# BOROUGH OF LEICESTER.

# ANNUAL REPORT

ON THE

## HEALTH AND SANITARY CONDITION

## OF THE BOROUGH,

WITH

## QUARTERLY AND YEARLY TABLES

## OF DEATHS,

## FOR 1879,

BY


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MEDICAL OFFICER OF HEALTH.



LEICESTER:

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BOROUGH OF LEICESTER.

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*The Committee meet every Friday, at the Committee Room, Town Hall, at half-past Three o'clock in the Afternoon.*

TO THE SANITARY COMMITTEE OF THE TOWN COUNCIL OF LEICESTER.

20TH APRIL, 1880.

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MR. CHAIRMAN AND GENTLEMEN,

I have the honour to submit to you my Annual Report for the year 1879.

To NOEL H. HUMPHREYS, ESQ., F.S.S., of the Registrar General's Office, my thanks are specially due for his kindness and promptitude in supplying me with such statistical information as enabled me to construct the most important Tables in the Report.

I am also gratefully indebted to Mr. W. JEROME HARRISON, Curator of the Museum, Leicester, for supplying me with the Meteorological Returns of last year.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient servant,

WILLIAM JOHNSTON,

*Health Officer.*

MELBOURNE STREET,
LEICESTER.

# INDEX.



# APPENDIX.


# REPORT

ON THE

# HEALTH OF LEICESTER

## IN 1879.

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The population of Leicester, estimated to the middle of the year 1879, was 125,622. The area of the Borough was calculated to include 3,200 acres, which gives the average density of population as 39·3 persons to an acre. In urban districts density of population affects the mortality. A town with a high average density of population will generally be found to be overcrowded in one or more of its districts, and, as the mortality in overcrowded areas is always exceptionally high, if these latter be of considerable extent the general death-rate of the town itself becomes sensibly raised. From the following statement it will be seen that Leicester, in regard to overcrowding, bears favourable comparison with the other large towns whose boundaries have not undergone recent extension.

Density of Population. 1879.

| Towns. | Persons to an Acre. | Towns. | Persons to an Acre. |
|---|---|---|---|
| Bristol ... ... ... ... | 47·2 | Sunderland ... ... ... | 41·4 |
| Birmingham ... ... ... | 46·3 | London ... ... ... ... | 48·0 |
| Manchester ... ... ... | 84·3 | Brighton ... ... ... | 44·9 |
| Hull ... ... ... ... | 40·3 | Plymouth ... ... ... | 53·3 |
| **Leicester ... ... ...** | **39·3** | Liverpool ... ... ... | 103·3 |

## MARRIAGES.

The number of Marriages in town populations depends, in great measure, upon the existing state of trade; a greater activity or depression in the latter being rapidly followed by an increase or decline in the former. The fluctuations in the marriage-rate (persons married to 1000 persons living) may therefore be taken as a fairly accurate test of the commercial prosperity of a town. The marriages for each quarter of the four years 1875–'78, and for the first three quarters of 1879, were as follow:—

| | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | Total. | Marriage Rate per 1000 living. |
|---|---|---|---|---|---|---|
| 1875 ... ... | 224 | 267 | 302 | 393 | 1186 | 10·8 |
| 1876 .. ... | 198 | 316 | 309 | 403 | 1226 | 10·8 |
| 1877 ... ... | 224 | 314 | 300 | 344 | 1182 | 10·1 |
| 1878 ... ... | 189 | 297 | 269 | 354 | 1109 | 9·1 |
| Average for the 4 years 1875–'78 | 209 | 298 | 295 | 373 | 1176 | 10·2 |
| 1879 ... ... | 169 | 310 | 280 | | | |

The depression in the general trade of the country that has prevailed since the beginning of 1877 was not sensibly felt in Leicester until the close of that year and, from the preceding statement, it will be seen that there was a considerable reduction in the number of marriages during the fourth quarter of 1877. The above returns further shew that since 1877 marriages have continued to be proportionately less numerous.

## BIRTHS.

The Births registered during 1879 were 4,687; of these, 2,333 were males, and 2,354 females. For comparative information the Quarterly Returns of Births since the year 1876 are given below.

QUARTERLY RETURNS OF BIRTHS FOR THE FOUR YEARS 1876–'79.

| 1876. | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | Total for the Year. |
|---|---|---|---|---|---|
| Males ... ... ... | 677 | 583 | 614 | 585 | 2459 |
| Females ... ... | 645 | 558 | 533 | 586 | 2322 |
| Total ... ... ... | 1322 | 1141 | 1147 | 1171 | 4781 |
| 1877. | | | | | |
| Males ... ... ... | 647 | 629 | 611 | 607 | 2494 |
| Females ... ... | 637 | 527 | 509 | 586 | 2259 |
| Total ... ... ... | 1284 | 1156 | 1120 | 1193 | 4753 |

| 1878. | First Quarter. | Second Quarter. | Third Quarter. | Fourth Quarter. | Total for the Year. |
|---|---|---|---|---|---|
| Males ... ... ... | 603 .. | 622 ... | 611 ... | 612 ... | 2448 |
| Females ... ... | 602 ... | 586 ... | 566 ... | 577 ... | 2331 |
| Total ... ... ... | 1205 ... | 1208 ... | 1177 ... | 1189 ... | 4779 |
| 1879. | | | | | |
| Males ... ... ... | 626 ... | 555 ... | 610 ... | 542 ... | 2333 |
| Females ... ... | 600 ... | 554 ... | 607 ... | 593 ... | 2354 |
| Total ... ... ... | 1226 ... | 1109 ... | 1217 ... | 1135 ... | 4687 |

The total Births in 1879 shewed a decline of 84 upon the average for the three preceding years. The birth-rate for the year was 37·3 per 1000 persons living, against 39·4 in 1878, and 40·9 the average for the 10 years 1869–'78; in fact the rate was lower than in any year of the previous decade. This marked depression in the birth-rate may be accounted for by the diminished number of marriages, to which attention has already been drawn.

## DEATHS.

The total Deaths registered in the Borough during 1879 were 2,706. From this number must be deducted 61 deaths that took place during the year in the County Asylum, and 33 in the Infirmary, of patients who had, previous to admission, resided in the County. To the remaining 2,612 must be added 21 deaths that occurred in the Borough Asylum and 18 in the Borough Fever Hospital, making the corrected total deaths equal to 2,651. The total deaths, thus corrected, represented a rate of mortality of 21·1 per 1000 of the estimated population. This death-rate shewed a slight excess (0·5 per 1000) on the exceptionally low rate of 1878, but was less by 3·5 per 1000 than the average rate for the 9 preceding years. (*Vide* Table I.) The 2,651 deaths last year included 1,374 of males and 1,277 of females. The annual death rate among males was equal to 23·3, and among females to 19·2 per 1000 estimated as living of each sex. In equal numbers living, the deaths of males were as 121 to each 100 of females. This increased mortality among males may partly be accounted for by the fact that their daily pursuits involved greater exposure to the cold and inclement weather that prevailed throughout the greater part of the year.

When the highly tentative character of the weather is considered together with the amount of trade depression that ruled in Leicester in 1879, I think that the rate of 21·1 per 1000, although a slight increase on the rate of 1878, may be taken as an indication that the preventive and remedial measures adopted and carried out by the Health Authorities during the year were highly successful.

In Table I. I have tabulated the general death-rates of 20 English towns for the 10 years 1870–'79. The mortality in Leicester, it will be observed, has materially decreased in the last 4 years of the decade, while the rates for 1878 and '79 are amongst the lowest recorded in the manufacturing towns given in the list.

## TABLE I.

THE GENERAL MORTALITY IN 20 LARGE ENGLISH TOWNS, FOR THE NINE YEARS 1870–'78, AND FOR 1879.

| | 1870 | 1871 | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | 1878 | Average for the 9 years 1870–'78. | 1879 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| London ... ... ... ... | 24·1 | 24·7 | 21·4 | 22·5 | 22·5 | 23·7 | 22·3 | 21·9 | 23·5 | 22·9 | 23·2 |
| Brighton ... ... ... | ... | ... | ... | ... | ... | ... | 19·6 | 18·7 | 21·2 | 19·8 | 18·9 |
| Portsmouth ... ... | 22·1 | 19·3 | 22·9 | 18·4 | 20·4 | 19·5 | 22·1 | 17·4 | 19·0 | 20·1 | 16·7 |
| Norwich ... ... ... | 27·7 | 25·9 | 26·3 | 21·5 | 23·5 | 24·5 | 21·9 | 21·0 | 24·6 | 24·1 | 22·0 |
| Plymouth ... ... ... | ... | ... | ... | ... | ... | ... | 22·1 | 21·7 | 25·3 | 33·0 | 22·3 |
| Bristol ... ... ... ... | 28·4 | 23·2 | 22·0 | 23·1 | 22·7 | 26·8 | 22·6 | 21·8 | 21·4 | 23·6 | 21·0 |
| Wolverhampton... .. | 23·5 | 28·8 | 25·9 | 25·1 | 23·9 | 24·7 | 23·8 | 24·2 | 23·3 | 24·7 | 22·7 |
| Birmingham ... ... | 23·0 | 24·0 | 23·0 | 24·9 | 26·8 | 26·5 | 22·7 | 24·2 | 25·5 | 24·6 | 22·2 |
| **Leicester ... ... ...** | **27·9** | **26·8** | **26·8** | **24·4** | **24·1** | **26·6** | **23·1** | **21·5** | **20·6** | **24·6** | **21·1** |
| Nottingham ... ... | 24·9 | 26·0 | 25·3 | 23·2 | 24·8 | 27·7 | 23·5 | 22·9 | 21·0 | 24·4 | 22·6 |
| Liverpool ... ... ... | 32·9 | 35·1 | 27·1 | 25·9 | 32·0 | 27·5 | 27·6 | 26·5 | 29·4 | 29·3 | 27·0 |
| Manchester... ... ... | 29·8 | 31·2 | 28·6 | 37·1 | 30·4 | 29·9 | 29·2 | 27·4 | 27·9 | 29·4 | 26·9 |
| Salford ... ... ... ... | 25·8 | 30·4 | 25·8 | 29·3 | 29·6 | 31·5 | 31·9 | 25·1 | 25·6 | 28·3 | 24·9 |
| Oldham... ... ... ... | ... | ... | 31·1 | 25·8 | 29·7 | 29·6 | 29·4 | 24·2 | 25·8 | 27·9 | 21·7 |
| Bradford ... ... ... | 27·5 | 25·5 | 26·3 | 24·7 | 27·0 | 27·1 | 23·9 | 21·9 | 22·5 | 25·1 | 21·1 |
| Leeds ... ... ... ... | 28·7 | 26·4 | 27·9 | 27·6 | 28·7 | 26·4 | 25·1 | 22·3 | 23·8 | 26·3 | 22·5 |
| Sheffield ... ... ... | 26·5 | 28·3 | 26·0 | 25·8 | 26·9 | 24·8 | 24·3 | 21·9 | 25·0 | 25·5 | 21·3 |
| Hull ... ... ... ... | 23·8 | 23·2 | 26·1 | 23·9 | 25·5 | 27·4 | 22·9 | 21·7 | 24·3 | 24·3 | 22·2 |
| Sunderland ... ... ... | 20·9 | 36·5 | 26·5 | 22·8 | 23·4 | 22·4 | 21·0 | 22·6 | 25·6 | 24·6 | 21·9 |
| Newcastle ... ... ... | 25·4 | 32·2 | 26·3 | 30·1 | 29·2 | 26·1 | 22·8 | 22·4 | 23·8 | 26·5 | 23·7 |

The rate of mortality varies greatly at different ages. For instance, according to the English Life Table, the mortality per 1000 among *persons* living under one year of age is equal to 165·38, under 5 years 65·7, from 5 to 10 years 9·6, and from 10 to 15 years 5·2. Since populations differ one from another in the numbers living at the various ages, it is essential, when great accuracy is required in the death-rates for the purpose of comparing the healthiness of towns, to calculate the rate of mortality for different intervals of age. Having first ascertained the number of deaths recorded during a given period in each age interval, it is next necessary, for the calculation of such death-rates, to ascertain the numbers *living* out of which the deaths occurred.

In the following Tables, which show the mortality in Leicester at sixteen periods of life, the population living at each period was found by assuming that the males and females were distributed in 1878 and 1879 in the same proportion as was found to obtain in the *mean* of the populations enumerated at each period in the two Censuses of 1861 and '71. This method of estimating the population at the various ages may be taken as fairly reliable, and is now commonly adopted by Health Officers to enable them to calculate accurately the annual death-rates of their districts.

The English Life Table, which I have used as a standard of comparison, is based on the numbers enumerated at the given ages in the two Censuses of 1841 and '51, and the deaths recorded at the corresponding ages in 17 years. The Life Table, therefore, forms a trustworthy gauge for measuring the death-rates of different localities, and is recommended by the Registrar General as a standard for comparing English mortality in town or country districts. In looking over the death-rates given in the Life Table, it is important to remark how extreme is the range of mortality at the several periods of life. At Infancy the mortality will be seen to be very high; from this period the rate declines, and is lowest at the age-group of 10 to 15 years; as life advances the death-rate again rises until, at ages of 85 years and upwards, the mortality even exceeds the infantile rate.

# TABLE II.

POPULATION, DEATHS, AND ANNUAL RATE OF MORTALITY IN THE BOROUGH OF LEICESTER DURING THE YEAR 1878 AT SIXTEEN GROUPS OF AGES COMPARED WITH THE ENGLISH LIFE TABLE RATES AT THOSE AGES FOR PERSONS, MALES AND FEMALES.

| | PERSONS. | | MALES. | | FEMALES. | |
|---|---|---|---|---|---|---|
| | Estimated Population, 1878. | Deaths, 1878. | Estimated Population, 1878. | Deaths, 1878. | Estimated Population, 1878. | Deaths, 1878. |
| All Ages ..... | 121,473 | 2,518 | 57,096 | 1,320 | 64,377 | 1,198 |
| Under 1 year... | 3,986 | 971 | 2,018 | 521 | 1,968 | 450 |
| 1—2 years ... | 3,335 | 234 | 1,680 | 126 | 1,655 | 108 |
| 2—3 „ ... | 3,133 | 85 | 1,533 | 38 | 1,600 | 47 |
| 3—4 „ ... | 3,007 | 47 | 1,491 | 17 | 1,516 | 30 |
| 4—5 „ ... | 2,904 | 23 | 1,462 | 12 | 1,442 | 11 |
| Total under 5 years | 16,365 | 1,360 | 8,184 | 714 | 8,181 | 646 |
| 5—10 years ... | 13,637 | 45 | 6,739 | 27 | 6,898 | 18 |
| 10—15 „ ... | 12,458 | 33 | 6,078 | 17 | 6,380 | 16 |
| 15—20 „ ... | 12,774 | 40 | 5,777 | 19 | 6,997 | 21 |
| 20—25 „ ... | 11,672 | 50 | 5,049 | 22 | 6,623 | 28 |
| 25—35 „ ... | 18,511 | 147 | 8,465 | 81 | 10,046 | 66 |
| 35—45 „ ... | 13,905 | 143 | 6,479 | 87 | 7,426 | 56 |
| 45—55 „ ... | 10,320 | 145 | 4,813 | 78 | 5,507 | 67 |
| 55—65 „ ... | 6,889 | 150 | 3,254 | 74 | 3,645 | 76 |
| 65—75 „ ... | 3,669 | 205 | 1,698 | 106 | 1,971 | 99 |
| 75—85 „ ... | 1,128 | 163 | 499 | 82 | 629 | 81 |
| 85 and upwards | 135 | 37 | 61 | 13 | 74 | 24 |

# TABLE II.

Annual Death Rates per 1,000 living among

| | Persons. | | Males. | | Females. | |
|---|---|---|---|---|---|---|
| | Leicester. | English Life Table. | Leicester. | English Life Table. | Leicester. | English Life Table. |
| All Ages ..... | 20·7 | 21·5 | 23·1 | 22·4 | 18·6 | 20·7 |
| Under 1 year... | 243·60 | 165·38 | 258·17 | 183.26 | 228·66 | 147·49 |
| 1—2 years ... | 70·16 | 65·58 | 75·00 | 66·80 | 65·26 | 64·36 |
| 2—3 „ ... | 27·13 | 36·14 | 24·78 | 36·24 | 29·38 | 36·03 |
| 3—4 „ ... | 15·63 | 24·33 | 11·40 | 24·16 | 19·78 | 24·50 |
| 4—5 „ ... | 7·92 | 17·92 | 8·21 | 17·99 | 7·63 | 17·85 |
| Total under 5 years | 83·1 | 65·7 | 87·24 | 70·1 | 78·96 | 61·3 |
| 5—10 years ... | 3·29 | 9·6 | 4·01 | 9·6 | 2·61 | 9·5 |
| 10—15 „ ... | 2·65 | 5·2 | 2·79 | 5·0 | 2·51 | 5·3 |
| 15—20 „ ... | 3·13 | 6·5 | 3·29 | 6·3 | 3·00 | 6·6 |
| 20—25 „ ... | 4·28 | 8·9 | 4·36 | 8·7 | 4·23 | 9·0 |
| 25—35 „ ... | 7·94 | 10·3 | 9·57 | 10·1 | 6·57 | 10·5 |
| 35—45 „ ... | 10·28 | 12·8 | 13·43 | 12·9 | 7·54 | 12·7 |
| 45—55 „ ... | 14·05 | 17·6 | 16·21 | 19·0 | 12·17 | 16·3 |
| 55—65 „ ... | 21·74 | 30·4 | 22·74 | 32·4 | 20·85 | 28·6 |
| 65—75 „ ... | 55·87 | 62·4 | 62·43 | 65.8 | 50·23 | 59·3 |
| 75—85 „ ... | 144·50 | 131·2 | 164·33 | 137·4 | 128·78 | 126·0 |
| 85 and upwards | 274·07 | 258·3 | 213·11 | 267·8 | 324·32 | 251·4 |

# TABLE III.

Population, Deaths, and Annual Rate of Mortality in the Borough of Leicester during the Year 1879 at sixteen groups of ages compared with the English Life Table Rates at those ages for Persons, Males and Females.

| | Persons. | | Males. | | Females. | |
|---|---|---|---|---|---|---|
| | Estimated Population, Midsummer, 1879. | Deaths, 1879. | Estimated Population, Midsummer, 1879. | Deaths, 1879. | Estimated Population, Midsummer, 1879. | Deaths, 1879. |
| All Ages ..... | 125,622 | 2,651 | 59,046 | 1,374 | 66,576 | 1,277 |
| Under 1 year... | 4,122 | 878 | 2,086 | 479 | 2,036 | 399 |
| 1—2 years ... | 3,448 | 271 | 1,737 | 148 | 1,711 | 123 |
| 2—3 „ ... | 3,239 | 106 | 1,585 | 61 | 1,654 | 45 |
| 3—4 „ ... | 3,110 | 74 | 1,542 | 39 | 1,568 | 35 |
| 4—5 „ ... | 3,002 | 37 | 1,511 | 19 | 1,491 | 18 |
| Total under 5 years | 16,921 | 1,366 | 8,461 | 746 | 8,460 | 620 |
| 5—10 years ... | 14,103 | 79 | 6,969 | 41 | 7,134 | 38 |
| 10—15 „ ... | 12,882 | 36 | 6,285 | 19 | 6,597 | 17 |
| 15—20 „ .. | 13,210 | 38 | 5,975 | 24 | 7,235 | 14 |
| 20—25 „ ... | 12,071 | 48 | 5,221 | 19 | 6,850 | 29 |
| 25—35 „ ... | 19,144 | 126 | 8,755 | 65 | 10,389 | 61 |
| 35—45 „ ... | 14,381 | 148 | 6,701 | 75 | 7,680 | 73 |
| 45—55 „ ... | 10,672 | 174 | 4,977 | 85 | 5,695 | 89 |
| 55—65 „ ... | 7,136 | 194 | 3,666 | 96 | 3,770 | 98 |
| 65—75 „ ... | 3,795 | 236 | 1,756 | 114 | 2,039 | 122 |
| 75—85 „ ... | 1,167 | 173 | 517 | 75 | 650 | 98 |
| 85 and upwards | 140 | 33 | 63 | 15 | 77 | 18 |

# TABLE III.

ANNUAL DEATH RATES PER 1,000 LIVING AMONG

| | PERSONS. | | MALES. | | FEMALES. | |
|---|---|---|---|---|---|---|
| | Leicester. | English Life Table. | Leicester. | English Life Table. | Leicester. | English Life Table. |
| All Ages ..... | 21·10 | 21·5 | 23·26 | 22·4 | 19·16 | 20·7 |
| Under 1 year... | 213·00 | 165·38 | 229·63 | 183·26 | 195·97 | 147·49 |
| 1—2 years ... | 78·59 | 65·58 | 85·20 | 66 80 | 71·88 | 64·36 |
| 2—3 „ ... | 32·72 | 36·14 | 38·48 | 36·24 | 27·21 | 36·03 |
| 3—4 „ ... | 23·79 | 24·33 | 25·29 | 24·16 | 22·32 | 24·50 |
| 4—5 „ ... | 12·32 | 17·92 | 12·57 | 17·99 | 12·07 | 17·85 |
| Total under 5 years | 80·72 | 65·7 | 88·16 | 70·1 | 73·28 | 61·3 |
| 5—10 years ... | 5·60 | 9·6 | 5·88 | 9·6 | 5·33 | 9·5 |
| 10—15 „ ... | 2·79 | 5·2 | 3·02 | 5·0 | 2·57 | 5·3 |
| 15—20 „ ... | 2·87 | 6·5 | 4·01 | 6·3 | 1·93 | 6·6 |
| 20—25 „ ... | 3·97 | 8·9 | 3·63 | 8·7 | 4·23 | 9·0 |
| 25—35 „ ... | 6·58 | 10·3 | 7·42 | 10·1 | 5·87 | 10·5 |
| 35—45 „ ... | 10·29 | 12·8 | 11·19 | 12·9 | 9·50 | 12·7 |
| 45—55 „ ... | 16·30 | 17·6 | 17·07 | 19·0 | 15·63 | 16·3 |
| 55—65 „ ... | 27·18 | 30·4 | 26 18 | 32·4 | 25·99 | 28·6 |
| 65—75 „ ... | 62·18 | 62·4 | 64·92 | 65·8 | 59·83 | 59·3 |
| 75—85 „ ... | 148·24 | 131·2 | 145·06 | 137·4 | 150·08 | 126·0 |
| 85 and upwards | 235·71 | 258·3 | 238·01 | 267·8 | 233·76 | 251·4 |

A careful study of the death-rates in Leicester for *persons* during 1878 and '79 affords most interesting information. It will be observed that while the gross death-rate (deaths at all ages to 1000 of population) was in each year below the Life Table rate, the mortality among infants in the town was very much in excess of the Life Table. The exceptionally low rates observed at the middle periods of life were sufficient to counterbalance and mask the excessive fatality recorded at ages under one year. Infancy being the only period of life where the mortality bears most unfavourable comparison with the Life Table, it is of vital importance that the Health Authorities should use every possible means to mitigate any circumstances that may prove in the least hurtful to infant life. The subject of Infant Mortality is more fully discussed in the last chapter of this Report.

## ZYMOTIC DISEASES.

From Table IV. it will be seen that 358 deaths were recorded in 1879 from the seven principal Zymotic diseases, and represented an annual death-rate of 2·8 per 1000 of the estimated population. In the nine preceding years, 1870–'78, the annual death-rate from these Zymotic diseases averaged 5·2 per 1000, and the highest and lowest rates recorded during these years were 7·7 and 3·0 per 1000 in 1872 and 1877 respectively; thus the Zymotic mortality last year was lower than in any year since 1870.

The ages and sex of the deaths during 1879 from Zymotic diseases were as follow:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Under 1 year ... ... | 130, viz.: | Males, | 66 | ... | Females, | 64. |
| From 1 to 5 years ... | 169 | „ | „ | 90 | ... | „ | 79. |
| 5 years and upwards | 59 | „ | „ | 33 | ... | „ | 26. |
| All ages, both sexes ... | 358 | „ | „ | 189 | ... | „ | 169. |

In the above analysis of the ages at death it is worthy of remark that 36 per cent. of the deaths were of infants under twelve months, and 47 per cent. were of children whose ages ranged between one and five years. Of the deaths from Zymotic diseases during 1878, 62 per cent were of infants under twelve months, and only 27 per cent. were of children aged between one and five years. The con-

# TABLE IV.

SHEWING THE DEATHS FROM THE SEVEN PRINCIPAL ZYMOTIC DISEASES IN THE THIRTEEN YEARS, 1866 TO 1878, AND IN THE YEAR 1879.

| Disease. | 1866 | 1867 | 1868 | 1869 | 1870 | 1871 | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | 1878 | Proportion of Deaths to 1000 Deaths in 1878. | 1879 | Proportion of Deaths to 1000 Deaths in 1879. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Small-pox..... | 3 | 2 | 1 | 0 | 0 | 12 | 346 | 2 | 0 | 0 | 0 | 6 | 1 | 0·4 | 0 | 0·0 |
| Measles ..... | 13 | 2 | 247 | 43 | 42 | 35 | 36 | 62 | 24 | 49 | 50 | 40 | 45 | 18·0 | 72 | 27·1 |
| Scarlet Fever ... | 9 | 40 | 9 | 8 | 263 | 112 | 5 | 6 | 18 | 175 | 173 | 33 | 12 | 4·8 | 105 | 39·6 |
| Diphtheria ..... | 3 | 3 | 10 | 9 | 11 | 7 | 2 | 9 | 8 | 7 | 10 | 9 | 5 | 2·0 | 11 | 4·2 |
| Whooping-cough | 20 | 62 | 6 | 70 | 56 | 32 | 51 | 64 | 43 | 91 | 33 | 65 | 82 | 32·8 | 61 | 23·0 |
| Fever ..... | 53 | 42 | 63 | 57 | 52 | 65 | 64 | 55 | 48 | 64 | 43 | 20 | 31 | 12·4 | 21 | 7·9 |
| Diarrhœa..... | 147 | 209 | 349 | 272 | 240 | 303 | 305 | 314 | 257 | 308 | 263 | 185 | 302 | 120·8 | 88 | 33·2 |
| Total ..... | 248 | 360 | 685 | 459 | 664 | 566 | 829 | 512 | 398 | 694 | 572 | 358 | 478 | 191·2 | 358 | 135·0 |

siderable decline in the proportion of deaths last year of infants must be attributed to the exceptionally low rate of mortality from Diarrhœa, while the higher proportion of deaths of children aged from one to five was mainly due to a greater fatality from Scarlet Fever and Measles.

