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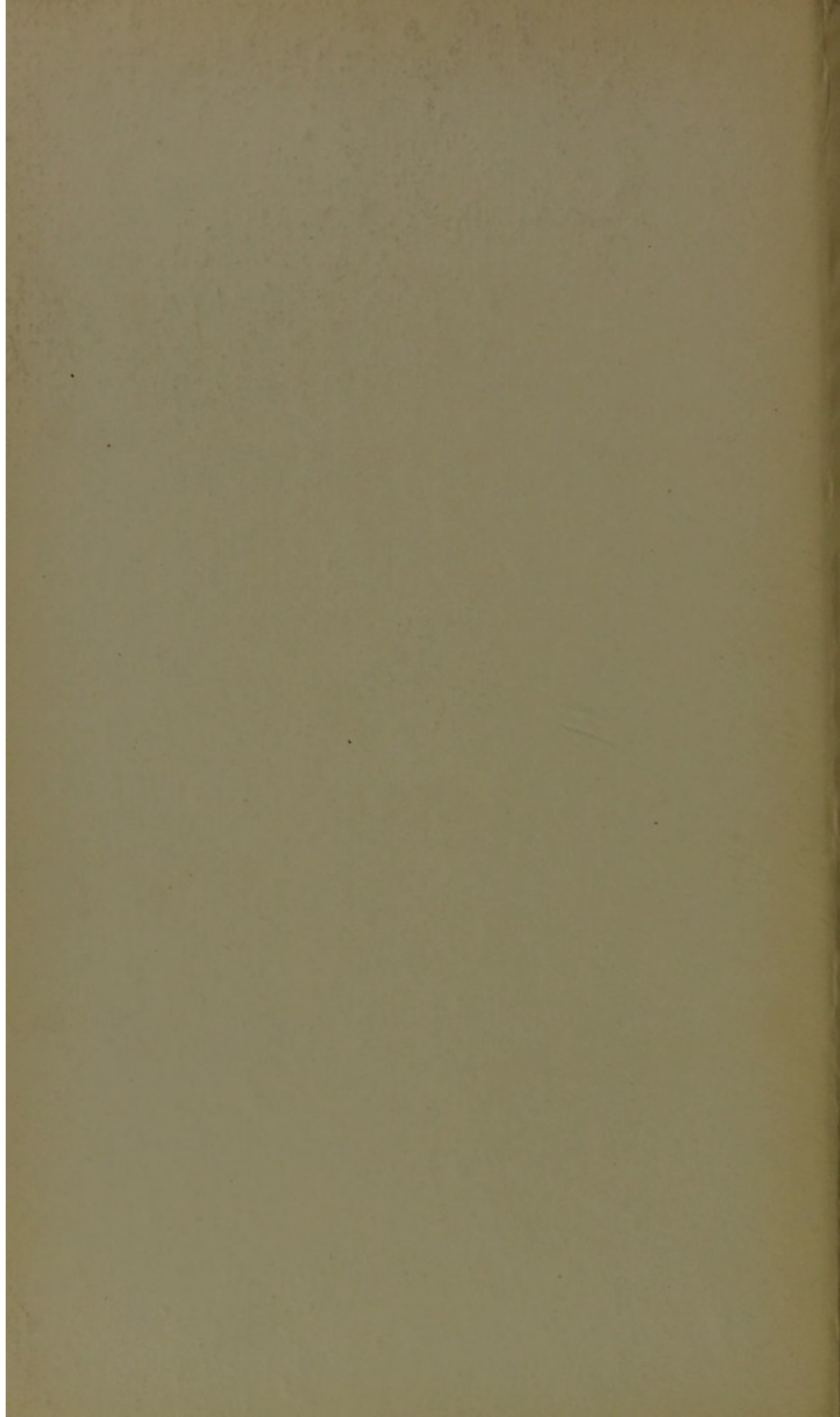
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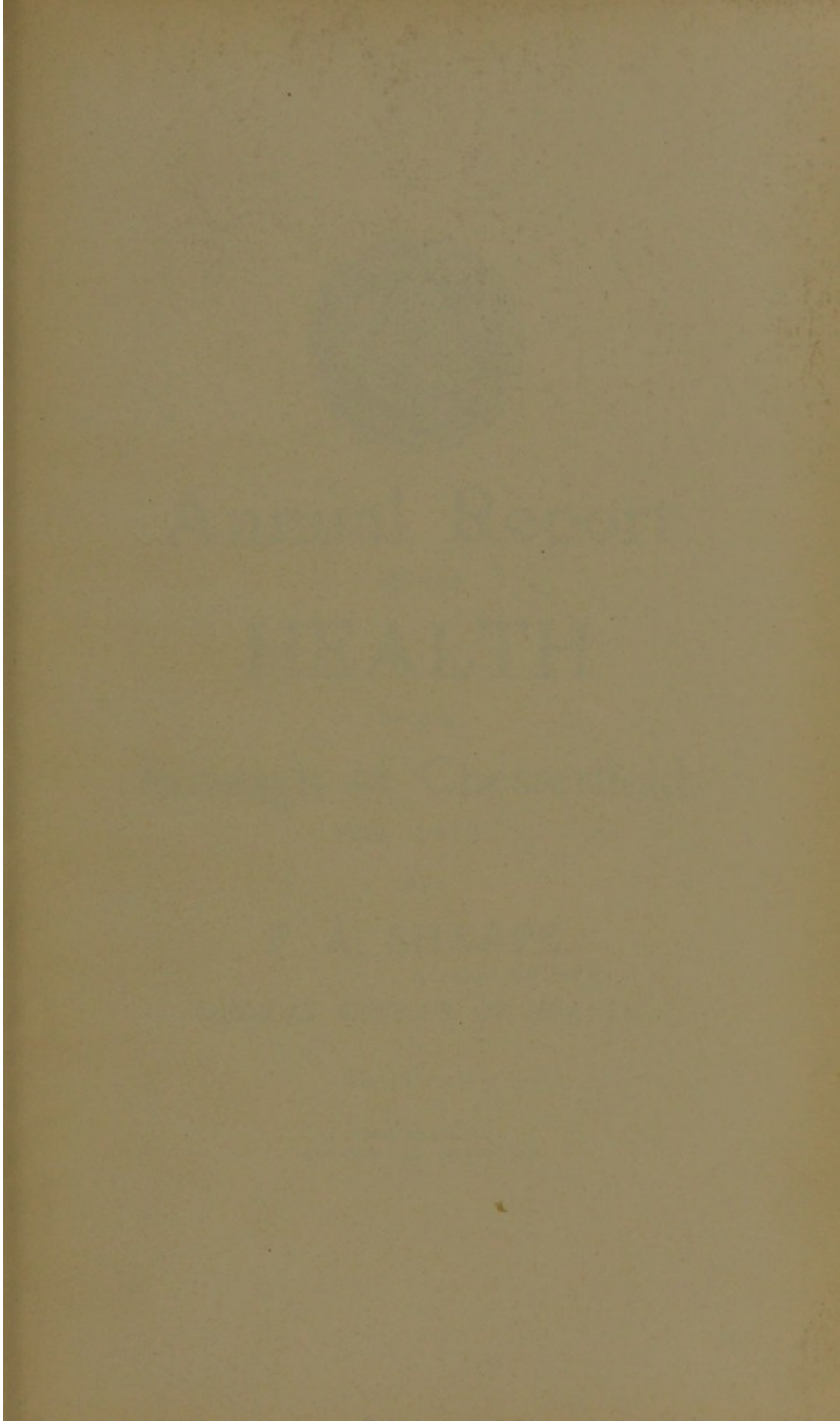
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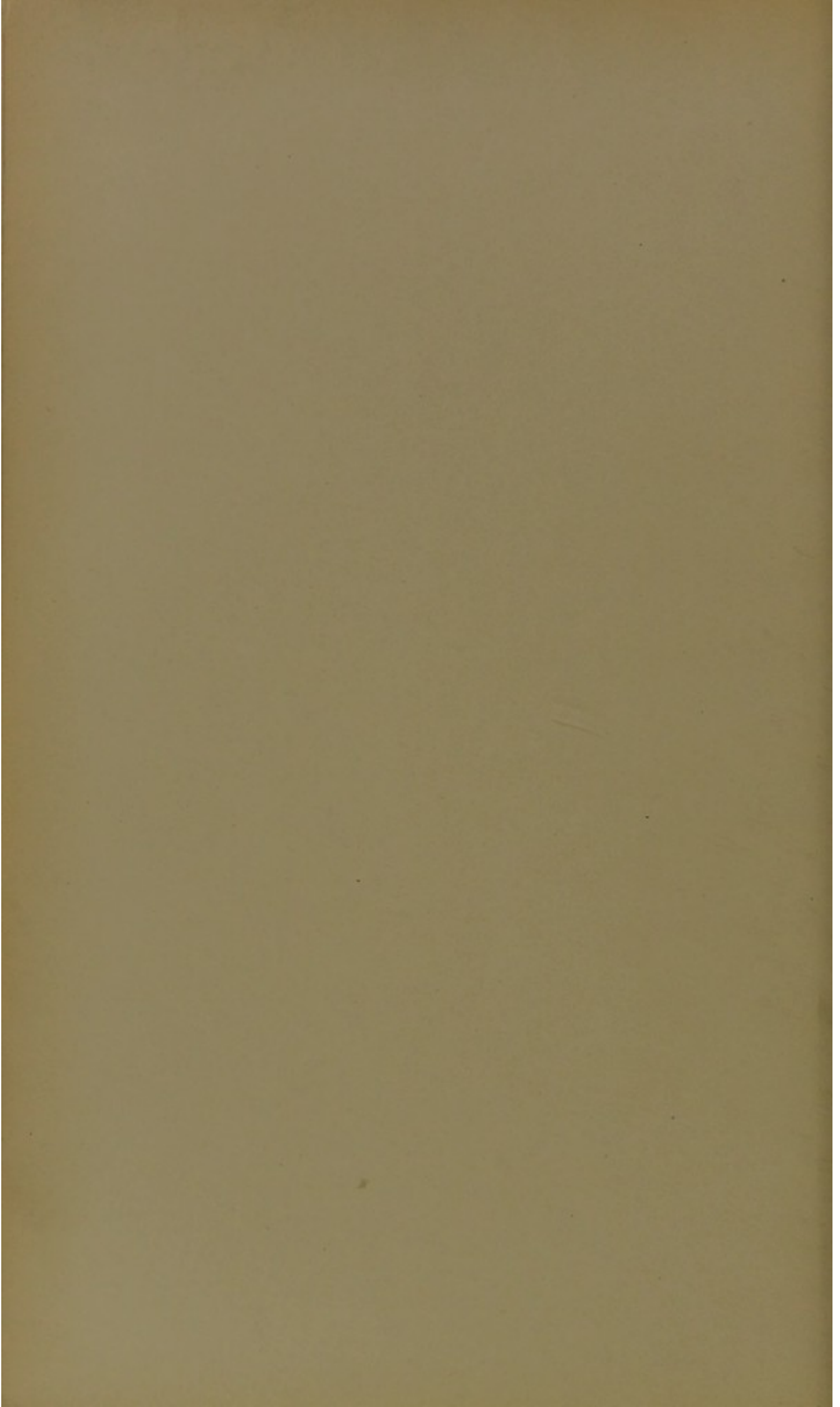


