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THE TWENTY-FIRST

ANNUAL REPORT

ON THE

SANITARY CONDITION

OF THE

BOROUGH & PORT OF IPSWICH

FOR THE YEAR 1898,

BY

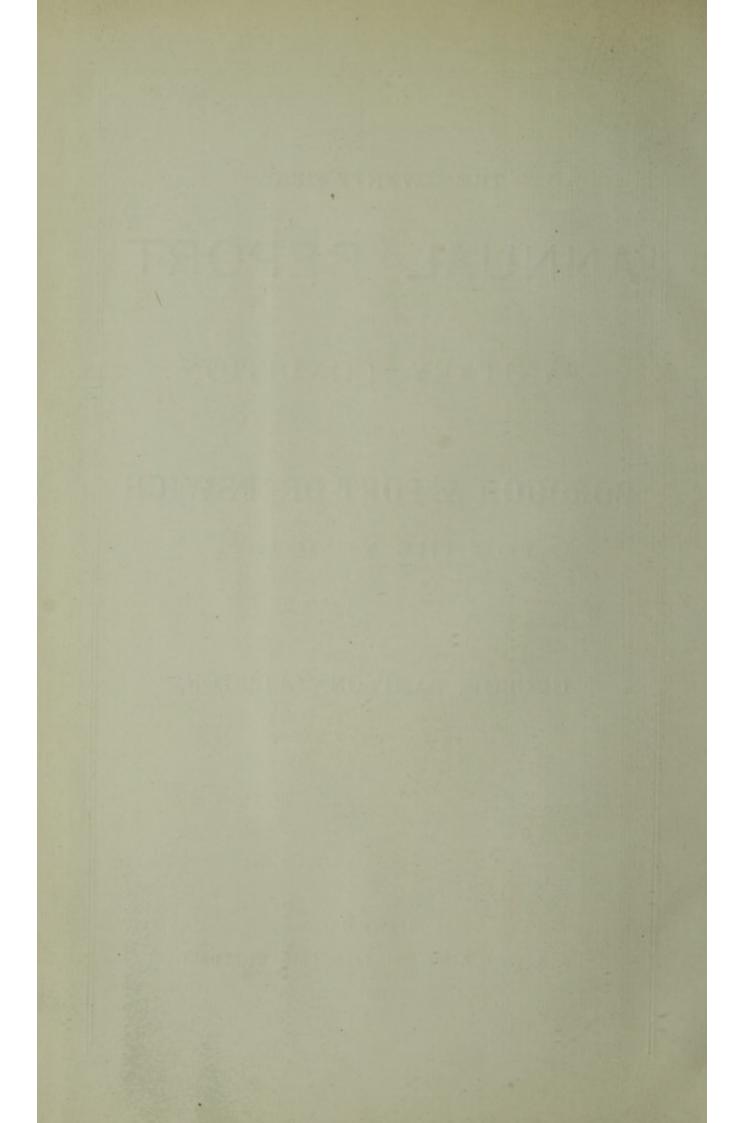
GEORGE SAMPSON ELLISTON,

MEDICAL OFFICER OF HEALTH.

IPSWICH:

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1899.



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MEDICAL OFFICER'S REPORT.

TO THE MAYOR, ALDERMEN, AND COUNCILLORS OF THE BOROUGH OF IPSWICH.

GENTLEMEN,

I have the honour to submit to you the following as my Report on the Sanitary Condition of the Borough and Port of Ipswich during the year 1898.

STATISTICAL RETURNS, HOUSES, AND POPULATION.

The three leading features in the vital statistics of Ipswich during the year 1898 are a higher birth-rate, a low death-rate, and an excessive infantile mortality. The adult population appear to have enjoyed a high standard of health throughout the year, the amount of general sickness being unusually small, and had it not been for the fatality of Whooping Cough, Measles, and Diarrhea amongst children, the death-rate would have been the lowest on record.

The two great blots in the health of Ipswich during the past year are the 112 deaths from Tuberculosis and the 129 from Diarrhœa, the two together amounting to more than one-fifth of the total deaths from all causes, viz.: 1,087, which is equal to the low death-rate of 17.4 per 1,000, and if the deaths of strangers dying in public institutions be deducted, the death-rate is reduced to 16.8 per 1,000.

The growth of the town continues to make satisfactory progress, and more than keeps pace with the increase in the population. The number of new dwellings added to the town during 1898 amounts to 360, against 321 built in the previous year. On the other hand 33 old and dilapidated houses were

pulled down to make way for public improvements. Of the 360 new houses built during the year 271 were connected to the sewers, 84 into dead wells, and 5 were provided with earth closets, these latter, however, are situated in the rural portion of the district.

The bulk of the new houses erected are of the small villa or cottage type, which pay the speculative builder better than larger residences. It is to be regretted that there are not more family residences built, which would attract well-to-do residents into the town. There is a great dearth of houses of from £45 to £75 a year rental in Ipswich, and for this reason many private families intending to settle here are prevented coming. It must be remembered that Ipswich has many natural advantages likely to attract strangers, e.g., its educational facilities, dry subsoil, sheltered position, good drainage, pure water supply, fine open spaces, and picturesque river and country, with easy access to the coast.

The population of Ipswich in the middle of the year 1898 was estimated to be 62,140, or an increase of 706 on the previous year. The natural increase, that is the excess of births over deaths, during the year was 774, and as it is nearly certain that more fresh people settle in the town than emigrate, it seems probable that the population may be under estimated. It is on the estimated population of 62,140 that the vital statistics in this Report are calculated.

MARRIAGES.

The number of marriages registered in Ipswich during the year 1898 amounted to 493 against 495 in 1897. The marriages are 40 above the average of the preceding 10 years; 306 of them took place in Churches, and 187 in Chapels, Roman Catholic Churhes, and at the Registrar's Office.

