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Contributors

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Lines

GAINSBOROUGH

RURAL DISTRICT COUNCIL.

THE THIRD

Annual

Report

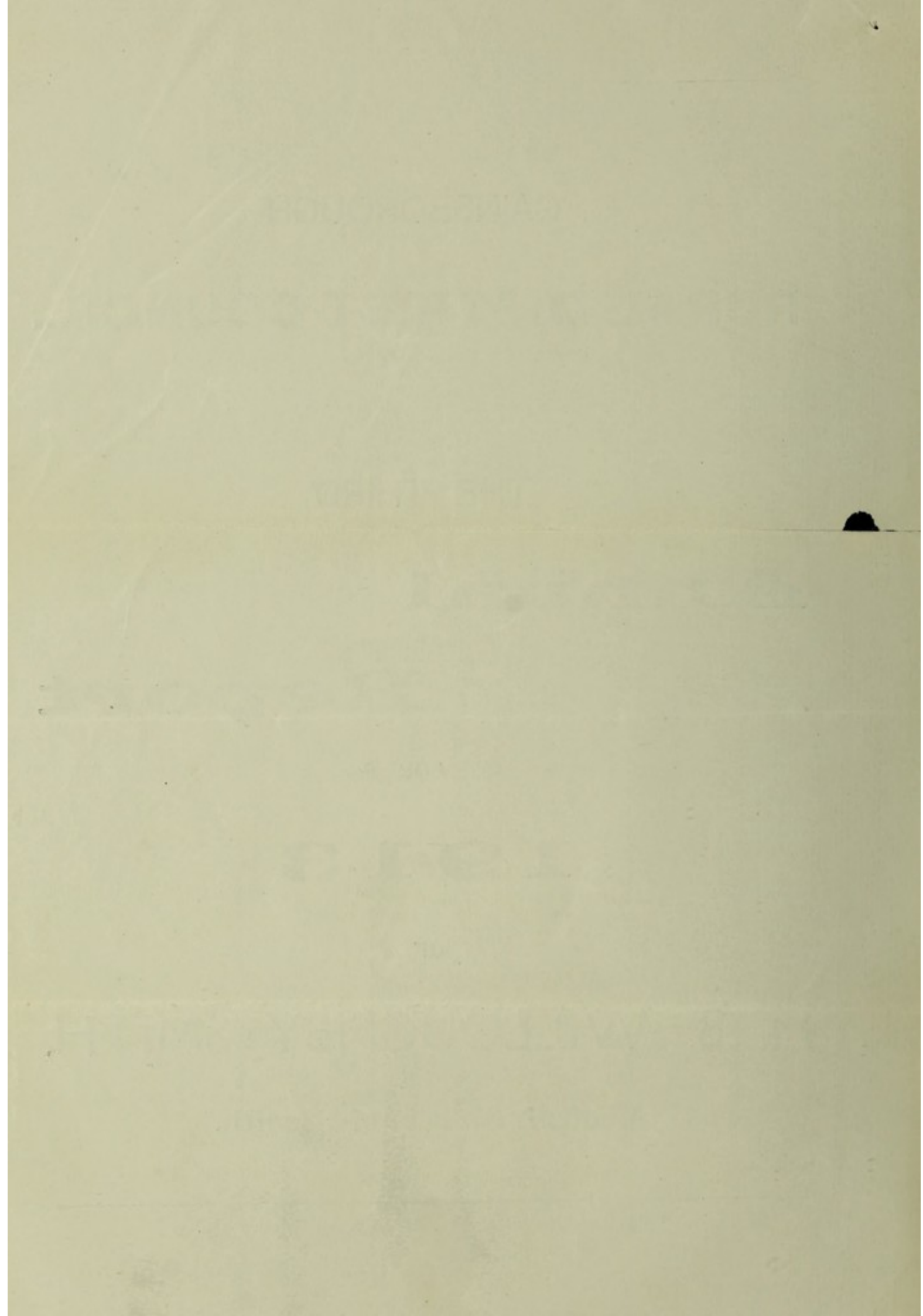
FOR

1913

OF

H. B. WILLOUGHBY SMITH,

Medical Officer of Health.



CASKGATE STREET,

GAINSBOROUGH,

FEBRUARY, 1914.

To the Chairman and Members of the Rural District Council of Gainsborough.

Sir, Madam, and Gentlemen,

Annual Report.

I beg to lay before you herewith my Annual Report for 1913, as to Health and Sanitary Conditions of your District, together with Tables of Births and Deaths registered, the prescribed forms of cases of Infectious Diseases, and the special Tables as to Infantile Mortality, &c., tabulated as required by the Local Government Board and the Administration of the Factories and Workshops Act 1901.

The past year was a fairly normal one as far as the weather is concerned, the summer months were very dry, but no great heat was evident.

The social conditions of the people are similar to those of any other rural community and their pursuits are agricultural.

The population is about as before and the accommodation for the people is fairly adequate, and taken on the whole satisfactory. There is no serious overcrowding.

Water Supply.

The water supply of the District is of three types.

1. Town main (constant).
2. Wells.
3. Rain water tanks.

The north western part of the District obtains its water from rain water tanks and in consequence the supply is at times more theoretical than real, the river Trent supplies a certain quantity.

The north east and north parts are supplied by wells.

The water from mains and wells (deep) is very hard but otherwise good. There is no plumbo-solvent action.

The water from two wells was found on analysis to be contaminated and unfit for use. These wells were dealt with.

New wells sunk, 8.

Wells cleaned, 6.

