**[Report 1897] / Medical Officer of Health, Burton-upon-Trent County Borough.**

*1897.* *1897.*

# ANNUAL REPORT

OF THE

## MEDICAL OFFICER OF HEALTH

FOR THE

## BOROUGH OF BURTON-UPON-TRENT

**For the Year 1897,**

BY


## T. ROBINSON, L.R.C.P., D.P.H.

*Medical Officer of Health.*
*Medical Superintendent Borough Hospitals.*


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**"HONOR ALIT ARTES."**

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Printed by order of the Sanitary Authority.


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# Borough of Burton-upon-Trent.

## HEALTH COMMITTEE

(1897-1898).

*Chairman*—Councillor J. Parker.

| | |
|---|---|
| The Mayor (Coun. F. Thompson) | Councillor G. Lathbury |
| Alderman Wilkinson | ,, F. Madeley |
| Councillor W. Austin | ,, J. R. Morris |
| ,, J. S. Coxon | ,, J. Oliver |
| ,, F. J. Croad | ,, H. Rugg |
| ,, G. Kennard | ,, T. Turner |

### Fixed Monthly Meetings (Fridays—4 p.m.)

| | | | |
|---|---|---|---|
| Jan. 28th | April 29th | July 29th | October 28th |
| Feb. 25th | May 27th | Sept. 2nd | Decr. 2nd |
| April 1st | July 1st | Sept. 30th | Decr. 30th |

*Town Clerk*—
Mr. T. N. Whitehead.

*Borough Surveyor*—
Mr. G. T. Lynam.

### Medical Officer's Department.

*Chief Sanitary Inspector*—Wm. Reading.

*Assistant to Inspector*—A. Humphries.

*Clerk*—J. B. Wilson.

*Medical Officer of Health*—T. Robinson, L.R.C.P., D.P.H.

# BOROUGH OF BURTON-ON-TRENT.

## SUMMARY OF STATISTICS.

| | |
|---|---|
| Area in Acres ... ... ... ... | 4,025. |
| Rateable Value ... ... ... ... | £253,270. |
| Population at Census 1891 ... ... ... | 46,047. |
| Number of Persons to the Acre, 1897 ... ... | 12·6. |
| Number of Persons per house at Census, 1891 ... | 5·17. |
| Estimated Population at Mid-Year, 1897 ... ... | 50,850. |
| Estimated Birth-rate per 1000 living, 1897 ... | 28·12. |
| Average Birth-rate for previous 10 years ... ... | 32·57. |
| Estimated Death-rate per 1000 living, 1897 ... | 14·91. |
| Average Death-rate for previous 10 years ... ... | 17·02. |
| Deaths under 1 year to 1000 births ... ... | 133·6. |
| Death-rate from Zymotic Diseases, 1897 ... ... | 1·78. |

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Infectious Diseases Notification Act, 1889, adopted December, 1892.

Infectious Diseases Notification Act applied to Measles (for 3 years), December, 1896.

Infectious Diseases Prevention Act, 1890, adopted November, 1891.

Public Health Amendment Act, 1890, Part iii, adopted March, 1897.

Burton-on-Trent Corporation Act, 1896.

*TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.*

*Gentlemen,*

*I have now to present to you my first Annual Report as your Medical Officer of Health. On the whole the general health of the town has been very satisfactory, except in so far as there was a slight increase in the number of Scarlet Fever cases, the greatest incidence in this disease being in the months of January and February. It is a matter for congratulation that 85 per cent. of the cases of Scarlet Fever notified were removed to the Borough Hospital for treatment, proving that the advantages of that establishment are appreciated in the Borough.*

*Diarrhœa was accountable for a considerable number of deaths of young children during the month of August.*

*Measles was also slightly more prevalent during the month of June.*

*Of the other Zymotic Diseases no special comment need be made.*

*The Birth-rate and Death-rate were considerably below the average of the Borough, the decrease in the number of births no doubt to some extent accounting for the decreased Death-rate.*

*Having only been in office for 4½ months in the year, it has been impossible for me to go more fully into details with regard to the work done or necessary to be done in the Borough. I must, however, again commend to your notice the conversion of privies into pail closets, as at present carried out, and would urge that the provision of water-closets be more frequently insisted upon. On the ground of expense I think this would be a considerable saving to the Borough; and, in addition, I am of opinion that the present treatment of the sewage would not be interfered with.*

*I am, your obedient servant,*

*T. ROBINSON,*

*Medical Officer of Health.*

# REPORT.

**Population.**—The population of the Borough of Burton-on-Trent "estimated" to be living at the middle of the year 1897 was 50,850. This number is estimated on the supposition that the population has increased at the same proportionate rate from the census of 1891 to the middle of the year 1897, as it did in the inter-censal period 1881-1891. Although now it is over six years since the last census, this total (50,850) is, I think, fairly correct, and is supported by other methods of calculating the increase of a population, viz., by the "natural" increase, and by the increase in the number of inhabited houses.

The "natural" increase is the excess of births over deaths, and I give below in tabular form the natural increase in each year from the census of 1891 to the middle of the year 1897.

The total "natural" increase for this period, plus the population at the 1891 census, gives a population of 50,704, being only 146 less than the "estimated" population.

| Year. | Births. | Deaths. | Natural Increase. |
|---|---|---|---|
| ¾ of 1891 | 1227 | 558 | 669 |
| 1892 | 1511 | 913 | 598 |
| 1893 | 1625 | 760 | 865 |
| 1894 | 1533 | 756 | 777 |
| 1895 | 1572 | 793 | 779 |
| 1896 | 1512 | 854 | 658 |
| ½ of 1897 | 729 | 418 | 311 |
| | | TOTAL | 4657 |

| | |
|---|---|
| Population at Census, 1891 | 46,047 |
| Natural increase as per table ... | 4,657 |
| Total ... | 50,704 |

The whole natural increase of the year 1897 was 672, being 63 below the average of the previous five years.

The number of houses "inhabited" at the census, 1891, was 8,905. Since then to the middle of February, 1898, the Borough Surveyor informs me that the number of new houses certified, less those taken down in the same period, is 990; therefore, supposing that the number of uninhabited houses remains the same, the total number of inhabited houses is 9,895.

At the 1891 census the average number of people per house was 5·18, and, if this average has been maintained, the population at the middle of February, 1898, would be (9,895 by 5·18) roughly 51,250. The estimated population at that time would be about 51,350. These two totals are practically identical, and it is only fair to assume that the corresponding figure for the middle of 1897 would be identical also.

The number of uninhabited houses at the census, 1891, was 358. Mr. Brittain, the rate collector, informs me that in August, 1896, there were 122, and 147 lock-up shops; and since then, he is of opinion, the number of uninhabited houses has been greatly reduced. The increase in the number of inhabited houses, plus the decrease in the number of uninhabited houses, points either to a large increase in the population or to greatly improved sanitary surroundings, namely, a considerable decrease in the average number of people per house.

Migration also plays an important part in the fluctuations in numbers of a population, and is chiefly affected by the state of trade. Since the trade of Burton continues to flourish, the balance of migrations must be in favour of immigration rather than emigration. So that after all the "actual" population may be proved to be not less than the "estimated."

Should a special census be taken this year with a view to proving that the Borough is large enough to become a County Borough, I hope to be allowed to obtain much valuable and detailed information which will be especially useful in sanitary work.

The "estimated" population of each ward will be found on Table B. The excessive increase in Horninglow Ward and the decrease in Burton Ward will be found to be incorrect, I fully expect.

**Births.**—The number of births registered in your borough during the year 1897 totalled 1,430.

This number is no less than 134 below the average of the past ten years, and is less than any one of the previous ten years, being 82 less than 1896, and 142 less than 1895.

Such a diminution would point at first sight to (*a*) a considerable decrease in the population, or (*b*) a decrease in the number of the population in early marriageable years. I am inclined to think that neither (*a*) nor (*b*) is the real cause, although (*b*) may have something to do with it; but the true solution is probably to be found in the operation of artificial causes.

The Birth-rate was equal to 28·10 per thousand of the population estimated to be living at the middle of the year. It is 4·47 per thousand below the average of the previous ten years. The birth-rate has declined with varying fluctuations from 36·48 in 1889 to this year's figure.

The birth-rate for England and Wales was 29·7, equal to the 1896 rate, and 1 per thousand less than the average for the past ten years.

For the purposes of comparison throughout this report I quote the rates of England and Wales, and where possible of the 67 other large towns of which Burton is one, and it is, therefore, with the rates of the latter that those of Burton ought to be compared.

