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# ANNUAL REPORT

Of the Medical Officer of Health for  
the Borough of Crewe.

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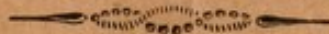
## SPECIAL REPORT

On the Sanitary Requirements of the  
Factory and Workshop Acts, 1878-1895.

BY

HERBERT JONES, D.P.H.,

MEDICAL OFFICER OF HEALTH.



CREWES:

WILMOT EARDLEY, BOROUGH PRINTING OFFICES.

1896.






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

*Municipal Offices,  
Earle Street,  
Crewe,*

*18 April*

189 6





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1895.

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# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

FOR THE

### BOROUGH OF CREWE,

BY

## MERBERT JONES,

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

MEDICAL OFFICER OF HEALTH TO THE BOROUGH.

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CREWE:

WILMOT EARDLEY, BOROUGH PRINTING OFFICES.

1896.

# BOROUGH OF CREWE.

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## Health Committee.

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*Chairman :*

DR. WILLIAM HODGSON, J.P., C.C.

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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 C. H. PEDLEY, C.C.
„ J. A. BOND.	„ J. ROBERTSON, J.P.
„ J. F. FEAR.	„ T. SMITH.
„ J. HARFORD.	„ P. SWINTON, J.P.
„ T. H. HEATH, J.P.	„ H. TAYLOR.
„ A. JERVIS.	AND
„ J. JONES.	„ E. WILSON.

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## Hospital Sub-Committee.

DR. WM. HODGSON, J.P., C.C. ALDERMAN W. McNEILL, J.P.  
COUNCILLORS J. F. FEAR, J. HARFORD, T. H. HEATH, J.P.,  
A. JERVIS, C. H. PEDLEY, C.C., T. SMITH, AND P. SWINTON, J.P.

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*Sanitary Inspector :*

WILLIAM URQUHART.

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Population at Census, 1891	... ..	32,783
Estimated Population at Midsummer, 1895	... ..	37,020
Area in acres	... ..	2,193
Birth-rate per 1,000 living	... ..	33·4
Death-rate...	... ..	16·4
Death-rate from Zymotic diseases	... ..	2·4
Deaths under 1 year to 1,000 births	... ..	160
Deaths under 5 years per cent. of total deaths	... ..	47·3
Number of persons to the acre	... ..	16



MUNICIPAL OFFICES,

EARLE STREET,

CREWE,

JANUARY 24TH, 1896.

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TO THE CHAIRMAN AND MEMBERS OF THE HEALTH  
COMMITTEE.

GENTLEMEN,

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

Looked at merely from a statistical standpoint the year 1895 has a very satisfactory record, for if reference is made to Table 14 it will be seen that the figures relating to birth and death-rates during the year are almost identical with the averages of the past ten years. But when a closer examination is made, it is not at all satisfactory to find that we have a high mortality from preventible diseases, and among young children, indeed, the past year has been remarkable for the prevalence during its latter half of a severe epidemic of scarlet-fever, which has had to be met without means for isolation, and without the advantage of compulsory notification, both of which, I trust, will be available during the current year.

One of the causes of the high infantile mortality has been dealt with on page 22.

It is very pleasing to be able to record an increasing willingness on the part of property-owners to place their property in a good sanitary condition, and although 402 statutory notices have been served during the year, a large number were formal notices which agents desire for the satisfaction of their principals.

The steam disinfecter has been constantly used, and the disinfection of houses is now carried out on what I believe is the most satisfactory system (page 29).

The small-pox hospital has not been required.

An improved treatment of the night-soil and day ashes on the sewage farm has been successfully carried out, and the method is to be further developed (page 41).

The outlook of the town from a sanitary point of view may be considered distinctly good, and with the completion of the Sanatorium, to which should be added the provision of compulsory notification, and a determination to abolish at any rate the worst of the cess-pools and privy middens, no one need hesitate to recommend Crewe as a desirable place for residence.

#### Area.

Central Ward .....	134 acres.
West „ .....	676 „
North „ .....	942 „
South „ .....	441 „
	<hr/>
Borough of Crewe .....	2,193 „
	<hr/>

#### Height above Sea-level.

Sewage Farm .....	125 feet.
The Valley .....	145 „
Market Hall .....	179 „
Site of 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.

The very basis of all vital statistics rests upon a correct estimate of the number of persons to whom those statistics relate. If that estimate is incorrect, the birth-rates and death-rates will alike be unreliable; it is therefore of the first importance to know what is the actual population of a district. In a town such as Crewe, which is growing so rapidly, it is impossible to apply the same methods in estimating the population that would be adopted in a town the increase of which is not so great or so intermittent. For example: if we assume that the increase of population has been in the same proportion during the past five years—that is since the last census—as during the ten years 1881-91, we are met at once with the fact that the number of houses erected annually during the 1881-91 period was 150, and during the past five years 210; and if the houses have increased in a larger proportion than the inhabitants, the number of persons per house would have decreased from 5·011 in 1891, to 4·7 in 1895, and there is no evidence that this has occurred.

In the year 1890 an enumeration of the population was made for school attendance purposes, and I am informed by the School attendance officer that it is very desirable that a census should again be taken. I would suggest to you therefore that the Health Committee should confer with the School Attendance Committee with a view to having a census of the Borough taken at the end of March, 1896, five years would then have elapsed since the Imperial census. The cost of the enumeration in 1890 was under £35.

The figures in these pages are based upon a population of 37,020, a number arrived at as follows:—

Houses on Rate Book .....	7,588	Table 2.
Empty houses .....	184	„ 3.
	<hr/>	
Total occupied houses .....	7,404	
Persons per house, census 1891	5	
	<hr/>	
	37,020	
	<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 1895—

Central Ward	...	10,300
West	„	8,885
North	„	8,460
South	„	9,375

**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 78 per cent. of the houses in the Borough are rated under £10 per annum, and 95 per cent. under £20 per annum.

TABLE 2.

Number of houses on the Rate Books, March 25th, 1895:

154 houses rated under	...	...	£5	per annum.
5762	„	„	at £5 and under	£10
1250	„	„	£10	„ £20
224	„	„	£20	„ £30
94	„	„	£30	„ £40
44	„	„	£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.				

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 7588
 

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The number of houses added to the rate books during 1895 was 243.

The rateable value of the Borough in 1895 was £118,741; an increase of £2,668 upon that of 1894.

**Empty Houses.**

The Assistant Overseer (Mr. A. Maywhort) has again been good enough to supply the following list of houses empty at Midsummer, 1895:

TABLE 3.

Rateable Value.	Under £5.	£5, under £10	£10, under £20	£20, under £30	£30, under £40	Total
Central Ward ...	...	26	4	...	...	30
West Ward ...	...	51	4	...	...	55
North Ward ...	2	62	...	...	...	64
South Ward ...	1	26	5	1	2	35
Borough of Crewe	3	165	13	1	2	184
Per centage of empty houses at each group of rateable value.	2	2·9	1	4	2	2·4

**New Houses.**

TABLE 4.

Plans passed 1891	...	...	139
„ „ 1892	...	...	169
„ „ 1893	...	...	157
„ „ 1894	...	...	238
„ „ 1895	...	...	283

It is probable that there were more houses erected in Crewe during 1895 than in any one previous year. At the end of June there were in course of erection a church, two large schools, a clothing factory, the cottage hospital, and 155 dwelling-houses.

On page 40 I have stated that nearly 100 houses were allowed to be built provided with pail-closets; I should like also to point out that in several others the house-drain passes under the house itself, and although the 61st building Bye-law permits this method, the permission is only to be granted "where any other mode of construction may be impracticable."



The 9th Bye-law recites—

“Every person who shall erect a new domestic building shall cause the whole ground-surface or site of such building to be properly asphalted or covered with a layer of good cement concrete, rammed solid, at least six inches thick.”

And the 59th—

“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 dampness of the site renders such a precaution necessary.”

It is impossible to emphasize too strongly the importance of strictly enforcing these two bye-laws, especially in a town such as Crewe, situated on a stiff clay sub-soil. A damp site is a most important factor in the development of at least two diseases—consumption and rheumatism, both of which are far more prevalent in Crewe than one could wish. The deaths recorded as due to rheumatism are certainly few, but the death-rate from heart-disease is high, and doubtless many cases of heart-disease are but the *sequela* of rheumatism, and that the sickness-rate from rheumatism is by no means low I am in a position to know from the returns received from the Friendly Societies.

#### **Births.**

The number of births registered during the year 1895 was 1,237, of which 645 were males and 592 females, equal to a birth-rate of 33·4 per 1,000 per annum. Of the 1,237 births 3·2 were illegitimate; in 1894 and 1893 the percentage was 4·4 and 3·3 respectively.

The birth-rate is practically the same as that recorded for 1894, and is 1·0 per 1,000 per annum lower than the rate for the ten preceding years.



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
1st Quarter...	281	229	263	236	240	264	273	288	290	303
2nd „	270	252	237	239	230	256	262	342	300	320
3rd „	236	230	233	232	245	255	284	305	313	317
4th „	242	217	221	223	207	222	226	293	312	297
Whole year...	1029	928	954	930	922	997	1045	1228	1215	1237
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

#### DEATHS.

During the year 1895 there were registered in Crewe 608 deaths, of which 312 were males, and 296 females,—equal to a death-rate of 16·4 per 1,000. No adjustment has been made of deaths occurring in Institutions within or without the Borough. This rate is 2·0 per 1,000 higher than that recorded for 1894, and ·2 per 1,000 below the average for the preceding ten years. The death-rate in the thirty-three large towns during 1895 was 20·4.

The monthly death-rate varied from 7·8 in June to 20·0 in Aug.

There were six uncertified deaths, equal to ·98 per cent. of the total deaths.

*Still-born Children.*—The number of still-born children brought to the cemetery for burial during 1895, and the five preceding years was as follows:—

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

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

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

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
1st Quarter...	113	110	133	151	138	111	171	171	154	171
2nd „	85	102	85	114	77	127	143	193	115	115
3rd „	136	122	94	92	97	81	107	158	121	164
4th „	107	137	112	106	131	124	106	172	130	158
Whole year...	441	471	424	463	443	443	527	694	520	608
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



TABLE 8.—Apportioning the Deaths during 1895 to the Wards, giving the Death-rate and number of persons per acre.

Ward .. ..	Central.		West.		North.		South.	
	76		13		9		21	
Persons per acre .								
	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 ..	50	19·4	40	18·0	38	17·9	43	18·4
2nd „ ..	31	12·0	32	14·4	26	12·2	26	11·0
3rd „ ..	41	15·9	44	19·8	37	17·4	42	17·9
4th „ ..	52	20·1	42	18·4	31	14·6	33	13·6
Whole year ..	174	16·9	158	17·7	132	15·5	144	15·8

TABLE 9.—Apportioning the deaths during 1895 to the various age periods.

	Under 1 year	1 to 5	5 to 15	15 to 25	25 to 65	65 upwards	Total
Central Ward .. ..	47	23	11	8	55	30	174
West Ward .. ..	54	27	11	4	42	20	158
North Ward .. ..	53	20	5	6	34	14	132
South Ward .. ..	44	20	4	12	38	26	144
Borough of Crewe, 1895	198	90	31	30	169	90	608
„ „ 1894	174	72	22	24	154	74	520
„ „ 1893	211	139	38	19	181	106	694



### Infantile Mortality.

If reference is made to Table 14 it will be noticed that while the general death-rate of the town differs but little from the average of the past ten years, yet the mortality among infants and young children is considerably above this average. The facts for the year 1895 put briefly are that:—

**One-third** of the total deaths were among children under 1 year.

**Nearly one-half** „ „ „ „ 5 years.

**Nearly one-sixth** of the children born died before they reached the end of their first year.

It will be useful to enquire of what diseases did most of these children die, and in what particular locality did the majority reside. Tables 10 and 20 shew that the most fatal diseases to children under one year were lung diseases and diarrhœa, these two classes being alone responsible for 83 deaths of the entire 198, while the other Zymotic diseases—measles, scarlet-fever, and whooping-cough, were together only credited with 8 deaths. The number of deaths from lung diseases among infants appears to be under the average number occurring in former years; not so, however, as regards the deaths from diarrhœa, the rate for which is nearly double that of previous years (1893 excepted). Of the causes for this high rate I have dealt more at length on page 22. It will be sufficient to say here that the fatal cases occurred in groups of houses, these groups having a most remarkable tendency to be composed of those houses provided with cess-pools, privy middens, or privy pails. It must be more than a coincidence that this class of house habitually has a mortality from diarrhœa three times greater than those houses upon the water-carriage system.

