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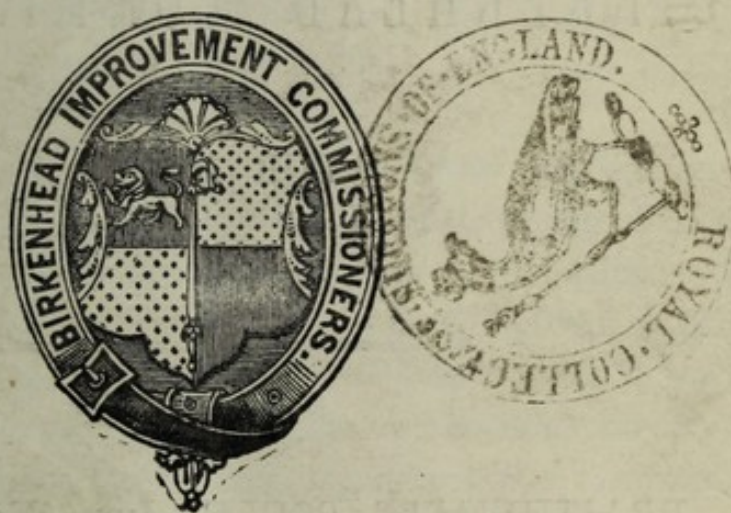


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11/20/71  
Comp<sup>lt</sup> =

REPORT  
ON  
THE SANITARY CONDITION  
OF  
**BIRKENHEAD,**

*For the Year 1871.*



BY  
**C. O. BAYLIS, M.D., M.R.C.S., &c.**

**MEDICAL OFFICER OF HEALTH FOR BIRKENHEAD.**

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**BIRKENHEAD :**  
**WILLMER, STEAM PRINTER, 64 AND 66, CHESTER STREET.**  
**1872.**

HEALTH COMMITTEE  
OF THE  
BIRKENHEAD COMMISSIONERS  
FOR 1871-72.

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BRAITHWAITE POOLE, JUN., ESQ., CHAIRMAN.

MR. FREDERICK FORREST.

„ ROBERT SPENCER SHIELD.

„ WILLIAM WALKER.

„ JOHN RANDALL WILLIAMS.

THE SANITARY STATE  
OF  
BIRKENHEAD (AND CLAUGHTON),  
DURING 1871.

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REPORT OF THE MEDICAL OFFICER OF HEALTH TO THE  
HEALTH COMMITTEE.

The Death Rate computations of the previous year were deferred till the census of the succeeding April afforded the final element of enumerated population requisite for complete exactness and reliability. The result gave the Death Rate of Birkenhead (and Claughton) at 19 per 1000 per annum, and marked the year as yielding the lowest ratio of mortality in a continuous series of seven, during which the rate declined from 24.8 in 1864, when the medical department was instituted, to 19.0 per 1000 per annum in 1870. This great and generally progressive improvement is now to be found abruptly reversing itself.

DEATHS AND DEATH RATE.

The number of deaths registered during 1871 amounted to 1137, of which 587 were males, and 550 were females. The total number of 1137 deaths, out of a population of 45,216\* in the middle of the year, gives the Death Rate at 25.1 per 1000. This Death Rate exceeds that of the previous year by 6.1 per 1000, and the corrected average Death Rate of the previous 7 years by 3.8 per 1000.

INCREASE OF MORTALITY.

This rise in the mortality of the year goes much beyond the limits of ordinary variation, and indicates some unusual potentiality of death

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\* Note—Census number of April, 1871=45,034 + 3 months increase to middle of year, proportionate to that between 1861 and 1871, viz., 181=45,215.

causes either in common with the whole or part of the country; or limited to the district or locality itself. That the increase is not shared in common with the whole country, or with either of its two large but differing populations, is shown by the following comparisons, in which, first, the Death Rate of Birkenhead, after running closely with the average of the country districts, is found suddenly rising to the higher average of the town ones; and, second, its Death Rate is found to have greatly risen since the previous year, while that of all England has diminished. Some cause of specific or local origin is, therefore, strongly indicated.

### Comparison of Death Rates.

	Birkenhead.	Country Districts.*	Town Districts.*	All England.*
1864	24.4	20.9	26.1	
5	21.4	20.4	25.5	
6	22.4	19.6	26.4	
7	20.8	19.0	23.9	
8	21.0	18.7	24.4	
9	19.7	19.3	24.6	
1870	19.0	20.6	24.7	23.0
1	25.1	19.5	25.0	22.6

### METEOROLOGY OF THE YEAR.

The mean temperature of the air, as deduced from Mr. Hartnup's observations at the neighbouring observatory on Bidston Hill, was 49.1, or 4 tenth's of a degree Fahrenheit less than the average of the previous twenty years. January was uniformly colder than the average. March and April, warmer. The latter half of September and the middle half of the 4th quarter were also much below the average, constituting trying periods for the public health. The barometrical mean was 29.243 inches, being 0.030 above the average of the preceding 20 years. The amount of rainfall reached 27.3 inches, which was in excess of the average quantity, and the class of westerly winds—including due south—prevailed over the class of easterly winds—including due north—in the proportion of 53 to 47 per cent.

\* Registrar General's 4th Quarterly Report of 1871.

### Meteorological Results of the 4 quarters.

AGENTS.	Winter, or 1st Quarter.	Spring, or 2nd Quarter	Summer, or 3rd Quarter	Autumn, or 4th Quarter.
Westerly class of winds per cent. (including due south) .....	51.4	53.7	58.9	47.4
Rainfall, in inches .....	3.73	5.97	8.74	8.88
Rainfall, in hours.....	104.8	118.6	152.6	165.7
Mean pressure of Air .....	29.917	29.954	29.908	29.992
Mean degrees of Temperature...	40.8	52.6	59.3	43.7
Corresponding means of previous 20 years, averaged .....	40.6	52.8	59.4	45.1

For further details see Table III.

