

Thirteen carcases were examined upon request from the owners. Six of these were totally condemned and voluntarily surrendered. The others were passed subject to the destruction of the affected portion. The disease in every case was Tuberculosis. The prices ranged from £10 12s. 6d. to £18 10s. 0d. A quantity of fish, weighing 102 lbs., was also surrendered for destruction.

Ice Cream Premises.

A constant supervision has been maintained over the premises where ice cream is made and sold. The premises were at all times found in a cleanly condition.

Factories and Workshops.

There are 74 factories and 217 workshops in the Borough. The latter include a great many places, such as dressmakers' establishments, where the business is a small one, and is carried on in a room of the dwelling-house set apart for the purpose. It sometimes happens that in such small workshops the business is carried on somewhat intermittently, and changes of address are frequent. This makes it difficult to keep an absolutely correct register, but so far as possible all changes have been followed up.

The following table of workshops shews the number in each Ward, and the nature of the trades carried on:—

Trade	Central	West	North	South	Borough
Bakers and Confectioners... ...	17	8	6	14	45
Dressmakers and Milliners ...	21	7	3	19	50
Tailors...	9	1	2	2	14
Watchmakers and Jewellers ...	4	1	—	1	6
Tinsmiths	4	—	—	1	5
Cabinet Makers and Joiners ...	10	2	3	5	20
Bootmakers	10	7	7	14	38
Herb Beer Manufacturers & Bottlers	1	1	—	—	2
Saddlers	2	1	—	1	4
Cycle Repairers...	1	1	—	4	6
Ice Cream Manufacturers ...	1	—	—	—	1
Wheelwrights	—	—	—	1	1
Shirtmakers	1	—	—	—	1
Hosiers	1	—	—	—	1
Stonemasons	2	—	1	1	4
Picture Framers...	1	—	1	—	2
Rag Stores	—	—	1	1	2
Blacksmiths	3	1	1	3	8
Laundry	—	—	—	1	1
Artificial Teeth Manufacturers ...	2	—	—	2	4
Scales Manufacturer	1	—	—	—	1
Gut Scraper	—	1	—	—	1
Totals	91	31	25	70	217

GENERAL SANITATION.—The condition of the workshops generally has been very satisfactory, although there were a few exceptions with regard to cleanliness. Thirteen notices relating to limewashing were sent out and complied with.

Three workshops contravening section 133 of the Factory Act by failing to have an abstract affixed in a prominent position were notified to the Factory Inspector.

In a large clothing factory some improvements in respect of the closet accommodation were made, and in one bakehouse a nuisance arising from black smoke from the furnace chimney was dealt with.

BAKEHOUSES.—There are now no underground bakehouses in the Borough. The sanitary condition of all the premises was very satisfactory.

HOMEWORK.—Lists of homeworkers have been received from the following: —

S. & J. Watts and Co., Clothing Factory ...	6	outworkers.
Compton and Sons' Clothing Factory... ...	12	,,
Marmion Clothing Factory	1	,,
C. Taylor, Shirtmaker	3	,,
A. Boden, Tailor	5	,,

The annual statistical return to the Secretary of State, which follows, gives a summary of the work done during the year.

1.—Inspection.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries)	74	1	...
Workshops ... . (Including Workshop Laundries)	434	18	...
Workplaces ... ... other than outworkers' premises included in part III.	—	—	...
TOTAL	508	19	...

2.—Defects Found.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspect'r	
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	15	15	...	...
Want of ventilation	...	...	...	...
Overcrowding	...	...	...	...
Want of drainage of floors	...	...	...	...
Other nuisances	...	...	...	...
Sanitary accommodation { insufficient ... / unsuitable or defective / not separate for sexes }	1	...	...	...
Offences under the Factory & Workshop Act:				
Illegal occupation of underground bakehouse (S. 101)	...	...	...	
Breach of special sanitary requirements for bakehouses (SS. 97 to 100) ...	...	...	...	...
Other offences :— (Excluding offences relating to outwork which are included in Part III.)				...
Total	16	15	...	...

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

3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.										Inspection of Outworkers' Premises.	OUTWORKERS IN UNWHOLESOME PREMISES, SEC. 108			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Addresses of Outworkers.		Prosecutions.								
	Twice in the year.			Once in the year.													
	Lists.	Outworkers. Contractors.	Outworkers. Workmen.	Lists.	Outworkers. Contractors.	Outworkers. Workmen.	Received from other Councils.	Forwarded to other Councils.	Failing to keep or permit inspection of Lists.	Failing to send Lists.		Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Wearing Apparel :—																	
(1) making	10	...	48	...	...	...	12	3	...	...	48	...	...	...	...	...	...
(2) cleaning and washing...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	10	...	48	...	...	...	12	3	...	...	48	...	...	...	...	...	...

4.—Registered Workshops.

Workshops on the Register (S. 131) at the end of the year.	Number.
Bakers and Confectioners	45
Dressmakers and Milliners	50
Tailors	14
Watchmakers and Jewellers	6
Tinsmiths	5
Cabinetmakers and Joiners	20
Bootmakers and Repairers	38
Herb Beer Manufacturers and Bottlers	2
Saddlers	4
Cycle Repairers	6
Ice Cream Manufacturers	1
Wheelwrights	1
Shirtmakers	1
Hosiers	1
Stonemasons	4
Picture Framers	2
Blacksmiths	8
Others	9
Total number of workshops on Register	217

5.—Other Matters.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	3
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) — Notified by H.M. Inspector ...	...
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5) — Reports (of action taken) sent to H.M. Inspector ...	...
Other	...
Underground Bakehouses (S. 101) :—	
Certificates granted during the year	...
In use at the end of the year...	...