BIRTHS.

The number of births registered in Ipswich during the year 1898 amounted to 1,861, against 1,762 in the previous year. Of the 1,861 births, 870 were registered in the Western Sub-district, and 991 in the Eastern. The births are 99 more than in the previous year, and 118 above the average of the ten years from 1888 to 1897.

The birth-rate in Ipswich for the year 1898 was equal to 29.9 per 1,000 of the population living, that for England and Wales during the same period amounting to 29.4 per 1,000, which the Registrar General remarks "is lower than that in any other year on record."

MORTALITY.

During the year 1898 the total number of deaths registered in Ipswich from all causes amounted to 1,087, against 1,086 in the previous year. The deaths, although only one more than in 1897, are 26 below the average of the preceding ten years, 1888-97. On the estimated population of 62,140, the 1,087 deaths give an annual rate of mortality of 17.4 per 1,000 living, the rate for England and Wales during the same period being 17.6 per 1,000.

If the deaths of 38 strangers dying in Public Institutions be deducted, the death-rate is reduced to 16.8 per 1,000, and this may fairly be done, as a large number of patients are sent to the County Hospital and Borough Asylum from other towns and districts with their fatal illnesses upon them, and it is now customary in all Urban Districts to deduct these from the general death-rate.

Of the 1,087 deaths, 589 were males and 498 females, 509 were registered in the Western Sub-district and 578 in the Eastern, the latter Sub-district having rather the larger population.

The deaths of 131 persons were registered as taking place in Public Institutions during the year, viz.:—36 in the East Suffolk Hospital, 36 in the Borough Asylum, 50 in the Union Workhouse, 5 in the Borough Fever Hospital, and 4 in St. John's Home.

ZYMOTIC DISEASES.

The number of deaths under this class amounted to 223 during the year 1898, against 90 in the previous year. The annual death-rate from these seven principal Zymotic Diseases was equal to 3.58 per 1,000, the rate in England and Wales for the same period being 2.22 per 1,000.

SMALL-POX.

No death was registered from this disease during the year, and considering the unprotected state of the children in the borough from neglect of vaccination it is fortunate that no case occurred in the town or neighbourhood.

WHOOPING COUGH AND MEASLES.

These infantile complaints were the cause of 78 deaths during 1898, viz.:—31 from Whooping Cough and 47 from Measles. Whooping Cough has been practically epidemic in Ipswich for the last five years, and much carelessness is displayed in the poorer and more crowded parts of the town, both in treating the disease and keeping infected children from school.

Measles became epidemic in the summer months, and, unlike the severe epidemic in 1896, commenced in the Western division of the town, and rapidly spread through the Central to the Eastern or high lying district of St. John's. During June the Elementary Schools at the West end of the borough became centres of infection, and in spite of exclusion of children from infected houses being strictly carried out, the disease rapidly extended to all districts of the town. The Managers of two or three Voluntary Schools applied for and received a closing order from the Sanitary Authority, but the School Board Authorities preferred exclusion to the more extreme measure of closing. They maintain that the wholesale closing of schools involves for a time a serious check to education, examinations have to be postponed, which results in serious pecuniary loss from not earning the Government grant.

At first the disease was of a mild type, but towards the end of July, in spite of magnificent summer weather, it assumed a very fatal form, and the School Authorities very wisely closed the schools for the summer holidays a fortnight earlier than they otherwise would have done. The epidemic now began to decline, and the 47 deaths recorded from this infantile complaint must be looked upon as a serious loss of life, but that is not all, for it is well known that children who recover from Measles are predisposed to other diseases, and fall ready victims to attacks of Bronchitis and Diarrhæa. The great mortality from Diarrhæa that followed in September and October was no doubt partly due to this cause, the two diseases playing great havoc with infantile life.

SCARLET FEVER.

One death was returned from this disease during 1898

against 2 in the previous year.

With the exception of one or two local outbreaks, Scarlet Fever did not give much trouble during the year. In January an extensive outbreak amongst children attending the Rose Hill Road Board School was traced to some overlooked mild cases attending the Infant School in the peeling stage. The Clerk to the Board was communicated with, and measures were taken to prevent further mischief arising. The total number of cases notified during the year amounted to 82, against 68 in the previous year. Of the 82 cases notified, 40 were isolated in the Fever Hospital, all of which recovered.

DIPHTHERIA.

Eight deaths from Diphtheria were returned during 1898, against 6 in the previous year. The number of cases notified amounted to 40, which is 5 more than in the previous year. The illness in many cases was of a milder type, and did not affect any particular locality.

ENTERIC FEVER (TYPHOID).

Typhoid Fever was rather more prevalent in Ipswich during 1898 than in the previous year. The excess was entirely due to the hot, dry summer which extended late into the autumn, the heat operating on the large accumulations of excremental filth stored up in the middens in populous districts.

Seven deaths were returned, against 6 in the previous year, the number of fresh cases notified amounting to 67. Of these 67 cases 31 were removed to the Fever Hospital; they were all of an exceptionally severe type, and caused a severe strain on the nursing staff of the Hospital.

DIARRHŒA.

The number of deaths returned as due to Diarrheeal Diseases during the year was 129, viz.: Diarrheea 78 and Gastro Enteritis 51. The latter being another or modern name for infantile Diarrheea. This is a larger number than in any one year since the great Diarrheea year of 1880, and as it forms so large a proportion of the mortality during the past year, the subject will be again referred to more fully in another part of this Report.

CONSTITUTIONAL DISEASES.

CANCER.

Forty-nine deaths were registered from this disease during 1898, being 5 more than in each of the two previous years.

TUBERCULAR DISEASES.

Phthisis, or Pulmonary Consumption, which is the principal disease under this order, has been referred to year by year in these reports as an incurable disease, but lately our views on this subject have been changed. Consumption is now considered an acquired and not a hereditary disease, and having been shown to be an infective one, special care ought to be taken to protect persons possessing the hereditary pre-

disposition from any chance of catching it.