Of the 1,430 births, 743 were males and 687 were females, and of these 29 males and 25 females were illegitimate.

The illegitimate births were 3·7% of the whole births.

The ratio of male to female births was 108 to 100.

Below I give the births and rates in the Borough for the past eleven years, as compared with those of England and Wales, and it is interesting to note that in this record last year's birth-rate of the Borough is the first one that is below that of England and Wales.

| Year. | Total Births. | Male Births. | Female Births. | Males born to every 100 Females born. Sex proportion. | Percentage of Illegitimate Births. | Borough Birth-rate. | England and Wales Birth-rate. |
|---|---|---|---|---|---|---|---|
| 1887 | 1565 | 815 | 750 | 108·66 | 3·25 | 36·07 | 31·9 |
| 1888 | 1575 | 802 | 773 | 103·75 | 3·74 | 35·27 | 31·2 |
| 1889 | 1634 | 815 | 819 | 99·51 | 3·36 | 36·48 | 31·1 |
| 1890 | 1481 | 769 | 712 | 108·00 | 3·44 | 32·54 | 30·2 |
| 1891 | 1636 | 831 | 805 | 109·44 | 2·93 | 35·38 | 31·4 |
| 1892 | 1511 | 758 | 753 | 100·66 | 3·77 | 32·16 | 30·5 |
| 1893 | 1625 | 821 | 804 | 102·11 | 3·81 | 34·04 | 30·8 |
| 1894 | 1533 | 784 | 749 | 104·67 | 4·82 | 31·61 | 29·6 |
| 1895 | 1572 | 793 | 779 | 101·79 | 4·32 | 31·90 | 30·3 |
| 1896 | 1512 | | | | | 30·20 | 29·7 |
| 1897 | 1430 | 743 | 687 | 108·15 | 3·77 | 28·10 | 29·7 |

Below I give, in tabular form, particulars of the Births in the different Wards and Townships of the Borough.

| | Estimated Population | Legitimate Births. | | | Illegitimate Births. | | | Total Births. | | | Estimated Birth-rate. | percentage of Illegitimate Births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M. | F. | Ttl. | M. | F. | Ttl. | M. | F. | Ttl. | | |
| Burton-on-Trent Ward .. | 7622 | 104 | 114 | 218 | 2 | 4 | 6 | 106 | 118 | 224 | 29·4 | 2·7 |
| Burton Extra Ward .. .. | 16125 | 228 | 207 | 435 | 5 | 6 | 11 | 233 | 213 | 446 | 27·7 | 2·4 |
| Horninglow Ward .. .. | 18251 | 244 | 217 | 461 | 18 | 10 | 28 | 262 | 227 | 489 | 26·8 | 5·7 |
| Stapenhill and Winshill Ward | 8282 | 138 | 124 | 262 | 4 | 5 | 9 | 142 | 129 | 271 | 28·4 | 3·3 |
| Stapenhill Township .. .. | | 95 | 81 | 176 | 3 | 3 | 6 | 98 | 84 | 182 | | |
| Winshill Township .. .. | | 43 | 43 | 86 | 1 | 2 | 3 | 44 | 45 | 89 | | |
| The whole Borough .. .. | | 714 | 662 | 1376 | 29 | 25 | 54 | 743 | 687 | 1430 | 28·10 | 3·7 |

* Reckoned on the estimated population of each Ward, and given for what they are worth. I cannot but think such differences are far from correct.

**Deaths.**—The number of deaths "recorded" in your district during the year 1897 was 758. This total needs a slight correction, as shewn at the bottom of Table A: 39 deaths which took place in your district of persons belonging to other districts must be deducted from the total, and 6 deaths of persons belonging to your district,

and which took place in other districts, must be added to it. These corrections necessarily come from large public Institutions, the Infirmary, the Union Workhouse, and the Scarlet Fever Hospital furnishing those I have obtained. With these alterations the more accurate number would be 725.

Of the recorded deaths 410 were males and 348 females, shewing a ratio of 118 males to 100 females. Comparing the ratio of male to female births, with the ratio of male to female deaths, namely :—

| | Males. | | Females. |
|---|---|---|---|
| Births - - | 108 | to | 100 |
| Deaths - - | 118 | to | 100 |

it will be seen, that although there is a greater number of males born than females, yet there is a still greater number of male deaths than female, and so the balance in the end is in favour of a greater proportionate increase of the female population.

The "recorded" death-rate was equal to 14·91 of the population estimated to be living at the middle of the year, as against an average for the past ten years of 17·02, and against 17·06 last year. A considerable decrease is thus shewn of 2·11 below the previous ten year average, and of 0·68 below the previous lowest of the ten years, namely, in 1894. The death-rate in England and Wales was 17·4, and for the 67 other large towns 17·2.

| | 1897 | 1896 | 1895 | 1894 | 1893 | 1892 |
|---|---|---|---|---|---|---|
| Deaths under 1 year ... ... | 191 | 205 | 211 | 201 | 210 | 257 |
| ,, from 1 to 60 years ... | 379 | 449 | 388 | 396 | 358 | 456 |
| ,, from 60 years and upwards | 188 | 200 | 194 | 159 | 192 | 200 |
| TOTAL ... ... | 758 | 854 | 793 | 756 | 760 | 913 |

This table shews a decrease in deaths at all ages as compared with the previous five years, and this result is highly satisfactory in every respect. The number of deaths under 1 year of age totalled 191, and the deaths under 1 year per thousand births was 133·6, which rate compares most favourably with that of England and

Wales, 156; and with that of the 67 other large towns, 169. Of the total deaths 27 were of persons of illegitimate birth, of which 21 were under the age of one year.

PERCENTAGE OF DEATHS UNDER ONE YEAR.

| | Births. | Deaths under 1 year. | Percentage of Deaths under 1. |
|---|---|---|---|
| Legitimate ... | 1376 | 170 | 12·4 |
| Illegitimate ... | 54 | 21 | 38·9 |

The following table gives the number of deaths in each Ward, the number of deaths under 1 year, the deaths under 1 year per 1000 births, the Ward death-rate, the number of deaths in public institutions, and number of inquests.

| Ward. | Deaths. | | | Under 1 year. | Per 1000 Births | Ward Death Rate. | *No. of D'ths in Public Inst. | In-quests |
|---|---|---|---|---|---|---|---|---|
| | Legit. | Illeg. | Total. | | | | | |
| Burton... ... ... | 143 | 6 | 149 | 38 | 170 | 19·42 | 20 | 19 |
| Burton Extra ... ... | 198 | 6 | 204 | 63 | 141 | 12·65 | 18 | 10 |
| Horninglow ... ... | 260 | 10 | 270 | 53 | 108 | 14·79 | 24 | 11 |
| Stapenhill & Winshill | 130 | 5 | 135 | 37 | 137 | 14·16 | 11 | 6 |
| Stapenhill ... ... | 85 | 3 | 88 | ... | ... | ... | 8 | 3 |
| Winshill ... ... | 45 | 2 | 47 | ... | ... | ... | 3 | 3 |
| Whole Borough ... | 731 | 27 | 758 | 191 | 133 | ... | 73 | 46 |

* Of Persons belonging to Borough only.

It must be remembered in connection with the estimated death-rate that the Infirmary (37 deaths) and the Union (68 deaths) are in the Burton and Horninglow Wards respectively.

MORTALITY OF DISTRICTS CORRECTED.

| Ward. | Private Houses. | Infirm-ary. | Union. | S.F. Hospital. | Correct'd Number. | Correct'd D'th rate. |
|---|---|---|---|---|---|---|
| Burton ... ... | 112 | 6 | 13 | 1 | 132 | 17·3 |
| Burton Extra ... | 204 | 9 | 6 | 3 | 222 | 13·8 |
| Horninglow ... | 202 | 9 | 14 | 1 | 226 | 12·4 |
| Stapenhill & Winshill | 135 | 3 | 7 | 1 | 146 | 15·3 |
| Stapenhill ... | 88 | 2 | 5 | | | |
| Winshill ... | 47 | 1 | 2 | 1 | | |

Mortality of districts corrected, by dividing up the deaths in the Infirmary, Union, and Scarlet Fever Hospital, to their respective Wards.