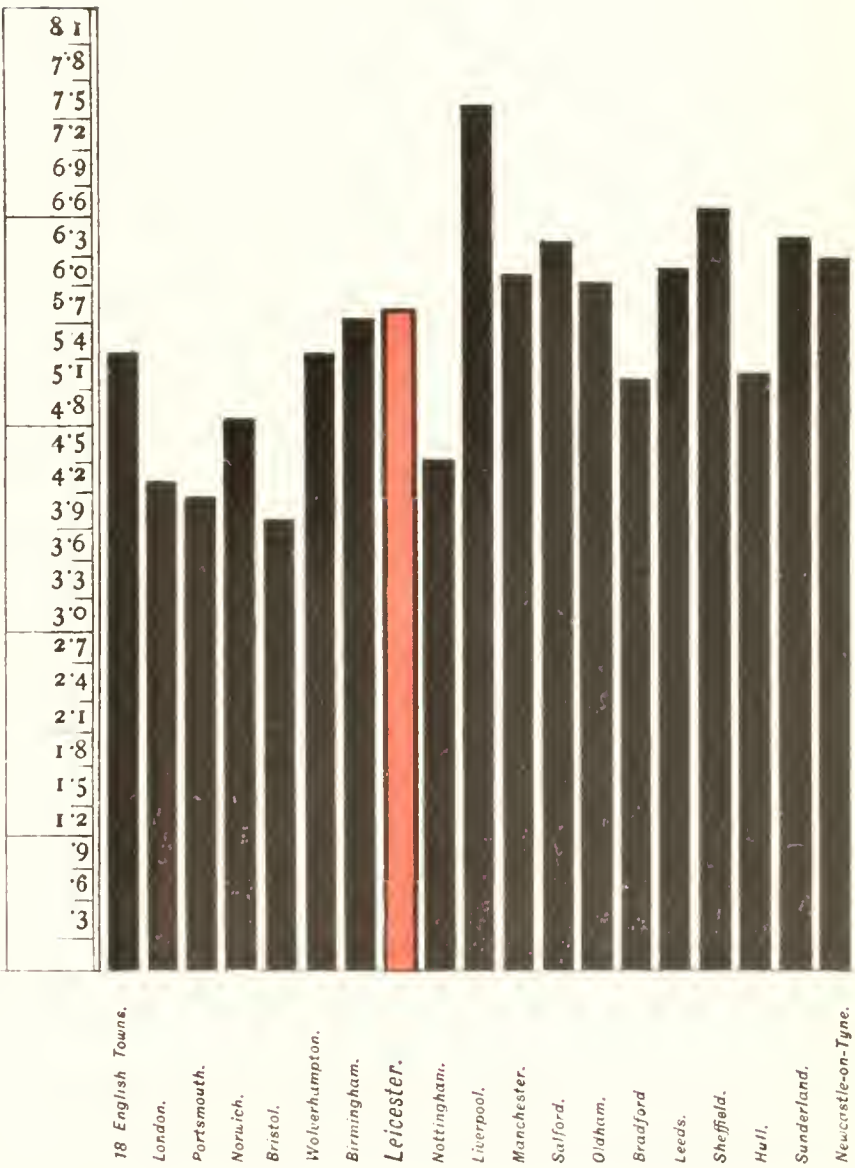
The three Plates afford comparative information for the last ten years upon the Zymotic mortality of the 20 large English towns, and shew that the mortality in Leicester during 1879 bore most favourable comparison with the rates of other manufacturing towns. This must be considered as highly satisfactory, and especially so when it is remembered that the town during the first and last half of that year suffered from an epidemic prevalence of Measles and Scarlet Fever respectively. On Plate I. I have shewn, by means of columns, the average Zymotic mortality in 18 large towns for the first five years of the decade 1870–'79; on Plate II. the corresponding average in 20 towns for the four years 1875–'78; and on Plate III. the Zymotic mortality in 1879. On comparing these Plates a manifest improvement, notwithstanding topographical disadvantages, will be apparent during the last quinquenniad in the Zymotic mortality of Leicester.

Recent experiences in health administration have firmly established the fact that mortality resulting from various Zymotic diseases is capable of being very greatly reduced. A high death-rate occurring in any locality from Zymotic causes (unconnected with topographical origin) may safely be regarded as an indication either of administrative indolence or of serious imperfections existing in the preventive measures adopted by the Health Authorities. Being the custodians of the health of the people, Sanitary bodies cannot ignore these facts and, if earnestly desirous to discharge effectually the duties devolving upon them and at the same time free themselves from the odium of indifference, they must hold it a duty of the first moment to correct any imperfections made apparent, whether these exist as defects of structure, insufficient means for isolation, etc., or are met with as obstructive prejudices held by any class of the people themselves.

In my Report for 1877 I brought under the notice of the Sanitary Committee of Leicester the clauses of the Bolton Improvement Act (1877) relating to the Compulsory Registration of Infectious

# PLATE I.

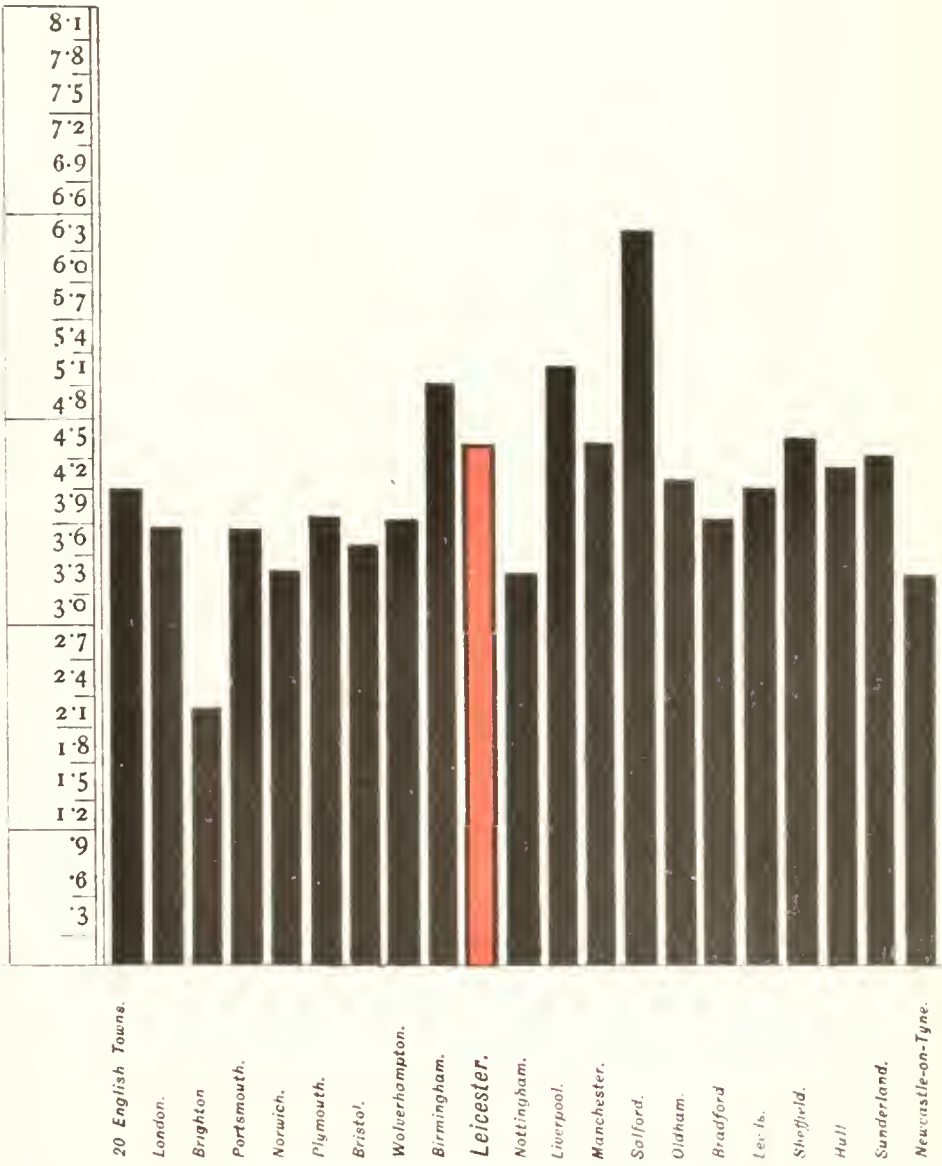
*Showing the Average Zymotic Mortality in the five years, 1870-74. 18 Towns.*

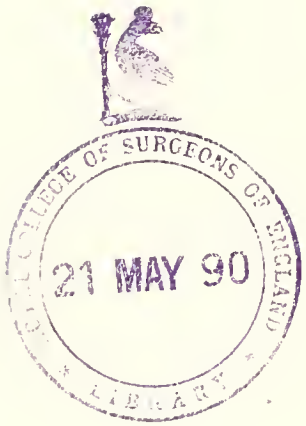



21 MAY 90

# PLATE 2.

*Showing the Average Zymotic Mortality in the four years, 1875-78. 20 Towns.*

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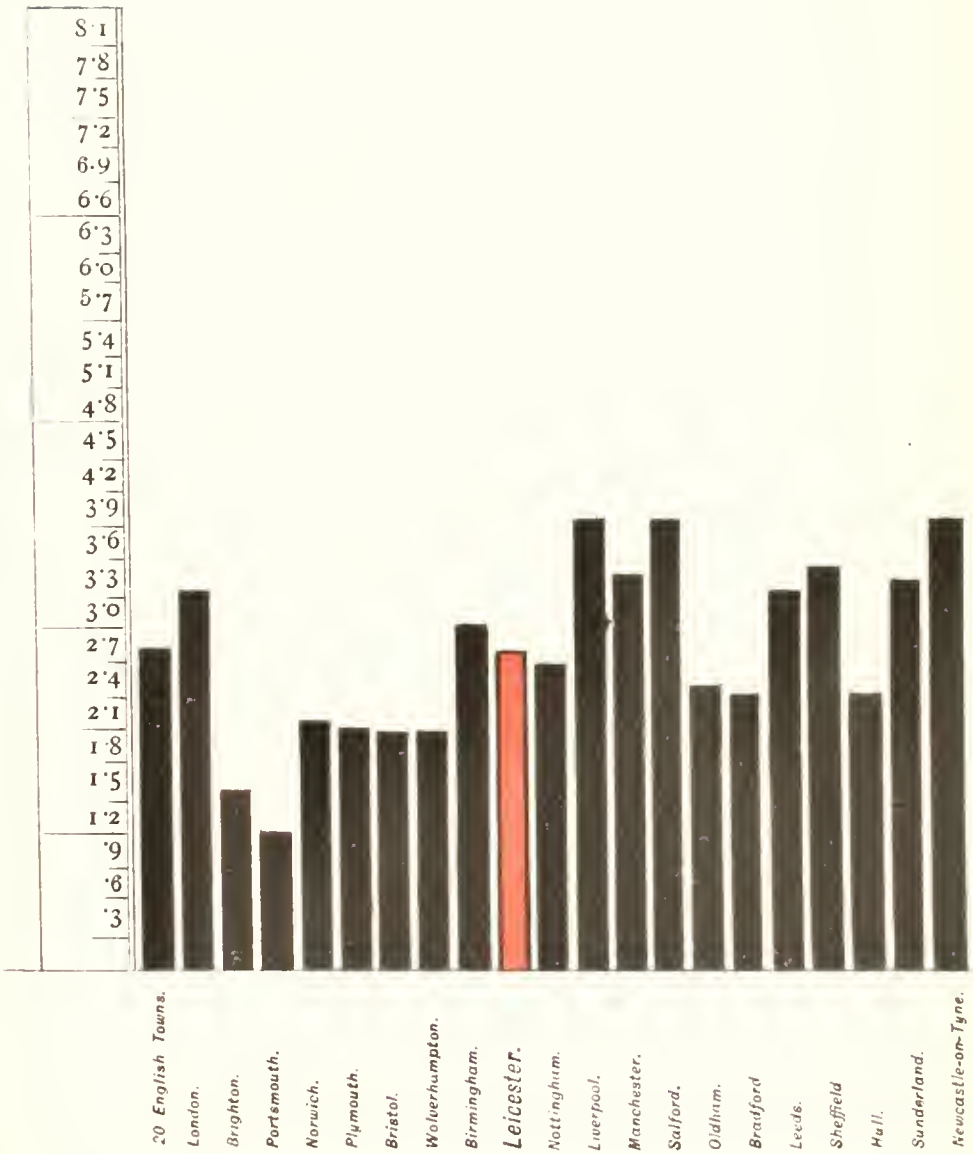
# PLATE 3.

*Showing the Zymotic Mortality for the year* 1879.

*20 Towns.*



Diseases. The Committee, in considering the Report, thought it desirable that powers similar to those of Bolton should, if possible, be obtained from Parliament for this town, and determined, in their next Improvement Bill, to include clauses asking for a similar authority to be conferred. In the Leicester Corporation Improvement Bill (1879) clauses seeking for such powers were accordingly introduced. This evoked a strong opposition on the part of the medical profession of the town, and they petitioned Parliament against the clauses, the chief objections raised being that the provisions "imposed upon them new and onerous and unnecessary obligations;" that these obligations were "inquisitorial in character, uncalled for, and likely to lead to endless mischief and complication." On May 23, 1879, after hearing the evidence for and against the granting of the powers sought for, the Parliamentary Committee, after a short deliberation, considered the preamble of the Bill as proved, and the Act came into operation on September 13th.

Scarlet Fever was at that time epidemic in the town and, from the greatly increased information obtained under the newly-acquired provisions respecting cases suffering from the disease, conditions were everywhere found to exist among the classes affected which favoured, to an eminent degree, the spread of the malady. Children from infected houses were frequently sent to school; mothers of families free from the disease were often found visiting the infected houses of their neighbours; hosiery goods were being made up by mothers as they nursed children suffering from malignant forms of Scarlet Fever, and in scores of families no attempt at all had been made to isolate the sick from the healthy.

The Inspectors, on visiting the reported cases, succeeded in removing to the Hospital a much greater number of cases than hitherto, and where the disease was found to exist the people were cautioned against sending their children to school; the School Board Authorities were also apprised of the danger, and requested to exercise greater caution in admitting children from houses where sickness existed; in short, wherever circumstances were found to favour the spread of the malady immediate action was at once taken either to correct, or limit as far as possible, their influence. A most important result of these proceedings was that the people themselves became

more alive to the dangers attendant upon the complaint, and in consequence were led to adopt greater precautionary measures. Judging from the records of previous epidemics of Scarlet Fever, a decided limitation in the fatality from the disease was, after a time, observable, notwithstanding that it had gained an epidemic prevalence before the provisions of the Act came into operation. Abundant proof of the reduction brought about in the mortality will be found under Scarlet Fever, where a comparison is made of the weekly deaths during the epidemics of 1870, 1875, and 1879.

With respect to the obligations being "likely to lead to endless mischief and complications," the reply is simple and lies in the fact that, from the time when the provisions of the Act first came into operation up to the present moment of writing (which embraces a period of over six months) not a single complaint has reached the ears of the Sanitary Authority from either the general public or the medical men themselves of any mischievous result or complication having arisen from their compliance with the newly-imposed duties. Up to the 31st December, 1879, the cases reported on were, of Scarlet Fever, 496; Typhoid Fever, 56; Erysipelas, 125; Diphtheria, 24. These cases existed among all classes of the population and, if any just ground for complaint had appeared, I feel satisfied that the Authorities would soon have been communicated with. I think that the fact of no friction having occurred in the working of the clauses in Leicester undoubtedly shows that the objections and fears at first entertained in regard to the probable issues of compulsory registration of disease were alike groundless and illusory. This being so the question naturally arises whether or not the medical attendant or the householder should be required to give information. I have watched with the deepest interest the working of the powers in the town from the commencement, and my opinion is that *the medical man and the householder should be held responsible for the reporting of the cases.* Where such a glaring lack of precaution as already described existed among the people, favouring, as it did, the spread of contagion of any kind, it will, I think, be admitted that the obligations imposed upon the medical faculty in Leicester for the compulsory registration of infectious diseases occuring therein were neither "unnecessary" nor yet "uncalled for." I do not deny that the obligations are new, and,

to a limited extent, inquisitorial in character; but upon these grounds objections to them cannot fairly be raised. During the last twenty years the mind of the profession has been much enlightened with respect to the intimate nature and mode of spread of these infective diseases, numerous fresh channels for their transmission have also been brought to light, while the risks of infection among children have been considerably multiplied since education was rendered compulsory. Under such altered circumstances an evolution of fresh obligations, together with a slight change in those already in force, should not meet with opposition from medical men, so long as it can be shown that, by their fulfilment of the new duties, medical interests are in no way encroached upon, while numbers of human lives may be annually saved and much bodily suffering averted.

## FEVER HOSPITAL.

During last year 269 patients were admitted into the Hospital, viz., 247 cases of Scarlet Fever and 22 of Erysipelas. The admissions in 1878 were in all 78, viz., 51 of Scarlet Fever, 8 of Small Pox, and 19 of Erysipelas. The great increase observed in the admissions last year may be partly accepted as an indication that the people are beginning to recognize more fully the advantages offered by the institution. Of the total 269 cases, 18 ended fatally, and were all confined to the Scarlet Fever wards. This mortality was equal to 6·7 per cent., a rate which bears strong testimony to the unflagging attention bestowed by the matron and nurses upon the patients entrusted to their care. For comparative information a summary of the cases admitted during the year is given below, and it is highly satisfactory to note the marked augmentation in the number of admissions during September and following months, a period concurrent with the application of the powers for the compulsory notification of infectious diseases. In order to show the localities where Scarlet Fever was most prevalent, I have included in the summary the names of the streets where the patients resided. A careful revision of these will afford convincing proof to those acquainted with the town that the exportation of so many cases from such districts must have exercised a powerful restraining influence over the subsequent spread of this highly infectious malady.

