[Report 1908] / Medical Officer of Health, Chelmsford R.D.C.

Contributors

Chelmsford (England). Rural District Council.

Publication/Creation

1908

Persistent URL

https://wellcomecollection.org/works/whyc2bw8

License and attribution

You have permission to make copies of this work under a Creative Commons, Attribution license.

This licence permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See the Legal Code for further information.

Image source should be attributed as specified in the full catalogue record. If no source is given the image should be attributed to Wellcome Collection.



ANNUAL REPORT

OF THE

Medical Officer of Health

(JOHN C. THRESH, M.D., ETC.)

FOR THE

CHELMSFORD

Rural District Council

FOR THE YEAR 1908.

CHELMSFORD

PRINTED BY JOHN DUTTON, 8, TINDAL STREET.

MDCCCCIX.

TABLE OF CONTENTS.

Character of District .					PAGE.
House Accommodation					4
Water Supplies					_
,, Analyses					
" Quantities used .					8
Cowsheds, Dairies, &c.					9
Food Poisoning					11
Sewerage and Drainage					11
River Pollution					12
Results of Inspection					13
Pea Pickers					15
Van Dwellers					15
Schools					16
Plans Submitted					
					17
Infectious Diseases .				•••	18
Schools Closed	•••		***		20
Statistics:					
Birth-rate and Infantile				•••	
Death-rates					21
Cancer and Phthisis .					22
Comparison of years :—					
1879-88 with 1899-1908					23
Local Government Board	Tables			24-	-30
Home Office Tables-Fa	ctories	and	Wo	rk-	
shops				31-	32
Inspector's Summary of V	Vork do	ne			33

CHELMSFORD RURAL DISTRICT.

Report of the Medical Officer of Health For the Year 1908.

TO THE CHAIRMAN AND MEMBERS OF THE RURAL DISTRICT COUNCIL.

GENTLEMEN,

In accordance with the requirements of the Local Government Board and County Council, I present you with the report on the Sanitary circumstances of the district and upon the mortality and sickness statistics for the past year. As this is the twentieth report which I have prepared, I have ventured to compare the statistics for the ten years prior to my becoming Medical Officer of Health with those for the past ten years. These will be found at the end of the report and are so encouraging that I hope they will persuade you, if persuasion is necessary, to continue your well-doing as I think it quite possible that at the expiration of another 20 years my successor may be able to show equally good results.

The physical features of the district remain unchanged, but the area has been slightly diminished by the absorption of nearly all Springfield and a small portion of Writtle into the Borough.

With the exception of a fair sprinkling of people whose occupation takes them almost daily to the metropolis, the inhabitants are directly or indirectly dependent upon agriculture for a livelihood. There are no manufactories or industries employing large numbers of hands. The population is slightly

increasing, especially in Ingatestone and Broomfield. (Vide The Surveyor's Table of Plans passed during 1908). The occupations followed are of a healthy character. I know of no business which is carried on which can be said to be detrimental to health.

The house accommodation generally is satisfactory. There has been a considerable improvement during recent years. The threat made some years ago to adopt the Housing of the Working Classes Act and erect cottages in Ingatestone and Good Easter had a marvellous effect. Private enterprise stepped in and provided the cottages and I think it drew attention to the want of houses in other parishes. There is really no overcrowding, but there is a want of a few better class cottages in nearly every village, yet the want is not so urgent as to necessitate any action on your part. As I am shewing in my report to the Maldon Rural District Council private enterprise can provide good cottages at a lower rate than a public authority, which indicates some defect in the law or in its administration.

Many existing cottages have few conveniences. Many are without ovens or boilers or sinks. Usually, however, they have a fair amount of ground attached, chiefly used for the cultivation of flowers and vegetables but on occasions neglected and covered with lumber or refuse. A few houses have badly paved yards. The supervision exercised over the erection of new houses is excellent. The Bye-laws are impartially and judiciously enforced. Both the Surveyor and Inspector conscientiously and fearlessly discharge their duties and it is to their efforts, chiefly, that the condition of the district so steadily improves.

The public water supplies in the district have been well maintained and are models of what such supplies should be. In the autumn a large deputation from a neighbouring authority came over and inspected the works at Ingatestone, Writtle and Great Baddow. The result of their inspection and of the information given by Mr. Dewhirst proved very

valuable to them. There have been few alterations during the year, the most important being an extension of the Ingatestone mains to supply a new road.

Writtle Waterworks. The deep well water continues to retain a more or less turbid character, but the Bell's filter turns out continuously a clear water, sufficiently bright not to give rise to complaint. In April the Local Government Board held an enquiry on the application for a Loan to pay for the filter and erection to contain it. Sanction for the loan of £375 was ultimately given. A little sulphate of alumina is used when the water is markedly turbid as this greatly assists the clarification. Bacteriologically, however, the water is not improved by the process as is shown by the results of the analysis made during the summer.

Water coming from air Water coming scullery tap lift. from filter. in house near

Bacteria per c.c. capable

of growing upon gelatine 60 Gelatine liquified. 160 Smallest quantity giving

acid in bile-salt glucose No acid

broth produced 20 c.c. 20 c.c. Gas production No fermentation by any sample (36 c.c.) Bacillus enteritidis sporogenes. Absent in all (100 c.c.)

The water is therefore of very good quality even after filtration.

At Ingatestone the Suction gas plant for raising the water from the very deep bore is proving very economical. During the year an additional sum of £1,500 was raised to complete the payment for the works.

An application was made during the year from the owners of the Ramsey Tyrell estate in Buttsbury parish, to have the mains extended there to supply a proposed Union School. The amount of water required was said to be 10,000 gallons per day. The matter was referred to the Ingatestone Parish Council with the result that the application was not entertained

the opinion being that in time the village will require the whole yield of the well.

The Danbury system supplying several parishes, has supplied all with an abundance of water. The present tank erected for the use of Danbury and from which Little Baddow is also now supplied rests on pillars which are 5 inches out of the perpendicular. The Surveyor recommends that a larger tank be provided. The present tank only holds 2,700 gallons. A new one of 12,000 gallons capacity is suggested to be placed on supports 10 feet higher than the present one. This will necessitate the acquisition of a little more land and negotiations are proceeding with the owner for its purchase.

The Great Baddow springs still continue to yield most of the water required for the supply of Great Baddow and Springfield (Chelmsford Borough). It is of excellent quality, far better than that with which the Borough supplies the cottages in Widford which is excessively hard and furs boilers and kettles rapidly.