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

	1893.		1894.		1895.	
	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	...
ditto ...	...	171	...	143	...	160
Diarrhœa ...	65	...	6	...	42	...
ditto ...	...	52	...	4	...	33
Lung diseases ...	45	...	46	...	41	...
ditto ...	...	36	...	37	...	33
Convulsions ...	17	...	16	...	19	...
ditto ...	...	13	...	13	...	15
Premature birth ...	17	...	23	...	21	...
ditto ...	...	13	...	18	...	17
'Tabes Mesenterica...	13	...	15	...	10	...
ditto ...	...	10	...	12	...	8
Measles ...	10	...	...	...	4	...
ditto ...	...	8	...	...	...	3
Whooping Cough ...	7	...	8	...	2	...
ditto ...	...	5	...	6	...	1
Tubercular disease...	4	...	3	...	2	...
ditto ...	...	3	...	2	...	1
Debility ...	3	...	24	...	21	...
ditto ...	...	2	...	19	...	17



**Zymotic Diseases.**

Receiving scarlet-fever and measles as a legacy from 1894, one or other of those diseases was present in the town during the whole of 1895, with the possible exception of the month of April. Small-pox, happily, has been entirely absent. During the latter half of the year typhoid fever has shewn itself, but as far as I have been able to ascertain has never been epidemic. Sporadic cases of diphtheria occurred in the first and second quarters of the year, and whooping cough prevailed to a slight extent in the second and third quarters. The number of cases of Zymotic disease which came under my notice, and of which a record was taken, was 616. (Table 13).

The Zymotic death-rate during the year was 2·4 per 1,000, and was 1·1 per 1,000 above the rate for 1894, but exactly the same as the average rate recorded for the past ten years.

TABLE 11.—Number of deaths from the seven principal *Zymotic Diseases* in the various Wards during 1895:—

	Centr'l	West	North	South
Small-pox ... ..	...	...	...	...
Measles ... ..	...	3	1	3
Scarlet-fever ... ..	5	6	5	6
Diphtheria ... ..	1	...	...	1
Whooping Cough ... ..	2	4	...	1
Diarrhœa ... ..	11	10	18	9
Typhoid fever ... ..	2	2	1	1
Total... ..	21	25	25	21
Death-rate per 1,000 per annum...	2·0	2·8	2·9	2·2



TABLE 12.—Number of deaths from the seven principal Zymotic diseases during 1895, in the Borough of Crewe.

	Under 5 years.	Over 5 years.	TOTAL.
Small-pox ... ..	...	...	...
Measles ... ..	7	...	7
Scarlet-fever ... ..	16	6	22
Diphtheria ... ..	1	1	2
Whooping-cough ... ..	7	...	7
Diarrhœa ... ..	48	...	48
Typhoid-fever ... ..	...	6	6
Total ... ..	79	13	92

TABLE 13.—Number of *cases* of Zymotic Disease which have come to the knowledge of the Medical Officer of Health during 1895 :—

	Centr'l Ward	West Ward	North Ward	South Ward	Boro' of Crewe
Small-pox ... ..	...	...	...	...	...
Measles ... ..	38	53	10	32	133
Scarlet-fever ... ..	62	94	85	107	348
Diphtheria ... ..	1	...	...	1	2
Whooping-cough ... ..	11	15	6	1	33
Diarrhœa ... ..	19	22	33	17	91
Typhoid-fever ... ..	3	2	1	3	9
Total... ..	134	186	135	161	616

**Small-pox.**

There were no cases of small-pox in the Borough during 1895.

*Vaccination.*—Only a very small percentage of the children born in Crewe remain unvaccinated.

**Measles.**

*Number of deaths*—7.

Although measles was prevalent more or less during the whole year, it did not become epidemic until the end of July, the first fatal case being recorded in August; two deaths were registered as due to the disease in that month, one in October, and four in December. At the end of November the epidemic was at its height, and no doubt the closing of the public elementary schools on November 22nd was responsible to a certain extent for the diminution in the number of cases occurring.

Death-rate per 1,000 per annum from Measles, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward	North Ward	South Ward
1895	0·2	.....	·3	·1	·3
1894	.....				
1893	1·0				
1892	·2		Steel St. Glover St. Glover St.	Vere St.	Camm St. Brown St. Herdman St.



**Scarlet-fever.***Number of Deaths—22.*

In the earlier months of the year there was but little scarlet-fever in the town; up to the end of May I heard of only 18 cases, and the first death from the disease was recorded on May 24th. About the middle of June, however, 20 cases came to my knowledge, nearly all being among children attending the same elementary school; it is extremely probable therefore that some child of whose illness I was not aware, had returned to school in the infectious stage, and communicated the disease to its school-fellows. One death occurred during June. The schools were closed for the summer holidays during the whole of July, and after the first week of that month I heard of only 7 cases until August 9th. There were no deaths recorded during July. Now, however, the epidemic may be said to have begun; in August I heard of 30 cases, and 1 death occurred; in September I heard of 38 cases, with 3 deaths; in October of 80 cases, with 6 deaths; and in November of 111 cases, with 8 deaths. During October and the early part of November I made constant enquiries, with the assistance of the School Attendance Officer, with a view to deciding as to the desirability of closing some or all of the public elementary schools. So rapidly did the epidemic appear to be extending during the second week of November, that I presented a special report to a joint meeting of the Health and School Attendance Committees on Nov. 19th, advising that all the public elementary schools should be closed for a period of six weeks. An order was accordingly issued, signed by two members of the Committee, requiring the schools in question to be closed from Nov. 22nd, 1895, until Jan. 6th, 1896. A circular letter was also sent to every Clergyman and Minister in the town, advising the closure of the various Sunday schools for a like period, a course which it was at once decided to adopt. During December I heard of 37 cases, —30 before the 5th of the month, and 2 deaths occurred. I am aware that, with the closing of the schools, my most valuable source of information was taken away, and that cases may have existed of which I did not know; still I have reason to believe that after the expiration of two weeks from the date of the closing of the schools there were very few fresh cases of the disease.



In the absence of compulsory notification it was a little difficult to place before you reasons or figures sufficiently weighty to justify a general closing of the public schools. My report was practically based upon the following considerations: scarlet-fever was undoubtedly present in the town in many households, for several fresh cases were daily reported to me from one source or another, chiefly through the School Attendance Officer, through whose ready assistance I was able to ascertain the average number of absentees during the four weeks ending Nov. 8th, 1895, and to compare this average with that for the corresponding period of 1894. I found that during the four weeks indicated in 1895 there were daily absent from all the schools in the town on an average 1,190 children, while in 1894 the number was only 924, or 266 less. A closer investigation shewed that this increase in the number of absentees was confined almost exclusively to the infant departments, noticeably so in eight schools; but as there are children from the same household very frequently attending all the departments in a school, no good purpose would have been served if one department only had been closed and the others allowed to remain open.

I should like to point out that the average number of absentees is obtained by deducting the average number present from the average number on the school register, and it is important to ascertain whether this last has been suddenly increased or decreased during the period under observation. If, for instance, an examination has been held in the infant department, and 25 children are transferred to the upper school, the average number on the books will be reduced, and the average number of absentees also reduced by a like number.

I must here acknowledge the assistance which was given to me by the head teachers, and the assistant teachers, who have always shewn their willingness to do all they can to reduce the amount of sickness among the scholars to a minimum.

Wherever possible, the clothing, bedding, and infected rooms of the convalescent from scarlet-fever have been disinfected as detailed on page 29. In order to lessen the risk of infection through the medium of children's books and toys, these have been supplied free to those who have cared to apply to the Sani-

tary Inspector. It should be stated that they were obtained from several ladies and gentlemen in the town in response to an appeal from His Worship the Mayor.

Death-rate per 1,000 per annum from scarlet fever, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1895	.5	.4	.6	.5	.6
1894	.2				
1893	.5				
1892	.1	Moss Square Sandon St. Market Ter'ce Oakley St. Beech St.	Minshull New Road West St. (2) Samuel St. Peel St. Vernon St.	Chetwode St. Sheppard St. Thomas St. New St. William St.	Lockitt St. Station St. Arthur St. Chambers St. Walthall St. Derington St.

### Diphtheria.

#### *Number of Deaths—2.*

It is satisfactory to be able to record only two deaths from this disease, one having taken place in July, the other in Dec.

Death-rate per 1,000 per annum from Diphtheria, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward	South Ward.
1895	.05	.1	.....	.....	.1
1894	.05				
1893	.5				
1892	.3	Liverpool St.			Railway St.



**Whooping Cough.***Number of Deaths—7.*

This disease did not prevail very extensively at any time of the year, though it was the registered cause of one death each month from March to September inclusive. Thirty-three cases came to my knowledge, fifteen occurring in the month of May.

Death-rate per 1,000 per annum from whooping cough, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1895	·1	·1	·4	—	·1
1894	·5				
1893	·4				
1892	·8				
		Sheppard St. Sandbach St.	Holt St. Glover St. West St. Underwood Lane		Alton St.

**Typhoid Fever.***Number of Deaths—6.*

Although two deaths occurred in January and one in February from typhoid fever, it was in the second half of the year that the disease most prevailed. Only eight cases were brought to my knowledge, and a covered sanitary pail containing 7 lbs. of peat was sent for the use of each of these. I have reason to believe, however, that there were many other cases in the town of which I have no record. That there was a common origin in some instances I feel certain, and I believe that I should have been able to trace out this source had the compulsory notification



Act been in force in the Borough. There is no disease which can be more readily dealt with than typhoid fever, if its existence is only known at an early stage to the sanitary officials, who can then make arrangements for the disinfection and destruction of the discharges from the patient, in which discharges are believed to alone lie the infective element of the disease.

Death-rate per 1,000 per annum from typhoid fever, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1895	.1	.1	.1	.1	.1
1894	.1				
1893	.2				
1892	.1	Exchange St. Beech St.	West St.	Remer St. Meredith St.	Nantwich Rd

### Diarrhœa.

*Number of Deaths—49.*

Of the total number of deaths occurring from diarrhœa during the year, 48 were among children under 5 years of age, and no fewer than 42 of these again among infants under twelve months old. The disease was prevalent during the whole of July, August, September, and the early weeks of October. The concurrence of infantile diarrhœa with a continued elevation of the temperature of the earth—say one foot and more below the level of the ground surface—has been frequently established; it is not surprising to find therefore that during the months named above the 1-foot and 4-foot earth thermometers registered respectively, with only the slightest variations, 62 degrees and 58 degrees F., and that when this temperature suddenly fell during October, the deaths from infantile diarrhœa ceased.

Death-rate per 1,000 per annum from diarrhoea locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1895	1·3	1·0	1·3	1·8	·9
1894	·3				
1893	2·5				
1892	·8	Liverpool St. (2) Market St. Market Ter'ce Delamere St Wistaston Rd (2) Ludford St. (2) Cobden St. Bowling Green	West St. (4) Derby St. Alexandra St Frederick St. Samuel St. Alice St. Rose Terrace Cemetery Rd. Minshull New Road	Audley St.(2) Ridgway St. Henry St. Sheppard St (3) Thomas St. Farrington St (2) Vere St. Bridge St Earle St. Hungerford Avenue William St. Oakley St.	Gresty Rd (3) South St. Pedley St. Brown St. Lord St. Station St. Wesley St.

In the above table locating the fatal cases it is impossible not to notice the remarkable grouping of the cases. It will be instructive to take four groups and to classify them as follows:—

	Houses.	Deaths.	No. of WC.'s
1. Henry Street	271	4	7
2. Thomas Street	127	4	10
3. Gresty Road	188	4	5
4. Liverpool St. and houses surrounding Christ Church	250	2	250

Nearly all the houses in the first three groups are provided with privy-pails or cess-pools; the fourth group has exclusively waste-water closets; in all other respects the four groups are alike, especially as regards rateable value and the class of tenants, although it should be remarked that the houses in the



fourth group are much more crowded together than those in the other three. In previous reports I have pointed out this noticeable difference between the water-closeted houses and those provided with privies.

### Influenza.

#### *Number of Deaths—6.*

From the returns received during January and February through the Secretaries of the Friendly Societies, it was evident that Influenza prevailed in the town to a considerable extent, reaching its height in March, when 5 deaths were recorded; during the latter half of the year there were few, if any, cases. The depressing after-effects of the disease are well known; and among those affected in Crewe no fewer than three men committed suicide, each strangely enough taking the form of cut-throat. Two of the suicides took place in March, one in April.