## Summary of Cases of Infectious Diseases admitted into the Borough Hospital during 1879.

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 1 | 53 | Jan. 7 | Ruding Street | Erysipelas | June 16 | |
| 2 | 7 | „ 7 | Porter Street | Scarlet Fever | Feb. 15 | |
| 3 | 5 | „ 7 | „ „ | „ „ | „ 15 | |
| 4 | 63 | „ 10 | | Erysipelas | March 1 | |
| 5 | 19 | „ 16 | Ruding Street | „ | Feb. 13 | |
| 6 | 18 | „ 16 | Noble Street | Scarlet Fever | „ 13 | |
| 7 | 4 | „ 22 | Leamington Street | „ „ | June 8 | |
| 8 | 8 | „ 27 | Portor Street | „ „ | Feb. 12 | |
| 9 | 4 | „ 27 | „ „ | „ „ | „ 12 | |
| 10 | 83 | Feb. 5 | Union Workhouse | Erysipelas | „ 15 | |
| 11 | 28 | „ 7 | Lutterworth | Scarlatina | Mar. 12 | |
| 12 | 43 | „ 8 | Framland Street | Erysipelas | „ 13 | |
| 13 | 15 | „ 18 | Infirmary | Scarlatina | „ 15 | |
| 14 | 10 | „ 19 | Gresham Street | Scarlet Fever | „ 14 | |
| 15 | 8 | „ 19 | „ „ | „ „ | „ 16 | |
| 16 | 6 | „ 19 | „ „ | „ „ | „ 16 | |
| 17 | 3 | „ 19 | „ „ | „ „ | „ 16 | |
| 18 | 1 | „ 19 | „ „ | „ „ | „ 14 | |
| 19 | 14 | „ 22 | Conduit Street | „ „ | „ 14 | |
| 20 | 83 | March 3 | Union Workhouse | Erysipelas | „ 19 | |
| 21 | 5 | „ 19 | John Street | Scarlet Fever | May 2 | |
| 22 | 17 | „ 19 | New Street | „ „ | April 29 | |
| 23 | 43 | „ 22 | Conduit Field Cotts. | Erysipelas | June 23 | |
| 24 | 75 | May 3 | The Union | „ | „ 30 | |
| 25 | 18 | „ 13 | „ „ | Scarlatina | „ 23 | |
| 26 | 2 | „ 13 | Humberstone Gate | „ | „ 18 | |
| 27 | 7 | June 3 | East Street | „ | July 19 | |
| 28 | 8 | „ 7 | Ash Street | „ | „ 19 | |
| 29 | 6 | „ 7 | All Saints Road | „ | „ 19 | |
| 30 | 8 | „ | Farnham Street | „ | May 17 | |
| 31 | 35 | „ 12 | Upp. Charnwood St. | Scarlet Fever | June 28 | |
| 32 | 8 | „ 12 | All Saints Road | „ „ | July 19 | |
| 33 | 28 | „ 14 | Newby Street | „ „ | „ 7 | |
| 34 | 2 | „ 14 | „ „ | „ „ | „ 25 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 35 | 6 | June 18 | Free Lane | Scarlet Fever | Aug. 2 | |
| 36 | | „ 23 | Newby Street | „ „ | July 7 | Malignant. |
| 37 | 4 | „ 23 | „ „ | „ „ | „ 7 | |
| 38 | 58 | „ 24 | The Union House | Erysipelas | Aug. 18 | |
| 39 | 70 | „ 27 | „ „ | „ | Sept. 15 | |
| 40 | 6 | „ 28 | Northumberland St. | Scarlet Fever | Aug. 9 | Severe. |
| 41 | 6 | „ 29 | All Saints Road | „ „ | „ 9 | Malignant. |
| 42 | 4 | July 1 | Northumberland St. | „ „ | „ 9 | |
| 43 | 12 | „ 1 | William Street | Erysipelas | July 12 | |
| 44 | 6 | „ 2 | Abbey Street | Scarlet Fever | Aug. 9 | |
| 45 | 3 | „ 3 | Pasture Lane | Scarlatina | „ 9 | |
| 46 | 18 | „ 4 | Newby Street | Scarlet Fever | July 25 | |
| 47 | 6 | „ 9 | Friars Causeway | „ „ | Aug. 23 | Severe. |
| 48 | 5 | „ 16 | Newby Street | „ „ | Sept. 1 | Malignant. |
| 49 | 14 | „ 19 | Newby Street | „ „ | „ 30 | |
| 50 | 8 | „ 21 | Redcross Street | „ „ | „ 22 | |
| 51 | 4 | „ 23 | „ „ | „ „ | Aug. 17 | Died. Malignant. |
| 52 | 56 | „ 23 | Guthlaxton Street | Erysipelas | July 31 | |
| 53 | 2 | „ 24 | East Street | Scarlet Fever | Sept. 3 | Died. Malignant. |
| 54 | 10 | „ 29 | Marble Street | Scarlatina | „ 22 | |
| 55 | 5 | „ 31 | York Street | „ | Aug. 13 | Very severe. |
| 56 | 3 | „ 31 | „ „ | „ | „ 13 | |
| 57 | 3 | „ 31 | South Albion Street | „ | „ 13 | |
| 58 | 10 | Aug. 1 | East Street | „ | Sept. 20 | |
| 59 | 6 | „ 3 | Gray Street | „ | Aug. 13 | Very severe. |
| 60 | 2 | „ 4 | Wigston Street | „ | „ 24 | Died from Convulsions. Malignant. |
| 61 | 8 | „ 5 | East Street | „ | Sept. 20 | |
| 62 | 43 | „ 5 | George Street | Erysipelas | Oct. 14 | |
| 63 | 4 | „ 8 | Goswell Street | Scarlatina | Aug. 23 | Died. Malignant. Bronchitis as complication. |
| 64 | 4 | „ 11 | Newby Street | „ | Sept. 22 | |
| 65 | 8 | „ 11 | Northumberland St. | „ | Oct. 4 | |
| 66 | 4 | „ 11 | Lower Brown Street | „ | Sept. 22 | |
| 67 | 2 | „ 12 | Marble Street | „ | „ 22 | |
| 68 | 5 | „ 13 | Metcalf Street | „ | „ 13 | Malignant. |
| 69 | 1 | „ 13 | „ „ | „ | „ 27 | |
| 70 | 6 | „ 13 | Orchard Row | „ | Aug. 29 | Severe. Hæmaturia. |
| 71 | 3 | „ 17 | Gray Street | „ | „ 21 | Died. Malignant. |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 72 | 6 | Aug. 17 | Gray Street | Scarlet Fever | Sept. 27 | |
| 73 | 8 | „ 18 | Argyle Street | Scarlatina | Aug. 23 | Died. Malignant case. Catamose from admission. |
| 74 | 14 | „ 21 | Chatham Street | „ | Oct. 4 | |
| 75 | 8 | „ 21 | „ „ | „ | „ 4 | |
| 76 | 5 | „ 21 | „ „ | „ | „ 4 | |
| 77 | 6 | „ 21 | Parliament Street | „ | „ 4 | |
| 78 | 7 | „ 21 | Sauvey Gate | „ | „ 4 | Malignant. |
| 79 | 48 | „ 23 | Brierley Street | Erysipelas | „ 7 | |
| 80 | 2 | „ 23 | Gray Street | Scarlet Fever | Oct. 14 | Very severe. |
| 81 | 5 | „ 24 | East Street | Scarlatina | „ 11 | |
| 82 | 2 | „ 28 | Friars Causeway | „ | „ 11 | |
| 83 | 8 | „ 28 | „ „ | „ | „ 11 | |
| 84 | 3 | „ 30 | Blue Boar Lane | „ | „ 25 | Malignant. |
| 85 | 6 | „ 31 | Norton Square | „ | „ 11 | |
| 86 | 4 | Sept. 4 | Friars Causeway | „ | „ 11 | |
| 87 | 4 | „ 4 | Bethel Court | „ | „ 11 | |
| 88 | 2 | „ 6 | Peel Street | „ | Sept. 12 | |
| 89 | 14 | „ 6 | Ash Street | „ | Oct. 14 | |
| 90 | 6 | „ 6 | Friars Causeway | Scarlet Fever | Sept. 27 | Died. Malignant. |
| 91 | 10 | „ 8 | Filbert Street | Scarlatina | Oct. 27 | |
| 92 | 6 | „ 8 | Kent Street | „ | „ 18 | |
| 93 | 3 | „ 9 | Court B, Oxford St. | „ | Sept. 11 | Died. Capillary Bronchitis. |
| 94 | 4 | „ 11 | Old Mill Lane | „ | Oct. 25 | |
| 95 | 2 | „ 12 | South Albion Street | „ | „ 25 | Malignant. |
| 96 | 10 | „ 12 | Mowbray Street | „ | „ 25 | |
| 97 | 6 | „ 12 | Oxford Street | „ | „ 25 | Malignant. |
| 98 | 7 | „ 13 | Buckingham Street | „ | „ 25 | |
| 99 | 11 | „ 14 | East Bond Street | „ | Nov. 1 | |
| 100 | 10 | „ 14 | Norton Square | „ | Oct. 25 | Severe. |
| 101 | 3 | „ 15 | Argyle Street | „ | Sept. 22 | Died. Malignant. |
| 102 | 25 | „ 16 | Kent Street | Scarlet Fever | Oct. 8 | |
| 103 | 3 | „ 16 | „ „ | „ „ | „ 8 | |
| 104 | 3 | „ 16 | East Bond Street | „ „ | „ 25 | |
| 105 | 8 | „ 16 | Wheatley Yard | „ „ | Nov. 1 | Very severe. |
| 106 | 27 | „ 16 | Peel Street | „ „ | Sept. 23 | |
| 107 | 4 | „ 18 | Filbert Street | „ „ | „ 1 | Malignant. |
| 108 | 4 | „ 18 | Northampton Street | „ „ | „ 25 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 109 | 3 | Sept. 18 | Filbert Street | Scarlet Fever | Sept. 1 | |
| 110 | 3 | „ 18 | Buckingham Street | „ „ | „ 1 | Severe. |
| 111 | 3 | „ 19 | Occupation Road | „ „ | „ 21 | Died. Malignant. |
| 112 | 25 | „ 20 | Melville Street | „ „ | Oct. 11 | |
| 113 | 1 | „ 20 | Melville Street | „ „ | „ 11 | Malignant. |
| 114 | 10 | „ 21 | Buckingham Street | „ „ | Nov. 1 | |
| 115 | 7 | „ 24 | Knighton Street | „ „ | Oct. 28 | Malignant. Hæmaturia. |
| 116 | 26 | „ 24 | Peel Street | „ „ | Sept. 28 | |
| 117 | 48 | „ 24 | Brierley Street | Erysipelas | Oct. 7 | |
| 118 | 9 | „ 24 | Knighton Street | Scarlet Fever | Sept. 25 | Died. Malignant. |
| 119 | 7 | „ 24 | „ „ | „ „ | Dec. 8 | |
| 120 | 6 | „ 24 | „ „ | „ „ | Nov. 7 | Malignant. |
| 121 | 25 | „ 25 | Gresham Street | „ „ | „ 1 | |
| 122 | 3 | „ 25 | „ „ | „ „ | „ 1 | Malignant. |
| 123 | 5 | „ 25 | „ „ | „ „ | „ 1 | |
| 124 | 3 | „ 25 | „ „ | „ „ | „ 1 | |
| 125 | 17 | „ 26 | Borough Hospital | „ „ | Oct. 11 | |
| 126 | 6 | „ 27 | Gresham Street | „ „ | Nov. 1 | |
| 127 | 13 | „ 27 | „ „ | „ „ | „ 1 | |
| 128 | 1½ | „ 27 | „ „ | „ „ | „ 1 | |
| 129 | 28 | „ 27 | „ „ | „ „ | „ 1 | |
| 130 | 4 | Oct. 1 | Preston Street | „ „ | „ 27 | |
| 131 | 4 | „ 1 | Ash Street | „ „ | „ 15 | Malignant. |
| 132 | 7 | „ 1 | Green Lane | „ „ | „ 15 | Malignant. |
| 133 | 1½ | „ 1 | Preston Street | „ „ | Oct. 27 | |
| 134 | 9 | „ 2 | Rutland Street | „ „ | Nov. 15 | Malignant. |
| 135 | 3 | „ 4 | Nelson Square | „ „ | „ 15 | |
| 136 | 15 | „ 4 | W. Road, Freemen's Common | „ „ | „ 22 | |
| 137 | 5 | „ 4 | Craven Street | „ „ | „ 15 | |
| 138 | 6 | „ 6 | Court A, Charles St. | „ „ | „ 22 | Malignant. |
| 139 | 16 | „ 6 | Clarendon Street | „ „ | „ 15 | Very severe. |
| 140 | 7 | „ 6 | „ „ | „ „ | „ 15 | |
| 141 | 5 | „ 6 | Wellington Street | „ „ | „ 22 | Severe. |
| 142 | 8 | „ 6 | Court A, Charles St. | „ „ | Oct. 7 | Died. Malignant. Eruption very dark coloured. |
| 143 | 27 | „ 7 | Birstall Street | „ „ | Nov. 15 | |
| 144 | 2 | „ 7 | „ „ | „ „ | „ 15 | Malignant. |
| 145 | 6 | „ 8 | Wood Street | „ „ | „ 22 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 146 | 5 | Oct. 10 | Mowbray Street | Scarlet Fever | Nov. 8 | |
| 147 | 7 | „ 10 | „ „ | „ „ | „ 22 | Malignant. |
| 148 | 6 | „ 10 | Mansfield Street | „ „ | „ 22 | |
| 149 | 6 | Oct. 13 | Leo Street | „ „ | „ 22 | |
| 150 | 6 | „ 14 | Knighton Street | „ „ | „ 22 | |
| 151 | 8 | „ 14 | Duke Street | „ „ | „ 22 | |
| 152 | 8 | „ 15 | Grange Lane | „ „ | „ 28 | Malignant. |
| 153 | 3 | „ 16 | Crown Street | „ „ | „ 4 | This patient was also suffering upon admission with Whooping Cough |
| 154 | 2 | „ 16 | Knighton Street | „ „ | „ 28 | |
| 155 | 4 | „ 17 | Cranbourne Street | „ „ | Dec. 8 | Malignant. |
| 156 | 5 | „ 17 | Grange Lane | „ „ | „ 6 | Very severe. |
| 157 | 1 | „ 17 | Cranbourne Street | „ „ | Nov. 15 | |
| 158 | 24 | „ 17 | „ „ | „ „ | „ 15 | |
| 159 | 6 | „ 17 | Birstall Street | „ „ | Dec. 2 | Malignant. |
| 160 | 5 | „ 18 | Grange Lane | „ „ | „ 2 | |
| 161 | 7 | „ 18 | Oxford Terrace | „ „ | Nov. 22 | |
| 162 | 5 | „ 20 | Napier Terrace | „ „ | Dec. 13 | |
| 163 | 4 | „ 20 | Mowbray Street | „ „ | Nov. 22 | |
| 164 | 2 | „ 20 | Curzon Street | „ „ | „ 30 | Malignant. |
| 165 | 3½ | „ 20 | Oxford Street | „ „ | „ 30 | |
| 166 | 3 | „ 22 | East Street | „ „ | Dec. 3 | |
| 167 | 9 | „ 22 | Gartree Street | „ „ | „ 6 | Very severe. |
| 168 | 2 | „ 23 | Court C, Belgrave Gt | „ „ | „ 8 | |
| 169 | 4 | „ 23 | Gresham Street | „ „ | „ 6 | Malignant. |
| 170 | 8 | „ 25 | Thornton Lane | „ „ | „ 6 | Died. Convulsions and malignant type. Eruption dark purple. |
| 171 | 2 | „ 25 | Norton Street | „ „ | Oct. 26 | |
| 172 | 5 | „ 26 | Buckingham Street | „ „ | „ 6 | |
| 173 | 2 | „ 27 | Gresham Street | „ „ | „ 6 | |
| 174 | 2 | „ 27 | Curzon Street | „ „ | Nov. 29 | |
| 175 | 5 | „ 27 | Atkin Street | „ „ | Dec. 13 | |
| 176 | 6 | „ 29 | Knighton Street | „ „ | „ 24 | Malignant case. |
| 177 | 53 | „ 29 | Borough Hospital | „ „ | Nov. 12 | A Cleaner in the Hospital. |
| 178 | 5 | „ 29 | Grange Lane | „ „ | „ 25 | |
| 179 | 6 | „ 30 | Harrington Street | „ „ | Dec. 13 | |
| 180 | 4 | „ 30 | „ „ | „ „ | „ 13 | |
| 181 | 9 | „ 30 | Oxford Terrace | „ „ | „ 13 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 182 | 1¾ | Oct. 31 | Birstall Street | Scarlet Fever | Nov. 10 | Died. Bronchitis. |
| 183 | 3 | Nov. 1 | Humberstone Gate | „ „ | „ 13 | |
| 184 | 63 | „ 4 | Court C, Humberstone Gate | Erysipelas | „ 22 | |
| 185 | 15 | „ 4 | Lower Willow St. | Scarlet Fever | Dec. 16 | |
| 186 | 5 | „ 4 | Lichfield Street | „ „ | „ 16 | Very severe. |
| 187 | 10 | „ 5 | Occupation Road | „ „ | „ 20 | |
| 188 | 6 | „ 6 | Grape Street | „ „ | „ 20 | |
| 189 | 5 | „ 6 | Grange Lane | „ „ | „ 20 | |
| 190 | 4 | „ 7 | Occupation Road | „ „ | „ 10 | |
| 191 | 11 | „ 7 | Palmerston Street | Erysipelas | „ 15 | |
| 192 | 3 | „ 8 | Occupation Road | Scarlet Fever | „ 20 | |
| 193 | 8 | „ 8 | „ „ | „ „ | „ 20 | |
| 194 | 1¾ | „ 9 | Birstall Street | „ „ | „ 13 | |
| 195 | 9 | „ 10 | Clarendon Street | „ „ | Jan. 10 | Malignant case. |
| 196 | 8 | „ 11 | Gray Street | „ „ | Dec. 13 | Malignant. |
| 197 | 3 | „ 11 | „ „ | „ „ | „ 13 | |
| 198 | 33 | „ 12 | Lichfield Street | „ „ | „ 22 | |
| 199 | 2 | „ 12 | Mowbray Street | „ „ | „ 24 | Severe. |
| 200 | 4 | „ 12 | Court E, Britannia Street | „ „ | „ 20 | |
| 201 | 2 | „ 12 | Court A, Stamford St | „ „ | „ 10 | |
| 202 | 3 | „ 12 | Samuel Street | „ „ | „ 23 | |
| 203 | 13 | „ 13 | Cedar Road | „ „ | „ 27 | |
| 204 | 7 | „ 13 | „ „ | „ „ | „ 27 | |
| 205 | 11 | „ 13 | „ „ | „ „ | „ 27 | |
| 206 | 3 | „ 13 | Filbert Street | „ „ | Jan. 3 | Malignant case. |
| 207 | 3 | „ 15 | Charnwood Street | „ „ | Dec. 29 | |
| 208 | 5 | „ 16 | Curzon Street | „ „ | „ 2 | Died. Malignant. Eruption black in colour. |
| 209 | 4 | „ 16 | Court C, Oxford St. | „ „ | „ 8 | Died from Convulsions |
| 210 | 7 | „ 19 | Thornton Lane | „ „ | Jan. 3 | |
| 211 | 4 | „ 19 | Upper Charnwood St | „ „ | Dec. 31 | |
| 212 | 15 | „ 20 | Luke Street | „ „ | „ 16 | |
| 213 | 49 | „ 20 | Wheat Street | Erysipelas | „ 22 | |
| 214 | 5 | „ 20 | Birstall Street | Scarlet Fever | Jan. 4 | |
| 215 | 11 | „ 21 | Silver Street | „ „ | Dec. 27 | |
| 216 | 16 | „ 21 | Humberstone Gate | „ „ | Jan. 10 | Very severe. |
| 217 | 2 | „ 21 | „ „ | „ „ | Dec. 31 | |
| 218 | 15 | „ 21 | Britannia Street | „ „ | „ 13 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 219 | 7 | Nov. 22 | Gartree Street | Scarlet Fever | Dec. 6 | |
| 220 | 5 | „ 22 | „ „ | „ „ | „ 6 | |
| 221 | 2 | „ 22 | Charnwood Street | „ „ | „ 29 | |
| 222 | 2 | „ 23 | Thornton Lane | „ „ | Jan. 3 | Very severe. |
| 223 | 5 | „ 23 | „ „ | „ „ | „ 3 | |
| 224 | 9 | „ 25 | King Richard's Rd. | „ „ | „ 3 | |
| 225 | 15 | „ 25 | Watling Street | „ „ | „ 3 | |
| 226 | 3 | „ 26 | Silver Street | „ „ | „ 10 | Malignant. |
| 227 | 3 | „ 26 | Birstall Street | „ „ | „ 5 | |
| 228 | 9 | „ 26 | Welland Street | Erysipelas | Dec. 22 | |
| 229 | 25 | „ 28 | Curzon Street | Scarlet Fever | „ 27 | |
| 230 | 9 | „ 28 | Curzon Street | „ „ | „ 27 | |
| 231 | 5 | „ 28 | Brown Street | „ „ | Jan. 3 | |
| 232 | 12 | „ 29 | Melton Street | „ „ | „ 3 | Malignant case. |
| 233 | 2 | „ 29 | Mowbray Street | „ „ | „ 10 | |
| 234 | 5 | „ 29 | Ashmore Street | „ „ | „ 10 | |
| 235 | 7 | „ 29 | Ashmore Street | „ „ | Jan. 10 | |
| 236 | 9 | „ 29 | Gray Street | „ „ | „ 10 | |
| 237 | 4 | Dec. 1 | Silver Street | „ „ | Dec. 6 | Malignant. Died in Convulsions. |
| 238 | 6 | „ 2 | Sanvey Gate | „ „ | Jan. 10 | |
| 239 | 4 | „ 2 | West Goscote Street | „ „ | „ 10 | |
| 240 | 6 | „ 2 | Navigation Street | „ „ | „ 10 | |
| 241 | 6 | „ 2 | Melton Street | „ „ | „ 17 | |
| 242 | 15 | „ 2 | Market Place | „ „ | „ 10 | |
| 243 | 1 | „ 3 | Parliament Street | „ „ | „ 10 | |
| 244 | 6 | „ 4 | Wellington Street | „ „ | „ 10 | |
| 245 | 2 | „ 4 | Park Street | „ „ | „ 10 | |
| 246 | 8 | „ 5 | Oxford Street | „ „ | „ 17 | Very severe. |
| 247 | 2 | „ 6 | Albion Hill | „ „ | „ 10 | |
| 248 | 5 | „ 8 | Park Street | „ „ | „ 21 | |
| 249 | 4 | „ 9 | Wellington Street | „ „ | „ 21 | |
| 250 | 4 | „ 13 | Wheat Street | „ „ | „ 21 | |
| 251 | 7 | „ 13 | Court C, Belgrave Gt | „ „ | „ 21 | |
| 252 | 12 | „ 15 | Parliament Street | „ „ | „ 24 | |
| 253 | 1 | „ 15 | Coach & Horses Yd. | „ „ | „ 10 | |
| 254 | 5 | „ 15 | Thornton Lane | „ „ | „ 21 | |
| 255 | 9 | „ 16 | Dorset Street | „ „ | „ 3 | |

| No. | Age. | Date of Admissn. | Residence. | Disease. | Date of Discharge | Observations. |
|---|---|---|---|---|---|---|
| 256 | 6 | Dec. 18 | Cardigan Street | Scarlet Fever | Jan. 21 | |
| 257 | 9 | „ 21 | Thornton Lane | „ „ | „ 22 | |
| 258 | 4 | „ 21 | Hunnberstone Gate | „ „ | „ 21 | Malignant. |
| 259 | 68 | „ 22 | Union | Erysipelas | | |
| 260 | 2 | „ 22 | Charlotte Street | Scarlet Fever | Dec. 25 | Died. Convulsions. Eruption livid. |
| 261 | 27 | „ 22 | Devonshire Street | „ „ | Jan. 24 | |
| 262 | 3 | „ 23 | Kate Street | „ „ | „ 24 | Severe. |
| 263 | 1¾ | „ 26 | Walnut Street | „ „ | „ 28 | |
| 264 | 3 | „ 26 | „ „ | „ „ | „ 28 | |
| 265 | 7 | „ 28 | Stoughton Street | „ „ | „ 2 | Died. Malignant. Eruption livid. |
| 266 | 5 | „ 30 | Birstall Street | Scarlatina | Feb. 4 | |
| 267 | 42 | „ 30 | Alexandra Street | Erysipelas | „ 13 | |
| 268 | 16 | „ 31 | George Street | „ | Jan. 19 | |
| 269 | 12 | „ 31 | Halford Street | Scarlet Fever | „ 24 | |

## SCARLET FEVER.

Scarlet Fever was the most fatal Zymotic disease last year, the deaths from it being 105* against 12 in 1878, and 88 the annual average in the nine years 1870–'78. Of the 105 fatal cases reported in 1879, 5 occurred in the first quarter of the year, 7 in the second, 36 in the third, and no less than 57 in the fourth, shewing that the incidence of the disease only assumed an epidemic proportion in the latter half of the year. The annual mortality was equal to 0·836 per 1000, against 0·099 in 1878. The average annual rate from Scarlet Fever in the nine preceding years 1870–'78 was 0·84 per 1000, and ranged from 2·836 and 1·57 in 1870 and 1875, to 0·05 and 0·058 in 1872 and 1873 respectively.

Last year the disease became epidemic in prevalence towards the end of July and beginning of August, and, with the exception of an occasional note from some of the medical men, the only means whereby the Health Authorities could at that time gain information of the localities where Scarlet Fever existed were the Death Register

* This total includes 18 deaths in the Borough Fever Hospital.

and the weekly returns of sickness sent in to the Board of Guardians by the medical officers of the several parishes. The information gleaned from such sources was scanty, and the action taken by the Committee for suppressing the disease was therefore limited, and proved, as in former years, of no effect in arresting its spread for, from the greatly increased information received on September 13 (when the newly-acquired powers for compulsory registration came into force), cases of the disease had become thickly scattered over considerable areas of the Borough.

Under such circumstances a complete arrest of the epidemic was hardly to be expected, but evidence is not wanting to shew that in many instances a check was given to the spread of the disorder by the measures adopted when the sources of information became more extended. Wherever Scarlet Fever was reported as existing, the Sanitary Inspectors visited the dwellings, and, by persuasion, succeeded largely in obtaining the parents' consent to the removal of their suffering children to the Fever Hospital. Failing in this, they gave information to the occupiers of the other houses in the yard* of the near existence of the disease, and advised them to hold themselves aloof, and more especially to keep their children away from the infected house; the inmates of the latter were also cautioned against visiting their neighbours. By the instructions thus given the disease, in many of the yards, confined itself to the infected house, whereas in the epidemic of 1875 it was ascertained that Scarlet Fever had appeared in almost all the houses in the same yards.

Again, where children from infected houses were found to be attending school, the managers were apprised of the fact and the parents were cautioned. It is but fair to assume that the "weeding out" of such cases from the various schools was productive of most beneficial results, for it was found that the instances met with of such attendances became much less numerous after the powers for compulsory registration had been but a short time in operation. The greatest ignorance was found to prevail among the people with respect to the dangers and extreme infectiveness of the disease. A description of a few of the conditions favouring the spread of infec-

* In Leicester every 4 or 6 contiguous houses of the artisan class open, as a rule, into a common yard.

tion, found by the Inspectors on their first visiting the reported premises, will show how imperative it was for the Health Authorities of this town to possess powers for the compulsory notification of such cases and, since it is highly probable that conditions, much akin to those detailed below, prevail in other manufacturing towns, a perusal of them should suggest to their Health advisers the urgent desirability of acquiring powers similar to those in force at Leicester, which alone will enable them to grapple successfully with circumstances so pregnant with evil and subversive of their efforts in other directions.

| | | |
|---|---|---|
| Sept. 17—Birstall Street | ... | The child lying in the living room in which the mother was at work machining shoes; a neighbour was also in the same room with a child in her arms. |
| Sept. 20—Colton Street | ... | The patient and five other children sleeping in the same room. |
| Sept. 20—Melville Street | ... | The child lying on a couch in the living room; the mother sewing gloves and another woman finishing coats all in the same room. |
| Oct. 1—Ash Street ... | ... | The mother dressmaking in the same room with the case, and there were two more children in the house. |
| Oct. 3—Cobden Street | ... | There were two cases in this house, both being in the same room with two other children who were not ill. |
| Oct. 3—Nelson Square | ... | There are only two rooms in this house and three more children in the family, all of whom sleep in the same room. |
| Oct 9—Argyle Street | ... | The mother was seen to take the child whilst suffering from Scarlet Fever into the provision shop adjoining. There are more children in the house. |

| | | |
|---|---|---|
| Oct. 14—Sherrard Street | ... | The case in the living room and three more children in the family, two of whom were attending Charnwood Street Board School; also a neighbour in the house with her baby. |
| Oct. 20—Deacon Street | ... | The child nursed by her grandmother who lives next door where are five children, two of whom attend Board Schools. The mother works at a factory. |
| Oct. 21—Grange Lane ... | ... | Three cases in this house; the mother working at hosiery, another child attending the Board Schools, and one other, who was suffering from Scarlet Fever, out for a walk. |
| Oct. 22—Brunswick Street | ... | The case in the front bed-room; the mother attends to the child and also waits in a provision shop connected with the house; three more children in the family. |
| Oct. 22—Curzon Street | ... | The child was sitting on his sister's knee (a girl of twelve) in the front room down stairs: three more children in the family, and milk sold in the house. |
| Oct. 30—Birstall Street | ... | Two more children in family, one of whom had attended school all the time fever was in the house. |

It may safely be presumed that the numerous cases removed to the Hospital, the instructions given to and daily carried out by the Inspectors with the view of rectifying, as far as circumstances would permit, the miserably defective arrangements so often met with for nursing the sick at their own homes, and the various other preventive measures adopted by these Officers, exercised a decided effect in

stemming the spread of the disease. The deaths recorded from the Scarlatinal epidemic of last year, when compared with the fatality caused by similar visitations in 1870 and 1875, afford most substantive evidence of the satisfactory results that followed the more extended efforts of the Health Authorities, when once they gained a wider information of the foci of the disease. The returns of the deaths from the epidemic visitations in 1870, 1875, and 1879 prove all the more useful for comparative purposes since the disease began to assume an epidemic form at the same period in each year, viz., about the twenty-seventh week.

The deaths and ages at death registered from Scarlet Fever in the years 1870, 1875, and 1879, were as follow:

| Ages at Death. | Under 1 year. | 1 to 2. | 2 to 3. | 3 to 4. | 4 to 5. | 5 to 10. | 10 and upwards. | Total. |
|---|---|---|---|---|---|---|---|---|
| 1870 ... | 15 ... | 44 ... | 65 ... | 42 ... | 28 ... | 57 ... | 12 ... | 263 |
| 1875 ... | 12 ... | 40 ... | 38 ... | 38 ... | 22 ... | 33 ... | 3 ... | *186 |
| 1879 ... | 8 ... | 19 ... | 18 ... | 16 ... | 16 ... | 26 ... | 2 ... | *105 |

To form a just estimate of the satisfactory decline here observed in the deaths during 1879, due regard must be given to the progressive increase in the population of the town. In 1870, the population numbered 92,729; by 1875, this number had risen to 109,830; and in 1879, it stood at 125,622.

From the following statement in which I have tabulated the deaths recorded in the weekly periods of each of the three epidemics above referred to, together with the weekly admissions into the Hospital for the corresponding weeks of 1875 and 1879, the course and rate of progress of each visitation may be comprehensively reviewed.

* These totals include the deaths which took place in the Borough Fever Hospital at Freak's Grounds.

TABLE FOR COMPARING THE WEEKLY DEATHS FROM SCARLET FEVER IN THE LAST 26 WEEKS OF EACH OF THE YEARS 1870, 1875, AND 1879, WITH THE WEEKLY ADMISSIONS INTO THE HOSPITAL DURING THE SAME PERIOD OF 1875 AND 1879.

| | NUMBER OF THE WEEKS. | | | | | | | | | | | | | | | | | | | | | | | | | | Total Deaths. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | |
| 1870 ..... | 0 | 1 | 1 | 1 | 3 | 6 | 5 | 1 | 2 | 3 | 7 | 6 | 13 | 8 | 10 | 14 | 13 | 25 | 18 | 15 | 13 | 23 | 14 | 22 | 14 | 9 | 247 |
| 1875 ..... | 1 | 2 | 4 | 6 | 6 | 5 | 4 | 2 | 1 | 3 | 8 | 2 | 6 | 11 | 3 | 7 | 5 | 10 | 9 | 9 | 7 | 4 | 5 | 2 | 5 | 9 | 136 |
| 1879 ..... | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 8 | 2 | 2 | 7 | 3 | 6 | 4 | 5 | 6 | 2 | 4 | 7 | 5 | 2 | 5 | 5 | 4 | 3 | 4 | 93 |
| Hospital Admissions in 1875 | 2 | 5 | 3 | 4 | 0 | 5 | 0 | 4 | 3 | 2 | 2 | 4 | 6 | 6 | 0 | 2 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 0 | 1 | 1 | Total Admissions. 61 |
| Admissions in 1879 | 6 | 1 | 2 | 3 | 5 | 4 | 7 | 9 | 4 | 6 | 8 | 15 | 15 | 7 | 11 | 13 | 10 | 11 | 8 | 14 | 13 | 14 | 12 | 4 | 5 | 7 | 214 |

From the weekly deaths in 1870 and 1875 it will be seen that the maximum fatality, on both occasions, was reached in about an equal period of time and at an advanced stage of prevalence, viz., from the 44th to the 46th week, showing that the disease burned up and ran its course unimpeded. The legitimate inferences to be drawn from the weekly deaths in 1879 are, however, of a very different nature. From them we observe that the acme of the epidemic occured much earlier* than on previous occasions, while the deaths afterwards recorded afford, by their very uniformity, an unmistakeable sign of a successful interference with the future spread and development of the disease. This limitation of Scarlatinal fatality may fairly be accepted as the direct result of the more extensive measures for prevention taken by the Health Authorities immediately they received prompt information of the existence of fresh cases.

Some may regard the decline in the mortality here spoken of as dependent more upon the type of the disease than on the success of the prophylactic measures employed. The terms "mild" and "severe" when applied to characterise an epidemic are used only in a relative sense to indicate the most prevalent form of the disease for, among the sick in every epidemic of Zymotic origin, great variation in the virulence of the symptoms is observed, mild cases in varying proportion co-existing with malignant forms of the complaint, but the type most frequently met with gives character to the whole epidemic. From the return of patients received during the year into the Hospital, (*vide* pp. 20–27) it will be seen that from the beginning of June to the end of October no less than 52 cases were suffering from the disease in a severe form. These cases were for the most part drawn from thickly populated districts of the town, and I consider that their removal at an early stage of the epidemic not only aided in the future limitation of the mortality already shown to have taken place, but was also largely instrumental in *modifying the prevailing type* of the cases that subsequently came under the notice of the profession. The amount of change thus effected in the character of the malady can of necessity only be a matter for surmise; it was, however, acknowledged by the medical men of the town that the type of the disease in 1879 was

* A week after the fresh powers for notification came into operation.

fairly comparable with the character it assumed in the previous visitation of 1875. Taking the type of the disease as the same in both years it may be interesting, before I leave this subject, to draw attention to some of the probable results that have followed the carrying out of the powers for compulsory registration.

To this end the deaths from Scarlet Fever in the last fifteen weeks of the years 1875 and 1879 are here compared. The deaths registered during this period of 1879 were 66; the number in the corresponding interval of 1875 amounted to 94, but (with the same imperfect means for prevention) if the increase of population be taken into account these deaths would have increased to 107 in 1879, showing an increase of 41 upon the actual deaths recorded.

The number of certificates of Scarlet Fever sent in during the same fifteen weeks of last year was 496, and referred to 467 different habitations; this number when divided by 66 (the number of deaths) shows that one death took place among every seven houses visited with the disease. The probable result that followed the increased vigilance of the Health Authorities during the fifteen weeks of Scarlatinal prevalence may therefore be briefly summarised as follows: no less than 41 lives were saved to the town from the disease, and 287 homesteads were preserved from an invasion of this dire and fatal malady.

## MEASLES.

72 deaths were recorded in 1879 from this disease, against 45 in 1878, and 42 the annual average in the nine years 1870–'78. The rate of mortality from this cause during 1879 was equal to 0.57 per 1000, and was higher than that recorded in any of the five preceding years, in which the average rate was 0·35.

The most fatal incidence of the disease was experienced during the first half of the year, as many as 55 of the deaths being registered before July. This higher mortality was not an index of a greater prevalence of Measles, but was probably due to the fact that the exceptional severity of the season was highly conducive to the promotion of pulmonary complications amongst those suffering from this complaint, and the dangers attendant upon an attack were thus augmented.

# DIARRHŒA.

The deaths referred to this disease were 88, against 302 in 1878, and 275 the annual average in the ten years, 1869–'78. The mortality from this cause during last year was 0·7 per 1000, which is the lowest Diarrhœal rate that has ever been recorded in this town. The nearest approach to so low a rate was in 1860, when, with a total fatality of 56, the mortality stood at 0·8 per 1000. Of past years, those most conspicuous for low Diarrhœal fatality were 1860 and 1866. The weather phenomena recorded in the summer quarters of each of these years agreed most closely in character; in both years the mean temperature of the air in the summer months was considerably below the average of the season; there was a marked absence of sunshine combined with an unusual excess of atmospheric humidity, and the rainfall was so frequent and excessive that it exercised a highly destructive effect upon vegetation, and seriously impeded harvest work all over the country. This brief statement of the weather in the summers of 1860 and 1866 is sufficient to show the striking similarity in the seasonal circumstances that then prevailed to those but recently experienced in the summer of 1879 (*vide* Appendix). To those engaged in working out the causes of Diarrhœa this close coincidence in meteorological constitution is both interesting and instructive, offering as it does, a good refutation to several of the theories now advanced to explain the causes of the affection.