The Southend Water Co., having laid their mains to supply Billericay in the adjoining Rural District, have asked permission to supply certain houses and an estate in Buttsbury parish which abuts on Billericay. In places the houses on one side of the road are in Billericay parish and those on the other side in Buttsbury. Negotiations are now proceeding as to the best means of utilizing the offered supply as water is much needed. I have suggested that it would be a great benefit to the district if the mains could be extended to Stock village, but the parishioners, never having experienced the benefits of an abundant supply, object on account of the expense.

The water supply to Stock and West Hanningfield has received much attention during the year, but no source has been discoverable and apparently the only way of supplying will be from a deep well as at Ingatestone, unless a supply is obtained from the Southend Company. Broomfield is a

parish with a growing population which is receiving attention. I am watching with interest the boring which is taking place at the Hall as doubtless a deep well will have to be sunk to supply the village shortly.

The Little Waltham public supply (spring water supplied by gravitation) continues satisfactory. The Great Waltham supply (spring water raised by a ram) is barely sufficient and the question of adding some other form of pumping engine is under consideration. The public wells and springs are kept in good order, and samples of water from these and private sources are examined chemically or bacteriologically whenever thought necessary.

56 samples were examined during the year, 47 of these were from private sources and 19 were pronounced undoubtedly polluted, 16 good or free from signs of contamination, 4 were too saline to be usable for domestic purposes, and 8 were from sources liable to contamination and showing some signs of pollution.

The results of the bacteriological examination of the Writtle deep well water have already been given. The results obtained by the examination of the deep well water from the Ingatestone Waterworks and by the spring water from the Danbury Works were as follows:—

			feet deep at Ingatestone Waterworks.	Gravel springs at Danbury Waterworks.
Bacteria cap on gelatine		owing	395 of which 10 were liquefying organisms	61 of which 10 were liquefying organisms
Bacteria gro- blood-heat		gar at	192	42
In bile-salt a				
ing acid			5 c.c.	1 c.c.
"	,,	gas	10 c.c.	5 c.c.
		The	gas producing organisms lactose or produce	
B. enteritidi	sporogen	es	Absent in 100	C,C,

The deep well water contained more bacteria than the spring water, and both contained a large proportion of bacteria capable of growing at blood-heat. Many bacteriologists regard this as a sign of pollution, but as I have pointed out many times elsewhere this is a mistake. It is also a mistake to suppose that deep well waters, if pure, always contain very few bacteria, for such is not the case. This, however, is not the place to discuss this matter, although it is of great importance to authorities possessing deep sources of supply.

The waters generally used in this district do not act upon lead, but some of the waters from wells at Galleywood dissolve lead rapidly and have given rise to cases of severe lead poisoning. In the known cases all lead pipe has been removed. It is somewhat curious that, taking the country as a whole, in the districts where the water has no lead solvent action iron pipes are almost invariably used, whereas where the water acts on lead, lead pipe is used for service.

The subjoined table and chart has kindly been prepared for me by Mr. Dewhirst.

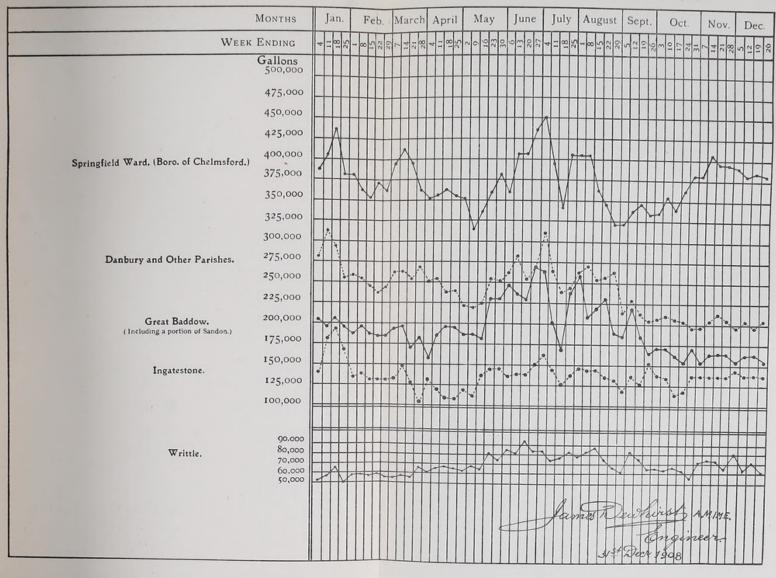
WATER SUPPLY, 1908.

Consumption in each of the four principal Districts of Supply.

T. T. T.	, 11 3
Great Baddow Waterworks (includ- ing Springfield (Boro' of Chelms- ford), Great Baddow s.d.d., and	
portion of Sandon	29,472,000 gallons.
Danbury and other parishes (includ-	
ing Danbury, Little Baddow,	
Sandon, East Hanningfield,	
Rettendon, Runwell, and Wood-	
ham Ferris	12,554,500 ,,
Ingatestone	7,037,800 ,,
Writtle, Special Drainage District	3,532,500 ,,
Total	52,596,800 gallons.



WATERWORKS CONSUMPTION CHART, 1908.



Digitized by the Internet Archive in 2017 with funding from Wellcome Library

No records are kept of the consumption in Great and Little Waltham and other small sources of supply.

	New	Consumers.	
Great Ba	ddow		 2
Danbury	and other	parishes	 17
Ingatesto	ne		 14
Writtle			 50
	Total	3	 83

The chart accompanying shows the consumption week by week in each district.

There is a large number of dairy farms in the district and a large quantity of milk is sent daily to Stratford and London. In some of the villages milk is not easily obtained and a good deal of tinned milk is used. Milk may be sent to London from a farm and yet the people living near be using milk produced abroad. Usually, however, there is some farmer who will let the people have a supply if they will fetch it, but it is not always as easily obtainable as it might be. I have examined some of the locally produced milk, but have found only one cause for complaint which could be based on such examination.

The cowsheds and dairies have been thoroughly inspected during the year and more improvements have been made than in any corresponding period previously. The condition, generally, is above the average, but many are not by any means as satisfactory as could be desired. The Council is somewhat lenient in this connection and does not back up the Inspector as much as could be wished. The importance of cleanliness is beginning to be recognised by the farmers, but it will be some time before the men realize it. The farm labourer is too accustomed to working in manure, and of eating with unclean hands to be sufficiently careful about a little filth getting into the milk. His confidence also in the strainer is marvellous, he cannot conceive how anything harmful can pass through the sieve.