Annual Report
ON THE
HEALTH
OF THE
Borough of Chesterfield,
FOR 1912.
BY
F. A. SHARPE,
M.D. Lond., B.S., D.P.H.,
MEDICAL OFFICER OF HEALTH.

CHESTERFIELD:
BROOMHEAD BROS., PACKERS' ROW.
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Borough of Chesterfield.

HEALTH COMMITTEE, 1911-12.

Chairman :

Councillor W. B. ROBINSON.

Vice-Chairman :

Councillor EDMUNDS, C.C.

Members :

THE MAYOR (The Duke of Devonshire).

Alderman BOOTH, M.D., J.P. Councillor LACK.

„ HADFIELD, C.C.

„ LANCASTER.

Councillor CLARK.

„ SILCOCK.

„ EYRE.

„ WOODHEAD.

„ GLOSSOP.

„ SHORT.

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Councillor CLARK.

„ SHORT.

„ EYRE.

„ WOODHEAD.

„ GLOSSOP.

„ HODKIN.

Medical Officer of Health :

F. A. SHARPE, M.D., B.S. Lond., D.P.H.

Inspector of Nuisances :

CHARLES E. WOOD, C.S.I.

Assistant Inspector of Nuisances :

JAMES R. HAWKINS, C.S.I.

Health Visitor :

MRS. MARION PELLY.

Veterinary Inspector :

FRANK B. PEARSON, M.R.C.V.S.

LIST OF ACTS OF PARLIAMENT ADOPTED BY THE COUNCIL.

Infectious Diseases (Notification) Act, 1899.
 Infectious Diseases (Prevention) Act, 1890.
 Public Health Acts Amendment Act, 1890.
 Private Street Works Act, 1892.
 Parts 3, 4, 5 and 6, and sections 15 to 25, and 27 to
 33 of Part 2, and 94 and 95 of Part 10 of the
 Public Health Acts Amendment Act, 1907.
 Notification of Births Act, 1907.

LOCAL GOVERNMENT ACT, 1894.

Powers conferred upon the Council by the Act.

The granting of Pawnbrokers' Certificates.
 The licensing of Game Dealers.
 The alteration of dates of Fairs.
 The duty of protecting public right of way.

Powers conferred by the Local Government Board.

To appoint Overseers.
 To appoint and revoke the appointment of
 Assistant Overseer.
 The Powers of a Parish Council as to Charities.

PRIVATE ACTS.

The Chesterfield Corporation Markets Act, 1873.
 The Local Government Board's Provisional Order
 Confirmation (No. 14) Act, 1892 (Borough Extension).
 Electric Lighting Orders Confirmation (No. 1) Act,
 1894.
 The Chesterfield Improvement Act, 1901.
 The Chesterfield Corporation Tramways and Im-
 provement Act, 1904.
 The Local Government Board's Provisional Orders
 Confirmation (No. 6) Act, 1910 (Borough Extension).

To the Chairman and Members of the Public Health
Committee of the Borough of Chesterfield.

Gentlemen,

I have the honour to submit to you the Annual Report for the year 1912, being my first Annual Report on the Health of the Borough. The past year has been remarkable owing to a low death rate and infantile mortality, the latter being below 100 for the first time in the history of the Borough.

The most pressing necessities for the furtherance of good sanitation in the Borough are: (1) More rapid conversion of privy middens to water closets; (2) to enable this to be done, the provision of a further water supply.

I am,

Your obedient servant,

F. A. SHARPE.

Health Office,
Saltergate,
Chesterfield,
March, 1913.

SUMMARY

OF ANNUAL

Health Report for 1912.

BOROUGH OF CHESTERFIELD.

Area—Land, less inland water, 2625 acres ; inland water 18 acres ; total 2643 acres.

Altitude (average)—About 300 feet above ordnance datum.

Population, Census for 1911—37,406.

Estimated Population, June 30th, 1912—38,100. Separate occupiers or families—7711.

Ratable Value—£136,449.

Assessable Value—£126,915.

General District Rate— $3\frac{1}{7}$ in the £.

Poor Rate— $4\frac{1}{5}$ in the £.

VITAL STATISTICS, 1912, per 1,000 living.

Birth Rate—28·8.

Crude Death Rate—16·06.

Death Rate (Corrected)—13·12.

Epidemic Diseases Death Rate—0·99.

Other Tubercular Diseases Death Rate—0·39.

Respiratory Diseases *do. do.* —2·23.

Phthisis ... *do. do.* —1·07.

Infant Mortality, per 1,000 Births—96.

Isolation Hospitals—Penmore Isolation and Small Pox Hospitals.

Water Supply—From Linacre Reservoirs and Holymoorside Whispering Well.

TABLE.—METEOROLOGICAL RECORD, 1912.

Rain Gauges, 5 inches in diameter at Gas Works and 8 inches at Linacre Reservoir, 1 foot above ground ; 279 feet above sea level at Gas Works and 500 feet at Linacre Reservoir. Temperature taken in the shade and 4 feet from the ground.