The following extract is taken from the Registrar General's Quarterly Return for last summer:—

"Diarrhœa caused, as it usually does in the summer quarter, more deaths in July, August, and September last, than any other of the seven principal Zymotic diseases. The annual death-rate from this disease last quarter did not exceed 0·75 per 1000; whereas in the September quarters of the nine years 1870–'78 it had averaged 2·43 per 1000, and ranged from 3·12 in 1870, to 1·31 in 1877. So far back as 1847, there is no instance of so low a death-rate from Diarrhœa as that recorded in the past summer; the nearest approach to it was in 1860, when the annual death-rate from this disease during the three months ending September may be estimated at 0·97 per

1000, against 0·75 in the corresponding period of this year. In the twenty large English towns the rate averaged 1·2 per 1000, against 2·3 and 4·2 in the summer quarters of 1877 and 1878. The rate among these twenty towns ranged from 0·5 in Bradford and Newcastle-upon-Tyne, and 0·7 in Bristol, Hull, and Oldham, to 1·7 in Leeds and Salford, and 1·9 in Leicester. Thus Leicester again showed the greatest Diarrhœa fatality, among these twenty towns, although the excess was much smaller than in recent corresponding quarters. The largest proportional decline in the fatality of this disease last quarter occurred in Hull."

In the Table given below will be found the death-rate from Diarrhœa in the twenty large towns during the third quarter of each of the years 1877, 1878, and 1879.

| Towns. | Annual Rate per 1000 from Diarrhœa. | | | Towns. | Annual Rate per 1000 from Diarrhœa. | | |
|---|---|---|---|---|---|---|---|
| | 1877 | 1878 | 1879 | | 1877 | 1878 | 1879 |
| | Mean temp. 58°·5 | Mean temp. 60°·8 | Mean temp. 58°·1 | | Mean temp. 58°·5 | Mean temp. 60°·8 | Mean temp 28°·1 |
| ENGLAND & WALES | 1·3 | 2·8 | 0·7 | Birmingham .. .. | 3·3 | 5.5 | 0·9 |
| 20 LARGE TOWNS .. | 2·3 | 4.2 | 1·2 | **Leicester .. ..** | **5·6** | **8·7** | **1·9** |
| 50 OTHER TOWNS .. | 1·5 | 3·6 | 0·9 | Nottingham .. .. | 2.6 | 3·7 | 1·4 |
| ENGLAND & WALES, EXCLUSIVE OF 70 TOWNS .. .. | 0·8 | 2·0 | 0·5 | Liverpool .. .. | 3·3 | 5·9 | 1·6 |
| | | | | Manchestor .. .. | 1·8 | 4·3 | 1·0 |
| 20 TOWNS: | | | | Salford .. .. | 3·3 | 6·4 | 1·7 |
| London .. .. | 2·0 | 3·3 | 1·3 | Oldham .. .. | 1·6 | 2·4 | 0·7 |
| Brighton .. .. | 2·6 | 3·6 | 1·0 | Bradford .. .. | 1·4 | 3·2 | 0·5 |
| Portsmouth .. .. | 3·4 | 3·4 | 0·8 | Leeds .. .. .. | 1·9 | 6·9 | 1·7 |
| Norwich .. .. | 2·6 | 5.3 | 1·2 | Sheffield .. .. | 1·6 | 5·0 | 1·0 |
| Plymouth .. .. | 2·9 | 2·8 | 0·9 | Hull .. .. .. | 4·6 | 10·2 | 0·7 |
| Bristol .. .. | 1·4 | 2·5 | 0·7 | Sunderland .. .. | 2·0 | 5·5 | 1·1 |
| Wolverhampton .. | 1·5 | 3·9 | 1·1 | Newcastle .. .. | 1·8 | 4·9 | 0·5 |

Notwithstanding the general and marked decline experienced in Diarrhœal fatality during last summer quarter, it will be observed from the preceding Table that the rate in Leicester was the highest recorded among the twenty English towns, while the rates for the two

previous years were almost equally unfavourable. The unfortunate position which the town is here seen to occupy must form my plea for further discussing the question of the cause of the disease.

It will be remembered that weather observers in America predicted that in England the summer season of 1879 would be remarkable for its unprecedented heat. The Sanitary Committee of this town, with a laudable desire of reducing the mortality likely to arise under such seasonal circumstances, again determined to supply Diarrhœa Mixture free of cost to the poorer families of the town and, although the prediction as to the character of the season proved entirely false, the applications for "Mixture" were numerous at all three of the places where it was dispensed. Instructions were given that the address and *exact age* of every person for whom medicine was supplied should be entered in books provided for the purpose. The total number of Diarrhœal cases thus recorded was 1022, and an analysis of their ages is given on line A of the following summary.

## TABLE VIII.

ANALYSIS OF THE AGES OF THE CASES OF DIARRHŒAL SICKNESS WITH THE AGES OF THE DEATHS FROM DIARRHŒA DURING THE THIRD QUARTER OF 1879.

| Ages. | Under 6 months. | 6 to 12 months. | 1 to 2 years. | 2 to 3 years. | 3 to 4 years. | 4 to 5 years. | 5 to 10 years. | 10 to 15 years. | 15 to 20 years. | 20 to 25 years. | 25 to 45 years. | 45 to 65 years. | 65 to 85 years. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A. Cases of Sickness | 37 | 75 | 106 | 105 | 55 | 44 | 73 | 65 | 32 | 51 | 220 | 125 | 34 | 1022 |
| B. Deaths ..... | 54 | | 4 | 2 | ... | ... | ... | ... | .. | ... | ... | 1 | ... | 61 |

On line B of the summary I have entered the ages at death of those who succumbed to the disease, from which it will be seen that the fatality was, as usual, confined almost entirely to the ages of infancy and early childhood. The fact that infants and young children form the great majority of the victims to the disease has, no doubt, led many medical men to assert that the disorder arises

either from artificial feeding, or results from the neglectful habits and mismanagement of mothers in the rearing of infants and children. If the causes of Diarrhœa resided solely in maternal neglect and bad nursing, we should naturally expect to find its prevalence strictly confined to the classes of the population affected by these habits, viz., to infants and children. The ages of the 1022 cases of diarrhœal sickness shew that no such limitation of prevalence occurred but, on the contrary, that the disease extended its visitations to all ages.

In the year 1878 Diarrhœa was much more prevalent than in 1879, and all ages at that time also suffered from the disease. The fact of the disease being unlimited in its spread as regards age is of extreme importance, since it offers a complete refutation to all theories of causation based solely upon maternal neglect and ignorance. On glancing over the ages of the cases of sickness, no one can question the fact that the influences causative of the disease must have operated upon every age-section of the population although, with a single exception, no fatality was recorded from Diarrhœa among ages higher than three years.

In my Report for 1878 I expressed my belief that the disease depended upon an entrance into the system, through the air or in food, of ferments derived from the putrefaction of animal refuse matters collected on the surface in cesspools or retained as deposit in the sewers of towns. The exceptional character of the seasonal circumstances of last spring and summer quarters, and the marked decline observed in diarrhœal fatality, have further strengthened me in this belief.

Before proceeding to point out the way in which the season exercised so salutary an effect on town populations, it will be necessary for me again to refer to the alternations of temperature induced in the subsoil through solar agency during the spring and summer months of the year. An eminent Parisian physicist,* in writing of the seasons, says :

" From the 21st of March, the epoch of the vernal equinox, to the 23rd of September, the epoch of the autumnal equinox, the day in our climate is longer than the night, the sun being above the horizon in Paris longer than twelve hours. While the solar rays are falling upon

* Arago.

solid or fluid objects included within our horizon, they at the same time heat them. Thus on the 21st of March it is heated throughout its whole extent during twelve consecutive hours; but at the same time it is cooling, by a process of radiation towards space, during these same twelve hours of day, and also during twelve hours of night; that is to say, during the whole of the twenty-four hours. It is not possible to state *a priori* whether the loss exceeds the gain; for that must depend on the intensity of the radiation towards space and on the heating power of the solar rays, two elements which numerically are unknown to us. What happens on the 22nd of March? On that day the solar rays will heat the horizon during rather more than twelve hours. With respect to the cooling by radiation, it will operate, as on the preceding evening, during twenty-four hours. Now what proves incontestably that the heating influence, although operating only during a period of about twelve hours, exceeds, at this season of the year, the cooling influence, is this, that the horizon gains more than it loses; so that the temperature of the 22nd of March usually exceeds that of the 21st. We shall arrive at the same result if we compare the temperature of the 23rd with that of the 22nd, and so on. The calorific rays of the sun produce effects more and more considerable, down to the 21st of June, because their influence is exercised during gradually longer and longer periods, the days increasing continually in length until the time of the solstice. However this, although the preponderating, is not the only cause which produces the effects in question. Let us consider the inclination at which the solar rays fall at noon; for example, on the generality of objects of which the horizon of Paris consists. This inclination, measuring from the surface, goes on increasing to the 21st of June; consequently the absorbed rays—those which alone can contribute to the heating of terrestial objects—will continue to increase daily till towards the solstice. A third cause of heating equally influential must be noticed here. The sun may be regarded as the centre of a sphere, whence rays emanate in all imaginable directions. Now if, at a certain distance from the centre of this sphere, we suppose an horizon exposed to the action of those diverging rays, the horizon will embrace a more considerable number of such rays, according as it will present itself to them in a direction more nearly approaching the perpendicular. Who does not see that,

at every noon included between the 21st of March and the 21st of June, any horizon situated in our climate presents itself to the solar rays in a direction approaching more and more nearly to the perpendicular. Let us finally add, that the rays reach the earth through an atmosphere which, as everybody may have observed, intercepts a quantity of rays—a quantity increasing with the length and obliquity of their path through the aerial strata. Thus, to recapitulate, from the 21st of March to the 21st of June, the horizon of Paris continually receives, from day to day, more and more of the solar rays: These rays fall with greater intensity at inclinations, at noon at least, more and more favourable for absorption. Finally, their daily action is of longer duration. From all these causes the horizon must receive an accession of heat between the two epochs. Let us remark, besides, that according as an horizon is heated, its radiating property—I had almost said its cooling property—goes on increasing. Observation alone, then, will serve to indicate the epoch when the two contrary effects compensate each other exactly, the epoch at which the horizon will cease to be heated."

"Upon discussing a long series of observations, it has been found that, in Paris, the instant of compensation—the instant when heat is at its maximum—does not coincide with the 21st of June, the day of the summer solstice, but that it occurs about the 15th of July."

It will be evident from these remarks that during the spring and a portion of the summer quarters, owing to solar influence, the subsoil in town and country undergoes an elevation of temperature, and the extent of the rise will entirely depend upon the character of the weather overhead; thus, if the spring and summer months be dry and hot the ground will be influenced to greater depths and attain to higher temperatures than would be the case if the season were cold and wet. The sewers of towns will, of course, be subject to the same changes of temperature as the subsoil which contains them, and when once this reaches 55° Fahr. or thereabouts, putrefaction will take place in all sewers containing filth refuse, and the higher the temperature of the sewer the more rapid will be the process.

With the view of discovering to what extent the subsoil is really influenced by the seasons, I caused two borings to be made into it in a garden in Melbourne Street. The soil, which here consists

of a stiff selenitic clay, was pierced to the depth of 11 feet, and into each hole I introduced a 12 foot length of iron gas piping. I perforated, by means of a fine drill, the bottom ends of these tubes with numerous small apertures for the admission into them of subsoil water, and the top end of each tube was fitted with an iron cap, which was only removed when observations were being made. When the tubes were first put down, the water rose in them to the height of 3 feet 6 inches, and in a period of seven months, although the rainfall was excessive, the water never rose above 3 feet 11 inches. The temperature was taken only once a month, and the first observation I made was on the 19th April. The following is a record of the temperatures taken (11 feet from the surface).

1879.

| | Apr. 19. | May 19. | June 19. | July 19. | Aug. 19. | Sept. 19. | Oct. 19. | Nov. 19. |
|---|---|---|---|---|---|---|---|---|
| Fahrenheit's Scale. | 45° | 48·4 | 52·3 | 56·0 | 58·2 | 55·6 | 51·4 | 48·0 |

Although the spring and summer quarters of 1879 were distinguished by a low temperature with frequent and excessive rainfall, we have nevertheless in the figures here given distinct evidence of a rise having taken place in the temperature of the subsoil sufficient in degree to establish putrefactive changes in town sewers. We may fairly assume that the subsoil, during a dry and hot spring, would become more rapidly heated and putrefaction begin much earlier in the sewers than in 1879, in which case we should expect the disease, if dependent upon this process, to appear sooner and give rise to a higher fatality. This actually occurred in 1878, when, with a comparatively hot and dry June, a fatal incidence of the disease was recorded in most English towns before the 1st of July; whereas in the year 1879, the June month of which was remarkably wet and cold, a marked prevalence of the malady was not observed until the last week in July. Some hitherto unexplained anomalies observed as to the time of appearance of Diarrhœa in different towns, only admit of explanation on the assumption that the disease is developed from filth after the manner I have described. For example, the Registrar General in his Report for the summer quarter of 1878 says :—

"Diarrhœa fatality rose much more rapidly in London than in the provincial towns, and the rate during July ruled higher in the

metropolis than the average rate in the nineteen other towns. The rate in London also declined more rapidly, and the average rate in the quarter was considerably lower than that in the nineteen towns. It is worthy of note that whereas the maximum Diarrhœa fatality was recorded in most of the twenty towns in the week ending 3rd August, it did not occur in several of the towns, especially in Portsmouth, Norwich, and Birmingham, until fully the middle of August. There appears to be nothing in the meteorological returns from these three towns to account for these variations."

A satisfactory solution to this varied behaviour of the disease in different localities is afforded by the fact that subsoils, differing from each other in their capacity for absorbing heat as well as in their power of conducting it, are differently influenced under the same meteorological conditions. Thus, the earlier appearance and more rapid rise of Diarrhœal fatality noted in the case of London would indicate that its subsoil was, in relation to other soils, a better conductor of heat, and in consequence the sewers became sooner heated and putrefaction was earlier established in them.

Keeping the above facts on subsoil heat steadily in view, the following Table, which contains the weather records for the last summer quarter, will serve to explain the manner in which the season exercised so powerful and beneficial an effect on Diarrhœal prevalence and fatality. Frequent and abundant rain, with low temperature, formed the characteristic features of the weather in June, and from the Table we observe that there was a continuance of "bad weather" throughout the whole of July. As a consequence of the cold weather the subsoil and the sewers underwent a minimum rise in temperature, while the excessive and continuous rainfall served still further to cool the latter, and by its scouring action must have effected an extensive removal of deposit from the sewers in the flat and low-lying districts of the town. A further beneficial effect of the frequent rainfall in July was to purify the atmosphere by washing down the ferments which so heavily impregnate it at this season of the year from the decomposition of filth wherever stored. (*Vide* Report, 1878.)

## TABLE IX.

Diarrhœal Deaths with Meteorological Means for each Week in the Third Quarter of 1879.

| Months ..... | July. | | | | August. | | | | | September. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Week of the Year ..... | 27th | 28th | 29th | 30th | 31st | 32nd | 33rd | 34th | 35th | 36th | 37th | 38th | 39th |
| Mean Maximum Temperature | 62·4 | 62·1 | 64·3 | 63·1 | 70·1 | 64·7 | 69·1 | 65·9 | 65·2 | 64·4 | 61·8 | 62·3 | 57·7 |
| Mean Minimum Temperature | 49·4 | 49·6 | 52·7 | 51·8 | 54·7 | 50·9 | 53·3 | 52·4 | 51·9 | 46·8 | 51·2 | 49·3 | 44·4 |
| Mean Temperature ..... | 55·8 | 55·8 | 58·5 | 57·4 | 62·4 | 57·8 | 61·2 | 59·1 | 58·5 | 55·6 | 56·5 | 55·8 | 51·1 |
| Humidity of Air ..... | 81 | 85 | 83 | 86 | 81 | 86 | 82 | 90 | 82 | 83 | 85 | 87 | 87 |
| Rainfall in inches ..... | 1·00 | 0·67 | 1·36 | 0·91 | 1·78 | 0·30 | 0·48 | 0·89 | 0·85 | 0·02 | 1·43 | 0·00 | 1·20 |
| Number of Rainy Days ..... | 6 | 6 | 5 | 5 | 4 | 4 | 3 | 5 | 5 | 2 | 6 | 0 | 6 |
| Diarrhœal Deaths..... | 0 | 3 | 0 | 1 | 3 | 1 | 6 | 6 | 8 | 14 | 9 | 8 | 2 |

It will be seen from the Table of weather observations that the amount of rain in the second and third weeks of August was, compared with the previous weeks, small in amount and fell with much less frequency. The immediate effect of this was a greater escape and dispersion of organisms from the sewers, which resulted in a greater prevalence of the disease, and was followed by a higher fatality. It will also be observed from the Table that the most fatal incidence of the disease occurred in a week when the rainfall was almost inappreciable in amount. It may be incidentally remarked that the leading features of the weather last summer were of much the same character in all manufacturing towns, so that the arguments here used as to causation apply with equal force to all English manufacturing towns besides Leicester. Speaking generally, the combined effect of the seasonal circumstances of last summer quarter was to reduce to an extent much below the average the amount of putrefactive impregnation of the air in towns which takes place during this season of the year. This fact, taken in conjunction with the very marked decline that occurred in the fatality of Diarrhœa, offers, to my mind, the most convincing proof of the excrementitious origin of the disease, and adds further weight to my belief that "Diarrhœa, as it affects both adults and infants during the summer months, depends in the majority of instances upon the introduction into the system by means of air, or in food, of living organic ferments derived from the putrefactive decomposition of animal refuse matter."

## FEVER.

After deducting one death from this cause of a county patient which took place in the Infirmary, the total deaths recorded from Fever in 1879 were 20, against 31 in 1878, and 50 the annual average in the decade 1869–'78. The annual death-rate in last year was equal to 0·159 per 1000, and was the lowest ever recorded in the Borough. As in 1879, the years 1860 and 1877 were both remarkable for cold seasons, excessive rainfall, and low fatality from Fever, and the mortality in each of these years closely approximated to the unprecedented low rate in last year, being equal to 0·162 and 0·17 per 1000 respectively.

Omitting accidental circumstances of causation, air impregnated with putrefying animal matter must be regarded as the cause of the majority of endemic Fever cases in Leicester, for most of the analyses of the water-supply to houses where Fever cases occurred showed no evidence of sewage pollution. However much, therefore, the sanitary measures that have been carried out in Leicester within the last few years may have contributed towards the marked decline of Fever in 1879, still there can be no doubt that the seasonal circumstances experienced in the latter half of the year (being pre-eminently air-cleansing in character) were highly potential in reducing the fatality from this cause.

In the subjoined Table are given the deaths from fever and the mortality per 1000 in the 20 large towns during the ten years, 1870–'79.

## TABLE X.

DEATHS AND MORTALITY FROM FEVER IN 20 LARGE TOWNS.

| Boroughs. | Deaths from Fever in each Year. | | | | | | | Annual Mortality per 1000. | | | Dths. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1870 | 1871 | 1872 | 1873 | 1874 | 1875 | 1876 | 7 yrs. '70-'76 | 1877 | 1878 | 1879 |
| London | 2053 | 1716 | 1340 | 1549 | 1554 | 1282 | 1176 | ·46 | ·35 | ·38 | 1099 |
| Brighton | 39 | 33 | 25 | 31 | 33 | 25 | 14 | ·31 | ·20 | ·15 | 11 |
| Portsmouth | 93 | 75 | 121 | 100 | 105 | 100 | 70 | ·80 | ·69 | ·71 | 65 |
| Norwich | 71 | 39 | 55 | 61 | 34 | 41 | 29 | ·58 | ·47 | ·28 | 28 |
| Plymouth | 31 | 33 | 49 | 37 | 38 | 34 | 36 | ·53 | ·55 | ·42 | 22 |
| Bristol | 120 | 116 | 83 | 106 | 84 | 94 | 89 | ·52 | ·68 | ·43 | 39 |
| Wolverhampton | 62 | 54 | 33 | 83 | 46 | 37 | 25 | ·70 | ·27 | ·35 | 9 |
| Birmingham | 233 | 184 | 188 | 205 | 199 | 196 | 140 | ·54 | ·39 | ·38 | 85 |
| **Leicester** | **50** | **76** | **70** | **63** | **56** | **63** | **42** | **·59** | **·21** | **·26** | **20** |
| Nottingham | 116 | 106 | 77 | 70 | 59 | 73 | 43 | ·86 | ·31 | ·37 | 42 |
| Liverpool | 900 | 888 | 411 | 314 | 433 | 477 | 388 | 1·10 | ·71 | ·68 | 254 |
| Manchester | 465 | 377 | 248 | 288 | 215 | 208 | 243 | ·83 | ·47 | ·38 | 76 |
| Salford | 131 | 85 | 86 | 88 | 124 | 111 | 75 | ·73 | ·68 | ·68 | 61 |
| Oldham | 35 | 36 | 48 | 41 | 45 | 86 | 71 | ·57 | ·25 | ·35 | 25 |
| Bradford | 194 | 134 | 133 | 128 | 106 | 81 | 73 | ·78 | ·34 | ·38 | 44 |
| Leeds | 339 | 331 | 295 | 210 | 205 | 140 | 177 | ·90 | ·57 | ·40 | 81 |
| Sheffield | 340 | 221 | 242 | 238 | 190 | 322 | 248 | 1·02 | ·60 | ·43 | 91 |
| Hull | 117 | 105 | 171 | 122 | 170 | 108 | 76 | ·97 | ·41 | ·66 | 53 |
| Sunderland | 58 | 221 | 106 | 53 | 70 | 46 | 61 | ·87 | ·60 | ·47 | 30 |
| Newcastle | 133 | 99 | 84 | 111 | 116 | 93 | 74 | ·76 | ·32 | ·61 | 57 |

The immunity from Fever fatality here evidenced is, for a manufacturing town like Leicester, very remarkable, and can only be accounted for by reference to the following facts which embody some of the results of the persistent activity of the Health Authorities of the town. *(a.)* It is very rare indeed to find a house drain in direct communication with the sewer in the low-lying districts; *(b.)* very few cesspools are to be found in the town; *(c.)* the town is absolutely free of "slums;" *(d.)* a good supply of water of pure quality is in almost general use. In other words, many of the most pregnant sources of causation in other towns are here confined within narrow limits.

## MORTALITY UNDER FIVE YEARS.

During the year 1879, the deaths recorded under five years in Leicester were 1366, equal to 51·5 per cent. of the total deaths at all ages. The corresponding proportion in 1878 was 54·4 per cent. and the annual average for the ten years, 1869–'78, was equal to 52·7 per cent. of the total deaths. Percentages, corresponding to the above, are given in the following Table for fifteen of the Large Towns for the year 1878.

### TABLE XI.

PERCENTAGE OF DEATHS OF CHILDREN UNDER 5 YEARS TO TOTAL DEATHS, AND MORTALITY FROM ZYMOTIC DISEASES IN THE FOLLOWING TOWNS, DURING THE YEAR 1878.

| Towns. | Percentage of Deaths under 5 yrs. to Total Deaths. | Mortality from the Seven Zymotic Diseases. | Diseases Prevalent. |
|---|---|---|---|
| Bristol ..... | 39·7 | 2·1 | |
| Manchester ..... | 40·5 | 4·0 | |
| Portsmouth ..... | 40·8 | 3·1 | |
| Norwich ..... | 41·6 | 3·6 | |
| London ..... | 43·5 | 4·1 | |
| Newcastle ..... | 43·9 | 4·6 | |
| Nottingham ..... | 44·8 | 2·8 | |
| Bradford ..... | 47·4 | 3·5 | |
| Wolverhampton .. | 47·4 | 3·7 | |
| Liverpool ..... | 47·5 | 6·1 | Scarlet Fever and Measles. |
| Oldham ..... | 49·1 | 5·5 | Scarlet Fever and Measles. |
| Salford ..... | 52·2 | 5·1 | Scarlet Fever. |
| Birmingham .... | 53·1 | 6·3 | Scarlet Fever. |
| Sunderland ..... | 53·7 | 6·4 | Scarlet Fever and Measles. |
| **Leicester** ..... | **54·4** | **3·9** | |

A comparison of the figures in the first column shows that the deaths in Leicester under five years stood higher in proportion to the total deaths than in any other of the towns tabulated. The deaths in the same ætal period were also proportionately numerous in Liverpool, Oldham, Salford, Birmingham, and Sunderland, but in all these towns either Scarlet Fever or Measles, or both diseases in conjunction, prevailed in an epidemic form for some portion of or throughout the year. The fatality arising from an epidemic prevalence of these diseases is chiefly incident upon children between one and five years of age, and hence the high proportion of deaths for each of the towns last mentioned is easy of explanation. None of the diseases, recognised as infective, were epidemic in Leicester during 1878, and the general Zymotic death-rate (*vide* Col. II.) was satisfactorily low; the high percentage of deaths under five years observed in the death-returns of the Borough was therefore dependent upon exceptional causes.

The following tabulation of returns available from other towns shows that for several years prior to 1878, the proportion of deaths under five years to total deaths has been highest in Leicester.

TABLE XII.

PERCENTAGE OF DEATHS OF CHILDREN UNDER 5 YEARS TO TOTAL DEATHS.

| | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 |
|---|---|---|---|---|---|---|
| **Leicester** ..... | **50·3** | **53·6** | **49·1** | **55·4** | **54·6** | **49·8** |
| Manchester ..... | ... | ... | 46·2 | 43·6 | 45·0 | 43·5 |
| Birmingham ..... | ... | 49·2 | 47·5 | 49·4 | 46·6 | 49·4 |
| Bradford ..... | ... | 48·7 | 47·6 | 50·3 | 47·5 | 44·3 |
| Nottingham ..... | ... | 38·0 | 42·0 | 43·0 | 42·0 | 40·0 |
| Portsmouth ..... | 35·8 | 38·1 | 40·7 | 37·0 | 43·9 | 38·9 |

This excessive proportion in Leicester may, in great measure, be accounted for by the fact that the deaths recorded at ages over five years are less numerous than in other manufacturing centres. The most accurate method of comparing the healthiness of different

towns for ages under five years, is to determine for each town the proportion of deaths recorded under five years to the number *living* in this interval of age. From the subjoined Table, constructed after this manner, it will be seen that the mortality in Leicester, although high, bore favourable comparison with other towns in 1878.

TABLE XIII.

Estimated Population, Deaths, and Annual Rate of Mortality of Children under 5 Years of Age, in 15 Large Towns, 1878.

| | | | |
|---|---|---|---|
| Portsmouth ... ..... | 16,921 | 1,006 | 59·4 |
| Bristol ..... | 26,450 | 1,750 | 66·1 |
| Newcastle ..... | 20,556 | 1,504 | 73·1 |
| Wolverhampton ..... | 10,617 | 817 | 76·9 |
| London ..... | 464,870 | 36,400 | 78·3 |
| Bradford ..... | 24,440 | 1,963 | 80·3 |
| **Leicester** ..... | **16,365** | **1,360** | **83·1** |
| Nottingham..... | 18,751 | 1,553 | 82·8 |
| Manchester ..... | 48,629 | 4,055 | 83·4 |
| Norwich ..... | 10,441 | 884 | 84·7 |
| Oldham ..... | 14,734 | 1,355 | 91·9 |
| Sunderland ..... | 16,531 | 1,537 | 92·9 |
| Liverpool ..... | 71,496 | 7,408 | 103·6 |
| Birmingham ..... | 53,850 | 5,128 | 95·2 |
| Salford ..... | 24,107 | 2,262 | 93·8 |

In the annexed statement, by the same method as that used in constructing the previous Table, I have calculated for 1878 the rate of mortality for each year of the quinquenniad.