In June, receiving a complaint from the M.O.H. for Woolwich about milk from a certain farm in the district, I visited and afterwards took with me Mr. Lewis, the Veterinary Surgeon. We found that certain cows had been suffering from mastitis and that one cow was still affected. Another cow had "boils" on the teats. The milk from the cow with mastitis contained red and white blood corpuscles, and obviously polluted the milk from the whole herd. In December the London County Council reported that the milk from a certain farm was tuberculous and again I got Mr. Lewis to visit. One cow was, undoubtedly, suffering from tuberculosis, but not of the udder. The L.C.C. Veterinary Inspector pointed out one cow which he considered had tuberculosis of the udder, but Mr. Lewis did not concur. However, as the owner undertook not to mix the milk from these cows with that intended for human consumption the difficulty was overcome.

These instances show the necessity for frequent veterinary inspection of milk cows, but should not the dairy farmer be responsible for making it? If it is to devolve upon the Rural District Council, then it should be absolutely compulsory and not left to the discretion of any Council. It is practically useless one Council undertaking such examination if the adjoining authorities do nothing. Moreover as no one would willingly or knowingly drink milk from any diseased cow, it should be a serious offence to sell the milk from any such cow for human consumption.

Slaughter houses and bakehouses are regularly inspected, but constant inspection is necessary to maintain them in good condition. No unsound food of any kind has been seized. Action under the Food and Drugs Act is taken by the Inspectors appointed by the County Council and whether anything is done or not in the district there is no ready means of ascertaining,

Certain cases of food poisoning occurred in January in Writtle, due to fried fish. Four pennyworth was purchased by

a family and all who partook of it suffered from sickness, vomiting, purging, cramp in the stomach, followed in some cases by collapse, and a baby, who had been fed on it, died. Other people who had purchased fish from the same shop on the same day were not affected. Unfortunately a sample of the implicated purchase could not be obtained as directly it was suspected that the fried fish was the cause of illness the remaining portion was destroyed. In all cases the attacks commenced in from eight to ten hours after eating the fish.

Shortly afterwards another complaint was made of illness following the eating of fried fish, but upon investigation I found there was no evidence to specially implicate the suspected food. The medical man and certain members of his family suffered from diarrhœa, &c., after he had attended the first case. There were certainly reasons for believing that they had been in some way infected by the patient who was very ill when in his surgery.

The sewerage and drainage of certain parishes is receiving a good deal of attention. At Ingatestone 60 yards of 6in. stoneware sewer has been laid up Norton Road and 168 yards of 9in. sewer along a new road now being developed. The small farm or irrigation area has been greatly improved and receives the constant attention of a man, the result is that the proposed extension will probably not be necessary. I have seen no indication of pollution of the river and no complaint of any kind has been received.

At Woodham Ferris the sewer outfall gives rise to a nuisance and improvements are necessary. The Surveyor, therefore, has prepared plans for a small installation, sedimentation tank, filter bed, and land irrigation. These are now being submitted to the Parish Council. The conditions here are such that some improvement must be speedily effected.

Broomfield has received great attention, a Committee of the Council having inspected the village and considered alternative schemes for sewering it. Houses of about £25 a year rental are being erected here and obtain water from wells sunk in the gravel. The sewage goes into cesspools sunk into the same gravel patch. For isolated houses this may be satisfactory, but where groups of houses arise the condition is dangerous. The older houses are connected with road drains and the sewage gets into ditches which frequently cause nuisances. The sewering of the whole village has, therefore, been decided upon and plans prepared. There are numerous difficulties to overcome on account of the varying contours and the position of land available for purification works. These, however, will doubtless be speedily overcome and a definite scheme decided upon.

At Writtle the sewage works give every satisfaction. The effluent from the bacteria beds is completely absorbed by the land. The sanitary condition of the village has been greatly improved by the recent sewering.

The only other parish which requires serious attention is Little Waltham. The old sewers here discharge into ditches, which are very oftensive and with every heavy rain much polluting matter is washed into the River Chelmer. As the houses are on hill sides and at opposite sides of the river the problem of providing sewers and purification works for less than 100 houses at a reasonable cost is a most difficult one.

Great Baddow and Widford are sewered and the sewers form part of the Borough system.

The pollution of the tributary of the Wid by the sewage of part of Billericay still continues, that parish not being sewered. In a recent communication from the Clerk to the Billericay Rural District Council it was stated that the scheme of sewerage would shortly be carried out.

Where public sewers are provided there are many water closets. Those connected with cottage properties are chiefly hand flushed, and as a rule they are kept clean. Elsewhere pail closets are generally used and in the Walthams and Broomfield scavengers empty these weekly. I am strongly

of opinion that save under exceptional circumstances every cottage should have its own closet accommodation. In July your Council discussed the question and there was a good deal of difference of opinion but ultimately it was decided that where there were several members of a family a private closet should be provided. In the thinly populated areas no trouble arises in connection with the disposal of house refuse but scavenging is undertaken in Great Baddow. During the year a scavenger has also been appointed for Widford and £19 a year is paid for the removal of the house refuse.

The chief nuisance which arises from house refuse is the dumping of that from the Borough in our rural district. This nearly gave rise to litigation during the year when the refuse was being dumped in a most careless manner near an important road and not far from some newly erected houses. However, when an Injunction was threatened the dumping commenced elsewhere but still in this district.

The Inspector discovers nearly all the nuisances which come to our knowledge. The work is systematically done and usually the Inspector is accompanied by my Assistant. Frequent inspection is absolutely necessary. In one case where notices to abate had been disregarded a successful prosecution followed. The nature of the nuisances, etc., will be ascertained by consulting the Inspector's tabulated statement at the end of this report.

As an example of the results of an inspection and as proving the necessity of constant watchfulness the following epitome of notes made by Dr. Gold when accompanying the Inspector round the hamlet of Ford End may be of interest.

- 3 houses ... Cottages satisfactory. Cesspit to one overflowing into a ditch close to the houses.
- 1 house ... House and pail closet in good order. A bumby close to road. Tenant promised to remove at once.

2 houses ... Satisfactory, but there is a bumby near the pond and apparently draining into it.

Advised tenants to remove it to a more suitable place.