MORTALITY RETURNS FROM VARIOUS TOWNS FOR 1897

(Given in the order of death-rate per thousand).

| TOWNS. | Population. | Birth-rate per 1000. | Death-rate per 1000. | Zymotic Death-rate per 1000. | Infantile Death-rate per 1000 Births. | Average death-rate for past 10 years, 1887-1896. |
|---|---|---|---|---|---|---|
| Walthamstow | 70,000 | 32·08 | 11·88 | 2·80 | 133·1 (3) | 14·8 |
| Reading ... | 68,094 | 26·62 | 14·22 | 2·10 | 148·4 | 15·45 |
| Barrow-in-Furness | 55,570 | 28·2 | 14·5 | 1·69 | 154 | 15·2 |
| **BURTON-ON-TRENT** | 50,850 | 28·1 | 14·71 | 1·78 | 133·5 | 17·02 |
| (2)Newport (Mon.) | 69,652 | 31·2 | 15·5 | 2·4 | 164·5 | 18·5 |
| Northampton | 66,500 | 26·3 | 15·6 | 2·4 | 184·3 | 16·2 |
| Cheltenham ... | 49,000 | 21·3 | 15·8 | ·89 | 151 | 16·6 |
| Bath ... ... | 52,600 | 19·18 | 16·36 | (1)1·29 | 128 | 18·6 |
| Southampton | 100886 | 29·11 | 16·59 | 2·15 | 156 | 17·8 |
| Coventry ... | 61,234 | 31·3 | 16·8 | 1·8 | 157 | 17.5 |
| Tynemouth ... | 51,148 | 29·5 | 18·4 | 2·24 | 166 | 19·35 |
| Bury ... ... | 60,100 | 25·29 | 18·75 | 2·89 | 176 | 22·44 |
| Warrington ... | 61,700 | 36·7 | 19·5 | 2·8 | 175 | 21·8 |
| West Bromwich | 63,000 | 36·0 | 19·7 | 3·4 | 175 | 19·9 |
| Hanley ... | 59,510 | 35·5 | 20·2 | 3·0 | 202 | 19·9 |
| Wigan ... | 61,602 | 37·16 | 20·99 | 3·11 | 175 | 22·69 |
| St. Helen's ... | 82,910 | 38·51 | 21·05 | 4·24 | 181 | 21·91 |

(1) Excluding Diarrhœa .. .. .. ·95.

(2) The population of the Borough previous to 1896 had been under-estimated (except years of Census taking); consequently estimated Death-Rate for decennium 1887-96 was too high.

(3) This high rate was due to a great extent to the exceptionally large number of deaths from Diarrhœa—111 as against 46 in 1896.

From this table it will be seen that, except for the rather low birth-rate, the returns of Burton-on-Trent in the past year compare most favourably with those of other towns about the same size, or rather larger than itself.

**Zymotic Diseases.**—During the year 1897 there have been 822 Notifications of Infectious Diseases in Burton. In tabular form below I give the number of notifications of each disease, and the numbers also for the past five years for the purposes of comparison.

NOTIFICATIONS.

| | 1897 | 1896 | 1895 | 1894 | 1893 | 1892 |
|---|---|---|---|---|---|---|
| Small-pox ... ... ... ... | ... | 5 | 1 | 1 | 17 | 5 |
| Scarlet Fever ... ... ... | 351 | 284 | 317 | 227 | 376 | 312 |
| Measles ... ... ... ... | 272 | 2453 | 96 | 1963 | ... | ... |
| Diphtheria ... ... ... ... | 72 | 156 | 101 | 56 | 68 | 42 |
| Fever (Typhoid chiefly) ... ... | 46 | 34 | 86 | 61 | 36 | 66 |
| Erysipelas ... ... ... ... | 79 | 80 | 78 | 57 | 60 | 4 |
| Puerperal Fever ... ... ... | 2 | 1 | 3 | 9 | 3 | ... |

Since the beginning of October I have had full particulars taken, on proper printed sheets, of all houses from which notifications of Scarlet Fever, Diphtheria, and Typhoid Fever come. The information obtained is with regard to the sanitary arrangements of the houses in detail, food and water supplies, schools, &c., attended, and any other probable cause or source of infection. These particulars, where one house only is affected, often show the definite cause of that single case; or, where many houses are attacked, may lead to the detection of the cause of the general outbreak. All sheets of particulars are numbered and kept for future reference.

The deaths from Zymotic Diseases—that is from the seven chief Zymotic Diseases, namely, Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Diarrhœa, and Fever (Typhoid, &c.) —numbered 91, being 12% of all the deaths. Diarrhœa was responsible for 53 of the 91 deaths.

The Zymotic death-rate was equal to 1·78 per thousand of the population estimated to be living at the middle of the year; whilst that of England and Wales was 2·15, and that of the 67 other large towns 2·41. The death-rate of the six principal Zymotic Diseases (excluding Diarrhœa), was equal to 0·75 per thousand of the estimated population. Below I give the Zymotic death-rate for the past five years of this Borough, and also the figures for England and Wales:—

| | 1897 | 1896 | 1895 | 1894 | 1893 | 1892 |
|---|---|---|---|---|---|---|
| Burton-on-Trent ... | 1·78 | *3·83 | 1·48 | 2·00 | 2·15 | ‡3·23 |
| England and Wales | 2·15 | 2·18 | 2·14 | 2·25 | 3·16 | 2·78 |

* Measles and Diphtheria. ‡ Measles and Whooping Cough.

## Zymotic Notifications and Deaths of other Infectious Diseases.

| Ward. | Scarlet Fever. | | Measles | | Diphtheria. | | Typhd. Fever. | | Diarrhœa. | Phthisis. | Erysipelas. | | Influenza. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases Notified. | Deaths. | Cases Notified. | Deaths. | Cases Notified. | Deaths. | Cases Notified. | Deaths. | Deaths. | Deaths. | Cases Notified. | Deaths. | Deaths. |
| Burton .. .. | 42 | 2 | 11 | 0 | 8 | 1 | 6 | 3 | 13 | 13 | 15 | 0 | 3 |
| Burton Extra .. | 157 | 3 | 136 | 1 | 29 | 4 | 8 | 0 | 14 | 25 | 26 | 0 | 3 |
| Horninglow .. .. | 110 | 1 | 108 | 6 | 29 | 3 | 25 | 3 | 17 | 34 | 25 | 0 | 4 |
| Stapenhill and Winshill | 45 | 1 | 19 | 0 | 6 | 3 | 5 | 1 | 7 | 6 | 12 | 1 | 9 |

**Smallpox.**—The Borough has been free from this disease during the year 1897. In England and Wales the total deaths in the same period were only 25.

**Vaccination.**—As the result of the report of the Royal Commission on Vaccination, a Bill has just been introduced into Parliament to amend the Vaccination Laws.

The chief points, as proposed at present, are—

(1) That vaccination shall be compulsory;

(2) That calf-lymph preserved in glycerine may be demanded;

(3) That vaccination shall be "domiciliary."

(4) That vaccination must be performed before the child is twelve months old (three months is the age in the present laws).

More than brief comment here and at this stage is unnecessary. That vaccination should remain compulsory, and should be enforced (to the extent of two penalties only), is the least that could be done in the interests of Public Health. The use of calf-lymph will, no doubt, remove many objections. That "domiciliary" vaccination may cause friction between the public vaccinator and the ordinary medical attendant of the family is to be feared. That vaccination,

put off until the child is twelve months old, would, in case of an epidemic, leave unprotected the children at the age in which Smallpox is probably most fatal.

I find that in Burton-on-Trent, in the year 1896, 40 per cent. of the children born in that year were either not vaccinated or were not otherwise accounted for.

**Scarlet Fever.**—As already stated, 351 cases of Scarlet Fever have been notified during the past year : 42 in Burton Ward, 157 in Burton Extra, 110 in Horninglow, and 45 in Stapenhill and Winshill.

There were 7 deaths : 1 in Burton Ward and 6 in the Fever Hospital ; but these last 6 do not come in the recorded deaths of this Borough, as the Hospital is situated beyond the Borough boundary.

The case mortality, that is, the proportion of deaths from scarlet fever to total cases notified, is just a small fraction under 2 per cent., and the mean annual death-rate 0·14 per thousand of the estimated population ; that of England and Wales being 0·14, and of the 67 other large towns 0·15. To shew at a glance exactly where each case of scarlet fever, diphtheria, and typhoid fever occurs ; also, which district, if any, is particularly affected, I have prepared a "spot" map of the district, on which is spotted each case of these three diseases—scarlet fever in red, diphtheria in blue, and typhoid fever in black ink. It will be seen that there are certain districts in which scarlet fever is much more prevalent than others, and in these cases are continually cropping up. In the small area bounded by Derby Street, Byrkley Street, Shobnall Street, and Dallow Lane this disease has been very prevalent ; also in the district on the N.W. side of Branstone Road beyond Wood Street ; while at Stapenhill and Winshill and in Burton Ward only comparatively few cases have occurred.