The deaths from these diseases form no inconsiderable proportion of the total deaths during the past year, although they are something like 20 per cent. less than in the previous year of 1897. During 1898, 84 deaths were returned from Consumption, 14 from Tuberculosis, 9 from Tubercular Meningitis, and 5 from Tabes-mesenterica, or a total of 112 deaths from Tubercular Diseases, being rather more than 1 in 10 of the deaths from all causes. In the previous year 134 deaths were returned in Ipswich, viz.: Consumption 104, Tuberculosis 9, Tubercular Meningitis, &c., 19, and Tabes-mesenterica 2.

Phthisis or Pulmonary Consumption has been slowly decreasing in Ipswich for the past 20 years, but the decrease has not been so marked as in the whole country, but while Consumption is decreasing the statistics in Ipswich prove that the mortality from Tuberculosis in early childhood is increasing, and as this opens several important questions I shall again deal with the subject in another part of this Report.

LOCAL DISEASES.

RESPIRATORY ORGANS.

During the year 1898 there was a marked decrease in the number of deaths from the various diseases of the lungs, 125 being returned against 172 in the previous year. Of the 125 deaths 71 were due to Bronchitis, 47 to Pneumonia and Broncho-pneumonia, and 7 to other diseases of the Lungs. In addition to these, 11 deaths were registered from Influenza.

OTHER DISEASES.

During the year 87 deaths were returned from Old Age, 82 from Heart Disease, 88 from Wasting Diseases of Infants, and 35 from Convulsive Diseases of Infants, including Teething and Convulsions.

DEATHS FROM VIOLENCE.

Twenty-four persons met with Violent Deaths during the year: 6 of them were due to Accidental Injuries, 1 to Poisoning by Belladonna, 3 to Accidental Burns, 3 to Drowning, 2 were Found Drowned, and 4 Infants were suffocated by being overlaid. Five persons committed suicide, viz.:—3 by Hanging and 2 by Shooting themselves.

INFANTILE MORTALITY.

The number of deaths of children under five years of age during the year amounted to 422, against 340 in the previous year. This excessive infantile mortality during an unusually healthy year is a matter that requires consideration. There is no doubt that the epidemic of Measles, which became general all over the town during the summer, left a large number of children so debilitated that they fell easy victims to the Diarrhœa epidemic that followed during the hot, dry autumn. These recurring epidemics not only play havoc with infant life, but very seriously interfere with school attendance, and for that reason the managers of Public Elementary Schools might well consider some plan for limiting the spread of a disease like Measles in its early stage before it becomes epidemic. Of the 422 deaths, 304 were returned under one year of age, and 118 between one year and under five. The rate of infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 163 per 1,000, that for England and Wales during the same period being 161 per 1,000.

AGED PERSONS.

The deaths of 320 persons over 60 years of age were returned during 1898, against 388 in 1897. Of these 129 were between 70 and 80, 61 between 80 and 90, and 6 upwards of 90 years.

THE FATAL PREVALENCE OF DIARRHŒA IN IPSWICH DURING THE SUMMER AND AUTUMN.

The Registrar-General of England in his Third Quarterly Report for 1898 referred to Diarrhoea being most fatal in Ipswich during that quarter, and the number of deaths from it having exceeded any previous record, induces me to present this Special Report on the subject.

There is little doubt that summer Diarrhæa is due to a bacillus, whose vigour and virulence is developed by high temperature acting on certain conditions in towns, these conditions certainly include the accumulations of excremental filth and decomposing organic matter at the backs of continuous rows of houses where sunlight and fresh air is deficient.

The peculiarity of this year's heavy mortality is that it has followed consecutively on three years' each of exceptional fatality, and at the same time they were more or less hot dry summers when the ground temperature of towns rose to an unusual height. Diarrhœa epidemics appear to be much influenced by the rise or fall of this ground temperature in large towns. I called attention to this subject in my Special Report on Diarrhea in the year 1880, as follows:- It is evident that during the summer quarters, owing to solar influence, the subsoil in town and country undergoes an elevation of temperature, and the extent of the rise will entirely depend upon the character of the weather overhead; thus if the summer months be dry and hot the ground will be influenced to greater depths, and attain to higher temperature than would be the case if the season were cold and wet. The sewers of towns will, of course, be subject to the same changes of temperature as the subsoil which contains them, and when once this reaches 55° F., or thereabouts, putrefaction will take place in all sewers containing filth refuse, and the higher the temperature of the sewer the more rapid will be the process.

By the following table the deaths returned as from Diarrhœa since 1875 can be compared with the deaths from all causes in each year:—

	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886
Deaths from Diarrhœa	57	51	40	99	15	126	16	47	41	103	16	64
Deaths from all Causes	1027	1045	1033	1155	1040	1023	886	1066	1042	1078	1037	1044

	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1877	1898
Deaths from Diarrhœa	24	23	46	30	23	33	92	11	122	52	55	129
Deaths from all Causes	964	1010	1066	1126	1087	1193	1322	1010	1157	1076	1086	1087

On referring to the summary of my Diarrhea Report for 1880, I find that owing to the further experience gained during the enquiry, I became more convinced of the excrementitious origin of the disease, an opinion which another 18 years has not altered. Among the practical suggestions made were to increase the minimum amount of yard space in rear of new dwelling-houses from 150 to 200 square feet, and to remove the refuse from the town at shorter intervals and in a more systematic manner.

