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# ANNUAL REPORT

OF THE

## Public Analyst

FOR THE

### COUNTY BOROUGH OF HALIFAX,

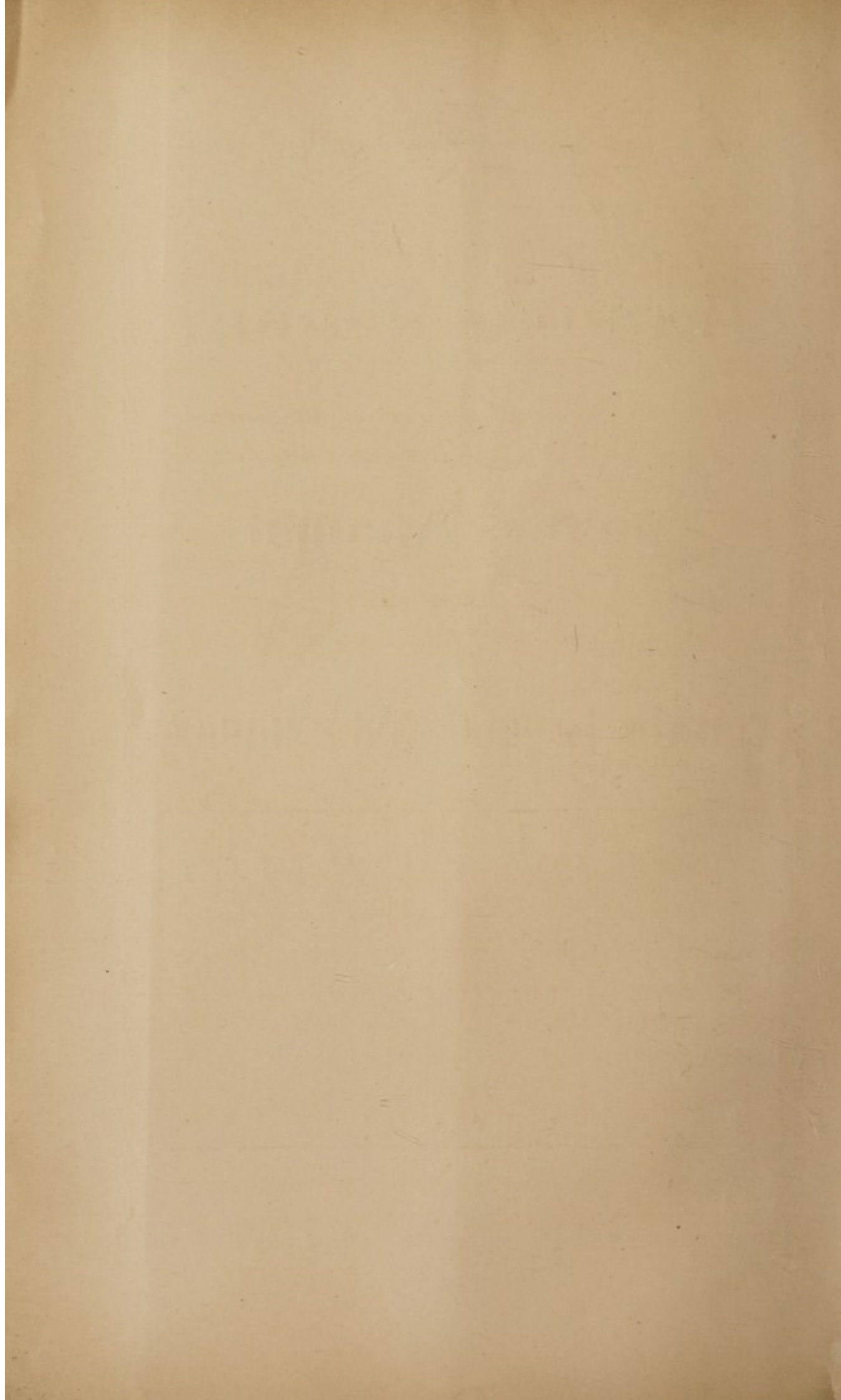
*FOR THE YEAR ENDED DEC. 31st, 1893.*

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HALIFAX:

WHITLEY & BOOTH, PRINTERS, ETC., CROWN STREET.

1894.





# Report of the Public Analyst

FOR THE YEAR ENDING DECEMBER 31st, 1893.

*To the Chairman and Members of the Sanitary  
Committee of the County Borough of Halifax.*

GENTLEMEN,

During the year 1893 I have analysed 129 samples of foods and drugs in compliance with the "Sale of Food and Drugs Acts, 1875 and 1879," and nine samples of water.

The nature and number of the articles examined are shown in the following Table :—

1893.	Milk.	Condensed Milk.	Butter.	Cheese.	Coffee.	Sweet Nitre.	Vinegar.	Bread.	Oat Cake.	Precipitated Sulphur.	Total.
First Quarter	24	...	3	3	...	...	..	...	...	...	30
Second Quarter	21	...	4	...	5	3	3	...	...	...	36
Third Quarter	12	3	...	...	...	...	...	3	...	...	18
Fourth Quarter	19	...	7	...	4	...	...	...	4	11	45
	76	3	14	3	9	3	3	3	4	11	129

Seven samples, or 5·4 %, were adulterated, and six samples, or 4·6 %, were of a doubtful character, *i.e.*, just



outside the limits for which a prosecution could be instituted. The 13 samples consisted of six doubtful and one adulterated milk, one adulterated butter, three adulterated coffees, and two adulterated precipitated sulphurs.

**Milk.**—Seventy-six samples, or nearly 59 %, of the substances examined were milk. This large proportion is only commensurate with its relative importance as an article of diet, but hardly with its position as an article of commerce. The precise amount of the County Borough's milk bill would be difficult to ascertain, but the poorest families are milk consumers, and it is probably fully £50,000 per year, taking as the basis of one's estimate a consumption of a quarter of a pint of milk per head per day for all purposes, drinking, cooking, &c., for our 92,000 inhabitants. It is not necessary to insist on the hygienic value of the milk supply being kept up to a high standard, while the lowering of it even 5 % means an aggregate loss to the consumers in the Borough, if this estimate be approximate, of some £2,500 per year. One sample has been analysed for every 1,210 people. The six doubtful samples came below what I regard as the standard of purity, but not sufficiently below for successful legal action against the vendors; the adulterated sample contained 10 % of added water, and by decision of your Committee a letter of warning was addressed to the seller. A recent interpellation in Parliament shows the

importance of the standard of purity being kept up, not only in the interests of consumers, but also in the interests of honest dealers and dairy proprietors.

**Milk of Sulphur.**—This article is also sold as *precipitated sulphur*. Eleven samples have been examined, and two of these were adulterated with 63 % and 74 % respectively of sulphate of lime. A child taking a spoonful of either of these samples would take nearly the same volume of the lime compound, which is of the nature of Plaster of Paris. The first of the two was “unofficial”—that is, it was bought as a “feeler,” without complying with the full letter of the law ; the second was bought in compliance with the Act, was the subject of a prosecution, and a fine was imposed. Buyers ought to ask for precipitated sulphur when purchasing this article, otherwise they are more liable to get an article with an undue proportion of the lime compound in it. The remaining nine samples were genuine.

**Other Articles.**—Of the 14 samples of butter analysed one was margarine, and three out of nine coffees examined had small amounts of chicory present in them. Three samples of vinegar were purchased for analysis, and were found to be genuine. This is of interest in view of the recent prosecutions in Birmingham for the sale of acetic acid, obtained by the destructive distillation of wood, as malt vinegar.



The total number of adulterated samples, 5·4 % for 1893, compares not unfavourably with the figures for former years, being slightly under the average.

	1885	1886	1887	1888	1889	1890	1891	1892	1893
Per cent. of Samples Adulterated ...	5	9·3	15	1·8	2·6	11·4	6	3	5·4

**Water.**—During the year nine samples of water from private sources of supply have been analysed. Two of these were passed as free from pollution. The remaining seven were all more or less contaminated and unfit to drink.

I have the honour to be,

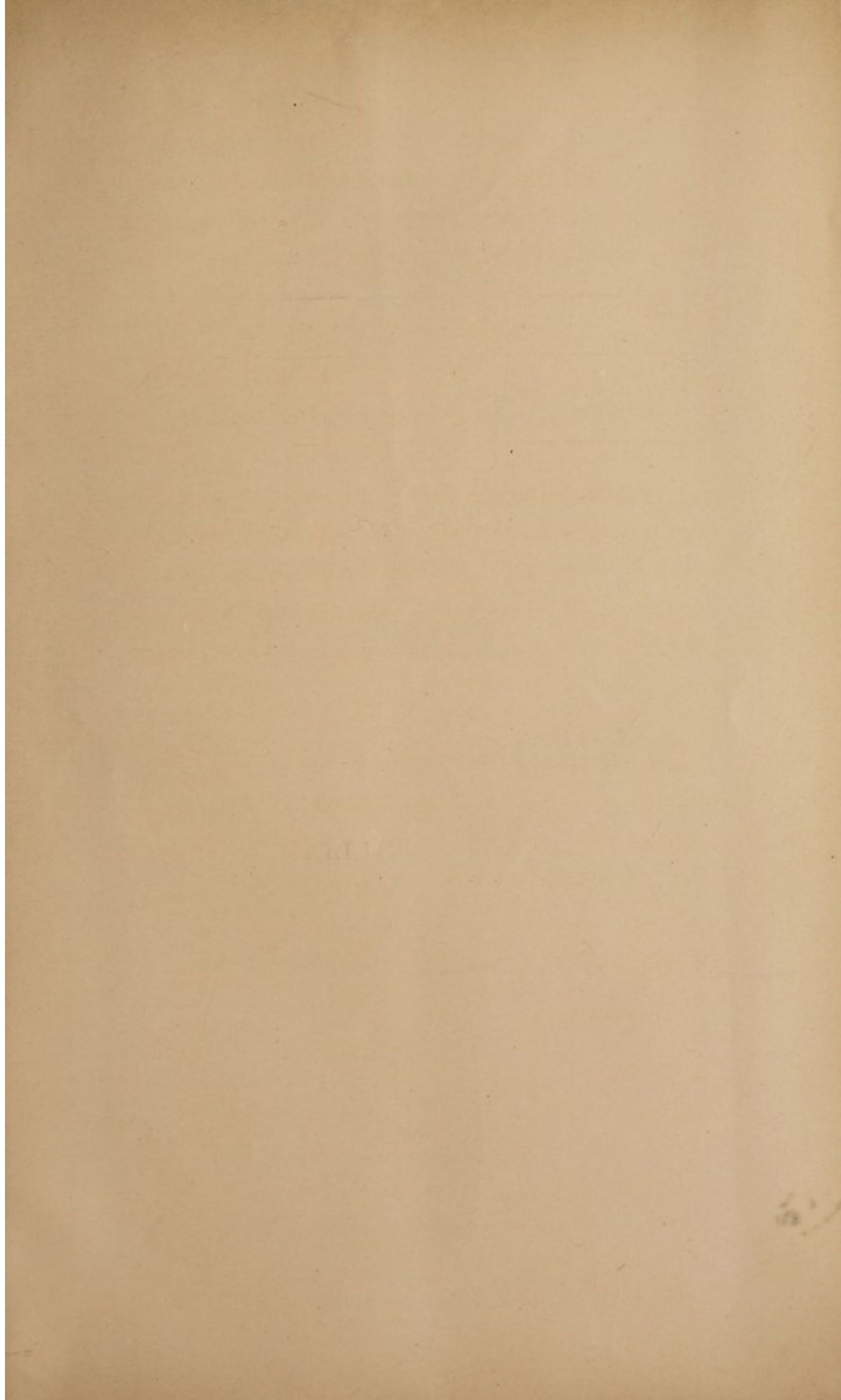
Gentlemen,

Your obedient Servant,

WILLIAM ACKROYD,

PUBLIC ANALYST.









County Borough of Halifax.

HEALTH DEPARTMENT.

# Report

OF THE

MEDICAL OFFICER OF HEALTH,

TOGETHER WITH THE REPORT OF

*THE SANITARY INSPECTOR,*

FOR THE

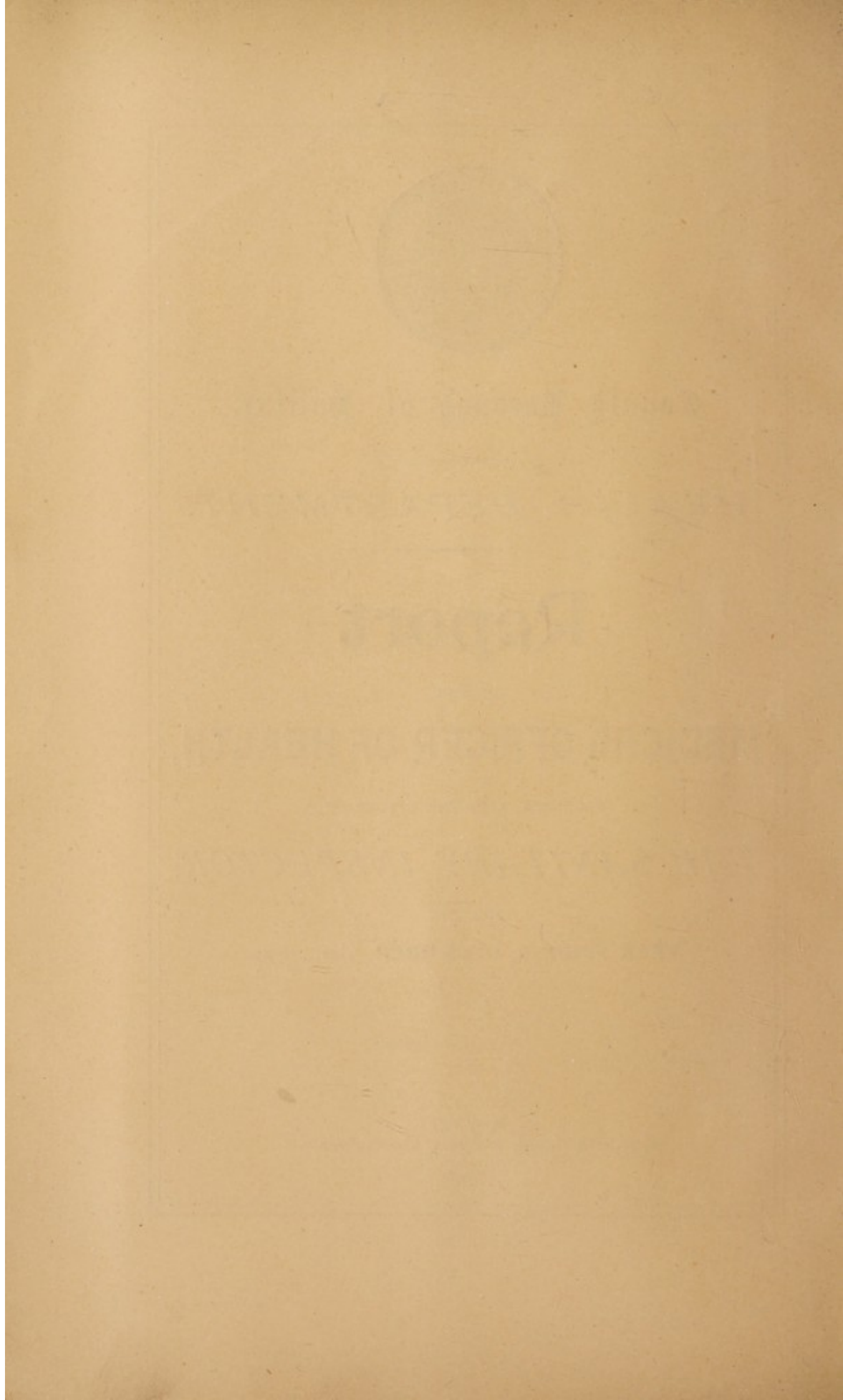
YEAR ENDING DECEMBER 31st, 1893.