The following table shews the number of Factories in the Borough.

Industry	Central	West	North	South	Borough
Loco. Engine Works	—	1	—	*	1
Electric Lighting	2	—	—	1	3
Clothing Factories	1	1	4	2	8
Cabinet Maker and Joiner ...	4	—	—	—	4
Cycle Works	1	—	—	—	1
Bottling & Herb Beer Manufactory	2	—	—	2	4
Brewery	1	—	—	—	1
Aerated Water Manufactory ...	2	—	1	—	3
Letterpress Printing	3	1	1	1	6
Laundry	—	—	2	—	2
Sausage Maker	3	2	1	2	8
Machine Smith	1	—	—	—	1
Wheelwright, Woodturner ...	3	—	1	—	4
Builder	2	1	1	2	6
Blindmaker	1	—	—	—	1
Ironfounder	1	—	—	—	1
Baker	2	—	1	—	3
Bootmaker	2	1	—	—	3
Brick Works	—	1	3	—	4
Fustian Cutting	1	2	—	—	3
Cattle Medicine	—	—	—	1	1
Firewood	—	1	—	1	2
Saw Mill	1	1	—	—	2
Chaffcutting	1	1	—	—	2
Totals	34	13	15	12	74

* These works are also partly in the South Ward.

Sale of Food and Drugs Acts.

These Acts are administered by the County Council, to whose Chief Inspector, Mr. Laird, I am indebted for the following particulars of samples purchased in the Borough of Crewe, under the Sale of Food and Drugs Acts, during the year ending December 31st, 1907.

Name of Sample	No. of Samples	No. of Samples certified as Adulterated
Butter	32	—
Camphorated Oil	1	—
Coffee	3	—
Gin	1	—
Ginger—Ground	1	—
Milk	52	—
Pepper	6	—
Rum	1	—
Whiskey	6	—
Totals	103	—

Work done by Sanitary Inspector's Department.

The Sanitary Inspector reports that the following matters have received his attention during the year:—

	1906.	1907.
Defective house drainage	136	196
„ Manure receptacles	3	7
„ Ashpits	23	73
„ Privy middens	221	245
„ Pail privies	81	131
„ Fixed receptacles	16	12
„ Cesspool privies	14	7
„ Water closets	68	62
„ Paving of yards and passages	21	14
„ Urinals	3	2
„ Eaves and rain-water spouting	47	32
„ Ventilating shafts (drains)	5	2
„ Channel shoots	3	6
„ Sink pipes	17	13
Nuisances from offensive accumulations	17	9
„ „ keeping of animals	1	7
„ „ stagnant water in cellars	6	1
„ „ offensive pools, ditches, etc. ...	8	4
„ „ smoke	6	4
House drains tested	60	43
Visits to cowsheds	100	76
„ Common lodging-houses	98	126
Night visits to ditto	10	6
Visits to slaughter-houses	180	201
„ Infectious disease cases	215	507
Notices for renewal of defective privies and ashpails	364	465
Licenses issued in respect of removal of Swine—		
Borough	1226	1174
Licenses issued in respect of removal of Swine—		
County	2494	2687
Post Cards issued in respect of removal of Swine—		
County	—	2687

	1906.	1907.
Statutory notices served	106	284
Persons supplied with disinfectants on application to office	886	1025
Dogs destroyed	123	58
Cats ,, ...	—	3
Visits to Ice Cream Shops	11	14
,, ,, Schools	50	60
,, ,, Bakehouses	70	78
,, ,, Fried Fish shops	45	172
,, ,, Pigstyes	55	60
,, ,, Offensive trades	20	21

Extra Duties of the Sanitary Inspector.

For several years the County Medical Officer of Health in his Annual Report has made reference to the extraneous duties which are frequently placed upon a Sanitary Inspector.

It is now becoming every year more apparent that these remarks are peculiarly applicable to Crewe.

The Sanitary Inspector has in addition to his purely sanitary work, many duties of a more or less important character which occupy a considerable part not only of his own time, but also of that of his assistant and pupil. When first placed upon him the Borough was comparatively small, and these extra duties were not of a specially exacting nature. But with the rapid growth of the population, and the introduction of fresh legislation, his sanitary work has very greatly increased, while at the same time the amount of extraneous work has also greatly increased. Since Mr. Urquhart's appointment as Sanitary Inspector the Infectious Diseases (Notification) Act has come into force in the Borough, and an Isolation Hospital has been established. He visits every notified case, and superintends or arranges for their removal to Hospital. This alone has been an enormous addition to his work.

The Factory and Workshops Act, 1901, demands a very large amount of his time, while also the more exacting requirements of modern sanitation have led to a considerably greater exercise of powers relating to other work. This includes the inspection of lodging-houses, slaughter-houses, cowsheds, milkshops, schools, ice cream premises, fried fish shops, marine store yards, offensive trades, the detection of nuisances arising from any cause, drain tests, reconstruction of closets, and perhaps the most important of all—regular inspection of the whole district and house-to-house visitation. At the same time he has a considerable amount of office work to perform, writing letters, reports, keeping wage books and records of all his work. The mere recital of his duties will make is evident that in a town of over 48,000 inhabitants there is abundant work for the Sanitary Inspector apart from anything else.

