BOROUGH OF GILLINGHAM, KENT.

Report of the Medical Officer of Health

FOR 1909.

GILLINGHAM, KENT.
February, 1910.

To His Worship the Mayor, the Aldermen, and Councillors of the Borough of Gillingham.

GENTLEMEN,

I beg to submit for your consideration my Twentieth Annual Report as to the sanitary condition of the Borough of Gillingham, Kent, in accordance with the Public Health Act, and also the various measures adopted for abatement of nuisances, and improving the general surroundings. The Medical Officer of Health is also required to report on the administration of the Factory and Workshops' Act in his district, and in this report are included details of the work done under this Act.

I have to thank the members of the Sanitary Committee and of the Town Council, for their kindness and support throughout the year, and also the members of the staff at the various departments for the assistance I have always had from them.

I shall, first, in speaking of the vital statistics, give the census of the years from 1881, and it was as follows :—

Population by	census	1881	was ...	...	20,5[illegible]
,,	,,	1891	...	...	27,823
,,	,,	1901	...	...	42,520

Next year is the time for the census to be again taken, so that I shall be in a position to correct both death returns, also births.

For statistical purposes it is usual to estimate the population for the middle of the year under review. Taking the natural increase only, that is the excess of births over deaths, I find that for the past three years this was 1101, which would make the population 52856. Another method is to obtain the number of inhabited houses, less lock-up shops, sheds, &c., from the rate book, and multiply this by the average number of persons found to be inhabiting each house. This I have done, and find the number of houses inhabited would make the population 53,485, reckoning five per house.

In preparing these various rates for the year, I am taking 53,485 as my estimated population.

The geological formation of this part of the County, which I feel certain is so well known to all who live around here, is made up of soil composed of part loam and part gravel, with a characteristic subsoil of chalk, and several places brick earth.

The total number of deaths is now shown for the past eight years, both for district alone, and also those included in Institutions :—

Total deaths registered in		1901	...	...	461
,,	,,	1901	(with Institutions)		510
,,	,,	1902	...	...	515
,,	,,	1902	,,	,,	582
,,	,,	1903	...	...	481
,,	,,	1903	,,	,,	567
,,	,,	1904	...	...	538
,,	,,	1904	,,	,,	619
,,	,,	1905	...	...	528
,,	,,	1905	,,	,,	599
,,	,,	1906	...	...	495
,,	,,	1906	,,	,,	564
,,	,,	1907	...	...	489
,,	,,	1907	,,	,,	558
,,	,,	1908	...	...	521
,,	,,	1908	,,	,,	585
,,	,,	1909	...	...	452
,,	,,	1909	,,	,,	518

Now will follow the ages at which deaths occurred both in the district, including also those who died at the Workhouse Infirmary, and St. Bartholomew's Hospital :—

Deaths under one year of age	...	...	...	100
Deaths over one year of age	...	...	...	418
				518

And the returns for the quarters were as follows :—

First Quarter	166
Second Quarter	129
Third Quarter	98
Fourth Quarter	125
	518

According to these figures the death rates for the various years are calculated, and give as follows :—

Death rate per	1,000	population	1901	10.8
,,	,,	,,	1901 (with Institutions)	11.9
,,	,,	,,	1902	11.3
,,	,,	,,	1902 ,, ,,	13.3
,,	,,	,,	1903	10.7
,,	,,	,,	1903 ,, ,,	12.6
,,	,,	,,	1904	11.1
,,	,,	,,	1904 ,, ,,	12.8
,,	,,	,,	1905	10.6
,,	,,	,,	1905 ,, ,,	12.0
,,	,,	,,	1906	9.8
,,	,,	,,	1906 ,, ,,	11.2
,,	,,	,,	1907	9.8
,,	,,	,,	1907 ,, ,,	11.2
,,	,,	,,	1908	10.2
,,	,,	,,	1908 ,, ,,	11.3
,,	,,	,,	1909	8.4
,,	,,	,,	1909 ,, ,,	9.7

These figures will give an infantile mortality per thousand of population of 1.8, but 68.9 per thousand births registered, which will compare very favourably with other towns, as it varies in some districts from 85 to 103 per thousand births, and others as high as 145 per thousand.

The deaths for the respective months were as follows :—

	District.	Institutions.	Total.
January...	55 ...	12 ...	67
February	37 ...	6 ...	43
March	51 ...	5 ...	56
April	37 ...	7 ...	44
May	33 ...	9 ...	42
June	39 ...	4 ...	43
July	22 ...	3 ...	25
August	32 ...	5 ...	37
September	30 ...	6 ...	36
October	39 ...	5 ...	44
November	31 ...	4 ...	35
December	46 ...	— ...	46
	452	66	518

The number of deaths from zymotic diseases, the term "zymotic" being used to describe communicable diseases generally, in consequence of the course presenting more or less resemblance to a process of fermentation, is also employed in a limited sense to designate those diseases which occur in epidemics. The term "Specific," while undoubtedly a good one to describe many of these affections which arise from a specific cause, cannot as yet be held to be sufficiently accurate to include the whole class, are as follows :—

Scarlet Fever	3
Enteric or Typhoid Fever	3
Whooping Cough	1
Diarrhœa (including Enteritis)	7
Measles...	Nil
Diptheria	9
	23

Which will give for the year a zymotic death rate of .4 per thousand of the population.

For the past five years it was :—

In year 1904	2.5	per thousand.
,, 1905	1.7	,,
,, 1906	1.7	,,
,, 1907	.8	,,
,, 1908	1·1	,,

BIRTH RATE.