Death-rate per 1,000 per annum from Influenza, locating the fatal cases in 1895.

	Borough of Crewe.	Central Ward	West Ward.	North Ward.	South Ward.
1895	·1	·1	·4	.....	.....
1894	·15				
1893	·2				
1892	·3				
		Heathfield Oakley St.	Rigg St. West St. (2) Underwood Lane		



**Phthisis.***Number of Deaths—42.*

The death-rate from consumption is not appreciably higher than the average rate recorded during the last ten years. Of the 42 deaths, 34 were among persons between 20 and 50 years of age; 26 were males and 16 females. 10 deaths occurred in the Central ward, 13 in the West, 13 in the North, and 6 in the South ward.

The bedding, &c., used by, and the houses occupied by consumptive patients, have in several instances been disinfected, for it cannot be too widely known that consumption is a distinctly infectious disease, and that preventive measures can 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.
1895	1·1	1·0	1·4	1·5	·6
1894	1·0				
1893	·9				
1892	·8				

**Pneumonia.***Number of Deaths—49.*

Twenty-three of the forty-nine deaths from inflammation of the lungs were among children under 5 years of age. In 1894 there were 45 deaths, and in 1893 there were 90 from this cause.

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

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

TABLE 14.—VITAL STATISTICS OF CREWE BOROUGH.  
Death-rate per 1,000 per annum.

	Birth-rate.	All causes	Zymotic	Respiratory	Phthisis	Diarrhoea	Children.		Per 1000 born under 1 year
							Per cent. of total Deaths under 1 year	Per cent. of total Deaths under 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

#### Deaths in the Cottage Hospital.

The cottage hospital was opened on August 7th. Two deaths have occurred in the Institution; one after extensive burns, and the other from pneumonia.

#### Inquests.

There were 42 Inquests held during 1895, of which 26 were upon males and 16 upon females. Of the total number 7 were upon children under one year.

TABLE 15.—Number of Inquests during the past 13 years:—

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



TABLE 16.—Causes of death as recorded at Coroner's Inquests :

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

#### Deaths in the Accident Hospital.

There were two deaths in the L. & N. W. Ry. Co.'s hospital, both following accidents which had occurred in the Company's works.

### Isolation Hospitals.

**Small-pox.** This Hospital, I am pleased to be able to record, has not been required during the year. The inside walls and ceilings have been whitewashed; the blankets, beddings, &c., overhauled and passed through the disinfectant; and various minor structural repairs carried out. The Sanitary Inspector and the Medical Officer of Health visit the Hospital periodically, and it can be got ready at a few hours' notice.

**Scarlet-fever.** It will doubtless be remembered that I was able to state in my last Annual Report that a site of five acres had been purchased, upon which it was proposed to erect an Isolation Hospital to accommodate 30 patients, and that competitive plans had been invited by public advertisement.

Sixty-three plans were submitted in competition, and on February 26th last the General Purposes Committee decided that Mr. George Bolshaw, of Southport and Crewe, be employed as the architect in the erection of the Hospital. This minute was confirmed by the Council on March 6th. On March 12th the Health Committee, at a special meeting, resolved that application should be made to the Local Government Board for sanction to borrow £8,000 for Isolation Hospital purposes. This minute was confirmed by the Council on April 3rd. On May 21st an Inquiry was held in the Council Chamber by Dr. R. Deane Sweeting, on behalf of the Local Government Board, and as a result of this Inquiry, on June 24th the Council received the sanction of the Board to borrow the sum of £8,000, the Council undertaking that cases of small-pox should not be taken or treated on the site proposed to be utilised. Permission was given to borrow the sum of £750 (the cost of the land) for a period of fifty years, £5,930 (the cost of the buildings) for thirty years, and £1,320 (the cost of furnishing, fencing, architects' and other incidental charges) for ten years.

On September 14th tenders were invited by advertisement for the erection of the buildings, and on October 18th seven tenders were received, that of Mr. John Matthews, of Nantwich, being accepted; the amount of the tender, and which did not include the boundary wall, was £5,899. Tenders have since been invited for the erection of a boundary wall.\* The site is an admirable

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\* Mr. Matthews' tender for £504 has been accepted.



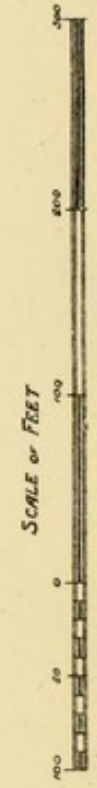
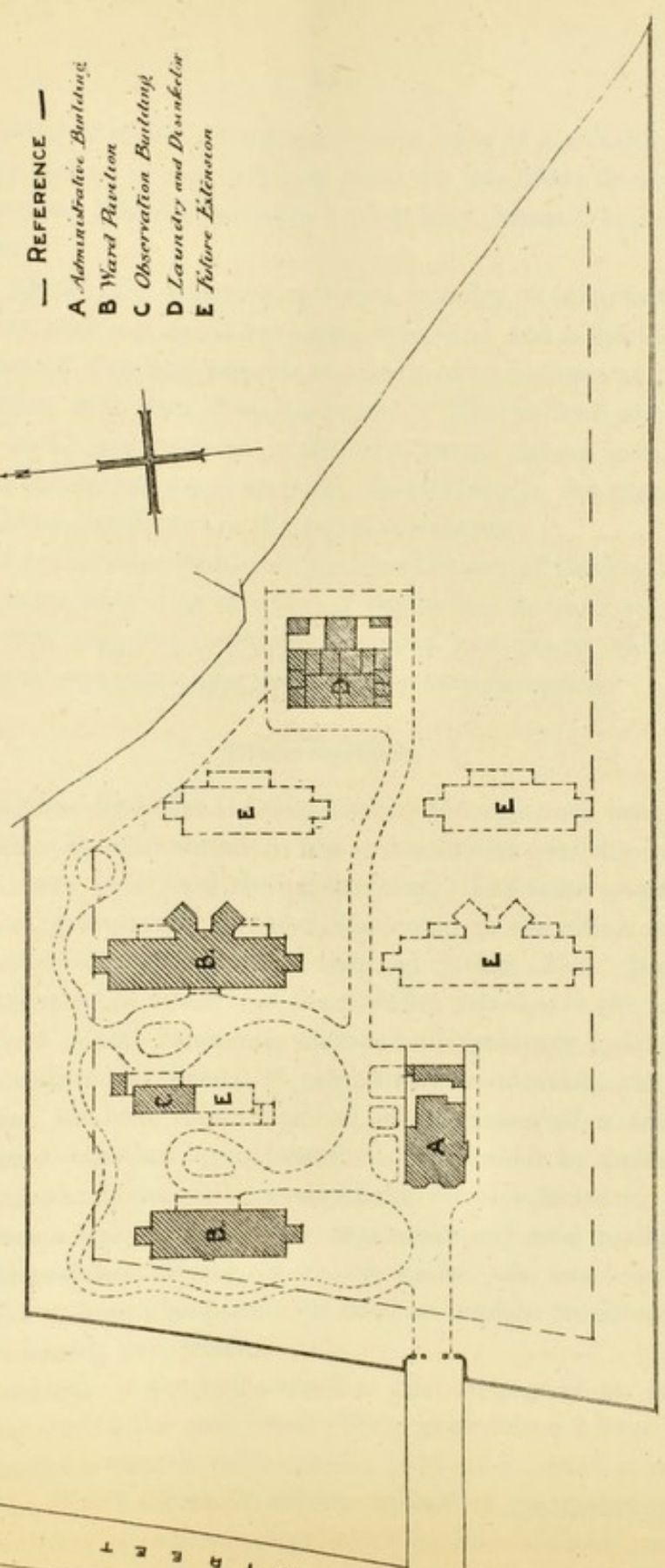
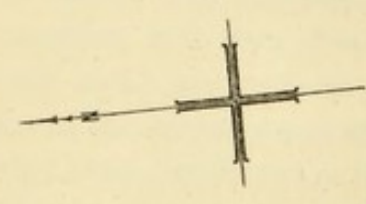
one, and has probably only one fault, it has a clay sub-soil. Although not in the highest part of the town, it is yet sufficiently elevated to overlook the greater part of the Borough, being only 18 feet below the level of the highest portion, and 64 feet above the lowest portion. Situated as it is on the north-eastern side, the prevailing winds will blow from the town towards and across the site. It is very centrally placed, and although within half a mile of the centre and business portion of the town, and not more than a mile and a half from any part of the Borough, it has, except on the southern side, the open country for miles round; on the south side there are not 250 houses within a radius of a quarter of a mile.

Although it is proposed at present to provide accommodation for only 28 patients, the blocks have been arranged with a view to placing on the site additional pavilions, so that it would be practicable to increase the accommodation to 100 beds at very little comparatively extra cost.

The aspect of the buildings is nearly north-west and south-east, every portion of the wards will therefore obtain a maximum amount of sun. The administrative block (A) contains a Matron's room, Nurses' room, Medical Officers' room, kitchens, and seven bedrooms, and if required additional bedrooms can be added. The larger of the two general pavilions (B) has two unequal large wards; the one to accommodate eight beds, the other six, and two single bed wards. Between these four wards a Nurses' room is placed, and so arranged that the Nurse in charge can see each of the wards from that room. Covered verandahs are on the north-easterly side of the pavilion. The bath-room, to contain a portable full-size bath, opens out of the entrance vestibule. The lavatories and w.c.'s are placed at each end of the pavilions, and are cut off from the main building by a cross-ventilated passage. The smaller pavilion (B) contains two general wards to hold six and four beds respectively, and with the exception of the single-bed wards is arranged precisely as the larger pavilion. The pavilion (C) contains two single-bed wards divided by a Nurses' room; into these wards will be placed those patients about whom there is any doubt as to the diagnosis of their case; they can here be placed under "observation," and

— SANATORIUM FOR THE BOROUGH OF CREWE —  
 — BLOCK PLAN —

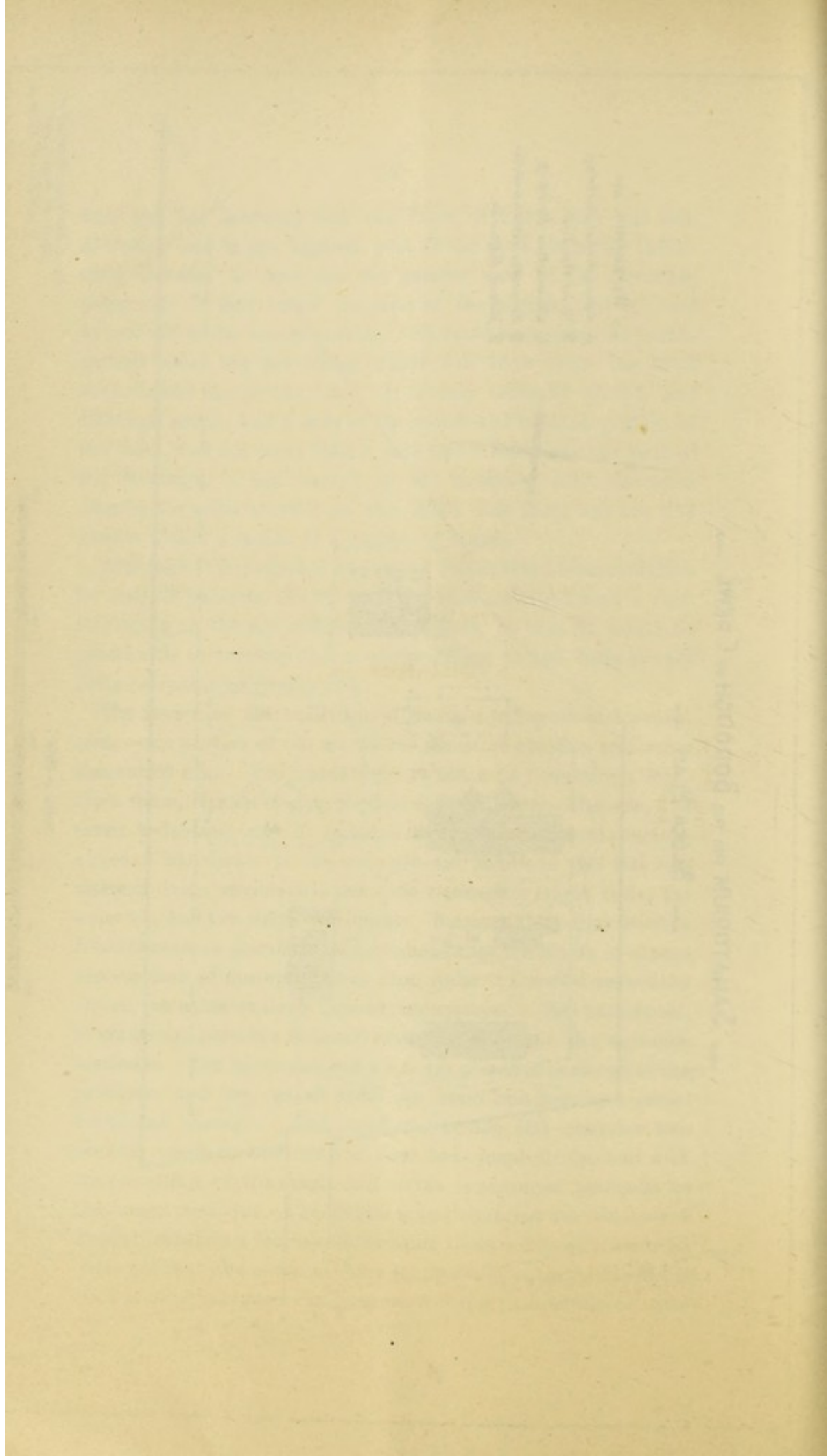
- REFERENCE —
- A Administrative Building
  - B Ward Pavilion
  - C Observation Building
  - D Laundry and Dressing
  - E Future Extension



Geo. E. Bobshaw, Architect.  
 Lord St. Southport.  
 & Victoria St., Crewe.

