

[Report 1896] / Medical Officer of Health, Crewe Borough.

Contributors

Crewe (Crewe and Nantwich, England). Borough Council.

Publication/Creation

1896

Persistent URL

<https://wellcomecollection.org/works/kxb84m8g>

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.



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

1896.

1896.



Annual Report

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

BOROUGH OF CREWE,

BY

HERBERT JONES,

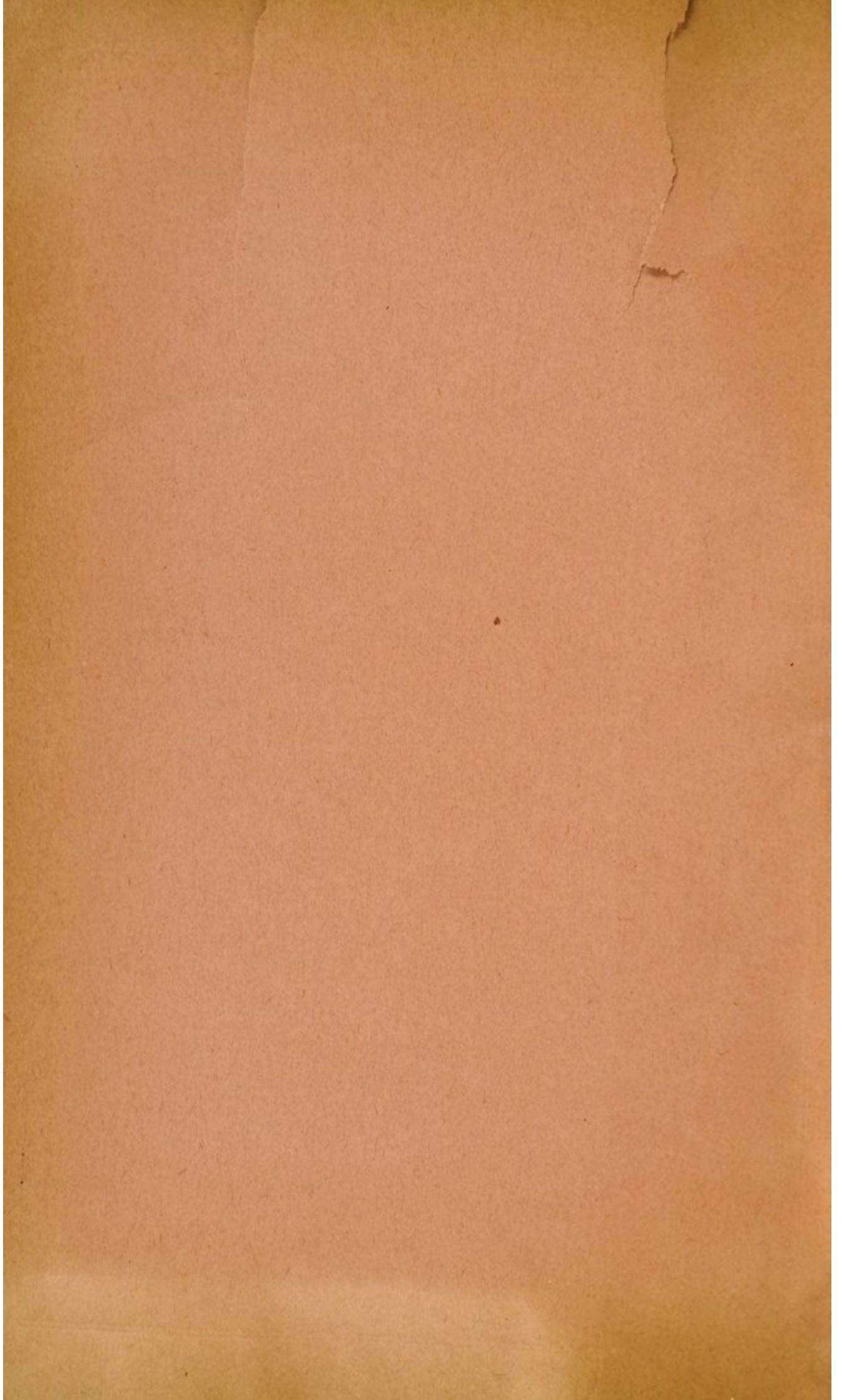
L.R.C.S.I., L.S.A., D.P.H., CAMB., &c.

MEDICAL OFFICER OF HEALTH TO THE BOROUGH.

THIS BEING THE SPECIAL FILE COPY FOR
LIBRARY B. M. A., IT IS PARTICULARLY
REQUESTED THAT IT MAY BE RETURNED
AT AS EARLY A DATE AS POSSIBLE.

CREWE:
WILMOT EARDLEY, PRINTER, CHESTER BRIDGE.

1897.




*With the Compliments of the
Medical Officer of Health.*

*Municipal Offices,
Earle Street,
Crewe,*

25 APR. 1897

189



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

<https://archive.org/details/b2912749x>

❖ 1896. ❖

Annual Report

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

BOROUGH OF CREWE,

BY

HERBERT JONES,

L.R.C.S.I., L.S.A., D.P.H., CAMB., &c.

MEDICAL OFFICER OF HEALTH TO THE BOROUGH.

CREWE:—

WILMOT EARDLEY, PRINTER, CHESTER BRIDGE.

1897.

BOROUGH OF CREWE.

HEALTH COMMITTEE.

Chairman:—

COUNCILLOR HENRY TAYLOR.

THE MAYOR (ALDERMAN W. McNEILL, J.P.)

ALDERMAN J. BRIGGS, J.P.	ALDERMAN R. PEDLEY, J.P.
„ A. P. COTTERILL.	AND
„ T. LATHAM.	„ H. WALLWORK, J.P.
COUNCILLOR G. BAILEY.	COUNCILLOR J. H. MOORE.
„ J. A. BOND.	„ C. H. PEDLEY, C.C.
„ J. CLARE.	„ J. ROBERTSON, J.P.
„ J. F. FEAR.	„ T. SMITH.
„ J. HALLARD.	„ P. SWINTON, J.P.
„ J. HARFORD.	AND
„ J. JONES.	„ E. WILSON.

HOSPITAL SUB-COMMITTEE.

COUNCILLOR HENRY TAYLOR. ALDERMAN W. McNEILL, J.P.
COUNCILLORS J. CLARE, J. F. FEAR, J. HALLARD, J. HARFORD,
C. H. PEDLEY, C.C., T. SMITH, AND P. SWINTON, J.P.

Sanitary Inspector:—

WILLIAM URQUHART.

Population at Census, 1891	...	...	...	32,783
Estimated Population at Midsummer, 1896	...	...	...	38,190
Area in acres	...	...	...	2,193
Birth-rate per 1,000 living	...	...	...	31·4
Death-rate „ „ „	...	...	...	14·8
Death-rate from Zymotic diseases	...	...	...	1 9
Deaths under 1 year to 1,000 births	...	...	...	138
Deaths under 5 years per cent. of total deaths	...	...	...	45
Number of persons to the acre	...	...	...	17

MUNICIPAL OFFICES,

EARLE STREET,

CREWE,

MARCH 15TH, 1897.

To the Chairman and Members of the Health Committee.

GENTLEMEN,

I beg to submit to you my fourth Annual Report upon the Sanitary condition of Crewe.

You will find that the death-rate—14·8 per 1,000—was only ·4 per 1,000 above the lowest rate recorded in the Borough. It was also much below the average (16·4) of the previous ten years; and also below the death-rate recorded during 1896 in England and Wales—17·1; the rate in Urban districts being 18·0 per 1,000, and in Rural districts 15·3 per 1,000. The Zymotic death-rate and the rate of Infantile mortality, though lowered, are both far too high.

During the year two cases of small-pox occurred—neither ending fatally, one in the Spring, the other in the Autumn. Scarlet-fever was prevalent more or less during the whole year, measles during the second and third quarters, whooping-cough during the first and fourth quarters, and diphtheria of a peculiarly fatal type during the last quarter of the year. Infantile diarrhoea prevailed only for about six weeks in July and August, and in December influenza attacked quite a large number of persons, two deaths resulting.

At the close of the year, of notifiable diseases there were 28 cases of scarlet-fever, 4 cases of typhoid-fever, and 4 cases of diphtheria; whooping-cough and influenza also prevailed to a considerable extent.

The Isolation Hospital, which has been building during the year, is now approaching completion, and its usefulness will be assured by the adoption from October 1st last of the Infectious Disease (Notification) Act (page 37), and in the case of diphtheria by the bacteriological examination which is to be made in doubtful cases (page 23).

The erection of a vibrating screen has enabled one-third of the ash-pit refuse to be burned under the boilers at the sewage farm pumping station, and an improved treatment of the night-soil has abolished a very great nuisance formerly connected with the farm (page 52).

The reconstruction of a large number of cess-pool privies and of privy-middens has been carried out; in many instances water-closets of one or other type having been substituted (page 45).

The disinfection of infected houses and articles is now more completely enforced, so that it is rarely any such escape this very necessary process (page 36).

The block or house-to-house system of dry ash-pit emptying has been organised, and with careful supervision will prevent any accumulation of refuse (page 47).

With regard to the future, I would urge upon you for consideration :—

The provision of recreation grounds (page 44).

The placing of back streets (secondary means of access) in a more cleanly condition (page 44).

The more complete adoption of the block system in connection with the cleaning of privy-closets at night.

- The abolition of all cess-pool and privy-midden closets, and the more general adoption of water-carriage (page 46).
- The erection of one or more destructors in the central part of the town to deal with the dry ashes not destroyed at the sewage farm.
- The erection of a Municipal lodging-house.
- The provision of public slaughter-houses.
- The more frequent use of section 41 of the Public Health Act, 1875, when dealing with nuisances (page 48).
- The prohibition, except under certain conditions, of all drains under buildings (page 39).
- The more general enforcement of Bye-law 59, which requires the sub-soil of the site of buildings to be effectually drained (page 7).

Area.

Central Ward	...	...	...	134	acres.
West	,,	...	...	676	,,
North	,,	...	...	942	,,
South	,,	...	...	441	,,
				—	
Borough of Crewe	...	...	...	2,193	,,
				—	

Height above Sea-level.

Sewage Farm	...	...	...	125	feet.
The Valley	...	...	...	145	,,
Market Hall	...	...	...	179	,,
Isolation Hospital...	...	...	...	182	,,
Nantwich Road	...	...	...	189	,,
Hightown	...	...	...	200	,,

Nature of Sub-soil.

A sub-soil of stiff clay extends over the whole of the Borough. Very exceptionally, principally in the highest parts of the town, and in some instances only for a few superficial yards, is there a sandy sub-soil.