Halifax:

WHITLEY & BOOTH, PRINTERS, CROWN STREET.

1894.







County Borough of Halifax.

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HEALTH DEPARTMENT.

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# Report

OF THE

MEDICAL OFFICER OF HEALTH,

TOGETHER WITH THE REPORT OF

*THE SANITARY INSPECTOR,*

FOR THE

YEAR ENDING DECEMBER 31st, 1893.

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Halifax:

WHITLEY & BOOTH, PRINTERS, CROWN STREET.

1894.

## Sanitary Staff.

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Medical Officer of Health :

D. AINLEY, M.R.C.S.E., L.R.C.P., &c.

Chief Sanitary Inspector :

DAVID TRAVIS.

Meat Inspector :

JOHN HUTCHINSON.

Assistant Inspectors :

JAMES ARCHBELL.

JOSEPH THOMPSON.

A. E. BOTTOMLEY.

A. E. HUDSON.

Goux Inspectors :

WILLIAM PARKER.

WALTER SEED.

Foreman Scavenger :

NATHAN GARSIDE.

Chief Clerk :

JOHN WM. JACKSON.

Assistant Clerks :

HERBERT REED.

HARRY WILSON.



# Members of the Sanitary Committee.

1893-94.

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Mayor :

Mr. ALDERMAN SAMUEL THOMAS MIDGLEY.

Chairman :

Mr. ALDERMAN JOHN FREDERICK COE.

Vice-Chairman.

Mr. ALDERMAN PATCHETT.

Mr. COUNCILLOR	ARNOLD,	Mr. COUNCILLOR	CROSSLAND,
"	BEEVER,	"	LISTER,
"	BUNNEY,	"	NAYLOR,
"	BUTLER,	"	J. T. SPENCER
"	CALVERT,	"	TYSON.

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The Committee meets every alternate Wednesday, at 5-0 p.m., at the Town Hall.

# COUNTY BOROUGH OF HALIFAX.

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## Report of the Medical Officer of Health,

FOR THE YEAR ENDING DECEMBER 31st, 1893.

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*To the Chairman and Members of the Sanitary  
Committee.*

GENTLEMEN,

I have the honour of presenting to you my twenty-first Annual Report of the Vital and Mortal Statistics of the Borough for the year ending Dec. 31st, 1893.

This is the first Report of the enlarged Borough, *i.e.*, with the addition of the Local Board District of Ovenden.

On account of the re-adjustment of many of the Wards, and others entirely new, comparison with past years has been rendered almost impossible.

Although the beginning of the year found us in the midst of an epidemic of Small-pox, which increased for several months, yet, when we see the results of the year's working, we cannot regard them as unsatisfactory. The totals come out better than we expected.

As the desire has been frequently expressed to see the figures of other towns, so as to form a comparison, I append the following Table, which is a Summary of the four quarters of the year published by the Registrar General, and which, although subject to further revision and correction, may be taken as practically accurate for comparative purposes :—



Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the year 1893.

Towns.	Estimated Population middle of 1893.	Births.	Deaths.	Annual Rate per 1,000 Living.			Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhoea.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Death.
				Births.	Deaths.	Principal Zymotic Diseases.										
33 Towns	10,327,846	328,342	222,178	31.9	21.6	3.2	32,797	732	4,559	3,015	4,423	4,977	2,493	12,598	181	1.8
32 Provincial Towns...	6,021,435	195,377	130,642	32.5	21.8	3.3	19,574	526	2,898	1,419	1,158	2,647	1,774	9,152	193	2.4
London	4,306,411	132,965	91,536	31.0	21.3	3.1	13,223	206	1,661	1,596	3,265	2,330	719	3,446	164	0.9
West Ham	227,405	8,083	4,288	35.6	18.9	3.4	768	55	36	80	95	154	68	280	170	4.5
Croydon	108,997	2,852	1,772	26.2	16.3	2.2	240	1	20	11	85	27	12	84	155	—
Brighton	117,833	2,981	2,165	25.4	18.4	1.8	217	—	13	12	33	56	15	88	169	2.7
Portsmouth	167,277	4,709	3,039	28.2	18.2	2.8	469	—	113	33	29	37	52	205	164	0.8
Plymouth	86,781	2,590	1,839	29.9	21.2	2.8	240	—	85	22	14	46	10	63	169	0.5
Bristol	225,028	6,814	4,249	30.4	18.9	1.7	371	17	25	35	49	77	25	143	141	1.6
Cardiff	142,435	5,121	2,796	36.1	19.7	3.3	469	—	100	39	98	40	27	165	179	1.0
Swansea	93,816	3,285	1,836	35.1	19.6	1.8	172	—	17	33	5	30	19	68	170	2.0
Wolverhampton	84,298	2,902	1,956	34.5	23.3	2.8	239	1	21	26	5	4	28	154	208	1.0
Birmingham	487,891	15,916	10,693	32.7	22.0	3.0	1,481	71	50	68	63	320	98	811	198	4.9
Norwich	104,184	3,210	2,003	30.9	19.3	3.1	317	—	61	20	23	66	37	110	195	1.1
Leicester	184,547	6,006	3,683	32.6	20.0	4.0	727	15	52	80	20	113	46	401	220	3.7
Nottingham	220,551	6,642	4,061	30.2	18.5	2.6	577	4	25	81	15	44	69	324	170	1.7
Derby	97,341	3,123	1,771	32.2	18.2	2.1	201	7	17	14	7	44	22	90	156	0.8
Birkenhead	103,817	3,431	2,127	33.1	20.5	2.8	292	1	15	12	16	69	27	152	196	1.1
Liverpool	510,514	18,322	13,919	36.0	27.3	3.9	1,987	9	273	231	63	279	269	863	211	3.7
Bolton	117,278	3,874	2,821	33.1	24.1	4.7	544	7	166	34	12	77	36	212	199	0.8
Manchester	515,598	17,268	12,801	33.6	24.9	3.7	1,911	48	206	138	165	241	129	894	203	1.3
Salford	203,431	7,047	4,886	34.7	24.1	4.1	839	22	92	41	58	99	100	427	210	3.3
Oldham	136,469	3,896	2,860	28.6	21.0	2.5	338	65	29	16	18	55	26	129	187	1.1
Burnley	93,462	3,161	2,039	33.9	21.9	3.8	354	6	27	51	14	34	28	194	223	1.4
Blackburn	124,005	3,822	2,879	30.9	23.3	4.1	504	7	144	5	2	33	30	283	241	3.4
Preston	110,225	3,855	2,899	35.1	26.4	6.0	661	—	179	27	14	47	51	343	269	3.8
Huddersfield	97,549	2,313	1,673	23.8	17.2	1.2	121	—	23	25	3	13	12	45	141	2.9
Halifax	91,918	2,253	1,591	24.6	17.4	1.7	157	35	5	3	23	32	13	46	173	4.3
Bradford	221,611	6,132	4,632	27.7	21.0	3.4	757	115	69	70	23	110	49	321	197	1.5
Leeds	382,093	12,349	8,493	32.4	22.3	3.5	1,322	20	341	31	62	166	110	592	206	1.0
Sheffield	333,922	11,591	7,428	34.8	22.3	3.5	1,172	5	176	90	61	128	90	622	191	3.5
Hull	208,709	7,125	4,545	34.2	21.8	4.1	862	8	128	33	22	80	99	492	206	3.3
Sunderland	134,515	4,771	3,022	35.6	22.5	3.4	451	5	17	26	11	24	131	237	188	0.9
Gateshead	90,938	3,309	1,750	36.5	19.3	3.5	314	2	71	9	19	53	21	139	170	2.5
Newcastle-on-Tyne	196,997	6,624	4,126	33.7	21.0	2.5	500	—	212	23	31	34	25	175	174	0.9



To those who do not wish to wade through the above figures I may say that Halifax has the lowest birth-rate but one, it has also the lowest death-rate but two, and is second in its Zymotic death-rate.

Although as stated above the figures are subject to official revision, which may not alter them materially, yet they are capable of some diminution by reference to local data which may be taken into account if we wish to be strictly accurate.

It will be observed in Table A that 48 deaths occurred in the Halifax General Infirmary, and perhaps no better evidence could be afforded of the large area served by this Institution than the fact that 22 of these came from other parts of the parish, viz.: Warley 2, Oyenden 2, Triangle 1, Stockport 1, Shelf 1, Bradford 1, Greetland 1, Sowerby 2, Brighouse 1, Northowram 5, Hipperholme 1, Elland 1, Southowram 1, Todmorden 1, and Hebden Bridge 1. One death also occurred in South Ward of a person on a visit from Bury, so that we have to subtract 23 from the total of 1591, which would give us a death-rate of 17·0. No doubt some who belonged to the Borough have died outside the District, I have not been able to ascertain the number.

**Population.**—The following Table gives the details of the Population at the Census of 1891. The Registrar-General's Estimate for the middle of 1893 is 91,918. The old Borough had an acreage of 3705, with 24·4 persons to an acre. The acreage of the extended Borough is 8209, with 10·8 persons to an acre :—

THE NUMBERS AT TWENTY-FIVE GROUPS OF AGES OF MALES AND FEMALES IN THE COUNTY  
BOROUGH OF HALIFAX AT THE CENSUS 1891.

ALL AGES. Persons.	Under 1 year		1	2	3	4	Under 5 years	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100 and up- wards
	Males and Females.																										
89832	M 41921	958 909 987			865 895 4614	4579 4774 4433 4007 3517	3168 2859 2442 1962 1711 1335 1094	707 419 218 63 18	1 ...	...																	
	F 47911	994 893 880 1000 984 4751			4679 4941 5089 4738 4246 3617 3390 2726 2435 2170 1604 1408	1032 654 299 95 31	5 1	...																			

These figures have been published since my last Annual Report, hence it is the first time they have been available for Statistical purposes. They will form the basis of our calculations of the Death Rates at various Groups of Ages.



**Births.**—The number of births registered within the Borough during 1893 was 2254, with the singular coincidence that the numbers of males and females are equal, viz. : 1127 of each, giving a birth-rate of 24·6 per 1000. This rate is the lowest on record in our Borough, and is 3·2 below the mean rate of the preceding ten years, 1883-92, see Table 1. In the 33 large towns dealt with in the Registrar General's Weekly Returns the mean birth-rate in 1893 was 31·9 per 1000 (the same as the previous year), and ranged from 23·8 in Huddersfield, 25·4 in Brighton, and 26·2 in Croydon, to 35·6 in West Ham and in Sunderland, 36 in Liverpool, 36·1 in Cardiff, and 36·5 in Gateshead. Seventy-three children, or 3·2 per cent. were born out of wedlock, and show a slight decline on the two previous years which were 3·4 and 3·6 per cent. respectively.

**Deaths.**—The deaths registered within the Borough, which had been 1667, 1827, 1877, and 1642 in the preceding four years, declined again to 1591 in 1893, 825 males and 766 females. The death-rate was equal to 17·3 per 1000, against 20·6, 22·3, 22·6, and 19·5 respectively in the four years 1889-92; and was 3·7 per 1000 below the mean rate in the preceding ten years 1883-92, and was the lowest rate in any year on record. In the 33 large towns the death-rate last year averaged 21·6 per 1000, and exceeded by 4·3 per 1000 the rate in Halifax. Among these large towns the rates ranged from 16·3 in Croydon, 17·2 in Huddersfield, to 26·4 in Preston, and 27·3 in Liverpool.

**Infant Mortality.**—Of the 1591 deaths in Halifax last year, 394 were of infants under one year of age, showing an increase of 40 upon the numbers recorded in the previous year, but only an increase of



one on the year 1891. Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 174 per 1000, against 173, 172, and 163 in the three previous years 1890-92, being an increase of 12 on the mean rate for the ten years 1883-92. In the 33 large English towns the rate of infant mortality last year averaged 181 per 1000, and exceeded the rate in Halifax by seven. The lowest rates in those large towns were 141 in Bristol and Huddersfield, and 155 in Croydon, and the highest were 223 in Burnley, 241 in Blackburn, and 263 in Preston. The two latter towns were also the highest in 1892.

**Mortality at Groups of Ages.**—The 1591 deaths in Halifax last year included 581 of children under 5 years of age, or a little over 36 per cent. of the total deaths. The deaths of 60 children occurred between the ages of 5 and 15 years; 78 deaths occurred between the ages of 15 and 25 years; 425 were of persons aged between 25 and 60 years, and 457 were of persons aged upwards of 60 years. Compared with the number of deaths at the same groups of ages in 1892, the deaths at each period, with the exception of the infants, showed a decline.

In Table 2 are given the rates of mortality that prevailed in 1893 among the persons estimated to be living at each of the above-mentioned five age-periods, as shown by the Census of 1891. In the same Table are inserted similar rates of mortality in previous years for the purpose of comparison. The death-rate among children under 5 years of age which had been 59·1 and 63·3 per 1000 estimated to be living at those ages in the preceding two years declined in 1892 to 54·0, and was 5·4 below the mean rate at those ages during the ten



years 1882-91, but rose again to 62·0 in 1893. The rate of mortality at the next age-period 5-15, was equal to 2·1 per 1000, and was 1·8 below that recorded in the previous year, and was 2·2 below the average. The death-rate among persons aged 15-25 years was equal to 3·0 per 1000, and showed a further decline from the rates in the preceding three years and was 2·5 below the average. Among persons aged 25-60 years, the rate was 10·7 per 1000 against 13·6 and 16·4 in the years 1891-2. Among persons aged upward of 60 years the rate of mortality was equal to 75·6 per 1000, and was as much as 15·1 per 1000 below the average of the ten years 1883-92.

**Causes of Death: Zymotic Diseases.**—The 1591 deaths in Halifax during 1893 included 157 which were referred to the principal zymotic diseases, against 104, 159, and 127 in the preceding three years. These 157 deaths were equal to 9·8 per cent. of the total deaths, and to an annual rate of 1·7 per 1000 of the population against 1·27, 1·91 and 1·51 in the preceding three years. In the ten years 1883-92 the mean zymotic death-rate in Halifax was 1·64. It may be stated in this connection that the zymotic rate in the 33 large towns in 1893 averaged 3·3 per 1000, and was considerably higher than the rate in Halifax, see Table 3.