**Measles.**—The number of cases of this disease notified was 274, of which 11 were in Burton Ward, 136 in Burton Extra, 108 in Horninglow, and 19 in Stapenhill and Winshill.

The deaths numbered 7, of which 6 took place in Horninglow, and 1 in Burton Extra. The death-rate per 1000 living was 0·14; whilst in England and Wales it was 0·40, and in the 67 other large towns 0·43, so that the local deaths from this disease were comparatively very few. The approach of the end of a severe epidemic will no doubt account for this low death-rate. The case mortality was 2·6 per cent. The decline of the violent and fatal epidemic which occurred in 1896 was brought to a close practically by the end of January, 1897. A small amount of the disease remained about the town until May, when there was a considerable recrudescence, with as many as 54 notifications in the month of June. After that time there was a gradual decline to the end of August, and since then a few cases at odd times only have occurred to the end of the year.

It is a matter for congratulation that your Authority has for some years past now added Measles to the list of notifiable diseases, and for my own part I should like to see Whooping Cough and Phthisis added also, and Erysipelas left out of it if possible.

In England and Wales, Measles in 1897 had a higher death-rate than any other Zymotic disease except Diarrhœa, being twice as fatal as Diphtheria, and thrice as fatal as Scarlet Fever.

The generally prevalent idea that Measles is such a slight disease, and that every child must have it, the wish that when one child has it that all should have it, and the total disregard for even the most elementary principles of isolation or disinfection, are the causes no doubt of the much greater incidence of this disease than others of a similar class. Early notification and investigation, with prompt isolation, free ventilation and disinfection, will, I am sure, help considerably to diminish its prevalence.

**Diphtheria.**—There were 72 notifications of this disease, namely, 8 in Burton Ward, 29 in Burton Extra, 29 in Horninglow, and 6 in Stapenhill and Winshill.

There were 11 deaths, showing a death-rate per 1000 living of 0·22 as against 0·24 for England and Wales and the 67 other large towns. The case mortality was nearly 15 per cent. This mortality is rather low, and tends to show that some cases notified may not have been true Diphtheria. Of the 72 notifications 48 were returned as Diphtheria, 6 as Membranous Croup, and 18 as Diphtheritic Sore Throat. I am of opinion that certificates stating Diphtheritic Sore Throat should be received as Diphtheria and treated as such—at any rate for the present.

Bacteriology alone can clear up any doubt that exists in many cases, but not in all. These sore throats often are mild cases of true Diphtheria, and may be the precursor, and the first signs, of an outbreak of the more serious disease, and as such these notifications are useful. At the same time medical practitioners should be most careful to exclude cases of "follicular" tonsillitis.

In connection chiefly with Diphtheria I have advocated the introduction of Bacteriological examination, and I hope, before many months are over, to be able—your sanction to this proposal having been already given—to offer facilities for such examinations. The Bacteriological examination of stools of possible Typhoid patients may lead to the early knowledge of a serious Typhoid epidemic: then the examination of milk for the Tubercle bacillus may often lead to the rejection of supposed good milk, and the prevention of much of that only too prevalent (and in most cases preventible) disease of children, namely, "consumption of the bowels."

A glance at the chart shews that Diphtheria occurred nearly all the year round, except in the month of July, in the latter part of September, and the whole of October, and that the greatest prevalence was at the middle of November, when the rain came after some weeks of very fine weather. Defective drains, foul and defective privies and ashpits, and damp houses have played a very

prominent part in determining the incidence of Diphtheria, as shewn by my sheets of particulars. In 20 houses in which cases were notified subsequent to November 4th, 10 had privies and ashpits, 4 had pails and ashpits, and 6 had pails and ashpans, 2 were very damp, 12 had bell-traps or "D" (of which 7 were defective), and in a few instances the houses were dirty.

**Typhoid.**—There were in the period covered by this Report 46 notifications of this disease, of which 6 were in Burton Ward, 8 in Burton Extra, 25 in Horninglow, and 5 in Stapenhill and Winshill. The total number in 1896 was 34, and in 1895—10. Two of the cases in Burton Ward were clearly "imported," and 1 in Horninglow Ward. Of all the Borough cases 13, or over 28 per cent., were removed to and treated at the Town Infirmary.

There were in all 7 deaths, 2 of which occurred in the Town Infirmary. The death-rate was equal to 0·14 per 1000 of the estimated population; whilst that of England and Wales and of the 67 other large towns for "Fever" was 0·16. The case mortality was 15 per cent. Odd cases were notified almost throughout the year, and the greatest incidence was towards the end of August and of November.

Horninglow Ward was comparatively by far the greater sufferer. A block of houses at Horninglow, at the top of a hill, and also at the end of a sewer, with very defective drain traps, bad and insufficient water supply, and foul ashpits was the situation from which 5 cases came. All these sanitary defects have now been remedied. 5 cases occurred in another house at Horninglow, 4 of which were, I think, by direct contagion.

Defective drains and traps, defective and foul privies, privy-middens, and ashpits can, in most first cases of Typhoid Fever in Burton, be found to exist, and with the remedying of these we shall look for a diminution in the incidence of this disease.

As pointed out in my Report on November 25th last, there are about 1,560 privies still in existence in the town, and these must always be a source of very great danger to the public health. In many of our cases have defective drain-traps, or privies and ash-pits, or ashpits alone been found.

I strongly advocate the water-carriage system in all new houses, and in most instances in substitution for privies, in preference to the pail system and conversion of privies to pails which now goes on. The water-carriage system is, without doubt, the most sanitary, and I feel sure would prove the more economical in the end. The pail system is very expensive, and is ever on the increase. I am inclined to think also that, were the water-carriage system adopted, the more evenly-diluted sewage—although increased in volume—would be more easily treated and disposed of than it is under the present arrangement. Then again, with the new deep intercepting sewer draining a very large portion of the Borough, and the proposed new drainage scheme for the East side of the River Trent, the great proportion of surface water will be separated from the sewage proper, and so to some extent reduce the amount to be treated.

**Diarrhœa.**—There have been 53 deaths registered as caused by Diarrhœa during the year 1897, of which 15 occurred in Burton Ward, 14 in Burton Extra, 17 in Horninglow, and 7 in Stapenhill and Winshill.

The death-rate was equal to 1·04 per thousand of the estimated population; whilst that for England and Wales was 0·86, and of the 67 lesser towns 1·05.

AGES AT DEATH WERE:—

| Years | 0-1 | 1-2 | 55-65 | 65-75 | 75-85 |
|---|---|---|---|---|---|
| Cases | 34 | 9 | 4 | 2 | 4 |

The chart shews that the greatest number of deaths from Summer Diarrhœa took place in the second week in August. This large fatality was co-incident with a considerable rainfall after a long spell of dry weather, and also after the 9 a.m. thermometer had stood at its highest for four or five weeks.

**Phthisis.**—Tuberculosis of the lung only has been responsible for no less than 78 deaths during 1897; of these, 13 occurred in Burton Ward (4 of which in the Infirmary), 25 in Burton Extra, 34 in Horninglow (8 of which in the Union), and 6 in Stapenhill. There were no deaths from Phthisis in Winshill.

The death-rate per 1000 living was 1·53. The largest number of deaths occurred in the months of August, September, and October, when there were 33 out of the 78. Writing on this year's figures only it appears that situation has something to do with the prevalence of this disease, Winshill being the highest part of the Borough and Burton Ward and Burton Extra the lowest. At the same time it must be remembered that Winshill is not so densely populated in any parts as Burton Ward or Burton Extra, and Winshill has the great advantage over all the other parts of the town, especially on the West side of the river, of plenty of open spaces the streets. Then again, the nature of the soil is entirely different. In Stapenhill and Winshill the soil is a dry marl and shale, varying from a few feet to 30 or 40 feet thick, lying on a bed of grey sandstone. In Burton Ward, Burton Extra, and the greater part of Horninglow the soil is gravel (alluvial bed of Trent), with sub-soil water only a short distance from the surface.