From Crewe  
 MIDDLEWICH STREET  
 To Cross Keys





in the event of it being found, after the lapse of a suitable time, that any person is not suffering from an infectious disease, he can leave the hospital without having been himself exposed to infection.

The block (D) contains a steam laundry, a disinfecter, a mortuary, stabling, sheds for ambulance vans, and a discharging bath-room. This last consists of a bath-room between and communicating with two dressing-rooms. The patient about to return home will undress in the first room, take a bath, and dress in the second dressing-room, the clothing in the meantime having been disinfected in the steam disinfecter.

There are no superfluities to be found in any of the buildings. At the same time it is safe to say that when finished we shall have a very completely equipped hospital, and one to which the most fastidious rate-payer could hardly take exception.

#### **Disinfection.**

Carbolic-acid powder is freely used by the night-soil men, who are practically empowered to use an unlimited quantity; some six tons have been used during the year. The same powder is also given gratuitously to those who come to the offices for it; in this way 502 packets were distributed during 1895. Not the least advantage to which this distribution attaches is the knowledge which is very frequently obtained of insanitary conditions, &c.; indeed, in the absence of compulsory notification, the first intimation we have often had of the existence of a case of infectious disease has been through the application by a member of the infected house, or by a neighbour, for disinfectants.

The steam disinfecter has been very constantly used during the year,—almost daily during the last six weeks. On two occasions articles have been disinfected for families outside the Borough, a charge having been made.

The method of house-disinfection has undergone an entire revolution during the past year. With many others I have long felt that the ordinary "fumigation" of an infected room is little more than a farce; if sulphur fumes are generated (sulphurous acid gas), the air of the room is alone affected, unless the walls, ceiling, and any furniture in the room are first of all



moistened; and as it can hardly be necessary to disinfect the air, the real lodging-places of the disease germs, such as the walls, ledges of wainscoating or of cornices, are left untouched. There is no doubt from the researches of Prof. Koch that the most satisfactory disinfectant is perchloride of mercury (corrosive sublimate), and he has found that a solution of 1 in 1,000 is of a sufficient strength to destroy even the spores of the tubercle bacillus.

In the early part of the year I used this solution upon the walls and ceilings of three houses, applying it with a white-wash brush, but I soon found that this method of application was undesirable, for the solution trickling down the wall, the upper part was hardly touched, while the lower portions became saturated. I therefore asked your permission to purchase an equifex spray producer, which has now been used to disinfect 81 rooms; indeed, wherever house disinfection has been required since November 20th last.

A room of ordinary size can be disinfected in about two hours no part of the corners, cornices, or window-ledges being left untouched by the disinfectant, and so fine is the spray, that the colours of wall-papers rarely if ever run one into the other. From the accompanying illustration the machine will be seen to resemble a small garden syringe; the lower portion contains the solution of corrosive sublimate, in the upper half is placed an air pump; the air being discharged along one tube extracts the solution through the second tube, and a very ingenious spiral coil introduced at the extremity of the tubes causes the solution to be thrown out in a very fine—almost invisible—spray.

This machine has been used in Paris for the past two or three years, but as far as I can gather your Authority is the first which has used it in this country.

Objection has been raised by some against the use of so poisonous a substance as corrosive sublimate; but I should like to point out that it would be necessary to drink at least a pint of the solution to secure poisonous effects. The only risk which at all attaches to its use lies in the concentrated solution which the person who uses the machine is required to dilute to the necessary strength. This, however, is kept in small quantity in





a blue fluted poison bottle, is coloured with blue aniline dye, and contains an odorous substance, so that only the most determined suicide could possibly take any portion of it. The handle of the machine, when not in use, is kept fast with a chain-lock; indeed the risk of poisoning by misadventure with this disinfectant is incomparably less than that which attends the distribution of strong carbolic acid, a practice which pertains in some towns where wine bottles, &c., are brought to the sanitary offices for a free supply of the acid, a fatal dose of which has not infrequently been taken by some person unaware of the substance contained in the bottle.

A room and the bedding contained in it having been disinfected, I have written to the owner of the house in question asking him to whitewash and re-paper the rooms which have been occupied by the patient. With very few exceptions the work has been done almost at once; but wherever a fortnight has elapsed without the owner taking any action in the matter, I have put in force the 5th section of the Infectious Disease (Prevention) Act, 1890, which says that

“Where the Medical Officer of Health of any local authority . . . certifies that the cleansing and disinfecting of any house or part thereof, and of any articles therein likely to retain infection, would tend to prevent or check infectious disease, the clerk to the local authority *shall* give notice in writing to the owner or occupier of such house or part thereof, that the same and any such articles therein will be cleansed and disinfected by the local authority at the cost of such owner or occupier, unless he informs the local authority within twenty-four hours from the receipt of the notice that he will cleanse and disinfect the house or part thereof, and any such articles therein, to the satisfaction of the Medical Officer of Health, within a time fixed in the notice.”

### **Notification of Infectious Diseases.**

In each of my two previous annual reports I have urged upon you the desirability of adopting the Infectious Disease Notification Act, the principle of compulsory notification being now in force in 134 English towns having a population over 25,000. In my monthly report for June last I again asked you to consider the question, and it was resolved that it be placed upon the agenda for consideration at the next monthly meeting; it was then resolved "That the Medical Officer of Health be instructed to report to the next meeting of the Committee upon the cost in carrying out the Act in other towns of a like population to Crewe where the Act has been adopted."

At the September meeting of the Committee I reported that having obtained information from 23 towns, each having a population of between 30,000 and 40,000 persons, I found that during the five years 1890-94, the average annual cost of administering the Act had been £35. I again strongly urged the adoption of the Act, and a motion for its adoption was moved and seconded, but after a short discussion withdrawn, the Committee being of opinion that it would be advisable to defer the matter until the Isolation Hospital was erected. In November a discussion again took place on the question, but no action was taken in the matter. To the December Committee I reported at some length, again urging reasons for the adoption of the Act, but again the subject was shelved. I need hardly, I think, point out to you that if any town should have powers of compulsory notification, it is such a town as Crewe, composed as it is almost exclusively of workmen's houses, and in which a very large percentage of the houses are occupied by lodgers, to whom it is of the first importance to know that the rooms they may be about to rent are free from infection.

### **Notification of Sickness by Friendly Societies.**

This system of notification, which has been in force in the Borough now for about a year and a half, is still continued, and by its instrumentality not a few insanitary conditions have been rectified. The returns sent in from the various Secretaries average fifteen per week. Even the short experience of the



method which I have had convinces me that much valuable information would be obtained if the Secretaries of all registered Friendly Societies were placed under an obligation to forward their sick returns to the Medical Officer of Health for their district. Even if a payment were made, say of three-pence for each return sent in, the aggregate amount would not be very great,—in Crewe it would not reach £10; and I should imagine that Crewe has a rather larger proportion of club-membership than other towns, from the fact of its population consisting so largely of working men.

#### **Examination of Houses.**

Several householders have availed themselves of the offer made in 1893 to examine any house in the town as to its sanitary condition, free of charge. The principal defects pointed out have been waste-pipes directly connected to drains, or an unsatisfactory condition of the cellar, either from a faulty trap, or actually badly jointed or broken drain-pipes.

#### **House-to-house Inspection.**

During May, June, and July of 1893, a very complete house-to-house inspection of the Borough was made by the Sanitary Inspector and Medical Officer of Health; and although during last year every part of the town was visited at one time or another, the pressure of other work, noticeably the prevalence of scarlet-fever in the latter half of the year, prevented a systematic inspection being made. I regret that it was impossible to carry out this duty, for I attach the highest importance to its performance, as in no other way can so many small—almost insignificant—matters be detected and remedied; their very insignificance rendering them almost too trivial to be reported as nuisances, while their aggregation endows them with much capability for mischief.

TABLE 15.—Premises which require periodical inspection.

	Boro' of Crewe.	Central Ward.	West Ward.	North Ward.	South Ward.
Bake-houses .....	25	8	5	7	5
Cow-sheds .....	57	3	12	29	13
Dairies and Milk-shops .....	38	12	9	5	12
Lodging-houses .....	6	3	1	1	1
Slaughter-houses .....	14	6	2	1	5
Factories .....	41	18	9	6	8
Workshops .....	63	32	11	8	12
<b>Total</b> .....	<b>244</b>	<b>82</b>	<b>49</b>	<b>57</b>	<b>56</b>

**Bakehouses.***Number—25.*

With only one or two exceptions the bakehouses are kept in a cleanly condition. Since the beginning of the year, at four bakehouses old insanitary privies have been converted into w.c.'s. There are now only six with out-offices in an unsatisfactory condition, and I have reason to believe that these, before long, will be done away with. It is most essential that a building in which is carried on the production of such an important article of diet as bread should be in a thoroughly good sanitary condition, and this cannot be the case if, within a few feet of the building, excrement is stored up from one week's end to the other.

**Cow-sheds.***Number—57.*

During an inspection of the cow-sheds it was found that there were 345 cows in the Borough, of which 8 were in the Central ward, 42 in the West, 232 in the North, and 63 in the South ward.



**Dairies and Milk-shops.***Number—38.*

It is not at all satisfactory to find that at not a single milk-shop in the town is milk exclusively sold. At eight groceries, &c., and at the remaining thirty vegetables are to be found in the same shop with the milk.

**Common Lodging-houses.***Number—6.*

The aggregate accommodation in the six registered lodging-houses is for 105 persons, and it is usual for each house to have its full complement of lodgers. I am more and more convinced that it is impossible to keep these houses in a thoroughly satisfactory condition. When a lodging-house is registered for only 20 beds or less, when it has not been built primarily for a lodging-house, and when such a small sum as fourpence per night is only charged for the accommodation, it is too much to expect the keepers to do more than satisfy the very barest requirements.

During the year I have had an opportunity of inspecting Lord Rowton's lodging-house at Vauxhall, which accommodates 500 men; and also the model lodging-house built and managed by the Corporation of Salford, which has beds for 285 men. Each of these Institutions is a financial success, and I feel sure that a Municipal lodging-house of say 100 beds, if established in Crewe, would prove itself to be self-supporting, and would remove what is now a distinct danger, for at any time small-pox, scarlet-fever, or other disease may be brought into the town through the medium of the present lodging-houses.

**Slaughter-houses.***Number—14.*

These are nearly all kept in a fairly clean condition, but most of them are far too small for the purpose for which they are used. At the risk of unduly repeating myself, I must again express my astonishment that at any rate the principal butchers in the town do not make more use of the slaughter-houses at the cattle market, instead of slaughtering in the very middle of the town.

### **Diseased Meat.**

Two butchers were proceeded against during the year for exposing meat unfit for food for sale. One was imprisoned for a month for exposing the carcass of a pig which was in an advanced tuberculous condition; in the second instance the Magistrates decided to dismiss the case.

### **Factories and Workshops.**

*Number—104.*

Having presented to you a special report upon the Factory and Workshop Acts so recently as December last, it is unnecessary to refer to them again here, beyond mentioning the fact that they have all, including the L. & N. W. Ry. Co.'s works, been visited during the year by the Sanitary Inspector or the Medical Officer of Health.