#### MORTALITY AS TO GROUPS AND DISEASES.

By an arrangement of the year's death causes in groups and diseases, alongside a similar one of the averages, corrected for variations of population, of the preceding seven years, the differences can be readily seized upon and computed. Such an arrangement is inserted in page 6, and it shows at once the increase of deaths in the 1st or Zymotic group over the average to be 57; in the 2nd or Constitutional group to be 22; and the increase in the third or great Local group to be 88. The 4th or Developmental group is not seen to differ, while the 5th or group of Violent Deaths may be at present left out of view as not being influenced by ordinary causes of fatal disease. Turning these numbers into per centages, we find the 3rd or local diseases group—the mortality of which is influenced by both weather and insanitary conditions—to yield the largest increase, or a rate of 27 per cent. above the average. The next in degree of increase is the 1st or Zymotic group, affected chiefly by insanitary conditions, giving an excess of 19 per cent.; and, last, the second or Constitutional group—influenced, though less quickly, by both weather and insanitary conditions—the deaths of which exceed the average by 14 per cent.

**The Death Causes of 1871 contrasted with corrected  
averages of the previous 7 years.**

GROUPS AND DISEASES.		1871.	Averages, 7 Years.	Differ- ences.
1st, Zymotic Group.	Small Pox .....	9	21	-12
	Measles .....	105	33	+72
	Scarlatina .....	68	67	+ 1
	Diphtheria.....	5	7	- 2
	Whooping Cough .....	55	27	+28
	Fevers .....	17	39	-22
	Diarrhoea .....	59	55	+ 4
	Other Zymotics.....	30	42	-12
Total Zymotic Diseases ...		348	291	+57
2nd, Constitu- tional Group.	Gout .....	35	28	+ 7
	Scrofula, Phthisis, &c. ....	144	129	+15
Total Constitutional Diseases		179	157	+22
3rd, Local Dis- eases Group.	Brain, &c. ....	131	97	+34
	Heart, &c.....	41	30	+11
	Lungs, &c. ....	168	145	+23
	Stomach, &c.....	48	33	+15
	Kidneys, &c.....	17	11	+ 6
	Uterus, &c. ....	3	2	+ 1
	Bones, &c.....	3	3	0
Skin, &c. ....	3	5	- 2	
Total Local Diseases.....		414	326	+88
4th, Develop- mental Diseases Group.	Premature Birth, Teething &c Childbirth .....	32	33	- 1
	Old Age.....	7	5	+ 2
	Atrophy and Debility .....	30	29	+ 1
		64	69	- 5
Total Developmental Diseases		133	136	- 3
5th Group ..... Violent Deaths .....		58	42	+16
Causes not specified .....		5	15	-10
Totals, &c. ....		1137	967	+170

## ZYMOTIC MORTALITY.

Continuing the examination of the above comparison from the groups into the chief Zymotic diseases, it will be seen that Small-pox, to be afterwards specially referred to, Fevers—which, with one exception, have steadily declined in mortality since 1864—and Diphtheria are below the average, Scarlet Fever and Diarrhœa slightly above ; but the two fatal diseases of the year, Measles and Whooping Cough, shew the large amounts of 105 and 55 deaths respectively, giving 72 and 28 above the averages. The excesses of these two diseases, especially that of the former, constitute prominent features of the Zymotic class of the year. It is, indeed, a usual experience in this group for one of them to be taking its turn in inflicting a leading and absorbing mortality on town populations. This is due to the introduction of new virus, or to some intensifying of the local poison, while the number of children born since the previous invasion supplies a new and virgin field for renewed ravages ; but in the Death Register of 1871 there is this peculiarity, that the leading disease—Measles—far surpassed itself in any previous mortality of the seven years, although its fatality returned after an unusually short period, as the following extract, corrected for population, demonstrates :—

	1864	'5	'6	'7	'8	'9	1870	'1
Measles .....	65·3	17·9	30·0	19·7	22·6	69·3	1·0	105.
Whooping Cough ...	9·2	23·9	41·0	24·8	56·4	8·7	21·0	55.

## HIGH MORTALITY OF MEASLES.

The former years of highest mortality for Measles are seen to be 1864 and 1869, but both years are surpassed by that of 1871 by no less than 50 per cent. It is easy to say this is owing to new or intensified virus, but as the virus power itself is capable of immense amelioration by good sanitary measures their efficiency is challenged and arraigned by so large an increase of deaths. The quick recurrence of a high Whooping Cough mortality tends also to a similar conclusion.

## SEASONAL INFLUENCE.

The mortality of the year, as affected by seasonal influence, comes next for review, and the following table is constructed to shew, 1st, the total mortality of each of the four quarters ; 2nd and 3rd, that of



the non-Zymotic and the Zymotic diseases, respectively; and, 4th, that from Measles alone as the leading epidemic of the year. To all of these the corresponding averages of the previous seven years are added, corrected for difference of population:—

**Comparison Table of Deaths from All Causes, Non-Zymotic and Zymotic Diseases, and Measles, for each of the four quarters of the year.**

<b>Part I.</b>				
	1st, or Winter Quarter.	2nd, or Spring Quarter.	3rd, or Summer Quarter.	4th, or Autumn Quarter.
Total Deaths, 1871.....	286	213	239	399
7 years' average do. ....	256	208	234	267
Excesses .....	30	5	5	132
<b>Part II.</b>				
Non-Zymotic Deaths, 1871	232	178	161	218
Do. 7 years' average	185	151	150	188
Excesses .....	47	27	11	30
<b>Part III.</b>				
Zymotic Deaths, 1871.....	54	35	78	181
Do. 7 years' average...	72	56	82	79
Differences .....	-18	-21	-4	+101
<b>Part IV.</b>				
Deaths from Measles, 1871	0	2	16	87
Do. 7 years' average ...	6	4	8	15
Differences .....	-6	-2	+8	+72