Phthisis is, moreover, to a great extent a preventible disease, one in which disinfectants and isolation can do much to diminish its spread. That meat and milk are in many cases also the medium of conveying the disease has been amply proved; and in the Bacteriological examinations at Liverpool of samples of milk it has been clearly shown by Dr. Hope in his recent report to the Corporation of Liverpool (1) that of 144 samples of milk taken in the city 2·8 produced Tuberculosis in test animals; (2) that of 24 samples of milk taken at railway stations 29·1 per cent. contained tubercle bacilli. Boiling for a few seconds is the simplest method of destroying the latter.

**Erysipelas.**—Of this infectious disease 79 cases have been notified: 15 in Burton Ward, 26 in Burton Extra, 25 in Horninglow, and 12 in Stapenhill and Winshill.

Only 1 death has been registered ; shewing a death-rate of less than 0·02 per 1000, and a case mortality of 1·3 per cent.

The chart shews that in ten weeks in the year there were no cases notified, and, therefore, the average cases per week in the other 42 weeks was nearly two.

The incidence during the year was comparatively greatest in Burton Ward, and on the whole seems to have borne no relation to rainfall or temperature. If it were possible to remove Erysipelas from the list of notifiable disease I should certainly advocate such a procedure. Occasionally only are sanitary arrangements found to be defective.

**Influenza.**—During the year 19 deaths have been ascribed to Influenza : 3 taking place in Burton Ward, 3 in Burton Extra, 4 in Horninglow, and 9 in Stapenhill and Winshill. In this disease almost solely has Stapenhill and Winshill suffered more than any other Ward, and proportionally it has suffered very severely. Perhaps the cold marly soil has had something to do with this.

In some non-fatal cases Influenza has left as a sequela insanity and severe mental depression. Its effects on the nervous system latterly have been very marked.

**Inquests.**—There have been 46 inquests. The inquests shew a percentage of 6·1 of all deaths, against 6·3 per cent. for England and Wales.

**Non-certified.**—Of cases not certified either by a medical man or the Coroner there have been 11 ; being 1·5 per cent. of all deaths, as against 2·0 per cent. for England and Wales.

**Public Institutions.**—105 deaths occurred in the Public Institutions, being 14 per cent. of all deaths.

**Violence.**—The violent deaths numbered 25, of which 2 took place in the Infirmary of persons from outside the Borough. The percentage of violent deaths was rather greater than 3 per cent., and being equal to 0·5 per 1000 of the population, whilst the rate for England and Wales was 0·62 per 1000.

# BOROUGH FEVER HOSPITAL.

During the year 1897 no less than 301 patients were admitted for treatment in the Hospital, all suffering from Scarlet Fever.

| | | |
|---|---|---|
| Patients in Hospital Decr. 31st, 1896 | ... | 34 |
| ,, admitted in year 1897 | ... ... | 301 |
| ,, discharged cured | ... ... ... | 285 |
| ,, died | ... ... ... ... ... | 6 |
| ,, in Hospital Decr. 31st, 1897 | ... | 44 |

Of the 301 cases taken to the Hospital, 296 belonged to the Borough, and were out of a total of 352 cases notified, or no less than 84 per cent.

Of the cases notified in Burton Ward (see Table B), 76 per cent. went to the Hospital; in Burton Extra 86 per cent.; in Horninglow 90 per cent.; and in Stapenhill and Winshill 70 per cent.

The percentage of deaths to cases was 2%

Five cases came from outside the Borough, namely, 4 from Branstone and 1 from Bretby Lane.

The ages and sexes of patients were :—

38 males and 31 females under 5 years

134 males and 98 females 5 years and upwards.

During the financial year ending March 31st, 1897, the total number of patients treated at the Hospital was 219, and the total number of days of stay in Hospital was 10,436, or an average of 47½ days' stay for each patient.

The total cost of maintenance was £1,076 8s. 11d., and the average cost per patient was, therefore, £4 18s. 3d., which is very low as compared with similar Hospitals elsewhere.

The grounds of the Hospital have recently been very tastefully laid out with shrubs and trees, and everything is being done to beautify the Hospital and grounds, and to make it a comfortable and happy home for those (especially the children), who are suddenly called upon unfortunately to spend some weeks of their lives away from their own homes in a strange Hospital.

That you have an excellent Hospital, and that your efforts to make it attractive are fully appreciated, are best proved by the large percentage of people who take advantage of it.

# WATER SUPPLY.

The largest proportion of the drinking water of the town is supplied by the South Staffordshire Waterworks Co., but there are a number of shallow wells in various parts, the water from which is not as a rule above suspicion.

By order of your Committee on October 1st I had the South Stafford Water both chemically and bacteriologically examined at The British Institute of Preventive Medicine, with results proving the water to be excellent. I append the reports in full.

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## British Institute of Preventive Medicine.

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**Report of general microscopic and bacteriological examination of sample of water drawn from stand-pipe in Borough Road, Burton-on-Trent.**

The sample was received on 7th October, 1897, and the examination commenced at once.

The water is clear and bright, giving on standing a slight brownish coloured deposit. This deposit consists mainly of inorganic matter, chiefly carbonates.

The results of the bacteriological examination are as follows:—

(i) One cubic centimetre of the water contains on an average 40 bacteria capable of growing on gelatin at a temperature of 23° C.

(ii) The proportion of bacteria liquifying the gelatin to those not capable of causing liquifaction is as 3 : 5.

(iii) The special examination made with a view to the detection of bacteria which might indicate sewage contamination has given entirely negative results.

Judged by bacteriological standards the sample is a water of excellent purity and well adapted for drinking purposes.

ALEX. G. R. FOULERTON,
F.R.C.S., D.P.H. Camb.

October 11th, 1897.

Dear Sir,

I beg to report on the chemical examination of a sample of water from a stand-pipe in Borough Road, Burton-on-Trent, received on the 7th inst.

The sample was clean, but contained a slight sediment, and was free from odour.

The following are the analytical data :

| | Parts per 100,000. |
|---|---|
| Free and Saline Ammonia ... ... | Trace. |
| Albumenoid Ammonia ... ... ... | 0·004 |
| Nitrogen as Nitrites and Nitrates... ... | None |
| Oxygen absorption at 80°F. (a) 15 minutes<br>(b) 4 hours | None |
| Total Solids ... ... ... ... | 49·5 |
| Alkalinity (as Calcium Carbonate)... ... | 14·0 |
| Chlorine ... ... ... ... | 2·1 |
| Poisonous Metals ... ... ... | None |

The water is remarkably free from organic matter, and as far as that is concerned, is unobjectionable as a drinking water. The amount of total solids is however very high, although it appears to consist almost entirely of mineral matter. A complete analysis of the residue would be necessary before a definite opinion could be expressed as to the desirability of using the water for drinking purposes.

ARTHUR HARDEN,
Ph. D., M. Sc.

**Report on the Mineral Constituents of a sample of water from Stand pipe in the Borough Road, Burton-on-Trent, received on the 7th inst.**

October 15th, 1897.

The chief mineral constituents of the residue of the water are as follows :—

| | Parts per 100,000. |
|---|---|
| Silica ... ... ... ... | 1·3 |
| Sulphuric Anhydride ($SO_3$) ... ... | 16·9 |
| Phosphoric Anhydride ($P_2O_5$) ... | 0 |
| Lime ... ... ... ... | 15·6 |
| Magnesia... ... ... ... | 3·2 |
| Soda ... ... ... ... | 5·5 |
| Sodium Chloride ... ... ... | 3·5 |

The solid constituents, therefore, are in no way injurious, and do not detract from the high quality of the water for drinking purposes.

ARTHUR HARDEN,
Ph.D., M.Sc.

## GENERAL INSPECTIONS OF BOROUGH.

During the short time I have been in office, it has been impossible for me to inspect in detail the whole of the Borough and places coming under the control of the Health Department. I have inspected the whole of Stapenhill and Winshill and nearly all the worst parts of the rest of the Borough. In my report to you on November 25th, I drew your attention to the "open brook sewers" in Mear Greaves Lane, Winshill, and the two open "pond cesspools" of Hill Street and the lower end of Pickering Street, Stapenhill. All these are in a most insanitary condition, especially the two ponds, which, receiving the sewage from many houses near them, are nothing less than open cesspools—stinking abominably—and which are also the cause of many complaints in that neighbourhood. It is my intention to make a thorough inspection of all the worst districts and Courts in the town during the current year (1898).

### Common Lodging Houses.

I have visited all the 11 Common Lodging Houses registered in your district, and hope at a future date to report to you in detail on these places.

### Bakehouses and Slaughter-Houses.

I have commenced an inspection of these places and find in many the necessity of frequent and regular inspections, which it is impossible to give with the present limited staff. During the next year I hope to lay before you some details of the sanitary condition of these premises.