MONTH.	Temperature of Air during Month.				Mean Temperature of Air.	Rainfall.						
	Highest.	Lowest.	Mean of			Number of Days on which Rain Fell.				Amount Collected in Inches.		
			All Highest.	All Lowest.								
January ...	54	12	40·87	30·03	35·45	18	19	4·81	5·80	3·79		
February ...	57	10	45·41	33·17	39·29	12	17	1·58	1·95	1·31		
March ...	62	30	50·45	39·03	44·74	20	25	2·65	4·48	3·36		
April ...	70	28	57·43	37·03	47·23	6	8	·29	·61	·31		
May ...	73	28	61·25	44·58	52·91	11	12	2·65	3·23	2·67		
June ...	78	37	65·76	49·53	57·64	22	22	3·47	3·79	3·47		
July ...	84	40	67·90	53·45	60·67	17	17	5·14	4·79	4·81		
August ...	67	36	61·93	49·61	55·75	19	23	4·99	5·60	5·03		
September ...	70	31	59·66	44·26	51·96	10	12	1·15	1·63	1·19		
October...	66	27	55·25	36·80	46·02	10	13	3·01	3·59	2·89		
November ...	57	25	48·5	38·0	43·25	11	16	2·19	2·52	2·33		
December ...	59	20	49·25	37·03	43·14	14	23	2·76	3·75	2·76		
Entire Year ...	84 (a)	10 (b)	55·33	41·04	48·17	170	207	34·69 (c)	41·74 (d)	33·92 (e)		

(a) July 12th. (b) February 4th and 5th. (c) Greatest amount on one day, 1·78 inches on July 27th.
 (d) Greatest amount in one day, 1·32 inches on January 16th, 1·04 inches on October 26th.
 (e) Greatest amount on one day, 1·35 inches on July 27th.

REPORT.

A.—NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

(1) **Physical Features and General Character of the District.**—The area of the Borough previous to November 9th, 1910, was 1,216 acres, 18 of which are covered by water; that of the Extended Borough is 2,643 acres.

The greater part of the town is built upon a tongue of land projecting in an easterly direction from the high land of Newbold and Dunston into the valley of the Rother, the remainder being situate to the north, east and south of this in the valleys of the Hipper and the Rother, which join here after the Rother has received the Muster brook. The joint stream discharges into the disused Chesterfield and Stockwith Canal, which overflows in time of heavy rain into its former course, which contains little but the effluent from the sewage disposal works at other times.

The geological formation is clay overlying the trias sandstone of the coal measures, but to the north the surface is largely composed of stones lying in alluvial soil, while most of the West Ward stands on alluvial deposits.

The Old Borough was divided for electoral purposes into three wards—the North, chiefly residential and mercantile, containing the Chesterfield and North Derbyshire Hospital and the Union Workhouse, and the South and West, which contain the principal factories and works.

The Extended Borough is divided into four wards—the Central, comprising the principal portion of the old South Ward, and parts of the old North and West Wards; the North, made up of the greater part of the old North Ward and the added Newbold and Dunston area; the

South Ward, consisting of the smaller part of the old South Ward and the added Calow and Hasland areas; and the West, including the added area of Brampton and Walton and all the old West Ward except its easterly portion.

The town is a busy one and rapidly increasing. It is served by three lines of railway, two of which now belong to one company, and is the centre of an important colliery and agricultural district. Large numbers of people enter the town for shopping and recreative purposes by the electric tramway (which is the property of the Corporation), motor omnibuses, and the very numerous wagonettes which ply between the town and surrounding villages.

The main industries are the coal and iron trades, but there are several large mills, engine works, potteries, breweries and tanneries. The shops are very numerous and better than are usually found in a town of this size.

The Corporation are now seeking Powers to instal a system of Trackless Trams and Motor 'Buses to further connect the Borough with adjacent districts.

The following Census return of occupations is appended:—

CHESTERFIELD BOROUGH.

OCCUPATION	MALES			FEMALES			
	Total	Single or Widowed	Married	Total	Single	Married	Widowed
I. General or Local Government of the Country	215	89	126	44	36	2	6
II. Defence of the Country ...	9	4	5	...	...	...	...
III. Professional and their Subordinate Services	342	156	186	343	304	30	9
IV. Domestic Offices or Services ...	135	57	78	1216	1046	85	85
V. Commercial Occupations ...	597	256	341	73	68	1	4
VI. Conveyance of Men, Goods and Messages ...	1334	617	717	7	4	1	2
VII. Agriculture ...	175	101	74	14	13	...	1
VIII. Fishing ...	...	...	...	...	...	...	...
IX. In and about Mines and Quarries ...	3319	1580	1739	4	2	...	2
X. Metals, Machines, Implements & Conveyances	2088	1062	1026	32	28	2	2
XI. Precious Metals, Jewels, Watches, &c. ...	71	29	42	53	51	1	1
XII. Building and Works of Construction ...	918	351	567	...	...	...	...
XIII. Wood, Furniture, Fittings and Decorations	219	91	128	17	15	1	1
XIV. Brick, Cement, Pottery and Glass ...	326	177	149	104	86	15	3
XV. Chemicals, Oils, Grease, Soap, Resin, &c ...	62	34	28	7	5	2	...
XVI. Skins, Leather, Hair and Feathers ...	76	28	48	...	...	...	...
XVII. Paper, Prints, Books and Stationery ...	199	103	96	436	411	21	4
XVIII. Textile Fabrics ...	199	89	110	690	626	49	15
XIX. Dress ...	331	141	190	459	395	41	23
XX. Food, Tobacco, Drink and Lodging ...	967	411	556	413	207	134	72
XXI. Gas, Water, Electricity and Sanitary Service	102	28	74	...	...	...	...
XXII. Other, Undefined Workers and Dealers ...	726	391	335	104	51	35	18
Total Occupied ...	12410	5795	6615	4016	3348	420	248
XXIII. Without Specified Occupations or Unoccupied ...	2030	1837	193	10436	3051	6500	885
Total (aged 10 years and upwards) Occupied and Unoccupied ...	14440	7632	6808	14452	6399	6920	1133

(2) **The Population.**—The revised figures of the census of 1911 are as follows:—

THE CENSUS, 1911.
The following are the Revised Figures for 1911.

	Area in Statute Acres	Families or separate Occupiers		POPULATION				Institutions, Large Establishments, etc.	
				1901		1911			
		1901	1911	Persons	Persons	Male	Female	No.	Population
CHESTERFIELD, M.B. ...	2643	6319	7711	32335	37406	18766	18640	38	1373
Central ...	...	...	1946	...	9739	4974	4765	27	411
North ...	...	...	1835	...	9004	4474	4530	7	822
South ...	...	...	1756	...	8494	4631	4133	2	27
West ...	...	...	2174	...	10169	4957	5212	2	113

The population in the respective wards in 1901 is not included owing to the re-arrangement of wards at the 1910 Extension of the Borough.

The figures at previous enumerations were:—

		Persons.		Inhabited houses.
1871	...	11427	...	2379
1881	...	12221	...	2315
1891	...	22009	...	4171
1901	...	27185	...	5282

The rate of increase in the Borough during the intercensal period equals 15.7 per cent., that of England and Wales equals 10.9 per cent., and in Derbyshire equals 13.9 per cent. Excluding the rural population, the urban population has increased in England and Wales at a rate of 11.1 per cent., and in Derbyshire at a rate of 12.5 per cent. The increase is a very healthy sign of growth, the old Borough having increased by 2,529 and the added portion by 2,542 since the 1901 census.

Population in the Middle of 1912.—Estimated by the natural increase—that is, the excess of births over deaths—the population is 37,980. No account is taken here of immigration and emigration. Estimated according to the method of the Registrar General, which assumes that the population increases or decreases in a geometrical ratio in any intercensal period at the same rate as in a previous one, the figure is 38,098. Calculated by new houses certified for occupation, less those houses closed, since the census, and corrected for large institutions, the figure is **38,100**, which is used as the basis of the rates in this report.

The population is divided as under (the figures given being approximate only, pending further census details):

Wards.			
North.	South.	West.	Central.
9173	8653	10360	9922

It is impossible to give any details as to the number of marriages in the Borough, as the area for registration is the Poor Law Union, which includes a large area around the Borough.