New cisterns supplied, 17.

There is considerable sewerage pollution of the river Trent, but not much of the other streams.

Sewerage Disposal.

The arrangements for the disposal of sewage are fairly adequate, very little is carried by water, the greater part being disposed of on the land.

20 Pail closets were substituted for privy vaults.

16 Pail closets repaired.

65 Cesspools abolished.

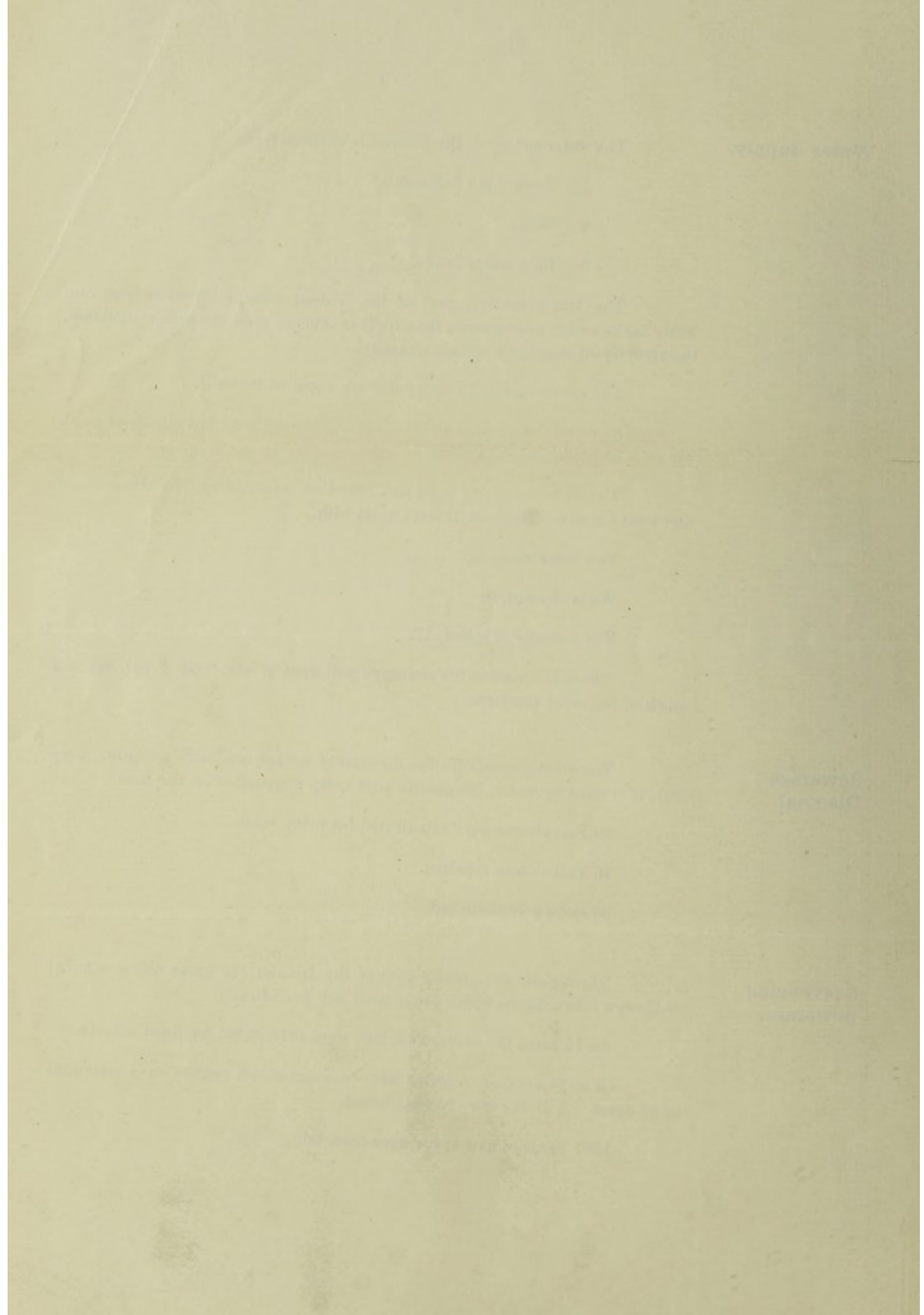
Scavenging Sewerage.

Throughout the greater part of the District the house refuse is burnt or thrown into ashpits, which are cleared out periodically.