### Workshops.

One Workshop was reported by Her Majesty's Inspector of Factories and Workshops as requiring whitewashing, and this was done by the occupier after some little delay.

### Offensive Trades.

Only few offensive trades are carried on in your Borough, and these not of the worst type.

The fish frying shops, now coming under the head of "offensive" trades, are great nuisances in many cases, and have been the cause of many complaints. No proceedings have however as yet been taken against any of the owners.

### Chemical Works.

During the last four months of the year, the Chemical (Sulphuric Acid) Works in Dallow Lane have been the cause of many complaints at odd times of choking and sulphurous fumes. Acting on instructions from your Committee I have made every enquiry into this matter, and found as reported on several occasions that when there has been an undue amount of fumes in the atmosphere near the works, it has always been the result of a breakage in the rectifying apparatus. This apparatus has recently been altered, and the complaints now are not anything like so numerous.

### Cowsheds and Dairies, and Milk-stores.

I have visited many of the Cowsheds and Dairies, and Milk-stores in your district, and recognise the necessity for some definite regulations in section 6 of the Dairies, Cowsheds, and Milk-shops Orders. I have prepared a list of proposed regulations which were submitted to you on November 25th, 1897.

The chief point of contention in them is the common one, namely, the cubic air space to be allowed for each cow. I have suggested 600 cubic feet per head in all sheds now occupied as such, and propose that 800 cubic feet should be the minimum allowed in cowsheds newly occupied after the coming into force of these regulations. This, I think, is the smallest amount that should be allowed, and for those at present in use will only enforce such breathing space as is compatible with the fair health of the cattle. In addition to the cubic air space, I think that an air inlet of not less than 120 square inches for each cow is required. No doubt the great increase of Tuberculosis in cattle is in great measure due to very close confinement and limited air space in which cattle are kept, and this increase must mean increased danger to human beings.

The usual regulations with regard to cleansing and other sanitary arrangements of cowsheds and milk-shops follow with only slight variation. I have introduced a new feature (new at any rate in so far as I have never seen it in any regulations I have perused), in the form of numbering by your Authority of each cowshed or milk-shop with a view to the more easily carrying out these regulations—after the style of rooms in lodging-houses,—and to this I think there would be little objection. The register would then contain particulars of each shed, store, or shop.

The Burton-on-Trent Corporation Act, 1896, sec. 25, requires that "Every dairyman supplying milk within the Borough, from premises whether within or beyond the Borough, shall notify to the Corporation or to the Medical Officer of Health all cases of infectious diseases among persons engaged in or in connection with his dairy, and all cases of Tuberculosis or milk or parturient fever to his knowledge occurring in his dairy, and any such dairyman who shall commit any breach of this enactment shall be liable to a penalty not exceeding forty shillings." With regard to the part of this section relating to cattle, the regular and systematic inspection of all the dairies, and the appointment of a veterinary surgeon who may be called upon for professional advice, are the only methods likely to enforce such notification. Indeed every possible measure which will tend to ensure the supply of pure milk to the public should be carried out with as little delay as possible.

## A TABLE OF DEATHS during the Year 1897, in the BURTON-UPON-TRENT URBAN DISTRICT, classified according to Diseases, Ages, and Localities.

| Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. (Columns for Population and Births are in Table B.) | Mortality from all causes, at subjoined Ages. | | | | | | | | Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age. | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| | | | | | | | | | | | | | Fevers. | | | | | | | | | | | | | | | | | |
| | At all ages. | Under 1 year. | 1 and under 5 | 5 and under 15 | 15 and under 25 | 25 and under 65 | 65 and upwards | | Smallpox. | Scarlatina. | Diphtheria. | Membranous Croup. | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | Cholera. | Erysipelas. | Measles. | Whooping Cough. | Diarrhœa and Dysentery. | Rheumatic Fever. | Phthisis. | Bronchitis, Pneumonia, and Pleurisy. | Heart Disease. | Influenza. | Injuries. | All other Diseases. | TOTAL. |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | | | | | | | | | | | | | | | | | | | | | |
| BURTON WARD .. .. | 112 | 36 | 8 | 3 | 3 | 41 | 21 | Under 5 | | 1 | | | | | | | | | | | 1 | 11 | | 1 | 6 | | 1 | | 23 | 44 |
| | | | | | | | | 5 upwards | | | 1 | | | 1 | | | | | | | | 4 | | 9 | 6 | 13 | 2 | 3 | 29 | 68 |
| GENERAL INFIRMARY .. .. | 37 | 2 | 5 | 1 | 5 | 20 | 4 | Under 5 | | | | | | | | | | | | | | | | | | | | 4 | 3 | 7 |
| | | | | | | | | 5 upwards | | | | | | 2 | | | | | | | | | 1 | 3 | 1 | 2 | | 8 | 13 | 30 |
| BURTON EXTRA WARD .. | 204 | 63 | 22 | 13 | 7 | 73 | 26 | Under 5 | | | 3 | | | | | | | | | 1 | 4 | 12 | | 1 | 16 | | | | 48 | 85 |
| | | | | | | | | 5 upwards | | | 1 | | | | | | 1 | | | | | 2 | 2 | 24 | 14 | 13 | 3 | 4 | 55 | 119 |
| HORNINGLOW WARD .. .. | 202 | 50 | 30 | 8 | 16 | 58 | 40 | Under 5 | | | 3 | | | | | | | | | 4 | 3 | 13 | | 3 | 12 | | 1 | | 41 | 80 |
| | | | | | | | | 5 upwards | | | | | | 3 | | | | | | 2 | | 1 | 2 | 23 | 12 | 13 | 2 | 3 | 61 | 122 |
| WORKHOUSE .. .. .. | 68 | 3 | 2 | 1 | 1 | 30 | 31 | Under 5 | | | | | | | | | | | | | | 1 | | | 1 | | | | 3 | 5 |
| | | | | | | | | 5 upwards | | | | | | | | | | | | | | 2 | | 8 | 10 | 7 | 1 | | 35 | 63 |
| STAPENHILL & WINSHILL WARD | 135 | 37 | 16 | 5 | 5 | 42 | 30 | Under 5 | | | | | | | | | | | | | 4 | 6 | | 1 | 12 | | 3 | 1 | 26 | 53 |
| | | | | | | | | 5 upwards | | | 3 | | | 1 | | | | | 1 | | | 1 | | 5 | 12 | 12 | 6 | 2 | 39 | 82 |
| TOTALS .. .. | 758 | 191 | 83 | 31 | 37 | 264 | 152 | Under 5 | | 1 | 6 | | | | | | | | | 5 | 12 | 43 | | 6 | 47 | | 5 | 5 | 144 | 274 |
| | | | | | | | | 5 upwards | | | 5 | | | 7 | | | 1 | | 1 | 2 | | 10 | 5 | 72 | 55 | | 14 | 20 | 232 | 484 |

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Deaths occurring outside the district among persons belonging thereto .. | 6 | | 6 | | | | | Under 5 | | 6 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 5 upwards | | | | | | | | | | | | | | | | | | | | | | |
| Deaths occurring within the district among persons not belonging thereto | 39 | 1 | 1 | | 3 | 21 | 13 | Under 5 | | | | | | | | | | | | | | | | 1 | | | | 1 | 2 |
| | | | | | | | | 5 upwards | | | | | | | | | | | | | | | | 6 | 4 | 4 | | 2 | 21 | 37 |