**Small-pox.**—The beginning of the year found the town in the midst of an epidemic of this disease, which continued until October, the last case leaving the Hospital on the 18th of that month, the total amounting to 513 cases. In the December following I issued a special report on the outbreak. As that document is still before you, and no doubt in most of your memories, I need not repeat the whole of the details, but content



myself with giving a summary of the cases which occurred in the year under notice. During that period 346 cases were notified; of these 340 were admitted into Hospital; of the remaining six three were of the malignant type, and died almost before they were diagnosed as Small-pox, two made provision for complete isolation at home, and the remaining one was a case of childbirth and could not be removed with safety. No ill effects followed those that remained at home, but of those of a malignant character many other cases followed after the usual period of incubation. Table 2 gives the number of patients attacked in each Ward. Some, no doubt, will look with interest on this Table in order to note the incidence of the disease in various parts of the Borough. Southowram has the highest number, and this will be attributed by some to the presence of the Hospital. I have discussed this point in my Special Report, and need not do so again. The next highest is East Ward. This I think is entirely accounted for from the fact that most of the lodging-houses are situate in this district, and several times the disease was introduced into them by tramps; and when we remember that some of these lodging-houses have from one to two hundred occupants every night, there is little wonder that a disease so infectious as Small-pox should spread with a rapidity unknown to any other disease. Little need be said of the other Wards, excepting that it appears that the remotest districts with the sparsest populations had the fewest cases. Ovenden and Kingston had each eight, while Illingworth had only one. There is nothing unusual in this circumstance, for we must have the people before we have a disease spreading to any large dimensions. Aggregation of human beings favours the spread of nearly all diseases; especially so of the one



under notice, unless those exposed are protected in the only safe and reliable way, namely, by re-vaccination. Of the 346 cases of Variola, 33 deaths are registered, being 0.94 per cent., or less than one in a hundred. When we consider that these 346 patients are composed of unvaccinated as well as vaccinated persons, the results appear highly satisfactory. Those who wish to go further into the figures will find additional information in Table transferred from my Special Report, on page 13.

TABLE SHOWING THE NUMBER OF CASES OF SMALL-POX ADMITTED TO HOSPITAL IN THE YEARS 1892-3 OF ALL CLASSES, AT DIFFERENT AGE-PERIODS, DISTINGUISHING THE TYPE OF ATTACK, AND GIVING THE MORTALITY PER CENT. OF EACH TYPE AND OF EACH AGE-PERIOD, AND OF ALL AGES.

	Under 5 years.		5 to 10.		10 to 20.		20 to 30.		30 to 40.		40 and upwards.		All Ages.		Totals.
	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	
Discrete ...	...	5	4	4	69	...	122	...	78	...	56	...	329	9	338
Semi-Confluent ...	...	20	...	4	12	2	16	...	24	...	6	...	58	26	84
Confluent ...	...	25	...	9	5	3	8	5	12	6	13	5	38	53	91
Total { Cases	...	50	4	17	86	5	146	5	114	6	75	5	425	88	513
Deaths ...	...	20	...	2	1	1	1	3	1	6	5	4	8	36	44
Mortality per cent. of Cases ...	...	40.0	0.0	11.7	1.1	20.0	0.6	60.0	0.8	100.0	6.6	80.0	1.8	40.9	8.5

Two Cases of Re-vaccinated Persons. 1st Re-vaccinated inefficiently 5 years ago. 2nd Re-vaccinated 34 years ago. Officials: One only attacked, and that during first week of epidemic, not Re-vaccinated; all others Re-vaccinated and none attacked. Doubtful Cases omitted.



**Measles.**—This is not a notifiable disease with us. We have only, therefore, to report on the deaths. 1893 has not been one of the epidemic years of this complaint, so we only record five for the year, four of which were in Kingston Ward and one in Ovenden. The numbers for the four preceding years were 70, 25, 39, and 64. and the average for the ten years, 1882-91. was 31.

**Scarlet Fever.**—For this fatal infantile disease we have to record only 3 deaths for the year under notice, against 7, 24, 36, and 7 in the preceding four years. The average for the ten years, 1883-92 is 20. The percentage of deaths to cases notified is 2·0 ; this is very much below the average. See further remarks on pages 23 and 24.

**Diphtheria.**—During last year 18 deaths were registered as resulting from this disease; a higher number than in any year on record, the nearest approach to it being 1886, with 16 deaths. The numbers of the four preceding years were 7, 12, 2, and 14 respectively. The average for the last ten years being a little over 7. These 18 deaths were distributed in every Ward except West, which was free. Ovenden had 4, Pellon 3, East 2, Skircoat 2, and the remainder 1 each. Although this disease is on the increase throughout the country, as evidenced by published returns, I see no reason to accept this as a necessity, and intend giving close attention to it in the coming year. The percentage of deaths to notified cases is 31·6. The remarks on the Sanitary surroundings will be found on pages 23 and 24.

**Whooping Cough.**—32 deaths were referred to this disease during 1893, against 15, 58, and 9 in the three preceding years respectively. These 32 deaths are 12 above the average for the last ten years.



**Fever.**—This term includes typhus, enteric, and simple-continued and ill-defined forms of fever, to which 12 deaths were referred in the year 1893, all of which resulted from enteric fever. Although this is an increase of 7 on last year, it is 10 below the average of the ten years 1883-92. The percentage of deaths to notified cases is 17·4.

**Diarrhœa**, including **Dysentery**, caused 38 deaths during 1893, against 7, 16, 13, and 2 in the preceding four years. The number has only been equalled twice in the last 14 years, viz. : 1884 and 1886, when the numbers were exactly the same. The average for the past ten years is 17. As Diarrhœa seems to be a very common, if not a natural result of a hot summer, I have no doubt the almost unprecedented temperature of last year was the exciting cause of the increase of this disease. The deaths are pretty equally distributed over the Borough, Kingston Ward only escaping. Northowram Ward has 6, Central, Southowram, and Skircoat, 5 each.

**Cholera.**—Seven deaths are referred to this disease in 1893, and no doubt had their origin chiefly in the causes mentioned above. As the country was alarmed and warned in the summer and autumn of last year respecting Cholera, of course Sanitary Authorities were on the look out. I visited each one of the above cases when notified, and two others besides, whose deaths pointed to an Asiatic form of the disease. I sent up a quantity of soiled linen to Dr. Klein for microscopical examination, but unfortunately the attendants of the case had used some disinfectant and thus rendered enquiry impossible. In no case was there any insanitary surroundings. Errors of diet—in three cases very gross errors of diet—appeared to me to be the sole exciting cause. Given—the



meteorological conditions pointed out in Dr. Ballard's tentative report on Diarrhœa then, any meal which disturbs the gastric and alimentary canal may run into Choleraic Diarrhœa followed by collapse and death in a few hours. One of these cases was a man who had been working hard all day without much food, then in the evening he sits down and eats as much cold meat pie (with beer) as he ought to have eaten at three meals; he is taken ill with the usual symptoms of sickness and vomiting and is dead before morning. A second case was that of a man who had been drinking all day in a public house and in the evening he buys and eats two pounds of unsound plums; he was taken ill in the night and died the next day. No doubt these are only average samples of the causes of deaths from English Cholera. During a season of high temperature there is no need to depart very much from one's ordinary mode of living, except it be the addition of a little more sound fruit. The danger is in carelessness; taking meals irregularly, unsuitable and excessive, which, aided by extreme conditions, disturb the healthy balance and induce disease.

**Respiratory Diseases.**—Under this heading are included bronchitis, pneumonia, and pleurisy; the 343 deaths referred to these diseases in 1892 showed a marked decline from the very high numbers in 1890 and 1891, when there was an excessive mortality from diseases of the respiratory organs, owing to the epidemic of influenza which then prevailed. There is a still further decline in the year under notice, the total only making 321. The numbers for 1890 were 499, and for 1892 490.

Phthisis, or pulmonary consumption, caused 135 deaths, against 149, 171, 168, and 134 in the preceding four years. Among the other causes of death in 1893



were 2 which were referred to rheumatic fever, 3 to puerperal fever, and 128 to heart disease; in the preceding year the deaths from these diseases were 4 and 117 respectively.

The deaths referred to different forms of violence within the Borough were 38 last year, against 49, 45, 39, and 32 in the preceding four years. These 38 deaths were equal to 2·3 per cent. of the deaths from all causes, and to a rate of 0·41 per 1000 of the estimated population, the mean violence rate last year in the 33 large English towns being 0·63 per 1000. For details of the deaths from violence see Table 4.

During the year 1893, 56 deaths in the Borough were registered on the authority of the Coroner's Certificate, being inquest cases. These were equal to 3·5 per cent. of the total deaths. For details see Table, page 18.

TABLE SHOWING INQUESTS IN THE BOROUGH DURING THE YEAR.

VERDICTS.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		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.
Accidental death	2	1	2	...	2	1	2	...	1	1	3	1	1	...	2	1	2	...	...	1	2	1	1	...	20	7
Natural causes	2	1	...	...	...	...	2	...	2	1	1	...	...	...	...	...	...	...	...	...	1	3	2	...	10	7
Found drowned	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suicide by various means	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	1	...	1	...	6	1
Other verdicts	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	1	...	...	...	3	1
Murder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Total 1893	5	2	2	...	4	1	4	...	3	2	5	1	2	...	2	1	2	1	2	1	5	5	3	...	39	17
" 1892	2	1	1	...	7	4	7	3	3	1	6	1	4	2	4	2	5	1	3	...	5	1	4	2	51	18
" 1891	1	2	5	3	3	...	2	2	6	...	1	...	4	2	4	2	1	...	1	2	1	1	2	1	31	15
" 1890	2	2	8	...	5	2	2	1	2	1	2	2	4	...	5	3	3	...	3	...	2	1	3	3	41	15
" 1889	2	1	3	1	5	...	5	1	4	1	4	1	7	...	2	...	5	...	1	...	5	1	1	2	44	8
" 1888	2	1	2	4	2	...	1	...	2	3	6	2	3	...	2	1	2	...	2	1	1	...	2	...	27	12
" 1887	5	...	3	...	2	2	2	1	3	...	4	...	2	1	1	1	3	...	2	1	2	1	...	2	29	9
" 1886	...	1	...	...	6	1	3	2	5	...	6	1	5	1	...	...	...	...	4	...	1	1	1	...	35	8
" 1885	4	2	4	2	2	2	5	3	4	...	2	1	3	2	3	...	3	...	5	...	3	...	3	...	41	12
" 1884	...	...	6	...	2	3	6	2	8	...	7	3	4	2	4	1	4	1	2	4	5	4	5	...	53	20
" 1883	1	1	2	...	...	...	2	2	2	2	4	1	2	1	5	2	5	1	...	1	7	1	3	1	33	13



The causes of 68 of the deaths in Halifax last year were not certified by a registered medical practitioner or by the Borough Coroner. The proportion of uncertified deaths was equal to 4·3 per cent., against 5·1, 5·5, and 4·5 in the years 1890-92, and considerably exceed the mean proportion in the 33 large towns during 1893, which was only 2·4.

**Influenza.**—Such had been the rapid fall in the death-rate of this disease in 1892 that I expressed a strong hope that we should have seen the end of it before now. Although we have not quite realised that, we are glad to report a still further decline upon the numbers of 1892. The totals for the years 1891-3 are 30, 19 and 15 respectively. As in former visitations this disease was the most fatal during the winter months, the low temperature of that period no doubt contributing chiefly to that result in the development of attacks of the respiratory organs. Thus we had 4 deaths in the first quarter, 2 in the second, 6 in the last, and none in the Summer quarter. As in previous reports it still shows marked fatality at the higher age-periods, six deaths occurring between 25 and 60, and nine at 60 and upwards. With regard to its distribution in the Borough, six deaths occurred in the Workhouse, three in Skircoat Ward, and three in South Ward. Considering this complaint as highly infectious in its nature, you adopted a wise and Sanitary measure when you informed the public that this department would offer every facility for the disinfection of articles and premises on the application of any burgess whose house had been invaded. Up to the present I am not aware that any have availed themselves of this offer.



**The Infectious Disease Hospitals.**—We refer to these as two Hospitals, because they are at present in the same locality and under the same management and supervision, but when the New Small-pox Hospital is built they will be miles apart.

During the year 1893, by reason of the epidemic of Small-pox, nearly twice the number of patients were admitted than had been in any previous year. See Table on page 33.

On reference to Table B, it will be observed that of the 346 cases of Small-pox notified by medical practitioners, 340 were removed to Hospital; it will be also noticed that only 5 other cases, namely, 1 of Scarlet Fever and 4 of Enteric Fever were admitted during the year. The very obvious explanation of this circumstance is, that the entire staff and premises were utilised for the Small-pox epidemic, and not until the month of November, when the former Fever Wards had been thoroughly disinfected, did we admit fever patients. Now that we are prepared to receive all notified cases of infectious diseases, *free of charge*, we are hoping to admit a much larger proportion of such cases, for the mutual benefit of the patient and the town. A neighbouring town get 95 per cent. of their Scarlet Fever patients into Hospital, and largely by this means have secured the lowest zymotic death rate for the last year.

During the year under notice the new buildings between the two Hospitals, known as the "Nurses' Homes," have been completed. So far as they contribute to the happiness and comfort of the staff they may justly merit the designation of "Homes," but they really are nothing more than what are essentially necessary for the



decent housing of those for whom they have been provided. No sane person ever approved of the manner in which the staff was formerly "lodged." In connection also with these buildings have been added large store-rooms, mortuary, surgery, stables, van-shed, and one of Bradford's drying-ovens, and all laundry appliances of the most modern description; so that when the internal fittings are complete, and the various rooms furnished, your Committee may feel satisfied that it has made ample provision for the present, for the proper isolation, nursing and treatment of the infectious cases of the Borough. Of course these remarks apply to diseases other than Small-pox. You have already taken steps to provide for this complaint elsewhere. 65 acres of land have been purchased, a conference with the Local Government Board has been held, and plans for the various buildings are nearly completed.

In the *personnel* of the staff there have been few changes during the year. Two nurses have left, and two others have taken their places. The present staff consists of six nurses and five domestic servants, who are superintended by Miss Robison, the Matron, who, I am sure, deservedly has the unabated confidence of your Committee, as well as the loyalty and affection of all the staff. In connection with the Hospital I feel that I ought to mention a gentleman, than whom, few take more interest in the welfare of that Institution, I refer to the Rev. W. L. Stock, who has charge of the Caddy Field district, in which the Hospital is situated. I am sure he deserves the thanks not only of your Committee, but also of the public, for the unwearied and oft-times unpleasant duties he has to discharge in connection with his self-imposed task. During the Small-pox epidemic his private ministrations



and general services in the Wards were highly prized. He was at all times a *persona grata* both with the patients and the staff. I need not add, of course, that every precaution was taken, both with regard to personal clothing and disinfection, that he should not carry away the disease.

**Housing of the Working Classes.**—Soon after the Act came into operation in 1891, your Committee lost no time in applying it. Four unhealthy areas were at once chosen, and after much negotiation with property owners, two of them were cleared, and awaited the sanction of the Local Government Board for powers to rebuild. The condition of those areas is very much as it was a year ago. Only a part of the benefits intended by the demolition of the slum property has been realised. If improved dwellings for the poor have not yet been built, the former occupants have removed to more sanitary houses; and the areas having been cleared are so many open spaces for the good of the neighbourhood. If, therefore, you do not build upon the open sites at present, the benefits accruing to the district are considerable, from a health point of view.