The same applies to figures relating to Poor Law Relief. In the middle of the year there were 493 inmates in the Workhouse and 149 persons in the Chesterfield and North Derbyshire Hospital. I am indebted to Mr. Thraves for the following table showing the steadily increasing use made of the Hospital:—

Year.	In-patients treated.	Out-patients treated.
1902	490	2103
1903	580	2390
1904	618	2701
1905	653	3764
1906	763	3944
1907	921	4193
1908	866	4725
1909	897	4687
1910	1091	5540
1911	1102	4895
1912	1225	4716

B.—SANITARY CIRCUMSTANCES OF THE DISTRICT.

Water Supply.—Water is supplied by the Chesterfield Gas and Water Board, whose area of supply includes the Borough, the Urban Districts of Whittington and Newbold, Brampton and Walton, and part of the Chesterfield Rural District. The area supplied is 24 square miles in extent.

The greatest part is collected on a gathering ground above the Linacre Reservoir of 1,386 acres, but there are other works as given below, while a small supply can be obtained in time of need from the mains of the Chesterfield Rural District Council.

Capacity of Reservoirs, 247,746,000 gallons.

Lowest quantity stored during the year, 209,279,000 gallons.

Present daily consumption, 1,065,000 gallons.

Number of houses supplied, 14,466.

The water contains too much vegetable matter to be considered a first-class supply, but is adequately filtered. For some years the plumbo solvency of the High Level Supply has been the subject of comment, and the following report was submitted to the Health Committee:—

REPORT ON THE LEAD SOLVENCY OF THE WATER SUPPLY TO THE BOROUGH.

On November 28th, 1912, I received a letter from a medical practitioner calling my attention to a case of lead poisoning which had occurred in 45 Old Road. Accompanying this was a sample of water taken from the house pipes, which were supplied by the High Level Supply. The Borough Analyst reported that the sample contained one-tenth of a grain of lead per gallon, which is, of course, an amount dangerous to health.

On reporting to the Health Committee I was requested to ascertain whether lead pollution was possible in other parts of the town. With this object in view twelve more samples were submitted to the Analyst—six from the High Level Supply (which also contains the Whispering Well water from Holymoorside) and six from the Low Level Supply. The power to dissolve lead from the pipes of a house is much affected by the age of the pipes, those pipes which have been in use for some time having more or less a protective coating, pipes newly used being more liable to the solvent action of water. The samples were again divided, three being taken from old pipes and three being taken from new pipes.

All the samples were drawn off early in the morning, and thus represented water which had been in contact with the lead pipes all night.

High Level Supply (Upper Linacre and Holymoorside).

Pipes	Analyst's Ref. No.	Amount of Lead in grains per gallon
Old	2	07
Old	3a	07

Pipes	Analyst's Ref. No.	Amount of Lead in grains per gallon
Old	6a	 None
New	1	15
New	4a	 None
New	5a	3
Low Level Supply (Middle and Lower Linacre).		
Old	3	 None
Old	4	 None
Old	6	 None
New	5	 Trace less than .05
New	1a	 None
New	2a	 None

The result of this analysis shows that, except for a trace of lead in sample No. 5, contamination with lead is confined to the High Level Supply and Holymoorside.

At the dates when the samples were taken the High Level Supply consisted of Linacre and Holymoorside (Whispering Well) in equal parts.

With the samples sent as above, samples were sent of (1) Linacre High Level, (2) Linacre Low Level, and (3) Holymoorside Whispering Well, for complete analysis with special reference to plumbo solvency.

The results of these analyses with respect to plumbo solvency are as follows:

(1). Upper Linacre Reservoir.

Period of action.

1st 24 hours, 0.15 grains per gallon.

2nd 24 hours, 0.10 grains per gallon.

3rd 24 hours, 0.10 grains per gallon.

4th 24 hours, 0.10 grains per gallon.

(2). Lower and Middle Reservoir.

Period of action.

1st 24 hours, 0.12 grains per gallon.

2nd 24 hours, 0.10 grains per gallon.

3rd 24 hours, 0.07 grains per gallon.

4th 24 hours, 0.07 grains per gallon.

The Analyst reports that the above two samples yield practically the same results. "The waters are soft, and they have a distinct tendency to dissolve lead in such a proportion as to have an injurious effect upon people habitually drinking the water and who are susceptible to its action."

(3). Whispering Well, Holymoorside.

Period of action.

1st 24 hours, 0.05 grains per gallon.

2nd 24 hours, trace less than 0.05.

3rd 24 hours, faint trace.

4th 24 hours, 0.05.

"The water is softer than the other two and has practically no plumbo solvent action."

On receipt of these results I called the attention of the Borough Analyst to their apparent discrepancy; that is, Upper Linacre water (plumbo solvent) mixed with equal quantities of Holymoorside water (non-plumbo solvent) was found to contain more lead in the house pipe water than the Middle and Lower Reservoir water (plumbo solvent) unmixed with the non-plumbo solvent Holymoorside supply. This was explained by the Borough Analyst, whom I consulted, by the fact that the tests for the power to dissolve lead were carried out in his laboratory under exactly equal conditions, whereas the house waters analysed for lead were all subjected to different conditions of temperature and time of exposure of the lead pipe to the action of the water. Further, the constitution of the lead pipe varies in different houses, and the water may undergo slight chemical changes in the mains and pipes, so that some discrepancy is inevitable.

The fact, however, is obvious that the main supply to the Borough is capable to a dangerous degree of dissolving lead. The problem of rendering the water safe is not difficult. Among other places, Sheffield and

Ashton-under-Lyne have a water supply of a similar nature to ours, and have succeeded in removing this dangerous power.

I append a copy of the results of analysis of the water :—

		Upper Linacre Reservoir	Low and Middle Linacre Reservoir	Whispering Well, Holymoorside
PHYSICAL CHARACTER.				
1.	Suspended Matter	Trace	Trace	Trace
2.	Appearance of a column, two ft. long	Clear, yellowish	Clear, nearly colourless	Clear, yellowish
3.	Taste and Odour	None	None	None
ANALYSIS.				
Grains per gallon	Total Solid Matter	13·00	14·00	10·00
	Loss in ignition	2·00	4·00	3·00
	Chlorine	0·80	0·90	0·95
	equal to Sodium Chloride	1·32	1·48	1·56
	Nitrogen in oxidised forms	Trace	Trace	0·19
	equal to Nitric Acid	—	—	0·73
	Poisonous Metals	None	None	None
Degree of Hardness		6·2°	6·2°	3·2°
Parts per Million	Oxygen absorbed	0·82	0·82	0·15
	Free & Ureal Ammonia	0·02	0·03	0·05
	Albuminoid Ammonia	0·12	0·10	0·08

The difference between the High and Low Level Supply as regards their plumbo solvency was partly elucidated later by a suggestion that the "Bore Hole" supplying water to the Middle and Lower Reservoir might be a powerful factor. The Borough Analyst reported as follows :—

"The figures show the water (Bore Hole at Linacre) to be free from other than normal traces of readily changeable organic matter, and negative any suspicion of animal contamination. The figure recorded under the head of free ammonia is high, but waters from bore holes in coal measures always contain it as a natural constituent. The water, however, is peculiar in this respect—that is, it is alkaline containing 16·5 grains per gallon of sodium carbonate; but this constituent is not deleterious and would have a tendency to prevent plumbo solvent

action by partially neutralising the acidity of the moorland waters.

“A water of this composition is soft, as it is free from the hardening constituents of ordinary waters.

“As to the plumbo solvent action of the water, the experiments I have conducted show that its action is very slight.”

Report on Bore Hole at Linacre:—

		Suspended Matter	Traces
		Appearance of Column 2 ft. long ...	Clear and Colourless
		Taste	Normal
		Odour	None
Grains per gallon	{	Total Solid Matter	23·80
	}	Loss on Ignition	2·24
		Chlorine	1·05
		Equal to Solid Chlorine	1·73
		Nitrogen in oxidised form	None
		Equal to Nitric Acid	—
		Poisonous Metals	—
		Degree of Hardness	1 50
Parts per Milli'n	{	Oxygen absorbed	0·37
		Free and Ureal Ammonia	0·36
		Albuminoid Ammonia	0·04

Sanitary Conveniences.—The following table shows the number and types of sanitary conveniences in each Ward:—

Ward.	Privies.	Middens	Dry Ashpits.	Portable Dustbins	Closet Pails.	Water Closets.	Waste Water Closets.
NORTH ...	780	452	183	537	1	775	44
SOUTH ...	1413	735	156	251	9	461	8
WEST ...	1150	640	69	696	38	518	148
CENTRAL ...	695	360	210	626	9	827	32
Total ...	4034	2187	618	2100	57	2581	232

At the Council meeting held on October 14th, 1912, the following resolution was passed:—

Resolved—That the Health Committee be requested to submit, at the earliest date, a general scheme for privy conversion in the Borough, with an estimate of the cost of the same, together with a statement as to the amount of addition water which, in their opinion, will be necessary under such a scheme.