Population.

In my last Annual Report I suggested that a census should be taken in March, 1896, that is five years from the date of the last Imperial census. The question was discussed both by the Health Committee and the School Attendance Committee, but it was decided not to carry out the proposal.

The figures in these pages are therefore based upon a population of **38,190**, the estimated number of persons living in Crewe at Midsummer, 1896, and arrived at as follows:—

Houses on Rate-books	...	...	7,866	(Table 4).
Empty houses	...	...	228	(Table 3).
			<hr/>	
Total occupied houses	...		7,638	
Persons per house—census 1891...			5	
			<hr/>	
			38,190	
			<hr/>	

On page 8 of my Report for 1894 will be found the census returns for Crewe and Church Coppenhall since the first Imperial census of 1801.

TABLE 1.

Population of Wards in 1896—

Central Ward	...	10,305
West	„	9,065
North	„	8,975
South	„	9,845

New Houses.

TABLE 2.

Plans passed 1891	...	...	139
„	„	1892	...
„	„	1893	...
„	„	1894	...
„	„	1895	...
„	„	1896	...

I would again urge the importance of enforcing the following bye-law (59), which is especially needed in a town such as Crewe, situated on a stiff clay sub-soil :—

“ Every person who shall erect a new building shall cause
 “ the sub-soil of the site of such building to be effectually
 “ drained by means of suitable earthenware field pipes,
 “ properly laid to a suitable out-fall, wherever the damp-
 “ ness of the site renders such a precaution necessary.”

Empty Houses.

The Assistant Overseer (Mr. A. Maywhort) has again been good enough to supply the following list of houses empty at Midsummer, 1896 :—

TABLE 3.

Rateable Value.	Under £5.	£5, under £10.	£10, under £20.	£20, under £30.	£30, under £40.	Total.
Central Ward ...	...	47	5	...	...	52
West Ward ...	2	56	2	1	...	61
North Ward ...	3	69	...	1	...	73
South Ward ...	3	15	24	...	...	42
Borough of Crewe	8	187	31	2	...	228
Per centage of empty houses at each group of rateable value.	5·1	3·1	2·2	·8	...	2·8

Houses on the Rate Books.

The Borough rate collectors have afforded most valuable information regarding the rateable values and the number of houses in the town; and from the following table supplied by them it will be found that 77 per cent. of the houses in the Borough are rated under £10 per annum, and 94 per cent. under £20 per annum.

TABLE 4.

Number of houses on the Rate Books, March 25th, 1896 :—

154 houses rated under £5 per annum.					
5905	„	„	at £5 and under £10	„	„
1378	„	„	£10	„	£20
229	„	„	£20	„	£30
95	„	„	£30	„	£40
45	„	„	£40	„	£50
15	„	„	£50	„	£60
15	„	„	£60	„	£70
10	„	„	£70	„	£80
4	„	„	£80	„	£90
5	„	„	£90	„	£100
10	„	„	£100	„	£200
1 house rated above £200.					

7866

The number of houses added to the rate books during 1896 was 278.

The rateable value of the Borough in 1896 was £124,492; an increase of £5,751 upon that of 1895.

Births.

The number of births registered during the year 1896 was 1,200, of which 626 were males and 574 females, equal to a birth-rate of 31·4 per 1,000 per annum. Of the 1,200 births 4·1 were illegitimate; in 1895 and 1894 the percentage was 3·2 and 4·4 respectively.

The birth-rate is 3·0 per 1,000 lower than that recorded for 1895, and is 3·0 per 1,000 per annum lower than the average rate for the ten preceding years.

The birth-rate during the year 1896 for England and Wales was 29·7.

TABLE 5.—Comparing the actual number of Births and the Birth-rate with those of previous years—

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
1st Qr.	281	229	263	236	240	264	273	288	290	303	271
2nd „	270	252	237	239	230	256	262	342	300	320	314
3rd „	236	230	233	232	245	255	284	305	313	317	295
4th „	242	217	221	223	207	222	226	293	312	297	320
Whole year }	1029	928	954	930	922	997	1045	1228	1215	1237	1200
Birth-rate for whole year. }	31·4	34·0	34·6	33·1	32·4	33·8	35·6	34·7	33·7	33·4	31·4

Deaths.

During the year 1896 there were registered in Crewe 568 deaths, of which 305 were males, and 263 females—equal to a death-rate of 14·8 per 1000. No adjustment has been made for deaths occurring in Institutions within or without the Borough. This rate is 1·6 per 1000 lower than that recorded for 1895, and 1·6 per 1000 below the average rate for the preceding ten years. With one exception—1894, when the death-rate was 14·4 per 1000, this is the lowest death-rate which has been recorded in the Borough. The monthly death-rate varied from 7·8 per 1000 in September, to 25·1 per 1000 in December.

There were four uncertified deaths, equal to ·7 per cent. of the total deaths.

As far as I could ascertain there were 8 deaths in the Borough among persons resident outside, and 11 deaths in districts outside of persons belonging to the Borough. With this adjustment the death-rate for the year is 14·9 per 1,000.

STILL-BORN CHILDREN.—The number of still-born children brought to the Cemetery for burial during 1896 and the six preceding years was as follows:—

1890	...	36	1893	...	48
1891	...	30	1894	...	37
1892	...	51	1895	...	71
		1896	...		65

The death-rate from all causes in England and Wales during 1896 was 17·1 per 1000. In Urban districts, 18·0 per 1000; in Rural districts, 15·3 per 1000.

ILLEGITIMACY.—There were 50 illegitimate births registered during the year, and there were six deaths among illegitimate children under one year of age. There does not appear to be such a preponderance of deaths among illegitimate children as prevails in many towns; indeed, in Crewe, an illegitimate child would seem to have a slightly better chance of surviving the first year of its life than a child born in wedlock.

TABLE 6.—Monthly death-rate from all causes.

	1893.	1894.	1895.	1896.
January ...	16·6	21·9	16·1	15·0
February ...	16·9	15·0	19·3	14·4
March... ..	26·4	14·6	18·7	13·2
April	20·0	12·0	16·7	12·0
May	21·7	12·0	13·1	15·3
June	22·0	14·3	7·8	11·3
July	25·1	15·6	14·4	13·1
August	16·9	12·6	20·0	12·0
September ...	11·2	12·0	18·8	7·8
October	15·6	10·6	17·1	16·0
November ...	17·9	16·0	17·5	20·7
December ...	24·7	16·6	16·5	25·1

TABLE 7.—Comparing the actual number of Deaths, and the Death-rate with those of previous years—

	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
1st Qr.	113	110	133	151	138	111	171	171	154	171	137
2nd ,,	85	102	85	114	77	127	143	193	115	115	125
3rd ,,	136	122	94	92	97	81	107	158	121	164	107
4th ,,	107	137	112	106	131	124	106	172	130	158	199
Whole year }	441	471	424	463	443	443	527	694	520	608	568
Death-rate for whole year. }	16·4	17·3	15·3	16·5	15·4	15·0	17·9	19·6	14·4	16·4	14·8

TABLE 8.—Apportioning the Deaths during 1896 to the Wards, giving the Death-rate and number of persons per acre.

Ward	Central.		West.		North.		South.	
Persons per acre	76		13		9		22	
	Numb'r of Deaths.	Death- rate.	Numb'r of Deaths.	Death- rate.	Numb'r of Deaths.	Death- rate.	Numb'r of Deaths.	Death- rate.
1st Quarter ..	43	16·6	35	15·4	40	17·6	19	7·7
2nd ,, ..	31	12·0	28	12·3	39	17·1	27	10·9
3rd ,, ..	38	14·7	25	11·0	22	9·8	22	8·9
4th ,, ..	46	17·8	49	21·6	53	23·6	51	20·7
Whole year ..	158	15·3	137	15·1	154	17·1	119	12·0

TABLE 9.—Apportioning the deaths during 1896 to the various age periods.

		Under 1 yr.	1 to 5	5 to 15	15 to 25	25 to 65	65 upwards	Total.
Central Ward ...	...	41	23	8	10	39	37	158
West Ward ...	...	41	15	6	10	42	23	137
North Ward ...	...	48	34	7	6	39	20	154
South Ward ...	...	36	18	5	6	31	23	119
Borough of Crewe, 1896		166	90	26	32	151	103	568
„ „ 1895		198	90	31	30	169	90	608
„ „ 1894		174	72	22	24	154	74	520
„ „ 1893		211	139	38	19	181	106	694

TABLE 10.—Rates of Mortality of Children under one year of age, from principal infantile diseases, per 1,000 births.

	1893.		1894.		1895.		1896.	
	Total deaths	Rate per 1,000 births.	Total deaths	Rate per 1,000 births.	Total deaths	Rate per 1,000 births.	Total deaths	Rate per 1,000 births.
From all causes ...	211	...	174	...	198	...	166	...
ditto ...	...	171	...	143	...	160	...	138
Diarrhœa ...	65	...	6	...	42	...	19	...
ditto ...	...	52	...	4	...	33	...	16
Lung diseases ...	45	...	46	...	41	...	63	...
ditto ...	...	36	...	37	...	33	...	52
Convulsions ...	17	...	16	...	19	...	11	...
ditto ...	...	13	...	13	...	15	...	9
Premature birth...	17	...	23	...	21	...	18	...
ditto ...	...	13	...	18	...	17	...	15
Tabes Mesenterica	13	...	15	...	10	...	4	...
ditto ...	...	10	...	12	...	8	...	3
Measles ...	10	...	...	...	4	...	2	...
ditto ...	...	8	...	...	...	3	...	2
Whooping Cough	7	...	8	...	2	...	1	...
ditto ...	...	5	...	6	...	1	...	1
Tubercular disease	4	...	3	...	2	...	1	...
ditto ...	...	3	...	2	...	1	...	1
Debility ...	3	...	24	...	21	...	14	...
ditto ...	...	2	...	19	...	17	...	12

Infantile Mortality.

There is a marked decrease in the death-rate among children under one year of age, the lower birth-rate doubtless affecting the mortality to a certain extent. A reference to Table 10 will shew too how largely infantile mortality in Crewe is dependent upon the deaths from diarrhœa. In 1893 and 1895 diarrhœa was very fatal among young children, and in those years the infantile mortality was very high. In 1894 and 1896 deaths from diarrhœa were much fewer in number, and the infantile mortality correspondingly less.

On page 27 I have shewn how there is again a grouping of fatal cases of diarrhœa in those districts where cess-pool privies, privy middens, and pail-closets abound.

Zymotic Diseases.

Number of Deaths - - - 76.