The number of births reported for the year was 1451, being as follows for each month :—

	Males.	Females	Medway Union.	Total.
January	78	51	2	131
February	58	48	2	108
March	56	52	2	110
April	52	67	0	119
May	59	42	4	105
June	53	68	2	123
July	59	67	3	129
August	67	59	0	126
September	61	41	2	104
October	65	76	0	141
November	60	65	0	125
December	62	65	3	130
	730	701	20	1451

These figures will give a birth rate of 27·1 per thousand of the population, as against 26·5 for last year. Following is the number of births and birth rate for preceding years :—

Total births registered in		1900	...	...	1,137
,,	,,	1901	...	...	1,114
,,	,,	1902	...	...	1,177
,,	,,	1903	...	...	1,390
,,	,,	1904	...	...	1,355
,,	,,	1905	...	...	1,458
,,	,,	1906	...	...	1,352
,,	,,	1907	...	...	1,352
,,	,,	1908	...	...	1,318
,,	,,	1909	...	...	1,375

And the birth rate :—

Per 1,000 population in		1900	...	...	29.4
,,	,,	1901	...	...	26.1
,,	,,	1902	...	...	29.2
,,	,,	1903	...	...	30.9
,,	,,	1904	...	...	28.0
,,	,,	1905	...	...	29.3
,,	,,	1906	...	...	26.9
,,	,,	1907	...	...	26.6
,,	,,	1908	...	...	26.5
,,	,,	1909	...	...	27.1

Notes will now be given in reference to the cases of zymotic diseases that have occured in the district.

SCARLET FEVER.

There were notified to me seventy-nine cases, of this number there were three deaths ; forty-eight were admitted to our Infectious Hospital and there treated. One has noticed for several years that this disease is of a much milder type, and this year has proved no exception. School teachers, under the guidance of the School Medical Officer, have been alert to any cases that have been at all suspicious, and thus very largely assisted in preventing spread of the disease.

WHOOPING COUGH.

This does not come under the Infectious Diseases Notification Act ; there was but one death from this disease, but several children have been absent from school during the year, and many are treated by their parents without seeking the advice of a medical man.

DIARRHŒA (including Enteritis).

There were but seven deaths from this disease during the year, and six of these under one year ; it has been a notable year in this district for such a small number of cases of this disease. I consider atmospheric influence a partial factor, and a wet summer is often

noted as a cause which decreases deaths from diarrhœa, this would point to a practical lesson in the form of thorough flushing of streets, especially the gutters where the natural scavenging of rain falls, and one hopes also the advice given to mothers in reference to feeding of infants is helping.

ENTERIC OR TYPHOID FEVER.

Of this disease twenty-four cases were notified to me, and fifteen of these treated at our Infectious Hospital. There were no deaths of these notified cases, but two cases at Naval Hospital and one at Fort Pitt Military Hospital, Chatham, but coming from the district of Gillingham. Of these cases I have made careful enquiries, and find that in seventeen I have not been able to trace any source, and some not at all clear cases of Typhoid but more a form of Enteritis, which gave no characteristic reaction with Widal's test. Two cases had eaten cockles, one fourteen days before, the other one three weeks before ; three other cases had eaten wild oysters picked up on the Upnor shore, one fourteen days before ; one mussels three weeks, and oysters four weeks, and the third one eleven days before being ill. Another case was that of a child, and the source water from a contaminated well in the suburbs ; I had the water examined and B. Coli were found present, therefore had the well condemned and water from the Company's main laid on to the house. One case was that of a man working at the Corporation Sewage Works. The sewers receive constant attention as in former years as regards flushing and disinfecting, and all subsidiary drains receive immediate attention. Collection of flies I consider a source from which Enteric might be carried.

DIPHTHERIA.

Forty-eight cases were notified, and twenty-seven of these were removed to Hospital. The deaths from this disease were nine, and several of those in Hospital were of a more severe type than in later years, the swabs from the throats have been examined bacteriologically, and a definite opinion has been arrived at, and cases are injected with Antitoxin, which, without doubt, is a great boon in a very large proportion of cases. We still continue active in seeing that domestic animals are removed from being close to the house, and are not kept in too confined spaces.

I had no deaths from measles reported to me. From school notices and information received from the School, Medical Officer there have been some cases in the district, but not to a very large extent.

No cases of Small Pox have occured during the year, but there have been a small number of cases of Chicken Pox.

Deaths from diseases of the respiratory organs were as follows :—
Phthisis or Pulmonary Tuberculosis. From this disease forty-six

deaths took place. Where possible I always give instructions for the rooms to be fumigated after death free of cost. I should be pleased if the Medical Attendant would advise the friends the necessity of this being done, and also inform me of all deaths of this kind; their word would do more good than notices being served. The deaths from Pneumonia numbered nineteen, and from Bronchitis forty-eight, the largest numbers being at the two extremes of life, viz.: under one year and over sixty. From other tubercular diseases there were seven deaths. Seventeen took place from accident, and four from suicide. There were thirty-seven deaths from cancer or malignant disease. It might be interesting to notice in the following table the chief headings under which deaths occured, and as to the sexes:—

Seat of Disease.	Male.	Female.	Total.
Liver and Gall Bladder	1	10	11
Uterus		1	1
Throat and Tongue	3	0	3
Breast	0	3	3
Jaw	1	0	1
Stomach	4	2	6
Œsophagus	0	1	1
Lung	1	0	1
Bowel	2	5	7
Lip	1	0	1
Bladder	1	0	1
Part unspecified	0	1	1
	14	23	37

The following Infectious cases were reported to me during the year:—

	Diphtheria.	Erysipelas.	Scarlet Fever.	Enteric Fever.
January	11	0	10	4
February	2	1	12	1
March	5	2	8	3
April	4	2	5	4
May	5	2	6	0
June	2	0	13	1
July	3	1	3	0
August	4	0	6	2
September	4	1	4	5
October	2	1	5	3
November	4	1	4	0
December	2	3	3	1
	48	14	79	24

Of this number there were conveyed to our Hospital and treated twenty-seven diphtheria, forty-eight scarlet fever, and fifteen enteric fever.