SUMMARY IN ZYMOTIC REGISTER OF THE CAUSES  
OF THREE PRINCIPAL DISEASES.

**SCARLET FEVER.**

From other cases in the Neighbourhood	..	39
From other Cases in the same house	...	29
No trace	...	67
From visiting distant Relatives	...	4
Contracted at School	...	9
Contracted at Mill	...	2
<b>TOTAL</b>	...	<b>150</b>

**TYPHOID FEVER.**

From other Cases in the Neighbourhood	..	1
From other Cases in the same house	...	4
No trace	...	47
From Bad Drainage	...	16
Contracted at School	...	...
From a Severe Cold	...	1
<b>TOTAL</b>	...	<b>69</b>

**DIPHTHERIA.**

From other Cases in the Neighbourhood	...	1
From other Cases in the same house	...	5
No trace	...	45
From Bad Drainage	...	4
From a Severe Cold	...	1
Caught Infection from old rags	...	1
<b>TOTAL</b>	...	<b>57</b>



**Remarks on the preceding Summary.** — In my last year's report I gave a verbatim copy of our zymotic register, which contained an account of the conditions and surroundings of every case notified. It has appeared to me since, that if one could collect under a few "heads" three of the leading diseases, it would be of more practical value, hence the summary now presented.

I should say in the outset that the causes alleged or ascertained are copied from the Inspectors note-books. Looking at them as a whole it cannot be considered satisfactory that more than one-half cannot be traced to some likely or possible cause.

Take Scarlet Fever for instance, if 39 cases are traced to others in the same neighbourhood, and 29 cases from others in the same houses, there cannot have been proper isolation and control of previous cases ; besides, nine have contracted the disease at School. All this clearly proves that Scarlet Fever treated at home is a prolific source of infection to others, and emphasises the necessity of getting all cases into Hospital, and surely now when you offer a *Free Hospital* to all, this state of things will be improved.

Typhoid Fever is equally unsatisfactory ; that 47 cases out of a total of 69 cannot be traced is surprising, and still more so that this disease, which is above all others a "drain" disease, only 16 can be attributed to bad drainage.

And then with regard to Diphtheria, a mystery hangs over 45 out of the 57 cases reported, four are set down to bad drainage, and five to infection in the same house. It is very likely that a number of cases might be set down as "errors of diagnosis," yet making allowance for these, there is a very considerable portion, the causes of which are undiscovered and therefore unremedied. I hope to give special attention to these matters during the current year.



TABLE SHOWING THE NUMBER OF ZYMOTIC DISEASES NOTIFIED BY MEDICAL PRACTITIONERS IN EACH WARD OF THE BOROUGH, FOR THE YEAR ENDING DEC. 31ST, 1893, AND THE RATE PER CENT. OF POPULATION, AND THE COMPARISON WITH THE SIX PREVIOUS YEARS.

WARDS.	Small-pox.	Cholera.	Typhus Fever.	Enteric Fever.	Scarlet Fever.	Continued Fever.	Puerperal Fever.	Diphtheria.	Relapsed Fever.	Total.	Rate per cent. of Population.
Ovenden ...	8	1	...	2	22	1	...	15	...	49	0·72
Northowram	12	...	...	2	12	...	..	9	...	35	0·52
North ...	21	...	..	7	10	...	...	1	...	39	0·51
Central ...	19	...	...	10	15	...	1	4	...	49	0·55
West ...	31	2	...	4	16	1	2	3	...	59	0·63
South ...	33	1	...	9	20	...	...	4	...	67	0·80
East ...	70	...	...	11	3	...	...	1	...	85	0·99
Southowram	111	1	...	7	10	1	...	11	...	141	1·94
Skircoat ...	18	...	..	4	27	1	1	4	...	55	0·73
Pellon ...	14	..	...	6	4	...	1	3	...	28	0·37
Kingston ...	8	...	...	3	8	1	...	1	...	21	0·31
Illingworth ...	1	...	..	4	3	..	1	1	...	10	0·13
Total, 1893	346	5	...	69	150	5	6	57	...	638	0·69
„ 1892	159	..	1	56	256	9	4	71	2	558	...
„ 1891	...	1	...	99	429	14	5	23	2	573	...
„ 1890	...	...	..	67	328	8	8	62	1	476	...
„ 1889	2	...	...	94	153	18	1	31	3	302	...
„ 1888	1	...	1	36	440	16	1	29	...	524	...
„ 1887	1	...	1	66	727	8	7	26	...	837	...
<b>PUBLIC INSTITUTIONS.</b>											
The Workhouse	7	..	...	...	...	...	...	...	..	...	...

REMARKS ON THE FOREGOING TABLE.—It will be observed that the zymotic notification rate in Southowram Ward equals nearly 2 per cent. of the population, but the increase above the rest of the Wards is caused by the extra cases of Small-pox. The same remark applies to East Ward, where the zymotic rate is practically one per cent. Of the Town Wards proper, Kingston is the lowest with 0·31 per cent. Illingworth Ward, which is the part newly added to the Borough, and which has an acreage equal to the remainder of the Borough, has by far the lowest rate with 0·13 per cent.

I am, Gentlemen,

Your obedient Servant,

D. AINLEY,

*Medical Officer of Health.*



TABLE 1—POPULATION, BIRTHS, DEATHS, AND INFANT MORTALITY IN THE  
BOROUGH OF HALIFAX, 1880-1893.

Years.	Population.	Births.	Deaths.	Rate per 1000 living.		Deaths of Infants under One Year, to 1000 Births.
				Births.	Deaths.	
1880	...	...	...	33.6	22.4	156
1881	...	...	...	31.7	21.5	155
1882	...	...	...	30.1	20.3	167
1883	...	...	...	28.6	19.7	150
1884	...	...	...	29.6	23.4	180
1885	...	...	...	28.9	19.5	133
1886	...	...	...	28.8	22.7	173
1887	...	...	...	28.4	21.0	149
1888	...	...	...	28.2	19.6	154
1889	...	...	...	25.7	20.6	176
1890	...	...	...	27.8	22.3	173
1891	...	...	...	26.0	22.6	172
1892	...	...	...	25.8	19.5	163
1893	...	...	...	24.5	17.2	174

TABLE 2—DEATH RATES IN GROUPS OF AGES IN THE BOROUGH OF HALIFAX, 1879-93.

TABLE 2—DEATH RATES IN GROUPS OF AGES IN THE BOROUGH OF HALIFAX, 1879-93.									
Years.		Death-rate per 1000 living in each group.						60 and upwards.	
		All Ages.	0-5.	5-15.	15-25.	25-60.			
1879	...	...	25.2	85.4	...	...	...	81.3	
1880	..	..	22.4	70.3	...	..	...	72.9	
1881	..	...	21.5	68.0	...	...	...	77.5	
1882	...	...	20.3	62.9	4.3	7.0	13.7	74.2	
1883	...	...	19.7	49.6	5.1	5.7	14.0	90.1	
1884	...	...	23.4	70.0	5.2	5.3	16.3	85.5	
1885	...	...	19.5	50.3	4.9	5.2	14.7	83.3	
1886	..	...	22.7	68.5	5.3	6.0	14.9	92.4	
1887	...	..	21.0	54.8	4.0	6.0	16.2	88.2	
1888	...	..	19.6	55.4	3.6	3.9	13.0	93.8	
1889	...	...	20.6	59.7	3.5	4.6	15.3	84.2	
1890	...	...	22.3	59.1	4.3	6.0	17.5	94.3	
1891	...	..	22.6	63.3	4.2	5.6	16.4	96.6	
1892	..	...	19.5	54.0	3.9	4.4	13.6	89.2	
1893	..	...	17.2	62.0	2.1	3.0	10.7	75.6	



TABLE 3.—SHOWING DEATHS FROM ZYMOTIC DISEASES IN THE BOROUGH OF HALIFAX,  
1879-93.

Years.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhus	Enteric Fever.	Ill- Defined Fever.	Diarrhoea and Dysentery	Principal Zymotic Diseases.	Death-rate per 1000 living, from these Diseases.
1879	..	14	125	4	39	1	20	...	18	220	3.05
1880	...	15	44	4	10	1	19	...	22	114	1.56
1881	6	6	102	4	17	1	21	...	6	162	2.19
1882	...	11	21	2	11	1	22	...	25	93	1.24
1883	...	1	9	3	7	1	26	5	8	60	0.79
1884	...	57	28	3	33	1	22	2	38	184	2.41
1885	1	...	32	7	12	1	12	2	20	87	1.13
1886	...	85	9	16	11	1	13	2	38	175	2.22
1887	...	14	33	6	11	...	12	...	23	99	1.24
1888	1	10	21	3	35	...	9	1	14	94	1.16
1889	1	70	7	7	2	...	22	3	16	128	1.58
1890	...	25	24	12	15	1	13	1	13	104	1.27
1891	...	39	36	2	58	...	22	...	2	159	1.91
1892	19	64	7	14	9	...	7	...	7	127	1.51
1893	33	5	3	18	32	...	12	...	38	141	1.7

TABLE 4.—DEATHS FROM SEVERAL CAUSES AT SIX GROUPS OF AGES.

	All Ages.	Under 5 years.		5-15.	15-25.	25-60.	60 and upwards.
		0-1.	0-5.				
All Cases	1591	394	187	60	78	425	457
Small-pox	33	6	9	1	1	17	1
Measles	5	2	3	...	...	...	...
Scarlet Fever	3	1	2	...	...	...	...
Diphtheria	18	1	11	4	1	1	...
Whooping Cough	32	15	17	...	...	...	...
Typhus	...	...	...	...	...	...	...
Enteric Fever	12	...	2	...	4	5	1
Simple and undefined Fever	2	...	1	...	...	1	...
Diarrhoea, Dysentery	38	26	5	...	...	3	4
Simple Cholera	6	1	2	...	...	2	1
Venereal Affections	...	...	...	...	...	...	...
Erysipelas	2	1	...	...	...	...	1
Pyæmia, Septicæmia	4	2	...	...	1	1	...
Puerperal Fever	2	...	...	...	1	1	...
Parasitic Diseases—Thrush	2	2	...	...	...	...	...
Dietetic Diseases—Starvation	...	...	...	...	...	...	...
Alcoholism—Del. Trem.	...	...	...	...	...	...	...
Rheumatic Fever, Rheumatism of Heart	2	...	...	1	1	...	...
Rheumatism	9	...	...	...	1	...	3
Rickets	3	2	1	...	...	5	...
Cancer	65	...	...	...	1	43	21
Tabes Mesenterica—Marasmus	46	38	6	1	1	...	...
Tubercular Meningitis	42	11	14	10	3	4	...
Phthisis	135	5	3	12	32	73	10
Scrofula, Tuberculosis	28	9	6	...	5	7	1
Other Constitutional Diseases	21	3	1	1	2	10	4



[illegible]

TABLE 5—SHOWING WHETHER MOTHERS OF CHILDREN  
WHO HAVE DIED UNDER FIVE YEARS OF AGE  
IN 1893 WORK OUT, OR ARE ENGAGED AT  
HOME.

	At Home.	Work Out.
OVENDEN ... ..	32	...
NORTHOWRAM ... ..	23	3
NORTH ... ..	21	9
CENTRAL ... ..	52	2
WEST ... ..	46	7
SOUTH ... ..	42	3
EAST ... ..	32	4
SOUTHOWRAM ... ..	50	6
SKIRCOAT ... ..	37	3
PELLON ... ..	48	1
KINGSTON .. ...	33	1
ILLINGWORTH ... ..	28	2
WORKHOUSE .. ...	...	5
INFIRMARY ... ..	3	...
HOSPITAL .. ...	6	1
	453	47
Total 1892	422	20

The particulars of 81 deaths, in addition to the above, were not given.



TABLE 6—SHOWING THE NUMBER OF CASES ADMITTED INTO THE BOROUGH FEVER HOSPITAL DURING THE YEAR 1893.

	Small-pox.	Typhoid.	Scarlatina.	Total.
Cases remaining in Hospital Jan. 1st, 1893 ... ..	27	...	...	27
Cases admitted during the year ..	340	4	1	345
Total ... ..	367	4	1	372
Recoveries ... ..	340	...	...	340
Deaths ... ..	27	1	...	28
Cases remaining in Hospital Dec. 31st, 1893 ... ..	...	3	1	4

TABLE 7—SHOWING THE NUMBER OF CASES ADMITTED SINCE OPENING, AND TOTAL DEATHS AND RATE PER CENT.

	Small-pox.	Cholera.	Typhus.	Typhoid.	Fever.	Scarlatina.	Other.	Total.
Number of Cases admitted since the opening ...	666	1	29	475	62	446	102	1781
Number of Deaths since the opening ... ..	67	...	14	107	8	35	11	242
Percentage of Deaths from all causes to whole number of Cases admitted since the opening ... ..								<u>13.58</u>





(A)

TABLE OF DEATHS IN THE BOROUGH OF HALIFAX SANITARY DISTRICT, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES, AND SHOWING ALSO THE POPULATION OF SUCH LOCALITIES, AND THE BIRTHS THEREIN DURING THE YEAR ENDING DECEMBER 31ST, 1893.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate Localities.	BIRTHS.—3				MORTALITY FROM ALL CAUSES, AT SURVIVED AGES.							MORTALITY FROM SURVIVED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	SEX.		Total.	Illegitimate.	Birth-rate per 1000 per annum.	At all ages.							Small-pox.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Males.	Females.				4	5	6	7	8	9	10	11	12	13	14	15	16	17	Continued Fevers.									Typhus.	Enteric or Typhoid.	Other or Debil.	Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Emphy.	Heart Disease.	Injuries.	Intestina.	Other Diseases.	Total.	Death-rate per annum.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
																				Whooping Cough.	Typhus.	Enteric or Typhoid.	Other or Debil.	Dysentery.	Cholera.	Rheumatic Fever.	Erysipelas.	Pyæmia.																			Puerperal Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Emphy.	Heart Disease.	Injuries.	Intestina.	Other Diseases.	Total.	Death-rate per annum.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1	Males.	Females.	Total.	Illegitimate.	Birth-rate per 1000 per annum.	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Ovenden Ward	105	111	216	8	32.0	92	24	14	7	3	19	25	{ Under 5	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

\* The Birth-rates and Death-rates are worked out on the estimated population at the middle of 1893. See Table B.





TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH,  
DURING THE YEAR 1893, IN THE URBAN SANITARY DISTRICT OF THE BOROUGH OF HALIFAX;  
(B)  
CLASSIFIED ACCORDING TO DISEASES, AGES AND LOCALITIES.

NAMES OF LOCALITIES adopted for the purpose of these Statistics; Public Institutions being shown as separate localities.	POPULATION AT ALL AGES.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Census 1891.	Estimated to middle of 1893.			1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
					Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.			Small-pox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Notification of Infectious Disease has been compulsory since 1882.

The Isolation Hospital is the Halifax Borough Fever Hospital, and is situate in Southowram Ward, marked (H.).