**OTHER THAN CLIMATIC CAUSES INCREASING THE DEATH RATE.**

In reading over the excesses of total deaths in the four quarters of 1871, in part 1st it is found that three-fourths of the whole belong to the fourth quarter and three-fourths of the remainder to the first. Now this coincides so closely with the proportionate deficiency of temperature recorded in the first quarter, and also with the much more prolonged deficiency recorded in the fourth, as to immediately suggest the idea of

cause and effect ; but if we exclude Zymotic diseases, which are only indirectly affected by low temperature, as is done in part 2nd, the conformity disappears, and though the operation of unusual cold is too well ascertained to admit of any doubt of its having contributed to the increased mortality of non-Zymotic diseases in the first and fourth quarters, it cannot be admitted to have also caused the increased mortality of the second and third, which had no unusual cold recorded ; other causes, therefore, than direct climatic ones must have increased the non-Zymotic mortality. In part 3rd it is seen that the Zymotic deaths of the first three quarters are decidedly below the average, but this gain is very much overbalanced by the large excess in the fourth, which amounts to 102 on the quarter, and affords 59 of excess on the average for the year. This excess in the quarter is due chiefly to deaths from Measles, which numbered 72, as seen in part 4. This epidemic of Measles was doubtless rendered more fatal by the unusual autumnal cold which often prevented recovery from the lung affections common in the disease ; but that the type of the disease was itself a bad one is proved by the high mortality of the succeeding quarter, since run out, though its temperature was remarkable for unusual warmth.

#### THE AGE PERIODS OF DEATH. \*

The ages at which deaths occur, taken in conjunction with the enumerated ages of the community, form an important element in vital statistics ; but they cannot be applied to those of 1871 until the Census Commissioners have completed and published their labours. The difference of the ages at which the deaths took place, as compared with the averages, corrected for varying population of the previous five years, may, however, be recorded as follows :—

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\* While correcting the last proofs for press, the Medical Officer received, through the kindness of his friend, Mr. W. Clode, of the Registrar General's Department, the Age Census of Birkenhead and Claughton. It is briefly as follows, viz. :—Under 1 year, 1554 ; 1 year and under 2, 1254 ; 2 years and under 5, 3905 ; 5 years and under 10, 5509 ; 10 years and under 15, 4718 ; 15 years and under 20, 4293 ; 20 years and under 30, 8259 ; 30 years and under 40, 6474 ; 40 years and under 50, 4647 ; 50 years and under 60, 2931 ; 60 years and under 70, 1310 ; 70 years and under 80, 496 ; 80 years and under 90, 62 ; 90 years and under 100, 6.

**Table contrasting the Age Periods of the year's Mortality with the average Age Periods of the previous 5 years.**

Age Periods.	Previous 5 years' average.	1871.	Increase per cent.
Below 1 year of age.....	256	312	22
„ 2 years „ „ .....	111	158	42
„ 5 „ „ „ .....	119	149	25
„ 10 „ „ „ .....	59	67	12
„ 15 „ „ „ .....	22	18	...
„ 20 „ „ „ .....	20	28	40
„ 30 „ „ „ .....	58	59	1.7
„ 40 „ „ „ .....	61	76	25
„ 50 „ „ „ .....	74	73	...
„ 60 „ „ „ .....	64	90	40
„ 70 „ „ „ .....	48	59	23
„ 80 „ „ „ .....	34	31	...
„ 90 &c., „ „ .....	11	22	100
Totals, &c.....	937	1137	21

#### RANGE OF THE MORTALITY OVER THE AGE PERIODS.

A glance at the above table shows the increased mortality of the year to have ranged through nearly every period of life, the exceptions of nine under the head "Below 15," of one under "Below 50," and of three under "Below 80," being too small in difference and number to be important. Of the others, those between 1 and under 2 years of age, between 15 and under 20, and between 50 and under 60 suffered an excess death rate about double the average of the whole. Two-thirds of the excess under two years of age were owing to Zymotic, and the remaining third chiefly to Tuberculous and Brain disease; the excess under 20 was due to Tuberculous and Heart disease; and a moiety of those under 60 was attributable to Lung disease. The extreme excess of 100 per cent. under the head of "below 90, &c.," is founded on numbers too small (11 and 22) to claim much significance. The greater part of these consisted of deaths from old age.

#### A PRACTICAL AIM.

Having now briefly pointed out the salient points of the registered

mortality of the year, a more difficult, but not less incumbent, duty remains to be done, viz., a tentative elimination of such preventable causes of the increased mortality as may enable the Health Committee to adopt the best means for their abatement or removal.

#### PREVIOUS INFERENCES RECALLED.

In treating this subject it may be assumed from what has been already said that the amount of increased mortality—amounting to 67 deaths or 6 per cent. above the seven years average, and 232 or 33 per cent. above the deaths of the previous year—is very considerable; 2nd, that the increase is diffused pretty generally over all diseases, and takes in, generally, all ages; 3rd, that the non-Zymotic diseases shew an excess of deaths in all the quarters, while the Zymotic show an excess, but an unprecedentedly large one, only in the last or autumn quarter; 4th, that the leading Zymotic—Measles—was more fatal than on any recent occasion; and, 5th, that no indication of any such continued or generally diffused increase appears in the Registrar General's published returns of 1871 in all England, in the rural or the urban populations, or in the county or in the neighbouring seaport town.

#### EXTRA FACTORS IN THE DEATH RATE RECOGNIZED.

With such premises we are forced to conclude that, in addition to the action of climatic and irregular causes, there is evidence of other ones elevating the death rate persistently throughout the varying seasons of the year, bringing under their influence nearly all the age periods of death, and rendering more mortal nearly every kind of disease. Zymotic deaths are, it is true, found in excess, though in a very large one only in the fourth quarter, but this exception loses weight from the consideration that autumnal heat could quickly make up, with excess, every arrear when the Zymotic infection obtained the requisite time for diffusing itself.