In view of the above, the following report was submitted.

The following table gives the number of Privies, including paid closets, which exist in the different wards:

North	.....	630	.....	171	.....	801
South	.....	1331	.....	91	.....	1422
Central	...	513	.....	204	.....	717
West	.....	942	.....	219	.....	1161
		3416		685		4101

From this total 96 may be deducted, as houses to which they are connected are situated more than 100 feet from a sewer and for that reason are drained into cess-pools.

These are—Ashgate Road 3, Brockwell 5, Newbold Road 24, Boythorpe 8, Hasland Road 7, Spital Road 20, Derby Road 15, Hady Hill 4, Hady Lane 10, or a net total of 4,005 privies.

From a perusal of the resolution submitted by the Council to the Health Committee the two points at issue are the question of cost and the water supply.

Before discussing the question of conversion the powers usually adopted to enforce the same may be briefly described as follows:

(1) Public Health Act 1875, Sec. 36. Local Authority may require the provision for any existing house of a sufficient closet. On failure of the owner to comply the Local Authority may themselves carry out the work and recover the expenses summarily.

(2) P. H. Act, Sec. 91. Any Privy, etc., so foul or in such a state as to be a nuisance or injurious to health is a nuisance under the Act.

(3) Public Health Act Amendment Act 1907, Sec. 39, gives power to Local Authority to require provision of water closets, in lieu of other forms of closet, in connection with new buildings, provided there are sufficient water supply and sewer facilities.

(4) A Local Authority may order the conversion of the existing closets to the water carriage system. The Local Authority, however, must bear the entire cost where the original accommodation is a pail closet, and half the cost in case of other types.

(5) A provisional Order of the Local Government Board or a local Act to enable a Corporation to subsidize the owners to an extent determined by the Corporation for the conversion of privies into water closets and to provide a separate receptacle for ashes and house refuse may be obtained.

Many towns have obtained powers to enforce conversion and to subsidize owners, except in such cases where the privies are a nuisance or where additional water closets are required, when no contribution is made.

In Sheffield, if the owners do the work themselves according to a specification marked A, they receive a contribution of £3 for each privy converted. If the owner wishes the Corporation to do the work, tenders are obtained from three builders, one of whom may be nominated by the owner. This work is carried out under more strict specification marked B., when the Corporation pay one-third the cost of conversion, including repairs to any drain used for carrying water closet sewage.

In Rotherham the work is carried out under the Corporation Act 1904, which empowers the Corporation to pay one-half the cost to the owners.

In Derby, where about 25 per cent. of the conveniences are still either pails or privies, the Corporation

have not up to the present time made any contribution whatever to owners.

The work of conversion is carried out under the Public Health Act, Sec. 36 and 91, and up to now there has not been any difficulty in getting the conversion made at the expense of the owners.

Bolton obtained a Provisional Order in 1893; having no power to borrow money for this purpose, they now contribute £2 out of the rates for each privy or pail converted. The work has to comply with a specification supplied to the owners.

Leicester, between the years 1897 and 1906, converted 6,093 pails and 194 privies at an average cost to the Corporation of £2/9/- per closet. The cost of collecting and disposal of the contents of pails previous to conversion was 9/5 per closet per annum against 8/6½ per w.c. during the conversion.

The figures given, being from the experience of large towns, show the cost of conversions to average about £5.

In many cases this amount exceeds the cost of conversion in Chesterfield, but as secondary means of access or back streets are an exception in the Borough, privy conversion cannot be carried out as economically as in more modern towns.

In cases where drains are close to existing privies no difficulty is met with, but in many others 15 to 20 yards of asphalt will require making good.

In Old Road there are blocks of privies 40 yards away from a drain. In others, such as the west side of Rutland Road, Victoria Street, St. Helen's Street, Ashgate Road, Lower Grove Road, Valley Road, Hartington Road, and other places, the present conveniences are at such a low level that sewers must be laid specially to drain them, while in others it will be necessary to rebuild them nearer the houses.

In my opinion, difficulties of this kind will be surmounted before many years by those owners who do not

want empty houses. It is surprising to find that in four of our best residential streets, containing 131 houses, there are yet 67 of this form of convenience in use, which in many cases is the sole convenience for the tenants.

A change of tenants is gradually reducing the numbers, as the absence of a water closet is regarded by possible tenants as a serious drawback.

Regarding the water supply required for the water carriage system, only one answer has been received to a number of queries sent out. This comes from an adjoining County Borough, which replied that "No notable increase in the water supply caused by privy conversion has been noticed." From other sources I find that Leicester provided that the extra sewage resulting from the 6,395 water closets would amount to about 61 million gallons per annum, which could be pumped and treated at a cost of £530, equal to 1/9 per closet. This works out at 26 gallons per closet per day or say 5 gallons per head.

Blackburn measured a district for three months previous to conversion of the convenience to a block of houses, when the quantity used averaged 9.05 gallons per head. After conversion the water used was found to average 13.62 gallons, a difference of 4.57 or an increase of 50 per cent.

Twenty-five gallons may be taken as the amount to be provided per day for each conversion made, or 9,125 gallons per annum.

The estimated number of houses using privies are 4,700, and if the consumption of each house increased by five gallons per head per day then the total increase would be 117,500 per day or 42,887,500 gallons per annum.

Exact figures as to the water supply in the Borough are not available, but the amount necessary to provide for the conversion is roughly one-sixth of the present supply.

Sewage Disposal.—The average dry weather flow is 742,440 gallons per diem, as compared with nearly a

million and a quarter before the leaks in the sewers were sought for and repaired. The maximum flow is about three and a half million gallons. The sewage, in reaching the Works, passes through a silt chamber, duplicated, where the diminished rate of flow permits of the deposition of the heavier solid matter in suspension. It then goes through a screen which removes the large floating and suspended matter and enters the septic tanks. These are open, three in number, and have each a capacity of 223,200 gallons; two are in use at once while a third is being cleaned. The solid organic constituents of the sewage are liquified in these, from which the sewage flows to the pumping station, where it is raised by a pump to a sufficient height to allow of its flowing by gravitation to the filters. These are 20 in number, and have a cubic capacity of, roughly, 45,000 cubic yards, capable, at a rate of 84 gallons per cubic yard, of purifying 3,780,000 gallons of sewage per diem. This accounts for three times the dry weather flow. There are two storm-water filters, on to which excess amounts over three times and under six times the dry weather flow are treated. Amounts over six times the dry weather flow were run direct into the old river bed, from which the river water has been diverted above the sewage works into the canal. As this is dry in summer, the river bed, consisting of a deep layer of putrefying mud, has been the cause of many complaints as a nuisance. At the present time a tank is being constructed of 100,000 galls. capacity in order to allow sedimentation of the storm-water overflow before reaching the old river bed.

The steam power for pumping the sewage is generated by the refuse destructor, the clinker from which supplies the filtering medium. The sludge from the tanks is mixed with lime and sold to farmers.

Septic tanks and percolating filters are provided at Hasland, near the Penmore Hospital, and at Calow Lane for the districts of Mansfield Road, Hasland Green and

Calow Lane. These works are satisfactory, but will in all probability be replaced by an intercepting sewer down the Spital Valley brook.

House Refuse.—The house refuse removed during the year ending 31st December, 1912, amounted to 17,062 loads, against 16,749 loads, an increase of 313 loads. 13,129 loads, or 76 per cent. of the refuse, passed through the destructor at the Sewage Disposal Works; the remaining 3,933 loads were deposited on tips in the district.

The cost of removing the refuse amounted to £2,208 8s. 3d., against £2,063 for the year previous, or an increase of £139. Taking the number of tenements as 7,772, the average cost per tenement is 5s. 8d., the cost per thousand inhabitants being £57.