Although the number of deaths registered from the 7 principal Zymotic diseases was 16 fewer in 1896 than 1895, this decrease is more apparent than actual, and is due to the decreased number of deaths from infantile diarrhœa. From measles, typhoid fever, diphtheria, and whooping cough, the number of deaths is increased.

Two cases of small-pox occurred—one in March, the other in October, neither terminated fatally. Scarlet fever was very prevalent during the first and third quarters of the year; measles during the second and third quarters; and in the last quarter diphtheria was present to such an extent as to cause a considerable amount of anxiety. Typhoid fever has been present more or less the whole year, and whooping cough for the second half of the year.

The number of cases of Zymotic disease which came under my notice, and of which a record was taken, was 586, of which 430 refer to the first three quarters of the year, and 156 to the last quarter, the period during which the Infectious Disease (Notification) Act was in force. (Table 11).

The Zymotic death-rate during the year was 1·9 per 1,000, and was ·5 per 1,000 below the rate for 1895, and ·5 per 1,000 below the average rate for the previous ten years. The Zymotic death-rate for the whole of England and Wales during 1896 was 2·18.

TABLE 11.—Number of *cases* of Zymotic Disease which have come to the knowledge of the Medical Officer of Health during 1896 :—

	Centr'l Ward	West Ward	North Ward	South Ward	Boro' of Crewe
Small-pox	1	1	...	...	2
Measles	43	21	20	47	131
Scarlet-fever	67	107	51	152	377
Diphtheria	4	3	4	18	29
Whooping-cough	5	1	3	...	9
Diarrhoea	7	5	4	6	22
Typhoid-fever	3	5	3	5	16
Total	130	143	85	228	586

TABLE 12.—Number of deaths from the seven principal Zymotic diseases during 1896, in the Borough of Crewe,

	Under 5 years.	Over 5 years.	TOTAL.
Small-pox ... ..	...	...	...
Measles	9	...	9
Scarlet-fever	16	2	18
Diphtheria	8	2	10
Whooping-cough	8	...	8
Diarrhoea	20	2	22
Typhoid-fever	1	8	9
Total... ..	62	14	76

TABLE 13.—Number of deaths from the seven principal Zymotic diseases in the various Wards during 1896.

	Centr'l	West	North	South
Small-pox ... ..	...	...	...	...
Measles	3	...	4	2
Scarlet-fever	4	3	4	7
Diphtheria	3	2	...	5
Whooping-cough	4	1	3	...
Diarrhoea	7	5	5	5
Typhoid-fever	3	4	1	1
Total	24	15	17	20
Death-rate per 1,000 per annum ...	2.2	1.6	1.8	2.0

Small-pox.

Number of deaths - - 0.

On March 29th a case of small-pox was reported to me. The small-pox hospital was at once got in readiness, nurses engaged, and the patient removed. The patient had been vaccinated in childhood, but not re-vaccinated. She remained in the hospital four weeks and made a good recovery. The room she had occupied in her own house, with its contents, were disinfected with the equifex sprayer, and by means of the steam disinfectant. Every person who had been in contact with the patient during the fourteen days prior to the attack, was re-vaccinated and kept under observation for a fortnight. No second case occurred. The cost of the measures which were taken amounted to £40.

On October 5th, a notification was received of a case of small-pox, the patient having come from London during the incubating stage. As the Medical Attendant was averse to his removal to the hospital, the patient, who had been vaccinated but not re-vaccinated, was isolated at home, the only two members of his family being re-vaccinated. He too, made a good recovery.

TABLE 13.—Actual number of deaths occurring from small-pox in the Borough of Crewe during each year since 1874 :—

1874	...	...	4 deaths	1882	...	...	0 deaths
1875	...	...	1 ,,	1883	...	...	1 ,,
1876 to 1879	...	...	0 ,,	1884	...	...	1 ,,
*1880	...	...		1885 to 1896	...	...	0 ,,
1881	...	...	0 ,,				

* No record.

Measles.*Number of Deaths - - 9.*

During the middle half of the year measles was very prevalent and seriously affected the attendance of school children; considering the extent of the epidemic the mortality was low. Of the nine deaths recorded, 5 were among children under two years of age, three of 3 years, and one of 4 years.

Death-rate per 1,000 per annum from Measles, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward	North Ward	South Ward
1896..	0.2	.2	..	.4	.2
1895..	0.2				
1894..	..				
1893..	1.0				
1892..	.2				
		Frank St. Gladstone St Earle St.		Martin St. Earle St. Thomas St.	Herdman St. South St.

TABLE 15.—Actual number of deaths from measles occurring in the Borough of Crewe during each year since 1874 :—

1874...21 deaths	1882... 1 deaths	1890...14 deaths
1875...11 ,,	1883...18 ,,	1891... 1 ,,
1876... 2 ,,	1884... 1 ,,	1892... 5 ,,
1877... 0 ,,	1885...31 ,,	1893...34 ,,
†1878...30 ,,	1886... 0 ,,	1894... 0 ,,
1879... 1 ,,	1887...32 ,,	1895... 7 ,,
*1880...	1888... 7 ,,	1896...9 ,,
1881... 9 ,,	1889... 8 ,,	

* No record.

† The second half of the year only.

Scarlet Fever.

Number of Deaths - - 18.

It will be remembered that at the end of 1895, Scarlet-fever prevailed to so great an extent that on November 22nd the public elementary schools were closed by an order of the Town Council for a period of six weeks. In November 8 deaths occurred; in December there were only two fatal cases, and I have reason to believe that when the schools re-opened on January 6th, 1896, the epidemic had practically died out. Within a week, however, of the children being brought together again there was a renewed outbreak, four schools being chiefly affected, and the simultaneous sickening of several children pointed very strongly to the return to school of one or more scholars in an infected condition. During January I heard of 63 cases, and four of these proved fatal; in February I heard of 41 cases, and 2 were fatal; in March of 38 cases, and of these 3 were fatal; in April of 42 cases, all of which recovered; in May I heard of 17 cases, and one terminated fatally; in June I recorded 31 cases, and there were two deaths; in July I heard of 3 cases; in August of 11; and in September of 28; and in each of these 3 months one death was registered. This brings us to the period when the Infectious Disease (Notification) Act came into force, and consequently my information was much more precise. In October 61 cases were notified; in November 14; and in December 29, one death occurring in each month. On page 37 are reported the steps which have been taken to prevent the spread of this and other infectious diseases so far as concerns the public schools, &c.; and on page 37 the method of disinfection of houses, clothing, &c. I would point out here that the 104 cases notified during the 3 months in which the Act has been in operation occurred in 71 families, so that 33 patients were attacked owing to insufficient isolation of an initial case.

Death-rate per 1,000 per annum from scarlet-fever, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896...	·4	·3	·3	·4	·7
1895...	·5				
1894...	·2				
1893...	·5				
1892...	·1	Ludford St. John St. Chetwode St Bank St.	Cemetery Rd Ford Lane (2)	Market St. Oakley St. Vincent St. Herbert St.	Edleston Rd. Hope St. Pedley St. Ruskin Road Bedford St. Nantwich Rd Fareham's Row

TABLE 16.—Actual number of deaths from scarlet-fever occurring in the Borough of Crewe during each year since 1874:—

1874... 9 deaths	1882... 7 deaths	1890... 0 deaths
1875...43 ,,	1883 .. 7 ,,	1891... 2 ,,
1876... 4 ,,	1884... 0 ,,	1892... 3 ,,
1877...22 ,,	1885...13 ,,	1893...19 ,,
1878...many ,,	1886... 9 ,,	1894... 8 ,,
1879...77 ,,	1887... 7 ,,	1895.. 22 ,,
*1880...	1888... 8 ,,	1896...18 ,,
1881...28 ,,	1889...16 ,,	

* No record,

Diphtheria.

Number of Deaths - - 10.

One death was recorded from diphtheria in May, and two in September, while in the last three months of the year, the disease assumed grave epidemic dimensions, twenty-five cases being notified in twelve households during that period, and seven deaths were recorded. An examination of the premises occupied by those affected was in every instance made, and in nine of the twelve houses some one or other form of unhealthy surroundings were found. In one instance the yard drain which received the waste water from the kitchen sink was entirely open, the old iron D trap having been removed altogether. In two other cases there was found to be a distinct outpouring of sewer or drain gas from the inlet grating adjoining the house occupied by the diphtheritic patient. It is true that there is no direct communication between these inlet openings and the main sewer, a syphon trap intervening, so that it would appear as though the only foul air which escapes can be that coming from the house drain, but my attention has so frequently been called to objectionable smells arising from them that I feel sure the syphon must in some way be at fault, either it is not laid perfectly true, and therefore does not effectually trap the sewer, or it is not self cleansing and faecal matter lying in the bottom decomposes, impregnates the water in the trap, and thus foul gases are given off from the very trap itself. In a fourth case where diphtheria found a footing a drain from the cellar communicated directly with the main sewer, no trap of any kind intervening. In this connection I cannot speak too strongly in condemnation of any opening in a cellar, whether trapped or untrapped, which has a direct opening into a drain or sewer. Even if such an opening be trapped, unless the cellar is constantly used, the trap, if water be used as the seal, is liable to become untrapped, or again the temperature of the air in the house often varying considerably from that in the drain or sewer, the traps may readily be forced, and sewer gas more or less impregnated with disease germs may mingle with the air breathed by the occupants of the house.

In December I received permission from the Health Committee to submit material taken from the throats of persons suspected of having diphtheria to Professor Delépine, of Owens College, Manchester, for bacteriological examination, and I anticipate much good will come from this verification or otherwise of diagnosis. The arrangement with Professor Delépine dates from January 1st last.

In carrying out the scheme I followed very much upon the lines adopted by the Manchester Corporation, whose course of procedure has been very carefully elaborated by their Medical Officer of Health (Dr. Niven), to whom I am indebted for much valuable assistance.

The following circular letter which has been sent to every Medical Practitioner in the town, explains pretty fully, not only the object of the scheme, but the manner in which it is carried out:—

HEALTH DEPARTMENT,

MUNICIPAL OFFICES,

EARLE STREET.

DEAR SIR,

I have pleasure in informing you that the Town Council have decided to give facilities to Medical Practitioners in the diagnosis of cases of diphtheria occurring within the Borough. That many cases of diphtheria—more especially those of a small degree of severity—are difficult to recognise, is a common experience; such cases, if unrecognised, are liable to spread the disease, and again if they *are* recognised it is difficult to persuade patients that such apparently slight symptoms as may prevail can really require either isolation from other members of their family, or disinfection, or indeed that any precautionary preventive measures need be taken. Arrangements have been made with the Council of Owens College, Manchester, and with Professor Delépine, to make a bacteriological examination of

material obtained from cases suspected to be suffering from diphtheria. The cost of this examination will be borne by the Corporation; and the notification fee of 2/6 will be paid to the Practitioner notifying, even if the case notified is shewn, not to be one of diphtheria.