### **Ventilation of Sewers.**

As in former years, there were many complaints made of foul smells coming through the street-level manhole ventilators. At the end of 1898 it was decided to make certain alterations in the floors of some (about 300) of the manholes, by which the catch-pit character would be abolished, and the sewage would be able to flow continuously along the whole of its course; this work was not carried out last year, but I am informed that it will be put in hand shortly. When these 300 sewer-gas manufactories—for that is really what a catch-pit is—are abolished, we shall be better able to define the best position along the course of a sewer for a ventilating-shaft, if any are needed.

### **Houses Let in Lodgings.**

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

### **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.



**Water.**

From periodical analyses of the water supplied to the town by the L. & N. W. Ry. Co. from Artesian wells at Whitmore, I have found it to be of uniform purity, varying, however, in hardness.

**School Accommodation.**

The public school accommodation in the Borough suffices for 6,716 scholars, apportioned to the Wards as follows:—

			Per cent. of Population
Central Ward	...	2,657	.... 25
West	,,	1,663	.... 18
North	,,	1,118	.... 13
South	,,	1,278	.... 13

All the voluntary schools, eleven in number, in the Borough, are now on the water-carriage system, being provided with latrines which are flushed automatically during the day, and night and morning by the school care-takers. The two Board schools at Church Coppenhall are on the pail system.

There is no doubt that there is now frequent overcrowding in some of the schools; but the new schools which are approaching completion in Beech Street, and the additional rooms at the Trinity and Edleston Road schools, will accommodate some 500 more children. I understand, too, that a new school is about to be erected in the South Ward for 400 scholars.

On page 17 will be found in detail the circumstances which led to the closing of the elementary schools in the Borough for six weeks from November 22nd, in consequence of the prevalence of scarlet-fever in the town.

The absence of a play-ground in the centre of the town for children is being more and more felt, and year by year the available plots are being built over. At present the back streets and passages are usually chosen as the meeting-place for recreation; indeed, the youngsters appear to consider the ash-pits and middens an especial attraction, and admirably adapted to some of their games. More than once I have watched a group of boys

chasing one another through an uncovered privy-midden, leaping in through one door, climbing the inside wall, and so on round and round. One not at all infrequently, too, finds the ash-pit as an improvised gymnasium, and a small boy hanging head downwards, inhaling the effluvium from the ash-pit contents.

I am informed that the 6 acres of land adjoining the cemetery, and having an entrance into Market Street, yields a rental to the Corporation of only £28 per annum. It would appear therefore, that by sacrificing this sum, a good sized play-ground could at once be obtained. I am aware that an objection, and a very proper one, might be raised against permitting noisy games, &c., to be played in a field actually adjoining the cemetery; this might, however, be met by railing off a strip of land say 20 or 30 feet wide between the play-ground and the cemetery itself. If this proposal were adopted, a very pressing want would be met for a few years at any rate; at the same time it seems to me that an effort should also be made to obtain a permanent central recreation ground.

#### Licensed Houses.

*Number*—86.

This number does not include houses which have an "off license." There is one public-house to each 430 persons in the town; they are apportioned to the wards as follows:—

Central Ward	.....	.....	.....	36
West	,,	.....	.....	14
North	,,	.....	.....	17
South	,,	.....	.....	19

During the year great improvements have been made in the sanitary arrangements of many of these houses; the cellars of not a few were found to be in a most deplorable condition, but they are now almost without exception in a very fair state. Sixty-nine of the licensed houses are entirely on the water-carriage system, fourteen having been so placed last year; there still remain, however, seventeen with privy accommodation, some of which I hope during the present year will be re-placed by water-closets in one form or other. The owners have, as a rule, shewn every desire to do all that is required to place their property in a thoroughly good sanitary condition.



### **Re-construction of Privies and Ash-pits.**

During the year 24 fixed receptacles, 113 cess-pools, 23 pail-closets, and 85 privy-middens have been re-constructed, and converted into 101 wash-down water-closets, 40 waste-water-closets, and 104 pail-closets.

The multiplication of the pail-closets in the town is very much to be deplored, for where properly laid sewers exist, as in Crewe, no more costly method could be devised for dealing with the sewage, both as regards the property owner and the Corporation, and the carting through the streets of nearly ten tons of night-soil nightly can hardly be said to conduce to the health or to the well-being of the inhabitants. Surely the time has arrived when the 72nd bye-law with respect to New Streets and Buildings might be altered, so that it should not be permissible to construct a privy in connection with a building unless such privy is placed at least 40 feet from a dwelling-house or public building, &c. The prescribed distance at present is only 6 feet; and I fear the Health Committee hardly realize how many new buildings are being erected in Crewe attached to which are pail-closets. Of the plans passed last year nearly 100 shewed this form of out-building, and included in this number were the plans of a bake-house situated in a very central part of the town, and which in other respects will be found of a most modern and improved type.

### **Ash-pits and Refuse Removal.**

If reference is made to Table 17 it will be found that the work of scavenging the ash-pits, &c., has materially increased, although the cost of this department has been considerably lessened. Five hundred more loads were removed in 1895 than in 1894, at practically the same outlay, the cost per load being reduced from  $4/5\frac{1}{4}$  to  $4/2\frac{1}{2}$ .

There are several improvements which might be effected in the removal of the day ashes, and the principal one is the abolition of the heaps of dry ashes from ash-pits and dust-bins which lie in the streets waiting to be loaded into the carts. As the present form of Scotch cart gets worn out, it will be well to substitute a lower vehicle, so that wherever possible the ash-bins may be



emptied directly into the cart, thus doing away with the double labour involved in emptying the bin on the roadway, and then throwing the ashes in spadefuls into the high cart. An endeavour must also be made to obtain a more frequent—possibly daily—removal of refuse from business premises.

The treatment of the dry ashes at the sewage farm has, during a part of the year, undergone a complete change. Formerly the contents of the dry ash-pits were mixed, (with only the most superficial extraction of tins, brick-bats, &c.,) with the crude night-soil from pails and cess-pools; the resultant heap was then left for many months to “sweat,” and during this process it is obvious that no small nuisance was caused; indeed with the wind in a suitable direction, the occupiers of the houses in West Street were only too well aware of their proximity to a sewage farm. The new method adopted was shortly as follows:—the dry ashes were screened through an upright hand-screen, the coarser portion being burned in the boiler at the pumping station in lieu of slack, and the finer part having been sprinkled with about 10 per cent. of strong sulphuric acid, was spread on the ground in the form of a rectangular pie dish, in size ten or twelve feet by four feet, with sides eighteen inches high; into this receptacle of acidulated ash-dust the crude night-soil was emptied, and the following morning thoroughly mixed with an iron rake. The acid having fixed the ammonia,—converted the volatile carbonate into a non-volatile sulphate,—little or no smell resulted, and for the farmer the ammonia with its nitrogen remained in the manure. The whole proceedings were at first carried on in a very primitive manner, a hand-screen being used, and the entire work done in the open air; when it became evident that the system would be a success, the Farm Manager (Mr. Woodhouse), to whose energy this successful issue was due, recommended that a vibromotor screen, worked from the pumping engine, should be erected, and that a covered shedding should be placed in a position to enable screening and mixing to be done at as little cost as possible, and so that the amount of moisture in the manure might be reduced to a minimum.\*

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\* Tenders have been accepted for the erection of a Screen and Shedding for the sum of £77 5s.





I have to thank my Inspector (Mr. Wm. Urquhart) for the energy he has shewn in carrying on his work during the year. The routine work of the department is quite enough to keep him fully employed, and when added to that an epidemic such as we had during the latter half of the year, breaks out, the day's work is very largely added to.

To the Chairman and Members of the Health Committee my thanks are again due for the consideration which they have at all times shewn.

I beg to remain,

Mr. Chairman and Gentlemen,

Faithfully yours,

Herbert Jones





TABLE B.

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS coming to the knowledge of the Medical Officer of Health, during the year 1895, 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 1895.		Aged under 5 or over 5.	Small-pox.	Scarlatina.	Diphtheria.	Enteric or Typhoid.	Puerperal Fever.	Krysipelas.	Small-pox.	Scarlatina.	Diphtheria.	Enteric or Typhoid.					
CENTRAL WARD .. .. .	..	10,300	..	..	19	1	..	..	..	..	..	..	..	..	..	..	..	..	..
WEST WARD .. .. .	..	8,885	..	..	43	..	..	..	..	..	..	..	..	..	..	..	..	..	..
NORTH WARD .. .. .	..	8,460	..	..	60	..	..	..	..	..	..	..	..	..	..	..	..	..	..
SOUTH WARD .. .. .	..	9,375	..	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTALS.....	32,783	37,020	1237	..	115	1	..	..	..	..	..	..	..	..	..	..	..	..	..

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 *not* compulsory.



SUMMARY OF CLASSIFIED DEATHS (TABLE 19).

	Number of Deaths.					
	1895.		1894.		1893.	
I.—ZYMOTIC DISEASES...	106	...	65	...	205	...
1. Miasmatic diseases	...	51	...	40	...	109
2. Diarrhoeal	...	49	...	13	...	84
3. Malarial	...	...	...	...	...	...
4. Venereal	...	1	...	1	...	3
5. Septic	...	5	...	11	...	9
II.—PARASITIC DISEASES	1	1	2	2	2	2
III.—DIETIC DISEASES	8	8	5	5	10	10
IV.—CONSTITUTIONAL DISEASES	101	101	100	100	90	90
V.—DEVELOPMENTAL DISEASES	59	59	51	51	52	52
VI.—LOCAL DISEASES	269	...	248	...	306	...
1. Nervous system	...	57	...	51	...	71
2. Organs of special sense	...	...	...	...	...	...
3. Circulatory system	...	41	...	43	...	30
4. Respiratory	...	129	...	116	...	165
5. Digestive	...	28	...	25	...	20
6. Lymphatic	...	...	...	..	...	3
7. Glandular	...	...	...	...	...	...
8. Urinary	...	6	...	3	...	6
9. Reproductive	...	8	...	9	...	10
10. Bones and Joints	...	...	...	1	...	1
11. Integumentary system	...	...	...	...	...	...
VII.—VIOLENCE	21	...	11	...	17	...
1. Accidents	...	16	...	8	...	14
2. Homicide	...	...	...	1	...	...
3. Suicide...	...	5	...	2	...	3
VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES	43	43	38	38	12	12
	608	608	520	520	694	624

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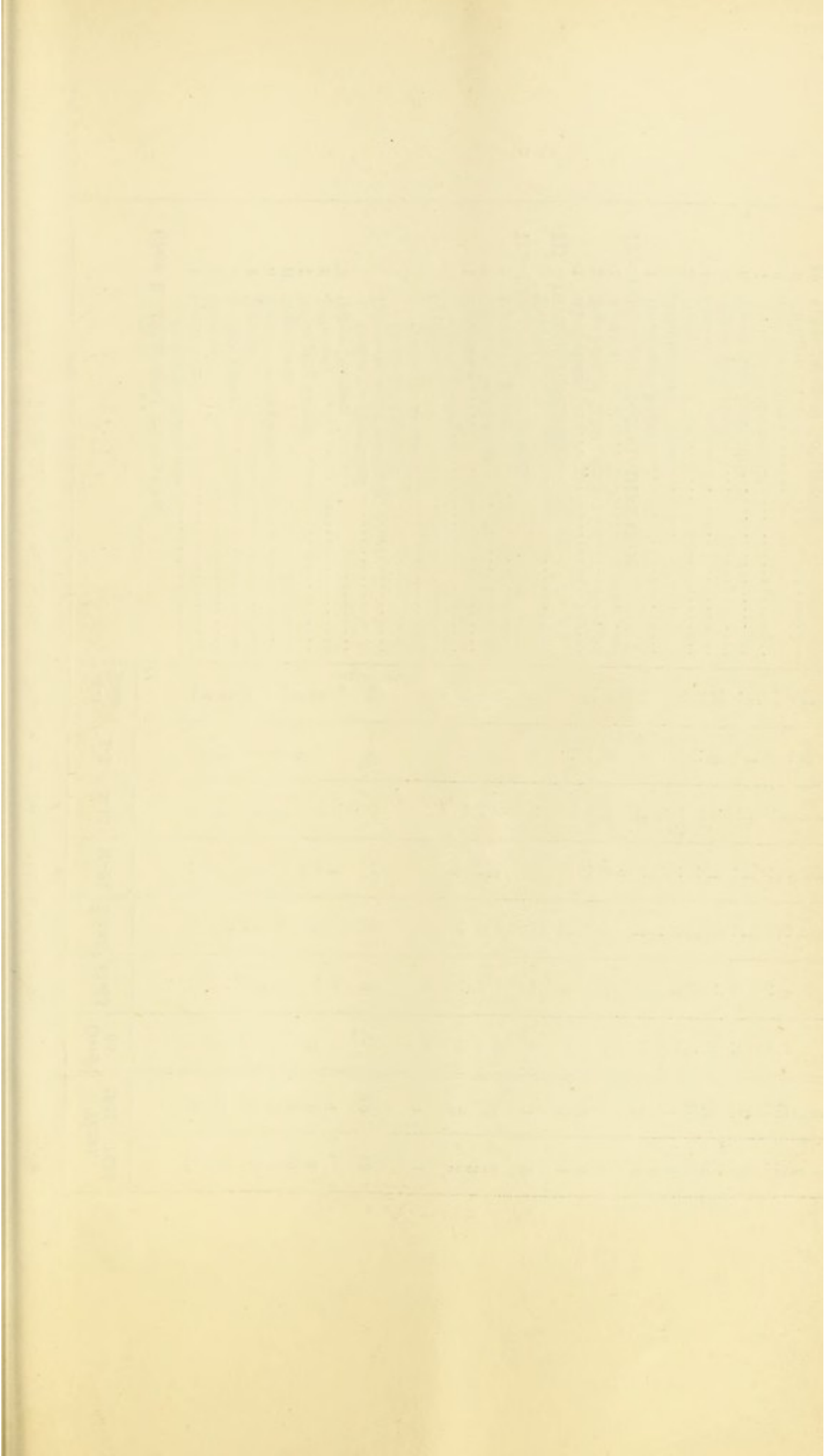
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# REPORT