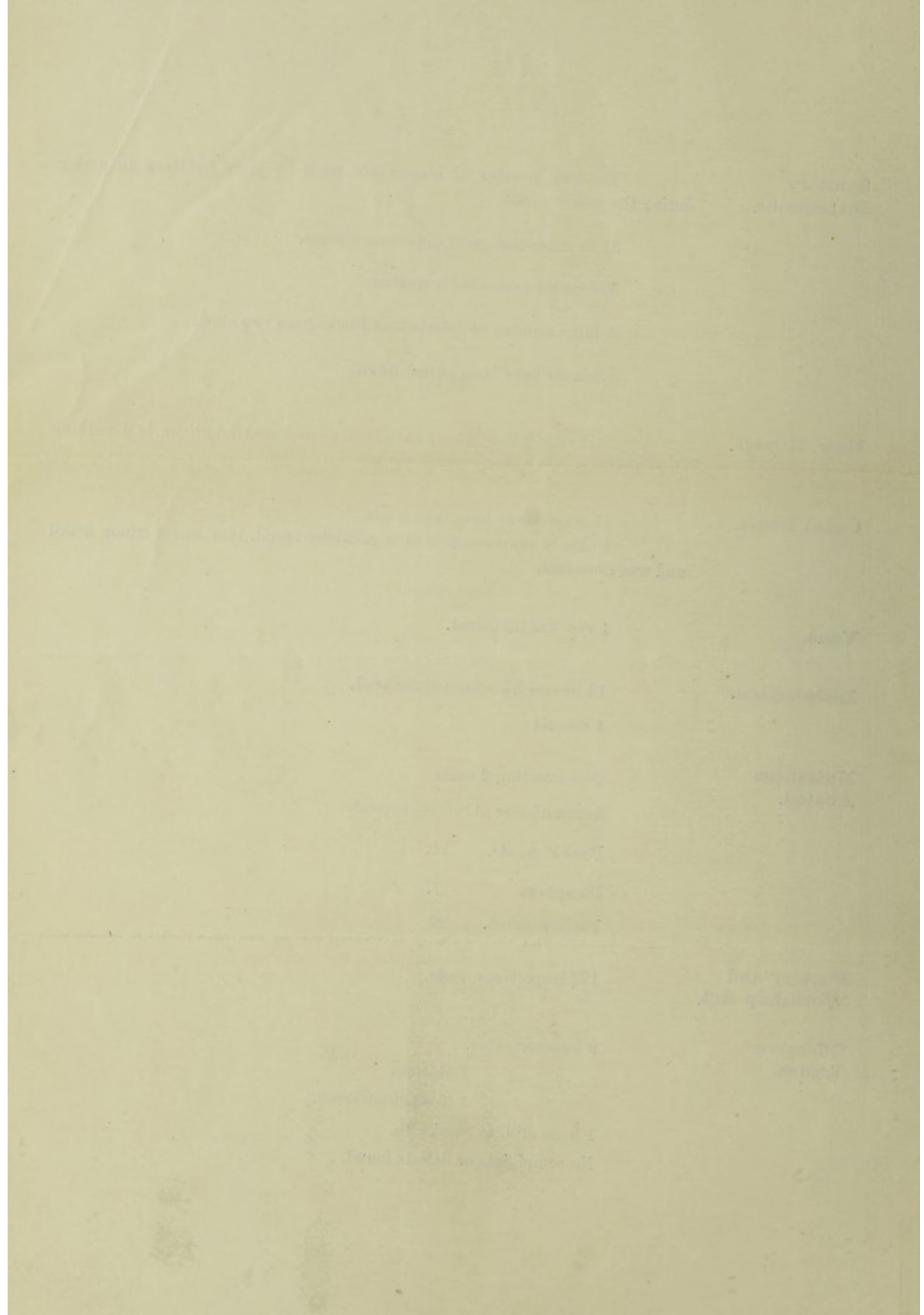
In 12 cases the covered ashbins were substituted for fixed ashpits.

A large number of drains have been examined, repairs have been done in 65 cases. 3 drains were reconstructed.

1587 yards of new sewer have been laid.



Sanitary Inspections.	The total number of inspections made by your Sanitary Inspector during the year was 805.
	37 in connection with infectious disease.
	329 under periodical inspection.
	A large number of defects found have been remedied.
	3 houses have been pulled down.
New Houses.	Plans for 8 new houses have been passed, and additions to 4 working class dwellings have been carried out.
Canal Boats.	15 inspections have been made.
	1 case of contravention of regulations found, this was a minor detail and was remedied.
Vans.	1 van was inspected.
Disinfection.	12 houses have been disinfected.
	4 schools.
Nuisances Abated.	Overcrowding 2 cases.
	Accumulation of refuse, several.
	Foul Pigs, etc. 11.
	Dampness 7.
	Yards repaved. 23
Factory and Workshop Act.	127 inspections made.
Offensive Trades.	2 knacker yards.
	1 Morton.
	1 Newton-on-Trent.
	1 bone mill, at Stockwith,
	No complaints or defects found.



Schools.

The schools in the District have been inspected and found on the whole satisfactory. At Haxey the boys school seemed not sufficiently ventilated and rather dark. Suggested the ceiling should be raised and new windows made, with further ventilating facilities. These details have been taken in hand by the educational authorities.

The health of the scholars is well looked after by the teachers, and a careful look out kept for symptoms of infectious disease.

The non-notifiable infectious diseases have been the cause of a considerable loss of educational time by school closure.

Where a case of infectious disease occurs all the children from that house are excluded for the regulation time. If the attendance drops to 50 per cent. the schools are closed by the school Medical Officer on educational grounds.

If the conditions appears to such that the health of the other children would suffer, I have closed the schools by an order from your Council before the 50 per cent. reduction of attendance.

During the year the following schools have been closed.

Month	Schools Closed	Disease	Closing Authority
January	Fillingham	Measles	District M.O.H.
January	Haxey	Measles	School Med. Off.
March	Morton	Scarlet Fever	District M.O.H.
March	Owston Ferry	Measles	School Med. Off.
May	Scotter	Measles	" "
July	Blyton	Measles	" "
December	West Butterwick	Measles	" "

It will be seen that Measles has been responsible for practically all the school closing; this is easily accounted for by the fact that the incubation period is a long one and during the most infectious period the only symptoms presented are those of a feverish cold.

FOOD

(a) Milk.

The milk supply in the District is plentiful. It is all produced in the District and under favourable conditions.

The cowsheds registered in the District number 39.

These have all been inspected and found in good order.

The cows are well kept.

The first of these is the fact that the
economy is not in a state of equilibrium
and that the government is not in a position
to maintain the present level of activity.