I have personally visited on several occasions over seventy shops selling milk, and impressed upon all the necessity of the greatest cleanliness, and the necessity for the covering of the milk so as to prevent any deleterious matter settling on it. In company with the Veterinary Surgeon I have made periodical inspection of all the dairies and cowsheds, and examined all cows, and none of a tuberculous nature found, at the same time giving attention to all the general surroundings as to cleanliness, light, sufficient space, removal of manure, and free drainage.

I might here mention that all the milkshops are registered, and when an application is made for a new one, or a transfer, I inspect the premises and give advice to the seller before it is granted. A large quantity of the milk sold in the district is imported from farms around, and some from Wiltshire. There are not nearly so many cows kept in the district as in years past.

The Health Committee have before them each year the applications for renewal of slaughter-houses. This, I consider, a step in the right direction, as it tends to keep the occupier up to a better standard, and gives the Committee power to refuse same if necessity arises. One good transfer this year is from an old one in Brompton to a new spot in Beresford Road. I continually visit these places on my rounds, and often at killing times. There are seventeeen slaughter houses in the district. There is no Inspector with a special certificate in meat inspection in this district. If any animals are suspicious, and there have been some which appeared tuberculous before killing, in each case I have called in the Veterinary Surgeon to be present with me. In one there was a trace in one of the internal organs, but not sufficient to condemn the whole carcase, the organ was taken away and destroyed.

Among other inspections the fish shops receive attention. I have not received any complaints when fish are being fried, and I consider the new enclosed frying apparatus a very great improvement. Fresh fish is also inspected both before coming out of the boxes, and when exposed for sale, and what is put ready for cooking. I had to condemn one box of fish brought direct to me from the railway station, but which had not been exposed for sale.

In the district there are eighteen bakehouses ; of these four are under-ground, and were so before the passing of the Act. The general conditions of all these is in a satisfactory state. I personally visit these several times in the year, as well as all premises where food is cooked and sold in the form of cooked meat. Cleansing is

performed by whitewashing twice a year regularly, or oftener where I consider it necessary.

In reference to the Factory and Workshops' Act, which comes under the the supervision of the Sanitary Department, and also the visiting of houses where work from Factories is taken home to be finished. These are classified under the proper headings in the sheet accompanying this report, and to these various Factories, Workshops and Workplaces, over a thousand visits have been made. There have been minor defects in some of these places, but on the usual notice being served they have been set right. In a few cases I have had to give cautions as to overcrowding in workrooms. Sanitary arrangements receive special attention, and in two cases new w.c.'s have had to be provided, as the two sexes were at work in the same room. Cubic space is measured in all necessary cases, and same entered on schedule, which also gives the number that may work in the same room.

In reference to collection of house refuse, this is undertaken by a contractor under the Borough Authorities' control. The collection takes place three times a week from all parts of the district, in suitable carts with properly fitting tops, and taken to a spot known as Commodore Hard, in close proximity to the Sewage Outfall Works. It is then fired, and is being rolled, thus forming a good road and a substantial bank around the works, preventing the inroad of the tide, which does at times rise very high. We certainly see a very strange collection of articles put out in the streets containing the refuse, but there are certainly more sanitary dust bins than in previous years. More of the marsh has been obtained, and so for the present, the tip will be in use for some time to come.

The record of rainfall for several years is now appended. It is of interest to notice the variations that take place for the various months, and then the totals for the year. In passing, it is worthy of mention that one inch of rain means that it is equal to 22,000 gallons per acre, and 14,500,000 per square mile, and provided it all percolates into the earth, every inch would yield per square mile 40,000 gallons per day for one year. These returns are kindly sent me by Mr. W. Coles Finch, the Resident Engineer, living at the Water Works, Luton, where the returns are taken. The water comes from springs situated well down in the chalk, and is pumped into various reservoirs from which the district is supplied. It is a water of great purity, very suitable for domestic purposes, and the supply is continuous. It is of a hard character, and that you would naturally expect from its source.

The result of the last analysis is as follows :—

(1).—Chemical.	Grains per gallon.
Total Solids (dried at 120° c.)	23.80
Combined Chlorine	1.60

	Grains per gallon.
Expressed as U. Cl.	2.64
Nitrogen as Nitrates	0.32
Nitrites	Nil.
Saline Amonia	Nil.
Album. Amonia	0.0008
Oxygen absorbed in 4 hours at 27° c. ...	0.002
Total Hardness	16°1
Lead or Copper	Nil.

(2).—BACTERIOLOGICAL.

Average number of organisms producing visible colonies on gelatine plates inculated at 20-22c for 3 days	146 per c.c.
Average number of organisms producing visible colonies on ajar plates inculated at 37-5c for 2 days	88 per c.c.
B Coli	not found in 100 c.c.
Streptoeoca	not found in 30 c.c.
B Enteritidis Sporojenes	not found in 100 c.c.