If no bacteriological examination is requested, it will be presumed that the case notified admits of no doubt, and the necessary precautions, as regards isolation and disinfection, will be enforced.

A number of tubes are kept at the Municipal Offices, each containing materials by means of which a Practitioner can obtain from a suspected case matter for transmission to Professor Delépine. The tubes are enclosed in a wooden case, on the outside of which are printed instructions for taking the matter for examination. A copy of these instructions is appended herewith. Professor Delépine wishes it to be understood that unless the particulars asked for are given, no bacteriological examination will be made.

When the Medical Attendant requires a tube, he can either by telephone, or by writing across the notification certificate, request that it be sent to his patient's address, or to his own house. The Messenger who delivers the tube will, if desired, wait to receive it back and send it forthwith to Manchester, or the Medical Attendant can himself transmit it. Professor Delépine will send his report to the Medical Officer of Health the following day, and a copy will at once be forwarded to the Medical Attendant. In order that the diagnosis may not be delayed, the tube should reach Owens College by 3 p.m. on any one of the days, Monday to Friday, and on Saturday by 1 p.m. No diagnosis will be given on Sunday.

I beg to remain,

Dear Sir,

Sincerely yours,

Medical Officer of Health.

Death-rate per 1,000 per annum from diphtheria, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896...	·2	·2	·2	...	·5
1895...	·05				
1894...	·05				
1893...	·5				
1892...	·3	Wistaston Rd Market St. Bank St.	West St. Hulme St.		Edleston Rd. Waverley Place Brooklyn St. Lawton St. Herdman St.

TABLE 17.—Actual number of deaths from diphtheria occurring in the Borough of Crewe during each year since 1874:—

1874... 0 deaths	1882... 4 deaths	1890... 4 deaths
1875... 7 ,,	1883... 6 ,,	1891... 3 ,,
1876... 7 ,,	1884... 4 ,,	1892... 9 ,,
1877... 2 ,,	1885... 4 ,,	1893... 19 ,,
*1878...	1886... 5 ,,	1894... 2 ,,
1879... 2 ,,	1887... 16 ,,	1895... 2 ,,
*1880...	1888... 14 ,,	1896... 10 ,,
1881... 1 ,,	1889... 8 ,,	

* No record.

Whooping Cough.*Number of Deaths - - 8.*

Until mothers can be made to believe that this disease is exceptionally fatal to young children the death-rate will continue to be high. There were many cases in the early part of the year, and one death was recorded in January. Again in the last four months of the year there was an outbreak which is still in activity. One death occurred in each of the three months—August, September, and October; and there were four deaths in December.

Death-rate per 1,000 per annum from whooping cough, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896...	.2	.3	.1	.3	...
1895...	.1	.1	.4	...	.1
1894...	.5				
1893...	.4				
1892...	.8	Betley St. Newdigate St. Wistaston Rd Dorfold St.	Ramsbottom St.	Chetwode St. Ludford St. Middlewich St.	

TABLE 18.—Actual number of deaths from whooping-cough occurring in the Borough of Crewe during each year since 1874 :

1874... 1 deaths	1882... 9 deaths	1890... 0 deaths
1875... 9 ,,	1883... 4 ,,	1891...13 ,,
1876... 2 ,,	1884...14 ,,	1892...23 ,,
1877... 9 ,,	1885...11 ,,	1893...14 ,,
*1878...	1886... 8 ,,	1894...19 ,,
1879... 9 ,,	1887... 4 ,,	1895... 7 ,,
*1880...	1888... 4 ,,	1896...8 ,,
1881... 4 ,,	1889...17 ,,	

* No record.

Diarrhoea.

Number of Deaths - - 22.

Of the total number of deaths registered from diarrhoea, 20 were among children under 5 years of age, and 19 of these again among infants under twelve months old. In 1895 deaths from infantile diarrhoea occurred during a long three months, viz. :— July, August, and September, and during the whole of this time the 1-foot and 4-foot earth thermometers registered respectively, with only the slightest variations, 62 degrees and 58 degrees F. In 1896, however the temperature of the earth at these two depths did not reach these points until the middle of July, and only remained elevated until the end of August, and it was during this six weeks that 18 deaths from infantile diarrhoea were registered. It will be seen from Table 19 that the disease has always been prevalent in Crewe, and there can be little doubt that one cause of this annual slaughter is the existence of so large a number of old-fashioned badly constructed cess-pool privies, and privy middens, the walls of which are constructed of uncemented brickwork, thus allowing the excrement to soak into the surrounding ground; to this danger must be added the pail-privy accommodation which is only too prevalent, and where the pails remain uncleaned year in and year out, the duplicate system of pails not being in operation as in some other towns.

There is one district in the town—adjoining Henry Street—which contains 271 houses, only seven of which are provided with water-closets, the remaining houses have either cess-pool^l privies or pail-closets. Each Summer the deaths in this group of houses from infantile diarrhoea have always very much exceeded those in other parts of the town. In the Spring of last year, with the Sanitary Inspector, I made a very careful inspection of all the houses in this particular district, and, in addition to finding nearly 50 dilapidated cess-pool privies within 6 feet of the back doors of the houses, we discovered that a large proportion of the pail-closets were in a very filthy condition, especially as regards the pail-cupboard; every one of the cupboards was well cleaned

out and sprayed by means of the equifex sprayer with solution of corrosive sublimate 1 in a 1,000; the empty pails were also sprayed with the like disinfectant, and, in addition for six successive weeks, the pails had placed in them the morning after the night upon which they had been emptied, about 7 lbs. of dried peat, which not only absorbed and deodorised the pail contents but effectually cleansed the sides and bottom of the pail. I regret that owing to a difficulty in obtaining the peat, this method of dealing with the pail-closets could not be continued, as I am convinced it would very considerably diminish their most objectionable features. It is noticeable that following these steps which were taken to make the district at any rate a little more cleanly, there were no deaths recorded within its limits from infantile diarrhoea, although as stated above it has hitherto been a hot-bed of the disease.

Death-rate per 1,000 per annum from diarrhoea, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896...	·5	·6	·4	·4	·5
1895...	1·3	1·0	1·3	1·8	·9
1894...	·3				
1893...	2·5				
1892...	·8				
		Frank St. Alice St. Gladstone St. Newdigate St. Oakley St. Albert St. Beech St.	West St. Samuel St. Minshull New Road (2)	Sheppard St. Market St. Martin St. Underwood Lane	Mill St. (2) Railway St. Alton St. Fareham's Row

TABLE 19.—Actual number of deaths occurring from diarrhoea in the Borough of Crewe during each year since 1874 :—

1874...21 deaths	1882...16 deaths	1890...15 deaths
1875...19 ,,	1883...10 ,,	1891...11 ,,
1876...21 ,,	1884...32 ,,	1892...24 ,,
1877... 5 ,,	1885... 6 ,,	1893...93 ,,
1878...41 ,,	1886...39 ,,	1894...13 ,,
1879... 2 ,,	1887...14 ,,	1895...49 ,,
*1880...	1888... 7 ,,	1896...22 ,,
1881... 0 ,,	1889...14 ,,	

* No record.

Typhoid Fever.

Number of Deaths - - 9.

Isolated cases occurred during the whole year, and of the nine deaths one was registered in March, two in each of the months—May, June, and August, one in November, and one in December. Nineteen cases were brought to my notice, ten since October, when notification was made compulsory. Immediately notification is received of a case of typhoid-fever, a covered bucket containing peat and a disinfectant is sent to the house indicated with instructions to place all the patients' discharges only in the bucket, which is removed and replaced by a fresh bucket daily. The contents of these buckets are taken to the sewage farm and burned in a small cremator at the pumping station. At the end of these pages will be found the instructions as to the nursing of typhoid patients, a copy of which is sent to every household where the disease is known to exist.

Death-rate per 1,000 per annum from typhoid-fever, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896...	·2	·2	·4	·1	·1
1895...	·1	·1	·1	·1	·1
1894...	·1				
1893...	·2				
1892...	·1				
		Market Ter'ce Meredith St. (2)	Alexandra St. (3) Jackson St.	New St.	Railway St.

TABLE 20.—Actual number of deaths from typhoid-fever occurring in the Borough of Crewe during each year since 1874 :—

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

* No record.

Phthisis.

Number of Deaths - - - 33.

The death-rate from consumption is the lowest, of which there is any record, and is .3 per 1,000 below the average rate of the preceding ten years. Twenty of the total deaths were among males, thirteen among females. As regards the age at death, 16 were between 25 and 45 years. Ten deaths occurred in the Central Ward, eleven in the West, six in the North, and six in the South Ward.

In an increasing number of cases the bedding, &c., and the houses occupied by these consumptive patients have been disinfected, and by means of circular "instructions"—a copy of which is appended—it has been endeavoured to impress upon those concerned that consumption is a distinctly infectious disease, and that preventive measures can and should be taken to prevent its spread both by the householder and the sanitary authority.

Death-rate per 1,000 per annum from phthisis.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896	.8	1.0	1.2	.6	.6
1895...	1.1	1.0	1.4	1.5	.6
1894...	1.0				
1893...	.9				
1892...	.8				

TABLE 21.—Actual number of deaths from phthisis occurring in the Borough of Crewe during each year since 1874 :—

1874...31 deaths	1882...28 deaths	1890...36 deaths
1875...30 ,,	1883.. 45 ,,	1891...23 ,,
1876 ..27 ,,	1884...25 ,,	1892...24 ,,
1877...19 ,,	1885...33 ,,	1893...31 ,,
*1878...	1886...34 ,,	1894 ..35 ,,
1879...28 ,,	1887...39 ,,	1895...42 ,,
*1880...	1888...22 ,,	1896...33 ,,
1881...26 ,,	1889...38 ,,	

* No record.

Influenza.

Number of Deaths - - 3.

One death from this disease was recorded in May and two in December ; at no period does it appear to have been epidemic.

Death-rate per 1,000 per annum from Influenza, locating the fatal cases in 1896.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1896..	·07	·01	...	·01	...
1895...	·1				
1894...	·15			...	
1893...	·2			...	
1892...	·3			...	
		Beech St. Fleet St.		Broad St.	

Pneumonia.

Number of Deaths - - 71.

Forty of the seventy-one deaths from inflammation of the lungs were among children under 5 years of age. In 1895 there were 49, in 1894 there were 45, and in 1893 there were 90 deaths from this cause.