The second is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

The third is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

The fourth is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

Table 1. The effect of the government's policy on the economy.			
Policy	Effect on the economy	Effect on the government	Effect on the public
1. Increase in the money supply	Increases the money supply	Increases the government's revenue	Increases the public's income
2. Decrease in the money supply	Decreases the money supply	Decreases the government's revenue	Decreases the public's income
3. Increase in the interest rate	Increases the interest rate	Increases the government's revenue	Increases the public's income
4. Decrease in the interest rate	Decreases the interest rate	Decreases the government's revenue	Decreases the public's income
5. Increase in the tax rate	Increases the tax rate	Increases the government's revenue	Increases the public's income
6. Decrease in the tax rate	Decreases the tax rate	Decreases the government's revenue	Decreases the public's income
7. Increase in the public debt	Increases the public debt	Increases the government's revenue	Increases the public's income
8. Decrease in the public debt	Decreases the public debt	Decreases the government's revenue	Decreases the public's income

The fifth is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

The sixth is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

The seventh is the fact that the government
is not in a position to maintain the present
level of activity and that the economy is
not in a state of equilibrium.

(b) **Meat.** There are no registered slaughterhouses in the District ; the slaughterhouses which are in use have been inspected and found in good order, with free drainage and sufficient air space.

None of the meat has been condemned for tuberculosis.

(c) **Bread.** All the bakehouses in the District have been inspected and found in good sanitary condition. There are no underground ones.

Housing Act.	1. The number of houses inspected ..	439
	2. Number of dwelling houses on inspection considered unfit for human habitation ..	Nil.
	3. The number of representations made to local authority to make closing order ..	Nil.
	4. The number of closing orders made ..	Nil.
	5. Number of dwelling houses the defects of which were remedied without closing order being made	4
	6. The number of houses which after making closing orders were put into a fit state for habitation	Nil

Hospital Accommodation. Arrangements are made with the Urban Council by which beds are reserved in the Isolation Hospital for the use of the Rural Council.

The Rural Council possess an Isolation Hospital for small pox cases. This has not been used.

Adopted Acts. The following Adoptive Acts are in force in the Rural District : —

(a) Public Health Acts Amendment Act 1890, Part 3.

(b) Public Health Acts Amendment Act, 1907-

(c) Infectious Diseases Prevention Act 1890.

NOTIFIABLE DISEASES.

The compulsory notifiable diseases include Smallpox, Enteric Fever, Diphtheria, Scarlet Fever, Erysipelas, Puerperal Fever, Cerebro Spinal Meningitis, Poliomyelitis, Pulmonary Tuberculosis.

(1) The Board of Directors of the Corporation shall have the right to declare dividends on the common stock of the Corporation out of the assets of the Corporation.

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(8) The Board of Directors of the Corporation shall have the right to declare dividends on the common stock of the Corporation out of the assets of the Corporation.

NOTICE OF MEETING

The Board of Directors of the Corporation shall have the right to declare dividends on the common stock of the Corporation out of the assets of the Corporation.

The only ones which have occurred in your District during 1913 are, Diphtheria, Scarlet Fever, Erysipelas, Cerebro Spinal Meningitis and Pulmonary Tuberculosis.

The total number of Notifications apart from Pulmonary Tuberculosis sent in was 59, or thirteen more than the previous year.

In the last four years the numbers are—

1910	44 cases
1911	54 „
1912	46 „
1913	59 „

The number of each disease are :—

Diphtheria	19 cases
Scarlet Fever	36 „
Erysipelas	3 „
Cerebro Spinal Fever	1 „

Compared with the previous year :—

	1912	1913
Enteric Fever	2	Nil
Diphtheria	15	19
Scarlet Fever	20	36
Erysipelas	7	3
Cerebro Spinal Fever	1	1

The deaths from Infectious Fever notifiable and non-notifiable were :—

Measles	..	3
Scarlet Fever	.	3
Whooping Cough	..	2
Cerebro Spinal Fever		1

Typhoid Fever.

The complete absence of Typhoid Fever from the year's notification is very satisfactory. This result may be due partly to good luck, but on the other hand seeing that the prevalence of typhoid is more or less an index of the lack of or non efficient working of the sanitary system of a district; I think one may say that it shows the sanitary work of your rural district is very efficiently done.

The first part of the paper is devoted to a study of the general properties of the solutions of the system of equations

The second part of the paper is devoted to a study of the properties of the solutions of the system of equations

In the third part of the paper the author studies the properties of the solutions of the system of equations

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In the fourth part of the paper the author studies the properties of the solutions of the system of equations

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In the fifth part of the paper the author studies the properties of the solutions of the system of equations

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The author wishes to thank the Ministry of Higher Education of the USSR for the support of this work.

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2. A. M. Ljapunov, *Problème général de la stabilité du mouvement*, Ann. Chem. Phys., 3, 147 (1892).

3. A. M. Ljapunov, *Problème général de la stabilité du mouvement*, Ann. Chem. Phys., 3, 147 (1892).

Received 1964

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Scarlet Fever.

36 cases. 3 deaths.

The distribution was as follows :—

Blyton Carr	..	3 cases
Springthorpe	..	3 „
Knaith Park	..	2 „
Morton	..	13 „
Hemswell	..	5 „
East Stockwith	..	4 „
Wildsworth	..	2 „
Corringham	..	1 „
Owston Ferry	..	1 „
Blyton	..	1 „
Scotter	..	1 „

Age incidence :—

under 1 year	..	1 case
1— 5 years	..	16 „
5—15 years	..	19 „

This number of cases of Scarlet Fever is unduly large and is nearly double that of the previous year. It will be seen from the table of distribution that one area is responsible for almost one-half of the cases. This unfortunate spot was the village of Morton ; luckily the disease was of a mild type. I embodied the results of my investigations in the area in a special report which is here reproduced.