CONCLUSIONS.

The chemical results are all satisfactory, and there is no evidence of recent contamination with sewage or animal excreta.

The water is a trifle hard, but of a high degree of purity.

RAINFALL in 1904.

Rain gauge { Diameter of tunnel, 5 ft.
Height of top { above ground, 3 ft.
above sea level, 88 ft.

	Total depth. Inches.	Greatest Fall in 24 hours.	No. of days on which ·01 or more fell.
January	3.51	·77—13th	20
February	2.84	.60—12th	18
March	1.41	·33—2nd	14
April	·71	.23—22nd	7
May	1.33	.25—2nd	15
June	1.24	.49—9th	7
July	2.55	1.42—27th	7
August	1.91	.95—22nd	9
September	.86	.21—6th	12
October	1.46	.40—6th	12
November	1.25	.37—10th	8
December	2.62	.60—6th	20
	21.49		149

RAINFALL in 1905.

	Total depth. Inches.		Greatest Fall in 24 hours.		No. of days on which ·01 or more fell.
January	.66	...	.40—16th	...	9
February	.68	...	.30—26th	...	10
March	2.13	...	.47—10th	...	20
April	2.31	...	.40—30th	...	18
May	.96	...	.45—1st	...	7
June	5.34	...	1.35—5th	...	16
July	.50	...	.20—27th	...	6
August	1.96	...	.46—28th	...	16
September	1.62	...	.31—9th	...	13
October	1.13	...	.64—30th	...	8
November	2.83	...	.42—1st	...	17
December	.54	...	.13—29th	...	10
	20.66				150

RAINFALL in 1906.

	Total depth. Inches.		Greatest Fall in 24 hours.		No. of days on which ·01 or more fell.
January	3.36	...	.80—16th	...	17
February	1.75	...	.48—17th	...	16
March	1.37	...	.23—10th	...	19
April	.56	...	.26—18th	...	6
May	1.60	...	.59—20th	...	12
June	3.06	...	1.20—28th	...	8
July	2.27	...	1.75—27th	...	6
August	.63	...	.25—15th	...	6
September	1.53	...	.47—4th	...	11
October	3.44	...	.85—30th	...	17
November	5.12	...	.68—7th	...	16
December	1.74	...	.40—25th	...	16
	26.43				150

RAINFALL in 1907.

	Total depth. Inches.		Greatest Fall in 24 hours.		No. of days on which ·01 or more fell.
January	1.10	...	.50—1st	...	9
February	.92	...	.25 16th	...	13
March	.70	...	.22—5th	...	10
April	2.44	...	.80—24th	...	14
May	2.08	...	.29—31st	...	16
June	2.75	...	1.55—1st	...	14
July	1.83	...	.66—11th	...	14
August	1.60	...	.59—17th	...	14
September	.53	...	.27—30th	...	7
October	4.01	...	.64—8th	...	23
November	2.18	...	1.00—26th	...	11
December	2.56	...	.75—12th	...	13
	23.13				161

RAINFALL in 1908.

	Total depth. Inches.		Greatest Fall in 24 hours.		No. of days on which ·01 or more fell.
January	1.15	...	.86—7th	...	9
February	.92	...	.25—16th	...	13
March	2.03	...	.53—25th	...	16
April	2.44	...	.80—24th	...	14
May	1.48	...	.73—29th	...	8
June	1.22	...	.53—4th	...	6
July	2.57	...	.56—16th	...	11
August	3.24	...	.74—23rd	...	14
September	1.66	...	.73—3rd	...	12
October	1.44	...	.37—16th	...	12
November	.77	...	.29—21st	...	10
December	2.21	...	.47—14th	...	18
	21.13				143

RAINFALL in 1909.

	Total depth. Inches.		Greatest Fall in 24 hours.		No. of days on which ·01 or more fell.
January	·76	...	·16—14th	...	13
February	·89	...	·25—10th	...	10
March	3·32	...	·62—3rd	...	25
April	1·60	...	·45—19th	...	11
May	1·10	...	·35—16th	...	6
June	2·72	...	·55—3rd	...	16
July	3·48	...	·50—27th	...	17
August	2·22	...	·70—24th	...	10
September	3·10	...	·65—22nd	...	19
October	3·90	...	1·13—26th	...	29
November	1·08	...	·36—15th	...	9
December	3·13	...	·54—2nd	...	19
	27·30				177

The Council Infectious Hospital, situated at the top of Canterbury Street, has accommodation for fifty patients, and the diseases treated are Scarlet Fever, Diphtheria, and Enteric Fever. The re-arrangements and improvements spoken of last year are accomplished facts, and add very specially to the efficiency of the Hospital and comfort of the Matron and Staff. The "Manlove and Alliott" disinfector is working in a very satisfactory manner. The Matron and Staff are thoroughly efficient, and prepared to cope with any cases taken in for treatment. After cases are removed from their homes to the Hospital, and also when remaining home after recovery, their rooms and clothing are thoroughly disinfected by Formaline. If a covered cart was provided, beds and other articles could be disinfected, and especially in cases connected with the School Authority, as the only method very often where you can ensure thorough disinfecting and killing of vermin is by superheated steam, such as is generated in the disinfector.

Should any cases of Small Pox occur we are prepared, as at Wigmore we possess a Hospital well isolated and equipped, with persons living there, so that it is always ready for occupation.