The following paragraph extracted from that report might have been written last year, it refers to the work of the Refuse Removal Committee:- "So far great credit is due to the Committee for the economical way they relieve the town of so much refuse; but the result of the September inspections of the Inspector of Nuisances and myself proved that many of the streets mentioned at pages 29, 30, and 31 contained a number of foul soil bins that require to be cleansed in a more systematic manner and at shorter intervals. At the commencement of last summer the Committee, on the plea of economy, refused my application for the extra gang of scavengers to deal with urgent nuisances. This extra gang in 1879, though not a pecuniary success, proved invaluable from a health point of view, and if necessary in the cool wet, summer of 1879, must have been much more so in the hot, dry season of 1880. I trust that early in the ensuing summer the Committee will see their way clear to employing a gang of this description, and also order the special scavenging of those streets in the town in which the fatal Diarrhœa incidence has principally shown itself."

I have nothing new to add as to the causation of this fatal epidemic of Diarrheea last year, and following, as it did, on three years of exceptional fatality I propose to reproduce here the paragraph on Diarrheea from each of the last three Reports. They were written at a time when the subject was fresh in my memory, and the suggestions contained were the result of of inspections and investigations.

EXTRACT FROM 1895 REPORT.

"The fatal prevalence of this disease in Ipswich is much influenced by heat or coolness of the season and by the amount of rainfall during the summer months. The weather during the summer and autumn of 1895 was certainly such as generally favours an excessive mortality from Diarrhea, but hardly sufficient to account for the alarming death-rate that took place last year. During the year 1895 122 deaths were registered from Diarrhœa against 11 in the previous year, this is a larger number than in any one year since the great Diarrhea year of 1880, and taking into consideration the amount of sanitary work done in that period is most disappointing. Diarrhea like Typhoid Fever is a "filth disease," and invariably shows a preference for those districts where excremental nuisances abound. A study of the localties where the bulk of the deaths took place last year corroborates this, and these recurring epidemics of Diarrhea and Typhoid Fever forcibly reminds us that we are only at the commencement of the gigantic task of abolishing the foul midden pits of this town."

EXTRACT FROM 1896 REPORT.

"It is rather unusual to have two fatal Diarrhea summers running in Ipswich, and after the excessive mortality from Diarrhea in 1895, it was to be expected that there would be a marked decline during the past year. But this was not so, for the 52 deaths during 1896, although much less than the 122 of the previous year, are very much above the average. Doubtless the epidemic of Measles was the great cause of so many succumbing to Diarrhea, and it is dreadful to think of the great havor these two diseases made last year with infantile life in Ipswich. The excessive mortality amongst children is the worst feature of this year's Report, and the low general death-rate is entirely due to the high standard of health enjoyed by the adult population throughout the year."

EXTRACT FROM 1897 REPORT.

"Diarrhea was again very fatal during the summer and autumn months, it is one of the penalties that a town like Ipswich has to pay for a long, hot summer that ends with fine harvest weather. In all hot, dry summers it has been noticed that the localties where this fatality from Diarrhea occurs are the closely confined districts where the heat operates on the

accumulations of excremental filth. Although scavenging has been fairly active during the last three summers, there were too many accumulations of filth in midden pits, in courts and small back streets, just at the time that Diarrhæa was raging. I have often advocated that special attention should be given to those particular localities in May and June, and the soil bins not only thoroughly emptied but also disinfected with some dry material.

"The number of deaths returned from Diarrhœa during 1897 amounted to 55 against 52 in the previous year. The bulk of the cases were infants under one year of age and living in districts where the dwellings are crowded together, and the ventilation defective by reason of the confined space in the small yards and narrow streets."

What can be done to prevent this periodical loss of life in Ipswich from Diarrhœa? At the time the epidemic was raging in Ipswich no death was returned from it in the neighbouring rural district of Bosmere and Claydon, and only 2 in that of Samford, and yet the children of all three districts are fed and brought up much under the same conditions. Another significant fact is, that in that closely-built neighbourhood, the Cox Lane district, where during the last three years all the middens have been abolished, only two deaths from Diarrhæa were returned. And yet before the improvements it was the 200 small houses in the courts and streets forming this area in which infectious diseases were always prevalent and infantile Diarrhæa flourished.

I believe many of the conditions influencing Diarrhœa are capable of removal, certainly the great factor that I have persistently reported against for 25 years.

First and foremost must be the more frequent and systematic emptying of the existing soil bins in the borough.

They ought to be emptied in accordance with the Model Bye-laws of the Country, viz., not less than once in three months.

Where deep and wet the scavengers, after emptying, should deodorise with some dry antiseptic material.

Extra gangs should be put on in May and continued till October, to deal with the Diarrhœa localities.

The abolition of the foul midden pits in the town has been, and is being, pushed on as fast as possible, in fact as fast as the resources of the local builders will permit. I know that house property owners are complaining of the outlay and tenants resenting the extra threepence on the rent, but it must be done, and when completed a great saving of life will be the result.

THE PREVALENCE OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

So much has been said and written about this subject during the last six months that it becomes necessary to make more than a passing reference to it in the pages of this Annual Report.

I have been in the habit of calling attention year by year to the high mortality from Phthisis or Pulmonary Consumption in Ipswich, and although a marked decline had taken place during the last ten years, the decrease was much less than in the rest of the country.

Hitherto I have frequently been in the habit of describing it as "that incurable disease," and did not class it as an infective disease, but our views as to Tuberculosis have been altogether changed by the discovery of Koch's *Bacillus Tuberculosis*.

We now look upon Consumption as an acquired disease and not a hereditary one, and there is an accumulating weight of evidence which makes it clear that under certain conditions Consumption is actively communicable.

Under the influence of improved sanitary conditions the fall in the death-rate from Phthisis in England and Wales since 1838 has been most striking. In 1838 the Phthisis rate per 10,000 was over thirty-eight; in 1895 it was nearly fourteen. In other words, during the last fifty-eight years the disease had diminished nearly two-thirds.

I now propose comparing the deaths from Phthisis in Ipswich for the last twenty years, and if the average number in the last ten years be compared with those in the previous decade an idea will be obtained of the real progress made.