#### THE PROBABLE CAUSATION.

This large increase of deaths, extending to nearly all diseases, over almost every age, and throughout each season, as well as the apparently exceptional concentration of Zymotic deaths, are quite conformable as results to what might arise from a continued deficiency in the ordinary large sanitary operations of the town, and it may be conceded that, owing to various unfavorable circumstances—the night soil

removal contract, the scavenging of the streets, and the complete removal of road scrapings and refuse have all been much less extensively and efficiently carried on during the year and previous 6 months. The reduction, &c., of the inspectorial staff has also not only materially interfered with the prompt discovery and abatement of nuisances, but has allowed to deteriorate the improved sanitary habits formerly instilled in the mass, and afterwards kept up by the constant, though friendly, pressure exercised on them by efficient inspection. A good officer is a veritable missionary of health. The important by-law that all housekeepers should keep their portions of footpath clean, too, seems to have fallen altogether into disuse, thus retaining and hoarding the lightest organic, and, generally, the most putrid dust for constant inception into houses, and into the lungs of foot passengers. An enforcement of the by-law, or a public provision for ensuring this important sanitary requirement, is much needed, but, as all these subjects are under the consideration of the Committee, they need not be further considered here.

#### CHECK AND EXTINCTION OF THE SMALL POX EPIDEMIC.

Among the sanitary events of this and the previous year none can be dwelt upon with such great satisfaction as the prompt check and final arrest, in Birkenhead, of the Small Pox epidemic, which, for more than two years, has been pursuing its fatal course in various parts of the country. The fact, too, of this arrest, in view of the unfavorable circumstances already acknowledged, and of the serious results of former invasions, constitutes no mean crucial test that vaccination of itself alone can reduce this disease from the most dreaded and fatal to one of the least hurtful and serious of the Zymotic class. As described in the last yearly report, Small Pox appeared first in Egerton-street, during May 1870\*, and, omitting no other practicable measure, the great principles of vaccination and re-vaccination were at once adopted and acted upon as the real base of defence. In carrying out this plan the facts of the epidemic were immediately communicated to every local medical practitioner, a strict canvass was at once instituted in all streets contiguous to the infected locality, and the numerous unvaccinated children, &c., were promptly operated on by the public vaccinator.

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\* Note—Full particulars of the early invasion, with remarks and suggestions by the Medical Officer, were published in the *Lancet* of December 8rd, 1870.

The parish surgeons were also indefatigable in their exertions to apply the prophylactic to every one within their reach or control, and revaccination was effected, to a large extent, by private practitioners. All these measures, vigorously kept up, in spite of fresh introductions of the disease, limited the deaths to 5 \* during the remainder of the year of invasion, and to 18 \* during 1871, until the end of October, at which time the epidemic may be considered to have been fully arrested, no further case having occurred in the ensuing six months since expired.

#### METHOD AND FAVORING CIRCUMSTANCES.

Such a decisive result could only be arrived at by employing the true method, and being aided by a conjunction of accidentally favoring circumstances, unnecessary to specify here, but which enabled vaccination and re-vaccination to be thoroughly and effectively carried out.

#### REALITY OF THE DANGER AND OF THE EXTRICATION.

So much success renders it desirable to note some further facts in illustration of the reality of the dangers thus escaped. Birkenhead (and Claughton), though at present having a reduced population within its own limits of 45,000, forms the nucleus of a much larger though contiguous one. Its records shew two former epidemics of Small Pox, one of which in 1857-58, resulted in 73 deaths in a population of 33,000, giving a ratio of 22 per 10,000; another in 1863, 1864, and 1865 resulted in 195 deaths with a population of 53,000, giving a ratio of 36 per 10,000; the recent epidemic of 1870-71 coming after a longer interval, resulted in only 23 \* deaths in a population of 45,000, giving a ratio of only 5 \* per 10,000.

#### COUNTY COMPARISONS.

It may also be stated that Birkenhead, along with Runcorn and Nantwich, were the first places fatally affected in Cheshire, the first deaths being registered in each during the second quarter of 1870. The following table gives the progress of fatal Small Pox in Birkenhead, in the county town, and in the whole of Cheshire to the end of 1871, in quarters of years.

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\* NOTE.—These numbers include the fatal Small Pox cases removed from the streets named at page 21 to the Workhouse Hospital situate beyond the limits of the town. Particulars of these cases have been kindly furnished by Mr. Redding, the Master of the Workhouse.

1870.

1871.

PLACES.	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	1st Qr.	2nd Qr.	3rd Qr.	4th Qr.	Total.
Birkenhead * .....		1		4	7	4	6	1	23
Chester .....				1	2	2	25	22	52
All Cheshire.....		3	4	13	41	45	60	45	211

The population of Birkenhead (and Claughton) town, at the census of 1871, was 45,035, of Chester City (Cathedral and Castle Registration Sub-districts) was 45,953, and of Cheshire 561,131, the latter being in amount rather more than 12 times the population of Birkenhead, as it is also of the similar total of the population of Chester.

EXTENSIVE PREVALENCE OF THE DISEASE (MODIFIED BY GENERAL VACCINATION.)

Besides being in intimate communication with the infected district of the opposite bank of the river, where the mortality from the disease amounted to 38 per 10,000, Birkenhead itself was thoroughly over-run with the disease, but the protective power of the unusually complete vaccination nearly altogether deprived it of its lethal effects. As there is no present registration of diseases, the Medical Officer has no effective means of arriving at the total number of Small Pox cases thus modified, but he has recorded nearly a hundred which have come within his knowledge, and arranging these as to locality in the 18 ashpit-cleansing districts, which are divided so as to give approximately equal numbers of houses, and supplementing these by 3 more to take in the remaining more scattered parts of the town, he finds that only two out of the twenty-one districts escaped the actual presence of the disease, and consequent exposure to its infection. With the limited success already obtained when he wrote his last report (for 1870), the Medical Officer ventured to express himself thus:—"In the present instance the extent to which Vaccination has been carried out, together with some favoring circumstances, more than promises, it may <sup>even</sup> be asserted, will ensure, that the present epidemic will be far less fatal than on former occasions." The final result has more than verified this sanguine prediction. Numbers of lives have been saved, a very large amount of serious sickness has been avoided, and much

\* See note of preceding page.

time and money have been saved to the community. It is to be hoped that, before another cycle brings round the inevitable re-invasion, reliable legal powers will replace the accidental circumstances which enabled the last epidemic to be so successfully arrested.