1 house ... Some overcrowding. Father, Mother and 6 children in 2 bedrooms. Not serious as most of the children are young. Privy defective.

1 house (large) Drain overflow reaches roadside causing nuisance. Promised to alter at once.

4 houses ... All satisfactory.

1 house ... Roof in bad repair but owner has promised to attend to it.

Bakehouse ... Satisfactory. Cement floor. Water from well adjoining.

1 house ... A new closet required.

4 cottages ... Satisfactory save that one pail closet is not properly attended to.

2 cottages ... In shocking repair. Rent in brickwork passing through chimney and fires cannot be made as smoke penetrates both houses.

Owner knows of this but has done nothing.

2 cottages ... Same owner as above. In bad repair and one overcrowded. Father, Mother, and 4 children occupy the only bedroom.

Other requires a new closet.

Bakehouse ... Not very satisfactory. Used as stores as well as bakehouse. Roof not clean.

The School ... Closets, etc., in good order, but drains discharge into a ditch which requires attention.

Inn ... This drains into a ditch which is offensive but it is probably too far from any house to be a nuisance.

Farm ... Not registered. Keep a few cows for selves and neighbours. No one about to enquire.

15 other houses inspected. No defects found.

WATER SUPPLY.—Spring water piped from a meadow, supplies most cottages at lower end of hamlet. The brick work round hydrant requires repairing. Public pump on hill in good order.

SEWERAGE.—No sewers. Several drains discharge into ditches and then into the brook, but there are no signs of pollution in the latter.

All the defects enumerated above were noted by the Inspector and he will see to all being abated. Only when his notice is disregarded is active interference by the Council necessary. To save the time of the Council also the Sanitary Committee meets on the Friday before the Council meeting and decides what action to recommend the Council to take.

Tent, van and shed dwellers have began to frequent the southern portion of the district and several complaints have been received about them. The complaints are chiefly on account of trespassing and interfering with other people's enjoyment of their property. If they were a little more considerate one would not be so anxious about their removal. The question of adopting bye-laws relating to these nomads is now under consideration.

There are not as many pea pickers engaged in summer in this district as in some of the adjacent areas. This year they were visited in Little Waltham, Boreham, Springfield (Rural), and Danbury. Some were found sleeping in granaries, in open sheds, in mangers, and a married couple had cleaned out and tenanted a pig-sty. One lot of van dwellers, possessing their own vans made themselves very comfortable. There were comparatively few in any parish, but I heard that many came to Chelmsford at night where they found some kind of sleeping accommodation. Holiday children came down in numbers during the summer. The principal metropolitan organizations

sent me down a list of dates, number of children, parishes in which they were being received, and of persons who had undertaken to make arrangements for them. This enabled us to keep an eye upon them and to make enquiries where we suspected overcrowding. On the whole the work is very well organized and great care is taken not to send down an infectious child.

A complete list of sections of Acts adopted and of Byelaws and Regulations in force was given in my 1906 report.

The plans approved under the Building Bye-laws are enumerated in the subjoined table (page 17).

The question of adopting a number of sections of the last Public Health Amendment Act has been discussed, but a letter from the Local Government Board not being very encouraging the matter was dropped.

It has not been thought necessary to adopt the Notification of Births Acts.

All the public elementary Schools have been visited. A report on the sanitary condition of each School was sent to the Sub-Advisory Committee last year. Some of the conditions have been improved and the others will receive the attention of the newly appointed School Medical Officers. In consequence of the numerous public water supplies most of the Schools have water laid on, but there are a few in which the water supply admits of much improvement.

The teachers usually keep me well informed as to the prevalence of any infectious disease, but as I write, I have just heard from a School for the first time where 50 per cent. of the Scholars are absent on account of an outbreak of Measles. Attending to the reports from Schools in the Chelmsford and Maldon districts just about takes half the whole time of one assistant. Whenever a parish is visited the School is visited so as to keep in constant touch with the teachers.

Plans approved under the Bye-laws relating to the New Streets and Buildings during the Year 1908.

Parish.	New elling ouses.		Other	tod	dditio	ng	Addition to other	er	New streets.
Great Baddow	 8		4		4		1		-
Little Baddow	 1		1		2		_		_
Boreham	 3		_		_		_		_
Broomfield	 15		_				_		-
Buttsbury	 2		1		-		-		-
Chignall	 2		_		1		1		_
Danbury	 1		1		2		_		_
Good Easter	 _		1		_		_		_
East Hanningfield	 1		_		_		_		_
South ,,	 1		_		-		-		-
West ,,	 3		1		1		_		_
Ingatestone	 11		3		3		1		_
Great Leighs	 		_		1		_		_
Little Leighs	 _		_	***			_		-
Margaretting	 1	•••	_		_		_		_
Pleshey	 _		2		1		-		-
Rettendon	 3		1		1		-		-
Roxwell	 1		_		1		_		_
Runwell	 -		_		1		_		_
Sandon	 2		1		-		_		_
Springfield	 -		1		-		-		_
Stock	 1		2		-		-		-
Great Waltham	 1		-		_		_		_
Little Waltham	 _		_		1		_		_
Widford	 4		1		1		_		_
Woodham Ferris	 5		1		2		-		-
Writtle	 -		1		2		1		-
	66		22		24		4		_
	_		_				_		_

JAMES DEWHIRST, Surveyor.

INFECTIOUS DISEASES.

The infectious diseases notified during the year numbered 56 only. This is far the smallest number ever notified in one year but it must be remembered that we no longer receive notifications from Springfield. Last year we had 132 cases, including 14 in Springfield which would give 118 for the present area. The notifications this year are therefore less than half those of last year.

The distribution of the cases is given in the appended Table and it is noteworthy that only 5 cases came from Writtle. We had 35 cases in the previous year and this was not above the average. Probably the provision of sewers and a public water supply has had something to do with the great decrease.

DISTRIBUTION OF INFECTIOUS DISEASES DURING THE YEAR.