Death-rate per 1,000 per annum from Pneumonia :—

1896	...	...	1·8
1895	...	...	1·3
1894	...	...	1·2
1893	...	...	2·5
1892	...	...	1·2

Deaths in the Cottage Hospital.

Five deaths have occurred in this Institution; one after extensive burns, and the other four from physical causes. Two of the five patients were resident outside the Borough.

Deaths in the Accident Hospital.

There were four deaths in the L. & N. W. Ry. Co.'s hospital, two following accidents which had occurred in the Company's works, one after injuries caused by being run over by a locomotive engine, and one after injuries caused by accidentally falling through a bridge.

Inquests.

There were 34 Inquests held during 1896, of which 19 were upon males and 15 upon females. Of the total number 2 were upon children under one year.

TABLE 22.—Number of Inquests during the past 13 years :—

1883	...	25	1890	...	35
1884	...	21	1891	...	23
1885	...	23	1892	...	28
1886	...	24	1893	...	27
1887	...	21	1894	...	30
1888	...	14	1895	...	42
1889	...	26	1896	...	34

TABLE 23.—Causes of death as recorded at Coroner's Inquests :—

	1893	1894	1895	1896
Accident in Works	2	-	2	2
Alcoholism	1	-	3	2
Apoplexy	-	1	2	2
Asphyxia	-	2	1	-
Blood-poisoning	-	2	-	-
Burns	-	1	3	6
Convulsions	1	3	2	1
Choking	-	-	-	1
Drowning	-	1	-	-
Epilepsy	-	1	-	-
Exposure to Cold	-	1	-	-
Fall down stairs	3	2	3	1
Fall in house	-	-	1	-
Fall in street	1	-	-	2
Found Dead	-	-	1	-
Hæmorrhage	-	1	1	2
Heart disease	1	2	1	2
Injury to head	-	-	1	2
Injury to spine	-	2	-	-
Meningitis	1	-	-	-
Murder	-	1	-	-
Natural Causes	3	5	2	1
Overlain	2	1	1	-
Pleurisy	1	-	-	-
Pneumonia	1	1	2	1
Poisoning (misadventure)	-	-	3	1
Run over by train	5	-	-	2
Scalds	1	1	2	-
Scarlet Fever	-	-	1	-
Senile decay	-	-	1	-
Suicide	3	1	5	2
Syncope	1	1	4	3
Typhoid Fever	-	-	-	1

TABLE 24.

Vital Statistics of Crewe Borough.

	Birth-rate.	Death-rate per 1,000 per annum.							Per 1000 born under 1 year.
		All Causes.	Zymotic	Respiratory.	Phthisis	Diarrhoea.	Children. Per cent. of total Deaths under		
							1 year.	5 years.	
1886...	38·4	16·4	2·6	2·2	1·2	1·4	27·6	37·8	118
1887...	34·0	17·3	3·2	2·8	1·4	·5	28·8	46·7	146
1888...	34·6	15·3	1·5	3·7	·8	·3	25·9	...	113
1889...	33·1	16·5	2·2	3·0	1·3	·5	29·6	45·3	137
1890...	32·4	15·4	1·8	3·1	1·2	·5	29·5	39·5	142
1891...	33·8	15·0	1·2	4·3	·8	·4	29·3	39·5	130
1892...	35·6	17·9	2·3	3·2	·8	·8	30·7	45·0	154
1893...	34·7	19·6	5·3	4·4	·9	2·5	30·4	50·7	171
1894...	33·7	14·4	1·3	2·9	1·0	·3	33·4	47·3	143
1895...	33·4	16·4	2·4	3·2	1·1	1·3	32·5	47·3	160
Average of above 10 years.	34·4	16·4	2·4	3·3	1·05	·8	29·8	44·3	141
1896	31·4	14·8	1·9	4·2	·8	·5	29·2	45·0	138

Isolation Hospitals.

Small-pox.—During the month of April this Hospital was occupied by one patient under circumstances related on page 17. After the patient's discharge the house was disinfected with solution of corrosive sublimate, 1 in a 1,000, by means of the equifex sprayer, all the walls and ceilings were limewashed, and the bedding was passed through the steam disinfector.

Scarlet-fever.—The building of this Hospital was begun in January, and should have been completed by the end of November, various causes—including a strike of Joiners in the Summer months conspired to retard the work, and it is hardly possible that the buildings can be ready for occupation before the beginning of the Autumn of 1897.

In April I presented a Report to the Hospital Committee in which I pointed out the advantages which would be gained by having the Hospital buildings lighted by electric light; I suggested at the same time that a furnace, of a type suitable to consume dry ash-pit refuse, might be erected to supply the necessary steam for an engine, for the disinfector, and for the laundry. The Committee very carefully considered the matter, and visited furnaces which it was thought might answer the purpose they had in view. After recommending that the Corporation erect a refuse furnace for the purpose of raising steam, and also that the buildings be lit with electric light, tenders for the supply of the necessary plant were invited, and on the basis of these tenders, in October application was made to the Local Government Board for sanction to borrow the sum of £500 for electric lighting purposes, and £500 for the purpose of erecting a refuse furnace. At the same time application was made for sanction to borrow an additional £1,000 for the general buildings, necessitated principally by the altered position of the administrative block to enable future extensions to be more advantageously made.

Considerable discussion took place in the Committee and in the whole Council as to whether it would be desirable to place a refuse furnace on the Hospital site, the majority finally deciding

in favour of the furnace, and pending the Inquiry by the Local Government Board a further resolution was passed that the buildings should be lighted with electric light in the event even of the Local Government Board refusing to sanction a loan for the erection of a refuse furnace. Very careful enquiries from those who have had electric light installations for some years of about the same size as that proposed for the Hospital,—100 16 c.p. lamps—shewed that the probable annual cost of electric light over gas would be about £15. It should be remembered that steam must be produced both for the laundry and the disinfecter, the cost therefore of steam raising would not be so great as though it were raised solely for electric lighting purposes. The electric plant will further be capable of working four 18-inch ventilating fans, one of which will be placed at the gable ends of the two large pavilions, and will extract the foul air from the wards through ducts connected with ceiling gratings. *

Disinfection.

7 tons of carbolic-acid powder has been used during the year by the night scavengers, who are instructed to use an unlimited quantity. The same kind of powder is also given gratuitously to those who apply at the Sanitary Inspector's Office, and in this way 487 packets were distributed during 1896. The steam disinfecter was used for the disinfection of bedding, clothing, &c., on 151 days. A new 2-wheel van, completely closed, was purchased during the year, and is to take the place of the old ambulance van formerly used to carry infected clothing from the town to the disinfecting station. I regret that the adjoining districts have not taken advantage of the arrangement made with them in 1894 to carry out disinfection from households in their respective localities. In one instance only have articles been sent from outside the Borough.

* On January 8th a Public Enquiry was held by Dr. S. W. Wheaton on behalf of the Local Government Board. The Board have sanctioned an additional loan for £1,000 for general purposes, have refused to sanction a loan for £500 for the purpose of erecting a refuse furnace, and are prepared to sanction the loan for electric lighting purposes, but advise the Corporation to delay putting in the installation until there is a town's supply of electric light.—March 20th, 1897.

There have been altogether 281 houses disinfected, the method of disinfection being that described in my last Annual Report, viz. :—a solution (1 in 1,000) of corrosive sublimate sprayed upon the ceiling, walls, &c., from the equifex sprayer. I have still no cause to regret having adopted this means of disinfection in place of sulphur fumigation, though it is undoubtedly a more costly proceeding from the fact that two men are required to carry out the work. I understand that many other towns are now adopting the same means of disinfection which has been practised in Paris for some years, although Crewe was the first town in England to carry it out. It is only very exceptionally that any objection is now made to the disinfection either of articles of clothing, &c., or of houses; so rarely indeed that when it does happen I should feel quite justified in enforcing section 6 of the Infectious Disease (Prevention) Act, which reads

“ Any local authority, or the Medical Officer of Health of
 “ any local authority generally empowered by the authority
 “ in that behalf, may, by notice in writing, require the
 “ owner of any bedding, clothing, or other articles which
 “ have been exposed to the infection of any infectious
 “ disease, to cause the same to be delivered over to an
 “ officer of the local authority for removal for the purpose
 “ of disinfection; and any person who fails to comply with
 “ such requirement shall be liable to a penalty not exceed-
 “ ing ten pounds.”

Notification of Infectious Diseases.

It is exceedingly gratifying to be able to record the adoption of the Infectious Disease (Notification) Act, which came into operation in the Borough on October 1st.

I confess that I have hitherto been a little in doubt as to the effectiveness of the machinery placed in one's hands by this Act without its complement—proper means of isolation. But the three months only during which it has been administered, has convinced me that even alone it has great power for good. The visit of the Sanitary Inspector or of the Medical Officer of Health to the premises, the instructions as to isolation, and in

the case of typhoid-fever, the prompt removal in a special receptacle of infected material cannot fail to be of service, quite apart from the efficient disinfection of all infected houses, clothing, &c., and the retention at home from school of all children from infected households. As regards this last, the method adopted has been to supply to each head teacher a list of the names and addresses of all children attending the particular school who are exposed to infection; a fresh list is supplied as often as necessitated by the dropping out or adding to of names, and the teacher is requested not admit any child to school so long as the name remains upon the list. A list of infected houses is also supplied to the Librarian of the Mechanics' Institution.

During the three months 154 notifications were received referring to the following diseases:—

Small-pox	...	...	1
Diphtheria	...	...	25
Erysipelas	...	...	12
Scarlet-fever...	...	...	104
Typhoid-fever	...	...	10
Puerperal-fever	...	...	2

Notification of Sickness by Friendly Societies.

The two and a-half years' experience which we have had with this system of notification has impressed upon me its importance, a very considerable amount of information being derived from the lists sent in weekly by the various Secretaries to whom I must now acknowledge my indebtedness. I am bound to say however that the greatest amount of good can only be obtained by making it compulsory upon the Secretaries to furnish sickness lists, and compensating them for the trouble they are put to. If a payment, say of three-pence were made for each list forwarded, the cost would not be very great,—in Crewe something like £10 per annum. A voluntary service unfortunately cannot be sufficiently relied upon.

Examination of Houses.

Several householders have again availed themselves of the offer made in 1893 to examine any house in the town as to its sanitary condition, free of charge.