Much of the refuse from privy middens was removed in skeps and deposited direct in carts, thereby reducing the soiling of the street surface. This method, to a small extent, reduces the nuisance caused by the emptying, but it is impossible to avoid creating a nuisance during the process.

1,936 tenements having portable dustbins were emptied weekly during the daytime, while 5,836 have middens or ashpits from which the refuse is removed during the night.

The night work cost £1,795, or an average cost of 6s. 2d. per house, while the average cost of emptying bins in the daytime amounted to 4s. 2½d., or a saving of nearly a third of the cost of midden work.

At the end of the year our stud consisted of 12 horses; one was sold, two died, and three were purchased to complete the stock. Three of the horses are engaged in the daytime upon bin work, and nine work at night removing ashpit and midden refuse. Hired horses are engaged during the winter to assist in the night work.

Common Lodging House.—There are 13 on the register. They were frequently inspected by the Police and Sanitary Officer and found in a satisfactory condition. The keepers have been notified of the occurrence of cases of small pox within a near distance of Chesterfield so that the Sanitary Authority may be notified of the arrival here of contacts.

Summary of Sanitary Work of Recent Years.

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Total
Houses closed by Magistrate's Order ...	...	...	...	...	...	...	...	...	3	...	...	3
Houses closed after formal notice ...	9	...	...	...	2	5	11	5	...	4	14	50
Houses closed after informal notice ...	3	...	...	2	1	2	1	2	1	2	2	16
Houses demolished or disused ...	1	...	...	...	...	...	1	3	11	29	5	50
Houses made fit for habitation ...	...	4	12	42	13	16	10	35	33	9	13	187
Houses repaired ...	29	65	45	35	29	26	80	22	156	143	65	695
Yards repaired ...	38	106	66	81	34	82	88	108	90	95	54	883
Overcrowding notices served ...	49	29	16	24	25	21	27	21	30	42	28	312
Houses inspected ...	1491	1100	909	785	1393	760	1125	1174	1016	1219	996	11968
Formal } Notices served for Informal } the abatement of Nuisances	184	193	151	187	28	47	150	182	139	216	96	1573
	376	318	331	368	316	239	475	618	867	915	617	5390

Schools.—The Medical Officer of Health is also the Medical Officer to the Education Committee. The work of School Medical Inspection is reported on elsewhere.

Food and Drugs.—One hundred and four samples of food were sent to the Borough Analyst, Mr. C. G. Scott-Smith, who reported that five of the samples of milk did not comply with the standard suggested by the Board of Agriculture. Two of the samples contained added water and two were deficient in fat.

NATURE OF FOOD.	Number of Sampls obtain'd	Number G'nuine	Not G'nuine	Prose-cutions.	Convic-tions.	Dis-mis-sed.	Caut'ns
Milk	52	47	4	4	3	1	1
Butter... ..	31	31	...	...	...	...	...
Cheese	1	1	...	...	...	...	...
Lard	6	6	...	...	...	...	...
Margarine ...	3	3	...	...	...	...	...
Preserved Cream	2	2	...	...	...	...	...
Pepper	4	4	...	...	...	...	...
Baking Powder	1	1	...	...	...	...	...
Mustard	1	1	...	...	...	...	...
Lard Substitute	1	1	...	...	...	...	...
Coffee	1	1	...	...	...	...	...
Ground Ginger...	1	1	...	...	...	...	...
Total	104	99	4	4	3	1	1

PROSECUTIONS, 1912.

Date.	Number of Sample.	CHARGES.	Result.	Penalty	Costs.
20th Feb.	169	Selling Milk containiug 10½ per cent of added water.	Con-victed	£ s. d. 0 10 0	£ s. d. 18 6
12th May	184	Selling Milk 16·6 per cent deficient in fat.	do.	0 10 0	1 1 6
12th May	186	Selling Milk 21·6 per cent deficient in fat.	do.	0 10 0	19 6
23rd Dec.	257	Selling Milk containing 11·4 per cent of added water.	Dis-miss'd	.....	.....
				£1 10 0	2 19 6

Previous to the commencement of proceedings against the vendors of samples Nos. 184 and 186, which respectively were 16.6 and 21.6 per cent. deficient in milk fat, an appeal to the cow was made, when each of such appeal samples were found upon analysis to comply with the standard adopted by the Board of Agriculture.

After this prosecution complaint was made by one of the defendants that cowkeepers could not always produce milk in the early part of the year which would comply with the standard adopted by the Board of Agriculture. The Committee then decided to inform all cowkeepers of their willingness to assist them by making an analysis, without charge, of any sample of milk submitted to them. Instructions were sent to each cowkeeper how the samples were to be submitted. From 23 cowkeepers two samples were received, both of which came from the complainant. One of the samples complied with the standard, and one was slightly deficient in milk fat.

The following is a summary of the work of the last ten years:—

	No of samples taken.	Number Genuine.	Number adulter- ated.	Per centage adulter- ated.	Cautioned	Prosecu- tions.	Total Amount of fines and costs imposed.
1903	60	57	3	5.0	...	3	£ s. d. 7 1 0
1904	60	58	2	3.3	1	1	1 9 0
1905	90	79	1	1.2	...	1	1 1 6
1906	79	74	5	6.3	3	2	2 6 0
1907	80	76	4	5.0	3	1	dismiss'd
1908	83	80	3	3.6	2	1	2 3 0
1909	85	82	3	3.5	...	3	1 18 6
1910	83	77	6	7.2	1	4	7 17 6
1911	105	101	4	3.7	...	4	10 17 6
1912	104	99	5	4.8	1	4	4 9 6

Slaughter Houses.—There are 30 registered for the slaughter of cattle, sheep and pigs, 7 of which are the property of the Corporation. They have been regularly

inspected and found satisfactory. During the year one slaughter house has been rebuilt.

Dairies, Cowsheds and Milkshops.—There are 24 cowsheds in the Borough, housing 168 cows. The sheds have been frequently inspected by the Medical Officer of Health and the Sanitary Inspector. All the cows have been examined by the Veterinary Inspector, who reported that all the animals appeared to be in a healthy condition and showed a marked improvement since his last visit. One cowshed was rebuilt. Eleven milkshops have been regularly inspected and no complaint made except as to neglect of keeping the milk bowl covered, a most important detail which is frequently overlooked by the shopkeepers.

Preparation of Food.—During the year all premises used for the preparation of food were inspected. In 9 cases slaughter houses, occupied by small traders, are used occasionally for the chopping up and the boiling of food; although many of these premises are regularly cleansed, there is an element of danger in this practice, which should not exist. Food should not be made up in forms where offensive matter is handled.

Twenty-two bakehouses are all used jointly for bread baking and confectionery and are in a satisfactory condition. All are on ground level.

The food in the Market Place was regularly inspected. There were surrendered 2 cwt. of beef, 9 cwt. of fish, $3\frac{1}{2}$ cwt. of fruit, 11 bags of mussels, 31 lbs. of pork and 6 tins of prawns. This important subject, i.e., food inspection, does not receive as much attention as it ought to, owing to the inadequacy of the staff.

Housing.—Most of the houses occupied by the artizan class are two stories in height and separate tenements.

The through houses occupied by the better class of artizan vary much in plan from the simple 4-roomed tenement, having a living room at the front and scullery at

the back, with stairs between the two rooms, all under one roof, to the more elaborate plan giving a scullery and another bedroom under another roof at the back.

The back-to-back houses in the town were the subject of a special report, which was considered by the Health Committee, who decided to visit each block. There are five blocks, the houses are three stories in height, and contain a living room, and scullery at the side of living room, on the ground floor, and two bedrooms on the first floor.

In the Low Pavement area the shops fronting the Market Place were at one time high-class residences with narrow gardens (the width of the houses) running down to the river Hipper. As these dwellings became used for commercial purposes, the gardens were built upon, with the result that the area became closely packed with small artizan dwellings, running in long rows down to the river, separated from the neighbouring parallel rows by a narrow passage, in some cases not wide enough to admit a horse and cart. The sanitary conveniences consisted of huge blocks of privies, which were placed either between two adjacent dwellings or were isolated by a narrow cross passage. It is years since any new property, with the exception of frontage, was erected in this area, and 109 houses have been either voluntarily closed or have been closed by the Council during the last 18 years. At the present time the special sanitary problems in this area are those due to lack of ventilation, lighting, and difficulty of adequate cleansing, as the state of the buildings, necessity for repairs, yard surface and drainage, etc., are equal to property having a similar rental in other parts of the town.