				Diphtheria.	Scarlet Fever.	Typhoid and Allied Fevers.	Brysipelas.	Totals.
Ingatestone Sub-distr	rict—							
Buttsbury and	Stock	444		0	1	0	0	1
West Hanning	ield			0	1	0	0	1 13 3
Woodham Ferr	is			0	13	0	0	13
Ingatestone		***		3	0	0	0	3
Chelmsford Sub-dist					1911	1	1/2/10	
Writtle		***		0	4	0	1	5
Great Waltham Sub-	district							
Pleshey	***	***		0	1	0	0	1
Broomfield				0	1	0	1	2
Great Walthan	1			1	12	0	1	2 14 2
Little Walthan				1	1	0	0	2
Great Baddow Sub-a			000			1 2 2 2	1000	-
Great Baddow	***			0	6	0	0	6
Danbury				0	4	1	0	5
Sandon		***	***	0	0	0	1	1
Little Baddow				0	0	0	1	6 5 1 1
Galleywood	***	***		1	0	0	0	1
Tota	ls		***	6	44	1		56

A considerable number of cases were removed to the Joint Isolation Hospital, and before one of our patients is discharged he or she is examined by me or my assistant as well as by the Hospital Medical Officer. If a return case then occurs we share the responsibility. Clothing and bedding are taken to the hospital for steam disinfection.

The hospital has answered all our requirements especially since the small pox hospital at Galleywood has been utilized for convalescent Scarlet Fever cases.

Medical men were requested years ago to notify pulmonary tuberculosis but only one or two have ever been notified. I keep a supply of cards, pamphlets, etc., which are distributed when occasion requires. After death the house, bedding, etc., are disinfected. At the Union Workhouse there are three tent sheds erected in the grounds. Two women occupy one tent, two children with bone affections occupy another, and two men occupy the third. Two of the pulmonary cases are advanced and two early. These are in the same tents, and it is doubtful whether it is advisable to put such cases together. I hope the Guardians will see their way to provide more shelters as from reports received the patients do well therein. There is a private sanitorium in the district receiving patients and there has been talk of providing a public institution but the matter is not being taken up with enthusiasm.

There has been no epidemic of the notifiable diseases in any parish, nor any outbreak of particular interest. A considerable number of doubtful cases of Scarlet Fever have been kept under observation and the trouble of visiting them and persuading the patient or friends to maintain isolation until the diagnosis was cleared up has been considerable.

Of the non-notifiable infectious diseases, measles and whooping cough have been very prevalent. I do not remember recommending so many schools to be closed in any one year before. The Schools closed by order of your Council were as under:—

School.		Per	iod of Closure		Cause.
Rettendon		Jan.	27—Feb.	22	Measles
South Hanningfield		Feb.	3—Mar.	2	 ,,
West ,,		Feb.	10-Mar.	10	 ,,
Runwell		Feb.	12—Mar.	7	 "
Rettendon		Feb.	28—Mar.	7	 ,,
South Hanningfield		Mar.	2—Mar.	9	 1)
West ,,	*	Mar.	10-Mar.	15	 "
Runwell		Mar.	7—Mar.	14	 ,,
East Hanningfield		Mar.	21—April	11	 "
Stock (Church)		April	30—May	22	 ,,
" (Catholic)		April	30—May	22	 ,,
Danbury		May	18—June	8	 ,,
Sandon		June	8-June	22	 ,,
Little Baddow		June	5—June	22	 ,,
Roxwell		July	24- July	31	 "
Ingatestone Girls		Oct.	6—Oct.	23	 21
,, ,,		Oct.	26-Nov.	9	 11
" Infants		Nov.	. 10—Dec.	1	 ,,
" Boys		Nov.	23—Dec.	6	 ,,
Highwood		Nov.	26—Dec.	18	 "
Radley Green		Nov.	26—Dec.	18	 ,,

BIRTH AND DEATH STATISTICS.

POPULATION. Corrected for the areas taken from the district last year and added to the Borough of Chelmsford, I estimate the population at the middle of 1908 at 20,650 distributed as under:—

Great Waltham, sul	Great Waltham, sub. reg. district				
Chelmsford	,,		3,500		
Great Baddow	,,		4,250		
Ingatestone	,,		6,300		

The death-rates, birth-rates, &c., are based upon these estimates.

THE BIRTH-RATE AND INFANTILE MORTALITY. 494 births were registered during the year and 34 infants died before

attaining the age of one year. The Birth-rate, therefore, is 23.9 per 1,000 population and the infantile mortality 69 per 1,000 births. This birth-rate, though low, is higher than has been recorded during the past 10 years. The infantile mortality is also very low, though on occasions slightly lower rates have been recorded.

The total number of deaths registered in the district was 242, but three of these were in the Billericay and Chelmsford Joint Hopitals and did not belong to the district. On the other hand 48 deaths occurred in the Workhouse, of people belonging to the rural portion of the Union. The corrected number of deaths for the year is therefore 287, equivalent to a death-rate of 13.9 per thousand. Although this is a low death-rate it is a little in excess of the average for the past 10 years,

The rates for the sub-registration districts were as under:

	1	Great Waltham.	C	helmsfor	rd.	Great Baddow.	Ingate- stone.
Birth-rate		21.2		22.6		27.1	 25.4
Infantile Mortality		93		38		52	 75
Death-rate		14.8		12.6		14.6	 13.2

In such small areas the variation from year to year is very great. Taking the 10 years 1898-1907 the average rates are as under:—

	Great Waltham.	(Chelmsfor	rd.	Great Baddow.	Ingate stone
Birth-rate	 22.3		25.7		21.8	 22.9
Infantile Mortality	 93		100		78	 82
Death-rate	 15.8		14.7		13.4	 12.7

The Great Waltham district has a persistently higher death-rate than the other areas, but this may be due to the age distribution of the population as there is probably a larger proportion of aged people in that district than in the others.

The deaths from infectious diseases comprise four from Measles, one from Scarlet Fever, nine from Whooping Cough and nine from Influenza.

Cancer and Phthisis each caused 19 deaths, this is below the average for the last nine years.

		Phthisis deaths.		Cancer deaths.
1900		25	***	21
1901		19		26
1902		25		31
1903		24		22
1904		17		18
1905		22		27
1906		16		18
1907		20		28
1908		19		19
	Total	187		210
Average		21		23

Reference can be made to Table IV. for causes of deaths at various age periods. Table V. gives the causes of deaths of all infants under one year. Prematurity of birth is the commonest cause of death. It is noteworthy that not a single infant died from diarrheal disease.

Comparing the statistics for the 10 years prior to my becoming Medical Officer of Health with those for the last 10 years, there is every reason to believe that the improvements made in the sanitary condition of the district have reduced the death-rate and consequently that many lives are now saved annually which would have been lost under the old conditions.