In addition to all this, the Sanitary Inspector is Inspector of Hackney Carriages, Inspector under the Contagious Diseases (Animals) Act, Inspector under the Petroleum Acts, all of which take up an undue proportion of his own and his assistants' time.

Scavenging.

In the accompanying Tables the work done during the year and the cost of both team and manual labour are given in detail, and for comparison the work for each year since 1898 is also shewn.

It will be seen that as compared with 1906, the total cost of scavenging has increased £80 14s. 1d., while the cost per load of day and night work (more especially the latter) is also increased.

TABLE shewing total cost, number of loads, etc., for day and night work.

MONTH, 1907	DAY WORK.				NIGHT WORK.			
	Wages £ s. d.	Horse Hire £ s. d.	Paper Wagon Hire £ s. d.	Total £ s. d.	Average Cost per Working Day £ s. d.	Wages £ s. d.	Horse Hire £ s. d.	Total £ s. d.	Average Cost per Working Night £ s. d.
January ...	116 7 7	43 18 6	0 6 0	160 12 1	5 18 11½	78 15 3	22 11 6	101 6 9	4 8 1½
February ...	105 7 4	42 0 0	0 6 0	147 13 4	6 3 9½	69 13 10	21 0 0	90 13 10	4 10 8¼
March ...	101 4 0	38 6 6	0 6 0	139 16 6	5 7 6¾	73 16 2	21 7 0	95 3 2	4 10 7½
April ...	95 12 5	36 11 6	0 6 0	132 9 11	5 1 11	84 0 9	22 11 6	106 12 3	4 16 11
May ...	100 13 3	37 16 0	0 6 0	138 15 3	5 2 9½	79 16 8	23 12 6	103 9 2	4 9 11½
June ...	90 10 10	35 0 0	0 6 0	125 16 10	5 0 8	69 5 10	21 17 6	91 3 4	4 11 2
July ...	110 16 1	41 16 6	0 6 0	152 18 7	5 9 6½	86 1 6	23 12 6	109 14 0	4 15 4½
August ...	112 7 8	42 10 6	0 6 0	155 4 2	5 14 11½	76 15 10	23 12 6	100 8 4	4 11 3½
September ...	103 11 10	39 7 6	0 6 0	143 5 4	5 14 7¼	73 3 4	21 17 6	95 0 10	4 10 6¼
October ...	109 10 10	42 10 6	0 6 0	152 7 4	5 12 10½	82 7 8	23 12 6	106 0 2	4 12 2
November ...	103 11 4	40 19 0	0 6 0	144 16 4	5 11 4¼	73 7 6	22 15 0	96 2 6	4 11 6½
December ...	102 13 8	40 19 0	0 6 0	143 18 8	5 10 8¾	76 5 2	22 15 0	99 0 2	4 10 0
	1252 6 10	481 15 6	3 12 0	1737 14 4	5 11 0½	923 9 6	271 5 0	1194 14 6	4 11 6½

MONTH.	No. of Loads Removed.		Average Cost per Load.	
	Day Work	Night Work	Day	Night
			s. d.	s. d.
January ...	947	346	3 3¾	5 10¼
February ...	872	322	3 3¼	5 7½
March ...	775	310	3 5¾	6 1½
April ...	764	363	3 4¼	5 10¼
May ...	829	371	3 2¾	5 6¾
June ...	711	305	3 5	5 11¾
July ...	862	356	3 5¼	6 1¾
August ...	919	347	3 3	5 9
September ...	841	333	3 3½	5 8½
October ...	889	359	3 4	5 10¾
November ...	846	332	3 5	5 9½
December ...	818	326	3 6¼	6 1
	10073	4070	3 6¾	5 10½

TABLE shewing number of privies and dustbins emptied and cost per load, etc.

	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Privies and Ashpits emptied ...	32,051	31,962	33,455	25,171	20,617	25,485	28,371	29,381	20,136	21,166
Privy Pails emptied ...	135,468	128,086	129,086	129,656	132,432	145,038	154,570	156,003	157,305	157,373
Dustbins	78,048	79,920	93,180	104,260	112,510	138,585	176,956	183.414	184,163	194,919
Paper Bags ...	—	—	—	—	—	11,160	11,388	13,405	17,675	16,844
Number of Loads removed—										
Day Work ...	8,313	8,525	9,099	8,803	9,851	10,225	10,325	9,825	8,970	10,073
Night Work ...	4,978	4.967	4,958	4,940	4,880	5,130	5,290	4,879	4,456	4,070
	13,291	13,492	14,057	13,743	14,731	15,355	15,618	14,704	13,426	14,143
Cost of removal—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Total cost ...	2486 7 7	2649 8 5	2812 1 2	2827 8 11	2984 9 3	3007 9 9	3068 16 7	2923 9 6	2850 18 3	2931 12 4
Cost per load ...	0 3 8½	0 3 11	0 4 0	0 4 1¼	0 4 0½	0 3 11	0 3 11	0 3 11½	0 4 2¾	0 4 1½
Cost of Day Work per load ...	0 2 7¼	0 2 11½	0 3 1½	0 3 2½	0 3 0¼	0 3 3¾	0 3 3	0 3 3¼	0 3 6¼	0 3 6¾
Cost of Night Work per load ...	0 5 7½	0 5 6⅞	0 5 6¾	0 5 8¾	0 6 1¼	0 5 1	0 5 3	0 5 4½	0 5 8	0 5 10½

Water Supply.