The type of houses in this area may be described as a single house, having only one entrance and without cross or through ventilation. They contain a living room with a small scullery at the back or at the side, in which

the stairs are often fixed, and have a large and small bedroom. The space under the stairs usually does duty as a pantry.

A good improvement has been effected in the standard of the housing conditions by the construction of a new street through this area. It has opened out the lower end of the yards, and demolished a number of houses the type of which are too common in the Borough.

The Council have under consideration a road running from the Market Place, commencing at the Three Tuns Inn, and opening in Markham Street opposite the main entrance to the Cattle Market, which will further open out this neighbourhood. A cross street running from Wheel-don Lane to South Street has been suggested.

If the opening out of this area by means of these streets is done, the area would be sub-divided into small areas which could be more easily dealt with.

An undesirable feature in the older parts of the town is the tunnel entrances to courts (as seen in St. Mary's Gate). The opening of the court is made at the expense of the living room of the house or houses forming the entrance, the covering being formed by the floor of the bedroom. This arrangement very materially affects the free air space and ventilation of the houses in the courts.

Further, small dwelling-houses having a frontage in a street that has become a shopping street are converted into lock-up shops in the front, the backs of the houses being let off as separate dwellings. In some cases there is practically no space at the back, and through ventilation has been destroyed by bricking up the old communications from the front to the back of the house.

Another point to which attention should be directed is those yards giving access to works upon which dwelling-houses open. In some cases these yards are properly paved; in some, however, where there are several owners, liability is denied and the means of access to the houses become quagmires.

Houses Empty June 30th, 1912.

RENTS				North Ward	South Ward	Central Ward	West Ward	TOTAL
3/6 per week (Rates inclusive)	...			1	...	3	...	4
3/9 "	...			1	...	1	...	2
4/- "	...			...	...	2	1	3
4/2 "	...			...	1	...	...	1
4/6 "	...			2	10	2	4	18
4/9 "	...			1	2	...	7	10
5/- "	...			2	4	4	4	14
5/3 "	...			...	1	...	...	1
5/6 "	...			...	3	4	4	11
5/9 "	...			...	1	...	1	2
6/- "	...			...	3	...	3	6
6/6 "	...			...	1	...	1	2
7/- "	...			...	3	1	...	4
7/3 "	...			...	...	...	1	1
7/6 "	...			...	...	2	1	3
8/- "	...			1	...	1	...	2
8/6 "	...			1	...	1	1	3
9/6 "	...			...	...	1	...	1
10/- "	...			...	1	...	...	1
10/6 "	...			1	...	...	...	1
£ s. d.								
11 4 0 per year and Rates	...	...		...	1	...	...	1
13 0 0 "	...	...		...	1	...	...	1
14 1 8 "	...	...		...	1	...	...	1
15 0 0 "	...	...		3	1	1	...	5
16 0 0 "	...	...		2	...	...	...	2
17 0 0 "	...	...		2	1	...	...	3
17 10 0 "	...	...		...	...	...	1	1
18 0 0 "	...	...		1	1	...	2	4
19 10 0 "	...	...		1	...	...	...	1
20 0 0 "	...	...		4	1	1	...	6
20 16 0 "	...	...		...	...	...	1	1
22 0 0 "	...	...		1	...	3	2	6
25 0 0 "	...	...		1	...	...	...	1
26 0 0 "	...	...		3	...	...	...	3
30 0 0 "	...	...		1	...	...	1	2
31 10 0 "	...	...		...	...	1	...	1
35 0 0 "	...	...		1	...	...	...	1
36 0 0 "	...	...		1	...	...	...	1
40 0 0 "	...	...		1	...	...	...	1
				32	37	28	35	132

The following houses were certified as fit for occupation during the last 12 months:

North.	South.	Central.	West.
12	44	34	87

Total since census 1911:

North.	South.	Central.	West.
21	52	36	107

Closed by action of Health Committee during last 12 months:

North.	South.	Central.	West.
5	5	2	0

Total since census 1911:

North.	South.	Central.	West.
8	5	27	0

There were at the census 7,609 occupied houses and 235 unoccupied. There were 7,888 occupied houses and 132 empty houses on June 30th, 1912.

Of the 996 houses inspected during the year 65 were repaired after informal notice and without reporting their condition to committee. The defects consisted mostly of leaking roofs and bad floors resulting from ordinary wear and tear.

Representations were made to the Council that three owners refused, after informal notice, to do the necessary work required to 12 houses of which they were owners. Notices under the Housing and Town Planning Act were then served upon the owners to place the houses in a condition fit for human habitation. Similar notices were also served upon two owners of four dwellings adjoining other houses which required more drastic measures. Of the 16 houses 10 were afterwards repaired by the owners, 1 was demolished, 3 after default by the owner were repaired by order of the Council and the cost charged to the owner, and 2 are still outstanding.

Six closing orders were made against the owners of 15 houses, after which orders were made for the demoli-

tion of nine of the houses. Five had already been demolished, and in one case the house, after the insertion of a damp-proof course and other repairs to make it habitable, was re-occupied. Reconstruction is promised in nine others, and the other one will be demolished at an early date.

The improvement demanded by the Council in St. Mary's Place and adjoining property necessitated the demolition of a cottage. In addition, five blocks of middens containing 14 privies were demolished, and 16 new water-closets erected in their place, and portable dustbins supplied for the storage of house refuse. The area of the yards has also been more equally distributed between the different blocks, and the surface asphalted. The improvement is a credit to the owners, and is one which, though it be called a slum, ought to be copied by many owners in the town.

NORTH WARD.

Number of Houses inspec'd	STREET.	Back to Back.	Thr'gh houses.	Single houses having through vent.	Single houses having no through vent.	Number of Defects Found.	Number of W.C's.	Number of houses using Privies.
32	Albert Street ...	19	13	...	...	18	19	12
11	Brunswick Street	...	11	...	...	5	...	11
9	Dowdeswell Street	...	9	...	...	6	...	9
20	Holywell Street ...	...	10	3	7	7	15	5
9	Marsden Street ...	...	5	...	4	5	...	9
29	Newbold Road ...	...	20	9	...	6	3	26
52	Prospect Street ...	...	52	...	...	28	52	...
13	Queen Street ...	...	10	...	3	8	4	9
9	Saltergate ...	...	9	...	...	7	2	7
39	Sheffield Road ...	2	33	1	3	22	...	39
13	Spencer Street ...	...	4	9	...	9	9	4
36	Victoria Street ...	...	36	...	...	29	...	36
11	Wharf Lane ...	...	10	1	...	...	1	10
283		21	222	23	17	150	105	177

SOUTH WARD.

Number of houses inspec'd	STREET.	Back to Back.	Thr'gh houses.	Single houses having through vent.	Single houses having no through vent.	Number of Defects Found.	Number of W.C.'s.	Number of houses using Privies.
8	Alma Street ...	...	8	...	...	4	...	8
7	Chapel Street ...	...	2	3	2	16	...	7
76	Derby Road ...	...	60	15	1	41	3	73
12	Hasland Green ...	...	12	...	...	9	...	12
8	Handby Street ...	...	8	...	...	4	...	8
12	Hoole Street ..	...	12	...	...	17	...	12
9	Hawthorne Street ...	...	9	...	...	4	1	8
9	Meakin Street ...	...	9	...	...	6	...	9
14	Park Street ...	...	14	...	...	5	...	14
10	Rothervale Road...	...	10	...	...	...	...	10
10	Storforth Lane ...	...	10	...	...	...	...	10
40	Warwick Street ...	...	40	...	...	16	...	40
8	Valley Road ...	...	8	...	...	3	...	8
223		...	202	18	3	125	4	219

CENTRAL WARD.