One case was that of a house which had several different tenants during the past ten years, in which there had never been any specific illness, but where the occupants were constantly suffering from sore throat, or becoming "run down." Upon examination, most unsatisfactory conditions were found, waste pipes entering the soil pipe which was itself ineffectually ventilated; rain-water down spouts discharging into the foundations owing to misconnection with the drain; a cellar gully trap permitting sewer gas to enter and permeate the house; and lastly the outside drain connecting the soil pipe with the main sewer laid so much after the plan of a switchback that an elongated cess-pool was the result. In one other case similar conditions prevailed in so far as the cellar drain was concerned, where broken collars and badly connected pipes again allowed a direct communication between the sewer and the house. Here, too, at least one of the occupants—though never distinctly ill—was always suffering more or less *malaise*. Even at the risk of repeating myself unduly, I would again emphasise the importance of carrying all drains entirely outside the house. At present it is left to the discretion of the Works Committee to permit a drain under a house; in my opinion, when there is no other course available, the pipes used should be in long lengths, of iron, glass-lined, jointed with lead, and laid upon concrete. We are suffering now in so many instances from the permission given in the early days of the town to underdrain houses, that it behoves us to be extremely careful lest we give those who will criticise us in the future any cause to blame us for continuing the practice.

House-to-House Inspection.

Although a systematic house-to-house inspection such as was made in 1894 was not possible last year, every portion of the town was visited either by the Sanitary Inspector or the Medical Officer of Health, and where it was considered desirable, certain districts received special attention. I fear that a regular house-to-house inspection, such as one would wish to have, is impracticable unless there be an increased staff. The routine work of the department keeps one Inspector very constantly employed, so that there is little or no time available for periodical inspections; I believe there is no other town with a population approaching 40,000 persons, and in which only one Sanitary Inspector is employed.

TABLE 25.—Premises which require periodical inspection.

	Boro' of Crewe.	Central Ward.	West Ward.	North Ward.	South Ward.
Bake-houses	23	7	4	7	5
Cow-sheds	59	4	15	30	10
Dairies and Milk-shops ...	45	13	13	6	13
Lodging-houses	5	3	...	1	1
Slaughter-houses	13	6	2	1	4
Factories	41	18	9	6	8
Workshops... ..	61	32	11	8	10
Laundries	2	...	...	...	2
Total	249	83	54	59	53

Bakehouses.

Number - - 23.

At five of these bakehouses the ovens are stoked from behind ; in the others a sufficiency of coal for daily use is brought in each morning, and a great deal of unnecessary dust and dirt is thereby created. I have urged upon the occupiers the desirability of providing a covered receptacle of some kind, but they do not at present appear to realise the importance of keeping these " food factories " absolutely above suspicion.

There are no underground bakehouses in the town.

Cow-sheds.

Number - - 59.

Most of these erections are in the outskirts of the town. Only a very few even approach that perfection we are entitled to expect in buildings from which is sent out so important an article of food as milk.

Dairies and Milk-shops.

Number - - 45.

There is not a single milk-shop in the town at which milk and dairy-produce is sold exclusively ; the mixing together of the business of a green-grocer, chandler, or grocer, and of a milk-seller is not at all desirable, and it is extremely difficult to obtain compliance in such cases with the regulation requiring that the ceiling and interior of the walls of every milk-shop shall be thoroughly cleansed twice a year—in April and October.

Regulations were made by the Town Council in pursuance of the Dairies, Cow-sheds, and Milk-shops Order of 1885, in 1892, and during last year, in accordance with the requirement of the same Order, public notice was given by advertisement and by public placard of the necessity for registration by all Cow-keepers, Dairymen, and Milk-sellers. Every means has therefore been taken to keep the register complete.

Common Lodging-houses.

Number - - 5.

There are six houses registered as common lodging-houses, but at present one registered for 10 beds is closed. The five houses contain in the aggregate 22 rooms, and can accommodate 104 persons.

In three of the houses I have had great difficulty in obtaining compliance with the bye-laws. Having made many visits both in the daytime and at night, and having failed both by persuasion and by threats to secure any better conditions than I repeatedly found, in August the keepers of the houses concerned appeared before the Borough Justices, and for contravening the bye-laws were fined £1 2s. 6d., and £3 16s. 0d. costs. Since then two of the houses have changed hands and a slight improvement has been observed. In my Monthly Report for August, I entered pretty fully into the question of the provision of a Municipal lodging-house. I am more firmly of opinion than ever that such an institution would do an incalculable amount of good both directly and indirectly. I am convinced moreover that under proper management it would become self-supporting.

Houses Let in Lodgings.

The Model bye-laws relating to houses let in lodgings were adopted and came into force in 1877.

Slaughter-houses.

Number - - 13.

I regret to have to record the closing of the slaughter-houses at the Cattle Market, for no other reason than this,—that the butchers so rarely used them, that the Lessee of the Market has found more profitable employment for the space occupied. Nearly all the buildings registered are too small and are ill-adapted for their special purpose. Most of the butchers endeavour to carry out the requirements of the bye-laws, but they require very constant reminders of their duties.

There is no doubt that public slaughter-houses must in time be erected, if only that a more perfect system of meat inspection than is now possible may be carried out.

Diseased Meat.

No diseased meat or unsound food was seized during the year.

The Food and Drugs Act is administered by the County Authorities.

Factories and Workshops.

Number - - - 102.

These have been visited during the year ; in three cases where there have not been separate conveniences for the sexes such have been provided.

In my April report I recorded certain steps which I had taken to procure more satisfactory closet accommodation for the men employed in the Railway Works. I stated that while in the Permanent Way Department there existed an almost perfect form of dry earth-closet, in nearly all other parts of the works a most filthy pail-closet was the only convenience available. I suggested in a letter to the Superintendent of the Works that earth-closets should be provided all over the Works ; as he did appear desirous of carrying out my proposal, a statutory notice, after resolution by the Health Committee, was served upon the Secretary of the Railway Company, requiring a sufficiency of dry earth to be placed in each pail after being used. This requirement has been carried out to the extent of placing in each group of closets a tub of flue-dust, which the men can, if they choose, sprinkle over the pail-contents. In addition to this, one of the worst of the pail-closets has been demolished and a group of water-closets erected, the flush-down cisterns acting automatically each time the closet is used.

Adoptive Acts.

The Infectious Disease (Prevention) Act, 1890, came into operation in Crewe on January 1st, 1891.

The Public Health Acts Amendment Act, 1890, came into operation on February 1st, 1891.

The Infectious Disease (Notification) Act, 1889, came into operation on October 1st, 1896.

School Accommodation.

The public school accommodation in the Borough suffices for 7,723 scholars, an increase of 1,007 upon 1895 :—

			Per cent. of Population.
Central Ward	..	2,847	.. 28
West Ward	..	1,743	.. 20
North Ward	..	1,229	.. 13
South Ward	..	1,904	.. 20

The Teachers have co-operated with me most cordially in every way for the diminution of disease in their schools. Since the adoption of compulsory notification I have been able to give them more precise information as to the existence of the notifiable diseases in the households of their scholars. In order that I may be better informed as to the amount of measles, mumps, whooping-cough, and chicken-pox in the town, I have now supplied all the head teachers with certificate forms, to be filled up and returned to me when any of their scholars are said to be suffering from one of these four diseases, while on my part I have undertaken to give a formal certificate requiring the non-attendance of such scholar at school, which certificate is recognised by the Inspector of the Education Department, and, in certain circumstances, has a definite pecuniary value in view of the Government grant.

In each of my previous Annual Reports I have drawn attention to the desirability of providing one or more recreation grounds for children; I can only add to what I have previously written, that the need of such by no means decreases with an increase of the population on the one hand, and the enlargement of the town on the other.

Back Streets.

(Secondary means of Access).

I have frequently drawn your attention to the disgraceful condition of many of the back streets in the town, and I regret that the question of taking them in hand has been again and again shelved. The initial cost of paving or of asphaltting these passages, especially where they are only, as in some cases,

six feet wide, is so slight that there can be no excuse for not employing such compulsory powers as we possess to get the work done. In not a few cases, too, the owners of houses upon one side a street are not only willing but anxious to pave the portion abutting on their property, but one or more adjacent owners, by their unwillingness to share the cost of the improvement, stop it altogether.

The owners of small houses complain of the dirty condition of their houses, and say that they have constantly to clean them down as old tenants leave, but when one sees the state of some of the back streets adjoining the houses complained of, and realises that the back door is the most frequently used entrance, one can only feel that the landlord has himself to blame very largely for the extra expenditure he so much deplures.

Ventilation of Sewers.

There were not so many complaints of foul smells from street-level manholes or gullies as in former years. All the manholes in the town—and there were nearly 300 such, which had catch-pit bottoms—have now been so altered that there is a continuous flow of sewage along them. In several instances I have found that where an untrapped gully has been near a badly smelling manhole, the effectual trapping of the gully has put an end to the nuisance from the manhole.

Re-construction of Privies and Ash-pits.

During the year 2 fixed receptacles, 133 cess-pools, 7 pail-closets, and 90 privy-middens have been re-constructed, and converted into 122 wash-down water-closets, 83 waste-water-closets, and 29 pail-closets. There are now a large number of cess-pool closets being re-constructed, but even when the work is completed there will still be about 300 in various parts of the town, and as they get sufficiently dilapidated they should be replaced by water-closets. It is hardly necessary to particularise the localities of these undesirable erections; it will be sufficient to say that those which ought to be brought to your notice at an early date are situated in Oxford Street, Gatefield Street, Samuel Street, Mirion Terrace, Earle Street, and Railway Street.

During the three years 1894-5-6, there have been abolished 32 fixed receptacles, 289 cess-pools, 30 pail-closets, and 252 privy-middens. Although these numbers may seem large, it must not be forgotten that there are still over 100 fixed receptacles, over 300 cess-pool privies, and about 2,000 privy-middens still in the town in addition to 2,500 pail-closets, and there can be no question that in a town which is growing as rapidly as Crewe, the retention of this conservancy system will, each year, increase the difficulties of coping with disease in the town.

Where main sewers have been laid down, and outfall sewerage works provided at a great cost as in this Borough, I cannot conceive how it can be possible for any one to advocate any other system than water-carriage. Looked at purely from a financial point of view, the present conservancy method cannot be defended, for although we have sewers ready provided under the streets to convey sewage to the sewage farm, yet we spend about £1,500 yearly in collecting it each night and carting it over the streets to the no small annoyance, and at considerable risk to the health of the inhabitants. It would be almost as reasonable to deliver water free of cost at the houses of those persons who do not care to go to the expense of being connected with the water-mains. It is true that at the present cost of water, if ordinary wash-down water-closets were universally used, the cost of the water would nearly come up to the sum just named (£1,500), but there are many groups of houses—for example the 32 houses in Whitegates—which could be provided with closets of such a type that they could be flushed *en bloc* either with waste water or with fresh water.