On the Sanitary Requirements of the Factory  
and Workshop Acts, 1878—1895.

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*To the Chairman and Members of the Health Committee of  
the Crewe Town Council.*

GENTLEMEN,

1. The extent to which the obligations of a Sanitary Authority, and therefore the duties of the Sanitary Officials, have been increased by the last two Factory and Workshop Acts is so great that I propose to lay before you a resumé of the sanitary and some other requirements of the Factory Acts, together with those sections of the Public Health Acts which refer to Factories and Workshops.

2. The Act of 1895, which comes into operation on the 1st of January, 1896, contains provisions affecting variously not alone the owner and occupier of a Factory and Workshop with its employes, but also the Sanitary Authority, and to a slight extent, the general medical practitioner. Laundries can now be more definitely dealt with; and a dock, quay, wharf and warehouse, so far as relates to the process of loading and unloading, together with a building in course of construction, and any building which exceeds 30 feet in height, and in which more than 20 persons, not domestic servants, are employed for wages, is subject to certain sections of the Acts, chiefly relating to accidents and the powers of Factory Inspectors.



3. It will be convenient at the outset to define a Factory and a Workshop.

4. A Factory means

(i.) Any premises in which a manufacturing process is carried on for the purpose of gain, or by way of trade, and in which process steam, water, or other mechanical power is used to move or work any machinery employed.

(ii.) Any premises in which the following trades are carried on, whether such mechanical power be or be not used :

Blast furnaces.  
 Bleaching and dyeing works.  
 Book-binding works.  
 Cartridge works.  
 Copper mills.  
 Earthenware works.  
 Flax scutch mills.  
 Foundries.  
 Fustian cutting works.  
 Glass works.  
 Iron mills.  
 Letterpress printing works.  
 Lucifer match works.  
 Metal and India rubber works.  
 Paper mills.  
 Paper staining works.  
 Percussion cap works.  
 Print works.  
 Tobacco factories.

5. A Workshop means

Any premises in which a manufacturing process is carried on for the purpose of gain, or by way of trade, and in which process water, steam, or other mechanical power is *not* used to move or work any machinery employed, with the exception of the trades enumerated above in par. ii. (F. W. Act, 1878—93.)

6. A room solely used for the purpose of sleeping in is not part of a Factory or Workshop. (F. W. Acts, 1878—93, 1891—31.)

7. It will be noticed that broadly speaking, and with the exceptions indicated, in a Factory mechanical power is present; in a Workshop it is always absent.

8. The provisions of the Factory Acts apply to all factories as defined above, whether children, young persons or women are or are not employed, but as regards workshops, those in which children, young persons or women are not employed, are exempted under certain sections of the Acts, (F. W. Acts, 1878—93), and those places called “domestic” factories and workshops, in which the persons employed are members of the same family and dwelling in the same house, provided neither steam, water, nor other mechanical power is used in aid of the process carried on, are not subject to all the regulations of the Acts, but only to certain requirements having reference to the hours of employment of children and young persons. (F. W. Act, 1878—16.) They are, however, strictly subservient to the Public Health Acts. (F. W. Act, 1878—101).

9. A “child” means a person under 14 years of age.

A “young person” means a person of 14 years of age and under 18 years, (F. W. Act, 1878—96), or one of 13 years of age who has passed the 5th Standard as fixed on September 1st, 1894, by the Home Secretary, with the approval of the Education Department, or who has attended School between the ages of 5 and 13 years 250 times for each of 5 years. (F. W. Act, 1878—26.)

A “woman” means a woman of 18 years and upwards. (F. W. Act, 1878—96.)

10. A child under the age of 11 years is not allowed to be employed in a factory or workshop, even for half-time. (F. W. Act, 1891—18.)

11. A woman may not be employed in a factory or workshop within 4 weeks of giving birth to a child. (F. W. Act, 1891—17.)

12. Every person who occupies a factory or workshop, whether a child, young person, or woman, is or is not employed, is required to inform the Inspector of the district within one month of the beginning of the occupation, and to state the address of the factory or workshop, the address to which he desires letters to be addressed, the nature of the work carried on, the nature of the power used (if a factory), and the name of the firm under which the business is carried on. A maximum fine of £5 may be imposed in case this information is not tendered. (F. W. Acts, 1878—75, 1891—26.)



If any person is in occupation of a workshop on January 1st, 1896, and has not already sent the above information to the Inspector, he must do so within twelve months of that date, or he will be liable to a maximum fine of £5. (F. W. Act, 1895—41.)

The occupier of a factory and workshop must send to the district Factory Inspector on or before the 1st of March in each year, a return of the number of persons employed in the factory or workshop during the year ending on the previous 31st of December, the return to include such particulars as to age and sex as the Secretary of State may direct. A maximum penalty of £10 may be enforced for not complying with this requirement. (F. W. Act, 1895—34.)

13. If any person is killed or suffers any bodily injury or injury to health in consequence of the occupier of a factory or workshop having neglected to observe any provision of the Factory Acts, or any special rule or requirements made in pursuance of the Act of 1891, the occupier of the factory or workshop is liable to a fine not exceeding £100, the whole or any part of which may be applied for the benefit of the injured person or his family, or otherwise, as the Secretary of State determines. But in the case of injury to health, the occupier is not liable unless the injury is caused directly by such neglect. (F. W. Acts, 1878—82, 1895—13.)

14. As far as regards the giving notice of and the formal investigation of accidents, the two following classes of buildings are subject to the provisions of the Factory Acts :—

- (i.) Any building which exceeds 30 feet in height, and which is being constructed or repaired by means of a scaffolding.
- (ii.) Any building which exceeds 30 feet in height, and in which more than 20 persons, not being domestic servants, are employed for wages. (F. W. Act, 1895—23.)

15. Where there occurs in any factory or workshop an accident which either

- (i.) Causes loss of life to a person employed therein; or
- (ii.) Causes to any person employed therein such bodily injury as to prevent him on any one of the three working days next after the occurrence of the accident from being employed for five hours on his ordinary work.

Written notice stating the residence of the person killed or injured, and the place to which he has been removed, must be immediately sent to the Factory Inspector of the district, and in case the accident is fatal, or is produced by machinery moved by steam, water, or other mechanical power, or through a vat, pan, or other structure filled with hot liquid or molten metal or other substance, or by explosion or escape of gas, steam or metal, a like notice must also be sent to the district Certifying Surgeon. Failure to send these notices renders the occupier of the factory or workshop liable to a fine of £5. (F. W. Act, 1895—18.)

16. Within a week of the occurrence of an accident the occupier of a factory or workshop must enter particulars of the accident in a register to be kept for the purpose, and which must at all times be open to inspection by the Factory Inspector, and by the Certifying Surgeon. The penalty for not complying with this requirement must not exceed £10. (F. W. Act, 1895—20.)

#### FACTORIES.

17. Some of the sanitary provisions of the Factory Acts having reference to factories are required to be carried out by the Factory Inspector, but for the most part the Sanitary Authority is expected to put in force, as far as it has the power, the requirements of the Public Health Acts; indeed in this respect domestic factories are entirely under the control of the Sanitary Authority.

18. A Factory Inspector may himself take proceedings, and a maximum penalty of £10 may be enforced against the occupier of a factory which is not kept in a cleanly state and free from effluvia arising from any drain, privy, w.c., earth closet or urinal, or other nuisance, or which is so overcrowded while work is carried



on therein as to be dangerous or injurious to the health of the persons employed therein, or is not ventilated in such a manner as to render harmless, so far as practicable, all the gases, vapours, dust, or other impurities generated in the course of the manufacturing process or handicraft carried on that may be injurious to health. (F. W. Acts, 1878—3, 1891—5.)

19. In the event of a Court of Summary Jurisdiction being satisfied on the complaint of a Factory Inspector that any manufacturing process carried on in a factory or workshop is dangerous to health or to life or limb, the court may prohibit the place being used for the purpose of that process until such works have been executed as are in the opinion of the Court necessary to remove the danger. Should the occupier of a factory or workshop ignore such an order, he will be liable to a daily penalty of 40/- so long as the order is not carried out. But before taking action the Inspector must satisfy himself that proceedings could not have been taken by the Sanitary Authority under the Public Health Acts. (F. W. Act, 1895—2.)

20. In addition to the general terms mentioned in par. 18, the Factory Inspector may specifically deal with a factory not kept in a cleanly state, and a maximum penalty of £10 may be enforced in the event of the following conditions not being carried out :—all the inside walls of the rooms of a factory, and all the ceilings and tops of such rooms (whether plastered or not), and all the passages and staircases must either (1) be limewashed at least once within every 14 months, or (2) painted with oil and varnished once at least within every 7 years, and washed with hot soap and water once at least within every 14 months. (F. W. Act, 1878—33.)

21. The occupier of a factory is required to keep a register of the dates when the limewashing, painting, varnishing, or washing is executed. (F. W. Act, 1878—77), and failure to enter in the register particulars as to limewashing is *prima facie* evidence of failure to observe the requirements as to limewashing. (F. W. Act, 1895—43.)



22. The Secretary of State may however, by order, exempt any special class of factory or workshop or parts thereof from the requirement to limewash or paint varnish, and wash with soap and water. (F. W. Act, 1878—33.)

23. On December 22nd, 1882, such an order was issued, allowing either complete or partial exemption to about 40 trades, mostly included in the following:—

- (i.) The walls of a dwelling house which are papered.
- (ii.) Work places which contain unglazed windows.
- (iii.) Several industries which are mostly as it were of an antiseptic nature.

24. It would be a distinct advantage if an exception were also made in the case of those buildings, the walls of which are lined with glazed bricks or tiles, for under the strict letter of the law, these should either be limewashed or painted.

25. If the Secretary of State considers that some special means should be adopted for securing greater cleanliness or better ventilation for the protection of any child, young person, or woman employed in a factory or workshop, he may require that such special means be adopted as a condition of the employment of a child, young person, or woman. (F. W. Act, 1878—63.)

26. Overcrowding is now more precisely defined, for it is required that there shall be at least 250 cubic feet of air-space to each person employed in a factory or workshop, or during any period of overtime, at least 400 cubic feet for each person. The Secretary of State is empowered to substitute as regards any particular handicraft or manufacturing process for these figures, any higher figures, and may modify the proportion for any period during which artificial light other than electric light is employed for illuminating purposes. (F. W. Act, 1895—1.)

27. A notice specifying the number of persons who may be employed in each room of a factory or workshop in accordance with the regulation of par. 26, must be placed in a prominent position in the several rooms occupied. (F. W. Act, 1895—1.)