Comparing the Leicester rates with those of the English Life Table given in column 4, the following facts are disclosed :—

*(a.)* The rate for ages under one year greatly exceeds that of the English Life Table.

*(b.)* For ages between one and two years the mortality shows a slight increase on that of the Life Table.

*(c.)* In the three remaining years the rates are lower than those of the Life Table.

*(d.)* The rate for ages between one and five years is only 31·4 per 1000 living, whereas that of the Life Table is 36·7.

## TABLE XIV.

POPULATION, DEATHS, AND ANNUAL RATE OF MORTALITY IN THE BOROUGH OF LEICESTER DURING THE YEAR 1878 FOR EACH YEAR OF THE QUINQUENNIAD 0—5 YEARS COMPARED WITH THE ENGLISH LIFE TABLE RATES FOR SIMILAR AGES.

| Ages at Death. | Estimated Population, Midsummer, 1878. | Deaths in 1878. | Annual Death-rate per 1000 living. | English Life Table. |
|---|---|---|---|---|
| 0—1 | 3,986 | 971 | 243·60 | 165·38 |
| 1—2 | 3,335 | 234 | 70·16 | 65·58 |
| 2—3 | 3,133 | 85 | 27·13 | 36·14 |
| 3—4 | 3,007 | 47 | 15·63 | 24·33 |
| 4—5 | 2,904 | 23 | 7·92 | 17·92 |
| 1—5 | 12,379 | 389 | 31·4 | 36·7 |

Now, as the mortality was satisfactorily low for ages between one and five years, it follows that an enquiry into the causes of the high mortality (83·1 per 1000) among children under five years virtually reduces itself to a discrimination of the causes that gave rise to the excessive mortality of infants under one year.

## INFANT MORTALITY.

For years past the fatality in Leicester among infants has been excessively high, and for this reason the subject demands the continued attention of the Health Authorities. For all ages over one year the town is one of the most healthy in England, and the mortality at the several ages over five years, during 1878, compared favourably even with Portsmouth, which has generally the lowest death rate at all ages of any of the large towns.

The deaths registered in Leicester under one year of age, during the year 1879, were 878, against 971 in 1878, and 940 the annual average number in the nine years 1870–'78. The proportion of deaths under one year to births registered in last year was equal to 187 per 1000; in the year 1878 it was 203, while the annual average rate in the seven years, 1872–'78, was 213. For comparative information the infant mortality in twenty large English towns during the past eight years is shewn in the following Table.

## TABLE XV.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE TO 1000 BIRTHS IN THE 20 LARGE TOWNS 1872–'79.

| Towns. | 1872 | 1873 | 1874 | 1875 | 1876 | 1877 | 1878 | Average Rate in the Seven Years 1872-78. | 1879 |
|---|---|---|---|---|---|---|---|---|---|
| London ... ... ... ... | 159 | 159 | 155 | 162 | 157 | 146 | 164 | 157 | 147 |
| Brighton ... ... ... | 166 | 139 | 143 | 177 | 153 | 150 | 176 | 158 | 129 |
| Portsmouth ... ... ... | 146 | 139 | 151 | 133 | 142 | 133 | 150 | 142 | 112 |
| Norwich ... .. ... | 210 | 159 | 177 | 210 | 176 | 154 | 211 | 185 | 159 |
| Plymouth ... ... ... | 149 | 154 | 173 | 155 | 156 | 159 | 193 | 163 | 135 |
| Bristol ... ... ... ... | 151 | 157 | 153 | 166 | 153 | 154 | 160 | 156 | 145 |
| Wolverhampton ... | 176 | 175 | 169 | 161 | 176 | 146 | 173 | 168 | 148 |
| Birmingham ... ... | 166 | 180 | 180 | 196 | 160 | 163 | 174 | 174 | 151 |
| **Leicester ... ... ...** | **228** | **213** | **215** | **245** | **200** | **189** | **203** | **213** | **187** |
| Nottingham ... ... | 207 | 172 | 195 | 199 | 172 | 169 | 170 | 183 | 162 |
| Liverpool ... ... ... | 222 | 213 | 233 | 210 | 208 | 188 | 193 | 209 | 162 |
| Manchester ... ... ... | 191 | 198 | 197 | 184 | 180 | 161 | 175 | 184 | 165 |
| Salford ... ... ... ... | 173 | 185 | 189 | 178 | 189 | 161 | 185 | 180 | 169 |
| Oldham ... ... ... ... | 178 | 169 | 190 | 177 | 174 | 161 | 174 | 179 | 157 |
| Bradford ... ... ... | 197 | 206 | 189 | 200 | 174 | 155 | 177 | 185 | 149 |
| Leeds ... ... ... ... | 212 | 192 | 200 | 197 | 180 | 165 | 188 | 190 | 160 |
| Sheffield ... ... ... | 185 | 180 | 188 | 176 | 169 | 145 | 176 | 174 | 152 |
| Hull ... ... ... ... | 204 | 174 | 172 | 191 | 162 | 161 | 184 | 178 | 134 |
| Sunderland ... ... ... | 177 | 163 | 166 | 169 | 152 | 143 | 184 | 165 | 133 |
| Newcastle ... ... ... | 177 | 186 | 198 | 187 | 167 | 151 | 161 | 175 | 145 |

A reference to the Table reveals the fact that although the mortality in Leicester showed a marked decline last year upon the high average rate in the previous seven years, it nevertheless still continued to be the highest recorded in any of the large towns. Some medical men have sought to explain this excessive mortality among infants by the high birth-rate in the town, their line of argument being that wherever the birth-rate of a community is abnormally high, the rate of infant mortality will necessarily present a proportionate excess on account of the greater number of infants living. The facts I have tabulated below referring to 10 of the large towns will suffice to expose the fallacy of this argument.

## TABLE XVI.

| | Birth-Rate Average for 7 years, 1872-'78. | Infant Mortality Average for 7 years, 1872-'78. | Birth-Rate. 1879. | Infant Mortality. 1879. |
|---|---|---|---|---|
| Plymouth ..... | 30·9 | 163 | 31·4 | 135 |
| Norwich ..... | 32·8 | 185 | 34·1 | 159 |
| Portsmouth ..... | 32·9 | 142 | 31·7 | 112 |
| Bristol ..... | 36·3 | 156 | 35·8 | 145 |
| Wolverhampton | 83·8 | 168 | 38·1 | 148 |
| Oldham..... | 40·5 | 179 | 34·6 | 157 |
| **Leicester** ..... | **40·9** | **213** | **37·3** | **187** |
| Birmingham ..... | 41·4 | 174 | 40·1 | 151 |
| Sunderland ..... | 42·2 | 165 | 39·4 | 133 |
| Salford ..... | 44·3 | 180 | 40·1 | 169 |

The preceding Table shows that in Norwich while the birth-rate was much below Birmingham and Sunderland, the infant mortality was in excess of the latter towns. Again, in Salford, Sunderland, and Birmingham, the birth-rate is seen to have exceeded that in Leicester; the infant mortality, however, in each of the former towns falls considerably short of the exceptionally high rate in the latter. It is evident, therefore, that a high birth-rate may be maintained for years in a town population without causing a proportionately high rate of infant mortality. On the other hand it is certain that a great fatality among infants in any town will tend to raise the birth-rate, for the mothers who lose their infants early become in a short time again pregnant. From this fact I am disposed to regard the high

birth-rate in Leicester as a natural consequence of the excessive infant mortality.

Speaking generally, the causes which destroy infant life in large towns are many and they operate unequally in different localities. There are few of our manufacturing centres which cannot refer back to several periods in the last forty years when they enjoyed intervals of exceptional prosperity, and it was during these periods of industrial activity that some of the principal causes of high death-rates of infants in towns, as at present observed, were either first introduced or gained greater prevalence. Wherever branches of manufacture became extended or fresh industries were started, a rapid gravitation of the population from rural districts and the smaller towns ensued; overcrowding was the immediate result; houses were in great demand to meet which habitations were "run up" defective both in construction and arrangement and with a total disregard as to the suitability of site; marriages increased in undue proportion and the high wages offered facilities for early marriages, both of which caused the birth-rate to rise to an inordinate degree and disproportionately augmented the infantile population. Under such circumstances, general neglect, want of cleanliness, and ignorance in proper domestic management were more frequently observed among artizans, and, where the particular industry required skilled female labour, the dangers to infant health and life were enhanced by a more general adoption of artificial feeding, baby-farming, and the free use of anodyne and soporific "cordials." These vicious maternal habits have outlived the prosperity which caused them and, at the present time, their evil influence is felt in every town of consequence throughout England, and form the means whereby thousands of healthy and vigorous infants are deprived of much of their constitutional stamina, and thousands more are prematurely sacrificed. It may safely be assumed that the influence of such habits upon infant life will vary in different towns according to their industries. Some towns employ almost exclusively male operatives, while others require a variable proportion of females in the production of their fabrics; as instances of the former I may mention Sunderland, Newcastle, Sheffield, and Wolverhampton; and of the latter, Norwich, Oldham, Salford, Nottingham, Leeds, Leicester, Bradford, and Manchester may be taken as examples. On looking over the Infant Mortality in former years

accredited to those towns I have mentioned (page 50) as employing large proportions of females in their staple manufactures, it will be seen that the rates were by no means uniformly high but varied greatly and ranged, in 1879, from 145 and 149 per 1000 in Bristol and Bradford, to 169 and 187 in Salford and Leicester. These infant death-rates lead us to infer that however prejudicial a large employment of female labour may have proved to infant life in these towns, other local agencies must have been at work to have caused such wide discrepancies in their infant mortality.

In taking the census of 1871, special enquiry was made in several towns as to whether the mothers were engaged in out-door work during the day, with the view of ascertaining the relative proportions so employed. The following Table taken in part from the Registrar General's Report for 1875, shows the results of this enquiry.

## TABLE XVII.

NUMBER, and PROPORTION per 1000, of FEMALES 20 YEARS of AGE and upwards employed (1) in TEXTILE MANUFACTURES and (2) in HOUSEHOLD DUTIES, according to the Census of 1871; together with the rate of INFANT MORTALITY 1872–8, in the SEVEN FACTORY TOWNS, and in PORTSMOUTH, and LONDON, arranged in the order indicated by the Results in Col. 4.

| TOWNS. | Females 20 Years of Age and upwards in 1877. | | | | | Infant Mortality, 1872–78. |
|---|---|---|---|---|---|---|
| | Females enumerated 20 Years of Age and upwards. | Number engaged in | | To every 1,000 living the proportion employed in | | Death-rate per 1000 Births. |
| | | Textile Manufactures. | Household Duties.* | Textile Manufactures. | Household Duties. | |
| Cols. ... ... | 1. | 2. | 3. | 4. | 5. | 6. |
| Oldham ... ... ... ... | 32,343 | 11,178 | 15,961 | 346 | 493 | 179 |
| Nottingham ... ... | 27,171 | 6,758 | 12,429 | 249 | 457 | 183 |
| Manchester & Salford | 150,019 | 22,750 | 81,245 | 152 | 542 | 182 |
| **Leicester ... ... ...** | **27,677** | **3,368** | **15,017** | **122** | **543** | **213** |
| Leeds ... ... ... ... | 72,719 | 6,776 | 47,873 | 93 | 658 | 190 |
| Norwich ... ... ... | 25,684 | 1,478 | 13,847 | 58 | 539 | 185 |
| Portsmouth .. ... ... | 31,504 | — | 21,460 | — | 681 | 142 |
| London ... ... ... ... | 1,022,119 | — | 585,506 | — | 573 | 157 |

* The results in this column represent the number of women at *home*; generally engaged in household duties, but in certain cases assisting in their husbands' business.

If the trade requirements of the towns above specified continued to employ female labour in much the same proportions as in 1871, a comparison of the average rates of infant mortality in the seven years, 1872–'78, supplies incontestable proof of the existence of local causes hurtful to infants in addition to those arising out of mismanagement and neglect of mothers. In the consideration of influences destructive to infant life in town districts, those arising from topographical position should receive special attention as it is difficult to over-estimate them. There are few persons who will not admit that the site of a town exercises a marked influence on the health of the adult population, and it would be folly to suppose that the delicately sensitive organisation of the infant section should escape being much affected from the same cause. The limits of this Report will not allow of my dealing with this part of the question further than to call attention to the fact that, where manufacturing towns or districts in towns are built upon low-lying and flat situations, the infant death-rate is generally found to be abnormally high.

I now come to the main question of what are the special causes of the excessive fatality among infants in Leicester. In dealing with this subject the first step is to ascertain the number of deaths annually recorded in the town from each of the most common diseases of infancy. In Table XVIII., I have given the number of deaths of infants under one year of age recorded in each of the four years, 1876–'79, from eleven causes, together with the total number from each cause in the four years. By thus cumulating the deaths from each cause for a number of years the true position is found for those diseases which differ but slightly in point of fatality for a single year, while the importance of each affection in relation to total causation is more easily recognized.

It will be seen by the deaths from each cause, given in the Table, that the most fatal, by far, of all the diseases were (1.) Atrophy and (2.) Diarrhœa, and next to these came in the order of their fatality, (3.) Convulsions, (4.) Lung Diseases, (5.) Premature Birth, (6.) Tubercular Diseases, (7.) Whooping Cough, (8.) The Eruptive Fevers, (9.) Suffocation and (10.) Teething.

## TABLE XVIII.

DEATHS OF INFANTS, 1876–'79.

| Years. | Measles. | Scarlet Fever. | Whooping Cough. | Dentition. | Diarrhœa. | Convulsions. | Lung Diseases. | Tubercular Diseases. | Atrophy. | Premature Birth. | Suffocation. | Total Deaths. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1876 ..... | 13 | 11 | 17 | 8 | 223 | 103 | 104 | 38 | 241 | 98 | 6 | 862 |
| 1877 ..... | 13 | 3 | 27 | 14 | 141 | 113 | 90 | 60 | 260 | 84 | 10 | 815 |
| 1878 ..... | 6 | 1 | 27 | 5 | 255 | 116 | 108 | 54 | 216 | 75 | 13 | 876 |
| 1879 ..... | 18 | 8 | 29 | 14 | 73 | 123 | 146 | 44 | 239 | 85 | 13 | 792 |
| Total ..... | 50 | 23 | 100 | 41 | 692 | 455 | 448 | 196 | 956 | 342 | 42 | 3345 |

In prosecuting an enquiry into the causes of diseases that may particularly affect a population, it is of cardinal importance to ascertain the *seasonal distribution of the deaths* to which they give rise. With the view of finding out whether any peculiarities existed in the distribution of the infantile deaths, I sifted the mortality returns for the last four years, and kept separate the deaths under one year of age recorded in each quarter from the above-mentioned causes. The results are tabulated on the following page.

In looking over the figures contained in Table XIX. special attention should be given to the lines showing the *total* quarterly deaths from each cause registered during the four years, where from cumulation the differences in fatality from each cause are made more apparent. It will be seen by these totals that, with a decline in the deaths from Measles, Whooping Cough, Suffocation, Convulsions, and Lung Diseases, (most marked in the two latter complaints) the fatality during the third quarter was nearly double that recorded in any other quarter, owing to an increase in Diarrhœal deaths and a greater mortality from Asthenic Affections, to wit, Tubercular Diseases, Atrophy, and Premature Birth.

As being less difficult to comprehend, I have represented by means of columns the infant death-rates (proportion of deaths to 1000 births) in ten manufacturing towns during 1878. A careful study of these death gauges will show that, while the mortality in Leicester from all the diseases which do *not* exhibit a more fatal

incidence in the summer months bears favourable comparison with the other towns, the death-rates from such diseases as are attended with greater fatality during this season are above the average and, in some cases, very much so. The former group of maladies, as will be seen from the statement of quarterly deaths, includes Measles, Whooping Cough, Convulsions, Lung Diseases, Suffocation, and Dentition, and the latter comprises Diarrhœa, Tubercular Diseases, Atrophic Affections and Premature Birth.

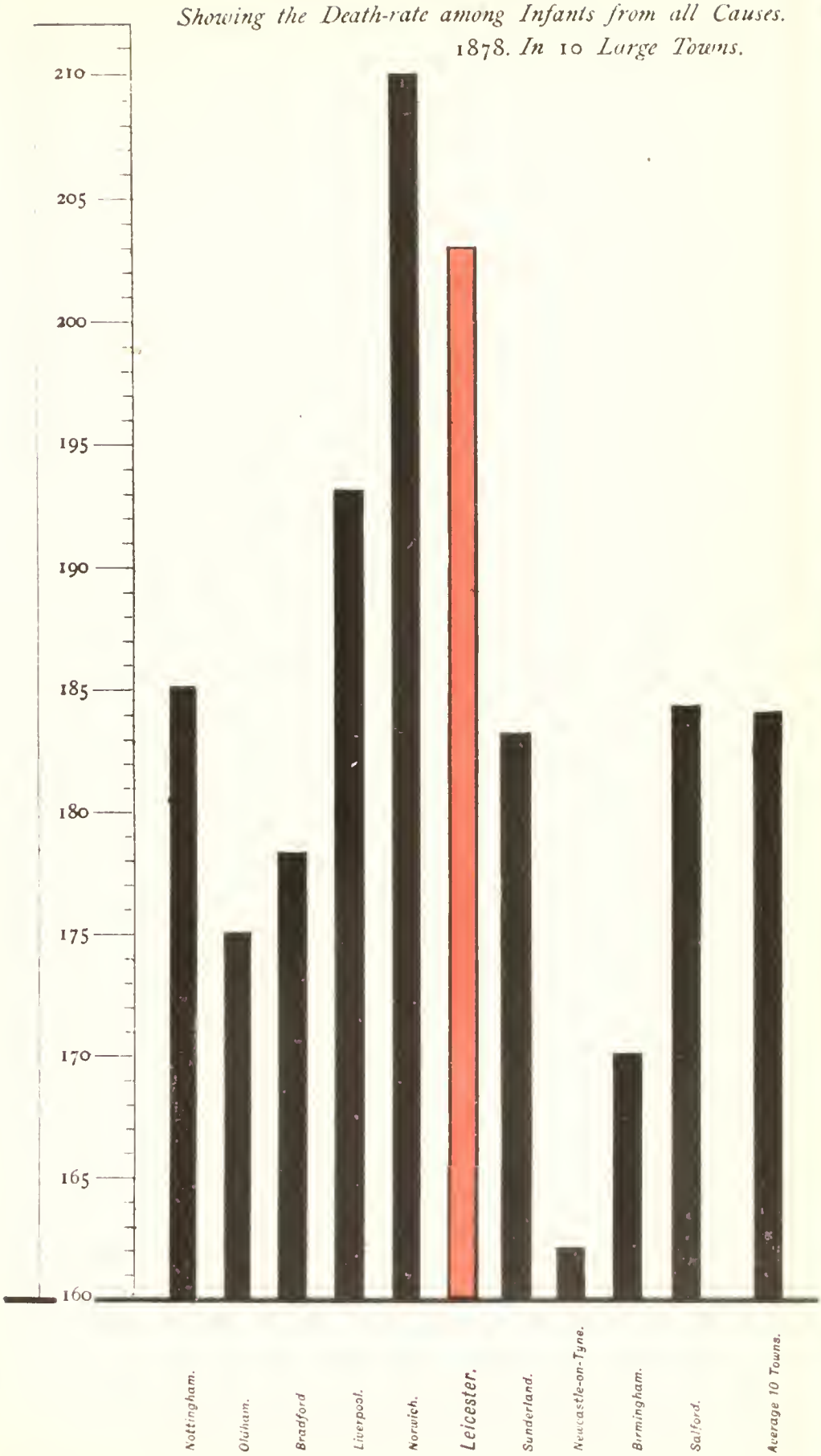
## TABLE XIX.

### Quarterly Deaths of Infants, 1876–'79.

| | Years. | Measles. | Scarlet Fever. | Whooping Cough. | Dentition | Diarrhœa | Convulsions. | Lung Diseases. | Tubercular Diseases. | Atrophy. | Premature Birth. | Suffocation. | Total Deaths. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1st Quarter. | 1876..... | 2 | 1 | 5 | 2 | 7 | 31 | 19 | 7 | 35 | 33 | 1 | 143 |
| | 1877..... | 9 | 2 | 7 | 3 | 1 | 44 | 30 | 6 | 52 | 24 | 4 | 182 |
| | 1878..... | 2 | 0 | 12 | 0 | 1 | 36 | 36 | 6 | 48 | 14 | 4 | 159 |
| | 1879..... | 9 | 0 | 6 | 5 | 5 | 36 | 46 | 10 | 42 | 19 | 7 | 185 |
| | Total ..... | 22 | 3 | 30 | 10 | 14 | 147 | 131 | 29 | 177 | 90 | 16 | 669 |
| 2nd Quarter. | 1876..... | 2 | 1 | 4 | 1 | 4 | 22 | 30 | 8 | 55 | 25 | 4 | 156 |
| | 1877..... | 3 | 0 | 7 | 5 | 1 | 32 | 28 | 14 | 64 | 17 | 3 | 174 |
| | 1878..... | 2 | 0 | 5 | 3 | 11 | 30 | 33 | 14 | 43 | 13 | 3 | 157 |
| | 1879..... | 7 | 0 | 10 | 5 | 4 | 40 | 43 | 11 | 54 | 24 | 4 | 202 |
| | Total ..... | 14 | 1 | 26 | 14 | 20 | 124 | 134 | 47 | 216 | 79 | 14 | 689 |
| 3rd Quarter. | 1876..... | 4 | 4 | 5 | 3 | 205 | 19 | 19 | 15 | 93 | 20 | 0 | 387 |
| | 1877..... | 0 | 1 | 8 | 5 | 132 | 19 | 11 | 29 | 92 | 21 | 2 | 320 |
| | 1878..... | 1 | 0 | 3 | 2 | 230 | 22 | 11 | 26 | 89 | 28 | 1 | 413 |
| | 1879..... | 1 | 1 | 8 | 2 | 54 | 24 | 16 | 12 | 66 | 28 | 0 | 212 |
| | Total ..... | 6 | 6 | 24 | 12 | 621 | 84 | 57 | 82 | 340 | 97 | 3 | 1332 |
| 4th Quarter. | 1876..... | 5 | 5 | 3 | 2 | 7 | 31 | 36 | 8 | 58 | 20 | 1 | 176 |
| | 1877..... | 1 | 0 | 5 | 1 | 7 | 18 | 21 | 11 | 52 | 22 | 1 | 139 |
| | 1878..... | 1 | 1 | 7 | 0 | 13 | 28 | 28 | 8 | 36 | 20 | 5 | 147 |
| | 1879..... | 1 | 7 | 5 | 2 | 10 | 23 | 41 | 11 | 77 | 14 | 2 | 193 |
| | Total ..... | 8 | 13 | 20 | 5 | 37 | 100 | 126 | 38 | 223 | 76 | 9 | 655 |

# PLATE 4.

*Showing the Death-rate among Infants from all Causes. 1878. In 10 Large Towns.*




ROYAL COLLEGE OF SURGEONS OF ENGLAND
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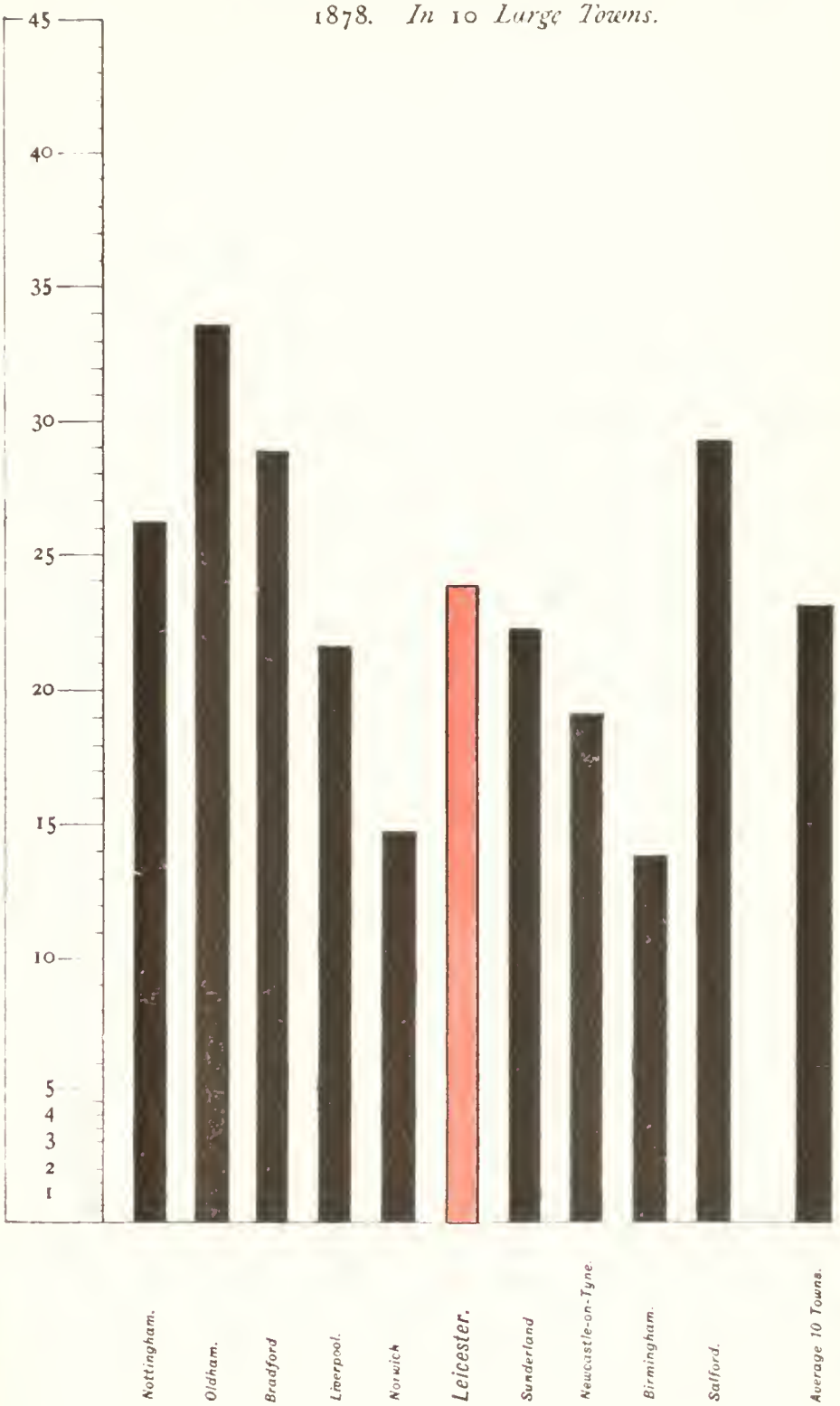
# PLATE 5.