	1878	187	1880	1881	1882	1883	1884	1885	1886	1887	Annual average 10 years.
Deaths from Phthisis	128	130	98	100	123	120	134	114	136	108	119
Deaths from all Causes	1155	1040	1023	886	1066	1042	1078	1037	1044	964	1033

	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	Annual average of 10 years.
Deaths from Phthisis	96	103	109	106	122	124	106	114	89	104	107
Deaths from all Causes	1010	1066	1126	1087	1193	1322	1010	1157	1076	1086	1113

From these tables it will be seen that during the first ten years, 1878-87, the deaths from Consumption were about 1 in 9 deaths from all causes, and the average death-rate per 10,000 23·10, and that in the last ten years ending 1897, the deaths were 1 in 11, and the Phthisis death-rate per 10,000 18·40. Allowing for the increase in the population this is a substantial reduction on 20 years ago, but still higher by 4 per 10,000 than the rest of the country. These figures are for Pulmonary Consumption only, and do not include the tubercular diseases of children, which are evidently on the increase in Ipswich, and this at a time when Consumption is decreasing.

With regard to the national movement for the prevention of Tuberculosis, a very wide field is open, especially in large towns, and one where Local Authorities can play a very important part if they chose. The Council of the British Medical Association have just issued some valuable suggestions on the subject, and in the first paragraph on general sanitation they remark that:- "It is imperative that all Sanitary Authorities should put in force the manifold powers which they now possess for improving the public health, and especially in the direction of providing better ventilation and access of light in all dwellings and workshops and in all places of public assembly. The clearance of crowded sites and the reconstruction of insanitary house property under powers already possessed by Local Authorities is a matter of great importance in connection with the prevention of the spread of Tuberculosis. It is also the duty of Local Sanitary Authorities, through their Medical Officers of Health, to assist in educating public opinion by the diffusion of leaflets and notices, pointing out the best means for limiting the spread of Tuberculosis."

The control of the Milk supply in a town like Ipswich ought to be more under the Sanitary Authority. Many of the cowsheds are not what they should be; there is no guarantee that cows giving Milk are not suffering from Tuberculosis, and there is no adequate means for the pathological examination of the Milk supplied by retail.

The air space allowed in cowsheds should be fixed; 800 cubic feet per cow might be accepted as a standard requirement, but if this were to be insisted upon many a tumble-down shed in Ipswich would have to disappear. "Surely," said a cowkeeper to me a few months ago, "you are not going to rob a poor man of his living!"

The infection of Tuberculosis in Milk can be destroyed by boiling or sterilisation; this is important to know in the case of children, as they are the most liable to Intestinal Tuberculosis, and are the great Milk consumers of the community.

From this it will be seen that from the preventive point of view it is Milk supervision that is of the greatest moment to the public health. It is the consumption of raw Milk that constitutes the chief channel of infection, and this can be overcome by simply heating Milk up to boiling point.

The danger from Meat is much less than in the case of Milk, but it undoubtedly exists, and can only be effectually obviated by inspection of the carcases of all animals slaughtered for use as food. This can only be efficiently carried out in Public Slaughter-houses; the present inspection of Meat in the Private Slaughter-houses of Ipswich is unsatisfactory, they are dotted about all over the wide area of our Borough, and cannot be kept under supervision.

The Royal Commission on Tuberculosis reported strongly in favour of Public Abattons for towns, and recommended that Local Authorities should have power conferred on them to close all the existing Private Slaughter-houses when once a Public Slaughter-house had been established. This power has been enjoyed in Scotland by Burgh Authorities for many years.

There are many other preventive measures that can be carried out in fighting this fatal scourge, but no headway can be made until the public have been gradually educated up to

it. I do not think the time has yet arrived to make Consumption a notifiable disease, but the houses where deaths take place should have the rooms disinfected by the Sanitary Officers in the same manner as other Infectious Diseases. This is already being done in health resorts like Brighton, &c. I welcome this new Crusade against Consumption, and believe the movement is laying the foundation for work, which will eventually triumph over it, and a great saving of human life will be the result.

SLAUGHTER-HOUSES.

Since the last Annual Report the Public Health Committee have reported in favour of establishing "Public Abattoirs" in Ipswich, and the Town Council subsequently affirmed the principle.

Of course there will be opposition from the trade, but the feeling throughout the country is getting too strong for that.

The following are some of the conclusions arrived at for abolishing Private Slaughter-houses:—

- 1. That the condition of many of the Slaughter-houses in the Borough is unsatisfactory.
- 2. That this unsatisfactory condition is due chiefly to structural defects and bad position.
- 3. That the scattered situation of the Slaughter-houses prohibits effectual supervision and lends opportunity to the introduction and sale of unsound Meat.
- 4. That many of the occupiers of unfit Slaughter-houses would be glad to avail themselves of a convenient and accessible Public Slaughter-house, as it would be to their greater convenience, and as then they could more readily comply with the stringent enforcement of the bye-laws which would follow the provision of such a place.

ANNUAL REPORT ON THE SANITARY CONDITION OF THE PORT OF IPSWICH.

The limits of the Port of Ipswich are the same as set forth in the order of May, 1892, and extend to the boundary limit in the river of the Port of Harwich.

SHIPPING TRADE.

There has been an increase in the Trade of the Port during the year 1898; not only has there been an increase in the number of steamers from foreign ports, but also in the number of steamers and sailing vessels arriving costwise.

During the year 1898 there entered the Port 167 vessels coming foreign, with a gross tonnage of 50,582, and 2,501

coastwise vessels, with a gross tonnage of 176,034 tons.

Of the 167 vessels arriving from foreign ports 52 were steamers of 31,472 tons, and 115 were sailing vessels of 19,110 tons.