The housing accommodation in the district is of a suitable character, and there is an ample supply. The large majority are kept in a satisfactory condition. In certain cases notices have to be

served for cleansing and purifying, but that one will find in all towns a necessity. One point that strikes me as I make my visits is the neglected state of so many gardens. Many back premises could be made bright and cheerful were the ground tilled and a few flowers put in, or better still, a few vegetables. The paving of back alleys has been a very great improvement, and the landlords and tenants thoroughly appreciate it. Our population is composed of skilled artizans, the corps of Royal Engineers, and the Naval service. The Royal Dockyard is the main stay of employment. All new buildings are under the supervision of the Surveyor and his Staff, who give full attention to sufficient air space and materials used in the operation of building.

In reference to our sewerage and drainage, it is the water carriage system, and we have no cesspools or old privies in the town except where too low to join the sewer, or are 100 feet away from it. To the end of the year 9,491 houses were connected to the main sewer. There are surrounding the town about 285 houses that cannot join, so that it means we must always keep a staff and appliances ready for emptying cesspools, and many of these being old, require constant attention. Our system is that of precipitation and treatment with alumino ferric and lime, after which the clarified liquid is turned into the Medway, while the sludge is pressed and sold for use on the land. The condition of our sewers and house drains is satisfactory. We have occasional chokes, but our staff is always available, and those matters receive immediate attention. The Sanitary staff also undertakes the testing of drains by the smoke or water system, whichever is most appropriate.

In reference to our river, I consider the crude sewage coming from Government Establishments should certainly receive more attention than it does at present. I look upon it as a source of pollution, and several cases of Enteric Fever have occured from eating wild oysters from the shore opposite these establishments.

Regarding nuisances in the district, many have occured during the year, but on serving the legal notices there has been no trouble in having them abated. As examples :—manure heaps in several parts of the district; gullies choked; yards requiring cementing; ruinous cottages which were pulled down; several others unfit for habitation in their present condition have been closed and boarded up; the team yard put in a better state of sanitation, viz. : all broken windows renewed; old brick floors taken up and concreted; earthenware gullies substituted for old bell traps; the old iron chimneys taken down and new put up. In places, ground given way at back of alleys. Curing fish next to wall of house becoming a nuisance, I had the shed for curing moved to a more suitable spot. In many places weather boarding and rain water pipes had become dangerous. All

houses where more than one used the same water closet have been inspected, and lists submitted to Health Committee for them to take action. In several cases water closets, out-houses, and various buildings have been in a dangerous state; these have all received attention. All hawkers selling mussels, cockles, oysters, &c., have their address taken and enquiries made as to where they obtain them.

I have had some general instructions and hints printed in reference to Tuberculosis, and these are distributed by the Sanitary Inspector.

All urinals in the district have been visited, especially those in connection with Licensed Victuallers' premises, both those that are open to the public and those that are used by customers only, and in several cases notices have been served for them to be put in a more sanitary state and water laid on. It would be an improvement if those attached to public houses were used for their customers only.

The Corporation are putting up new public urinals, which are much needed, and provisions are to be made for more to be put in the populous parts of the town. The present under-ground lavatory for both sexes is a great boon, and is kept in a thorough sanitary condition.

I was present with the Health Committee at the inspection of cabs that ply for hire in the district, in respect to their cleanliness, condition of seats and cushions.

Notices in reference to conveyance by railway or by water of unfit horses have been received under the Diseases of Animals' Act. These were handed to the Inspector of Kent County Constabulary for his perusal and publicity.

Urinal at Public Hall which was not well ventilated and thereby became a nuisance, was inspected by the Borough Surveyor, and his wishes in improving were carried out.

In company with a deputation from the Oyster Merchants of London, I visited the beds at Whitstable, Elmley, Medway and Queenborough, where oysters were laid down and from where the public were supplied.

In company with the Borough Veterinary Surgeon, I have several times been called to the Naval Victualling Establishment, for our opinion as to the quality and freedom of disease of carcasses of beasts that have been killed there.

We have no common lodging houses in this part of the district, and no offensive trades are carried on.

In reference to schools, all particulars of them will be found in accompanying report. All are, except Hempstead, supplied with water from the Company's mains. I have frequently been present at time of children feeding.

Referring to the Midwives' Act, the supervising of this is undertaken by the Staff appointed by the County Medical Officer.

There have been no cases of Puerperal Fever notified to me. The Notification of Births Act, 1907, in relation to infant mortality has not been adopted in this district, and no health visitors are employed.

It is my practice to make systematic inspections of the district, taking streets or special parts of the town, and inspect drains, back premises, houses and alleyways; noticing general conditions of people as to personal cleanliness; also that of houses in reference to floors, furniture, linen and bedding, and impressing upon them the necessity of setting an example to their children, especially as the School Medical Officer is doing his best in that direction.

The marriage rate of the district, according to the return sent to me by the Superintendent Registrar, viz.: 231, gives a marriage rate of 4·3 per thousand of the population.

The number of uncertified deaths during the year was nineteen.

As to vaccination, it is worthy of note that the number of vaccinations was 1,001, and the declarations of objection for the year were 282. Section 53, year 1907, is adopted in this district.

Our Queen's Nurses, three in number, are still in our midst, doing excellent work and thoroughly appreciated by all classes of the community. They are still under a most excellent Committee, consisting of ladies, clergy, medical men and laity.

I remain, Gentlemen,

Your obedient servant,

E. C. WARREN,

Medical Officer of Health.

ANNUAL REPORT OF THE SANITARY INSPECTOR.

Sanitary work carried out by the Sanitary Inspector during the year ending 31st December, 1909.