The Water Supply is owned by the London and North Western Railway Company and is obtained from artesian wells at Whitmore, Staffordshire. The quality of the water for drinking purposes is excellent, although somewhat hard for domestic and laundry use. The supply has never failed even after the most prolonged drought.

The total quantity of water given below is the amount actually paid for to the Railway Company, plus 20½ million gallons, the estimated amount supplied directly by the Company to their own property.

Year	Quantity consumed during the year in gallons	No. of Inhabited Houses	Population estimated to middle of year	Consumption per house per annum in gallons	Consumption per head of Population per day in gallons
1893	116,348,000	7,125	34,866	16,329	9·14
1894	134,269,300	7,190	35,796	18,674	9·47
1895	139,736,000	7,404	36,726	18,873	10·42
1896	148,833,000	7,638	37,656	19,485	10·79
1897	149,088,000	7,945	38,586	18,765	10·58
1898	160,555,000	8,182	39,516	19,622	11·13
1899	175,551,000	8,582	40,446	20,455	11·88
1900	185,026,000	8,808	41,376	21,006	12·24
1901	220,604,500	8,771	42,307	25,151	14·28
1902	228,111,000	9,208	43,237	24,773	14·45
1903	243,332,390	9,500	45,505	25,613	14·6
1904	233,434,413	9,617	46,065	24,273	13·8
1905	201,038,120	9,724	46,578	20,674	11·8
1906	198,421,000	9,844	47,142	20,156	11·5
1907	213,841,000	10,001	47,904	21,381	12·2

Sewage Disposal.

The bulk of the sewage is being disposed of on the Corporation Farm, and a small proportion by the double contact method. Toward the end of the year a new circular continuous filter was constructed on the site of one of the secondary contact beds. The samples taken immediately after it had started work were naturally not satisfactory, but after several months' working an effluent well within the requirements of the County Council has been produced.

Back Passages.

Considerable progress has been made in paving back passages, as the following list of these which have been completed shews.

1. Between Walthall Street and Westminster Street
2. Between Lewis Street and Wistaston Road.
3. East side of West Avenue.
4. East side of Ernest Street.
5. Between Brooklyn Street and Nelson Street.
6. South side of Stalbridge Road from Brooklyn Street to Nelson Street.
7. North side of Stalbridge Road behind Nos. 34 to 44.
8. South side of Hammond Street.
9. Between Westminster Street North and Derrington Avenue.

Prosecutions, &c.

The following is a summary of the proceedings taken during the year to enforce Statutory Notices issued for the abatement of various nuisances, or for infringement of bye-laws.

No.	Nature of Offence.	Result of Proceedings.
1.	Imperfectly trapped drains	Defendant did work and paid 3/6 costs. Summons withdrawn.
2.	Offensive privy-midden	W.C provided. Costs paid. Summons withdrawn.
3.	Offensive cesspool	ditto.
4.	Offensive privy-midden	ditto.
5.	Nuisance from privy pail	ditto.
6.	,, ,, privy-midden	ditto.
7.	,, ,, pail closet	ditto.
8.	,, ,, pail-closets	Fined in costs £1 11s. 6d. W.C.'s provided.
9.	Keeping an unregistered Lodging-house	Fined 10/- with 9/6 costs.
10.	Failure to cleanse filthy house	Fined 2/6 with 8/6 costs.
11.	Wilful exposure when suffering from a dangerous infectious disease.	Fined in costs £1 13s. 0d.

Sewers and Sewer Ventilation.

New sewers were laid in the following streets:—

Beech Grove.
Walker Street.
Derby Street (part of).
New Streets off Ruskin Road.
Cromwell Grove.

There were no sewer ventilating shafts erected during 1907.

Unwholesome and Dirty Houses.

Notices were issued for the cleansing and limewashing of 137 houses. In 38 instances a second notice had to be issued before the work was carried out.

Contagious Diseases of Animals.

The Sanitary Inspector acts also as Inspector under the Contagious Diseases (Animals) Act and the Swine Fever Order. Every Monday he is in attendance at the Cattle Market to receive declarations regarding swine brought for sale and to give orders for removal of swine from the market.

The number of licences issued by him for the removal of swine was 3,861, as against 3,720 for 1906.

Several blood specimens from animals which had died suddenly were examined by the Medical Officer for the Veterinary Surgeon.

Poor Law Relief Statistics.

I am indebted to Mr. C. E. Speakman, Clerk to the Poor Law Guardians, for the following information. The figures for each year are for the half-year ending Michaelmas.

	1903	1904	1905	1906	1907
1. In Workhouse					
Able-bodied	168	83	176	60	14
Not able-bodied ...	141	75	169	296	367
Insane	13	5	15	15	16
Children	110	72	119	139	116
Total	432	235	479	510	513
2. Vagrants relieved in Workhouse... ...	4216	4601	2862	2786	2616
3. Out-door poor relieved	899	1001	994	1114	1077
Ditto Vagrants ...	922	660	7	45	45
4. Cost of out-door relief ...	£2045	£2229 11 6	£2260	£2355 12 7	£2153 14 10

METEOROLOGY.—Mr. M. Morgan, the Curator of Queen's Park, has kindly furnished the figures for the following table.