The following list, tabulated by the Harbour Master, Capt. J. Wing, will show the countries from which they came and the cargoes they brought.

No. of Steam Vessels.	Cargoes.	Where from.	No. of Sailing Vessels.	Cargoes.	Where from.
4	Maize	America	3	Barley	South America
4	Barley	Spain and Black	9010	The state of the s	and Russia
		Sea	1	Wheat	Holland
1	Oats	Prussia	4	Oats	Holland,
1 1 2 1	Peas and Oats	Russia			Prussia, and
1	Beans and Oats	Prussia			Denmark
2	Wheat	Russia	1	Wheat and	
1	Maize and	Black Sea		Barley	South America
	Barley		1	Locust Beans	Spain
5 2 1 8	Cotton Seed	Egypt	10	Sugar	France,
2	Oilcake	Germany	122	23 20 33	Germany,
1	Sugar	Prussia	1000	Le dell'assessor	and Prussia
8	Pyrites	Spain	2 8	Salt	Germany
9	Wood	Norway, Sweden, and Russia	8	Oilcake	Germany, Prussia, and Russia
9	Granite Stone	Guernsey	18	Wood	Norway,
3	Phosphate of Lime	Mediterranean			Sweden, and Russia
1	Light	Holland	58	Phosphate of Lime	France, Belgium, and West Indies
2003			4	Granite Stone	
			2	Moss Litter	Holland
43.5	10 TA 34 KT TO BE TO BE		2 1 1	Onions	France
2011			1	Ballast	Germany
1500			1	Manure and Soda	Holland

Of the 2,501 vessels arriving coastwise, 680 were steamers with a registered tonnage of 67,535, and 1,821 were sailing vessels, with a gross tonnage of 108,499.

These cargoes consisted of wheat, maize, barley, oats, linseed, pyrites, coals, timber, beans, peas, pig iron, oilcake, cotton seed, phosphate of lime, and granite stone.

INFECTIOUS DISEASE IN THE PORT.

The crews of all vessels visiting the Port during the year must have enjoyed a high standard of health for no case of sickness was reported to me, and as far as I have been able to ascertain no death was registered.

The Deputy Medical Officer of Health at Harwich was not once called upon by the Customs Authorities there to board an Ipswich bound ship, nor had the Quarantine Officer at Ipswich any occasion to notify a single case of Infectious Disease throughout the year.

FLOATING HOSPITAL.

During the year the Hospital Ship has been thoroughly overhauled and repaired by the builders, and she may now be considered ready and fit for the reception of patients at a short notice. This Hospital is only kept in reserve for special cases, ordinary ones being removed in the usual way to the Borough Fever Hospital, where it is easier and more economical to treat them.

SANITARY WORK.

In the summer Mr. Brydone, the Local Government Inspector for Barges and Canal Boats, visited Ipswich. I accompanied him round the Docks, and we boarded all the small craft under this class. The regulations as to the number of the crew and their sleeping accommodation appeared to have been fairly carried out, but the Inspector complained that in the case of many of the older and smaller barges the periodical painting of the cabins and cleansing the wood work had been somewhat neglected.

The sanitary condition of the vessels inspected during the year was satisfactory. No notices were served by the Inspector of Nuisances for sanitary amendments, nor was he called upon to make any special inspection.

The watering stations round the Dock were periodically inspected during the year, there being a good demand for fresh supplies by the shipping. These stations are supplied direct from the Ipswich water mains, and the water has a good reputation amongst the masters of vessels visiting the Port.

During the hot part of September a thick layer of scum and vegetable debris accumulated at St. Peter's end of the Dock, causing an offensive nursance. The Health Committee ordered the Inspector to attend to it forthwith, and the

nuisance was at once abated.

Several complaints were received during the hottest part of the summer by passengers from Ipswich to Harwich of an offensive nuisance at low tide in that part of the river near the outfall of the main sewer. Every year the volume of sewage from the town increases, and it is evident that some further treatment by precipitation and screening is required.

BOROUGH FEVER HOSPITAL.

The year commenced with only four patients in the Hospital, and with the exception of a local outbreak of Scarlet Fever in the Rose Hill Road district, which soon filled up the the two Scarlet Fever Wings, the Hospital remained for the first six months of the year with a low average of patients.

When the hot, dry summer set in it became apparent that in the early autumn an access of Typhoid Fever would take place, and a second wing was prepared and devoted to this disease. Typhoid Fever appeared in the town earlier and more suddenly than was expected, and the two wings filled up one after the other. Like the previous year the cases were of a virulent type and severely strained the Nursing Staff. Of the 31 cases admitted 3 died, another death took place on January

1st, but does not come into this year's account.

Five cases of Diphtheria were admitted into the Hospital during the year, two ending fatally. When rather pressed with the Typhoid cases and the remaining Scarlet Fever wing being occupied, I was applied to by the Medical Attendants to remove some urgent cases of diphtheria, but was obliged to refuse, having no available bed. This appears to have given dissatisfaction to the Medical Profession, for at a recent meeting of the Ipswich Clinical Society the following resolution was passed, after a long discussion, and transmitted to the Public Health Committee, who requested me to include it in the Annual Report:—

"That, in the opinion of the members of the Ipswich Clinical Society, the present accommodation at the Infectious Hospital of this town is insufficient, and that Mr. G. S. Elliston be asked to approach the Health Committee to provide proper room for increased treatment, with special reference to the desirability for accommodation and treatment of persons suffering from Diphtheria."

On January 1st, 1898, there were 4 patients under treatment in the Hospital, 76 fresh cases were admitted, 62 were discharged cured, 5 died, and 13 patients remained in the

Hospital at the close of the year.