84751  
235 277

THE UNIVERSITY OF CHICAGO

(6)

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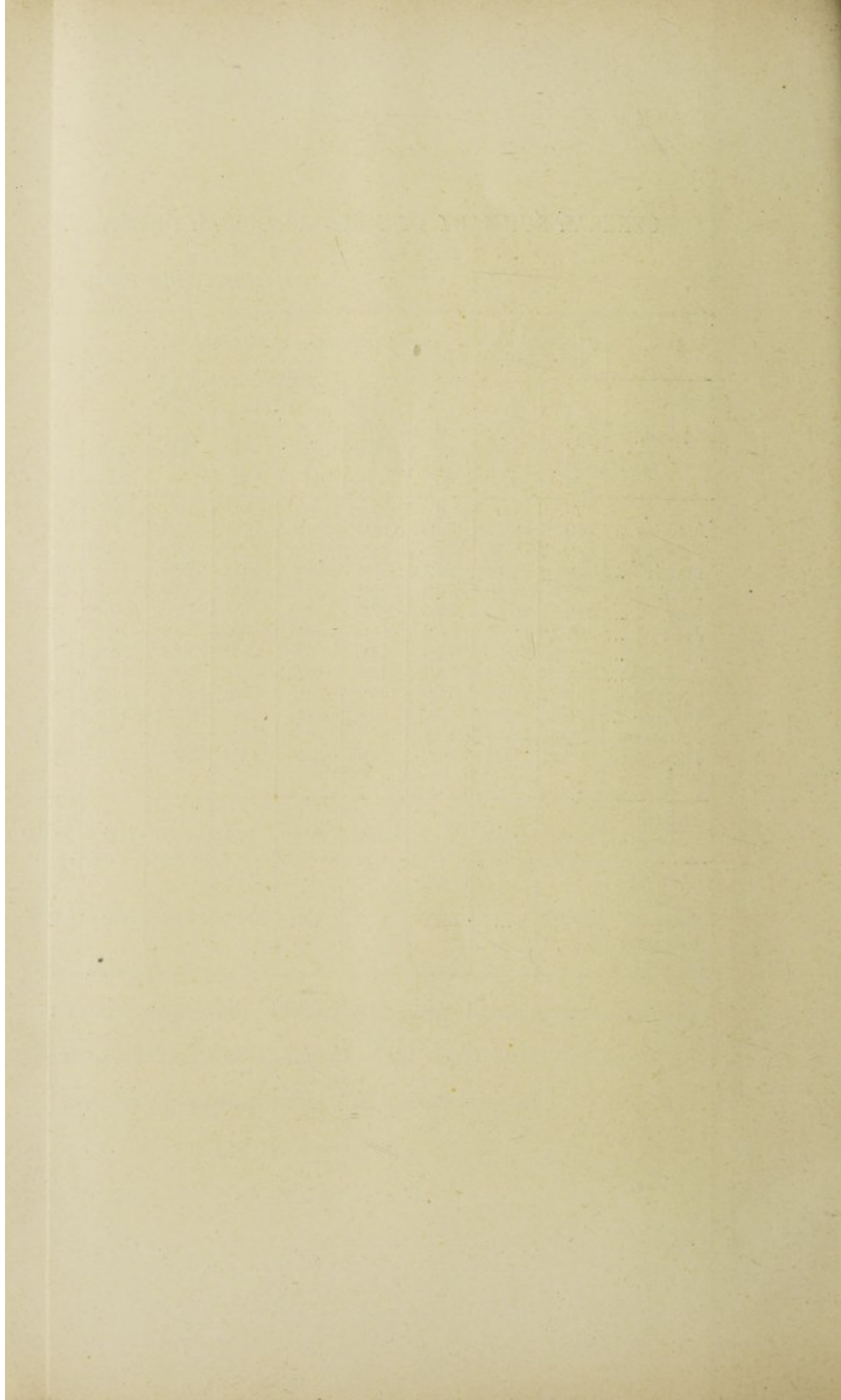


GENERAL SUMMARY OF METEOROLOGICAL OBSERVATIONS TAKEN AT THE PUBLIC FREE LIBRARY, BELLE VUE, FROM JANUARY 1st, 1893, TO DECEMBER 31st, 1893,  
BY MR. J. WHITELEY.

LATITUDE OF STATION = 53° 43' N. LONGITUDE = 1° 52' W. HEIGHT ABOVE SEA LEVEL, 625 FEET.

1893.	Pressure of Atmosphere in the Month.		Temperature of Air in Month.							Mean Temperature.		Vapour.			Mean degree of a cubic foot of Air.	Mean weight of a cubic foot of Air.	Mean Reading of Thermometer.		Wind.				Mean amount of Cloud.	Rain.		REMARKS.
Month.	Mean.	Range.	Highest.	Lowest.	Range.	Mean.			Air.	Dew Point.	Elastic Force.	In a cubic foot of Air.		Maximum in Rays of Sun.			Minimum on Grass.	Estimated Strength.	Relative proportion of.					No. of days it fell.	Amount collected.	
						Of all Highest.	Of all Lowest.	Daily Range.				Mean.	Short of Saturation						N.	E.	S.	W.				
January ...	29.358	1.026	50.2	15.3	34.9	39.4	32.2	7.2	35.7	32.0	.182	2.1	0.4	86	549	52.4	29.5	0.6	8	6	4	13	8.5	12	1.00	The observations have been reduced to mean values by Glaisher's Barometrical and Diurnal Range Tables, and the hygrometrical results have been deduced from the seventh edition of his Hygrometrical Tables, after corrections for Index errors of the Instruments employed.
February ...	29.968	1.656	55.5	24.0	31.5	42.9	34.9	8.0	38.4	34.4	.200	2.1	0.4	86	539	54.2	32.5	0.7	6	5	4	13	8.1	20	3.87	
March ...	29.390	1.072	62.2	27.8	34.4	51.8	36.3	15.5	43.6	35.7	.209	2.4	0.8	74	541	85.7	31.7	0.5	5	4	6	16	6.6	8	0.86	
April ...	29.507	0.760	70.1	32.1	38.0	57.3	38.4	18.9	46.4	37.9	.228	2.6	1.0	73	540	95.9	34.7	0.5	5	11	4	10	6.9	4	0.70	
May ...	29.391	0.935	70.0	37.0	33.0	60.2	44.8	15.4	50.5	45.0	.299	3.4	0.8	82	535	101.9	40.8	0.5	7	8	6	10	7.4	10	1.81	
June ...	29.328	1.166	80.1	43.8	36.3	65.4	49.1	16.3	55.6	46.9	.323	3.7	1.3	73	527	106.1	45.2	0.5	4	12	4	10	7.4	11	2.15	
July ...	29.208	0.738	77.7	47.0	30.7	66.0	52.1	13.9	57.3	49.3	.351	3.9	1.3	74	523	110.7	49.0	0.6	6	7	5	13	8.1	19	2.31	
August ...	29.310	0.858	83.2	43.0	40.2	68.1	54.9	13.2	60.6	50.3	.365	4.1	1.8	69	521	117.6	50.0	0.7	6	4	6	15	7.1	10	1.99	
September ...	29.152	1.206	70.3	36.3	34.0	59.6	47.2	12.4	52.8	45.4	.304	3.4	1.1	77	526	96.9	41.5	0.6	5	3	4	18	7.0	13	1.83	
October ...	29.226	1.382	63.3	29.3	34.0	53.8	43.0	10.8	47.6	42.4	.269	3.1	0.7	83	532	92.2	38.4	0.7	6	12	4	17	7.6	15	2.38	
November ...	29.326	1.672	54.0	26.5	27.5	44.5	36.2	8.3	40.0	36.8	.218	2.5	0.4	89	544	60.6	33.0	1.2	10	7	5	8	8.6	15	3.09	
December ...	29.193	1.892	52.1	21.7	30.4	44.3	35.6	8.7	40.2	36.7	.218	2.5	0.4	88	541	54.1	32.3	0.9	4	12	8	17	8.2	18	3.56	
Annual Means ...	29.363	1.197	65.7	32.0	33.7	54.4	42.0	12.2	47.4	41.1	.264	3.0	0.9	80	535	86.5	38.2	0.7	6	6	5	13	7.6	155	26.15	
Annual Means between Latitudes 53° and 54°	29.665	...	74.9	27.8	47.1	56.4	43.0	13.4	49.0	42.4	.279	3.1	0.7	79	539	86.8	37.7	1.0	4	6	7	12	6.0	172	24.49	

NOTE.—The Annual Means give the Averages for the Twelve Months. The next lower line of numbers gives similar averages for Stations between the 53rd and 54th Parallels of Latitude, between which Halifax lies; these numbers have been adopted from those given by Mr. Glaisher in his Meteorological Reports, published in the Registrar - General's Quarterly Returns.





COUNTY BOROUGH OF HALIFAX.

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THE

# Sanitary Inspector's Report

FOR THE

Year ending December 31st, 1893.

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*To the Chairman and Members of the Sanitary Committee.*

GENTLEMEN,

I have the honour to submit to you my Nineteenth Annual Report on the operations of the Sanitary Department for the year ending December 31st, 1893, in the usual tabular form. I have in one or two cases appended the totals of similar tables for 1892.

TOWN HALL, HALIFAX,  
*January, 1894.*

## SANITARY DEPARTMENT.

### Summary of Work done.

Total number of Visits made by the District Inspectors ...	34935
Total number of Visits to Houses ... ..	10518
Number of Visits to Houses with reference to defective drainage ... ..	5064
Number of Visits to Houses with reference to cleanliness, overcrowding, &c. ... ..	1284
Number of Visits to Houses with reference to infectious diseases ... ..	2532
Rooms disinfected ... ..	1446
Cases removed to the Hospital ... ..	345
Infectious Diseases reported ... ..	638
Nuisances reported .. ..	3696
Nuisances abated ... ..	3760
Notices served ... ..	1430
Letters served (referring to Nuisances, &c.) ... ..	400
Summonses taken out .. ..	1
Smoke Observations taken ... ..	615
Old Ashpits abolished ... ..	1
Old Ashpits altered to Goux System ... ..	188
Goux Closets registered ... ..	984

It must be remembered that many nuisances are frequently included under one notice, and therefore the number of nuisances represent considerably more than the number of notices.



### Removal of Nuisances.

At the commencement of the year 491 complaints remained on the books and in course of removal. Since then 3,696 have been registered and 3,760 removed, leaving at the close of the year 427 to be dealt with. The following table shows the nature of nuisances registered, together with a comparison of the previous year's figures :—

Nature of Nuisances.				No. Reg. during 1893.	No. Reg. during 1892.
Defective Sink Drains	..	...	...	487	304
„ Yard or Private Street Drains			...	143	108
„ Cellar Drains	...	...	...	218	255
„ Spout Drains	...	..	..	7	3
„ Fall Pipes	...	...	...	143	99
„ Street Drains	...	...	...	82	85
„ Roofing	...	...	...	12	14
„ Urinals	...	...	...	23	6
Drains not efficiently Trapped	..	...	...	560	290
Sink Drains requiring Disconnecting			...	213	144
Drain Traps requiring Air Grates	...		...	10	...
Nuisances from Want of Drains	...	..	...	30	14
„ „ Water in Cellar	...	...	...	19	10
„ „ Stagnant Water	...	...	...	1	...
„ „ Smoke		.	...	8	3
„ „ Poultry	...	...	...	3	5
„ „ Pigeons	...	...	...	1	4
„ „ Swine	...	...	...	3	2

NUISANCES—*Continued.*

Nature of Nuisances.			No. Reg. during 1893.	No. Reg. during 1892.
Houses Overcrowded	...	...	47	35
„ Unfit for Habitation	...	...	4	...
„ Require Cleansing	...	...	119	184
Offensive Accumulations	...	...	70	65
„ Ashpits and Privies	...	...	72	296
„ Goux Closets	...	...	167	603
„ Ashes Tubs	...	...	96	3347
„ Middensteads	...	...	5	13
„ Ashes Tub Places	...	...	5	1
„ Water Closets	...	...	115	71
Privies requiring Limewashing	...	...	262	525
Ashpits and Privies requiring Reconstruction	...	...	83	150
„ „ in a dilapidated state	...	...	35	27
„ „ requiring proper doors	...	...	69	118
Insufficient Privy Accommodation	...	...	56	70
Bad Smells	...	...	13	3
Cowsheds requiring Limewashing	...	...	287	5
„ „ Drainage	...	...	2	...
Miscellaneous	...	...	226	140
Total			3696	6999

The above lists do not include work carried out after mere verbal notice.



### **Repairs to House Drains and Water Closets.**

274 sink drains have been disconnected from the house drains; basement drains have been repaired and properly trapped; bath and lavatory waste pipes have been disconnected from water closet soil pipes, and old pan closets have been taken out and replaced with others of a modern construction.

### **Factories and Workshops.**

During the year 1,294 visits have been made under the Factory and Workshops Act, 1891, and 479 defects reported; old pan closets have been removed, and proper connections with sewers have been made.

### **Shop Hours Act.**

267 visits have been made under this Act.

### **Property Condemned.**

Four cellar dwellings have been condemned as unfit for human habitation.

### **Overcrowding.**

81 cases of overcrowding have come under our notice, which is in excess of the previous year; in each case notices were served upon the occupiers. The notices in all cases have been complied with.

### **Houses requiring Limewashing.**

135 notices have been issued with reference to the cleansing of dirty houses and houses where cases of infectious diseases existed.

### **Privies requiring Limewashing.**

262 notices have been issued for the cleansing and limewashing of privies.

### **Vans occupied as Dwellings.**

80 visits have been made to vans occupied as dwellings, which have entered the Borough, for the purpose of discovering infectious diseases and noting their condition.

### **Urinals.**

There are within the Borough 29 public urinals, which are regularly cleansed by a man specially appointed for the work; 17 of these are fitted up with a constant supply of water.

### **Disinfection.**

10,533 articles have been disinfected in the Ovens at Stoney Royd, and 104 beds at lodging-houses. 633 houses have been disinfected by the District Inspectors; and there were 580 from which articles were sent for disinfection.

### **Disinfectants.**

32 tons of disinfecting powder, in 4 lb. bags, have been given to persons applying at the Sanitary Office, and 240 gallons of disinfecting fluid, in 6 and 8 oz. bottles, where cases of infectious diseases existed.

### **Night Scavenging.**

At the commencement of the year there were no reports of ashpits that required cleansing. During the year 72 complaints have been registered and attended to, thus leaving the books again clear. The number of complaints registered show a decrease of 224 on the previous year. About one-fourth of the above number have been reported solely for the purposes of being cleansed prior to alterations, so that, apart from this, the decrease would have been less.



The following Table shows the number of ashpits cleansed during the year, and the number of loads of manure and rubbish collected.