During the year twenty-seven cases of Diphtheria, forty-eight cases of Scarlet Fever, and fifteen cases of Enteric Fever were removed to the Infectious Hospital, and all houses, bedding and clothing have been disinfected after the removal of the patients.

The number of infectious cases treated at their homes during the year are twenty-one cases of Diphtheria, thirty-one cases of Scarlet Fever, nine cases of Enteric Fever, fourteen cases of Erysipelas, and twelve cases of Consumption. No cases of Small Pox being being reported to me during the year.

The number of houses disinfected during the year where patients have recovered from an Infectious disease after treatment at their homes is seventy-six.

Houses disinfected where patients have died suffering with Consumption were five.

The number of dead bodies removed from their homes to the mortuary, and orders given for their burial, by order of Dr. Warren, the Medical Officer of Health, has been four.

The Cowsheds, Dairies, and Milkshops in the Borough are inspected from time to time, and cautions given for the storage of the milk.

The number of Slaughter-houses in the Borough is seventeen; inspections are constantly being made to these premises.

The Factories, Workshops and Workrooms are visited and inspected as often as possible throughout the Borough. New premises are measured and reported to the Inspector of Factories.

List of home-workers are received from Rochester and Chatham every six months, and the homes of the home-workers are visited and inspected, and where necessary, orders are given to cleanse, etc., their premises.

Record of Sanitary Work :—

Privies emptied and attended to	95
Cesspools ,, ,, ,, ...	163
Pans of w.c.'s choked	204
Pans of w.c.'s broken	7
Pans of w.c.'s dirty	19
Yard Gullies choked	191
Yard Gullies broken	14
Yard Gullies without covers	10
W.c.'s out of repair	47
Vent shafts defective...	15
Water supply pipes burst	239
Flush pipes broken away from the pan	38
Subsidiary drain pipes broken	6
Offensive Air Inlets	6
Kitchen sink pipes broken	16
Inspection pit-covers broken	6
Cisterns out of repair	89
Disused soilpits fallen in	12
Accumulation of refuse in gardens	24
Back premises in a dirty condition	14
Backyards out of repair	38
Roofs of houses out of repair	9
Houses in a dirty condition	11
Houses with defected drainage	28
Houses with insufficient drainage	2
Deposit of manure on premises	21
Sewage matter purcolating into cellars	12
Liquid matter running into public street... ...	6
Backyards and cellars flooded with storm water ...	7
Inspection pits out of repair	7
Main sewer choked	6
Subsidiary drains choked	1341
Syphons of pans of w.c.'s broken	12
Fowls and rabbits kept in a dirty condition ...	7

Animals kept in a dirty condition	7
Dangerous chimneys...	9
Kitchen sink broken...	16
Guttering and spouting defective and broken ...	31
To provide water for flushing w.c.	22
Ruinous buildings	62
Pan of w.c.'s defective	3
Fences of forecourts out of repair	5
Drains tested	5
Water from wells condemned	1
Roofs of houses out of repair	9
New cisterns in w.c.'s	2
Damp walls in houses	5
Mica flaps to fix	3
Premises flooded by storm	1

Yours faithfully,

JAMES NORRIS,

Sanitary Inspector.

TABLE I.

Vital Statistics of Whole District during 1909 and Previous Years.

Name of District—GILLINGHAM, KENT.

Year.	Population estimated to Middle of each Year.	Births.		Total Deaths Registered in the District.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of residents registered in Public Institutions beyond the District.	Nett Deaths at all ages belonging to the Dis't.	
				Under 1 year of age.		At all ages.						
		Number.	Rate.*	Number.	Rate per 1,000 Births regist'rd.	Number.	Rate.*				Number.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1899 ...	36605	1067	29·1	155	4·2	534	13·4	41			534	13·4
1900 ...	38606	1137	29·4	157	4·4	564	14·6	53			564	14·6
1901 ...	42520	1114	26·1	143	3·3	510	11·9	49			510	11·9
1902 ...	43625	1277	29·2	153	3·5	582	13·3	67			582	13·3
1903 ...	44850	1390	31·0	157	3·5	481	10·7	93			481	10·7
1904 ...	48245	1355	28·0	207	4·3	531	11·1	81			538	11·1
1905 ...	49600	1458	29·3	182	3·6	528	10·6	71			528	10·6
1906 ...	50140	1352	26·9	160	3·3	495	9·8	69			495	9·8
1907 ...	49505	1318	26·6	121	2·6	489	9·8	69			489	9·8
1908 ...	51755	1375	26·5	111	2·3	521	10·2	64			521	10·2
Averages for years 1899-1908.	45565	1284	28·2	154	3·4	522	11·5	65			522	11·5
1909 ...	53485	1451	27·1	100	68·9	452	8·4	66			452	8·4

* 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.

By the term "Non-residents" is meant persons brought into the district on account of sickness or infirmity, and dying in public institutions there; and by the term "Residents" is meant persons who have been taken out of the district on account of sickness or infirmity, and have died in public institutions elsewhere.

The "Public institutions" to be taken into account for the purposes of these Tables are those into which persons are habitually received on account of sickness or infirmity, such as hospitals, workhouses and lunatic asylums. A list of the Institutions in respect of the deaths in which corrections have been made should be given on the back of this Table.

Area of District in acres (exclusive of area covered by water) } 4,936.

Including foreshore, tidal and inland water } 7,281 acres.

Total population at all ages ... 42,520

Number of inhabited houses ... 8,227

Averge number of persons per house 5

} At Census of 1901.

TABLE II.

Vital Statistics of separate Localities in 1909 and previous years.