The following is a summary of the number of cases treated in the Hospital during 1898, with their results:—

Disease.		Hilling	Number	Discha	arged.	Remaining in Hospital
Disease.			under treatment.	Cured.	Died.	Dec. 31st, 1898.
Scarlet Fever			42 33 5	35 24	3	7 6
Typhoid Fever Diphtheria	::	::	5	3	2	ő
Total			80	62	5	13

FOOD, MILK, AND WATER SUPPLY.

The Inspector reports that in November he seized a carcase of a sheep in the Green Yard, and being unfit for food it was destroyed under his supervision. He also reports that in two or three cases he had to warn the occupiers of Slaughter-houses of the suspicious nature of flesh hanging in them, but it was not necessary to take any further action.

Nine samples of Milk and ten of Butter were taken during the year for analysis, the majority of which were genuine and

of fair quality.

The periodical inspection of the wells, water-heads, and reservoirs in connection with the Town Water Works were made by the Inspector, and sometimes accompanied by myself, and twenty samples were collected and submitted to the Public Analyst for examination. With the exception of the Spring Road Reservoir all were found to be very satisfactory. It was necessary to draw the attention of the Water Works Committee to the report on the supply from the Spring Road Reservoir, which was to the effect that although good it required watching.

SUMMARY.

The notification of Infectious Diseases in the Borough has again been the means of initiating much valuable work in connection with the sanitation of the town. All outbreaks of Infectious Disease are referred to in the fortnightly reports to the Health Committee, and when they occur in bad localities are often the means of instituting some sweeping sanitary improvement in the district.

During the year 1898 the number of cases of Infectious Disease notified by the Medical Practitioners in the town amounted to 226, against 192 in the previous year.

The diseases reported and inquired into were as follows:-

Scarlet Fever	82	Typhoid Fever	 67
Diphtheria	40	Erysipelas	 34
Membranous Croup	1	Puerperal Fever	 2

An outbreak of fatal Typhoid Fever in the neighbourhood of Short Lane brought that insanitary area prominently before the Health Committee, with the result that a new street is to be driven straight through the worst part. This will be a great and long-wanted sanitary improvement, and will virtually do away with Short Lane. The improvement is not a costly one, and there is little doubt but that the Local Government Board will sanction the loan

In the Appendix to this Report will be found the Annual Report of Mr. Arthur Hicks, the Sanitary Inspector. It is well worth carefully studying, as it contains in a tabular form the sanitary work of the year. One item is of great importance, viz.:—the number of water-closets erected and converted during the year. It appears that 91 new ones have been erected, 481 old privies have been converted into water-closets, and at the end of the year 75 were in course of reconstruction.

This work is being carried on as fast as the resources of the builders in the town will permit, and it is satisfactory to note that last year the Inspector exceeded by nearly 150 the number estimated in each year.

I have the honour to be, Gentlemen,

Your obedient Servant,

GEORGE S. ELLISTON.

APPENDIX.

TABLE I.

Showing the Population, Inhabited Houses, Births, Deaths, and Marriages, for the Year 1898, and Ten Years preceding.

GROSS NUMBERS.

Year.	Population Estimated at the Middle of the Year.*	No. of Inhabited Houses in District.	Births.	Deaths.	Marriages.
1898	62140		1861	1087	493
1897	61434		1762	1086	495
1896	60728		1794	1076	475
1895	60022		1871	1157	471
1894	59316		1705	1010	496
1893	58610		1713	1322	508
1892	57904		1710	1193	428
1891	57081	12237	1784	1087	423
Census Yr. 1890	57400		1705	1126	415
1889	56700		1686	1066	443
1888	56548		1705	1010	376
	Average of 10 Years. 1888—1897.		1743	1113	453

NOTES.

- 1. Population at Census, 1891, 57,081.
- 2. Area in Acres, 8,395.
- 3. Average number of Persons in each House at Census, 4.6.

^{*} For statistical purposes the Registrar-General estimates the population to the middle of the year on the basis of the rate of increase ruling between the two preceding Census periods. The estimate of population may be checked by the known number of inhabited houses, and by the average number of inmates per house, as ascertained at the preceding Census.

TABLE II.

Showing the Annual Birth Rate, Rate of Mortality, Death Rates among Children, and Deaths in Public Institutions for the Year 1898, and Ten Years preceding.

Year.	Birth- rate per 1,000 of the Popula- tion.	Annual Rate of Mortality per 1,000 Living	Deaths of Children under 1 Year; per centage of Total Deaths.	Per centage of deaths of Children under 1 year to Registered Births.	Deaths of Children under 5 years; per centage of Total Deaths.	Total Number of Deaths in Public Institutions.
1898	29.9	17.4	28.0	16.3	38.8	131
1897	28.6	17.6	22.1	13.6	31.3	144
1896	29.5	17.7	27.1	16.2	38.5	115
1895	31.1	19.2	29.0	18-1	41.4	147
1894	28.7	17.0	20.4	12.1	32.5	131
1893	29.2	22.5	21.4	16.5	32.8	138
1892	29.5	20.6	22.2	15.5	31-2	136
1891	31.2	19.0	20.9	12.7	31.0	157
1890	29.7	19.6	19.2	12.7	38.1	121
1889	29.7	18.8	23.1	14.0	37.7	110
1888	30.1	17.8	23.5	13.9	35.4	130

TABLE III.

Showing the Number of Deaths from the Seven principal Zymotic Diseases in the year 1898, and in the Ten Years 1888 to 1897.