#### BIRTHS AND BIRTH RATE.

The total number of births registered during the year was 1715, or 77 less than those of the previous one. Of the total number 895 were males, and 820 were females, giving a rate per annum of 87·9 per 1,000.

#### DRAIN AND SEWER VENTILATION.

A recent event has powerfully drawn the public attention to the necessity which exists for having proper outlets for the foul gases generated in drains, these ought in every case to be properly ventilated from their upper terminations, and be conjoined with a free and complete public sewer ventilation, otherwise there will be a danger of drain ventilators tapping off continuous gases from the sewers into dangerous proximity with houses and windows. In cottages, where faulty drains do not often receive early attention, drains should not be brought within the dwelling at all, but all effluent water should be conveyed into them by pipes, which should terminate over gully holes, but not be continued into them.

#### SOME SANITARY WORK.

The system, established some years ago, of disinfecting cab stands, and gully cleansings during the warm weather, has been continued, and, also, the disinfecting of cleansed ashpits continuously during the year. In close localities where Small Pox shewed itself this was extended to streets and back passages. 186 notices to whitewash and cleanse dirty houses were given and complied with. 165 dead dogs and cats were removed from ponds, and the latter were caused to be drained in the majority of instances. 263 cases of defective flagging, &c., were referred to the Surveyor, 232 nuisance removal notices were issued and enforced. Two cases of excessive smoke were brought under notice of Mr. Preston, and fines inflicted; and, lastly, the night soil removals amounted to 6909, but, from various causes, they were far from being satisfactorily performed.



## TABLES, &amp;c.

The various details connected with the mortality and meteorology of the year are fully set forth in the annexed tables, of which No. I gives the causes of death, arranged as to numbers, under the different periods of age, together with the relative numbers of the sexes. No. II. gives the number of death causes for each week of the year. No. III. gives the same as to plan, but aggregates the causes of death into classes, and also gives the meteorological phenomena for the weeks, the quarters, and the year. No. IV. gives the analysis of the deaths from Fevers and Violence, and notes some death causes not specifically distinguishable in the larger tables. No. V. gives the (lunar) monthly deaths from all causes, and from Zymotic causes, with the rate per 1,000 per annum for each. No. VI. gives the streets in which deaths from any cause occurred, and also those from Zymotic disease in a separate column. And No. VII. specifies the occupations, &c., of all who, either themselves, or members of whose family have died throughout the year.

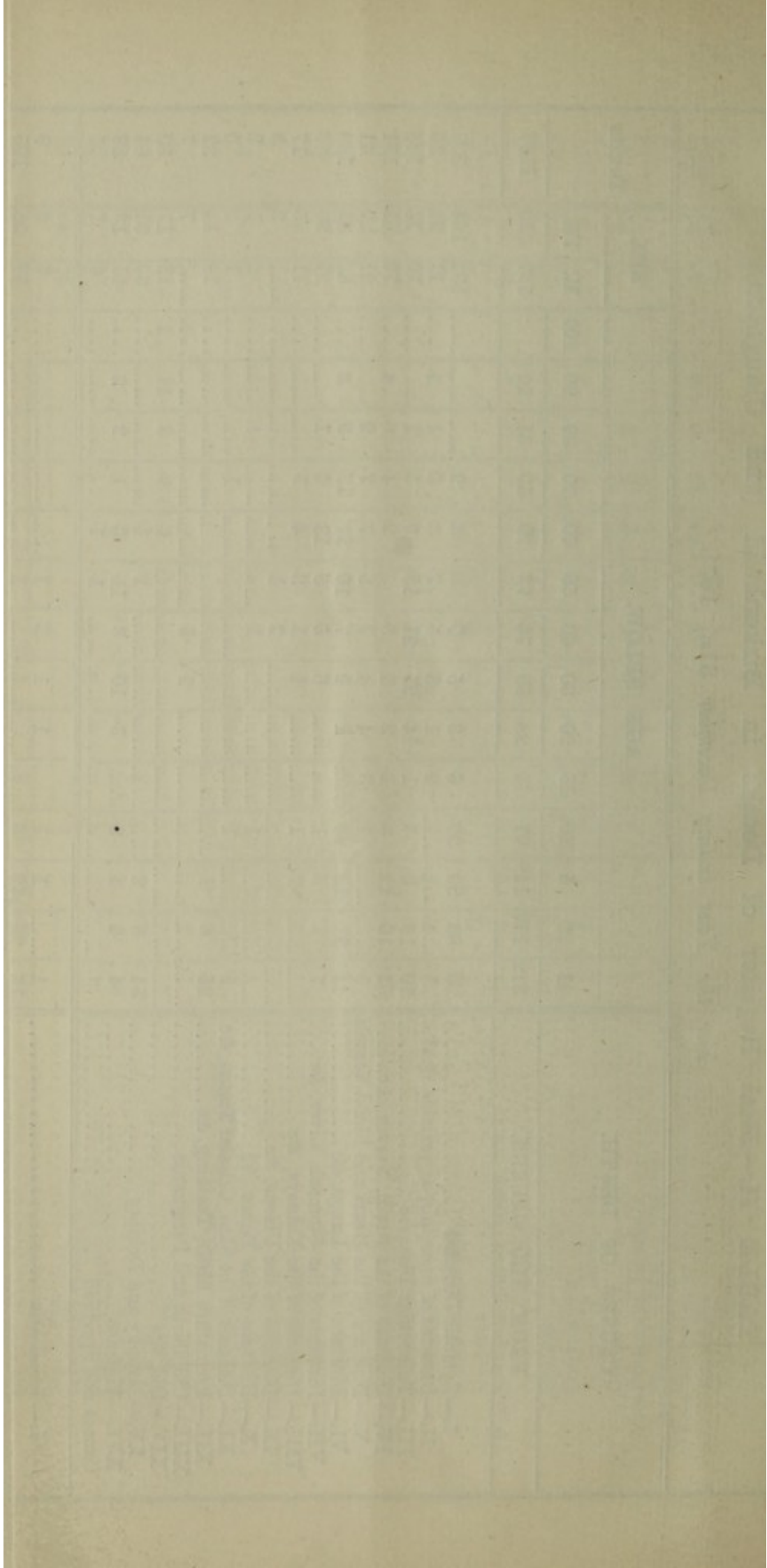
MR. HARTNUP.