1907	Total Rainfall in inches	No. of Rainy Days	Prevailing Wind in Days.								Mean Temperature.			
			N.	S.	E.	W.	N.W.	N.E.	S.W.	S.E.	Max'm in Shade	Mini'm in Shade	One foot deep	Four foot deep
January ...	1·0	3	—	2	4	10	6	—	7	2	41	28	38	41
February	2·60	6	1	3	1	5	10	1	5	2	39	26	35	39
March ...	2·25	6	—	6	—	10	6	1	4	4	50	31	40	41
April ...	1·20	9	—	5	6	4	11	1	3	—	54	33	45	44
May ...	2·25	9	2	3	7	2	6	3	3	5	59	40	50	44
June ...	7·12	18	—	8	1	7	2	—	9	3	63	43	54	51
July ...	2·84	13	1	4	2	9	2	1	5	7	68	46	58	55
August ...	1·66	10	—	6	—	11	5	—	9	—	67	46	58	57
September	0·60	6	1	4	2	4	8	1	3	7	69	44	57	56
October ...	3·15	15	1	8	5	1	1	1	2	12	57	38	51	54
November	1·26	10	2	5	5	4	2	1	2	9	47	34	46	49
December	0·96	8	—	4	4	—	1	—	11	11	41	31	40	44
Total ...	27·16	113	8	58	37	67	60	10	63	62	—	—	—	—

As compared with 1906 there were 12.44 inches less of rainfall and 45 fewer rainy days. During the months of June and July however, the rainfall was much heavier, the total for those two months being 9.96 inches, as compared with 3.52 inches in 1906.

LOCAL GOVERNMENT BOARD RETURN.

TABLE I.—Vital Statistics of whole district during 1907 and previous years.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	Nett Deaths at at Ages belonging to the District.	
				Under 1 Year of Age.		At all Ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births registered.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1897	38586	1278	33·1	186	146	617	15·9	19	6	16	627	16·2
1898	39516	1365	34·5	232	169	683	17·2	20	9	25	699	17·6
1899	40446	1400	34·6	231	165	667	16·4	16	4	32	695	17·1
1900	41376	1420	34·3	196	138	653	15·7	19	7	31	677	16·3
1901	42307	1311	30·9	234	178	685	16·1	26	2	27	710	16·7
1902	43237	1412	32·6	186	131	613	14·1	24	2	37	648	14·9
1903	45505	1454	31·9	210	145	636	14·3	36	6	21	651	14·3
1904	46065	1425	30·9	226	159	659	14·3	20	5	19	673	14·6
1905	46578	1318	28·2	171	129	602	12·9	36	7	34	629	13·5
1906	47142	1260	26·7	149	118	525	11·1	22	6	41	560	11·8
Averages for years 1897-1906.	43075	1364	31·7	202	147	634	14·8	23	5	28	656	15·3
1907	47904	1251	26·1	136	108	518	10·8	32	7	25	536	11·1

* Rates in Columns 4, 8, and 13 calculated per 1000 of estimated population.

Area of Districts in acres (exclusive of area covered by water) ... 2185

Total Population at all ages 42074
Number of Inhabited Houses 8771
Average number of persons per House ... 4·79
} At Census of 1901

LOCAL GOVERNMENT BOARD RETURN.

TABLE II.—Vital Statistics of separate localities in 1907 and previous years.

Names of Localities.	1. BOROUGH.				2. CENTRAL WARD.			3. WEST WARD.			4. NORTH WARD.			5. SOUTH WARD.		
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Deaths at all Ages.	Deaths under 1 year.
1897	38586	1278	627	189	8572	151	41	8690	167	55	9321	159	56	12003	134	57
1898	39516	1365	699	232	8779	185	54	8897	155	49	9545	163	61	12295	171	68
1899	40446	1400	695	231	8986	193	60	9104	164	57	9767	155	54	12587	162	60
1900	41376	1420	677	196	9183	174	50	9311	162	52	9993	152	44	12879	167	50
1901	42307	1311	710	238	9400	165	43	9518	171	65	10217	168	64	13172	188	62
1902	43237	1412	648	186	9607	138	30	9725	166	48	10441	157	62	13464	158	44
1903	45505	1454	651	211	10111	160	50	10236	148	52	10989	128	46	14168	194	62
1904	46065	1425	673	228	10235	120	37	10363	157	57	11123	168	61	14344	209	73
1905	46578	1318	629	173	10350	126	23	10478	134	41	11246	146	55	14504	189	52
1906	47142	1260	560	149	10476	117	34	10603	158	37	11383	114	35	14680	136	41
Averages of years 1897 to 1906	43075	1364	656	203	9569	152	42	9692	158	51	10402	151	53	13409	170	56
1907	47904	1251	*536	†136	10645	135	28	10775	127	40	11567	119	34	14917	134	33

* 21 of these deaths could not be obtained and are therefore omitted from the Wards.

† 1 in Nantwich Workhouse.

LOCAL GOVERNMENT BOARD RETURN.

TABLE III.—Cases of Infectious Disease notified during the year 1907.