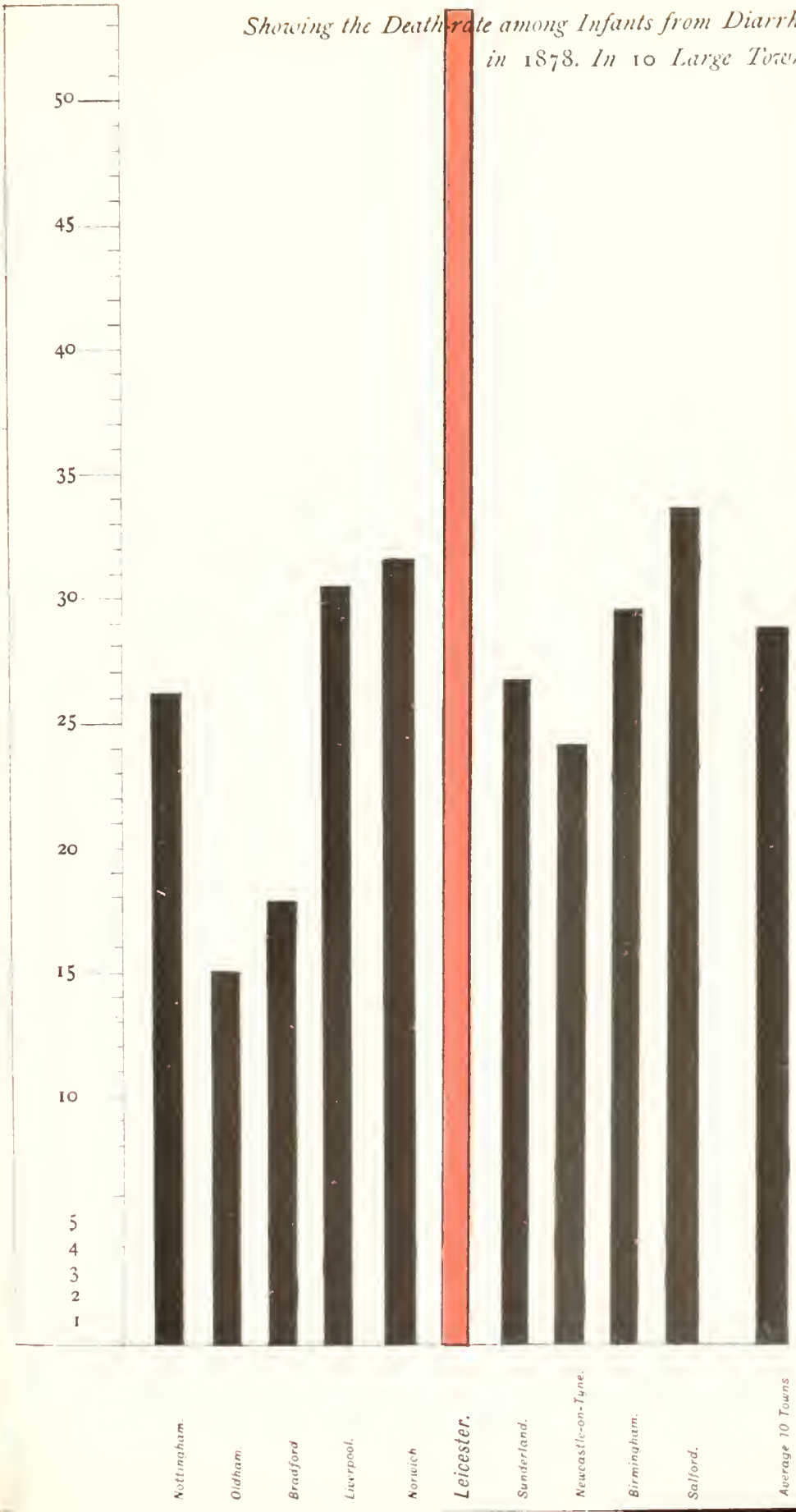
*Showing the Death-rate among Infants from Convulsions.*
1878. *In* 10 *Large Towns.*




OF SURGEONS OF ENGLAND
MAY 90

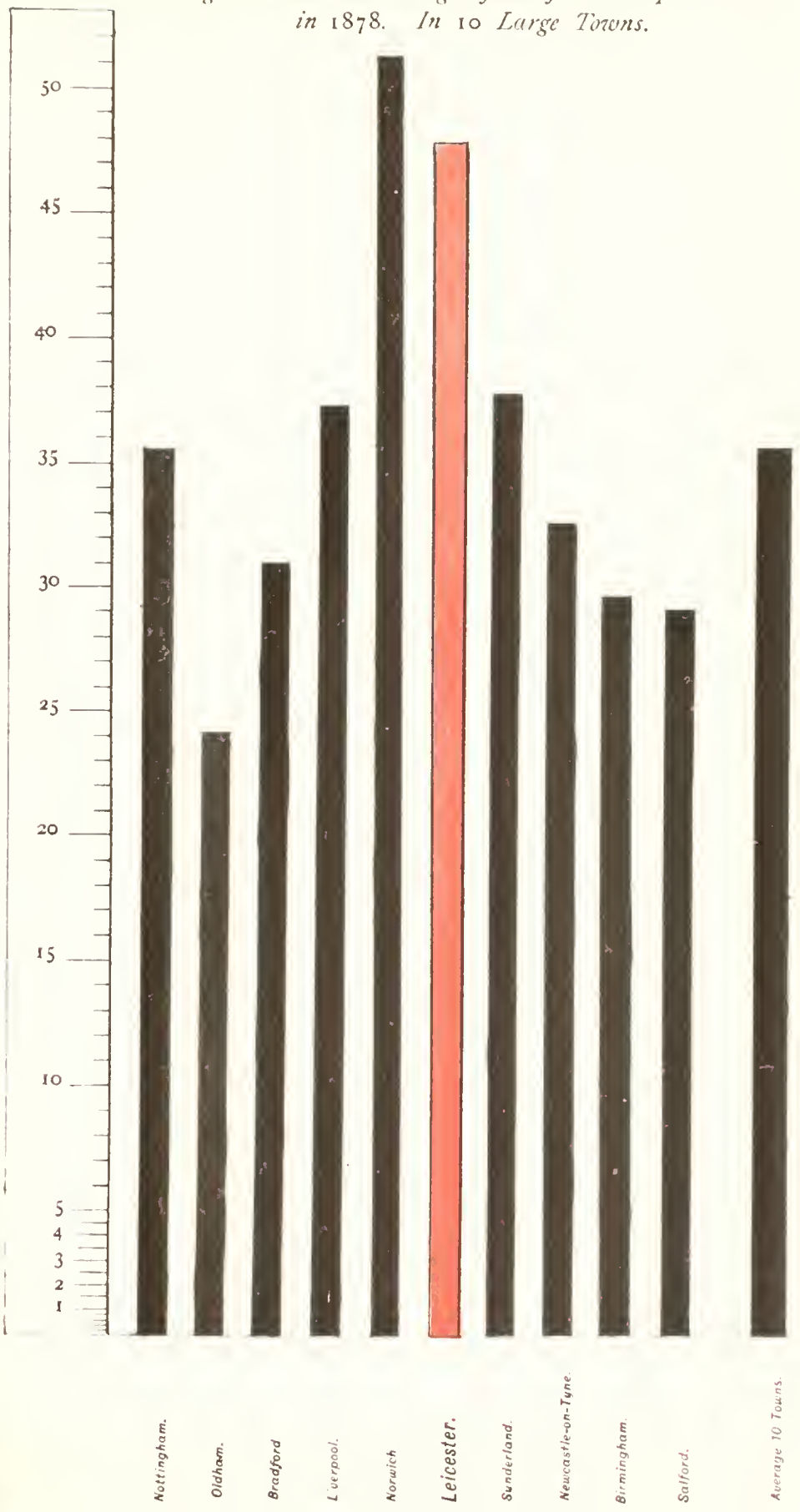
PLATE 6.

*Showing the Death-rate among Infants from Diarrhœa in 1878. In 10 Large Towns.*



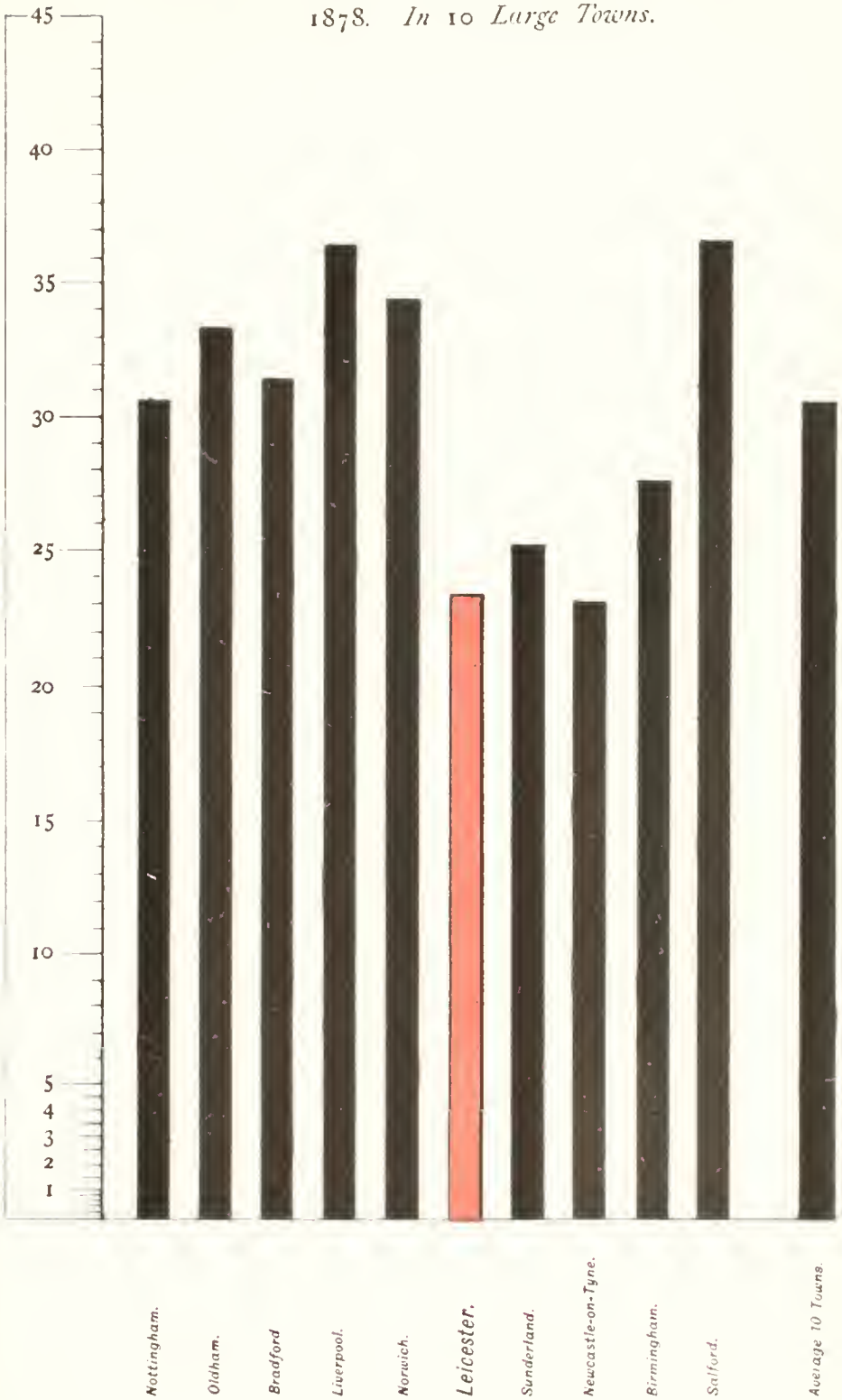
# PLATE 7.

*Showing the Death-rate among Infants from Atrophic Diseases in 1878. In 10 Large Towns.*



# PLATE 8.

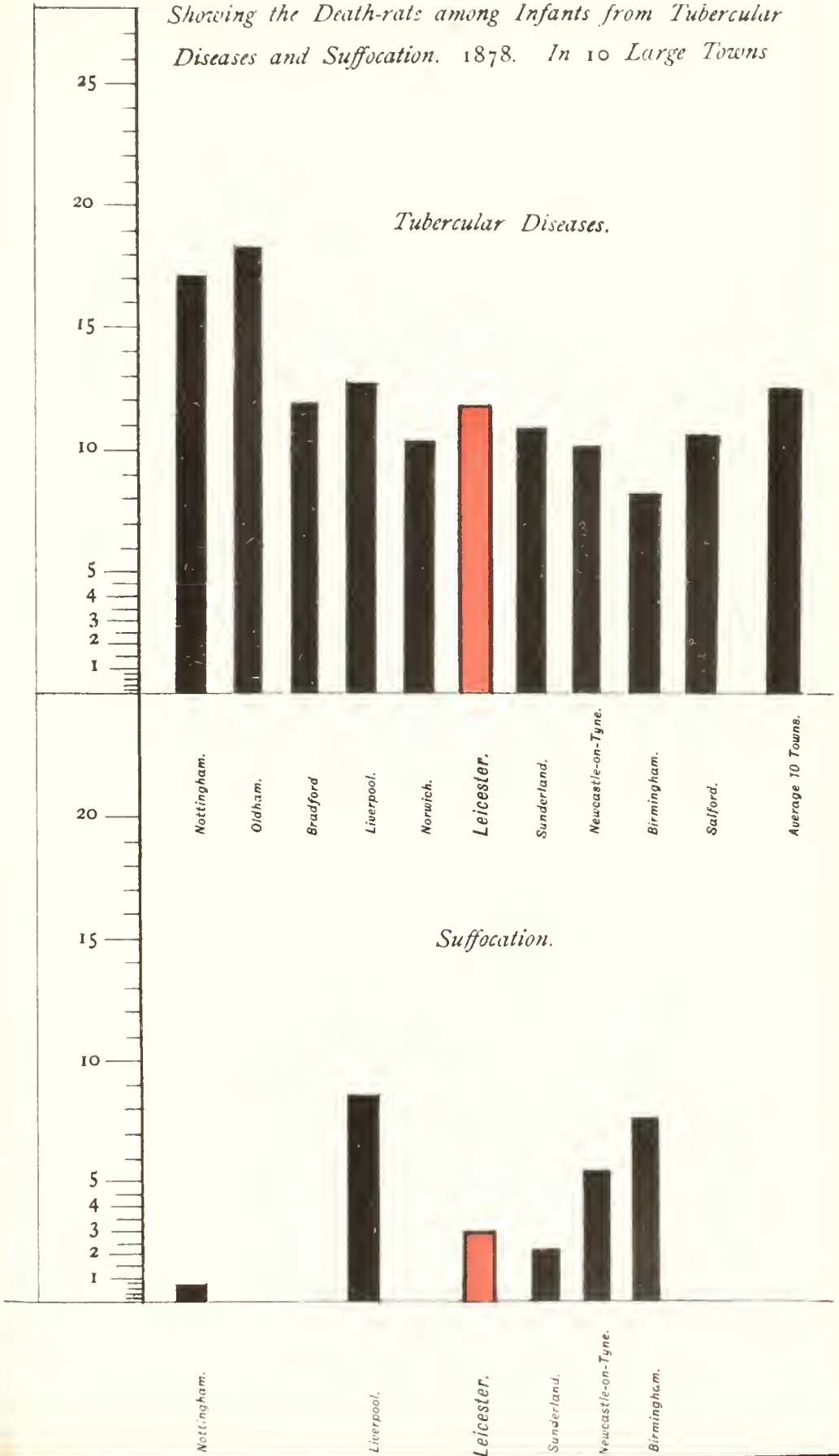
*Showing the Death-rate among Infants from Lung Diseases.*
1878. *In* 10 *Large Towns.*




21 MAY 90

# PLATE 9.

*Showing the Death-rate among Infants from Tubercular Diseases and Suffocation.* 1878. *In* 10 *Large Towns*

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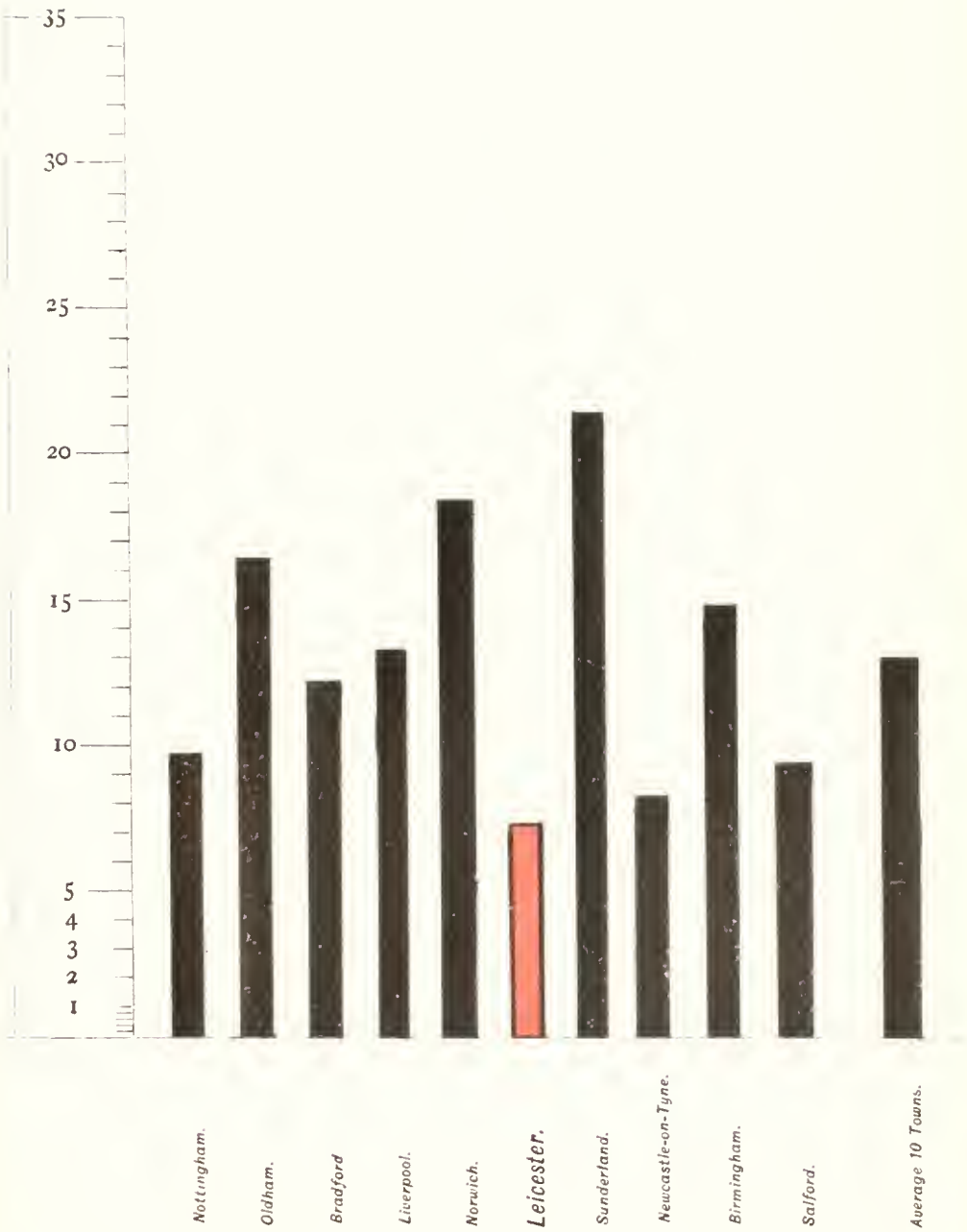
# PLATE 10.

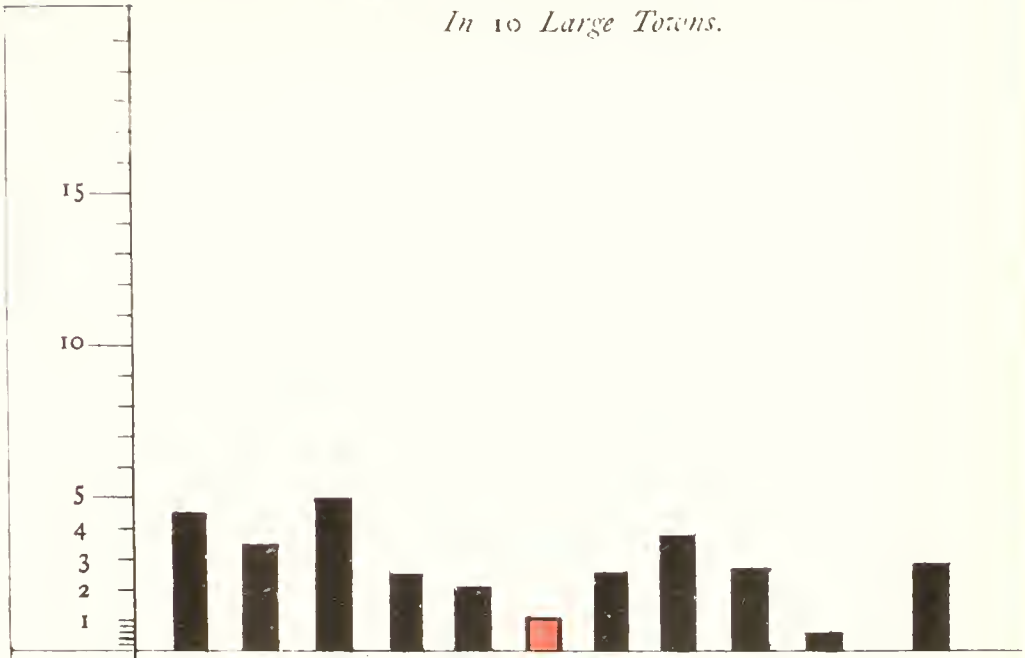
*Showing the Death-rate among Infants from the Zymotic Diseases, Measles, Scarlet Fever and Whooping Cough.* 1878.

*In* 10 *Large Towns.*

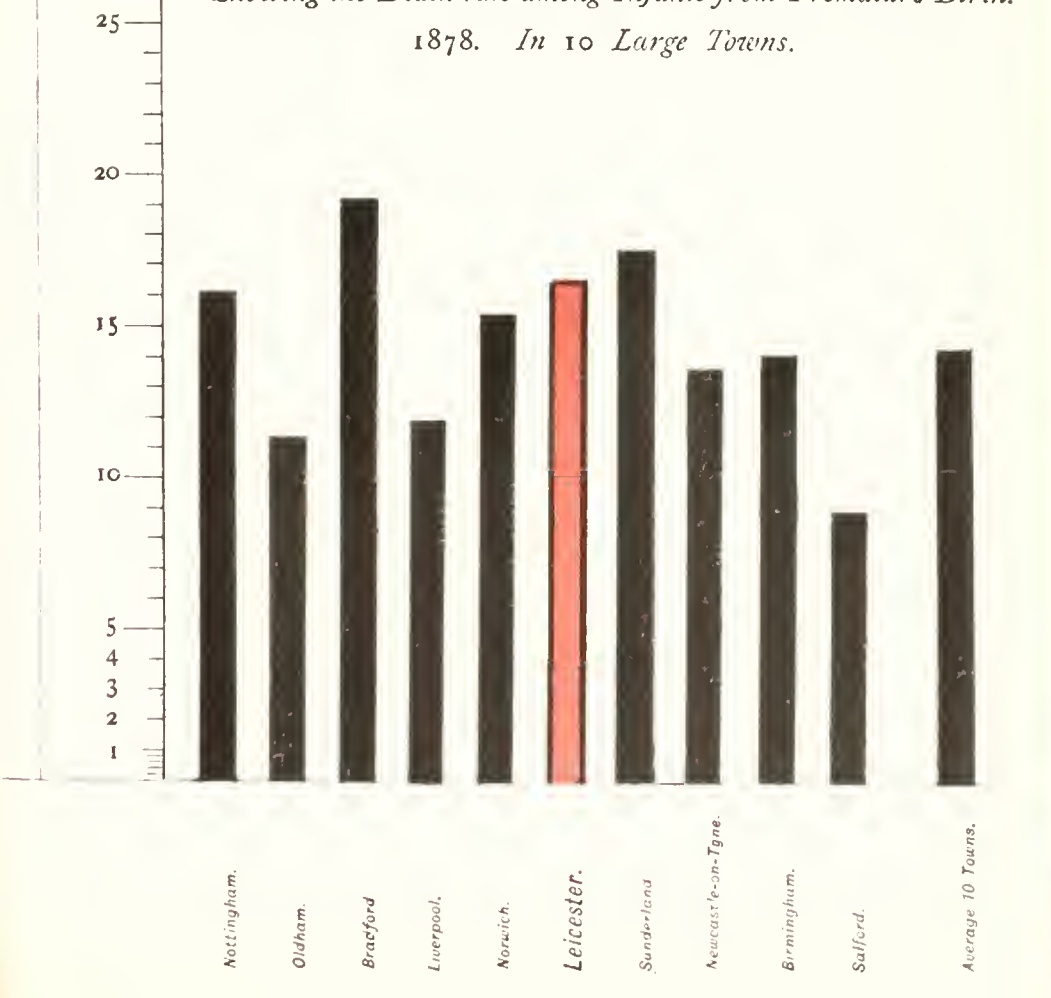


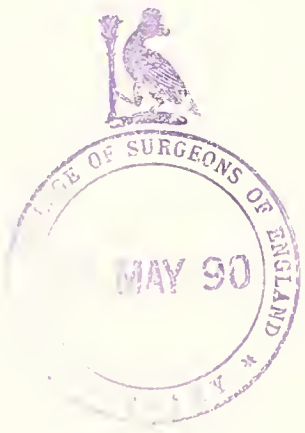
# PLATE II.

*Showing the Death-rate among Infants from Teething.* 1878.
*In* 10 *Large Towns.*




*Showing the Death-rate among Infants from Premature Birth.*
1878. *In* 10 *Large Towns.*




OF SURGEONS OF ENGLAND
MAY 90

I attribute much of the fatality among infants during the summer to the air becoming impure through admixture with sewer emanations here rendered specially hurtful in that they come from sewers containing deposit. This factor in the causation of infant deaths is, of course, at this season supplemented through the ignorance and neglect shown by mothers in the rearing of their children, and I regard these neglectful habits as constituting the chief cause of a great part of the fatality sustained during the other seasons of the year.

Some medical men look upon the excess yearly observed in the infant death-rate in Leicester, as the result and indication of a greater prevalence of vicious habits among the mothers in the town than is to be found in other manufacturing town districts. With this I cannot agree for, if such were the case, the maternal neglect, by proving equally prejudicial to infant life under every ailment, should cause the rates of mortality from *all* infantile seizures to show an excess over the fatality in other towns. By referring, however, to the plates of death gauges it will be seen that an excess was by no means general to all diseases but was observed in only a few of them. Again, if neglect and disregard of the requirements of infant life were of such common occurrence among the mothers in the town, the condition of the children at higher ages should afford unmistakable signs of a proportionate want of care. I enquired of several of the School Board Masters whether the children in Leicester presented a more uncared-for appearance than those in other towns, and they told me that the general appearance of the children bore strong evidence of even greater maternal care than they had noticed elsewhere.

In concluding this subject I would draw attention to and recommend the adoption of some of the remedial measures suggested by medical men during a special inquiry instituted, in 1877, into the causes of the excessive infantile mortality in Macclesfield. These were:

"I. That the mother should be restricted from working for a limited period before and after confinement.

"II. That crèches or nursing homes should be established under medical inspection and visited by Ladies' Committees.

"III. That the sale of narcotics and injurious soothing drugs should be limited.

"IV. That a more rigid enquiry should be made into the cause of all uncertified deaths, and medical evidence taken.

"V. That all available means be taken to enlighten ignorant and careless parents as to their responsibilities and duties; that Dr. Lancaster's 'Plain Rules for the Management of Infants' be distributed constantly; that lady missionaries, the clergy, ministers, and other visitors to the poor, be fervently invited to remind mothers, at all times and seasons, of the efficacy of these rules, and most of all of the value of pure milk for infants instead of bread and water, tea, and other unassimilating food, and the necessity of thorough cleanliness as a condition of health."