Name of District—**GILLINGHAM (KENT).**

Names of Localities.	1. GILLINGHAM.				2.....				3.....				4.....				5.....				6.....				7.....			
Year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
	a.	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*	*a.*	*b.*	*c.*	*d.*
1899 ...	36605	1067	534	155																								
1900 ...	38606	1137	564	157																								
1901 ...	42520	1114	510	143																								
1902 ...	43625	1277	582	153																								
1903 ...	44850	1390	481	157																								
1904 ...	48245	1355	538	207																								
1905 ...	49600	1458	528	182																								
1906 ...	50140	1352	495	160																								
1907 ...	49505	1318	489	121																								
1908 ...	51755	1375	521	111																								
Averages of Years 1899 to 1908	45565	1284	522	154																								
1909 ...	53485	1451	452	100																								

NOTES.—(*a*) The separate localities adopted for this table should be areas of which the populations are obtainable from the census returns, such as wards, parishes or groups of parishes, or registration sub-districts. Block 1 may, if desired, be used for the whole district: and blocks 2, 3, &c., for the several localities. In small districts without recognised divisions of known population this Table need not be filled up.

(*b*) Deaths of residents occurring in public institutions beyond the district are to be included in sub-columns *c* of this table, and those of non-residents registered in public institutions in the district excluded. (See note on Table 1. as to meaning of terms "resident" and "non-resident.")

(*c*) Deaths of residents occurring in public institutions, whether within or without the district, are to be allotted to the respective localities according to the addresses of the deceased.

(*d*) Care should be taken that the gross totals of the several columns in this Table respectively equal the corresponding totals for the whole districts in Tables I. and IV.: thus, the totals of sub-columns *a*, *b*, and *c* should agree with the figures for the year in the columns 2, 3, and 12 respectively, of Table I.: the gross total of the sub-columns *c* should agree with the total of column 2 in Table IV., and the gross total of sub-columns *d* with the total of column 3 in Table IV.

TABLE III.

Cases of Infectious Disease notified during the Year 1909.

Name of District—GILLINGHAM, KENT.

Notifiable Disease.	Cases notified in Whole District.							Total Cases notified in each Locality.							‡No. of Cases removed to Hospital from each Locality.						
	At all Ages.	At Ages†—Years.																			
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.	65 and upwards.	1	2	3	4	5	6	7	1	2	3	4	5	6	7 Total cases removed to Hospital
Small-pox	—	—	—	—	—	—	—								—						—
Cholera	—	—	—	—	—	—	—								—						—
Diphtheria (including Membranous croup)...	48	—	14	24	2	8	—								27						27
Erysipelas	14	1	—	—	3	9	1								—						—
Scarlet fever	79	1	21	45	7	5	—								48						48
Typhus fever	—	—	—	—	—	—	—								—						—
Enteric fever	24	—	1	6	7	10	—								15						15
Relapsing fever ...	—	—	—	—	—	—	—								—						—
Continued fever ...	—	—	—	—	—	—	—								—						—
Puerperal fever ...	—	—	—	—	—	—	—								—						—
Plague	—	—	—	—	—	—	—								—						—
*																					
Totals	165	2	36	75	19	32	1								90						90

NOTES.—The localities adopted for this Table should be the same as those in Tables II. and IV.

State in space below the name of the isolation hospital, if any, to which residents in the district, suffering from infectious disease, are usually sent, and the accommodation, available for the district, afforded by it. Mark (H) the locality in which it is situated, or if not within the district, state where it is situated, and in what district. The name of the authority by whom the hospital is provided should also be given. Mark (W) the locality in which a workhouse is situated.

* This space may be used for record of other disease the notification (compulsory or voluntary) of which is in force in the district.

† These age columns for notifications should be filled up in all cases where the Medical Officer of Health, by inquiry or otherwise, has obtained the necessary information.

‡ Column 7 should be filled up with the Totals of cases removed to Hospital, whether the District is divided into separate localities or consists of only one undivided area.

Isolation Hospital—*Infectious Hospital, Canterbury Street.* Total available beds, 50. Number of diseases that can be concurrently treated, 3. *Alexandra Hospital, Wigmore,* for Small Pox (5).

TABLE IV.

Causes of, and Ages at, Death during Year 1909.

Name of District—GILLINGHAM, KENT.

Causes of Death.	Deaths at the subjoined ages of "Residents" whether occurring in or beyond the District.							Deaths at all Ages of "Residents" belonging to Localities, whether occurring in or beyond the District.							Total Deaths wheth'r of Residents or Non-Residents in Public Institutions in the District
	All ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Small-pox	—	—	—	—	—	—	—								—
Measles	—	—	—	—	—	—	—								—
Scarlet fever	3	—	1	—	2	—	—								—
Whooping-cough ...	1	1	—	—	—	—	—								—
Diphtheria (including membranous croup)	9	—	5	4	—	—	—								—
Croup	—	—	—	—	—	—	—								—
Fever—Typhus ...	—	—	—	—	—	—	—								—
Fever—Enteric ...	2	—	—	—	2	—	—								1
Fever—Other continued	—	—	—	—	—	—	—								—
Epidemic influenza ...	2	—	—	—	—	1	1								—
Cholera	—	—	—	—	—	—	—								—
Plague	—	—	—	—	—	—	—								—
Diarrhœa	5	4	1	—	—	—	—								—
Enteritis	2	2	—	—	—	—	—								—
Gastritis	3	1	1	—	—	1	—								—
Puerperal fever ...	—	—	—	—	—	—	—								—
Erysipelas	—	—	—	—	—	—	—								2
Phthisis (Pulmonary Tuberculosis) ...	42	—	1	3	10	28	—								4
Other tubercular diseases	6	1	1	—	3	1	—								1
Cancer, malignant diseases	32	—	—	—	—	16	16								5
Bronchitis	46	14	6	—	—	5	21								2
Pneumonia	17	3	—	—	3	7	4								2
Pleurisy	—	—	—	—	—	—	—								1
Other diseases of Respiratory organs ...	—	—	—	—	—	—	—								—
Alcoholism, Cirrhosis of liver ...	8	—	—	—	1	7	—								2
Venereal diseases ...	1	1	—	—	—	—	—								4
Premature birth ...	24	24	—	—	—	—	—								—
Diseases and accidents of parturition ...	—	—	—	—	—	—	—								—
Heart diseases ...	41	—	—	—	2	28	11								5
Accidents	16	3	1	1	1	7	3								1
Suicides	4	—	—	—	—	4	—								—
.....															
.....															
All other causes ...	188	41	7	9	11	65	55								36
All causes ...	452	94	24	17	37	170	111								66