Thanks have been again voted by the Committee to Mr. Hartnup for furnishing the Medical Department with the daily results of his valuable meteorological labors throughout the year.

C. O. BAYLIS, M.D., M.R.C.S., &c.

Birkenhead Commissioners'  
Health Department,  
May, 1872.







CASES OF MENTAL

Class I—	General	1
I—	Mania	1
II—	Melancholia	1
III—	Dementia	1
IV—	Epilepsy	1
V—	Hysteria	1
VI—	Paranoia	1
VII—	Schizophrenia	1
VIII—	Alcoholism	1
IX—	Drug Intoxication	1
X—	Organic Brain Disease	1
XI—	Senile Dementia	1
XII—	Juvenile Dementia	1
XIII—	Pseudodementia	1
XIV—	Mental Deficiency	1
XV—	Psychomotor Abnormalities	1
XVI—	Psychic Blindness	1
XVII—	Psychic Deafness	1
XVIII—	Psychic Stupidity	1
XIX—	Psychic Paralysis	1
XX—	Psychic Death	1
XXI—	Psychic Resurrection	1
XXII—	Psychic Transformation	1
XXIII—	Psychic Transmigration	1
XXIV—	Psychic Transference	1
XXV—	Psychic Translocation	1
XXVI—	Psychic Transmutation	1
XXVII—	Psychic Transfiguration	1
XXVIII—	Psychic Transfiguration	1
XXIX—	Psychic Transfiguration	1
XXX—	Psychic Transfiguration	1



WHISKEY CONDENSED REGISTER OF  
 PENNSYLVANIA

Year

CAUSE OF DEATH

Year	Whiskey	Other	Total	Causes of Death
1880	100	100	200	...
1881	100	100	200	...
1882	100	100	200	...
1883	100	100	200	...
1884	100	100	200	...
1885	100	100	200	...
1886	100	100	200	...
1887	100	100	200	...
1888	100	100	200	...
1889	100	100	200	...
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1895	100	100	200	...
1896	100	100	200	...
1897	100	100	200	...
1898	100	100	200	...
1899	100	100	200	...
1900	100	100	200	...

TABLE IV.

Analysis of Fevers, and of some other "Headings" in  
Tables I. and II.

Headings.	Diseases.	Sex.	Years of Age.	Week.	
Fevers.	Continued Fever	F	2	3rd	
	" "	F	5	7th	
	" "	F	31	7th	
	" "	M	43	19th	
	Typhus Fever	F	24	21st	
	" "	M	16	27th	
	" "	F	29	31st	
	" "	M	31	33rd	
	" "	F	67	37th	
	" "	M	10	41st	
	Enteric Fever	F	9	29th	
	" "	M	45	42nd	
	" "	F	17	44th	
	" "	M	11	49th	
	Remittent Fever	M	4	3rd	
" "	F	2	25th		
" "	M	9	41st		
Suicide by	Drowning	F	50	4th	
	Shooting	M	23	21st	
	Cutting Throat	M	36	34th	
	Strangulation	M		44th	
	Prussic Acid	M	23	37th	
	Jump out Window	M	40	34th	
Homicide by	Exposure.	M	1 day	13th	
	Narcotism.	F	5 weeks	7th	
	Murder.	F	43	28th	
"	Bowel.	Perforation	M	8	6th
"	"	Obstruction.	F	21	8th
"	"	Std. Hernia	M	28	16th
"	"	Stricture	M	33	44th
"	"	Intusception	M	67	39th
"	Heart.	Pericarditis	M	6	26th
"	"	"	M	24	27th
"	"	Angina Pectoris	M	61	44th



TABLE V.

## STREET REGISTER OF DEATHS.

Streets.	Total from all Causes.	From Zymotic Causes only.	Streets.	Total from all Causes.	From Zymotic Causes only.
Abbey Street .....	3	1	Wynnstay Street	2	1
Abbot Street.....	5	1	Ruthin Street ...	2	1
Albion Street .....	8	1	Borough Hospital...	11	1
Albert Terrace ...	2	0	Bridge Street .....	7	2
Albion Terrace ...	2	1	Bridge End T'race	2	1
Castle Buildings	6	2	Bright Street .....	7	4
Hamilton Terrace	1	0	Brook Place .....	5	2
Wilbraham Ter.	5	1	Brook Street.....	39	18
Alexandra Road ...	1	1	Brook Square ...	3	2
Alfred Road .....	3	1	Lydia Terrace ...	1	0
Alma Street .....	1	0	Brougham Street ...	4	1
Argyle Street .....	2	1	Byrom Street .....	4	1
Arthur Street .....	2	0	Cambridge Place ...	5	2
Ashville Road .....	3	2	Camperdown Street	3	0
Back Beckwith St.	6	0	Canning Street.....	1	0
Back Camden Street			Cardigan Street ...	11	5
Campbell Terrace	2	0	Cathcart Street.....	9	3
Back George Street	1	1	Club Row .....	8	5
Back Oliver Street	3	2	Catherine Street ...		
Back Price Street...	7	2	Belgrave Terrace	1	0
Back St. Anne St.	5	1	Chapel Street .....	8	1
Ball's Road .....	1	0	Ackworth Place...	1	0
Barton Street .....	5	1	Chester Street .....	19	6
Beckwith Street ...	19	5	Mersey Place ...	1	0
Byrom Place.....	2	1	Chester Place ...	1	1
Bedford Street .....	2	0	Eton Place .....	5	2
Bentinck Street ...	5	0	Windsor Place ...	2	1
Bentinck Terrace	1	0	Christchurch Road	2	0
Bertha Street .....	8	0	Church Street .....	7	5
Birkenhead .....	68	0	Clarendon Street ...	4	1
Blackpool Street ...	1	0	Cloughton Road ...	19	6
Ruabon Street ...	2	1	Cloughton Village...		
Wrexham Street	1	1	Rimmer's Cottages	2	1
Denbigh Street...	6	5	Scott's Place .....	1	1

Table V.—Continued.