28. A maximum penalty of £10 may be enforced by the Factory Inspector if adequate measures are not taken for securing and maintaining a reasonable temperature in each room in which any person is employed. (F. W. Act, 1895—32.)

29. In those textile factories in which atmospheric humidity is artificially produced by steaming or other artificial means, the amount of moisture in the atmosphere must not exceed a certain fixed amount. (Cotton Cloth Factories Act, 1889—5, F. W. Act, 1895—31.)

30. A Factory Inspector may require under a maximum penalty of £10 for refusal, that a fan or other mechanical means of a proper construction shall be provided and used to prevent the inhalation of the dust from grinding, glazing, or polishing on a wheel, or from any process by which dust is generated or inhaled by the workers to an injurious extent (F. W. Act, 1878—36), or in any factory or workshop where any process is carried on by which any gas vapour or other impurity is generated and inhaled by the workers to an injurious extent. (F. W. Act, 1895—33.)

31. In every factory and workshop where lead, arsenic, or any other poisonous substance is used, suitable washing conveniences must be provided for the use of the persons employed in any department where such substances are used. A maximum penalty of £10 may be enforced for not carrying out this requirement. (F. W. Act, 1895—30.)

32. A very important obligation is now imposed upon every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or from anthrax, contracted in any factory or workshop. Unless the notice stated to be required in par. 33 has already been sent, the practitioner must inform the Chief Inspector of Factories at the Home Office, London, of the name and address of the patient, together with the disease from which in the opinion of the medical attendant the patient is suffering. A fee of half-a-crown will be paid for this information, and failure to communicate with the Chief Inspector, renders the medical practitioner liable to a fine of forty shillings. (F. W. Act, 1895—29.)



33. Whenever a case of lead, phosphorus, or arsenical poisoning, or of anthrax occurs in a factory or workshop, the occupier is required to at once communicate the particulars to the district Factory Inspector and the certifying Surgeon. To such a case the provisions of the Factory Acts referring to accidents will apply. (F. W. Act, 1895—29.)

34. The Secretary of State may add any other disease to those mentioned in the two preceding paragraphs. (F.W. Act, 1895—29.)

35. Before referring to the duty of the Sanitary Authority, with reference to the sanitary requirements of factories, it should be stated that the Public Health Act, 1875, sec. 92, recites that "it shall be the duty of every local authority to cause to be made from time to time inspection of their district, with a view to ascertain what nuisances exist calling for abatement under the powers of this Act, and to enforce the provisions of this Act in order to abate the same."

36. And further among the other duties of a Medical Officer of Health and a Sanitary Inspector prescribed by the Local Government Board, each of these officials is required by inspection of the district both systematically at certain periods and at intervals as occasion may require to keep himself informed of the conditions injurious to health contained therein.

37. It will be observed that there is no absolute right of entry in the first instance into premises for the purpose of this inspection, but in the very rare instance of admission being refused for the purpose of ascertaining the existence of any nuisance upon any premises, "any Justice on complaint thereof on oath by any officer of the local authority (reasonable notice in writing of the intention to make the complaint having been given to the person having custody of the premises), may, by order under his hand, require the person having custody of the premises, to admit the local authority or their officers into the premises" between the hours of 9 a.m. and 6 p.m., or in the case of a nuisance arising in respect of any business, then at any hour when such business is in progress or is usually carried on. (P. H. Act, 1875—102.)

The penalty for not obeying the order mentioned above must not exceed £5. (P. H. Act, 1875—103.)



38. It is not left however to the Sanitary Authority alone to ascertain the existence of insanitary conditions in factories, for where it appears to a Factory Inspector that any act, neglect, or default in relation to any drain, w.c., earth-closet, privy, ashpit, water supply, nuisance, or other matter in a factory or workshop, is punishable or remediable under the law relating to public health, but not under the Factory Act, 1878; the Inspector is required to give notice in writing to the Sanitary Authority in whose district the factory is situated of such act, neglect, or default, the Sanitary Authority must then make enquiry into the subject of the notice and take such steps as may seem proper for enforcing the law. (F. W. Act, 1878—4.)

39. The Sanitary Authority must subsequently inform the Factory Inspector of the proceedings taken in consequence of the notice. (F. W. Act, 1895—3.)

40. In the event of the Sanitary Authority receiving such a notice and no proceedings being taken within a month for the punishing or remedying the conditions stated in the notice, the Factory Inspector may take the like proceedings for punishing or remedying the same as the Sanitary Authority might have taken, and shall be entitled to recover from the Sanitary Authority all such expenses in and about such proceedings as he incurs, and are not recovered from any other person except those incurred in any unsuccessful proceedings. (F. W. Acts, 1891—2, 1895—3.)

41. It should be stated here that the term 'house' in the Public Health Acts applies to buildings in which persons are employed whatever their number may be. (P. H. Act, 1875—4. F. W. Act, 1878—101.)

42. The local authority has power to enforce adequate drainage in an inadequately drained house (therefore factory), provided there is a sewer within 100 feet. (P. H. Act, 1875—23.) And must afford facilities for factories draining into sewers. (Rivers Pollution Prevention Act, 1876—7.)

43. The local authority must see that all drains, w.c.'s, earth closets, privies, ashpits, and cesspools within their district, are constructed and kept so as not to be a nuisance or injurious to health. (P. H. Act, 1875—40.)

44. The local authority has power of entry, on written application of any person, upon any premises to examine a drain, w.c., earth closet, privy, ashpit or cesspool, with a view to ascertain any defect likely to create a nuisance, or to be injurious to health; and upon the failure of the owner or occupier of the premises to carry out any requirement of the authority arising out of the examination, the authority may do such works as are necessary at the cost of the owner or occupier. (P. H. Act, 1875—41.)

45. Where Part III. of the Public Health Acts Amendment Act, 1890, is in force (the entire Act was adopted in Crewe on February 1st, 1891), the local authority has power to enforce the provision of adequate sanitary conveniences in factories or workshops, especially having regard to separate accommodation for the sexes, and to the number of persons employed. (P. H. A. A. Act, 1890—22.)

46. Where the Amendment Act has not been adopted, a Factory Inspector may enforce the same provisions as stated in the preceding paragraph, under a maximum penalty of £10. (F. W. Act, 1895—35.)

### WORKSHOPS.

47. If reference is made to par. 12, it will be seen that the occupier of a workshop is required to report the occupation to the Factory Inspector in the same terms as the occupier of a factory.

48. When a Factory Inspector receives notice in accordance with the requirements stated in par. 12, of the establishment of a workshop, he is required to forward the notice to the Sanitary Authority of the district in which the workshop is situated. (F. W. Act, 1891—26.)

49. On the other hand, when a Medical Officer of Health becomes aware that any child, young person or woman is employed in a workshop, he must give written notice of the fact to the Factory Inspector. (F. W. Act, 1891—3.)



50. A Factory Inspector may enforce certain sanitary requirements with respect to workshops, and the instances in which he may do so will be found indicated in the following preceding paragraphs: 19, 25, 28, 30, 31.

51. It should be observed that the obligation to report cases of anthrax, or of lead, arsenic, or phosphorus poisoning, mentioned in par. 32 and 33, applies to workshops equally with factories.

52. For the purpose of carrying out their duties with respect to workshops (not being workshops to which the Public Health (London) Act, 1891, applies), a Sanitary Authority and their officers have all such powers of entry, inspection, taking legal proceedings, or otherwise, as a Factory Inspector. (F. W. Act, 1891—3.)

53. These powers of entry include the power:—

- (i.) To enter, inspect, and examine at all reasonable times by day and night, a workshop and every part where there is reasonable cause to believe that any person is employed. (F. W. Act, 1878—68.)
- (ii.) To take with him a constable where he has reasonable cause to expect obstruction. (F. W. Act, 1895—45.)
- (iii.) To require the production of any registers or documents kept in pursuance of the Factory Acts, and to examine and copy the same.
- (iv.) To make such examination and inquiry as may be necessary to ascertain whether the enactments relating to public health and the Factory Acts are complied with.
- (v.) To enter any school in which he has reasonable cause to believe children employed in a workshop are being educated.

- (vi.) To examine with respect to matters under the Factory Acts every person whom he finds in a workshop, or such school, or whom he has reasonable cause to believe has been within the preceding two months employed in a workshop, to require such person to be examined, and to sign a declaration of the truth of the matter upon which he has been examined.
- (vii.) To exercise such other powers as may be necessary for carrying the Factory Acts into effect.  
(F. W. Act, 1878—68.)

54. The occupier of every workshop, his agents and servants, are required to furnish the means required as necessary for an entry, inspection, examination, inquiry, or the exercise of any powers under the Factory Acts; and any person who wilfully delays any of these requirements, or conceals or prevents a child, young person or woman, from appearing or being examined, is liable to be fined, the maximum penalties being as follows:—

For the person actually causing the delay	.....	£5.
For the occupier of the workshop	.....	£5. }
"    "    if the offence is committed at night	.....	£20. }
"    "    of a domestic workshop	.....	£1. }
"    "    if the offence is committed at night	.....	£5. }

(F. W. Act, 1878—68.)

55. A Factory Inspector is required to inform the Sanitary Authority of any insanitary conditions in a workshop which may come under his notice; indeed it will be noticed that paragraphs 38, 39 and 40, have reference both to workshops and factories.

56. Any workshop not kept free from effluvia arising from any drain, w.c., earth closet, privy, urinal, or other nuisance (F. W. Act, 1891—4) not kept in a cleanly state, or not ventilated in such a manner as to render harmless, as far as practicable, any gases, vapours, dust, or other impurities generated in the course of the work carried on, that are a nuisance or injurious to health, or so overcrowded while work is carried on as to be dangerous or injurious to the health of those employed therein, may be dealt with summarily by the Sanitary Authority as a nuisance. (P. H. Act, 1875—91.)



57. Overcrowding in workshops is specifically defined in par. 26.

58. Uncleanliness may be specially dealt with apart from the powers enumerated in par. 56, "where on the certificate of a Medical Officer of Health or Inspector of Nuisances, it appears to any Sanitary Authority that the limewashing, cleansing, or purifying of any workshop or of any part thereof (except a workshop to which the Public Health (London) Act, 1891 applies), is necessary for the health of the persons employed therein, the Sanitary Authority shall give notice in writing to the owner or occupier of the workshop to limewash, cleanse, or purify the same, or part thereof as the case may require.

The penalty during default is a maximum fine of ten shillings per day. The Authority may themselves do the work required and recover the expenses from the person in default. (F. W. Act, 1891—4.)

59. A reference to par. 23 will shew that the walls of a dwelling-house which are papered are not required to be limewashed.

60. The further powers of a Sanitary Authority as regards workshops have reference to the enforcing of adequate drainage (par. 42), to the proper keeping of drains, &c. (par. 43), to the power of entry to examine drains, &c., and to make good at the cost of owner or occupier (par. 44), and to the provision of suitable sanitary conveniences (pars. 45-46.)

#### OUTWORKERS.

61. In accordance with the powers conferred by Section 27 of the Factory and Workshop Act, 1891, an order was issued by the Secretary of State, dated October 31st, 1892, requiring the occupier of every factory and workshop (or any contractor employed by the occupier), in which upholstery work is done, or where wearing apparel, electro-plate, files, or cabinet furniture is made, to keep a list of those persons who do work for him outside the workshop or factory, such list to be open to the inspection of any Factory Inspector or any officer of a Sanitary Authority. A maximum penalty of 40/- may be imposed if this order is not carried out.

62. The occupier of every factory or workshop to which the above paragraph applies, must send a list containing the names and addresses of all outworkers employed by him to the district Factory Inspector on or before the 1st of March and the 1st of September in each year. The maximum penalty for neglecting to carry out this requirement is 40/-. (F. W. Act, 1895—42.)

63. If any occupier of a factory or workshop, or laundry, or of any place from which any work is given out, or if any contractor employed by any such occupier causes or allows wearing apparel to be made, cleaned, or repaired in any dwelling house or building occupied therewith, whilst any inmate of the dwelling house is suffering from scarlet fever or small-pox, then unless he proves that he was not aware of the existence of the illness in the dwelling house, and could not reasonably have been expected to become aware of it, he is liable to a maximum fine of £10. (F. W. Act, 1895—6.)