Month.	Number of Ashpits Emptied.	Loads of Soil.	Loads of Rubbish.	Total Number of Loads.
January ... ..	336	360	128	488
February ... ..	605	557	167 $\frac{1}{2}$	724 $\frac{1}{2}$
March ... ..	507	649	105 $\frac{1}{2}$	754 $\frac{1}{2}$
April ... ..	592	442 $\frac{1}{2}$	131 $\frac{3}{4}$	574 $\frac{1}{4}$
May ... ..	619	453	173 $\frac{1}{4}$	626 $\frac{1}{4}$
June ... ..	572	613	134 $\frac{1}{2}$	747 $\frac{1}{2}$
July ... ..	721	431	150 $\frac{3}{4}$	581 $\frac{3}{4}$
August ... ..	577	212 $\frac{1}{4}$	198 $\frac{1}{2}$	410 $\frac{3}{4}$
September ... ..	326	206 $\frac{1}{2}$	159 $\frac{3}{4}$	366 $\frac{1}{4}$
October ... ..	460	105 $\frac{1}{4}$	224 $\frac{1}{2}$	329 $\frac{3}{4}$
November ... ..	429	129 $\frac{1}{2}$	262 $\frac{1}{2}$	392
December ... ..	638	180 $\frac{3}{4}$	274 $\frac{3}{4}$	455 $\frac{1}{2}$
Total ... ..	6382	4339 $\frac{3}{4}$	2111 $\frac{1}{4}$	6451

The total number of ashpits cleansed during the year is 6,382, as against 3,086 in the previous year. 188 ashpits with privies have been altered to the Goux System, one abolished, and ashes tubs supplied in the places of 16 dry ashpits. The above includes Ovenden and Illingworth Wards.

TABLE SHOWING THE NUMBER OF ASHPITS WITHIN  
THE BOROUGH, DECEMBER 31ST, 1893.

The Borough is divided into six districts, each district including two wards.

Districts.	Wards.	Ashpits with Privies.	Dry Ashpits.
1	Northowram and North ...	67	55
2	Ovenden and Illingworth ...	757	9
3	Central and East ...	55	106
4	West and South ...	41	243
5	Skircoat and Southowram...	74	51
6	Pellon and Kingston ...	19	36
	Total ...	1013	500



TABLE SHOWING NUMBER OF GOUX COMPLAINTS  
REPORTED UNDER THE OLD SYSTEM AND THE  
NEW BLOCK SYSTEM WITH THE PREVIOUS YEAR'S  
FIGURES.

Fortnight ending 1891.	No. of Public and Private complaints reported under the Old System.	Fortnight ending 1892.	No. of Public and Private complaints reported under the Block System.	Fortnight ending 1893.	No. of Public and Private complaints reported under the Block System.
...	...	...	...	Jan. 14	46
...	...	...	...	" 28	22
...	...	...	...	Feb. 11	6
...	...	...	...	" 25	12
...	...	...	...	Mar. 11	6
...	...	...	...	" 25	16
April 11	374	April 9	84	April 8	6
" 25	703	" 23	67	" 22	11
May 9	303	May 7	107	May 6	9
" 23	202	" 21	61	" 20	8
June 6	328	June 4	36	June 3	...
" 20	243	" 18	40	" 17	4
July 4	304	July 2	29	July 1	5
" 18	409	" 16	11	" 15	...
Aug. 1	200	" 30	10	" 29	5
" 15	152	Aug. 13	25	Aug. 12	11
" 29	143	" 27	25	" 26	23
Sept. 12	133	Sept. 10	10	Sept. 9	13
" 26	122	" 24	17	" 23	22
Oct. 10	125	Oct. 7	6	Oct. 7	18
" 24	154	" 22	14	" 21	20
Nov. 7	378	Nov. 5	24	Nov. 4	14
" 21	313	" 19	18	" 18	11
Dec. 7	488	Dec. 3	5	Dec. 2	15
" 19	361	" 17	4	" 16	19
" 31	269	" 31	20	" 30	13
	5704		613		335

## Goux Scavenging.

The following Table shows the number of closet tubs and loads of ashes collected during the year.

Month.				Number of Closet Tubs Collected.	Loads of Ashes Collected.
January	...	..	...	39321	1750
February	...	..	...	35958	1517
March	...	...	...	39356	1736
April	...	..	...	36838	1582
May	...	...	...	40878	1827
June	...	...	...	39720	1585
July	...	...	...	41495	1453
August	...	...	...	43797	1496
September	...	...	...	41427	1445
October	...	...	...	40877	1474
November	...	...	...	40233	1492
December	...	...	...	38113	1425
Total	...	...	...	478013	18782

The above represents  $22,762\frac{1}{2}$  loads of night soil (each load containing 21 closet tubs), as against 21,031, and 18,782 loads of ashes and 18,319 respectively for the preceding year.

The number of additional closets registered is 984, being an increase of 565 on the number registered during the year 1892.



### Goux Scavenging.

The following Table shows the number of Goux closet tubs registered each year since the commencement of the Goux System.

Year.			Number of Closet Tubs.	Number Registered during each year.
1871	...	..	1109	1109 in 15 months
1872	...	...	1895	786
1873	...	...	2440	545
1874	...	...	2820	380
1875	...	...	3088	268
1876	..	..	3316	228
1877	...	..	3769	453
1878	..	...	4277	508
1879	..	...	4853	576
1880	...	...	5071	218
1881	...	...	5552	481
1882	...	..	6057	505
1883	...	...	6506	449
1884	..	...	7405	899
1885	...	...	8049	644
1886	...	...	8727	678
1887	...	...	9327	600
1888	...	...	9831	504
1889	...	...	10446	615
1890	...	...	11098	652
1891	...	...	11644	546
1892	...	...	12063	419
1893	...	..	13047	984

During the year 274 closets have been erected in connection with new property, and 654 have been altered from the old system, 5 substituted for water closets, and 51 added where the accommodation was previously insufficient.

### Birks Hall Tip.

TABLE SHOWING THE NUMBER OF LOADS OF ASHES  
AND RUBBISH TIPPED DURING THE YEAR.

Names.				Number of Loads.
Goux Department	...	...	...	11027
Gasworks Committee	...	...	...	12112
Board of Works Committee	...	...	...	240
Waterworks Committee	...	...	...	320
Private Firms	...	...	...	2182
Total	...	...	..	25881



### Swan Bank Tip.

TABLE SHOWING THE NUMBER OF LOADS OF ASHES  
TIPPED DURING THE YEAR.

Name.	Number of Loads.
Goux Department ... ..	3130

### Highroad Well Tip.

Name.	Number of Loads.
Goux Department ... ..	5366
Gasworks Committee ... ..	150
Waterworks Committee ... ..	90
Board of Works Committee ... ..	1026
Private Firms .. ...	110
Total ... ..	6742

### Streets Scavenging.

The subjoined table gives at a glance the work done in this department with the previous year's figures.

	1893.	1892.
Number of Streets Swept .. .	30700	27019
Area in Yards ... ..	41197892	37706446
Number of Streets watered ...	7822	8016
Loads of Water used for that purpose .	8648	8057
Loads of Sweepings gathered ...	6571	4832
Loads of Snow removed from the Streets ... ..	8444	14564
Number of Gullies emptied ...	144019	120004
Number of Street Drains flushed ...	2211	1822

During the year 312 loads of garbage have been removed from fishmongers, fried fish shops, and green-grocers.



### Smoke Observations.

The following Table shows the number of smoke observations taken during the year, and the average number of minutes of dense smoke emitted.

	Number of Observations taken.	Average Number of minutes of Dense Smoke emitted.
Number of Observations taken ..	615	
Number showing moderate Smoke or <i>nil</i> ... ..	} 313	
Number of Observations taken for a period of 60 minutes each showing Dense Smoke ... ..	} 302	
Average number of minutes of Dense Smoke emitted from 302 chimneys }	.	2.58

### Smoke Observations.

The following Table shows the number of observations taken, names of firms, and number of boilers working.

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Akroyd J. & Son ...	Bowling Dyke ...	3	2	1·2
„ ..	Range Lane ...	5	3	1·2
Akroyd & Ambler ...	New Brunswick Mill...	1	5	2·2
Baldwin & Walker ..	West Croft Mill ...	2	3	1·3
Baldwin J. & J. ...	Clarke Bridge ...	5	8	0·8
Balme & Pritchard ...	Lister Lane stone chimney	2	1	1·0
„ ...	Lister Lane brick chimney	2	1	1·0
Barraclough J. & Sons	Boys' Mill stone chimney	1	3	nil
„ ...	Boys' Mill brick chimney	2	3	0·6
Berry John ...	New Bank ...	1	4	nil
Berry Bros. ...	Hebble Lane ...	1	2	nil
Blakey Emmott & Co.	Square Road ..	2	7	nil
Booth James & Son ...	Lee Bridge ...	6	7	1·8
Bowman Bros. ...	Lee Bank ...	2	7	1·0
Bradford & District Dyeing Co.	1, Lee Bank ...	4	5	2·0
„ ...	2, Lee Bank ...	6	4	7·5
„ ...	1, Old Lane ...	4	5	1·2
„ ...	2, Old Lane ...	1	4	2·5
Burnley Building Society	Pellon Lane ...	6	6	4·0



SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Butler John ...	Adelaide Street ...	1	2	nil
Carter John & Co. ...	Dunkirk Mills ...	1	2	2·5
Carter Brothers ...	Hebble Rag Mill ...	1	1	nil
Calder & Hebble Co....	Engine House Lane ...	1	4	1·2
Calvert W. & Sons ...	Illingworth Mills ...	2	3	0·3
Charnock G. & Sons	Pellon Lane ...	1	2	1·0
„ ...	Charlestown Road ...	1	1	nil
Chambers James ...	Craven Edge Mill ...	1	3	0·6
Charlestown Brick and Tile Co.	Charlestown Road ...	1	1	nil
Clayton & Murgatroyd	Lower Wade Street ...	4	9	1·4
Crabtree Joseph ...	Well Lane ...	2	5	nil
Crossley J. & Sons ...	Bank Bottom ...	1	2	nil
Crossley J. & Sons, Ltd.	Dean Clough ...	4	5	1·8
„ ...	Old Lane ...	5	3	0·3
„ ...	Office chimney ..	8	3	4·3
„ ...	Lee Bridge, stone chimney	6	2	0·5
„ ...	Lee Bridge, brick chimney	6	1	2·0
„ ..	Range Royd ...	3	5	2·0
„ ...	Albion Mills ..	3	9	0·2
„ ...	Hebble Mills ...	2	4	0·2
Dyson J. & Sons ...	King Cross ...	1	7	0·5
Drake J. & Co. ...	Foundry Street ...	1	5	nil

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Earnshaw A. & Sons, Ltd.	Grantham Road ...	1	8	nil
Empsall	... Spring Hall Lane ...	1	2	0·5
Farrar Jabez B.	... Lower Wade Street ...	2	8	0·1
„	... Well Lane ...	1	7	0·1
Farnell Elijah	... Gibbet Street ...	1	4	1·0
Fleming Andrew	... Grantham Road ..	1	7	nil
Fleming, Birkby, Goodall & Co.	Hopwood Lane ...	1	2	nil
Fletcher Bros.	... Raglan Street ..	4	7	2·7
Foster W. H.	... Woolshops ...	1	1	nil
Goodall E.	... Farrar Mill Lane ...	1	1	nil
Green Joseph	... Corporation Street ...	1	2	nil
Greenwood J.	... Cross Hills ..	1	1	nil
Greenwood James	... West End Works ...	1	1	nil
Hanson	... Hope Works ...	1	1	nil
Harrison & Singleton	Horton Street ...	1	8	nil
Hartley and Sugden	... Gibbet Street ...	1	4	1·7
Hanson Samuel	.. Adelaide Street ...	1	2	1·5
Hanson William	... Jumps Mill ...	2	5	1·2
Halifax Industrial Society	Northgate ...	1	1	1·0
Halifax Workhouse	... Gibbet Street ...	1	3	2·0
Halifax Corporation	... Albert Reservoir ...	1	1	nil
Halifax Flour Society	Bailey Hall ...	4	8	1·3



SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Haxby & Sewell ...	Well Lane ...	1	1	nil
Haigh Allan ...	Winding Road ...	1	3	0·6
Hegginbottom ...	Hays Mill ...	2	4	0·2
Hebden William Carr	Winding Road ...	1	2	nil
Hirst & Sons ...	Weymouth Street ...	1	2	0·5
Hirst & Mitchell ...	Godley Road ...	1	1	nil
Hitchen H. ...	Forest Mill ...	1	5	nil
Hitchens & Sons ...	Pellon Lane ...	1	4	0·7
Highley N. ...	Croft Mills ...	2	4	nil
Howson James Moss...	Albert Street Mills ..	2	2	2·0
Horsfall Eli ...	Commercial Road ...	1	6	0·6
Holdsworth J. & Sons	Shaw Lodge Mills ...	10	9	3·1
Hoyle J. & T. ...	Range Bank ...	4	5	nil
Hollingrake & Clegg...	Miall Street old chimney	5	7	2·0
„ ...	Miall Street new ...	...	7	1·2
Hoyle Richard ...	Queen's Road ...	2	3	5·0
Howarth Greenwood ...	Pellon Lane ...	1	4	1·5
Hoyle Elkanah ..	Waterside No 1 chimney	2	9	0·1
„ ...	Waterside „ 2 „	...	4	0·2
Huntriss Exors. ...	Well Lane ...	2	4	4·7
Inman Bros. ...	Hope Hall ...	1	5	nil
Jagger Emma Sophia	West Parade ...	2	1	2·0

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Knight J. ...	Raglan Street ...	1	3	0·6
Law & Son ...	Square Road ...	1	3	nil
Lees Thomas & Co. ...	Spring Edge Works ...	1	4	nil
Lumby, Son, & Wood	New Bond Street ...	1	3	1·0
Mackrell Samuel ...	New Brunswick Street	1	1	nil
Martin & Sons ...	Pellon Lane ...	3	6	4·0
Martin ...	Falcon Laundry ...	1	3	nil
Mansley James ...	New Pellon ...	1	1	nil
Maude & Turner ...	Gibbet Street ...	1	1	2·0
McCrea H. C. & Co....	Eastfield Works ...	1	1	nil
McNaught & Co. ...	Hare Street .	1	3	1·0
Miles Sykes & Son ...	King Cross ...	1	7	nil
Milner & Co. ...	Raglan Street ...	1	3	0·3
Morton J. ...	Clipster Hall ...	1	3	0·6
Morton J. ...	Siddal Lane ...	1	2	nil
Moore Z. ...	Shaw Mill ..	1	4	2·0
Murgatroyd ...	Bottoms Mill ...	1	1	2·0
Northern Engineering Co.	High Level Works ...	1	1	nil
North Allen ...	Old Lane Dyeworks ...	1	2	2·0
Oakes John ...	Regent Works ..	1	5	1·6
Oates James ...	Ryburne Mill stone chimney	} 1	2	4·0
„	Ryburne Mill stone chimney		2	1·5



SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observations taken.	Average number of Minutes of Dense Smoke emitted.
Oates & Green ...	Horley Green Road ...	1	2	8·5
„ ...	Ellen Royd ...	1	2	0·5
„ ...	Beacon Road ...	1	2	0·5
Ordish John ...	Waterside ...	2	9	0·2
Parker & Co. ..	Chapelton ...	1	3	1·3
Parker J. & Sons ..	Horley Green Road ...	1	2	0·5
Pickles W. ...	Steam Laundry ...	1	2	3·0
Priestley James ...	Ovenden ...	1	3	0·3
Priestley Bros. ...	Hope Street ..	1	1	1·0
Pohlmann & Sons ...	Hall Street ...	1	3	0·6
Proctor James ...	Salterhebble ...	3	5	0·2
Patchett Bros. ...	Sedburgh Road ...	1	6	0·8
Pulman John ...	Bond Works ...	1	2	1·5
Rawson W. H. ...	Old Lane ..	2	2	0·5
Ramsden T. & Son ...	Trinity Road ...	1	7	1·0
Robinson J. & Sons ...	Lower Wade Street ...	1	2	nil
Robinson J. ...	Holme Mill ...	1	1	1 0
Robinson Enoch ...	Battinson Road ...	3	3	2·3
Robinson J. ...	Prospect Mill ..	1	5	0·4
Robinson Jesse & Sons	Royal Mills ...	2	3	2·3
Redman Cornelius ...	Pioneer Works ...	1	2	0·5
Sagar J. & Co. ...	Water Lane ...	1	5	nil

SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers working.	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Scott Bros. ...	Johnson Street ...	1	2	2·0
Sheard Jonathan ...	Brackenbed Lane ...	1	3	0·3
Smeeton G. F. ...	Stoney Royd ..	3	12	1·9
Smith David ...	Woollen Mill, Siddal...	1	5	0·4
Smith Thomas ...	Siddal Lane ...	1	5	0·2
Smith & Wiltshaw ...	Kingston ...	1	2	nil
Smith G. F. ...	Paragon Works ...	1	3	1·0
Soothill & Simpson ...	North Castle Street ...	1	2	nil
Smithson Joseph ...	Park Print Works ...	2	4	3·0
Stott Bros. ...	Mount Street ...	1	1	nil
Standeven & Earnshaw	Ladyship ...	3	5	4·2
Standard Screw Co. ...	Dispensary Walk ...	1	9	0·6
Stead Bros. ...	Hare Street ...	1	1	2·0
Stirk & Co. ...	Turney Street ...	1	3	0·6
Sutcliffe J. & Sons ...	Range Bank ...	1	4	0·5
Swaine J. R. ...	Phoenix Works ...	1	1	nil
Swan Bank Brick and Tile Co.	Swan Bank ...	1	3	0·3
Speak Paul ...	Mixenden Shed ...	1	5	0·8
Taylor Joseph ...	Archer Street ..	1	1	4·0
Taylor & Hanson ...	North Bridge ..	1	1	nil
Taylor J. & Sons ...	Corporation Street ...	1	4	nil
Tetley S. & Co. ...	Bradshaw Mill ...	2	1	2·0



SMOKE OBSERVATIONS—*Continued.*

Name of Firm.	Address.	Number of Boilers Working	Number of Observa- tions taken.	Average number of Minutes of Dense Smoke emitted.
Thompson Joseph ...	Adelaide Street ...	1	3	0·6
Tillotson J. W. ...	Atlas Carpet Works ...	2	8	5·5
Todd J. & Son ...	Shay Lane Mills ...	1	1	nil
Turner Edwin ...	Dapper Mill ...	3	3	1·6
Ward J. W. & Son ...	Walnut Street ...	5	2	7·5
Walker Bros. ...	Ryburne Mill ...	2	1	1·0
Wavell ...	Claypits Mill ..	1	1	2·0
Ward R. D. ...	Hanson Lane ...	7	7	6·5
Wade Josiah ...	Hopwood Lane ...	1	1	nil
Walsh, Brearley and Eastburn	Beech Hill ...	1	6	1·1
Wainwright E. M. ..	Sun Works ...	1	8	4·1
Webster S. & Sons ..	Ovenden Wood ...	1	2	4·0
Whiteley J. ...	Jubilee Works ..	1	4	nil
Whitley S. & Co. ...	Hanson Lane ...	5	7	2·8
Whiteley J. & Sons ...	Brunswick Mills ...	2	1	2·0
Whitaker R. & Son ...	Corporation Street ...	1	7	0·8
Wiley R. C. ...	Trafalgar Works ...	6	7	2·4
Wood ...	Stannary Street ...	1	1	nil

TABLE SHOWING NUMBER OF PREMISES REQUIRING  
INSPECTION BY THE MEAT INSPECTOR,  
MR. JOHN HUTCHINSON.

Description of Premises.				Number.
Public Slaughterhouses	...	...	...	1
Private Slaughterhouses	...	...	..	4
Fish Curing Houses	...	..	...	5
Bakehouses and Confectioners	..	...	..	95
Cow Sheds	...	...	...	86
Cattle Lairs	..	...	...	5
Potted Meat and Tripe Boiling Houses		...	...	50
Fried Fish Shops	...	...	..	65
Milk Shops	...	...	...	86
Knackeries	...	...	...	1
Fat and Bone Boilers	..	...	..	3
Total	...	...	..	401

In addition to the above there are 140 persons registered for selling milk within the Borough, but residing in the country.



TABLE SHOWING NUMBER OF VISITS MADE BY THE  
MEAT INSPECTOR.

Description of Premises.				Number of Visits.
Public Slaughterhouses	...	...	...	1360
Private Slaughterhouses	...	...	...	104
Fish Curing Houses	...	...	...	240
Cow Sheds	...	...	...	561
Cattle Lairs	..	...	...	29
Fasting Sheds	...	...	...	1360
Knackeries	...	...	...	23
Potted Meat and Tripe Boiling Houses		...	...	1154
Bakehouses and Confectioners	...	...	...	2132
Milk Shops and Dairies	...	...	...	2207
Fried Fish Shops	...	...	...	851
Others	...	...	...	70
Total	...	...	...	10091

TABLE SHOWING MEAT, FISH, FRUIT, &c.,  
DESTROYED AS UNFIT FOR HUMAN FOOD.

Kind of Food Destroyed.						Quantity in lbs.
Ten Carcasses of Beef...	...	...	...	...	...	5144
Five Carcasses of Pigs ..	...	...	...	...	...	504
Two Carcasses of Mutton	...	...	...	...	...	114
Four Carcasses of Veal	...	...	...	...	...	256
Offal	...	...	...	...	...	10
Fish	...	...	...	...	...	3512
Shrimps	...	...	...	...	...	450
Mushrooms	...	...	...	...	...	235
Fruit	...	...	...	...	...	1064
Rabbits	...	...	...	...	...	56
Hares	...	...	...	...	...	24
Salad	...	...	...	...	...	224
Total 1893	...	...	...	...	...	11593
„ 1892	...	...	...	...	...	13394

The above summary represents 42 seizures. Six carcasses of beef and one pig were suffering from tuberculosis; two carcasses of beef from anthrax; two carcasses of pigs from jaundice and one from pleuro.



### **Dairies and Cowsheds.**

There are 86 cowsheds in the Old Borough ; these have been inspected by the Meat Inspector and found in a fair condition.

### **Milkshops.**

There are 86 Milkshops within the Borough ; these have all been regularly visited and found in a fair condition.

### **Bakehouses.**

The Sanitary arrangements have, upon the whole, been satisfactory. There are at present 55 confectioners, 15 bakers of oat bread, 11 muffin bakers and 1 pie maker.

### **Public and Private Slaughterhouses.**

These have been systematically inspected by the Meat Inspector, and found to be kept in a very satisfactory condition.

### **Knackers' Yard.**

This place, having been transferred to another firm, has been kept in a much cleaner condition.

### **Offensive Trades.**

These have been regularly visited and found to be kept in a fair condition.

THE FOLLOWING TABLE SHOWS THE POPULATION  
AND ACREAGE FOR EACH DISTRICT, WITH NAMES  
AND ADDRESSES OF INSPECTORS.

District	Population.	Area in Acres.	Name and Address of Inspector.
1	22900	1481	J. Archbell, The Square.
2	26924	620	J. Thompson, 24, Melville Place.
3	22794	832	A. E. Hudson, 9, Bangor Street.
4	19382	5276	A. E. Bottomley, Branch Office, Illingworth.
	92000	8209	



## District No. 1.

INSPECTOR JAMES ARCHBELL.

Nature of Defects.	Number of Defects.
Defective Sink Drains ... ..	123
,, Cellar Drains ... ..	56
,, Yard and Private Street Drains ...	79
,, Area Drains ... ..	24
Untrapped Sink Drains ... ..	44
Drains to Disconnect ... ..	64
Defective Roofing ... ..	5
,, Fall Pipes ... ..	15
,, Troughing ... ..	21
,, Urinals ... ..	13
Water in Cellars ... ..	3
Offensive Poultry ... ..	2
,, Swine ... ..	2
,, Rabbits ... ..	1
,, Swill Tubs ... ..	5
Houses Overcrowded ... ..	41
Offensive Accumulations ... ..	97
Ashpits requiring Reconstruction ... ..	9
Defective Waterclosets ... ..	90
Disused Closets ... ..	12

DISTRICT No. 1.—*Continued.*

Nature of Defects.	Number of Defects.
Closets and Ash Tub Places requiring proper doors	16
Insufficient Privy Accommodation ... ..	29
Bad Smells ... ..	32
Nuisances from Workshop Chimneys ...	5
Drains Tested ... ..	25
Smoke Observations taken ... ..	254
Houses requiring Limewashing ... ..	107
Closets requiring Limewashing ... ..	66
Visits to Lodging-houses ... ..	430
„ Houses where Small-pox Cases existed ...	168
„ Dwelling Vans ... ..	13
Rooms Disinfected ... ..	688
Beds Disinfected at Lodging-houses ..	154
Small-pox Cases removed to the Borough Fever Hospital ... ..	168
Visits to Workshops ... ..	557
„ Factories ... ..	28
„ under the Shop Hours Act ... ..	53

A considerable amount of time has been devoted by Inspector Archbell in visiting lodging-houses during the epidemic of Small-pox. He has also purchased 12 samples of food for analysis, and assisted in superintending the removal of snow from the streets.



**District No. 2.**  
INSPECTOR JOSEPH THOMPSON.

Nature of Defects.	Number of Defects.
Defective Sink Drains .. ...	27
,, ,, Pipes ... ..	23
,, ,, Syphon Traps ... ..	56
Made-up Sinks, Bath and Lavatory Pipes ...	15
,, Cellar Drains ... ..	47
Defective and Made-up Basement and Walled Drains	94
,, ,, Ground Floor Drains ...	9
,, Water Closet Drains ... ..	16
,, and Made-up Water Closets ...	14
,, Soil Pipes ... ..	7
Untrapped Bath, Lavatory and Sink Waste Pipes ...	82
,, Area Drains ... ..	14
,, Yard Drains ... ..	21
Defective and Broken Fall Pipes ... ..	44
Made-up Fall Pipes and Drains ... ..	31
Defective Bell Traps in Cellars and Wash-houses ...	25
Made-up Yard and Private Street Drains ...	46
Broken Pot and Iron Traps ... ..	33
Made-up Disconnecting Traps ... ..	28
Defective Urinal Drains ... ..	5
Offensive Accumulations ... ..	15
,, Ashpits and Privies ... ..	23
Damp Houses from Defective Roofs ... ..	15
Defective Spouting ... ..	37
Dirty Ash Tub Places ... ..	19

DISTRICT No. 2.—*Continued.*

Nature of Defects.				Number of Defects.
Offensive Rabbits	...	...	...	2
„ Poultry	...	...	...	2
„ Swill Tubs	..	...	...	4
Water in Cellar	...	...	...	15
Defective Stable Drains	...	...	...	3
Insufficient Water Supply to Closets	...	...	...	7
Offensive Smells from Gas Pans	...	...	...	5
Houses Overcrowded	...	...	...	2
Dirty Houses	...	...	...	4
Doors off Closets	...	...	...	6
Drains Disconnected	...	...	...	60
Visits to Workshops	...	...	...	276
„ Factories	...	...	...	17
Visits under the Shop Hours Act	...	...	...	10
Rooms Disinfected	...	...	...	373
Beds Disinfected in Lodging-Houses	...	...	...	20
Small-Pox Cases Removed to the Borough Fever Hospital				80
Fever Cases	...	...	...	2
Smoke Observations taken	...	...	...	148
Visits to Lodging-houses	...	...	...	20
„ Vans occupied as Dwellings	...	...	...	58
Drains Tested	...	...	...	50

In addition to the above, Inspector Thompson has been employed 9 weeks at plumbing work at the new buildings adjoining the Small-pox Hospital; also assisted in superintending the removal of snow from the Streets, and purchased 17 Samples of Food for analysis.



## District No. 3.

INSPECTOR ALBERT EDWARD HUDSON.

Nature of Defects.			Number of Defects.
Made-up and Defective Sink Pipes	...	...	77
Defective Syphon Traps	...	...	29
„ Basement Drains	...	...	38
Made-up Cellar Drains	...	...	19
Defective and Made-up Water Closets	...	...	16
Untrapped Bath, Lavatory and Sink Waste Pipes	...	...	48
„ Urinal Waste Pipes	...	...	4
„ Sink Drains	...	...	82
„ Yard Drains	...	...	60
„ and Stone Walled Cellar Drains	...	...	16
„ Drains in Wash Kitchens	...	...	5
Defective Connections to Drain Pipes	..	...	69
„ Fall Pipes	...	...	36
„ Troughing	...	...	42
„ Bell Traps in Cellars	...	...	15
Made-up Yard and Area Drains	..	...	48
Broken Pot and Iron Traps	...	...	36
Disconnecting Traps without Grates	...	...	8
Drains Disconnected	...	...	84
Sink Pipes Disconnected	...	...	31
Insufficient Water Supply to Closets	...	...	10
Damp Houses from Defective Roofs	...	...	6

34  
DISTRICT No. 3.—*Continued.*

Nature of Defects.				Number of Defects.
Offensive Swine, Poultry, Pigeons and Rabbits	...			6
Water in Cellars from Defective Flagging...	...			10
Houses insufficiently Drained	...	...		7
Houses Overcrowded	...	...	...	34
Dirty Houses	...	...	...	24
„ Closets	...	..	...	67
Doors off Closets	...	...	...	4
Dilapidated Closets and Ashpits	...	...		2
Offensive Closets and Ashpits	...	..		3
„ Accumulations	...	...	...	21
Rooms Disinfected	...	...	...	261
Visits to Workshops	...	...	...	363
„ to Shops under the Shop Hours Act	...			204
„ to Factories	...	..	...	39
„ to Furnished Rooms	...	...	...	48
„ to Vans occupied as Dwellings	...	...		22
Small-pox Cases removed to Hospital	...	...		41
Smoke Observations taken	...	...	...	132

In addition to the above Inspector Hudson has been employed eight weeks at plumbing work at the new buildings adjoining the Small-pox Hospital ; also assisted in superintending the removal of snow from the streets, and purchased 26 samples of food for analysis.



## OVENDEN AND ILLINGWORTH.

## District No. 4.

INSPECTOR ALBERT EDWARD BOTTOMLEY.