Streets.	Total from all Causes.	From Zymotic Causes only.	Streets.	Total from all Causes.	From Zymotic Causes only.
Clayton Street .....	1	0	Grange Lane .....	16	3
Cleveland Street ...	9	4	Grange Mount .....	1	0
Clifton Crescent ...	2	0	Grange Road .....	6	1
Conway Street .....	11	1	Grange Street .....	4	0
Kent Place .....	1	0	Greenfield Street ...	8	2
Conway Place ...	2	1	Grosvenor Place ...	1	0
Corporation Road...	1	0	Halkin Street .....	1	0
Cottage Street .....	4	3	Hamilton Square ...	4	1
Cromwell Street ...	1	0	Hamilton Street ...	2	0
Taylor's Buildings	4	2	Hamilton View...	1	1
Cross Street .....	2	0	Hemingford Street	1	1
Crown Street .....	7	5	Henry Street .....	6	1
Dacre Street.....	2	1	Hope Street .....	8	2
Dale Street .....	2	1	Wilton Street ...	1	1
Davies Street .....	2	0	Horatio Street .....	1	0
Derby Street.....	3	0	Howard Street .....	2	1
Devonshire Place ...	3	0	Ivy Street.....	7	1
Devonshire Road ...	2	1	Jackson Street .....	2	1
Sandyway.....	2	0	James Street .....	1	1
Dock Cottages .....	19	8	Kendal Street .....		
Duke Street .....	1	0	Whitfield Place...	2	2
Edgar Street.....	8	3	King Street .....	2	0
Egerton Street .....	13	5	Knox Street .....	3	0
Carpenter's Row	3	1	Prospect Place ...	2	1
Connor's Court...	1	0	Laird Street .....	4	1
Meacock's Court	1	1	Leicester Street ...	5	2
Eldon Place .....	5	2	Leicester Terrace	1	0
Elgin Street .....	2	0	Livingstone Street	9	2
Elizabeth Place.....	1	0	Lord Street .....	3	1
Elizabeth Street ...	4	1	Lower Ivy Street ...	2	1
Exmouth Street ...	8	4	Lowther Street.....	3	0
Euston Grove .....	1	0	Marion Street .....	5	1
Field Street .....	15	8	Market Place South	1	1
Flamank Street ...	19	7	Market Street .....	15	3
Fore Street .....	3	0	Brunswick Avenue	1	0
Forest Road .....	1	0	Marshall Street.....	4	0
Frederick Street ...	7	2	Meadow Street.....	3	1
George Street .....	7	5	Meacock Street.....	1	0
Gladstone Street ...	5	2	Midland Street .....	1	0
Glover Street .....	2	1	Milton Street .....	7	2
Grace Street.....	1	1	Moon Street .....	8	2

Table V.—Continued.

Streets.	Total from all Causes.	From Zymotic Causes only.	Streets.	Total from all Causes.	From Zymotic Causes only.
Mornington Street	4	1	Reedville .....	2	0
Morpeth Dock .....	1	0	Richmond Cottages	2	1
Myrtle Street .....	4	1	Robert Street .....	1	0
Nelson Street .....	5	0	Rose Brae .....	1	0
Neptune Street.....	2	1	Rose Street .....	4	2
Oak Street .....	12	7	Russell Street .....	5	2
Old Bidston Road...	7	3	Salisbury Street ...	2	1
Cumberland Place	1	0	Samuel Street .....	1	0
St. Mary's Terrace	1	0	Shotwick Street ...	1	0
Old Chester Road...	7	1	Shrewsbury Road...	1	1
Mathew's Place...	1	1	Somerville Street ...	4	3
Old Priory .....	2	0	Shaw's Place.....	1	0
Oliver Lane .....	1	0	St. Aidan's Terrace	3	1
Oliver Place .....	3	1	Stanley Road .....	1	0
Oliver Street.....	22	4	St. Anne Street ...	36	18
Miller's Place ...	2	0	St. Mary's Gate ...	5	1
Oxton Road .....	14	3	Priory Court.....	4	2
Oak Bank.....	1	1	Hughes' Build'gs	2	0
On a Steamer off			St. Mary's Av'nue	2	0
Ireland .....	1	0	St. Mary's Street ...	3	2
Park Road East ...	2	0	Sun Street .....	7	0
Park Road South ...	3	0	Sussex Street .....	1	1
Park Road West ...	2	2	Taylor Street .....	2	1
Park Street .....	6	1	Thomas Street .....	13	6
Mason's Court ...	1	0	Tranmere Vale .....	3	1
Parkfield .....	1	0	„ Vale Terrace	1	0
Parkfield Place...	1	0	Upper Beckwith St.	2	0
Plymouth Place...	2	2	Upton Road .....	2	0
Parkfield Avenue ...	3	1	Rock Terrace ...	1	0
Peel Street .....	6	1	Vicker Street .....	3	2
Pilgrim Street .....	1	1	Victoria Wharf.....	1	0
Pleasant Street.....	1	0	Vincent Street .....	2	2
Pool Street .....	4	1	Vine Street .....	8	2
Pool Terrace.....	1	0	Vulcan Street .....	6	2
Price Street .....	27	5	Walton Street .....	8	4
Myrtle Place.....	1	0	Warwick Street.....	14	7
German Terrace			Waterloo Place.....	3	0
Prince's Street .....	1	1	Rushton's Court	2	0
Prince's Terrace ...	1	1	Watson Street .....	16	7
Queen Street .....	1	0	Oakfield View ...	2	0
Queensbury Street	3	3	Orderly Home ...	2	2

Table V.—Continued.