Infantile Mortality		1879-1888. 92	1899-1908. 80·5	Difference11.5
Death-rate	/**	15.8	13.3	- 2.5
Phthisis Death-rate		1.23	.9	— ·33
Death-rate from seven pri	n-			
cipal zymotic disease		1.4	.8	6
Diphtheria Death-rate		·13	.23	+ .1
Typhoid Fever ,,		•15	.05	1

The excess in Diphtheria is entirely due to the Writtle epidemics of 1900-1. Excluding those two years the Diphtheria death-rate has only been '09 per 1,000 population.

Topput the above table into words, it shows that:-

- Out of every 1,000 infants born, 11 lives are saved annually.
- Out of each 2,000 population, 5 lives are saved annually or over 50 lives a year in the whole district.
- That the infectious diseases generally only cause about half as many deaths as formerly, and that typhoid fever only causes one third as many.

My opinion is that this is an excellent record and shows that the expenditure of time and money on sanitary improvements has been more than adequately recompensed.

I have the honour to be, Gentlemen,

Your obedient Servant,

JOHN C. THRESH.

TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1908 AND PREVIOUS YEARS. CHELMSFORD RURAL DISTRICT.

)EATHS	AGES.	Rate,*	13	156 1132 1132 1142 1142 1135	13.9
	AT ALL	Number.	12	369 292 394 315 316 316 318 343 343 343	287
p -nq u	i be istii	Deaths Reside registere Tublic In tions beg	11	8 67.822.45.22.85.3	48
uj	ed ic	Deaths of residen Register Hduf Tustituti	10	10 10 10 10 10	00
- 10	DIT	Toral Day	6	6 12 13 13 12 13 13 13	00
ERED.	all Ages.	Rate.*	20	14.2 11.6 11.8 11.8 11.0 11.3 11.3 11.3 11.3	11.7
S REGISTERED.	At	Number.	7	336 275 383 383 281 283 283 267 285 285 285 285 285 285 285 285 285 285	242
TOTAL DEATHS	year of Age	Rate per 1,000 Births registered.	9	132 115 115 115 115 115 115 115 115 115 11	69
TOTA	Under 1 y	Number.	2	69888484884	34
BIRTHS.		*.eteH	4	22.1 23.0 21.3 22.8 22.8 22.3 24.3 22.3 22.3 22.3 22.3 22.3 22.3	23.9
BIR		Number.	00	523 5044 505 5044 505 505 505 505 505 505 5	494
	Ponulation	estimated to Middle of each Year.	2	23,630 23,550 23,700 23,860 23,920 23,950 24,050 24,100	20,650
		YEAR.	1	1898 1899 1900 1901 1902 1903 1904 1905 1906 1906 1907 Averages for years 1898-1907	1908

*Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

NOTE.—The deaths to be included in Column 7 of this Table are the whole of those registered during the year as having actually occurred within the district or division. The deaths to be included in Column 12 are the number in Column 7, corrected by the subtraction of the number in Column 10 and the addition of the number in Column 11.

Area of District in acres (exclusive of area covered by water), 82,772.

Total population at all ages, 29,309
Number of Inhabited Houses, 4,817
Average number of persons per house, 4.2

Other Institutions, the deaths in which have been distributed among the several localities in the District.	
II. Institutions outside the District receiving sick and infirm persons from the District.	Workhouse. Chelmsford Infirmary.
I. Institutions within the District receiving sick and infirm persons from outside the District.	Billericay Isolation Hospital.

Is the Union Workhouse within the District? No.

VITAL STATISTICS OF SEPARATE LOCALITIES IN 1908 AND PREVIOUS YEARS. CHELMSFORD RURAL DISTRICT. TABLE II.

	Deaths under L year.	d.		60	0 0	::	303	****	****		****	***		:	:
TTLE.	Deaths at all Ages.	. c.		71	00	:	***	2000	****	***		:	:		
WRITTLE	Births regis- tered.	· 9		137	717	-	****	**	***	***	****	***	**	:	
	Population esti- mated to middle of each year.	a.		5160	OTO	:		****	::		***	***	-	:	-
	Deaths under I year.	d.	100	11	0	,	13	10	2	14	9	10	14	11.7	12
INGATESTONE	Deaths at all Ages.	c.		96	000	00	96	91	11	78	19	57	96	62	83
INGAT	Births regis- tered.	· 9		136	191	101	121	135	144	152	187	149	150	143	160
	Population esti- mated to middle of each year.	a.		6175	0000	0220	6240	6240	6240	6240	6240	6250	6260	6235	6300
Α.	Deaths under Lyear.	d.		15	100	or	1+	16	14	9	9	10	6	12.4	9
BADDOW.	Deaths at all ages.	.5	1	118	100	677	103	96	901	91	74	68	96	86	62
GREAT I	Rirths regis- tered.	6.		141	100	077	169	167	164	160	164	173	169	160	115
9	Population esti- mated to middle of each year.	a.		6842	0220	007/	7385	7420	7450	7450	7480	7510	7530	7325	4250
	Deaths under 1 year.	d.		0	000	200	00	10	12	111	14	20	11	8.8	60
SFORD.	Deaths at all ages.	c.		00 1	20	0)	43	22	54	54	09	48	52	20	44
CHELMSFOR	Births regis- tered	6.		200	93	200	35	102	96	100	90	108	95	2.18	62
	Population esti- mated to middle of each year.	a.		293	9000	9/00	3760	3770	3780	3780	3780	3790	3790	3411	3500
ж.	Deaths under	d.		13	CT CT	77	10	20	14	15	111	00	11	11.4	13
/агтна	Deaths at all Ages.	c.		98	600	200	78	88	79	93	92	84	105	89	86
GREAT WALTHAM.	Births regis- tered.	9.		120	OCT	103	147	136	165	122	153	129	136	138	140
GE	Population esti- mated to middle of each Year.	a.		5133	0100	0110	6415	6415	6420	6450	6450	6500	6520	6185	0099
NAMES OF LOCALITIES	YEAR.			1898	1899	1800	1901	1902	1903	1904	1905	1906	1907	Averages of Years 1898-1907	1908

"In 1899 a re-arrangement of the Sub-registration districts took place.

TABLE III.