The advocates of the conservancy system appear altogether to leave out of consideration the comfort of those who occupy the houses concerned, quite apart from any question of healthiness. From numerous conversations I have had with some of the most intelligent working men in the town, I am convinced that if a poll of the householders were taken, there would be found an overwhelming majority of them in favour of water-carriage. Indeed I have found, in not a few instances, this preference distinctly shewn by a tenant who has moved from one house to another merely to get into a water-closeted house.

Ash-pit and Refuse Removal.

This work has very considerably increased, the day work far more than the night. A reference to Table 26 will shew that more than 11,000 loads were dealt with at a cost of $3/11\frac{1}{4}$ d. per load, or 6d. per load less than in 1894.

The whole town is now divided into four districts, and during last year a fortnightly emptying of all ash-bins and ash-pits was inaugurated; it had at the end of the year barely come into force, many difficulties having stood in the way of its accomplishment, but during 1897 I trust it will be thoroughly carried out.

I was very desirous of having a daily emptying of all the refuse and debris from the business part of the town, and I approached the Tradesmen's Association in the hope that I might receive some help from this source; two Members conferred with me on the matter, but as no further communication came to me I assume that the Association did not consider any alteration from the present method necessary.

TABLE 26.—Statistics of Ash-pit emptying:—

	1894	1895	1896
Privies and Ash-pits emptied ...	11,969	12,919	17,788
Privy pails emptied	99,010	109,374	110,996
Ash-bins ,,	59,619	62,200	65,170
Number of loads removed:—			
Day ...	5,367	5,462	6,639
Night ...	4,496	4,914	4,769
Total ...	9,863	10,376	11,408
Total cost ...	£2187 1s. 4d.	£2180 15s. 3d.	£2243 0s. 10d.
Cost per load	$4/5\frac{1}{4}$	$4/2\frac{1}{2}$	$3/11\frac{1}{4}$

Abatement of Nuisances.

During the year 101 statutory notices were served upon property owners for the abatement of nuisances, 88 under section 94, 11 under section 49, and 2 under section 47 of the Public Health Act, 1875. Those under section 94 related very largely to nuisances arising from improper or defective traps. There are so many different forms of traps in the market that it is difficult to say which is the best; there is happily however no difference of opinion as to which are the *worst* traps, and such as should never be put into a new building or allowed to remain in an old one; of these I will name only three—

1. The bell-trap.
2. The D trap.
3. The trap with bricked sides which allows the contents to soak into the surrounding ground.

The trap which comes the nearest to perfection is one which is self-cleansing, and must therefore have no internal angles or corners, and which has a "seal" of at least $1\frac{1}{2}$ inches.

A very large number of imperfect traps have been taken up during the past few years, and have been replaced by a better type. I very much fear, however, that the work of making the drain connections has, in many instances, been but very imperfectly carried out. Under existing conditions there is no compulsory inspection of the work, and there is every temptation to scamp it. There is fortunately a remedy ready to hand for us in the future, and that is to make more use of section 41 of the Public Health Act, 1875, which empowers the Borough Surveyor to enter upon premises, to carry out necessary work, and to charge the cost to the property owner.

Manure Receptacles.

The rapid building up of the town makes it of increasing importance that these receptacles should be so constructed that they can be readily and frequently emptied, and that there shall be no pollution of the surrounding ground by liquid manure. I drew attention to this matter in April last, and in a few cases the evil complained of has been remedied; there are still, however, quite a number of stables where the following bye-law is not complied with:—

Every occupier of any building or premises wherein or whereon any horse or other beast of draught or burden, or any cattle or swine may be kept, shall provide in connection with such building or premises a suitable receptacle for dung, manure, soil, filth, or other offensive or noxious matter, which may from time to time be produced in the keeping of any such animal in such building or upon such premises.

He shall cause such receptacle to be constructed so that the bottom or floor thereof shall not in any case be lower than the surface of the ground adjoining such receptacle.

He shall also cause such receptacle to be constructed in such a manner and of such materials and to be maintained at all times in such a condition as to prevent any escape of the contents thereof, or any soakage therefrom into the ground or into the wall of any building.

He shall likewise provide in connection with such building or premises, a sufficient drain constructed in such a manner and of such materials and maintained at all times in such a condition, as effectually to convey all urine or liquid filth, or refuse therefrom into a sewer, cess-pool, or other proper receptacle.

Eleven statutory notices under section 49 of the Public Health Act, 1875, were served, requiring the removal within 24 hours of accumulations of manure.

Sewage Farm.

Area - - - 260 Acres.

The sewage farm was laid down in 1872 at a capital expenditure of £47,000. There is a total area of 260 acres, 30 of which are the freehold of the Corporation, the remainder being held on long leases from various landowners.

The whole area of the farm has a subsoil of stiff clay. About 60 acres are broken up yearly for cereal crops, 15 acres are planted with willows, and upon the remainder is grown Italian rye-grass, four and sometimes five crops being grown yearly. A large quantity of the fresh cut grass is sold in the town, and a still larger quantity is made into hay. There are usually about 50 head of cattle in the farm fattening, but no milch cows are kept.

The sewage finds its way by gravitation to the lowest portion of the farm along two main outfall sewers; the Northern capable of taking 14 million gallons in 24 hours, and the Southern with a like capacity as far as the Gas Works in Victoria Avenue, but beyond that point, only equal to 10 million gallons in 24 hours. The sewage is pumped untreated, either by subsidence or by precipitation upon the land, and is delivered by elevated and ground level carriers at whatever point is desired. The principal pump is worked by a beam engine, and is capable of lifting 100,000 gallons per hour, and there are four subsidiary Tangye pumps with a capacity equal to 80,000 gallons per hour, which are only used however as necessity arises.

After passing over the land the effluents flow into two streams, the North brook, or the South brook, each of which ultimately empty into the River Weaver. The character of the effluents themselves can rarely be complained of, and I am convinced that the occasional fouling of the North brook is entirely due to the overflow, and it is, I think, of the very first importance, that every effort should be made to reduce this overflow to a minimum,

a precise record should be kept of all occasions when such takes place, and preferably by means of an automatic register. The proposal of the Farm Manager to lay down a filter-bed of brick ballast (burnt clay) near to the North brook, will, I believe, go a long way towards lessening our difficulties in this respect; indeed, if the filter-beds are only made of sufficient capacity, no unfiltered or untreated sewage need ever go into this stream.

On the Southern farm—for three years—a portion of a sand-pit was used as a “tip” for dry ashpit refuse, and early in last year the Farm Manager converted this into a filter-bed, and with remarkable success. A stream of sewage straight from the pumping station enters at the top of the ash-heap through various openings, and comes out 40 to 50 feet lower down as colorless and as brilliant as a mountain spring.

A reference to Table 27,—the figures in which except as regards the rainfall, are taken from records kept in the Borough Surveyor's Office, shews that rather more than a million gallons of sewage is dealt with at the farm daily, but that the water supply of the town is only about one-third of this amount, even taking into account the water supplied to the Railway Company's houses and which does not pass through the Corporation mains. The figures given in the final column shew clearly that the rainfall has very little effect upon the amount of sewage at the outfalls. Take for instance, for comparative purposes, the two months ending April 4th and December 12th, the amount of water which passed through the Corporation meters in each of these two months was practically the same within half-a-million gallons, and the amount of rain was in each month almost identical, yet there were nearly five million gallons more sewage received at the pumping station in December than in April, necessitating 50 hours more pumping during the one month than in the other. The cause of this great difference might, I think, be investigated by the Farm Committee with advantage.

The steam supply to the engine at the pumping station is produced by two boilers of the Cornish type, each of which is 6-feet in diameter, 24-feet long, with furnace flue $35\frac{1}{2}$ -inches diameter, and fitted with 5 Galloway circulating tubes in each flue. One only of these boilers is used at once, and during alternate months. In 1894, to one of the boilers, steam blowers were fitted with a view to burning dry ash-pit refuse in lieu of a portion of the slack used for firing. After a short trial this was found to be impracticable, and the destruction of dry ashes in the boiler furnaces was abandoned until the early part of last year, when, in conjunction with the treatment of crude night-soil with acidulated ashes, it has been possible to burn the coarser portion of the household refuse, and thus to effect a saving in the coal bill.

In my last Annual Report I stated that very primitive experiments in mixing crude night-soil with fine ashes and strong sulphuric acid had been sufficiently successful to warrant the Farm Committee in carrying out the advice of their Manager to erect covered mixing sheds and a mechanical screen worked from the engine house, and this plant is now completely working. The dry ashes having been brought from the town in covered carts are deposited under cover near to the screen on to which they are thrown by hand. The screen moves both from side to side and from before backwards, and being of a "two-decker" pattern all large articles such as broken crockery, bottles, tins, &c., are first of all thrown off the top screen into a separate heap, to be removed as occasion arises; this "hard core" forms excellent bottom ballast for the farm roads; the lower screen catches the coarser and more combustible ashes which are shot straight into the stoke hole and used to raise steam as described above; there is now left only the fine ash under the screen, and this ash is wheeled to another part of the shed on to iron plates which cover a flue leading from a small furnace to the boiler chimney. This second furnace answers the double purpose of

burning up paper and large articles which cannot conveniently be sent into the stoke hole, and supplying heat to the flues over which the fine ashes are spread. In this furnace are also burned the contents of the typhoid pails from cases of typhoid fever in the town. After the fine ashes are spread over the iron plates they are sprinkled over from a leaden watering can with commercial sulphuric acid to the extent of about 4 % weight for weight, and after being left for a few days this acidulated ash is wheeled into the covered mixing shed about 80 yards distant, and thrown on to the top of the crude night-soil which has been tipped there during the previous night. Very little mixing is then required, the whole mass becoming in appearance very like ordinary soil. All evidence of the presence of night-soil rapidly disappears, and the well-known pungent smell is almost entirely absent by reason of the volatile carbonate of ammonia having been converted by the sulphuric acid into the more stable sulphate of ammonia. The mixing shed is divided down its entire length by a dwarf wall, so that when one side is nearly full of the manure it can be thrown over to the empty side ready for carting away, the actual tossing from one side the wall to the other constituting the final mixing.

From an analysis which has been made, the manure is found to contain 26 per cent. of organic matter (nitrogen .9 per cent.) and phosphate of lime 1.6 per cent. The report from those farmers who, in 1895, used the manure made in the open air, and consequently containing a superabundance of moisture, are sufficiently satisfactory to encourage us in anticipating that the manure now made, under much more favorable conditions, will be still more effective.