It is now over two years since I first drew attention to the Public Nursery as a means to prevent much of the infantile suffering and mortality arising from want of maternal care and proper nourishment. In some branches of manufacture in Leicester female labour is an absolute necessity, and there is no doubt that the daily withdrawal of mothers from their homes is attended with most mischievous results to infant life. The high infant death-rate in the Borough during 1879 fully justifies me in again bringing the subject of Nurseries under the notice of the Health Authorities in the hope that they will, if possible, undertake the establishment of homes in several parts of the town. I can certainly speak from personal experience of the practical good of our only local Crèche—the Day Nursery in Metcalf Street. Notwithstanding the unusual depression in trade during last year there was a daily attendance of over 20 infants in this Nursery. A Crèche, after the first outlay of fitting up, should be self-supporting; and in regard to the Metcalf Street Nursery, excepting for the annual rent of the rooms which still devolves upon the Executive Committee, it is self-supporting, and with no very great increase of children it would be entirely so in every way.

By the establishment of Day Nurseries in different parts of the town, well ventilated homes would be provided for the infants of mothers engaged in factories and, with respectable women as nurses,

the children would there partake of wholesome food, they would also receive careful nursing, and derive additional advantage from a regulated warmth and daily washing.

The town itself would be benefited by these institutions for, from personal observation, I feel convinced that many "farmed" children who droop, sicken, waste, and die, would, under good nursing and fostering care in a well-appointed Nursery, remain plump and healthy and develop into vigorous children; these, in years to come, would engage in life with robust constitutions, and eventually form a not insignificant number of active and useful members of the community.

# SANITARY WORK.

The general Sanitary work of the Borough was well attended to, and carefully carried out, during 1879; and I wish to take this opportunity of expressing my satisfaction at the efficient manner in which Inspectors Buxton and Braley discharged their duties.

## NUISANCES.

During the year ending 31st December, 1879, 804 orders were served on owners of house property to cleanse and lime wash Filthy Houses.

The number of Notices, sent out for the abatement of various Nuisances, was 631. In 109 instances, notices were given to repair defective or private street drains which required opening and clearing from obstruction; in 32, to efficiently trap defective drains; in 30, to disconnect sink drains from the sewer; in 37, to reconstruct or repair foul ash-pits; in 42, to provide sufficient privy accommodation; in 18, to properly pave back yards; and in 114, to make good foul or defective urinals.

Notices were also served for the following Nuisances: 23, arising from swine keeping; 17, caused by water in cellars; and 9, due to chimneys emitting black smoke from 5 to 20 minutes in the hour.

## WELL WATERS.

The number of well waters submitted in the year, by the Inspectors for analysis, was 206. Of these only 85, or 41 per cent., were reported as polluted, and 84 of the wells were closed. The number of premises, where tap water was substituted for well water, was 89.

## SLAUGHTER HOUSES.

The Slaughter Houses are all registered and inspected periodically. There are no less than 76 of these places in the town—a much greater number than should exist seeing that spacious Public Abattoirs have been erected, at considerable cost, by the Corporation.

## SEIZURES OF UNWHOLESOME FOOD.

The weight of unwholesome food seized by the Food Inspector, during 1879, was equal to 15,193 lbs., and comprised 10,722 lbs. of beef, mutton, ham, &c.; 1810 lbs. of fish, and 2661 lbs. of fruit. The amount of this unsound food destroyed on the recommendation of the Inspector, and with the owner's consent, was 9,340 lbs. of meat, 1,586 lbs. of fish, and 2,661 lbs. of fruit; the remaining quantity of the food was condemned by the Magistrates, the owners were prosecuted, and penalties, varying from £5 to £200, inflicted.

## THE REGISTRATION OF DAIRIES, COW SHEDS, AND MILK SHOPS.

Several cases of Scarlet Fever came under my observation last year which I strongly suspected were caused through drinking milk contaminated with Scarlet Fever poison. On the 9th July, 1879, the Privy Council issued an Order relating to Dairies, Cow Sheds, and Milk Shops. This Order includes provisions for preventing the dairyman, if he himself or any member of his family be suffering from infectious disease, from engaging in his trade; additional provisions are made empowering the local authorities to give public notice for the registration of Cow-keepers and Milk-men, and to make regulations for the proper cleansing of Dairies, &c.

I think it highly desirable that the Health Authorities in Leicester should draw up regulations similar to those at present enforced in other towns, for there can be no doubt that the operation of such regulations would prove of great benefit to the town at large.

The following is a Copy of the Regulations at present in force within the Borough of Sunderland :—

## REGULATIONS FOR THE CLEANSING OF DAIRIES, COW SHEDS, AND MILKSHOPS.

1. Every person occupying a Cow Shed, shall cause the same to be thoroughly cleansed, and flushed with water, at least twice every day, and the yard attached to such Cow Shed to be cleansed and flushed in the same manner at least once a day.

2. Every person occupying a Cow Shed shall cause all troughs, mangers, grain-tubs, and other receptacles for feeding, or the storage of fodder, to be kept thoroughly clean and free from offensive smell.

3. Every person occupying a Cow Shed, shall provide a properly-covered place or receptacle outside the shed for dung and other refuse.

4. Every person occupying a Cow Shed shall cause all dung, manure, and refuse to be removed from the premises before eight o'clock in the morning at least once in each week, or as often as may be required by the Medical Officer of Health or Inspector of Nuisances.

5. Every person occupying a Cow Shed shall cause the inner walls thereof, and every part of the premises to be kept thoroughly clean at all times, and shall cause the inner surface or ceiling and the upper portion of the walls to be thoroughly coated with lime-wash at least once in every quarter, viz. :—in the months of January, April, July, and October, and the woodwork of the stalls at least once in every four weeks.

6. Every Cow Keeper, Dairyman, or Purveyor of Milk shall cause his Dairy or Milk Shop to be kept thoroughly clean and sweet at all times, and the walls thereof to be lime-washed at least once in every month, and the floors thereof to be well scrubbed and cleansed at least once in every day.

7. Every Cow Keeper, Dairyman, or Purveyor of Milk shall cause all vessels used for the reception and delivery of the Milk to be thoroughly cleansed with soda and water, and rinsed with boiling water, and well aired, shortly after each time of their being used, and shall also at the same time cause the tables, &c., on which such milk vessels are placed, to be thoroughly scrubbed and cleansed.

8. The Medical Officer of Health, Inspector of Nuisances, or other Officer appointed by the Local Authority, shall at all reasonable times be admitted into any Cow Shed, Dairy, or Milk Shop, for the purpose of examining as to the cleansing of the same, and of the observance of the foregoing regulations.

9. Every person who shall offend against any of the foregoing regulations, shall be liable to a penalty not exceeding £5.

# APPENDIX

TO THE

# REPORT

OF THE

# MEDICAL OFFICER OF HEALTH,

# 1879.

# STREETS IN WHICH DEATHS OCCURRED FROM ZYMOTIC DISEASES DURING THE YEAR 1879.

## MEASLES.

23, Abbey-street
19, Church-gate
22, Abbey-street
73, Argyle-street
27, Green-street
129, Dorset-street
7, Old Mill Lane
59, Thames-street
2, Foundry-square
14, Denman-street
102, Charnwood-street
27, Benford-street
26, Painter-street
61, Frank-street
22, Queen-street
Curzon-street
48, Birstall-street
53, Archdeacon-lane
57, Oak-street
50, Birstall-street
191, „ „
2, St. George-street
18, Gold-street
2, Spitalhouse-street
1, Providence-place
44, Bedford-street
292, Birstall street
23, Leadenhall-street
Court H, Bedford-street
25, Willow-street
3, Underhill-street
29, Willow Bridge-street
18, Woodboy-street
Court D, Sanvey-gate
Court B, Rutland-street
17, Grafton-place
5, New-road
12, Colton-street
12, Freehold-street
Chester-street
Bartholomew-street
Biddulph-street
84, Gladstone-street
16, Watling-street
26, Lewin-street
10, Hull-street
79, Deacon-street
14, Garton-street
76, Outram-street
9, Vauxhall-street
21, Blue Boar-lane
Jarrom-street
39, Ruding-street
15, Alexander-street
3, Jarvis-street
15, „ „
4, „ „
12, Mansfield-street
72, Denman-street
9, Syston-street
99, Cobden-street
12, Harcourt-street
4, Royal East-street
160, Willow-street
Navigation-street
Larch-street

# SCARLATINA.

8, Denman-street
45, Waring-street
30, Rudkin-street
20, Eaton-street
45, Providence-place
2, Upper Charnwood-street
51, Southampton-street
13, Charnwood-street
16, Newby-street
57, Elm-street
34, York-street
6, Slawson-street
209, Dorset-street
6, Slawson-street
15, Colton-street
78, Argyle-street
7, York-street
125, Syston-street
Court A, Charles-street
11, Stoughton-street
21, Occupation-road
79, Crafton-street
36, Argyle-street
5, Gravel-street
13, Birstall-street
6, Albion-street
3, Richard-street
5, Denmark-terrace
11, „ „
50, Cedar-road
15, Spinney Hill-road
85, Charnwood-street
5, Church-gate
84, Stoughton-street
84, Clipstone-street
20, Welford-road
65, All Saints' Road
50, „ „ „
55, Causeway-lane
York-street
Brown-street
26, Grange-lane
23, Goswell-street
3, St. Leonard's-street
51, Gray-street
59, Causeway-lane
9, Parliament-street
6, Blue Boar-lane
23, Parliament-street
39½, Oxford-street
8, Lower Brown-street
Court B, Oxford-street
St. Peter's-lane
39, Oxford-street
19, East Bond-street
49, Lower Brown-street
Friars-causeway
46, Knighton-street
3, Albert-street
55, Catesby-street
13, Mowbray-street
45, Grange-lane
13, „ „
Grange-lane
22, New Park-street
42, Havelock-street
11, Foxon-street
25½, New Bridge-street
8½, Grange-lane
Court N, Oxford-street

62, Knighton-street
9, Park-street
24, Narborough-road
42, Swan-street
8, Jarrom-street
Victoria-street
29, New Bridge-street
Braunstone-gate
11½, Lower Brown-street
6, Chesnut-street
6, Bonner's-lane
Fosse-road
47, Outram street
36, High-street
25, New Bridge-street
10, Bonner's-lane
16, Denmark-terrace

## DIPHTHERIA.

28, Nichols-street
190, Syston-street
3, Norton-street
Court B, Bonner's-lane
69, Laxton-street
7, Albert-street
8, Gray-street
21, Norfolk-street
43, St. Peter's-lane

## FEVER.

Myrtle-road
3½, Providence-place
42, Benford-street
37, Albion-street
29, Framland-street
16, Bay-street
187, Argyle-street
173, Syston-street
12, Burley's-lane
Infirmary
22, Jewry Wall-street
36, „ „
16, Narborough-road
18, Lower Redcross-street
18, Regent-street
Bow Bridge-street
80, Walnut-street
Court B, Oxford-street

## WHOOPING COUGH.

Curzon-street
117, Upper Conduit-street
65, Denman-street
209, Dorset-street
Court H, Sanvey-gate
25, Providence-place
3, Brook-street
146, Birstall-street
31, Lower Willow-street
16, Nelson-square

1, Old Mill-lane
37, Liverpool-street
55, Guthlaxton-street
Leadenhall-street
10, Baker-street
31, Stoughton-street
16, Nelson-square
18, Gravel-street
8, Fox Lane
16, Gravel-street
61, Birstall-street
51, „ „
9, Chester-street
Fleet-street
32, Midland street
136, Brunswick-street
95, Clipstone-street
25, Nichols-street
13, St. Saviour's-road
18, Midland-street
177, Upper Conduit-street
Charnwood-street
2, Hastings-terrace
84, Willow Bridge-street
39, Biddulph-street
47, Albion-street
95, Belgrave-gate
9, Elbow-lane
4, Durham-street
2, Junior-street
47, Jewry Wall-street
10½, Highcross-street
41, Buckingham-street
21, All Saints'-open
18, Buckingham-street
10, Arundel-street
25, West-street
32, Vauxhall-street
40, Redcross-street
16, Church-gate
Brown-street
49, Filbert-street
5, Southgate-street
13, Bradgate-street
7, Countess-street
3, Chestnut-street
54, „ „

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## DIARRHŒA.

135, Belgrave-gate
34, Leadenhall-street
40, Devonshire-street
8, Richard-street
34, Providence-place
20, Sherrard-street
268, Syston-street
79, Martin-street
52, Gresham-street
166, Humberstone-road
Court D, Humberstone-Gate
33, Northampton-street
154, Willow-street
4, Gravel-street
28, Burley's-lane
83, Argyle-street
Allington-street
59, Fleet-street
12, Pike-street
24, Watling-street

# TABLE XXI.

## METEOROLOGICAL OBSERVATIONS

TAKEN AT THE TOWN MUSEUM, LEICESTER, A STATION 238 FEET ABOVE SEA-LEVEL. INSTRUMENTS BY CACELLA, AND CERTIFIED AT KEW OR GREENWICH.

W. JEROME HARRISON, F.G.S., CURATOR.

### 1878.

| Date. | Barometer cor. | Temperature. | | | Humidity | Rainfall. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Max. | Min. | Average. | | Total. | No. of Rainy Days. | Max. fall. | Date. |
| January ... | 30·085 | 44·5 | 36·4 | 40·4 | 87·9 | 1·57 | 19 | ·48 | 27 |
| February.. | 30·236 | 46·6 | 36·8 | 41·7 | 84·9 | 1·24 | 13 | ·34 | 12 |
| March ... | 30·035 | 47·2 | 35·2 | 41·2 | 78·9 | 0·69 | 13 | (s) ·23 | 27 |
| April ..... | 29·831 | 54·6 | 38·8 | 46·7 | 82·6 | 1·57 | 14 | ·47 | 20 |
| May ..... | 29·759 | 61·2 | 44·8 | 53·0 | 81·8 | 4·71 | 25 | 1·14 | 7 |
| June ..... | 29·923 | 65·9 | 49·6 | 57·8 | 74·9 | 1·70 | 15 | ·44 | 9 |
| July ..... | 30·039 | 67·6 | 51·9 | 59·7 | 76·5 | 2·04 | 8 | 1·21 | 24 |
| August ... | 29·736 | 67·5 | 52·5 | 60·0 | 82·8 | 6·76 | 22 | 1·78 | 3 |
| September | 29·957 | 61·3 | 47·1 | 54·2 | 86·0 | 1·82 | 14 | ·45 | 7 |
| October ... | 29·744 | 55·0 | 43·7 | 49·3 | 88·7 | 2·57 | 20 | ·40 | 24 |
| November | 29·759 | 42·4 | 33·3 | 37·9 | 85·0 | 3·25 | 19 | ·56 | 24 |
| December | 29·735 | 36·3 | 27·3 | 31·8 | 86·2 | 1·81 | 15 | ·42 | 26 |
| Averages.. | 29·904 | 54·2 | 41·4 | 47·8 | 83·0 | ... | ... | Greatest fall during year, 1·78 Aug. 3. | |

### 1879.

| Date. | Barometer cor. | Temperature. | | | Humidity | Rainfall. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Max. | Min. | Average. | | Total. | No. of Rainy Days. | Max. fall. | Date. |
| January ... | 29·828 | 34·6 | 26·6 | 30·7 | 86·8 | 1·33 | 11 | ·29 | 14 |
| February.. | 29·541 | 41·5 | 34·1 | 37·8 | 88·9 | 1·96 | 22 | ·30 | 8 |
| March ... | 29·977 | 47·3 | 34·5 | 40·9 | 83·6 | 0·68 | 14 | ·12 | 28 |
| April ..... | 29·707 | 49·0 | 36·2 | 42·6 | 82·4 | 2·11 | 18 | (s) ·49 | 14 |
| May ..... | 30·010 | 55·7 | 40·2 | 47·9 | 81·2 | 3·22 | 22 | ·79 | 14 |
| June ..... | 29·775 | 61·6 | 52·4 | 57·0 | 87·4 | 4·34 | 24 | ·79 | 7 & 30 |
| July ..... | 29·773 | 64·2 | 51·7 | 58·0 | 83·6 | 3·72 | 23 | ·75 | 13 |
| August ... | 29·809 | 66·1 | 51·9 | 59·0 | 87·8 | 4·01 | 19 | 1·18 | 2 |
| September | 29·946 | 61·4 | 46·9 | 54·1 | 86·6 | 3·33 | 15 | ·68 | 13 |
| October .. | 30·129 | 54·5 | 43·2 | 48·9 | 89·7 | 0·91 | 15 | ·30 | 2 |
| November | 30·223 | 44·5 | 34·4 | 36·4 | 84·5 | 1.09 | 16 | (R S) ·37 | 20 |
| December | 30·293 | 37·2 | 25·8 | 31·5 | 86·6 | 0·95 | 11 | ·34 | 31 |
| Averages.. | 29·918 | 51·5 | 39·8 | 45·6 | 86·5 | ... | ... | Greatest fall during year, 1·18 Aug. 2. | |


OF SURGEONS OF ENGLAND
21 MAY 90

# TABLE OF DEATHS FOR THE QUARTER ENDING MARCH 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 5 | 4 | 6 | 5 | 2 | 3 | - | 2 | - | 1 | 13 | 15 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 13 | 18 | 31 |
| Scarlet Fever... ... ... | - | - | 1 | 1 | - | 1 | 1 | - | - | - | 2 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 3 | 2 | 5 |
| Diphtheria ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | 1 | 2 | - | 1 | - | - | - | 1 | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 1 | 5 |
| Whooping-cough ... ... | 3 | 3 | 4 | 5 | 1 | 2 | - | 3 | 1 | - | 9 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 9 | 13 | 22 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | 1 | - | - | - | - | - | - | - | 1 | 2 | - | 1 | 1 | - | 1 | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 3 | 4 | 4 | 8 |
| Erysipelas ... ... ... | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | 1 | 2 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 2 | 3 | 1 | - | - | - | - | - | - | - | 3 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 3 | 6 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | 1 | 2 | 1 | 2 | 3 |
| Bronchitis ... ... .. | 19 | 15 | 10 | 9 | 3 | 2 | 1 | - | - | - | 33 | 26 | 1 | - | - | - | - | 1 | - | 3 | - | 4 | 3 | 6 | 11 | 9 | 17 | 17 | 14 | 9 | 11 | 1 | 1 | 51 | 57 | 84 | 83 | 167 |
| Pneumonia ... ... ... | 8 | 4 | 3 | 5 | - | - | 1 | 2 | 1 | 2 | 13 | 13 | - | - | - | - | 1 | 1 | - | - | 5 | - | 3 | - | - | 3 | - | 1 | 2 | 1 | 1 | - | - | - | 12 | 6 | 25 | 19 | 44 |
| Convulsions ... ... ... | 20 | 19 | 4 | 2 | 2 | 2 | 1 | 1 | - | - | 27 | 24 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27 | 24 | 51 |
| Atrophy ... ... ... ... | 26 | 16 | 3 | 3 | 4 | - | - | - | - | - | 33 | 19 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 34 | 19 | 53 |
| Dentition ... ... ... | 4 | 3 | 1 | 2 | 1 | 1 | - | - | - | - | 6 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 6 | 12 |
| Premature Birth ... ... | 10 | 9 | - | - | - | - | - | - | - | - | 10 | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 | 9 | 19 |
| Phthisis ... ... ... ... | 3 | 1 | 1 | 1 | 3 | 1 | - | - | - | - | 7 | 3 | 1 | 2 | - | - | 2 | 2 | 2 | 2 | 6 | 6 | 3 | 9 | 2 | 4 | - | 1 | - | - | - | - | - | - | 17 | 25 | 24 | 28 | 52 |


21 MAY 90

# TABLE OF DEATHS FOR THE QUARTER ENDING SEPTEMBER 30TH, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 1 | - | 2 | 1 | 1 | - | - | 1 | - | - | 4 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 2 | 6 | |
| Scarlet Fever... ... ... | 1 | - | 6 | 2 | 4 | 2 | 3 | 2 | 5 | 2 | 19 | 8 | 3 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 6 | 22 | 14 | 36 |
| Diphtheria ... ... ... | - | - | 2 | - | - | - | 1 | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 3 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 2 | - | 2 |
| Whooping-cough ... ... | 5 | 3 | 1 | - | - | 1 | - | - | - | 1 | 6 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 5 | 11 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 | - | - | 1 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 2 | 4 | 2 | 6 |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 30 | 24 | - | 4 | 2 | - | - | - | - | - | 32 | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | 33 | 28 | 61 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Bronchitis ... ... ... | 9 | 4 | 4 | 6 | - | 1 | - | 1 | - | - | 13 | 12 | - | - | - | - | - | - | - | - | - | - | 1 | 2 | 1 | 3 | 2 | 3 | 4 | - | 1 | - | - | 8 | 9 | 21 | 21 | 42 |
| Pneumonia ... ... ... | 3 | - | 2 | 1 | - | - | 1 | 1 | - | - | 6 | 2 | - | 1 | - | - | 1 | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | 1 | - | - | 2 | 3 | 8 | 5 | 13 |
| Convulsions ... ... ... | 13 | 11 | - | 2 | 1 | 1 | - | - | - | - | 14 | 14 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 14 | 28 |
| Atrophy ... ... ... ... | 36 | 30 | 2 | 3 | 2 | 1 | - | - | - | - | 40 | 34 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 34 | 74 |
| Dentition ... ... ... | 1 | 1 | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 |
| Premature Birth ... ... | 11 | 17 | - | - | - | - | - | - | - | - | 11 | 17 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 17 | 28 |
| Phthisis ... ... ... ... | 2 | - | 4 | - | - | - | - | - | - | - | 6 | - | 1 | - | - | - | 2 | 3 | 2 | 7 | 7 | 5 | 3 | 3 | 4 | 2 | - | - | - | - | - | - | - | - | 19 | 20 | 25 | 20 | 45 |

# TABLE OF DEATHS FOR THE QUARTER ENDING DECEMBER 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | - | 1 | 3 | 2 | - | 2 | 3 | - | - | - | 6 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet Fever... ... ... | 5 | 2 | 6 | 1 | 5 | 6 | 5 | 4 | 4 | 4 | 25 | 17 | 11 | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 5 | 11 |
| Diphtheria ... ... ... | 1 | 1 | - | 1 | - | 1 | - | - | - | - | 1 | 3 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 4 | 36 | 21 | 57 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | 1 | 2 | 4 | 6 |
| Croup ... ... ... ... | - | - | - | - | 1 | - | - | 2 | 1 | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping-cough ... ... | 3 | 2 | - | 2 | 2 | 1 | - | - | - | 1 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | 3 | 2 | 5 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 6 | 11 |
| Enteric or Typhoid Fever | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 3 | 1 | 4 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 3 | 7 | - | - | - | - | - | - | - | - | 3 | 7 | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | 2 | - | 5 | 7 | 12 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Bronchitis ... ... ... | 18 | 11 | 3 | 3 | - | 1 | 1 | 3 | - | - | 22 | 18 | - | 2 | - | - | - | - | - | - | 1 | - | 3 | 3 | 2 | 5 | 5 | 4 | 11 | 16 | 2 | 5 | - | 1 | 24 | 36 | 46 | 54 | 100 |
| Pneumonia ... ... ... | 7 | 4 | 6 | 2 | 1 | 3 | 2 | 1 | - | - | 16 | 10 | 2 | 1 | - | 1 | - | - | - | - | 1 | 3 | 2 | 1 | 2 | 1 | 3 | 2 | 2 | 3 | 1 | - | - | - | 13 | 12 | 29 | 22 | 51 |
| Convulsions ... ... ... | 14 | 9 | 1 | 2 | - | - | - | - | - | 1 | 15 | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 12 | 27 |
| Atrophy ... ... ... ... | 39 | 37 | 2 | 3 | 1 | - | - | - | - | - | 42 | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | 40 | 82 |
| Dentition ... ... ... | - | 2 | 1 | 1 | - | - | - | - | - | - | 1 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 3 | 4 |
| Premature Birth ... ... | 7 | 7 | - | - | - | - | - | - | - | - | 7 | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 7 | 14 |
| Phthisis ... ... ... ... | 3 | 1 | 2 | - | - | - | - | - | - | - | 5 | 1 | - | - | 1 | - | 4 | 2 | - | 3 | 5 | 10 | 6 | 5 | 4 | 4 | - | 2 | - | - | - | - | - | - | 20 | 26 | 25 | 27 | 52 |


MAY 90
LIBRARY

# TABLE OF DEATHS FOR THE YEAR ENDING DECEMBER 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 10 | 8 | 18 | 10 | 4 | 6 | 5 | 6 | 1 | 1 | 37 | 32 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet Fever... ... ... | 6 | 2 | 13 | 6 | 9 | 9 | 10 | 6 | 10 | 6 | 48 | 29 | 15 | 11 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 37 | 35 | 72 |
| Diphtheria ... ... ... | 1 | 1 | 2 | 1 | - | 1 | 1 | - | - | - | 4 | 3 | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 13 | 63 | 42 | 105 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 2 | 2 | 6 | 5 | 11 |
| Croup ... ... ... ... | - | 1 | 2 | - | 3 | - | - | 2 | 2 | - | 7 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping-cough ... ... | 12 | 17 | 6 | 10 | 4 | 5 | 1 | 3 | 1 | 2 | 24 | 37 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 3 | - | 10 | 3 | 13 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24 | 37 | 61 |
| Enteric or Typhoid Fever | - | - | - | 1 | - | - | 1 | - | - | 1 | 1 | 2 | 3 | 2 | 3 | 2 | 1 | 2 | - | 1 | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Erysipelas ... ... ... | - | 1 | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 7 | 12 | 9 | 21 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | 2 | 1 | 2 | 2 | 4 |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 37 | 36 | 3 | 4 | 2 | - | - | - | - | - | 42 | 40 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 1 | 1 | 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 1 | 47 | 41 | 88 |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | - | - | 1 | 1 | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bronchitis ... ... ... | 58 | 48 | 19 | 26 | 3 | 6 | 4 | 4 | - | - | 84 | 84 | 1 | 2 | - | - | - | - | 1 | - | 4 | - | 9 | 7 | 10 | 17 | 23 | 26 | 34 | 39 | 15 | 20 | 2 | 2 | 99 | 113 | 183 | 197 | 380 |
| Pneumonia ... ... ... | 25 | 15 | 14 | 15 | 5 | 3 | 5 | 5 | 2 | 3 | 51 | 41 | 2 | 3 | - | 2 | 2 | 1 | - | 1 | 6 | 3 | 6 | 2 | 3 | 7 | 3 | 4 | 5 | 5 | 2 | 2 | - | - | 29 | 30 | 80 | 71 | 151 |
| Convulsions ... ... ... | 66 | 60 | 10 | 6 | 3 | 5 | 1 | 1 | - | 1 | 80 | 73 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 80 | 73 | 153 |
| Atrophy ... ... ... ... | 134 | 104 | 12 | 14 | 8 | 2 | 1 | 1 | - | - | 155 | 121 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 156 | 121 | 277 |
| Dentition ... ... ... | 9 | 7 | 5 | 5 | 1 | 1 | - | - | - | - | 15 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 13 | 28 |
| Premature Birth ... ... | 40 | 45 | - | - | - | - | - | - | - | - | 40 | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 45 | 85 |
| Phthisis ... ... ... ... | 15 | 3 | 9 | 2 | 3 | 3 | - | - | - | - | 27 | 8 | 3 | 2 | 1 | 1 | 9 | 7 | 4 | 19 | 26 | 28 | 17 | 21 | 16 | 13 | - | 3 | - | - | - | - | - | - | 77 | 93 | 104 | 101 | 205 |

# TABLE XXI.

## METEOROLOGICAL OBSERVATIONS

TAKEN AT THE TOWN MUSEUM, LEICESTER, A STATION 238 FEET ABOVE SEA-LEVEL. INSTRUMENTS BY CACELLA, AND CERTIFIED AT KEW OR GREENWICH.