Notifiable Disease.	Cases Notified in whole District.							Total Cases Notified in each Locality.				No. of Cases removed to Hospital from each Locality.				
	At all Ages.	At Ages—Years.						1	2	3	4	1	2	3	4	8
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards	Central Ward	West Ward	North Ward (H)	South Ward	Central Ward	West Ward	North Ward (H)	South Ward	Total cases removed to Hospital
Diphtheria (including Membranous Croup)...	37	...	14	17	3	3	...	10	5	7	15	4	2	5	8	19
Erysipelas	23	...	1	...	...	16	6	4	5	3	11	1	...	...	...	1
Scarlet Fever ...	442	3	111	292	19	17	...	87	73	133	149	82	65	114	133	394
Enteric Fever ...	5	...	...	1	2	2	...	2	1	2	...	1	1	...	...	2
Totals	507	3	126	310	24	38	6	103	84	145	175	88	68	119	141	416

Crewe Isolation Hospital is situate in the North Ward marked (H).

LOCAL GOVERNMENT BOARD.

TABLE IV.—Causes of, and Ages at Death during year 1907.

Causes of Death.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths in or belonging to Localities at all Ages.					Total Deaths in Public Institutions in the District
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	Central Ward	West Ward	North Ward	South Ward	Address could not be obtain'd	
Measles	2	...	2	...	...	...	...	...	2	...	...	...	...
Scarlet Fever	6	...	2	4	...	...	...	2	2	...	2	...	5
Whooping Cough	12	7	5	...	...	...	...	4	3	1	4	...	...
Diphtheria (including Membranous Croup)...	6	...	3	3	...	...	...	3	2	1	...	...	...
Enteric Fever	3	...	...	1	2	...	...	...	1	2	...	...	1
Epidemic Influenza	9	...	1	...	2	3	3	2	2	1	4	...	...
Diarrhœa	16	14	1	...	...	...	1	6	4	3	3	...	...
Enteritis...	3	...	1	...	...	2	...	1	...	2	...	...	1
Erysipelas	1	...	...	...	...	...	1	...	...	...	...	1	...
Phthisis (Pulmonary Tuberculosis) ...	27	...	...	2	3	22	...	7	7	8	4	1	1
Other Tubercular Diseases	26	12	6	3	1	4	...	3	4	8	11	...	...
Cancer, Malignant Disease	40	...	...	1	...	22	17	11	12	4	12	1	5
Bronchitis	44	11	7	...	1	9	16	15	13	4	9	3	1
Pneumonia	54	16	12	4	3	14	5	20	13	10	9	2	1
Pleurisy	3	...	...	...	...	3	...	1	...	2	...	...	...
Other Diseases of Respiratory Organs ...	9	1	1	...	...	5	2	2	2	2	3	...	...
Alcoholism, Cirrhosis of Liver	7	...	...	...	...	5	2	1	1	2	3	...	...
Venereal Diseases	1	...	...	...	...	1	...	...	...	...	...	1	...
Premature Birth	28	28	...	...	...	...	...	3	7	11	7	...	...
Diseases and Accidents of Parturiton ...	3	...	...	...	...	3	...	...	...	...	3	...	...
Heart Diseases	46	...	...	3	3	27	13	13	8	10	13	2	...
Accidents	16	3	2	2	1	4	4	3	3	5	4	1	6
Suicides	5	...	...	...	...	4	1	1	...	2	2	...	...
All other Causes	169	44	11	2	7	44	61	37	41	41	41	9	11
All Causes	536	136	54	25	23	172	126	135	127	119	134	21	32

LOCAL GOVERNMENT BOARD RETURN.

TABLE V.—Infantile Mortality during the year 1907.

CAUSE OF DEATH.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All causes { Certified	26	7	8	10	51	16	11	13	6	7	7	8	2	7	5	3	136
All causes { Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	2	1	...	1	1	...	...	...	1	1	...	7
Diarrhœa, all forms	...	...	...	...	...	...	2	2	1	...	2	...	...	...	...	...	7
Enteritis, Muco-enteritis, Gastro-enteritis ...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	4
Gastritis, Gastro-intestinal Catarrh	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	3
Premature Birth	15	1	1	6	23	4	...	1	...	...	...	...	...	...	...	...	28
Congenital Defects	5	2	...	1	8	1	...	1	...	...	...	...	...	...	...	1	11
Atrophy, Debility, Marasmus	4	2	5	3	14	3	1	1	...	...	1	1	...	...	...	...	21
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Tuberculous Peritonitis : Tabes Mesenterica ...	...	...	...	...	...	...	2	4	...	2	2	...	1	...	...	...	11
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Convulsions	2	1	...	...	3	...	...	2	...	...	...	...	...	1	...	...	6
Bronchitis	...	...	1	...	1	2	...	...	1	...	...	1	...	2	2	2	11
Pneumonia	...	...	...	...	...	2	2	2	1	2	...	3	1	1	2	...	16
Suffocation, overlying	...	...	...	...	...	1	1	...	...	1	...	...	...	...	...	...	3
Other causes	...	1	1	...	2	...	1	...	...	1	1	1	...	...	...	...	6
All Causes	26	7	8	10	51	16	11	13	6	7	7	8	2	7	5	3	136

Births in the year { Legitimate, 1,209. Illegitimate, 42.

Deaths from all causes at all ages, 536.
Population estimated to middle of 1907, 47,904.