Disc	ease.		1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888
Small Pox		*	 0	0	0	0	0	1	0	0	0	0	0
Measles			 47	1	50	4	0	42	11	. 7	80	11	9
Scarlet Fever			 1	2	4	2	18	8	3	5	1	0	0
Diphtheria			 . 8	6	14	35	16	6	8	14	37	30	5
Whooping Co	ugh		 31	20	22	32	43	12	8	5	37	43	27
Fever			 7	6	8	11	4	19	7	15	6	6	5
Diarrhœa			 129	55	52	122	11	92	33	23	30	46	23
Total			 223	90	150	206	92	180	70	69	191	136	69

REPORT OF THE INSPECTOR OF NUISANCES THE YEAR 1898.	FOR
Number of complaints received during the year Number of houses and premises inspected	420 4,195
The state of the s	2,200
RESULT OF INSPECTION.	
Orders issued for sanitary amendments	427 963
House drains reconstructed, cleansed, trapped, etc. New W.C.'s erected	91
Old privies converted into W.C.'s	481
W.C.'s in hand December 31st	75 86
Old privies pulled down	6
INFECTIOUS HOSPITAL.	
Two hundred and twenty-six notifications of Infectious Disease were received at my office during the year, and	
a copy of each sent to the Board School Office, British	
Schools, Blue Coat School, and St. Matthew's Schools.	226
Seventy-six patients were removed to the Infectious Hospital, viz:—	
Typhoid Fever	31
Scarlet Fever	40
Diphtheria Sixty certificates of discharge from Infectious Hospital	5
were received and notice of same forwarded to residence	
of patients	60
DISINFECTING.	
Number of rooms fumigated after Infectious Diseases	49
Public Schools	16
Number of articles disinfected at the Chamber in the Sanitary Authority's Yard, Wolsey Street, from January	
1st to September 3rd	472
In October the above Disinfecting Chamber was taken down.	
Number of articles sent to new Steam Disinfecting Chamber	
erected in Infectious Hospital grounds	31
MORTUARY.	
During the year twenty-six bodies were taken to the Mortuary	26
All the external woodwork has been painted under the	
directions of the Borough Surveyor, and the internal walls, &c., have been thoroughly swept and the premises	
generally cleaned under my supervision	

WATER SUPPLY.

Houses required per notice to lay on Town water	
MILK AND FOOD SUPPLY.	
Number of samples taken under the Food and Drugs Act, viz.:—Milk Butter In November my attention was called to a carcase of a sheep in the Green Yard, which I inspected and found in such a condition that I recommended it to be destroyed, which was done under my directions. In two or three cases it has been necessary to warn occupiers of slaughter-houses of the suspicious nature of flesh hanging in same, but it was not necessary to take further action in any case.	10
BAKE HOUSES.	
Most of the bake houses in the Borough were inspected during the year, and in many of them notices were served for repairs to floors, limewhiting, and other amendments to be carried out	118
SLAUGHTER-HOUSES.	
There are thirty slaughter-houses and one knacker's	
premises in the Borough	31
MISCELLANEOUS.	
Washhouses repaired, etc	11 16 40
other refuse	43
Legal proceedings	ļ

FACTORY AND WORKSHOPS ACT.

22

PUBLIC URINALS.

There are now six public urinals, situated as follows:—
Town Hall Passage, St. George's Street, High Street,
Old Cattle Market, Custom House, and Stoke Bridge,
which have been cleansed daily and disinfected
...
The urinals at Custom House and Stoke Bridge are
frequently limewashed.

6

PORT SANITARY AUTHORITY.

No case of Infectious Disease was removed to the Hospital Ship.

During the year the Cholera Hospital Ship has been kept

clean and aired by Capt. Cook and his son.

In October she was hauled up the slip in Mr. Orvis's Yard, with the result that her bottom was found defective and instructions were given for the necessary repairs, scraping, and tarring to water line, and all parts above water line were painted, two coats at a total cost of £32 10s. 0d.

I am, Gentlemen,

Your obedient Servant,

ARTHUR HICKS,

Inspector of Nuisances.

REPORT OF THE INSPECTOR UNDER THE DAIRIES, COWSHEDS, AND MILKSHOPS ORDER, AND MANAGER OF HOUSE REFUSE REMOVAL AND NIGHT SOIL DEPARTMENTS FOR THE YEAR 1898.

The Dairies, Cowsheds, and Milksellers' premises have been visited from time to time; they are generally clean, ventilated, and well kept. One Cowshed and five Milksellers have been Registered during the year.

DRY HOUSE REFUSE DEPARTMENT.

Summary.

Wages			337	0	1
Horse Keep			262	13	0
New Horse		1101.	40	0	0
New Cart			17	10	0
Shoeing and Repairs	3		57	13	1
Rent of Depôt			8	0	0
Half-rent of Office, &			16	0	0
Share of Pony-keep			8	0	0

£746 16 2

NIGHT SOIL DEPARTMENT.

3,078 loads of night soil have been collected and disposed of to Farmers during the year.

10,993 emptying of soil bins were attended to during the year.

91 dead wells were emptied during the year, many of which have since been done away with.

60 pail closets still exist, which are emptied weekly.

These, in my opinion, ought to be done away, as if not properly attended to by the occupiers are much more objectionable than the common privies.

Summary.

	£	s.	d.	£	s.	d.
Wages	 1,309	18	4			
Horse keep	 615	7	0			
Pony ,,	 8	0	0			
Repairs and Shoeing	 191	12	2			
Half-rent, &c., of Office	 16	()	0			
,	-	_	-	2,140	17	6

Sales and Earnings.

	£	s.	d.			
1,773 wagons 4s. 0d. per wagon	 354	12	()			
40 ,, 4s. 3d. ,,	 8	10	0			
62 ,, 4s. 6d. ,,	 13	19	0			
975 ,, 4s. 9d. ,,	 231	11	3			
155 ,, 5s. 0d. ,,	 38	15	0			
32 ,, 5s. 3d. ,,	 8	8	0			
91 Dead Wells	 43	4	0			
Carcase of Horse Boxer	 1	10	0			
Carcase of Horse Bowler	 1	12	6			
Sale of Mare Brag	 6	0	0			
Sale of Old Wagon	 2	10	0			
Sale of Horse SMILER	 4	0	0			
	-		-	714	11	9
				£1,426	5	9

GEO. MOSS.