1908. YEAR, INFECTIOUS DISEASE NOTIFIED DURING THE CHEMSFORD RURAL DISTRICT COUNCIL. OF CASES

4 .9no	Ingatest	:	:	-	12		:	:		:	:		13
00	Great Baddow.	:	:	1	: :	:	::	:		:	:		1
ea .bro	Chelmsfo	1		:	: 10	**	:	:		:	:	-	4
٦, ١,	Great Walthan	:	:	:	=======================================	***					:		=
4 .9IIC	Ingatest	:	:	00	15	:	***				:		18
00	Great	:	:	-	102	-	1			::	:		14
ea .bro	Chelmsfo	:	:	****	1 4	***	***	::		::	:		2
٦ "	Great Walthan	:	:	2	2 70	:				-	:		19
	bna 68 sbrawqu	:	:	-	- :	:				::	:		-
50	25 to 65	:	:	-	4 67					***	:		7
-Year	ID to 25	:	:	-	:00	:				:	:		6
t Ages	gI of g	:	:	2	27	:	1		:	:	:		30
A	I to 5	:	:.	63		:		:		:	:		6
	Under	:	:	:	: :	:	***		-	:	: -		:
	At all Ages	:	:	9	5 4		-			:	:		26
		:	:	:	:	: :	:	***	***		:	1	:
NOTIFIABLE DISEASE.		mall-pox	holera finologing Mem	branous Croup				elapsing Fever	ontinued Fever	uerperal Fever	lague		Totals
	At Ages—Years. 1 2 3 4 1 2 3 ord	At Ages all I to 5 I to 65 I	TABLE DISEASE. At Ages — Years. Braddow. Chelmsford. 12 Cheat — Chelmsford. 13 Chelmsford. 14 Chelmsford. 15 Chelmsford	At Ages — Years. At Ages — Ye	At Ages—Years. At Ages—Years. At Ages—Years. Ander And	At Ages—Years. At all Ages—Years. At all Ages—Years. At all Ages—Years. And Ages—Years.	Chuding Mem- roup roup roup roup roup roup roup roup	DISEASE. At Age and Act and A	Disease. At Ages. Diddr Diddr I to 5 o 15 Coreat. Coreat. Didowards Discorption. Coreat. Discorption. Coreat. Discorption. At 10 o 1 ingatestone. Coreat. Discorption. At 11 ingatestone. At 11 ingatestone. At 12 ingatestone. Baddow. Coreat. Discorption. Coreat. Discorption. Discorption.	### DISEASE. At Ages. At Ages.	At Ages	At Ages	At Ages

Isolation Hospital, Chelmsford Joint Hospital, Great Baddow. Total available beds, 21. Number of Diseases that can be concurrently treated, 2. Also Small-Pox Hospital at Galleywood for 6 beds, can be used for other cases.

CHELMSFORD RURAL DISTRICT.—CAUSES OF, AND AGES AT, DEATH DURING YEAR 1908.

BLIO	DEATHS IN PUR	1 17 17 11 11 11 11 11 11 11 11 11 11 11	60
TIES	Ingatestone.	100 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	83
LOCALITIES AGES).	Great Baddow.	[HH]	63
DEATHS IN (AT ALL	Chelmsford.	: : : : : : : : : : : : : : : : : : :	44
DEAT	Great Waltham.	33: 1: 6: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1: 1:	86
NED	under under up- 25. 65. wards.	:::::::::::::::::::::::::::::::::::::::	131
SUBJOINED	25 and under 65.	::::::::::::::::::::::::::::::::::::::	84
AT		::::::::::::::::::::::::::::::::::::::	11
WHOLE DISTRICT AGES.	5 and under 15.	::::::::::::::::::::::::::::::::::::::	-1
VHOLE	1 and under 5.	[444	20
IN	Under 1.		34
DEATHS	All ages.	:4+0 :::::0 ::::::::::::::::::::::::::::	287
	ЕАТН.	rculosis) ory Organs Parturition	
	CAUSES OF DEATH.	Small-pox Measles Scarlet Fever Whooping Cough Diphtheria (including Membranous Cr Croup Fever { Enteric Other continued Epidemic Influenza Cholera Plague Diarrhœa Enteritis Puerperal Fever Erysipelas Phthisis (Pulmonary Tuberculosis) Other Tuberculous Disease Erysipelas Phthisis (Pulmonary Tuberculosis) Other Tuberculous Disease Bronchitis Pheurisy Other Diseases Alcoholism Cirrhosis of Liver Venereal Diseases Premature Birth Diseases and Accidents of Parturition Heart Diseases Accidents Suicides All other causes	All causes

TABLE V.

CHELMSFORD RURAL DISTRICT. -INFANTILE MORTALITY DURING THE YEAR 1908.

Deaths from stated Causes in Weeks and Months under one Year of Age.

	29
Total Deaths under One Year.	1111110111201100110011410
11-12 Months.	111111111111111111111111111111111111111
10 II Months.	
9-10 Months.	111111 11111111 1111 6
8-9 Months.	
7-8 Months.	
6-7 Months.	1 1 1 1 1 1 1 1 1 1
5-6 Months.	
4-5 Months.	111111111111111111111111111111111111111
3-4 Months.	1 1 1 1 1 1 1 1 1 1
2-3 Months.	
1.2 Months.	
Total under I Month.	11 11 11 11 11 12 22 11 11 11 11 11 11 1
3-4 Weeks,	2
2-3 Weeks.	
I-2 Weeks,	8
Under I Week	+ ! ! ! ! ! ! ; ; ; ; ; ; ; ; ; ; ; ; ;
Cause of Death.	Small-pox Chicken-pox Measles Scarlet Fever Diphtheria (in. Membranous Croup) Whooping Cough Diarrhoa, all forms Enteritis, Muco and Gastro Gastritis, Gastro-intestinal Catarh Premature Birth Congenital Defects Injury at Birth Want of Breast-milk, Starvation Atrophy, Debility, Marasmus Tuberculous Meningitis Tuberculous Peritonitis: Tabes Krophy, Debility, Marasmus Tuberculous Peritonitis: Tabes Atrophy, Debility, Marasmus Tuberculous Peritonitis: Tabes Rickets Meningitis (not Tuberculous) Convulsions Bronchitis Laryngitis Laryngitis Suffocation, overlying Other Causes
	Common Infectious Diseases. Diseases. Wasting Diseases. Diseases. Other Causes

District of Chelmsford Rural, Births in the Year, 494.

Population (estimated to middle of 1905), 20,650 Deaths from all Causes at all Ages, 13:9. TABLE VI.

TABLE OF METEOROLOGICAL DATA, DEATHS, AND INFECTIOUS DISEASES FOR THE YEAR ENDING DECEMBER 31ST, 1908, COMPARED WITH PREVIOUS YEARS.