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 1897, in the Burton-upon-Trent Urban District, 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. Last Census. | Population at all Ages. Estimated to middle of 1897. | Registered Births. | Aged under 5 or over 5 | New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health. 1 Small-pox. | 2 Scarlatina. | 3 Diphtheria. | 4 Membranous Croup. | 5 Fevers: Typhus. | 6 Fevers: Enteric or Typhoid. | 7 Fevers: Continued. | 8 Fevers: Relapsing. | 9 Fevers: Puerperal. | 10 Cholera. | 11 Erysipelas. | 12 Measles. | Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital. 1 Small-pox. | 2 Scarlatina. | 3 Diphtheria. | 4 Membranous Croup. | 5 Fevers: Typhus. | 6 Fevers: Enteric or Typhoid. | 7 Fevers: Continued. | 8 Fevers: Relapsing. | 9 Fevers: Puerperal. | 10 Cholera. | 11 Erysipelas. | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | | | | | | | | | | | | | | | | | | | | | | | | | |
| BURTON WARD .. .. | 8,245 | 7,622 | 224 | Under 5 | | 42 | 8 | | | 6 | | | 1 | | 15 | 11 | | 10 | 1 | | | 1 | | | | | | | |
| | | | | 5 upwards | | | | | | | | | | | | | | 22 | | | | | | | | | | | |
| GENERAL INFIRMARY .. .. | | | | Under 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 5 upwards | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | |
| BURTON EXTRA WARD .. | 14,773 | 16,125 | 446 | Under 5 | | 157 | 25 | 4 | | 8 | | | 1 | | 26 | 136 | | 32 | 1 | | | | | | | | | | |
| | | | | 5 upwards | | | | | | | | | | | | | | 103 | | | | 2 | | | | | | | |
| HORNINGLOW WARD .. .. | 14,747 | 18,251 | 489 | Under 5 | | 110 | 29 | | | 25 | | | | | 25 | 108 | | 19 | | | | 1 | | | | | | | |
| | | | | 5 upwards | | | | | | | | | | | | | | 80 | | | | 8 | | | | | | | |
| WORKHOUSE .. .. .. | | | | Under 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 5 upwards | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | |
| STAPENHILL & WINSHILL WARD | 8,282 | 9,533 | 271 | Under 5 | | 43 | 4 | 2 | | 5 | | | | | 12 | 19 | | 8 | | | | | | | | | | | |
| | | | | 5 upwards | | | | | | | | | | | | | | 22 | | | | 1 | | | | | | | |
| TOTALS .. . | 46,047 | | 1430 | Under 5 | | 352 | 66 | 6 | | 46 | | | 2 | | 79 | 274 | | 69 | 2 | | | 1 | | | | | | | |
| | | | | 5 upwards | | | | | | | | | | | | | | 227 | | | | 13 | | | | | | | |

Notification of Infectious Disease has been compulsory in the District since December, 1892.

The Isolation Hospital is situated at Lower Outwoods, in Tutbury Rural District.

SEE OVER

## Deaths Registered from all Causes during the Year (contd.)

| | AGES. | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IV.—CONSTITUTIONAL DISEASES. | 0 to 1 | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 65 | 65 to 75 | 75 to 85 | 85 and up-w'ds | TOTAL | 55 to 60 |
| Rheumatic Fever, Rheumatism of the Heart .. .. | | | 2 | 2 | | | | 1 | | | | 5 | 1 |
| Rickets .. .. .. | 1 | | | | | | | | | | | 1 | |
| Cancer, Malignant Disease .. | | | 1 | | 4 | 4 | 10 | 12 | 16 | 1 | 1 | 49 | 4 |
| Tabes Mesenterica .. .. | 6 | 1 | | | | | | | | | | 7 | |
| Tubercular Meningitis, Hydrocephalus .. .. .. | 5 | 9 | 2 | 1 | | | | | | | | 17 | |
| Phthisis .. .. .. | 3 | 5 | 4 | 13 | 22 | 13 | 14 | 3 | 1 | | | 78 | 2 |
| Other forms of Tuberculosis, Scrofula .. .. .. | | 1 | 1 | 2 | | | | | | | | 4 | |
| Anæmia, Chlorosis, Leucocythæmia .. .. .. | | | | | | | 1 | | | | | 1 | 1 |
| Glycosuria, Diabetes Mellitus.. | | | | | | | 2 | 1 | 2 | 1 | | 6 | |
| V.—DEVELOPMENTAL DISEASES. | | | | | | | | | | | | | |
| Premature Birth .. .. | 20 | | | | | | | | | | | 20 | |
| Congenital Malformations .. | 6 | | | | | | | | | | | 6 | |
| Old Age .. .. .. | | | | | | | | 1 | 3 | 21 | 4 | 29 | |
| VI.—LOCAL DISEASES. | | | | | | | | | | | | | |
| 1.—DISEASES OF NERVOUS SYSTEM | | | | | | | | | | | | | |
| Inflamation of Brain or Membranes .. .. .. | 1 | 2 | 1 | | 1 | | | | | | | 5 | |
| Apoplexy, Softening of Brain, Hemiplegia, Brain Paralysis | | | | | | 2 | 6 | 14 | 14 | 13 | 2 | 51 | 5 |
| Insanity, General Paralysis of the Insane .. .. | | | | | 1 | 3 | | 2 | | | | 6 | 3 |
| Epilepsy .. .. .. | | | | | 1 | 2 | | 2 | | 1 | | 6 | |
| Convulsions .. .. . | 23 | 3 | | | | | | | | | | 26 | |
| Disease of Spinal Cord, Paraplegia, Paralysis Agitans .. | | | | 1 | | 1 | | | 1 | 1 | | 4 | |
| Other Diseases of Nervous System .. .. .. | | | | | | 1 | | | | | | 1 | |
| 2.—DISEASES OF ORGANS OF SPECIAL SENSE. | | | | | | | | | | | | | |
| (*e.g.*, of Ear, Eye, Nose) .. | 2 | | 1 | | | | | | | | | 3 | |
| 3.—DISEASES OF CIRCULATORY SYSTEM. | | | | | | | | | | | | | |
| Pericarditis .. .. .. | | | 1 | | | | | | | | | 1 | |
| Acute Endocarditis .. .. | | | | | 1 | | | | | | | 1 | |
| Valvular Diseases of Heart .. | | | 2 | 4 | 4 | 4 | 1 | 2 | 1 | | | 18 | |
| Other Diseases of Heart .. | | | | | 4 | 5 | 5 | 7 | 13 | 6 | | 40 | 2 |
| Other Diseases of Blood Vessels | | | | | | | | 1 | 1 | | | 2 | 1 |

## Deaths Registered from all Causes during the Year (contd.)

| Local Diseases (contd.) | AGES. 0 to 1 | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 65 | 65 to 75 | 75 to 85 | 85 and up-w'ds | Total | 55 to 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.—Diseases of Respiratory System. | | | | | | | | | | | | | |
| Laryngitis .. .. .. | | 2 | 1 | | | | | | | | | 3 | |
| Croup .. .. .. | | 3 | | | | | | | | | | 3 | |
| Bronchitis .. .. .. | 19 | 8 | | | | 2 | 4 | 8 | 13 | 9 | 1 | 64 | 1 |
| Pneumonia .. .. .. | 9 | 10 | 2 | 2 | 1 | | 5 | 4 | 2 | 1 | 1 | 37 | 1 |
| Pleurisy .. .. .. | | 1 | | | | | | | | | | 1 | |
| 5.—Diseases of Digestive System. | | | | | | | | | | | | | |
| Dentition .. .. .. | | 2 | | | | | | | | | | 2 | |
| Diseases of Stomach .. .. | 3 | | | | | | | | | | | 3 | |
| Enteritis .. .. .. | 3 | | 1 | | | | | | | | | 4 | |
| Obstructive Diseases of Intestine | 1 | | | 1 | | | 1 | 1 | 2 | | | 6 | 1 |
| Peritonitis .. .. .. | | 2 | 2 | 2 | | 2 | 2 | | 1 | | | 11 | |
| Ascites .. .. .. | | | | | | | | 1 | | | | 1 | |
| Cirrhosis of Liver .. .. | | | | | | 3 | 6 | 8 | 1 | | | 18 | |
| Jaundice and other Diseases of Liver .. .. .. | | | | | 2 | | | | | | | 2 | |
| Other Diseases of Digestive System .. .. .. | | | | | | | | | 1 | | | 1 | |
| 6.—Diseases of Gland-like Organs of Uncertain Use. | | | | | | | | | | | | | |
| (*e.g.*, Bronchocele, Addison's Disease) .. .. .. | | | | | | | | 1 | | | | 1 | |
| 7.—Diseases of Urinary System. | | | | | | | | | | | | | |
| Nephritis .. .. .. | | | 1 | | 1 | | 1 | | 1 | | | 4 | |
| Bright's Disease, Albuminuria.. | | | | | | | 3 | | | 1 | | 7 | |
| Disease of Bladder or of Prostate | | | | | | | | 3 | 1 | 1 | | 2 | |
| Other Diseases of the Urinary System .. .. .. | | | | | | | | 1 | | | | 1 | |
| 8.—Diseases of Reproductive System. | | | | | | | | | | | | | |
| *Of Organs of Generation.* | | | | | | | | | | | | | |
| Female Organs .. .. | | | | | | | | 1 | | | | 1 | |
| *Of Parturition.* | | | | | | | | | | | | | |
| Abortion, Miscarriage .. | | | | | | 1 | | | | | | 1 | |
| Other Accidents of Child Birth | | | | | 1 | 1 | | | | | | 2 | |
| 9.—Diseases of Bones and Joints. | | | | | | | | | | | | | |
| Caries, Necrosis .. .. | | | | | | 1 | | | | | | 1 | |