Nature of Defects.	Number of Defects.
Defective and drawn out Lead Syphon Traps ...	26
Made-up Drains ... ..	28
Defective Joints of Drain Pipes ..	90
„ Bell Traps ... ..	21
„ Urinal Drains ... ..	2
„ Fall Pipes ... ..	16
„ Troughing ... ..	29
Made-up W.C. Drains ... ..	5
Defective Water Closets ... ..	3
Insufficient Supply of Water to Closets ..	2
Drains Disconnected ... ..	35
Untrapped Drains ... ..	47
Made-up Gullies ... ..	10
Water in Cellars ... ..	7
Bad Smells ... ..	3
Houses Overcrowded ... ..	4
Dirty Closets ... ..	21
Polluted Water ... ..	5

DISTRICT No. 4.—*Continued.*

Nature of Defects.				Number of Defects.
Offensive Swill Tubs	...	...	...	4
„ Poultry	...	...	...	1
„ Swine	...	...	...	3
„ Ashpits	...	...	...	15
Ashpits requiring Re-construction	...	...	...	87
Insufficient Privy Accommodation	...	...	...	37
Defective Pot Traps	...	...	...	6
Miscellaneous	...	...	...	11
Rooms Disinfected	...	...	...	125
Visits to Workshops	...	...	...	100
„ Cowsheds	...	...	...	520
„ Slaughterhouses	...	...	...	195
Smoke Observations taken	...	...	...	80
Samples purchased for Analysis	...	...	...	25
Drains Tested	...	...	...	15

In addition to the above, he has assisted in superintending the removal of snow from the streets.

### Private Slaughterhouses.

There are five private slaughterhouses in Illingworth District; these have been regularly visited by the District Inspector and found in a fair condition.



### Dairies and Cowsheds.

There are 199 cowsheds in Ovenden and Illingworth District; these have been systematically inspected by the District Inspector, which has been the means of enforcing general cleanliness. Some of the cowsheds were without drains, light, air space, and ventilation, and not in conformity with the rules and regulations of the Dairies, Cowsheds, and Milkshops Order of 1885.

The following Table shows the number of defects in connection with cowsheds.

Nature of Defects.				Number of Defects.
Want of Drains	...	...	...	32
„ Light, Air Space and Ventilation	...	...	...	5
Dilapidated Cowsheds	...	...	...	2
Defective Floors	...	...	...	2
„ Cesspool	...	..	...	1
Cesspools requiring Emptying	...	...	...	8
Offensive Manure Heaps	...	...	...	12
Cowsheds requiring Limewashing	...	...	...	140
Total	...	...	..	202

THE FOLLOWING TABLE SHOWS THE NUMBER OF  
 ASHPITS CLEANSED DURING THE YEAR IN  
 OVENDEN AND ILLINGWORTH WARDS  
 (FORMERLY THE LOCAL BOARD DISTRICT OF OVENDEN).

Month.			Number of Ashpits emptied.	Loads of Soil.	Loads of Rubbish.	Total Number of Loads.
January	...	...	171	331	...	331
February	...	...	171	433	...	433
March	...	...	243	405	.	405
April	...	...	279	385	...	385
May	...	...	305	369	...	369
June	...	...	335	445	...	445
July	...	...	427	426	3	429
August	...	...	323	145	131	276
September	...	...	149	83	91	174
October	...	...	109	63	96	159
November	...	...	285	112	162	274
December	...	...	324	105	136	241
Total	...	...	3121	3302	619	3921



### Cousin Lane Tip.

Name.	Number of Loads.
Goux Department ... ..	619

### Streets Scavenging.

#### OVENDEN AND ILLINGWORTH DISTRICTS.

Number of Miles of Setting ... ..	5½
Number of Miles of Macadamized Roads ...	16½
Number of Streets Swept ... ..	1106
Number of Loads of Sweepings Gathered ...	1445
Number of Gullies Emptied... ..	2309

## FACTORIES AND WORKSHOPS.

TABLE SHOWING NUMBER OF VISITS MADE TO  
FACTORIES AND WORKSHOPS BY THE  
DISTRICT INSPECTORS.

District.	Number of Visits made to Factories.	Number of Visits made to Workshops.	Number of Visits made under the Shop Hours Act.
1	28	557	53
2	17	276	10
3	39	365	204
4	4	96	...
	88	1294	267



## FACTORIES AND WORKSHOPS.

The following Table shows the nature of Nuisances registered :—

### District No. 1.

INSPECTOR JAMES ARCHBELL.

Nature of Nuisances.				Number Registered.
IN FACTORIES.				
Insufficient Privy Accommodation	...	...	...	13
Defective Water Closets	...	...	...	33
„ Drains	...	...	...	7
Rooms requiring Limewashing	...	...	...	4
WORKSHOPS.				
Insufficient Privy Accommodation	...	...	...	13
Defective Water Closets	...	...	...	17
„ Drains	...	...	...	19
Want of Ventilation	...	...	...	4
Workrooms Overcrowded	...	..	...	3
„ requiring Limewashing	...	..	..	63
Total				176

## FACTORIES AND WORKSHOPS.

The following table shows the nature of Nuisances registered :—

### District No. 2.

INSPECTOR JOSEPH THOMPSON.

Nature of Nuisance.				Number Registered.
IN FACTORIES.				
Insufficient Privy Accommodation	...	...	...	2
Defective Water Closet	...	..	...	1
„ Fall Pipes	..	...	...	1
Offensive Urinals	...	...	...	4
Workrooms requiring Limewashing	...	..	...	11
IN WORKSHOPS.				
Insufficient Privy Accommodation	...	...	...	10
Untrapped Sinks, Urinals, and Lavatories	...	...	...	12
Defective Drains	...	...	...	10
Made-up Sinks	...	...	...	5
Defective W.C. and Soil Pipe	...	...	...	2
„ Roofs	...	...	...	2
Want of Ventilation	...	...	...	2
Overcrowded Workroom	...	...	...	1
Insufficient Water Supply	...	...	...	1
Workrooms requiring Limewashing	..	...	...	49
Total	...	...	...	113



## FACTORIES AND WORKSHOPS.

The following Table shows the nature of Nuisances registered :

### District No. 3.

INSPECTOR ALBERT EDWARD HUDSON.

Nature of Nuisances.				Number Registered.
IN FACTORIES.				
Insufficient Privy Accommodation	...	..	...	2
Untrapped Water Closets	...	...	...	49
Defective Water Closets	...	...	..	4
Insufficient Water Supply to Water Closets			..	50
Defective Lavatory Waste Pipe		..	...	1
„ Urinals	...	...	..	2
Untrapped Drains	...	...	..	4
Want of Ventilation	...	...	...	1
Closets requiring Limewashing	...	...	..	12
IN WORKSHOPS.				
Insufficient Privy Accommodation	...	...	...	6
Defective Water Closets	...	...	...	3
Untrapped Sink Pipes and Drains	...	...	...	8
Defective Sink Pipes	...	...	..	7
„ Basement Drains	...	...	...	3
Closets requiring Limewashing	...	..	..	2
Workrooms requiring Limewashing	...	...	...	15
„ Want of Ventilation	...	...	...	3
„ Overcrowded	...	...	...	4
Dangerhouse Condition of Workshop Floor		..	..	1
Total	..	...	...	177

## FACTORIES AND WORKSHOPS.

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The following Table shows the nature of Nuisances registered :—

### District No. 4.

INSPECTOR ALBERT EDWARD BOTTOMLEY.

Nature of Nuisances.				Number Registered.
WORKSHOPS.				
Want of Ventilation	...	...	...	2
Workshops requiring Limewashing		...	..	11
„ without Abstracts		...	...	5
Total	...	...	...	18



### Disinfection.

Disinfection of dwellings, bedding and clothing is performed gratuitously. Excellent service continues to be rendered by the Disinfecting House at Stoney Royd. There is a man specially appointed to take charge of the apparatus. When infectious disease occurs in any dwelling the bedding and clothing are fetched and delivered by the Corporation Officer in covered vans provided for that purpose, and the rooms fumigated by the District Inspector. The following Table shows the number and description of the articles disinfected :—

Description of Articles.					Number of Articles.
Beds	...	...	...	...	521
Mattresses	...	...	...	...	814
Pillows	...	...	...	...	918
Sheets	...	...	...	...	204
Bolsters	...	...	...	...	485
Blankets	...	...	...	...	702
Counterpanes	...	...	...	...	408
Bed Furniture	...	...	...	...	63
Cushions	...	...	...	...	39
Trousers	...	...	...	...	169
Coats and Vests	...	...	...	...	612
Drawers	...	...	...	...	274
Flannel Vests, Dresses and Dressing Gowns	...	...	...	...	513
Petticoats	...	...	...	...	453
Shawls	...	...	...	...	288
Rugs and Carpets	...	...	...	...	248
Mats and Sundries	...	...	...	...	3822
Total	...	...	...	...	10533

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS  
DISEASES REMOVED TO THE BOROUGH FEVER  
HOSPITAL BY THE DISTRICT INSPECTORS,  
FOR THE YEAR 1893.

Wards.				Small-pox.	Typhoid Fever.	Scarlet Fever.
Ovenden	...	...	...	8	...	...
Northowram	...	...	...	12	1	...
North	...	...	...	21	...	...
Central	...	...	...	18	...	...
West	...	...	...	31	...	...
South	...	...	...	31	2	...
East	...	...	...	70	...	1
Southowram	...	...	...	110	1	...
Skircoat	...	...	...	16	...	...
Pellon	...	...	...	14	...	...
Kingston	...	...	...	8	...	...
Illingworth	...	...	...	1	...	...
Total	...	...	...	340	4	1



TABLE SHOWING THE NUMBER OF INFECTED HOUSES  
VISITED BY THE DISTRICT INSPECTORS.

Wards.			Small-pox.	Cholera.	Enteric Fever.	Scarlet Fever.	Continued Fever.	Puerperal Fever.	Diphtheria.	Total.
Ovenden	...	...	8	1	2	22	1	...	15	49
Northowram	...	...	12	...	2	12	...	...	9	35
North	...	...	21	...	7	10	...	...	1	39
Central	..	...	19	...	10	15	...	1	4	49
West	..	...	31	2	4	16	1	2	3	59
South	...	...	33	1	9	20	...	...	4	67
East	...	...	70	...	11	3	...	...	1	85
Southowram	...	...	111	1	7	10	1	...	11	141
Skircoat	...	...	18	...	4	27	1	1	4	55
Pellon	...	...	14	...	6	4	...	1	3	28
Kingston	...	...	8	..	3	8	1	...	1	21
Illingworth	...	...	1	...	4	3	...	1	1	10
Total	...	...	346	5	69	150	5	6	57	638

### Rooms Disinfected.

The following Table shows the number of rooms disinfected by the District Inspectors during the year:—

Wards.					No. of Rooms Fumigated.
Illingworth	...	...	...	...	25
Ovenden	...	...	...	...	60
Northowram	...	...	...	...	80
North	...	...	...	...	101
Central	...	...	...	...	80
West	...	...	...	...	150
South	...	...	...	...	190
Kingston	...	...	...	...	32
Pellon	...	...	...	...	40
East	...	...	...	...	260
Southowram	...	...	...	...	280
Skircoat	...	...	...	...	148
					1446

### Canal Boats.

During the year 76 Boats have been inspected, and generally were clean and in good condition. It is very gratifying to report that not a single case of sickness or overcrowding was found.

In every case where females and children were on board proper provision had been made for the division of the sexes. Of the 76 Boats inspected, there were 12 with women only, and 14 with women and children. All the Boats were free from bilge water. The masters in all cases were ready and willing to give every information and render any assistance with a view to a thorough inspection.

The ventilation upon the whole was fairly good, and proper provision had been made for the storage of water for drinking purposes.



TABLE SHOWING NUMBER OF PROSECUTIONS DURING THE YEAR.

Date.	Defendant's Name.	Nature of Offence.	DECISION OF COURT.									Remarks.
			Penalties.			Costs.			Total.			
			£	s.	d.	£	s.	d.	£	s.	d.	
Aug. 18th.	Samuel Utley	... Defective Drainage	...	...	...	...	...	...	...	...	...	Dismissed.
Dec. 8th.	J. Brearley	... Selling Precipitated Sulphur containing 24 per cent. of Sulphate of Lime.	0	10	0	0	0	5	6	0	15	6
			0	10	0	0	0	5	6	0	15	6

The foregoing Table shows two prosecutions as against two in the previous year. The total fines, including costs, amount to £0 15s. 6d., as against £1 13s. 6d. for the previous year.

**Concluding Remarks.**—We have to report, with regret, the large number of defects which we have found in middle-class houses during the year. Whether this is due to the complication of the sanitary appliances in comparison to those of cottage property we do not know. The plumbers who have put in these sanitary appliances have connected as many bath and lavatory waste pipes to soil pipes as possible, without even ventilating them. Anyone who has the slightest knowledge of sanitary matters can at once see that waste pipes connected to soil pipes, without anti-syphon pipes attached, are not in accordance with sanitary measures and extremely dangerous to health. Where the bath and lavatory waste pipes are connected to soil pipes even having syphon traps attached, the downward current of air in the soil pipe causes the water in traps of bath and lavatory waste pipes to be drawn off, thus acting as a ventilator for sewer gas into the rooms.

A general and systematic inspection of cowsheds in the Ovenden district, prior to its being taken into the Borough, had never been carried out. The result being that some of them were in a deplorable condition, bad drainage, bad ventilation, and want of light being very common; but the exertions of the District Inspector and, in many cases, the willing co-operation of the owner or occupier has made a great improvement, yet much remains to be done. At this point, I would like to remind your Committee that, up to the present, nothing has been done in the matter of fixing upon the minimum amount of air space per head of cattle either by Government or Local Authorities generally; but it is thought by some eminent men that from 600 to 800 cubic feet should be allowed. If this amount of air space is to be



insisted upon, one half of the present cowsheds would have to be demolished and rebuilt. The object of past generations seems to have been to construct this class of buildings in such a manner as to keep out both light and air. You will, therefore, see the importance of deciding at once upon something definite in order that your Inspectors may know how to act. Bridlington Rural Sanitary Authority have adopted Bye-Laws insisting upon 600 cubic feet of air space per head of cattle.

A considerable amount of time has been devoted in making more minute inspections of factories and workshops. A fair amount of work has been done with a view to improve the sanitary arrangements in connection therewith, some of which were in bad condition. The owners generally have complied with our requests, and the alterations made will certainly have a beneficial effect upon the employées.

During the year your Committee have taken no action with regard to the abatement of dense smoke. Millowners seem to have taken advantage of this, and thus we find that the average number of minutes of dense smoke emitted from mill chimnies is five times that of 1892.

In connection with the Goux Department it is very pleasing to note that the number of complaints are considerably on the decrease. In 1892, from April to December, the decrease was 5,091 ; in 1893 the numbers have been again reduced to 335, showing that the system adopted by your Committee of periodical removal on the Block System has been a success.

I again beg to thank my Assistants and Mr. J. W. Jackson for their valuable assistance rendered, which have materially assisted me in carrying out the very important duties of the Health Department.

I am, Gentlemen,

Your obedient Servant,

DAVID TRAVIS,

*Chief Sanitary Inspector.*