64. The Secretary of State may specify a certain area, and make an order that by reason of the number and distribution of the population or the conditions under which work is carried on, there are special risks of injury or danger to the health of the persons employed within that area, and of the district. Such an order having been made, a Factory Inspector may give notice in writing to the occupier (or to any contractor employed by the occupier) of a factory or workshop, or of any place from which work is given out, that a place situated within the specified area, and at which work is carried on in connection with the factory, workshop, &c., as the case may be, is injurious or dangerous to the health of the persons employed therein. If work is still given out in that place at the end of a month from the service of the notice, the occupier or contractor is liable to a maximum penalty of £10, provided the Court before which the case is brought is of opinion that the place indicated is so injurious or dangerous. (F. W. Act, 1895—5.)



## BAKEHOUSES.

65. A bakehouse which has machinery moved by steam, water, or other mechanical power is held to be a factory, and is amenable to the regulations of the Acts referring to factories, in addition to these however, *all* bakehouses have some additional requirements cast upon them.

66. (i.) No w.c., earth closet, privy or ashpit, must be within or communicate directly with a bakehouse.
- (ii.) Any cistern for supplying water to a bakehouse must be quite distinct from that which supplies water to a w.c.
- (iii.) No drain or pipe for carrying off fæcal or sewage matter must have an opening within a bakehouse. (F. W. Acts, 1883—15. 1895—27.)
- (iv.) A place on the same level with a bakehouse, and forming part of the same building must not be used as a sleeping place unless it is effectually separated from the bakehouse by a partition extending from floor to ceiling, and has an external glazed window nine superficial feet in area, of which at least  $4\frac{1}{2}$  superficial feet are made to open for ventilation. (F. W. Act, 1878—35.)

The maximum penalty for contravening i., ii., or iii., is 40/-, with a continuing daily penalty of 5/- so long as the bakehouse is occupied without the necessary alterations being made; for contravening iv., the maximum penalty for the first offence is £1, and £5 for each subsequent offence.

67. A place underground must not be used as a bakehouse, unless it is so used previous to January 1st, 1896, under a maximum penalty of £10. (F. W. Act, 1895—27.)

68. In addition to the above, however, a Court of Summary Jurisdiction may impose a maximum penalty of 40/- for the first offence, of £5 for the second, or a continuing daily penalty of 20/- upon the conviction of the occupier of a bakehouse, which

a Factory Inspector or the local authority has satisfied the Court is in such a state as to be on sanitary grounds unfit for use or occupation as a bakehouse. (F. W. Act, 1883—16.)

69. A specific regulation as to cleanliness requires all the inside walls of the rooms of a bakehouse, the passages and staircases, together with the ceilings, to be either

- (i.) Limewashed once at least every six months, or
- (ii.) Painted with oil and varnished once at least every seven years, and washed with hot water and soap once at least every six months.

The maximum penalty for not carrying out this requirement is £10. (F. W. Act, 1878—34.)

#### RETAIL BAKEHOUSES.

70. A retail bakehouse means any bakehouse or place the bread biscuits or confectionery baked in which are not sold wholesale, but by retail in some shop or place occupied together with such bakehouse (F. W. Act, 1883—18), but it does not include any place which is a factory within the meaning of the 1878 Act. (F. W. Act, 1891—36.)

71. The provisions enumerated in pars. 66, 67, 68 and 69, and also those which refer to ventilation or overcrowding, as respects *retail* bakehouses (not being factories), are enforced by the Sanitary Authority. (F. W. Act, 1883—18.)

72. Ventilation and overcrowding in a retail bakehouse is dealt with as though it were a workshop (par. 56.)

73. For the purpose of inspection, taking proceedings, &c., a Medical Officer of Health is invested with the powers of a Factory Inspector. These powers are enumerated in par. 53. (F. W. Act, 1883—18.)



## LAUNDRIES.

74. Laundries carried on by way of trade or for the purpose of gain (with the exception of those mentioned in par. 82), come now much more under the cognizance of the Factory Inspector and the Sanitary Authority than hitherto. A laundry, in which steam, water, or other mechanical power is used, is considered a factory, and every other such laundry a workshop. The following requirements of the Factory Acts must be observed :

Sanitary provisions (pars. 18, 19, 20, 21, 26, 27, 28, 38, 42, 43, 44, 45, 46, 56, 58.)

Giving notice of occupation to the Factory Inspector (par. 12)

Powers of Inspectors and Sanitary Authority (par. 53.)

Employment of children under 11 years (par. 10.)

Employment of women after childbirth (par. 11.)

Giving out work to the occupant of an infected house  
(par. 63.)

Safety.

Accidents (pars. 15, 16.)

Affixing of notices, &c.

Legal proceedings.

Education of children.

Holidays.

75. The period of employment in all such laundries is fixed as follows :—

Not to exceed in any consecutive 24 hours (exclusive of meal hours and absence from work)

For children ..... 10 hours.

„ young persons ..... 12 „

„ women ..... 14 „

or a total in any one week

For children ..... 30 hours.

„ young persons ..... 60 „

„ women ..... 60 „

76. Women may work overtime to the extent of two hours in any day, but not more than 3 days in any week, or 30 days in any year. But in any case the full number of daily working hours (including overtime) must not exceed 14 hours.

77. Whenever overtime is worked the occupier of the laundry must report particulars of the time worked to the Factory Inspector before 8 p.m. of the day to which it refers, and must affix a notice in the laundry of the same particulars.

78. With regard to meal times—a child, young person, or woman must not be employed continuously for more than five hours without an interval of at least half-an-hour for a meal.

79. Although a notice must be placed in a laundry specifying the period of employment and fixing the meal times, this period and the meal times may be varied day by day so long as a correct notice is affixed before the day's work is begun.

80. The following special regulations apply to laundries worked by steam water or other mechanical power.

- (i.) A fan or other means of a proper construction must be provided, maintained, and used for regulating the temperature in every ironing room, and for carrying away the steam in every wash-house in the laundry.
- (ii.) All stoves for heating irons must be sufficiently separated from any ironing room, and gas-irons emitting any noxious fumes must not be used.
- (iii.) The floors must be kept in good condition, and drained in such a manner as to allow the water to flow off freely.

81. The maximum penalty for contravening any of the above requirements is £10.

82. The following are exempt from the provisions of the Acts, any laundry in which the only persons employed are

- (i.) Inmates of any prison, reformatory, or industrial school, or other institution for the time being subject to inspection under any Act other than the Factory Acts.
- (ii.) Inmates of an institution conducted in good faith for religious or charitable purposes.
- (iii.) Members of the same family dwelling there.

Or in which not more than two persons dwelling elsewhere are employed.



83. The whole of the requirements regulating laundries are contained in Section 22 of the Factory and Workshop Act, 1895.

#### PROVISIONS AGAINST FIRE.

84. Every factory, the construction of which was commenced after January 1st, 1892, and every workshop, the construction of which is commenced after January 1st, 1896, and in each case in which more than 40 persons are employed, is required to be furnished with a certificate from the Sanitary Authority, that the factory or workshop is provided on the storeys above the ground floor with such means of escape in case of fire for the persons employed therein, as can reasonably be required under the circumstances of each case.

It is the duty of the Sanitary Authority to examine every such factory and workshop, and upon being satisfied, that suitable provision is made to give the required certificate, in the event of such provision not being made, a penalty of £10 may be incurred. (F. W. Act, 1891—7. 1895—10.)

85. In the case of every other factory or workshop than those mentioned in the preceding paragraph, and in which more than 40 persons are employed, it is the duty of the Sanitary Authority to ascertain whether all such factories and workshops are provided with such means of escape in case of fire for the persons employed therein, as can reasonably be required under the circumstances of each case, and in the event of such provision not being found, the Sanitary Authority must serve a notice upon the owner of the building, calling upon him to carry out the requirements of the case.

If the owner fails to comply he renders himself liable to a fine of £1 for every day that such non-compliance continues. He may, however, in case of difference of opinion between himself and the Sanitary Authority, cause the difference to be referred to arbitration. And if he considers that the occupier of the factory or workshop should share the cost, the County Court Judge for the district may be appealed to, who may make such an order as appears to him to be equitable. (F. W. Act, 1891—7, 1895—10.) An application to refer the matter to arbitration must be made within one month after the time when the difference arises. (F. W. Act, 1895—11.)

86. Where it appears to a Factory Inspector that sufficient provision is not made in any factory or workshop in which more than 40 persons are employed, for escape from fire, he may give notice to the Sanitary Authority of the insufficiency, and if the Sanitary Authority take no action in the matter within one month the Inspector may take such proceedings as may be necessary, and recover the costs from the Sanitary Authority, unless he be unsuccessful. (F. W. Act, 1895—10.)

In the event of a Court of Summary Jurisdiction being satisfied on the report of an Inspector that the provision of a moveable fire-escape or escapes is required for the safety of any persons employed in a factory or workshop, the Court may require the occupier to provide and maintain such escapes as will be sufficient for the purpose. (F. W. Act, 1895—10.)

87. While any person employed in a factory or workshop is within the factory or workshop for the purpose of employment or meals, the doors of the factory or workshop, and of any room therein in which any such person is, must not be locked, or bolted, or fastened in such a manner that they cannot be easily and immediately opened from the inside. A maximum penalty of £10 may be inflicted for non-compliance with this requirement. (F. W. Act, 1895—10.)

In every factory or workshop, the construction of which is commenced after January 1st, 1896, the doors of each room in which more than ten persons are employed must, except in the case of sliding doors, be made to open outwards. (F. W. Act, 1895—10.)



### FACTORIES AND WORKSHOPS IN CREWE.

88. There are in Crewe the following 104 factories and workshops as defined by paragraphs 4 and 5.

#### FACTORIES—41.

L. & N. W. Ry. Co.'s Engineering Works, &c.

Bakehouse	.....	.....	.....	1
Bicycles	.....	.....	.....	1
Brewery	.....	.....	.....	1
Brickworks	.....	.....	.....	4
Cabinet-making	.....	.....	.....	2
Cattle medicines	.....	.....	.....	1
Clothing	.....	.....	.....	3
Firewood	.....	.....	.....	1
Foundry	.....	.....	.....	1
Fustian cutting	.....	.....	.....	2
Joinery	.....	.....	.....	7
Letterpress printing	.....	.....	.....	5
Mineral waters...	.....	.....	.....	3
Sausage-making	.....	.....	.....	4
Wheelwright	.....	.....	.....	1
Wood turning	.....	.....	.....	1
Buildings over 30 feet high and employing more than 20 persons for wages	.....	.....	.....	2

#### WORKSHOPS—63.

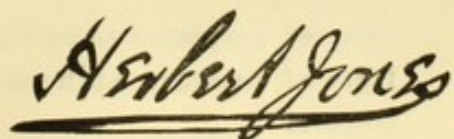
Brickworks	.....	.....	.....	7
Boot-making	.....	.....	.....	3
Blacksmith	.....	.....	.....	1
Cabinet-making	.....	.....	.....	3
Clothing	.....	.....	.....	2
Dressmaking	.....	.....	.....	29
Jewelry	.....	.....	.....	1
Knitting	.....	.....	.....	1
Paper-bag making	.....	.....	.....	1
Picture framing	.....	.....	.....	1
Pickle-making	.....	.....	.....	1
Shirt-making	.....	.....	.....	1
Sugar-boiling	.....	.....	.....	2
Tailoring	.....	.....	.....	6
Wheelwrights	.....	.....	.....	4

89. There are 24 retail bakehouses in the town, and these are under the supervision of the Sanitary Authority. At present there is only one laundry amenable to the Factory Act, 1895.

90. In the principal clothing factories in Crewe the workpeople are employed under the most satisfactory conditions, in large, airy, well-ventilated rooms, there never being the least question as to overcrowding. The more definite regulations, therefore, of the Act of 1895 have been in these instances voluntarily carried out. The managers, too, are exceptionally careful with regard to employing persons from or sending work out to houses in which there may happen to be a case of infectious disease; indeed in one factory at least, if an employe who is a member of the sick club connected with the factory has to stay away from work owing to infectious disease being present in the household, the sick pay is paid as though the member were actually sick; there is thus an inducement offered to reveal a case of infection. The requirements of Section 6 of the 1895 Act (par. 63), have so far been anticipated; indeed, when the Infectious Disease (Notification) Act is adopted in Crewe, it would appear to be practically impossible with the present sympathetic co-operation of the managers to spread infection by means of the clothing factories.

91. I cannot close this Report without an acknowledgment to the District Factory Inspector (Mr. D. Walmsley), for the assistance which he has at all times most readily and willingly rendered to those of your officers who are called upon to administer some portions of the Factory Acts.

Faithfully yours,

A handwritten signature in cursive script, reading "Herbert Jones", with a horizontal line drawn underneath the name.

*Crewe, Nov. 25th, 1895.*



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