## Deaths Registered from all Causes during the Year (contd.)

| | AGES. | | | | | | | | | | | TOTAL | 55 to 60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 to 1 | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 35 | 35 to 45 | 45 to 55 | 55 to 65 | 65 to 75 | 75 to 85 | 85 and up-w'ds | | |
| **Local Diseases (contd.)** | | | | | | | | | | | | | |
| 10.—DISEASES OF INTEGUMENTARY SYSTEM. | | | | | | | | | | | | | |
| Carbuncle, Phlegmon.. .. | | | | | | | | 1 | | | | 1 | |
| Other Diseases of Integumentary System .. .. .. | | 1 | | | | | | | | | | 1 | |
| **VII.—DEATHS FROM VIOLENCE.** | | | | | | | | | | | | | |
| 1.—ACCIDENT OR NEGLIGENCE. | | | | | | | | | | | | | |
| Fractures and Contusions .. | | | | | 1 | 2 | 2 | 3 | 1 | | | 9 | |
| Burn, Scald .. .. .. | | 4 | | | | 1 | | | | | | 5 | |
| Poison .. .. .. | | | | | | 1 | 1 | 1 | | | | 3 | |
| Drowning .. .. .. | | | 1 | | | | | | | | | 1 | |
| Suffocation .. .. .. | 1 | | 1 | | | | | | | | | 2 | |
| 2.—SUICIDE. | | | | | | | | | | | | | |
| Drowning .. .. .. | | | | | 1 | 2 | 1 | 1 | | | | 5 | |
| **VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES.** | | | | | | | | | | | | | |
| Debility, Atrophy, Inanition .. | 37 | 2 | | | | | | | | | | 39 | |
| Tumour .. .. .. | 1 | | | | | | | | | | | 1 | |
| Hæmorrhage .. .. | | | | | | | 1 | | | | | 1 | |
| Not Certified .. .. | 6 | | | | | | | | 2 | | | 8 | |

# SUMMARY OF TABLE III.

| | No. of Deaths. |
|---|---|
| **I.—SPECIFIC FEBRILE OR ZYMOTIC DISEASES.** | |
| 1. Miasmatic Diseases .. .. .. .. | 57 |
| 2. Diarrhœal ,, .. .. .. .. | 53 |
| 3. Malarial ,, .. .. .. .. | |
| 4. Zoogenous ,, .. .. .. .. | |
| 5. Venereal ,, .. .. .. .. | 3 |
| 6. Septic ,, .. .. .. .. | 2 |
| **II.—PARASITIC DISEASES.** | |
| **III.—DIETIC DISEASES.** | 4 |
| **IV.—CONSTITUTIONAL DISEASES.** | 168 |
| **V.—DEVELOPMENTAL DISEASES.** | 55 |
| **VI.—LOCAL DISEASES.** | |
| 1.—Diseases of Nervous System .. .. .. | 99 |
| 2.—Diseases of Organs of Special Sense .. .. | 3 |
| 3.—Diseases of Circulatory System .. .. .. | 62 |
| 4.—Diseases of Respiratory System .. .. .. | 108 |
| 5.—Diseases of Digestive System .. .. .. | 48 |
| 6.—Diseases of Lymphatic System .. .. .. | |
| 7.—Diseases of Gland-like Organs of Uncertain Use .. | 1 |
| 8.—Diseases of Urinary System .. .. .. | 14 |
| 9.—Diseases of Reproductive System— | |
| (*a*) Diseases of Organs of Generation .. .. | 1 |
| (*b*) Diseases of Parturition .. .. .. | 3 |
| 10.—Diseases of Bones and Joints .. .. .. | 1 |
| 11.—Diseases of Integumentary System .. .. | 2 |
| **VII.—VIOLENCE.** | |
| 1.—Accident or Negligence .. .. .. | 20 |
| 2.—Homicide .. .. .. .. .. | |
| 3.—Suicide .. .. .. .. .. | 5 |
| 4.—Execution .. .. .. .. .. | |
| **VIII.—ILL-DEFINED AND NOT SPECIFIED CAUSES** | 49 |
| TOTAL .. | 758 |

Town Hall,
Burton-upon-Trent,
January, 1898.

To the Chairman and Members
of the Health Committee.

Gentlemen,

I beg to lay before you a Summary of the work done by me, and the number of Nuisances abated during the past year.

*Conversion of Midden Privies to the Pan System.*

The conversion of foul and defective Ashpits and Privies to the Pan System is still steadily progressing, although the number is slightly smaller yearly. This will be accounted for by the worst properties being altered in the earlier period of the adoption of the Pan System by this Committee.

*Lodging Houses.*

There are 11 Common Lodging Houses registered to accommodate 169 persons, and the Houses are conducted in a satisfactory manner.

*Cattle Disease.*

During the past year there has been 12 cases of Swine Fever confirmed by the Board of Agriculture and 15 cases of suspected disease but not confirmed by the Board; in connection therewith there has been 86 pigs slaughtered and 24 died.

I am pleased to have to report that there has been no case of Swine Fever within the Borough since June 28th, and no other case of Cattle Disease has been reported during the year.

During the year 20 dogs have been seized under the Stray Dogs' Order, 14 of which were destroyed, 2 were claimed by Owners, and 4 were allowed to be taken by persons on payment of keep during detention.

| | | | |
|---|---|---|---|
| Persons summoned for Offences under the Diseases of Animals Acts and the Regulations relating thereto | | | 4 |
| Penalties ... | ... | ... | £2 0 0 |
| Costs ... | ... | ... | £1 19 6 |

*Cowsheds and Dairies.*

There are at the present time 68 Cowkeepers with 468 Cows, and 39 Milksellers who are not Cowkeepers.

*Bakehouses.*

There are 69 Bakehouses employing 128 men and 18 persons under 18 years of age.

*Disinfections.*

The following is a List of Articles disinfected at the Disinfector during the past year :—

| | |
|---|---|
| Number of Disinfections ... ... | 68 |
| Beds ... ... ... ... | 140 |
| Mattresses ... ... ... | 27 |
| Counterpanes ... ... ... | 13 |
| Blankets ... ... ... | 12 |
| Sheets ... ... ... | 19 |
| Bolsters ... ... ... | 90 |
| Pillows ... ... ... | 191 |
| Garments ... ... ... | 2713 |
| Sundries ... ... ... | 8 |

Appended hereto are details of the Nuisances abated during the past year.

I am, Gentlemen,

Your obedient Servant,

WM. READING,

*Inspector of Nuisances.*

*Nuisances Abated.*

| | |
|---|---|
| Foul and defective Ashpits filled up ... ... ... | 43 |
| Foul and defective Ashpits repaired ... ... ... | 13 |
| Foul and defective Privies repaired ... ... ... | 27 |
| Foul and defective Privies converted to Pans ... ... | 68 |
| Additional Pan Privies provided ... ... ... | 5 |
| Water Closets repaired ... ... ... ... | 10 |
| Urinals repaired ... ... ... ... | 2 |
| Sink drains disconnected from the Sewer ... ... | 3 |
| Yard drains trapped ... ... ... ... | 337 |
| Yard drains repaired ... ... ... ... | 96 |
| Drains relaid ... ... ... ... ... | 6 |
| Spout drains repaired ... ... ... ... | 78 |
| Cesspools filled up ... ... ... ... | 3 |
| Accumulations of Manure or offensive matter removed ... | 42 |
| Swine removed ... ... ... ... | 12 |
| Nuisances from Swine abated ... ... ... | 38 |
| Houses cleansed ... ... ... ... | 23 |
| Filthy premises cleansed ... ... ... ... | 19 |
| Yard paved or repaired ... ... ... ... | 20 |
| Overcrowded dwelling-houses ... ... ... | 13 |
| Water supplied ... ... ... ... | 23 |
| Miscellaneous Nuisances abated ... ... ... | 23 |
| Repairs to dwelling-houses ... ... ... | 16 |

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| | |
|---|---|
| Preliminary Notices issued ... ... ... | 726 |
| Legal Notices issued ... ... ... ... | 49 |
| Persons summoned under Public Health Acts ... ... | 2 |
| Penalties ... ... ... ... | £4 18 6 |
| Costs ... ... ... ... | £1 8 0 |