	30	
d.		
Infectious Diseases Notified.	Totals,	191 103 113 113 120 120 120 120 132 132 132 132 132
N ss	Erysipelas.	52222222222222222222222222222222222222
sease	Fevers.	8221128
us Di	Diphtheria and Croup.	22 22 28 28 28 28 28 28 28 28 28 28 28 2
ection	Scarlet Fever.	244572525448446154
Inf	Small-pox.	1
	Totals.	2882224422222
.68.	Measles.	H4H000000HH0HH04
iseas	Whooping Cough.	920 is 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
tic I	Erysipelas.	инноони : ін і ін і
Zymo	Diarrhoa.	20026PP84H4400 ::
Deaths from Zymotic Diseases.	Fevers,	нюонно4нюнн is ! !
ths fi	Small-pox.	1111111111111111111
Dea	Diphtheria and Croup.	621112201122 : 1288 : :
	Scarlet Fever.	номниоонии :пппп
n all	Over 65 years.	E 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
ths from causes.	Under I year.	\$552554554555 \$453455455 \$453455 \$453455 \$45345 \$45345 \$4535
Deat	Total Deaths.	300 323 323 323 323 324 326 316 316 316 316 316 316 316 316 316 31
	Rainfall in inches.	24.34 18.43 18.43 16.65 22.14 16.65 23.075 23.075 23.33 16.82 17.46 24.25 24.25 21.39 21.39
Data.	No. of Rainy . Uays.	190 160 160 160 160 160 160 160
logical	Relative Humidity.	833.8 813.8 813.8 81.3 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 80.7 7.9 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0
Meteorological Data.	Mean daily range of Temperature.	15.7 16.25 16.25 16.25 16.25 16.3 16.3 16.3 16.3
	Мези Тетрегаture.	45.1 45.2 45.2 45.2 45.4 48.2 49.8 49.8 49.8 49.8 49.8 49.8 49.8 49.8
		1894 1895 1896 1900 1900 1900 1900 1900 1900 1900 19
		Means

TABLE VII.

Factories, Workshops, Laundries, Workplaces, and Homework.

1.-INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances

			Number of	
	Premises.	Inspections	Written Notices.	Prosecutions
Factories (Including	Factory Laundries)	16		Nil
Workshops (Including Workplaces	Workshop Laundries)	195	8	Nil
workplaces	Total	211	8	Nil

2. DEFECTS FOUND.

			Numb	er of D	efects.	Number
Part	ciculars.		Found	Remedied	Referred to H.M. Inspector	
Nuisances under the F Want of cleanlin			_	_	_	Nil
Want of ventilati	ion		_	-		Nil
Overcrowding					-	Nil
Want of drainage	e of floors		1	1		Nil
Other nuisances			1	1	-	Nil
C:t	insufficient			_	_	Nil
Sanitary	unsuitable or defect	tive	-		-	Nil
accommodation	not separate for sex	ces	-	-	-	Nil
Offences under the Fac Illegal occupation house	tory and Workshop 2 n of underground ba		-	-	-	Nil
Breach of special for bakehous	sanitary requirements	ents	6	6	_	Nil
Other Offences		***	-	-	-	Nil
	Total		8	8	-	Nil

TABLE VII. - continued.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKSHOPS, ETC.

3.-REGISTERED WORKSHOPS.

Workshops on t	he Register	(s. 131) a	t the end	of the ye	ar.	Number
Bakers Shops		te				39
Carpenters Shops					***	30
Blacksmiths Shops						36
Boot Repairing Sho	ps					21
Tailoring Shops			***		***	0
Harness Making and	l Repairing	Shops			***	6
Laundries						7
Dressmaking Shops						6
Cycle Repairing Sho	ps					3
Wheelwrights Shops						29
Painters and Plumb	ers Shops					18
Total	number of	Worksho	ops on Re	egister		195

4. OTHER MATTERS.

Class.								
Matters notified to H.M. Inspector of F	ctories	:						
Failure to affix Abstract of Factory an	nd Works	shop Act (s. 133) Nil					
Action taken in matters referred by H.M. Inspector as remediable under Public Health Acts, but not under the Factory and Workshop Act (s. 5)	leports (en					
Other **			Nil					
Underground Bakehouses (s.[101):]								
Certificates granted during the year		***	Nil					
In use at the end of the year			Nil					

TABLE VIII.

SUMMARY OF WORK done through the Sanitary Inspector in the Rural Sanitary District of Chelmsford during the year ending December 31st, 1908.

		Total Number for year.	Notes, Results of Inspection, &c
1.	Complaints received Nuisances detected without	19	
2.	complaint	333	
3.	Nuisances abated	0.00	the second secon
4.	Notices served	243	
5.	Summonses taken out	1	
6,	Convictions	1	
7.	Cottages inspected	1310	
8.	Lodging-houses inspected	Nil	
9.	Slaughter-houses inspected	8	
e.	Bakehouses inspected	35	
1.	Dairies and Milkshops	0.4	
	inspected	94	
2.	Cowsheds inspected	94	
3.	Workshops inspected	80	
4.	Filthy houses cleansed, sec. 46 Public Health Act, 1875	8	
=	Houses disinfected	41	
5. 6.	Overcrowding abated	3	
7.	Houses placed in habitable		
1.	repair		
8.	Houses closed	NT:1	
9.	Houses erected or re-built		
	for which Water "Certifi-		
	cates" were applied		
0.	"Certificates" granted	65.4	
1.	deferred	5	
2.	Wells sunk or improved		
	supplies of Water afforded		Surveyor's department.
3.	Wells cleansed or repaired		
4.	Wells closed	Nil	
5.	Houses connected with sewers		Surveyor's department.
6.	Houses connected with water		1
-	mains		do.
7.	Earth, pail, or improved		
	Privies constructed or	3.0	Ten are new pail closets.
8.	existing Privies altered Privies and W.C.'s repaired	39	Ten are new pan closees.
9.	Cisterns cleansed, repaired,		
	or covered	Nil	
0.	Animals improperly kept		
	removed	3	
1.	Samples of water taken for		
	Analysis	90	(*)
32.	Compensation paid for		
1000	destruction of infected		
	bedding		
33.	Seizures of unsound Meat, &c.		H- I - I - I - I - I - I - I - I - I - I

WILLIAM EDSER,
Sanitary Inspector.