Special Report on Scarlet Fever at Morton.

The first notification was received on the 21st February. The medical man in charge of the case was called in on the 19th : the child was then peeling, and so had been suffering from the disease for two or three weeks. The child had not been to school since the 12th. Two other children in another family kept away from school, I found to be suffering from chicken-pox. I visited the School and saw the head master. I found one boy who in my opinion had had the disease and was just beginning to peel, so I sent him home and excluded all the family.

Two days later I received notice from the school that a large number of children had been absent from school that morning ; so in the afternoon I

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1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900

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again visited the school and went through the register ; afterwards visiting all the houses from which children had been kept from school. I found two or three cases which I suspected was sickening with scarlet fever and two definite cases. Some children I found beginning with chicken-pox.

I warned all the parents and ordered the schools to be closed till the Easter holidays.

The schools will be disinfected.

The cause of the trouble has apparently been a sad lack of common-sense on the part of the parents; one or two of them admitted having seen a rash, but thought it was nothing or perhaps measles; which disease they apparently consider a trivial complaint instead of one which frequently leads to complications.

I warned all the people to send for a doctor on the least suspicion of a rash or sore throat, etc.

Disinfectants have been supplied and strict isolation enforced so far as possible.

I hope these measures will be effective in stopping the spread of infection.

H. B. WILLOUGHBY SMITH, M.O.H.

The four cases at East Stockwith were all in the same house and very mild.

At Wildsworth the school had been closed two weeks. I first knew of it from the School Medical Officer. When I visited the district, it seemed probable that there had been a very mild epidemic, but after examining the school register and visiting the families I could only find two children who shewed any symptoms sufficient to base any diagnosis on, so I notified them; the others were apparently quite all right.

The origin of these outbreaks was very obscure in several cases.

Morton became infected from Gainsborobgh.

Blyton Carr from East Stockwith.

Blyton from Sheffield

In nearly all these cases the disease was of a mild type.

Erysipelas.

Three cases.

The distribution was :—

Morton	2 cases.
Walkerith	1 „

Age incidence :—

15—25	—
25—45 years	3 cases.

All mild cases.

Diphtheria.

Nineteen cases.