Streets.	Total from all Causes.	From Zymotic Causes only.	Streets.	Total from all Causes.	From Zymotic Causes only.
Orderly Residence	2	1	Wilkinson Street ...	8	1
Orderly Avenue	3	3	Willaston Place ...	2	1
Wesley Street .....	3	1	William Street .....	9	1
Westbourne Road...	4	1	Wilson Street .....	5	2
Whetstone Lane ...			Windsor Street.....	6	2
Whetstone View	1	0	Wood Street.....	6	0
White Street.....	7	4	Morpeth B'dings	9	5
Wilbraham Street...	2	0	Woodchurch Road	1	1

NOTE.—Twelve cases of fatal Small pox were also removed to the Union Hospital, from the following places, viz.:—Brook-street, 2; Brunswick-avenue, 2; Brassey-street, 1; Church-street, 1; George-street (Wilkes'-court), 1; Market-street, 1; Morpeth-buildings, 1; Oliver-street, 1; Price-street, 1; and Vicars-street, 1.

TABLE VI.

(Lunar) Monthly Table of Total and Zymotic Deaths, with the rates per 1,000 per annum.

1870.	Total No. of Deaths.	Rate per 1,000	No. of Zymotic Deaths.	Rate per 1,000.
1st Month ending January 28th...	108	31	17	4·8
2nd „ February 25th	87	25	19	5·4
3rd „ March 25th ...	71	20·4	13	3·7
4th „ April 22nd.....	58	16·6	12	3·4
5th „ May 20th .....	67	19·2	8	2·3
6th „ June 17th .....	79	22·7	12	3·4
7th „ July 15th .....	48	13·8	13	3·7
8th „ August 12th ...	52	14·9	7	2·
9th „ September 9th	72	20·7	28	8·
10th „ October 7th ...	131	37·6	56	16·1
11th „ November 4th...	135	38·8	58	16·6
12th „ December 2nd	121	34·7	63	18·1
13th „ „ 31st*	108	31·0	42	12·
	1187	25·1	348	7·6

\* The 13th month contains one extra day.

TABLE VII.

Occupations of Persons who either themselves, or  
Members of whose Family, died during 1871.

Accountants .....	5	Colliers.....	2
Agents .....	7	Confectioner.....	1
Artists .....	2	Coopers.....	6
Auctioneer .....	1	Dealers .....	3
Bailiff .....	1	Dock Gatemen .....	2
Bakers .....	16	Drapers .....	3
Barman .....	1	Dressmakers .....	4
Blacksmiths .....	24	Driller .....	1
Boatbuilders .....	2	Dyer .....	1
Boatmen .....	10	Editor .....	1
Boilermakers .....	42	Engine Drivers.....	11
Bookbinder .....	1	Engineers .....	5
Book-keepers .....	13	Engine Fitters .....	18
Brass Founders .....	3	Engine Turner .....	1
Brewers .....	3	Farmers .....	4
Bricklayers .....	9	Farriers .....	3
Brickmakers .....	3	Feather Dresser .....	1
Brokers.....	11	Ferry Manager .....	1
Builders .....	5	Fishermen .....	2
'Bus Driver .....	1	Flatmen .....	3
Butchers .....	7	French Polisher .....	1
Cabinet Maker .....	1	Gardeners.....	7
Car Drivers .....	7	Gas Inspector .....	1
Car Owners .....	5	Gasfitters .....	2
Carters .....	13	Gatekeeper .....	1
Cashier .....	1	Gentlemen .....	4
Caulkers .....	3	Glassmaker .....	1
Charwoman .....	1	Grocers.....	9
Chemists .....	4	Grooms.....	6
Chimney Sweep .....	1	Gunsmith .....	1
Clerks .....	11	Hairdressers .....	5
Coach Builders.....	5	Hammermen.....	2
Coachmen .....	5	Horse Keeper .....	1
Collector .....	1	Housekeepers .....	3

Table 7.—Continued.

Iron Dealer .....	1	Sawyers .....	3
Iron Monger.....	1	Schoolmasters .....	3
Iron Moulders .....	6	Seamen .....	31
Iron Plater .....	1	Servants .....	25
Iron Turners.....	3	Shepherd .....	1
Joiners .....	26	Ship Carpenter.....	1
Labourers.....	327	Ship Chandler .....	1
Lath-cleaver .....	1	Shipkeeper .....	1
Letter Carriers.....	2	Shipowners .....	3
Limeburner .....	1	Shipriggers .....	3
Machinists .....	6	Shipsmiths .....	4
Magistrate .....	1	Ship Stewards .....	5
Manufacturers .....	3	Shipwrights .....	87
Mariners .....	13	Shoemakers .....	30
Master Mariners .....	5	Shopmen .....	2
Merchants .....	23	Slaters .....	2
Milk Dealer .....	1	Soldier .....	1
Millers .....	4	Stevedore .....	1
Milliner .....	1	Stokers.....	15
Millwright.....	1	Stonemasons .....	20
Ministers .....	2	Storekeepers.....	4
Missionary .....	1	Strikers.....	2
Moulder .....	1	Surgeons .....	5
Painters .....	16	Tailors .....	16
Pattern Maker .....	1	Tallow Chandler .....	1
Paymaster .....	1	Teacher .....	1
Pensioners .....	7	Timekeepers.....	3
Photographer .....	1	Tinworkers .....	2
Plasterers .....	3	Travellers.....	5
Platelayers .....	3	Unknown .....	10
Plumbers .....	9	Upholsterers.....	2
Policemen.....	12	Warehousemen.....	5
Porters .....	16	Watchmakers .....	3
Poulterers.....	2	Watchman .....	1
Printers .....	3	Watermen .....	7
Provision Dealers.....	3	Well Sinker .....	1
Publicans .....	9	Wheelwright.....	1
Railway Officials .....	9	Whitesmiths.....	6
Rope Maker .....	1	Window Blind Maker .....	1
Saddlers .....	2	Wireworker .....	1
Saw Maker .....	1		

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