Disposal of Fish Offal and Unsound Meat.—Adjoining the mixing shed the Farm Manager has erected two small concrete tanks into which he places all the fish offal from the town and any unsound meat which may be seized. A large quantity of sulphuric acid is put into the tank, and at the end of 8 or 10 months the mixture is taken out and put upon the land.

TABLE 27.—Shewing the amount of sewage which passed down the main outfall sewers; the amount of water supplied by the Corporation water mains; and the rainfall in each of 13 lunar months :—

Month (4 weeks) ending	Sewage in Gallons.	Water in Gallons.	Rainfall in inches.
1896.			
January 11th ...	33,938,000	9,172,550	·61
February 8th ...	38,731,000	9,145,826	1·02
March 7th ...	32,283,000	8,978,070	1·48
April 4th ...	37,043,000	9,332,170	1·58
May 2nd ...	33,393,000	9,671,870	·70
May 30th ...	30,350,500	10,989,130	·44
June 27th ...	32,949,000	11,132,180	1·81
July 25th ...	29,871,000	10,483,430	1·42
August 22nd ...	33,877,000	10,084,800	1·31
September 19th...	36,354,000	9,332,100	2·84
October 17th ...	35,125,000	9,162,620	2·51
November 14th ...	38,981,000	9,093,090	1·90
December 12th ...	42,414,000	9,803,400	1·59
Total ...	455,309,500	126,381,236	19·21

NOTE.—The water supplied to nearly 850 houses owned by the L. & N. W. Rly. Co., and to the Railway Works, does not pass through the Corporation Meters, and must be taken into account when considering the above Table.

Expenditure of the Health Department.

The following Extracts from the Borough Accountant's Abstract of Accounts for the four financial years, ending March in each year, shew the expenditure of the Health Department. It should be pointed out that the extended area of the Borough, including nearly 1,000 houses, was dealt with during only the last five months of the year 1892-3. Each year since, there have been on an average about 250 houses added to the town.

TABLE 28.—Extract from the Borough Accountant's Abstract of Accounts.

EXPENSES OF HEALTH DEPARTMENT.

Ending March 25th	Estimated Expenditure.			Actual Expenditure.			Increase.			Decrease.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
1893 ...	1825	8	0	2302	18	2	477	10	2	...	...	...
1894 ...	2200	0	0	2702	15	1	502	15	1	...	...	...
1895 ...	2447	17	0	2476	3	0	28	6	0	...	...	...
*1896 ...	2549	6	0	2388	1	7	...	...	...	161	4	5

* In this year *all* office expenses are charged to this A/c.; in previous years a General "Establishment" A/c. for all departments existed.

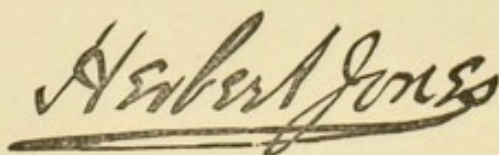
I have again to express my satisfaction at the energetic and conscientious manner in which my Inspector (Mr. Wm. Urquhart) has carried out his duties, many of which are of a most trying character. As I have already pointed out, the rapidly-increasing town will, before long, necessitate an addition to your staff; in the meantime, I think it is very desirable that as much clerical work as possible should be done by the Office Clerk, thus enabling the Sanitary Inspector to carry out his increasing duties.

As this is the last Annual Report which I shall be privileged to present to you, I must ask you to accept my sincerest thanks for the many personal kindnesses I have from time to time received from your Chairman and from every Member of your Committee, and for the consideration you have shewn me during the whole of the four years in which I have held the position of your Medical Officer of Health. I feel sure, however, that I shall not be misunderstood if I refer also to my indebtedness to your late Chairman, Dr. Wm. Hodgson. Coming, as I did four years ago, an absolute stranger among strangers, having to organise a new department, and having to make proposals which could not, from their nature, be acceptable to all persons, it was an incalculable advantage to be able to confer with one who, as your first Chairman had given so much attention to all the details of the Sanitary work of the Borough, and who knows, perhaps, better than any one what are the needs of the town.

I beg to remain,

Mr. Chairman and Gentlemen,

Faithfully yours,

A handwritten signature in dark ink, reading "Herbert Jones". The signature is written in a cursive style and is underlined with a single horizontal stroke.

LOCAL GOVERNMENT BOARD RETURN.

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officer of Health, during the year 1896, in the Urban Sanitary District of Crewe; classified according to Diseases, Ages, and Localities:—

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	Population at all Ages.		Registered Births.	New cases of sickness in each locality, coming to the knowledge of the Medical Officer of Health.							Number of such cases removed from their homes in the several localities for treatment in Isolation Hospital.			
	Census 1891.	Estimated to middle of 1896.		Aged under 5 or over 5.	Small-pox.	Scarlatina.	Diphtheria.	Enteric or Typhoid.	Puerperal Fever.	Erysipelas.	Small-pox.	Scarlatina.	Diphtheria.	Enteric or Typhoid.
CENTRAL WARD	10,305	..	..	26	2	..	..	..	..	..	..	..	..
WEST WARD	9,065	..	1	41	2	3	..	1	..	..	..	..	1
NORTH WARD	8,975	..	..	31	2	..	1	..	6	..	..	..	..
SOUTH WARD	9,845	..	1	76	1	5	..	2	..	..	..	..	..
TOTALS ..	32,783	38,190	1,200	..	..	..	..	..	..	..	..	..	..	..

NOTES.—1. The Small-pox Hospital is situated in the West Ward.

2. The Wards have been entirely re-arranged, it is not possible therefore to give their respective populations at the 1891 Census.

3. Notification of Infectious Diseases is compulsory since October 1st, 1896.

SUMMARY OF CLASSIFIED DEATHS (TABLE 30).

	Number of Deaths.							
	1896.		1895.		1894.		1893.	
I.—ZYMOTIC DISEASES ...	86	...	106	...	65	...	205	...
1. Miasmatic diseases ...	...	57	...	51	...	40	...	109
2. Diarrhœal ,, ...	...	22	...	49	...	13	...	84
3. Malarial ,, ...	...	...	...	...	...	...	...	...
4. Venereal ,, ...	...	...	...	1	...	1	...	3
5. Septic ,, ...	...	7	...	5	...	11	...	9
II.—PARASITIC DISEASES ...	2	2	1	1	2	2	2	2
III.—DIETIC DISEASES ...	7	7	8	8	5	5	10	10
IV.—CONSTITUTIONAL DISEASES	77	77	101	101	100	100	90	90
V.—DEVELOPMENTAL DISEASES	52	52	59	59	51	51	52	52
VI.—LOCAL DISEASES ...	298	...	269	...	248	...	306	...
1. Nervous system ...	...	46	...	57	...	51	...	71
2. Organs of special sense ...	...	...	...	...	...	...	...	...
3. Circulatory system ...	...	52	...	41	...	43	...	30
4. Respiratory ,, ...	...	162	...	129	...	116	...	165
5. Digestive ,, ...	...	24	...	28	...	25	...	20
6. Lymphatic ,, ...	...	...	...	...	...	...	...	3
7. Glandular ,, ...	...	...	...	...	...	...	...	...
8. Urinary ,, ...	...	8	...	6	...	3	...	6
9. Reproductive ,, ...	...	6	...	8	...	9	...	10
10. Bones and Joints ...	...	...	...	...	...	1	...	1
11. Integumentary system ...	...	...	...	...	...	...	...	...
VII.—VIOLENCE ...	18	...	21	...	11	...	17	...
1. Accidents ...	...	16	...	16	...	8	...	14
2. Homicide ...	...	...	...	...	...	1	...	...
3. Suicide ...	...	2	...	5	...	2	...	3
VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES	28	28	43	43	38	38	12	12
	568	568	608	608	520	520	694	694

INDEX TO CONTENTS.

	PAGE
Abatement of Nuisances	48
Accident Hospital	32
Accidents	33
Acid Ash Manure	52
Adoptive Acts	43
Ages at Death	12
Area	5
Ash-pit Emptying	47
Back Streets	45
Bacteriological Examinations	22
Bake-houses	41
Births	9
Census Returns	6
Cess-pools	46
Classification of Diseases	64
Classification of Diseases (Summary)	60
Conservancy	46
Cottage Hospital	32
Cow-sheds	41
D Traps	48
Dairies	41
Deaths	10
Deaths (Wards)	12
Diarrhœa	26
Diphtheria	21
Disinfection	36
Disinfector	36
Disinfector (Equifex Sprayer)	36
Draining of Site	7
Drains in Cellars	...21—39
Drains under Buildings	39
Electric Light	35
Empty Houses	7
Examination of Houses	39
Expenditure of Health Department	55

INDEX—CONTINUED.

	PAGE
Factories	43
Fish Offal	53
Food and Drugs Act	43
Friendly Societies (Notification by)	38
Height above Sea-level	5
House-to-House Inspection	40
Houses let in Lodgings	42
Houses (New)	6
Houses (Rateable Value)	8
Illegitimacy	10
Infantile Death-rate	...13—14
Infantile Diarrhœa	26
Infectious Disease (Notification) Act	43
Infectious Disease (Prevention) Act	43
Influenza	31
Inlet Drain Ventilators	21
Inquests	32
Isolation Hospitals	35
Lodging-houses	42
Manure Receptacles	49
Measles	18
Meat (Diseased)	43
Meteorology	56
Milk-shops	41
Monthly Death-rate	11
Municipal Lodging-house	42
Night-soil (treatment of)	52
Notification	37
Nuisances Abatement	48
Persons per Acre	12
Persons per House	6
Phthisis	30
Plans passed	6
Pneumonia	32
Population	6
Premises requiring Periodical Inspection	40
Public Health Act Amendment Act	43
Public Slaughter Houses	42

INDEX—CONTINUED.

	PAGE
Railway Works	43
Rateable Value	8
Recommendations	4
Re-construction of Privies	45
Recreation Grounds	44
Refuse Removal	47
Scarlet-fever	19
School Accommodation	44
Section 41 Public Health Act, 1875	48
Sewage (Amount)	54
Sewage-farm	50
Slaughter-houses	42
Small-pox	17
Statutory Notices	48
Still-born Children	10
Sub-soil	5
Suicides	33
Table A	58
Table B	59
Temperature (Earth)... .. .	26
Tradesmen's Association	47
Traps	48
Typhoid-fever	28
Uncertified Deaths	10
Underground Bakehouses	41
Ventilation of Sewers	45
Vital Statistics	34
Waste-water Closets... .. .	45
Water-carriage	46
Whooping-cough	25
Workshops	43
Zymotic Diseases	14