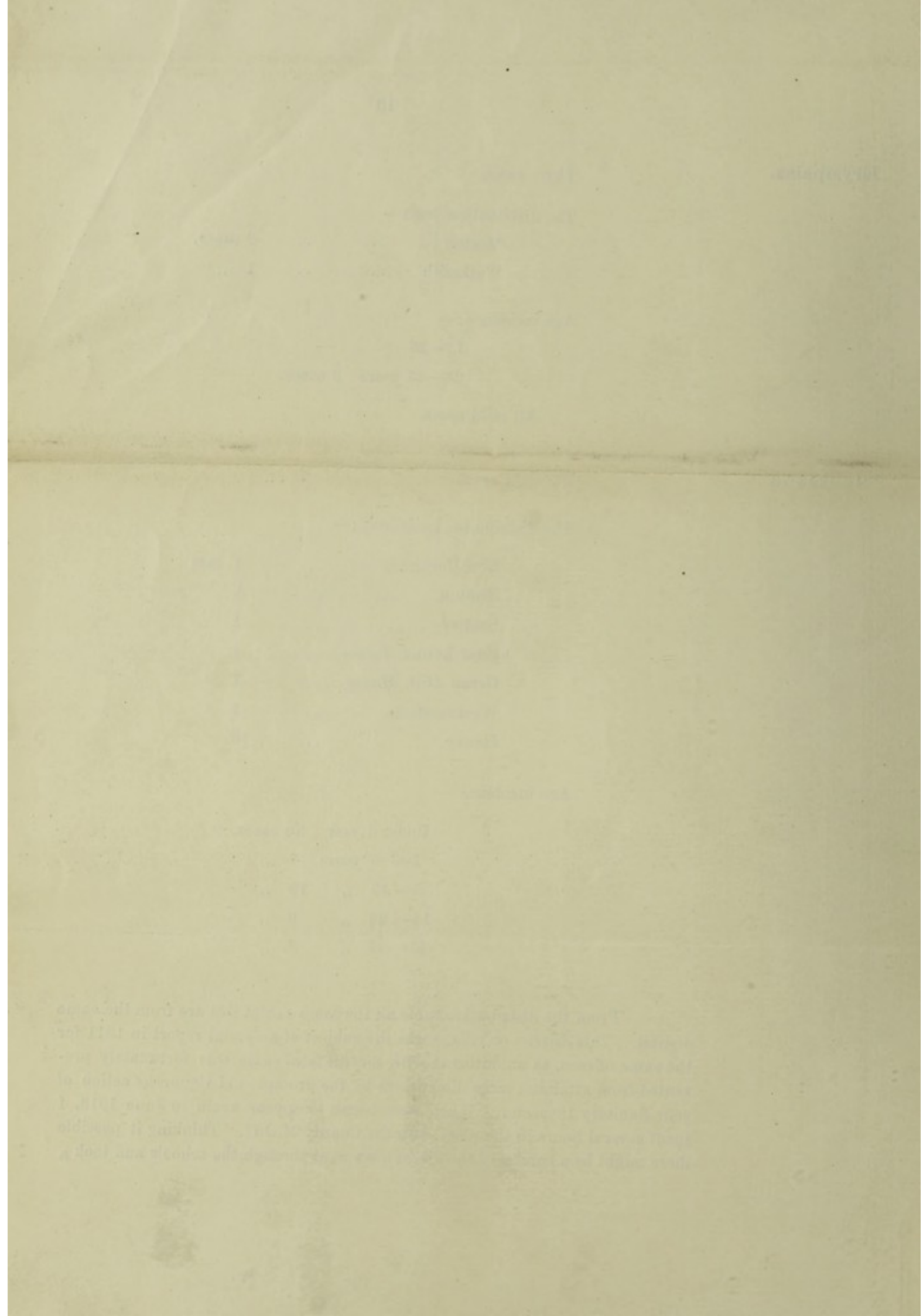
The distribution as follows :—

Low Burnham	..	1 case
Scotton	..	1
Scotter	..	1
East Lound, Haxey	..	4
Green Hill, Haxey	..	1
Westwoodside	..	1
Haxey	..	10

Age incidence :—

Under 1 year	No cases.
1— 5 years	7 „
5— 15 „	10 „
15— 25 „	0 „
25— 45 „	2 „

From the distribution table all the cases except two are from the same district. This district or village was the subject of a special report in 1911 for the same offence, as an outbreak with several fatal cases was fortunately prevented from attaining large dimensions by the prompt and vigorous action of your Sanitary Inspector. When cases began to appear again in June 1913, I spent several hours in the place with the County M.O.H. Thinking it possible there might be a carrier of the disease, we went through the schools and took a



large number of swabs from the children's throats but all the results were negative

Whether the inhabitants of this area are particularly prone to contract diphtheria on the slightest provocation cannot be proved.

Diphtheria is a disease which occurs endemically in certain localities, localized epidemic extensions taking place from time to time.

Some authorities state that certain districts in which the surface soil is cold and humid, and where damp houses and privy and drainage nuisances exist, or when the aspect involves much exposure to cold and wet winds; suffer from an exceptional incidence.

One or more of these conditions may partly explain the constant recurrence in this area.

Accepting this theory as an explanation I think it would be well worth trying as an experiment to establish a system of public scavenging in this area. Even if it did not stop the diphtheria it would be certainly be beneficial to the general well-being of the people.

Small Pox.

No cases.

Puerperal Fever.

No cases.

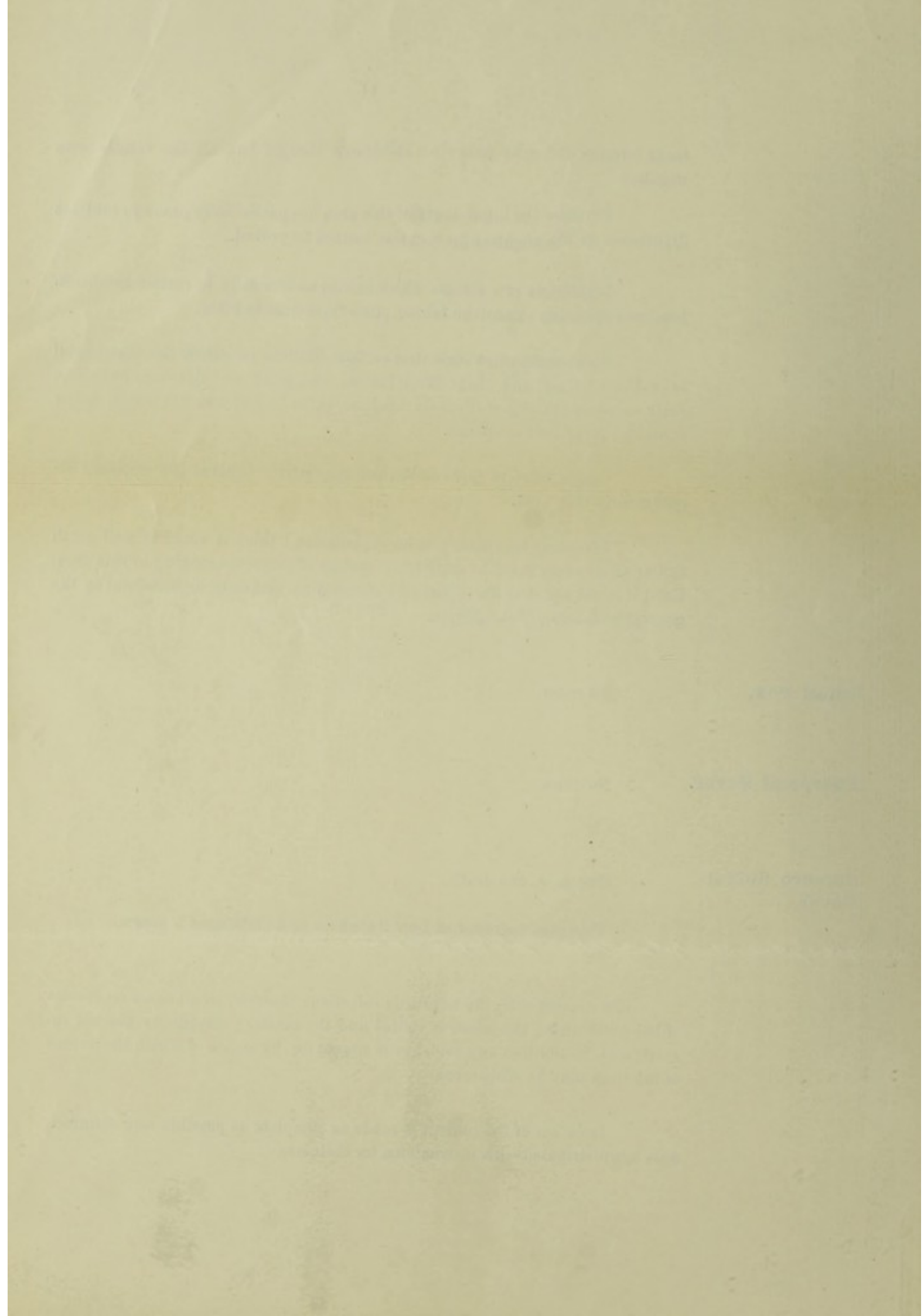
Cerebro Spinal Fever.