TABLE V. BOROUGH OF GILLINGHAM (KENT) DISTRICT.

INFANTILE MORTALITY DURING THE YEAR 1909.

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

CAUSE OF DEATH.		Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths under One Year.
All Causes	Certified																	81
	Uncertified																	19
Common Infectious Diseases	Small-pox																	
	Chicken-pox																	
	Measles																	
	Scarlet Fever																	
	Diphtheria : Croup ...																	
	Whooping Cough ...														1			1
Diarrhœal Diseases	Diarrhœa, all forms ...				1	1	1		1		1							4
	Enteritis Muco-enteritis Gastro-enteritis			1		1	1											2
	Gastritis, Gastro-intestinal Catarrh												1					1
Wasting Diseases	Premature Birth ...	21		1	2	24												24
	Congenital Defects ...	1					1											1
	Injury at Birth ...																	
	Want of Breast-milk ...																	
	Atrophy, Debility, Marasmus	3	1	3	4	11	2	1	1						1			16
Tuberculous Diseases	Tuberculous Meningitis																	
	Tuberculous Peritonitis: Tabes Mesenterica																	
	Other Tuberculous Diseases																	
Other Causes	Erysipelas				2	2												2
	Syphilis	2			1	3				1								4
	Rickets																	
	Meningitis (*not Tuberculous*)									1	1						1	3
	Convulsions	4	1			5				1				1				7
	Bronchitis			1	1	2		3		1			1	1	2	4		14
	Laryngitis																	
	Pneumonia							1					1	1				3
	Suffocation, overlaying ...			1		1			1									2
	Other Causes	5	2			7	3	1		2	1				1			15
		36	4	7	11	58	7	6	3	7	2		3	3	5	5	1	100

District (or sub-division) of Gillingham, Kent. Population (estimated to middle of 1909) 53,485.

Births in the year { legitimate - 1431, illegitimate - 20 } Deaths in the year of { legitimate infants - 99, illegitimate infants - 1 }

Deaths from **all Causes at all Ages** ... **452.**

TABLE VI.

ANNUAL REPORT OF MEDICAL OFFICER OF HEALTH FOR 1909,

For the Borough of Gillingham, Kent.

FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

Premises.	Number of		
	Inspections.	Written Notices	Prosecutions.
FACTORIES ... ... (Including Factory Laundries)	21	3	*Nil*
WORKSHOPS ... ... (Including Workshop Laundries)	1008	6	"
WORKPLACES ... ... (Other than Outworkers' premises included in Part 3 of this Report).	195		"
Total	1224	9	"

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts:—				
Want of cleanliness	3	3		
Want of ventilation	1	1		
Overcrowding	3	3	3	
Want of drainage of floors				
Other nuisances				
Sanitary accommodation — insufficient	2	2		
Sanitary accommodation — unsuitable or defective				
Sanitary accommodation — not separate for sexes	2	2		
Offences under the Factory and Workshop Act:—				
Illegal occupation of underground bakehouse (S. 101)				
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)				
Other offences				
Total	11	11	3	

TABLE VI.—2.

3.—HOME WORK.

Nature of Work.	Outworkers' Lists, (S. 107).		Inspections of Outworkers' Premises.	Outwork in unwholesome Premises (S. 108).		Outwork in infected Premises (S. 109, 110).	
	Lists received from Employers twice in the year.	Addresses of Outworkers received from other Councils.		Instances.	Notices served.	Instances.	Orders made (S. 110).
Wearing apparel—Making, &c. ...	18		260				
,, ,, Cleaning and Washing							

4.—REGISTERED WORKSHOPS.

		Number.
Workshops on the Register (S. 131) at the end of the year.		
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses ...	12
	Underground Bakehouses ...	4
	Dressmakers and Milliners ...	89
	Tailors ...	20
	Carpenters and Joiners ...	12
	Blacksmiths ...	15
	Jewellers ...	5
	Laundries ...	3
	Plumbers ...	6
	Stone Masons ...	2
	Boot Makers ...	2
	Total number of workshops on Register ...	170

5.—OTHER MATTERS.

Class.		
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act (S. 133) ...		
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5)	Notified by H.M. Inspector ...	
	Reports (of action taken) sent to H.M. Inspectors ...	
Other ...		
Underground Bakehouses (S. 101):—		
Certificates granted during the year ...		
In use at the end of the year ...		