Deaths in the year of { Legitimate Infants, 132. Illegitimate Infants, 4.

INDEX TO CONTENTS.

Classification of Deaths in the Borough of Crewe during 1907.

	0-1 Year.	1-5	5-15	15-25	25-65	Over 65	Totals. 1907	Totals. 1906
I. SPECIFIC FEBRILE OR ZYMOTIC DISEASES.								
1.—Miasmatic Diseases.								
Smallpox... {Vaccinated	...	...	...	...	...	...	...	...
Smallpox... {Unvaccinated	...	...	...	...	...	...	...	...
Smallpox... {No Statement	...	...	...	...	...	...	...	...
Chickenpox ...	...	...	...	...	...	...	...	...
Measles ...	...	2	...	...	...	...	2	14
Scarlet Fever	...	2	4	...	...	...	6	5
Typhus ...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...
Whooping Cough	...	7	5	...	...	...	12	7
Mumps ...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup	...	...	3	3	...	...	6	4
Cerebrospinal Fever	...	...	...	...	...	...	...	1
Simple Continued and Ill-defined Fever	...	...	...	...	...	...	...	...
Enteric or Typhoid Fever	...	...	...	1	2	...	3	...
Influenza ...	...	...	1	...	2	3	9	5
Other Miasmatic Diseases	...	...	...	...	...	...	...	...
2.—Diarrhoeal Diseases.								
Cholera ...	...	...	...	...	...	...	...	...
Diarrhoea ...	...	7	1	...	...	1	9	24
Dysentery ...	...	...	...	...	...	...	...	...
3.—Malarial Diseases.								
Remittent Fever	...	...	...	...	...	...	...	...
Ague ...	...	...	...	...	...	...	...	...
4.—Zoogenous Diseases.								
Cowpox and effects of Vaccination ...	1	...	...	...	...	...	1	...
Other Diseases (e.g., Hydrophobia, Glanders, Splenic Fever)	...	...	...	...	...	...	...	1
5.—Venereal Diseases.								
Syphilis ...	...	...	...	...	1	...	1	2
Gonorrhoea, Stricture of Urethra ...	...	...	...	...	...	...	...	...
6.—Septic Diseases.								
Erysipelas ...	...	...	...	...	...	1	1	2
Pyaemia ...	...	...	...	...	...	...	...	2
Puerperal Fever	...	...	...	...	...	...	...	1
Tetanus ...	...	...	...	...	...	...	...	1
II. PARASITIC DISEASES.								
Thrush and other Vegetable Parasitic Diseases...	...	...	...	...	...	...	...	2
Worms, Hydatids and other Animal Parasitic Diseases ...	...	...	...	...	...	...	...	...
III. DIETETIC DISEASES.								
Want of Breast Milk, Starvation ...	...	...	...	...	...	...	...	...
Scurvy ...	...	...	...	...	...	...	...	...
Chronic Alcoholism ...	...	...	...	...	...	...	...	...
Delirium Tremens ...	...	...	...	...	2	...	2	2
IV. CONSTITUTIONAL DISEASES.								
Rheumatic Fever, Rheumatism of the Heart	...	...	...	1	...	...	1	1
Rheumatism ...	...	...	...	...	...	...	...	2
Gout ...	...	...	...	...	...	...	...	...
Rickets ...	...	1	...	...	...	...	2	2
Cancer, Malignant Disease	...	...	...	...	21	17	38	25
Sarcoma ...	...	...	1	...	1	...	2	3
Tabes Mesenterica ...	11	1	...	...	2	...	14	5
Tubercular Meningitis, Hydrocephalus	1	3	1	...	...	...	5	9
Phthisis ...	...	...	2	3	22	...	27	39
Other forms of Tuberculosis, Scrofula	...	2	2	1	2	...	7	13
Purpura, Haemorrhagic Diathesis ...	...	...	...	...	...	...	...	1
Anaemia, Chlorosis, Leucocythemia	...	...	...	...	...	...	...	4
Glycosuria, Diabetes Mellitus ...	...	...	...	...	2	1	3	6
Other Constitutional Diseases ...	...	...	...	...	...	...	...	2
V. DEVELOPMENTAL DISEASES.								
Premature Birth ...	28	...	...	...	...	...	28	27
Atelectasis ...	4	...	...	...	...	...	4	4
Congenital Malformations ...	7	...	...	...	...	...	7	4
Old Age ...	...	...	...	...	...	37	37	39
VI. LOCAL DISEASES.								
1.—Diseases of Nervous System.								
Inflammation of Brain or Membranes	1	1	1	1	2	1	7	2
Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis ...	...	...	...	...	10	13	23	29
Insanity, General Paralysis of the Insane	...	...	...	...	1	1	2	2
Epilepsy ...	...	...	...	...	...	...	...	2
Convulsions ...	4	3	...	...	...	...	9	9
Laryngismus Stridulus (Spasm of Glottis)	...	...	...	...	...	...	...	...
Disease of Spinal Cord, Paraplegia, Paralysis Agitans ...	...	...	...	...	...	...	...	3
Other Diseases of Nervous System ...	1	...	...	...	3	...	4	6
2.—Diseases of Organs of Special Sense. (e.g., of Ear, Eye, Nose) ...	...	...	...	1	...	...	1	...
3.—Diseases of Circulatory System.								
Pericarditis ...	...	...	...	...	...	...	...	1