One case, one death.

This case occurred at Low Burnham in a child aged 5 years.

In dealing with the notifiable infectious diseases, in all cases on receipt of the notification, the house is visited and the sanitary conditions thereof investigated, in addition any evidence is sought for, by means of which the source of infection may be discovered.

Isolation of the patient is made as complete as possible and disinfectants are distributed with instructions for their use.



In all the districts a supply of disinfectants is kept at one centre so that the distribution may be as rapid as possible.

I have had no reason to suspect the milk supply or water as agents in the spread of infection.

Non-Notifiable Infectious Diseases.

There have been a considerable number of cases of these fevers and the distribution is as follows :—

<i>Measles</i>	<i>Whooping Cough</i>	<i>Chicken-pox</i>	<i>Mumps</i>
Haxey	Morton	Morton	Morton
Fillingham	Scotter	Gate Burton	Corringham
Willingham		Newton-on-Trent	Blyton
Owston Ferry		Lea	Blyborough
Upton		Owston Ferry	Haxey
Gunthorpe		Blyton	East Stockwith
Laughton		Upton	Owston Ferry
Sturton		East Stockwith	Lea
		Pilham	Scotter

Tuberculosis.

Under the Local Government Board Public Health Regulations (Tuberculosis) December, 1912, all forms of Tuberculosis became notifiable on the 1st February, 1913.

The total number of notifications in your District was 17.

The distribution was as follows :—

Gainsborough and district	3 cases.
Scotter	2 „
Marton	3 „
Misterton	9 „

The age incidence :—

1— 5 years	..	2 cases.
5—15 „	..	2 „
15—25 „	..	7 „
25—45 „	..	4 „
45—65 „	..	2 „

The first of these is the fact that the
 system is not a simple one.

It is a system of many parts, and the
 parts are not all of the same kind.

There are many different kinds of parts,
 and they are all of different sizes.

Some are small, some are large, and
 some are very large.

Some are of one kind, and some are
 of another kind.

Some are of one size, and some are
 of another size.

Some are of one shape, and some are
 of another shape.

Some are of one material, and some are
 of another material.

Some are of one color, and some are
 of another color.

Some are of one texture, and some are
 of another texture.

Some are of one weight, and some are
 of another weight.

Some are of one length, and some are
 of another length.

Some are of one width, and some are
 of another width.

Some are of one height, and some are
 of another height.

Some are of one depth, and some are
 of another depth.

Some are of one volume, and some are
 of another volume.

Some are of one mass, and some are
 of another mass.

Some are of one density, and some are
 of another density.

Some are of one temperature, and some are
 of another temperature.

Some are of one pressure, and some are
 of another pressure.

Some are of one force, and some are
 of another force.

Some are of one energy, and some are
 of another energy.

All these cases except two were of the pulmonary type.

Of the two exceptions, one was bone and one was peritoneum.

One of these cases was notified from Doncaster Infirmary.

One had been living in Southport, and had been previously notified in that district.

In dealing with these cases Sanatorium treatment has been obtained where possible for suitable cases.

Special stress has been laid on isolation during sleeping hours especially, also all the fresh air possible and abundance of food.

Instructions as to the disposal of sputum have been carefully given.

Deaths from Tuberculosis :—

Pulmonary	11 cases.
Meningeal	1 „
Other forms	3 „

VITAL STATISTICS.

The area of the District is 94706 acres.

The population given at the 1911 was 44746.

The estimated population for 1913 is 14812.

BIRTHS.

The number of births for the year 1913 is 314, giving a birth-rate of 21·19.

The number of births may be divided as follows :—

Legitimate	Boys	154	Total 301.
	Girls	147	
Illegitimate	Boys	4	Total 13.
	Girls	9	