W. JEROME HARRISON, F.G.S., CURATOR.

### 1878.

| Date. | Barometer cor. | Temperature. | | | Humidity | Rainfall. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Max. | Min. | Average. | | Total. | No. of Rainy Days. | Max. fall. | Date. |
| January ... | 30·085 | 44·5 | 36·4 | 40·4 | 87·9 | 1·57 | 19 | ·48 | 27 |
| February.. | 30·236 | 46·6 | 36·8 | 41·7 | 84·9 | 1·24 | 13 | ·34 | 12 |
| March ... | 30·035 | 47·2 | 35·2 | 41·2 | 78·9 | 0·69 | 13 | (s) ·23 | 27 |
| April ..... | 29·831 | 54·6 | 38·8 | 46·7 | 82·6 | 1·57 | 14 | ·47 | 20 |
| May ..... | 29·759 | 61·2 | 44·8 | 53·0 | 81·8 | 4·71 | 25 | 1·14 | 7 |
| June ..... | 29·923 | 65·9 | 49·6 | 57·8 | 74·9 | 1·70 | 15 | ·44 | 9 |
| July ..... | 30·039 | 67·6 | 51·9 | 59·7 | 76·5 | 2·04 | 8 | 1·21 | 24 |
| August ... | 29·736 | 67·5 | 52·5 | 60·0 | 82·8 | 6·76 | 22 | 1·78 | 3 |
| September | 29·957 | 61·3 | 47·1 | 54·2 | 86·0 | 1·82 | 14 | ·45 | 7 |
| October ... | 29·744 | 55·0 | 43·7 | 49·3 | 88·7 | 2·57 | 20 | ·40 | 24 |
| November | 29·759 | 42·4 | 33·3 | 37·9 | 85·0 | 3·25 | 19 | ·56 | 24 |
| December | 29·735 | 36·3 | 27·3 | 31·8 | 86·2 | 1·81 | 15 | ·42 | 26 |
| Averages.. | 29·904 | 54·2 | 41·4 | 47·8 | 83·0 | ... | ... | Greatest fall during year, 1·78 Aug. 3. | |

### 1879.

| Date. | Barometer cor. | Temperature. | | | Humidity | Rainfall. | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Max. | Min. | Average. | | Total. | No. of Rainy Days. | Max. fall. | Date. |
| January ... | 29·828 | 34·6 | 26·6 | 30·7 | 86·8 | 1·33 | 11 | ·29 | 14 |
| February.. | 29·541 | 41·5 | 34·1 | 37·8 | 88·9 | 1·96 | 22 | ·30 | 8 |
| March ... | 29·977 | 47·3 | 34·5 | 40·9 | 83·6 | 0·68 | 14 | ·12 | 28 |
| April ..... | 29·707 | 49·0 | 36·2 | 42·6 | 82·4 | 2·11 | 18 | (s) ·49 | 14 |
| May ..... | 30·010 | 55·7 | 40·2 | 47·9 | 81·2 | 3·22 | 22 | ·79 | 14 |
| June ..... | 29·775 | 61·6 | 52·4 | 57·0 | 87·4 | 4·34 | 24 | ·79 | 7 & 30 |
| July ..... | 29·773 | 64·2 | 51·7 | 58·0 | 83·6 | 3·72 | 23 | ·75 | 13 |
| August ... | 29·809 | 66·1 | 51·9 | 59·0 | 87·8 | 4·01 | 19 | 1·18 | 2 |
| September | 29·946 | 61·4 | 46·9 | 54·1 | 86·6 | 3·33 | 15 | ·68 | 13 |
| October .. | 30·129 | 54·5 | 43·2 | 48·9 | 89·7 | 0·91 | 15 | ·30 | 2 |
| November | 30·223 | 44·5 | 34·4 | 36·4 | 84·5 | 1.09 | 16 | (R S) ·37 | 20 |
| December | 30·293 | 37·2 | 25·8 | 31·5 | 86·6 | 0·95 | 11 | ·34 | 31 |
| Averages.. | 29·918 | 51·5 | 39·8 | 45·6 | 86·5 | ... | ... | Greatest fall during year, 1·18 Aug. 2. | |

# TABLE XX.

MORTALITY FROM CERTAIN CLASSES OF DISEASE, AND PROPORTIONS TO THE POPULATION, AND TO 1,000 DEATHS, DURING THE YEAR 1879.

| | Total Deaths. | Deaths per 1,000 of Population. | Proportion of Deaths to 1,000 Deaths. |
|---|---|---|---|
| 1.—Seven principal Zymotic Diseases ... ... | 358 | 2·85 | 135·0 |
| 2.—Pulmonary (other than Phthisis) ... ... | 531 | 4·23 | 200·3 |
| 3.—Tubercular ... ... ... | 283 | 2·25 | 106·8 |
| 4.—Wasting Diseases of Infants .. ... ... | 362 | 2·88 | 136·5 |
| 5.—Convulsive Diseases of Infants ... ... | 181 | 1·44 | 68·3 |

NOTES.

No. 1.—Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever, and Diarrhœa.

,, 2.—Includes Bronchitis, Pneumonia, and Congestion of Lungs.

,, 3.—Includes Scrofula, Rickets, Phthisis, and Tabes Mesenterica.

,, 4.—Includes Atrophy, Debility, Mal-nutrition, and Premature Birth.

,, 5.—Includes Convulsions and Teething.

234, Birstall-street
5, Devonshire-street
4, Grove-street
Curzon-street
39, Wood-street
Mansfield-street
22, Brunswick-street
96, Wheat-street
282, Birstall-street
60, Dorset-street
1, Palmerstone-street
2, South Church-gate
32, Northumberland-street
60, Rutland-street
7, Melton-street
42, Junction-road
25, John-street
Goodacre-street
8, Frank-street
25, Northgate-street.
2B, Lee-street

10, Gladstone-street
137, Bedford-street
78, Charnwood-street
113, Wheat-street
103, Curzon-street
33, George-street
35, East Bond-street
155, Great Holme-street
4, Regent-street
14, Causeway-lane
8, Blake-street
Court W, Northgate-street
26, Grundon-street
17, Henry-street
57, All Saints-road
Soar-lane
68, Buckingham-street
60, Outram-street
7, Lower Brown-street
3, Blake-street
9, Alexander-street

# TABLE OF DEATHS FOR THE QUARTER ENDING MARCH 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 5 | 4 | 6 | 5 | 2 | 3 | - | 2 | - | 1 | 13 | 15 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 13 | 18 | 31 |
| Scarlet Fever... ... ... | - | - | 1 | 1 | - | 1 | 1 | - | - | - | 2 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 3 | 2 | 5 |
| Diphtheria ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | 1 | 2 | - | 1 | - | - | - | 1 | - | 4 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 1 | 5 |
| Whooping-cough ... ... | 3 | 3 | 4 | 5 | 1 | 2 | - | 3 | 1 | - | 9 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 9 | 13 | 22 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | 1 | - | - | - | - | - | - | - | 1 | 2 | - | 1 | 1 | - | 1 | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 3 | 4 | 4 | 8 |
| Erysipelas ... ... ... | - | 1 | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | 1 | 2 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 2 | 3 | 1 | - | - | - | - | - | - | - | 3 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 3 | 6 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 | 1 | 2 | 1 | 2 | 3 |
| Bronchitis ... ... .. | 19 | 15 | 10 | 9 | 3 | 2 | 1 | - | - | - | 33 | 26 | 1 | - | - | - | - | 1 | - | 3 | - | 4 | 3 | 6 | 11 | 9 | 17 | 17 | 14 | 9 | 11 | 1 | 1 | 51 | 57 | 84 | 83 | 167 |
| Pneumonia ... ... ... | 8 | 4 | 3 | 5 | - | - | 1 | 2 | 1 | 2 | 13 | 13 | - | - | - | - | 1 | 1 | - | - | 5 | - | 3 | - | - | 3 | - | 1 | 2 | 1 | 1 | - | - | - | 12 | 6 | 25 | 19 | 44 |
| Convulsions ... ... ... | 20 | 19 | 4 | 2 | 2 | 2 | 1 | 1 | - | - | 27 | 24 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 27 | 24 | 51 |
| Atrophy ... ... ... ... | 26 | 16 | 3 | 3 | 4 | - | - | - | - | - | 33 | 19 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 34 | 19 | 53 |
| Dentition ... ... ... | 4 | 3 | 1 | 2 | 1 | 1 | - | - | - | - | 6 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 6 | 12 |
| Premature Birth ... ... | 10 | 9 | - | - | - | - | - | - | - | - | 10 | 9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 | 9 | 19 |
| Phthisis ... ... ... ... | 3 | 1 | 1 | 1 | 3 | 1 | - | - | - | - | 7 | 3 | 1 | 2 | - | - | 2 | 2 | 2 | 2 | 6 | 6 | 3 | 9 | 2 | 4 | - | 1 | - | - | - | - | - | - | 17 | 25 | 24 | 28 | 52 |


COLLEGE OF SURGEONS OF ENGLAND
21 MAY 90

# TABLE OF DEATHS FOR THE QUARTER ENDING JUNE 30TH, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 4 | 3 | 7 | 2 | 1 | 1 | 2 | 3 | 1 | - | 14 | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 10 | 24 | |
| Scarlet Fever... ... ... | - | - | - | 2 | - | - | 1 | - | 1 | - | 2 | 2 | - | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 5 | 7 | |
| Diphtheria ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Whooping-cough ... ... | 1 | 9 | 1 | 3 | 1 | 1 | 1 | - | - | - | 4 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 13 | 17 | |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 1 | 2 | 3 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 | 1 | 1 | 1 | 2 |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 2 | 2 | 2 | - | - | - | - | - | - | - | 4 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | 2 | 1 | 6 | 3 | 9 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bronchitis ... ... ... | 12 | 18 | 2 | 8 | - | 2 | 2 | - | - | - | 16 | 28 | - | - | - | - | - | - | - | - | - | - | 2 | - | - | - | 6 | 3 | 3 | 5 | 4 | 3 | 1 | - | 16 | 11 | 32 | 39 | 71 |
| Pneumonia ... ... ... | 7 | 7 | 3 | 7 | 4 | - | 1 | 1 | 1 | 1 | 16 | 16 | - | 1 | - | 1 | - | - | - | 1 | - | - | 1 | 1 | - | 2 | - | 1 | 1 | 1 | - | 1 | - | - | 2 | 9 | 18 | 25 | 43 |
| Convulsions ... ... ... | 19 | 21 | 5 | - | - | 2 | - | - | - | - | 24 | 23 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24 | 23 | 47 |
| Atrophy ... ... ... ... | 33 | 21 | 5 | 5 | 1 | 1 | 1 | 1 | - | - | 40 | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 28 | 68 |
| Dentition ... ... ... | 4 | 1 | 3 | 2 | - | - | - | - | - | - | 7 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 3 | 10 |
| Premature Birth ... ... | 12 | 12 | - | - | - | - | - | - | - | - | 12 | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12 | 12 | 24 |
| Phthisis ... ... ... ... | 7 | 1 | 2 | 1 | - | 2 | - | - | - | - | 9 | 4 | 1 | - | - | 1 | 1 | - | - | 7 | 8 | 7 | 5 | 4 | 6 | 3 | - | - | - | - | - | - | - | - | 21 | 22 | 30 | 26 | 56 |


OF SURGEONS OF
MAY 90

# TABLE OF DEATHS FOR THE QUARTER ENDING JUNE 30TH, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 4 | 3 | 7 | 2 | 1 | 1 | 2 | 3 | 1 | - | 14 | 10 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 10 | 24 | |
| Scarlet Fever... ... ... | - | - | - | 2 | - | - | 1 | - | 1 | - | 2 | 2 | - | 2 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 2 | 5 | 7 | |
| Diphtheria ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 | |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| Whooping-cough ... ... | 1 | 9 | 1 | 3 | 1 | 1 | 1 | - | - | - | 4 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 13 | 17 | |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 1 | 2 | 3 |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 | 1 | 1 | 1 | 2 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 2 | 2 | 2 | - | - | - | - | - | - | - | 4 | 2 | 1 | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | 2 | 1 | 6 | 3 | 9 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 3 | - | 3 |
| Bronchitis ... ... ... | 12 | 18 | 2 | 8 | - | 2 | 2 | - | - | - | 16 | 28 | - | - | - | - | - | - | - | - | 2 | - | - | - | 6 | 3 | 3 | 5 | 4 | 3 | 1 | - | 16 | 11 | 32 | 39 | 71 |
| Pneumonia ... ... ... | 7 | 7 | 3 | 7 | 4 | - | 1 | 1 | 1 | 1 | 16 | 16 | - | 1 | - | 1 | - | - | - | 1 | - | - | 1 | 1 | - | 2 | - | 1 | 1 | 1 | - | 1 | - | - | 2 | 9 | 18 | 25 | 43 |
| Convulsions ... ... ... | 19 | 21 | 5 | - | - | 2 | - | - | - | - | 24 | 23 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24 | 23 | 47 |
| Atrophy ... ... ... ... | 33 | 21 | 5 | 5 | 1 | 1 | 1 | 1 | - | - | 40 | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 28 | 68 |
| Dentition ... ... ... | 4 | 1 | 3 | 2 | - | - | - | - | - | - | 7 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 3 | 10 | |
| Premature Birth ... ... | 12 | 12 | - | - | - | - | - | - | - | - | 12 | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12 | 12 | 24 | |
| Phthisis ... ... ... ... | 7 | 1 | 2 | 1 | - | 2 | - | - | - | - | 9 | 4 | 1 | - | - | 1 | 1 | - | - | 7 | 8 | 7 | 5 | 4 | 6 | 3 | - | - | - | - | - | - | - | - | 21 | 22 | 30 | 26 | 56 |

# TABLE OF DEATHS FOR THE QUARTER ENDING SEPTEMBER 30TH, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | 1 | - | 2 | 1 | 1 | - | - | 1 | - | - | 4 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 2 | 6 |
| Scarlet Fever... ... ... | 1 | - | 6 | 2 | 4 | 2 | 3 | 2 | 5 | 2 | 19 | 8 | 3 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 6 | 22 | 14 | 36 |
| Diphtheria ... ... ... | - | - | 2 | - | - | - | 1 | - | - | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 3 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Croup ... ... ... ... | - | - | - | - | 1 | - | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 2 | - | 2 |
| Whooping-cough ... ... | 5 | 3 | 1 | - | - | 1 | - | - | - | 1 | 6 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 5 | 11 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Enteric or Typhoid Fever | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 | - | - | 1 | - | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 2 | 4 | 2 | 6 |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | 1 | - | 1 |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 30 | 24 | - | 4 | 2 | - | - | - | - | - | 32 | 28 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 1 | - | 33 | 28 | 61 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Bronchitis ... ... ... | 9 | 4 | 4 | 6 | - | 1 | - | 1 | - | - | 13 | 12 | - | - | - | - | - | - | - | - | - | - | 1 | 2 | 1 | 3 | 2 | 3 | 4 | - | 1 | - | - | 8 | 9 | 21 | 21 | 42 |
| Pneumonia ... ... ... | 3 | - | 2 | 1 | - | - | 1 | 1 | - | - | 6 | 2 | - | 1 | - | - | 1 | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | 1 | - | - | 2 | 3 | 8 | 5 | 13 |
| Convulsions ... ... ... | 13 | 11 | - | 2 | 1 | 1 | - | - | - | - | 14 | 14 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 14 | 14 | 28 |
| Atrophy ... ... ... ... | 36 | 30 | 2 | 3 | 2 | 1 | - | - | - | - | 40 | 34 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 34 | 74 |
| Dentition ... ... ... | 1 | 1 | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 2 |
| Premature Birth ... ... | 11 | 17 | - | - | - | - | - | - | - | - | 11 | 17 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 17 | 28 |
| Phthisis ... ... ... ... | 2 | - | 4 | - | - | - | - | - | - | - | 6 | - | 1 | - | - | - | 2 | 3 | 2 | 7 | 7 | 5 | 3 | 3 | 4 | 2 | - | - | - | - | - | - | - | - | 19 | 20 | 25 | 20 | 45 |

# TABLE OF DEATHS FOR THE QUARTER ENDING DECEMBER 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Measles ... ... ... ... | - | 1 | 3 | 2 | - | 2 | 3 | - | - | - | 6 | 5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet Fever... ... ... | 5 | 2 | 6 | 1 | 5 | 6 | 5 | 4 | 4 | 4 | 25 | 17 | 11 | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6 | 5 | 11 |
| Diphtheria ... ... ... | 1 | 1 | - | 1 | - | 1 | - | - | - | - | 1 | 3 | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 | 4 | 36 | 21 | 57 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | 1 | 1 | 2 | 4 | 6 |
| Croup ... ... ... ... | - | - | - | - | 1 | - | - | 2 | 1 | - | 2 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping-cough ... ... | 3 | 2 | - | 2 | 2 | 1 | - | - | - | 1 | 5 | 6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 | - | 3 | 2 | 5 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 6 | 11 |
| Enteric or Typhoid Fever | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 | - | - | - | 1 | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Erysipelas ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | - | 3 | 1 | 4 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 3 | 7 | - | - | - | - | - | - | - | - | 3 | 7 | - | - | - | - | - | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - | - | - | - | - | 2 | - | 5 | 7 | 12 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Bronchitis ... ... ... | 18 | 11 | 3 | 3 | - | 1 | 1 | 3 | - | - | 22 | 18 | - | 2 | - | - | - | - | - | - | 1 | - | 3 | 3 | 2 | 5 | 5 | 4 | 11 | 16 | 2 | 5 | - | 1 | - | 1 | - | 1 | 1 |
| Pneumonia ... ... ... | 7 | 4 | 6 | 2 | 1 | 3 | 2 | 1 | - | - | 16 | 10 | 2 | 1 | - | 1 | - | - | - | - | 1 | 3 | 2 | 1 | 2 | 1 | 3 | 2 | 2 | 3 | 1 | - | - | - | 24 | 36 | 46 | 54 | 100 |
| Convulsions ... ... ... | 14 | 9 | 1 | 2 | - | - | - | - | - | 1 | 15 | 12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 13 | 12 | 29 | 22 | 51 |
| Atrophy ... ... ... ... | 39 | 37 | 2 | 3 | 1 | - | - | - | - | - | 42 | 40 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 12 | 27 |
| Dentition ... ... ... | - | 2 | 1 | 1 | - | - | - | - | - | - | 1 | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 42 | 40 | 82 |
| Premature Birth ... ... | 7 | 7 | - | - | - | - | - | - | - | - | 7 | 7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 3 | 4 |
| Phthisis ... ... ... ... | 3 | 1 | 2 | - | - | - | - | - | - | - | 5 | 1 | - | - | 1 | - | 4 | 2 | - | 3 | 5 | 10 | 6 | 5 | 4 | 4 | - | 2 | - | - | - | - | - | - | 20 | 26 | 25 | 27 | 52 |


OF SURGEONS OF ENGLAND
21 MAY 90

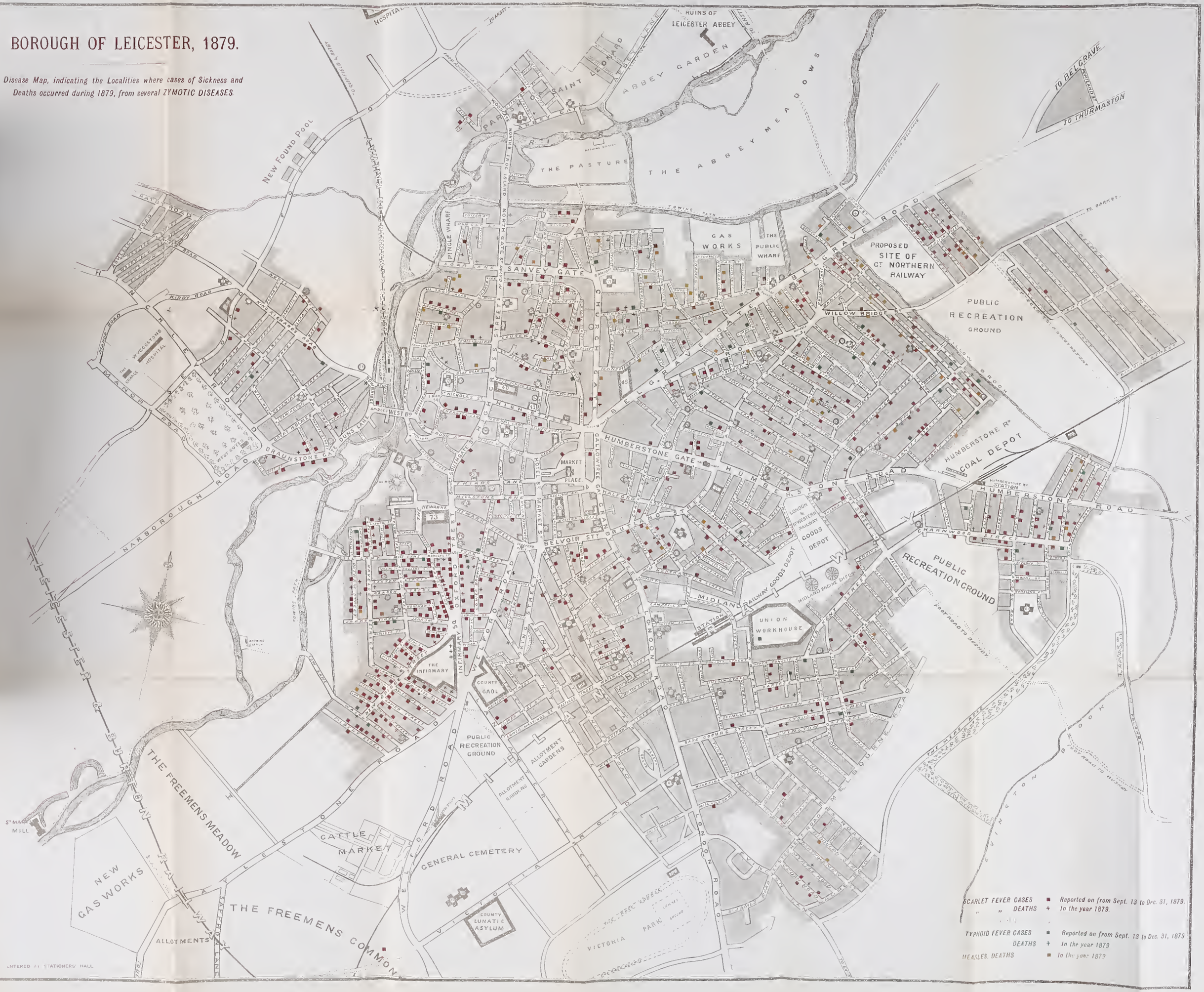
# TABLE OF DEATHS FOR THE YEAR ENDING DECEMBER 31ST, 1879.

| DISEASES. | Under 1 year. | | 1 to 2 years. | | 2 to 3 years. | | 3 to 4 years. | | 4 to 5 years. | | Under 5 years. | | 5 to 10 | | 10 to 15 | | 15 to 20 | | 20 to 25 | | 25 to 35 | | 35 to 45 | | 45 to 55 | | 55 to 65 | | 65 to 75 | | 75 to 85 | | 85 to 95 | | Over 5 years. | | All Ages. | | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | |
| Small-pox ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Measles ... ... ... ... | 10 | 8 | 18 | 10 | 4 | 6 | 5 | 6 | 1 | 1 | 37 | 32 | - | 3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Scarlet Fever... ... ... | 6 | 2 | 13 | 6 | 9 | 9 | 10 | 6 | 10 | 6 | 48 | 29 | 15 | 11 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3 | 37 | 35 | 72 |
| Diphtheria ... ... ... | 1 | 1 | 2 | 1 | - | 1 | 1 | - | - | - | 4 | 3 | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 13 | 63 | 42 | 105 |
| Quinsy ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | 2 | 2 | 6 | 5 | 11 |
| Croup ... ... ... ... | - | 1 | 2 | - | 3 | - | - | 2 | 2 | - | 7 | 3 | 2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Whooping-cough ... ... | 12 | 17 | 6 | 10 | 4 | 5 | 1 | 3 | 1 | 2 | 24 | 37 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | 3 | - | 10 | 3 | 13 |
| Typhus ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 24 | 37 | 61 |
| Enteric or Typhoid Fever | - | - | - | 1 | - | - | 1 | - | - | 1 | 1 | 2 | 3 | 2 | 3 | 2 | 1 | 2 | - | 1 | 3 | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Erysipelas ... ... ... | -, | 1 | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | - | - | - | 11 | 7 | 12 | 9 | 21 |
| Puerperal Fever (Metria) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 1 | 2 | 2 | 4 |
| Carbuncle ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 1 | 1 |
| Influenza ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Dysentery ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diarrhœa ... ... ... | 37 | 36 | 3 | 4 | 2 | - | - | - | - | - | 42 | 40 | 1 | - | - | - | - | - | - | - | 1 | - | - | - | 1 | 1 | 2 | - | - | - | - | - | - | - | 5 | 1 | 47 | 41 | 88 |
| Simple Cholera ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ague ... ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Remittent Fever ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Rheumatism ... ... ... | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | - | 1 | - | - | 1 | 1 | 1 | - | 1 | - | - | - | - | - | - | - | 1 | - | 4 | 4 | 4 | 4 | 8 |
| Bronchitis ... ... ... | 58 | 48 | 19 | 26 | 3 | 6 | 4 | 4 | - | - | 84 | 84 | 1 | 2 | - | - | - | - | 1 | - | 4 | - | 9 | 7 | 10 | 17 | 23 | 26 | 34 | 39 | 15 | 20 | 2 | 2 | 99 | 113 | 183 | 197 | 380 |
| Pneumonia ... ... ... | 25 | 15 | 14 | 15 | 5 | 3 | 5 | 5 | 2 | 3 | 51 | 41 | 2 | 3 | - | 2 | 2 | 1 | - | 1 | 6 | 3 | 6 | 2 | 3 | 7 | 3 | 4 | 5 | 5 | 2 | 2 | - | - | 29 | 30 | 80 | 71 | 151 |
| Convulsions ... ... ... | 66 | 60 | 10 | 6 | 3 | 5 | 1 | 1 | - | 1 | 80 | 73 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 80 | 73 | 153 |
| Atrophy ... ... ... ... | 134 | 104 | 12 | 14 | 8 | 2 | 1 | 1 | - | - | 155 | 121 | 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1 | - | 156 | 121 | 277 |
| Dentition ... ... ... | 9 | 7 | 5 | 5 | 1 | 1 | - | - | - | - | 15 | 13 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 15 | 13 | 28 |
| Premature Birth ... ... | 40 | 45 | - | - | - | - | - | - | - | - | 40 | 45 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40 | 45 | 85 |
| Phthisis ... ... ... ... | 15 | 3 | 9 | 2 | 3 | 3 | - | - | - | - | 27 | 8 | 3 | 2 | 1 | 1 | 9 | 7 | 4 | 19 | 26 | 28 | 17 | 21 | 16 | 13 | - | 3 | - | - | - | - | - | - | 77 | 93 | 104 | 101 | 205 |


LIBRARY

# BOROUGH OF LEICESTER, 1879.

*Disease Map, indicating the Localities where cases of Sickness and Deaths occurred during 1879, from several ZYMOTIC DISEASES.*




ENTERED AT STATIONERS' HALL