Acute Endocarditis ...	...	...	...	...	...	...	...	...
Valvular Diseases of Heart ...	...	...	3	3	23	10	39	49
Other Diseases of Heart ...	...	...	...	...	4	3	7	18
Aneurism ...	...	...	...	...	1	1	2	1
Embolism, Thrombosis ...	...	...	...	...	1	...	1	...
Other Diseases of Blood Vessels ...	...	...	...	...	2	1	3	3
4.—Diseases of Respiratory System.								
Laryngitis ...	...	...	...	...	...	...	...	1
Croup (not spasmodic) ...	...	1	...	...	...	...	1	1
Emphysema, Asthma ...	...	...	...	...	...	1	1	1
Bronchitis ...	13	7	...	1	9	34	44	27
Pneumonia ...	3	3	2	3	12	3	26	14
Broncho-Pneumonia ...	13	9	2	...	2	2	28	26
Pleurisy ...	1	...	...	...	3	...	3	1
Other Diseases of Respiratory System ...	...	...	...	...	...	1	2	3
5.—Diseases of Digestive System.								
Dentition ...	1	...	...	...	...	...	2	4
Sore Throat, Quinsy ...	...	2	...	1	...	...	1	1
Diseases of Stomach ...	...	...	...	...	1	1	1	1
Enteritis ...	...	2	...	...	1	1	4	8
Obstructive Diseases of Intestines ...	...	7	1	...	2	...	10	21
Peritonitis ...	...	...	...	...	3	1	5	1
Ascites ...	...	1	...	...	2	...	3	1
Cirrhosis of Liver ...	...	...	...	...	...	...	...	...
Jaundice and other Diseases of Liver	...	...	...	...	3	2	5	8
Other Diseases of Digestive System ...	...	...	...	...	2	1	3	3
6.—Diseases of Lymphatic System. (e.g., of Lymphatics and of Spleen)	...	...	...	1	1	...	2	1
7.—Diseases of Gland-like Organs of Uncertain Use. (e.g., Bronchocele, Addison's Disease)	...	...	...	...	...	...	...	1
8.—Diseases of Urinary System.								
Nephritis ...	...	...	...	...	...	...	...	1
Bright's Disease, Albuminuria ...	...	2	1	1	7	1	12	7
Disease of Bladder or of Prostate ...	...	...	...	...	...	1	1	4
Other Diseases of the Urinary System ...	...	...	...	...	1	1	2	2
9.—Diseases of Reproductive System.								
a. Of Organs of Generation.								
Male Organs ...	...	...	...	...	1	...	1	1
Female Organs ...	...	...	...	...	...	...	...	...
b. Of Parturition.								
Abortion, Miscarriage ...	...	...	...	...	4	...	4	1
Puerperal Convulsions ...	...	...	...	...	...	...	...	1
Placenta Praevia, Flooding ...	...	...	...	...	...	...	1	...
Other Accidents of Child Birth ...	...	...	...	...	1	...	1	...
10.—Diseases of Bones and Joints.								
Caries, Necrosis ...	...	...	...	...	1	...	1	2
Arthritis, Otitis, Periostitis ...	...	...	...	...	...	...	...	...
Other Diseases of Bones and Joints ...	...	...	...	...	...	...	...	...
11.—Diseases of Integumentary System.								
Carbuncle, Phlegmon ...	...	...	...	...	...	...	...	...
Other Diseases of Integumentary System	...	...	...	...	...	...	...	...
VII. DEATHS FROM VIOLENCE.								
1.—Accident or Negligence.								
Fracture and Contusions ...	...	...	...	...	...	...	...	...
Gunshot Wounds ...	...	2	...	...	2	3	7	2
Cut, Stab ...	...	...	...	...	...	...	...	...
Burn, Scald ...	...	...	...	...	...	...	...	...
Poison ...	...	...	...	1	...	...	1	2
Drowning ...	...	...	...	...	...	...	...	...
Suffocation ...	...	...	...	...	...	...	...	1
Otherwise ...	3	...	...	...	...	...	3	2
2.—Homicide.	...	...	2	...	2	1	5	2
Manslaughter ...	...	...	...	...	...	...	...	...
Murder ...	...	...	...	...	...	...	...	...
3.—Suicide.								
Gunshot Wounds ...	...	...	...	...	...	...	...	...
Cut, Stab ...	...	...	...	...	...	...	...	...
Poison ...	...	...	...	...	...	1	1	1
Drowning ...	...	...	...	...	1	...	1	...
Hanging ...	...	...	...	...	...	...	...	...
Otherwise ...	...	...	...	...	...	...	...	...
4.—Execution.								
Hanging ...	...	...	...	...	1	2	3	3
VIII. DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.								
Dropsy ...	...	...	...	...	...	...	...	...
Debility, Atrophy, Inanition ...	21	1	...	...	...	...	...	...
Mortification ...	...	...	...	...	...	...	22	21
Tumour ...	...	...	...	...	...	...	...	2
Abscess ...	...	...	...	...	...	...	...	...
Haemorrhage ...	...	...	...	...	...	...	...	...
Natural Causes ...	...	...	...	...	...	...	...	...
Sudden Death (cause not ascertained)	...	...	...	...	...	...	...	...
Causes not specified or Ill-defined ...	...	...	...	...	...	...	...	...
Totals ...	136	54	25	23	172	126	536	560