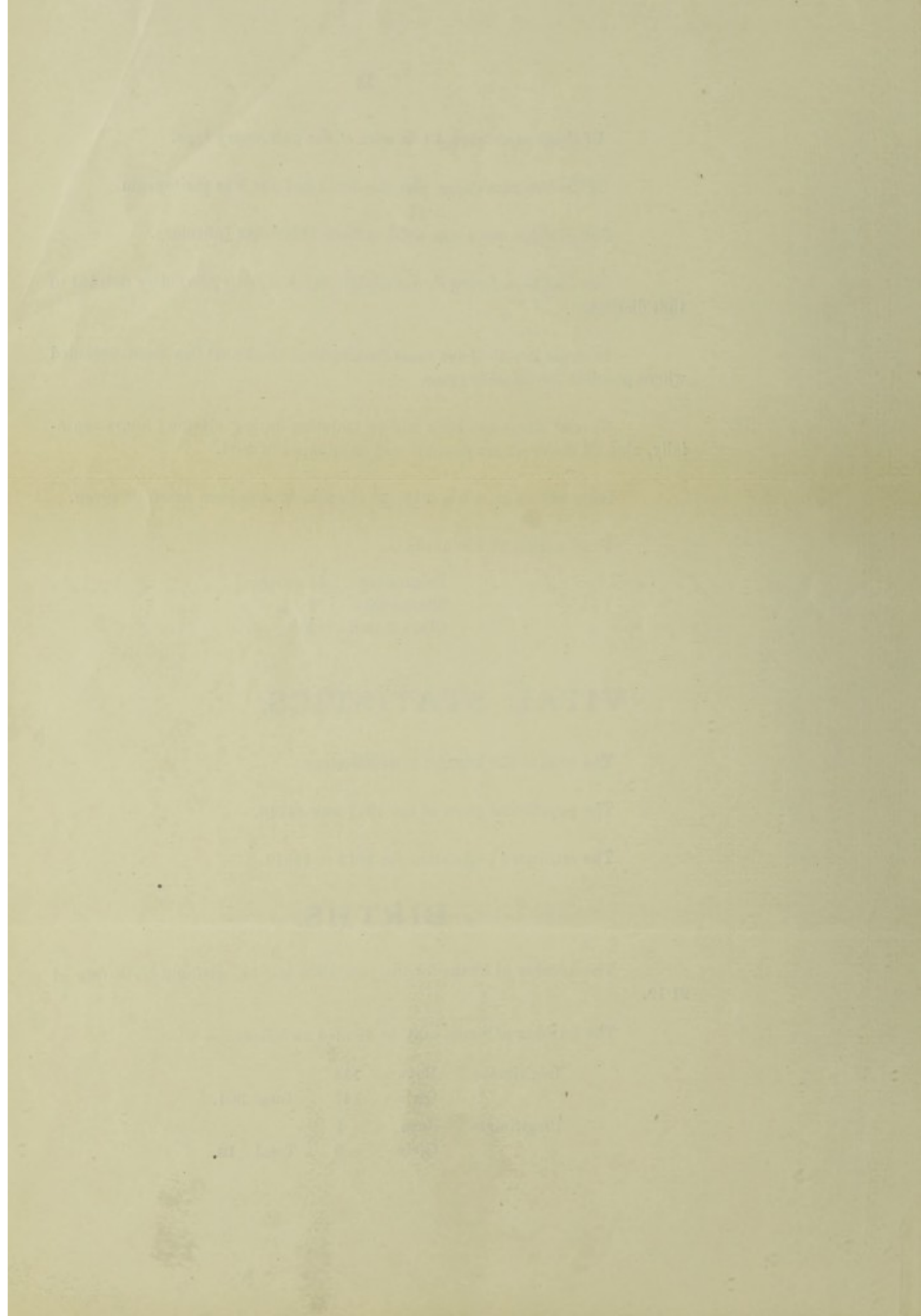


TABLE A.

Sub-District.	1st Half-Year.	2nd Half-Year.	Totals.	Illegitimate.
GAINSBOROUGH	11	18	29	Nil
MARTON ...	48	62	110	1
SCOTTER ..	43	47	90	5
MISTERTON ...	42	43	85	7
TOTALS ...	144	170	314	13

DEATHS.

The total number of deaths registered in the district for the year 1913 was 192.

Subtracting the number 28 of residents not registered in the district, the total is 164.

The death-rate is 12·96.

A. H. H. H.

1870		1871		1872		1873		1874	
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

TABLE B.

This table gives the total deaths according to the sub-districts for all ages, and for under 1 year ; comparing them with the previous four years.

Year	A		B		C		D		TOTALS	
	Misterton		Scotter		Marton		Gainsborough		All Ages	Under 1 Year
1909	65	9	60	9	84	11	16	2	223	32
1910	57	13	46	8	69	11	13	0	185	32
1911	64	6	48	9	73	7	24	7	209	29
1912	71	11	51	11	47	6	11	0	180	28
1913	62	11	35	6	58	4	9	2	164	23

Total deaths of illegitimate children 2.

The chief causes of death for children under one year were Prematurity and Marasmus, and diseases of the lungs and stomach.

TABLE II

Summary of the results of the experiments on the effect of the concentration of the solution on the rate of the reaction.

Concentration of the solution, g/l.	Rate of the reaction, g/l. per hour
0.1	0.01
0.2	0.02
0.3	0.03
0.4	0.04
0.5	0.05
0.6	0.06
0.7	0.07
0.8	0.08
0.9	0.09
1.0	0.10

The results of the experiments show that the rate of the reaction increases with the concentration of the solution. The rate of the reaction is directly proportional to the concentration of the solution.

Influenza.

This disease was not so prevalent as in the previous year, probably due to the improved climatic conditions.

Cancer.

There were 14 deaths from this disease; all the cases were of the abdominal organs or mammary gland.

Bronchitis.

This disease as usual was responsible for a very considerable number of deaths in old people.

Besides the regular notifications of infectious diseases, I receive through the office of the County M.O.H. copies of all notices of infectious disease from the head teachers in all the schools in your district.

I am indebted to the officials of your Council, and the County M.O.H. for much valuable assistance.

Copies of this Report have been sent to the Local Government Board, and the various bodies interested as usual.

I am,

Your obedient Servant,

H. B. WILLOUGHBY SMITH,

M.B., Lond., F.R.C.S. Eng., L.R.C.P. Lond.
MEDICAL OFFICER OF HEALTH.