Number of Houses inspec'd	STREET.	Back to Back.	Thr'gh houses.	Single houses having through vent.	Single houses having no through vent.	Number of Defects Found.	Number of W.C.'s.	Number of houses using Privies.
57	Beetwell Street ...	...	6	35	16	39	7	50
4	Chatsworth Road ...	...	4	...	...	2	4	...
10	Church Lane ...	...	10	...	...	7	1	9
8	Furnace Hill ...	...	2	3	3	...	...	8
21	Lordsmill Street ...	...	20	...	1	13	3	18
16	Low Pavement ...	...	3	9	4	19	2	14
19	Park Road ...	...	17	2	...	8	19	...
9	Rutland Road ...	...	9	...	...	7	5	4
27	St. Mary's Gate ...	...	5	19	3	23	1	26
7	Station Road ...	...	6	1	...	3	3	4
6	Soresby Stre ^t ...	...	6	...	...	2	6	...
14	South Place ...	...	2	...	12	3	1	13
5	Vicar Lane ...	...	5	...	...	4	...	5
9	Wheeldon Lane ...	...	7	...	2	3	7	2
19	West Bars ...	...	15	1	3	6	...	19
27	Wheatbridge Road ...	...	13	10	4	14	6	21
258			130	80	48	153	65	193

WEST WARD.

Number of houses inspec'd	STREET.	Back to Back.	Thr'gh houses.	Single houses having through vent.	Single houses having no through vent.	Number of Defects Found.	Number of W.C's.	Number of houses using Privies.
8	Ashgate Road ...	...	8	...	...	4	3	5
28	Barker Lane ...	...	28	...	...	11	...	28
11	Bank Street ...	...	11	...	...	7	2	9
9	Brickhouse Yard ...	...	9	...	...	5	6	3
42	Chatsworth Road ...	...	32	7	3	31	5	37
11	Catherine Street ...	...	11	...	...	7	...	11
21	Chester Street ...	...	21	...	...	6	...	21
9	Cross Street ...	...	9	...	...	9	1	8
18	Factory Street ...	...	17	...	1	11	...	18
6	John Street ...	...	6	...	...	2	...	6
14	Old Road ...	...	14	...	...	3	11	3
9	Old Hall Road ...	...	6	1	2	4	...	9
22	Shipley Street ...	...	22	...	...	8	...	22
4	Storr's Road ...	...	4	...	...	...	...	4
17	Victoria Street ...	...	17	...	...	13	6	11
3	Walton Road ...	...	3	...	...	1	...	3
232			218	8	6	122	34	198

3.—HOMEWORK.

Outworkers' Lists, Section 107.									
Nature of Work.	Lists received from Employers.						Addresses of Outworks		Inspections of Outworkers.
	Twice in the year.			Once in the year.			Receiv'd from other Councils	For-warded to other Councils	
	Lists.	Outworkers.		Lists.	Outworkers.				
		Con-tractors	Work-men.		Con-tractors	Work-men.			
Wearing Apparel (making, &c.) ...	2	1	2	4	4	13	1	...	...
Lace, lace curtains and nets ...	2	1	64	...	...	...	1	3	65
Furniture & Upholst'y ...	...	...	...	...	...	...	...	...	...
Total... ..	4	2	66	4	4	13	2	3	65

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Bakehouses ...	21
Dressmakers ...	19
Milliners ...	14
Joiners, Cabinet Makers and Wood Workers	23
Tailors ...	17
Saddlers ...	5
Sugar Boilers ...	4
Smiths (tin and iron) ...	16
Boots and Clogs ...	18
Plumbers ...	9
Other Trades ...	37
Total number of Workshops on Register ...	183

**Annual Report of the Medical Officer of Health
for the year 1912, for the Borough of Chesterfield
on the Administration of the Factory and Work-
shop Act, 1901, in connection with Factories,
Workshops, Workplaces and Homework.**

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or
Inspectors of Nuisances.

Premises.	Number of	
	Inspec- tions.	Written Notices.
Factories (including Factory Laundries) ...	91	7
Workshops (including Workshop Laundries) ...	383	34
Total ...	474	41

2.—DEFECTS FOUND.

Particulars.	Number of Defects	
	Found.	Remedied.
Nuisances under the Public Health Acts:		
Want of Cleanliness ...	26	26
Want of Ventilation ...	2	2
Overcrowding ..	...	...
Want of Drainage of Floors ...	...	...
Other Nuisances ...	6	6
Sanitary Accommodation { insufficient ...	10	10
{ unsuitable or defective ...	3	3
{ not separate for sexes ...	...	...
Offences under the Factory and Workshop Act:		
Illegal occupation of underground bakehouse (s. 101) ...	...	...
Breach of special sanitary requirements for bake-houses (ss. 97 to 100) ...	...	...
Other Offences (excluding offences relating to outwork which are included in part 3 of this Report) ...	...	...
Total ...	47	47

C.—SANITARY ADMINISTRATION OF THE DISTRICT.

Hospital Accommodation.—Penmore Isolation and the Smallpox Hospital are the property of the Chesterfield Joint Hospital Committee, which consists of representatives of the Brampton and Walton, the Newbold and Whittington Urban District Councils, and the Corporation of Chesterfield.

The accommodation at Penmore consists of—

(1) Scarlet fever block. Two wards, measurements 48ft. 4ins. by 26ft. by 13ft., and 36ft. 3ins. by 26ft. by 13ft.; cubical capacity 16,325, and 12,252 cubic feet. Beds 14, with two small observation wards of one bed each.

(2) Enteric block. Two wards, measurements 33ft. 8ins. by 26ft. by 13ft., and 24ft. by 26ft. by 13ft.; cubical capacity 11,356, and 8,112 cubic feet. Beds 10.

(3) Isolation block. Three wards, measurements 13ft. by 16ft. by 26ft., and 13ft. by 13ft. by 17ft., and 13ft. by 13ft. by 17ft.; cubical capacity 5,408, 2,873, and 2,873 cubic feet. Beds 5.

There are also an administrative block, steam laundry, disinfecting block with steam disinfecter, discharge room, ambulance and bedding van, sheds, stable, and mortuary. The hospital and grounds occupy about three acres of land, and there are nine acres in reserve for possible extension.

Population served: The hospital supplies the needs of the Borough of Chesterfield, population at 1911 census 37,406; the Whittington and Newbold Urban District, 1911 census 17,284; and the Brampton and Walton Urban District, census population 2,124; total, 56,814. When Penmore was first opened in January, 1905, the estimated population of the combined districts was 47,560.

Other accommodation: By arrangement with the

North Derbyshire Hospital District, cases of infectious disease requiring isolation may, when accommodation for them is not available in the hospital serving the district to which they belong, be mutually transferred.

There is also the Newbold Smallpox Hospital, transferred in 1912 to Spital Smallpox Hospital site.

The Chesterfield and North Derbyshire Hospital and the Union Infirmary are also prepared to take in cases of enteric fever; in the latter case, Poor Law patients are only admitted.

Diseases concurrently treated: During the greater part of last year both scarlet and enteric blocks have been used for isolation of scarlet fever. The isolation block, which has been recently altered, can now take in enteric and diphtheria.

Infected articles are removed, disinfected, and returned free of charge on application being received from the sanitary officials of the constituent authorities.

Newbold Hospital, now removed to the Spital Smallpox Hospital site, provides accommodation for 22 patients in two wards, one of which is fitted with red glass windows. It has a small administration block, providing accommodation for the caretakers and one nurse, and a washhouse and mortuary. It has a water supply from the mains of the Chesterfield Gas and Water Board, and a small sewage disposal works on the bacterial purification system.

Disinfection of infected articles is done at Penmore Hospital.

The charge of constituent authorities for the maintenance of patients in the hospitals is 1s. 6d. per diem, and 2s. for those from other districts and the Union Workhouse.

Owing to a severe outbreak of scarlet fever in the urban district of Whittington and Newbold a heavy strain was thrown upon the resources of the hospital (the subject

was treated in a special report to the Penmore Hospital Committee). The emergency was met by the temporary opening of the Spital Smallpox Hospital for the reception of convalescent cases of scarlet fever.

The Work at Penmore Hospital in 1912.—There were in the hospital at the beginning of the year, 21 cases of scarlet fever belonging to the Borough of Chesterfield, 1 enteric fever patient belonging to the Borough of Chesterfield, and 3 scarlet fever patients belonging to the Whittington and Newbold Urban District.

There were admitted from the Borough of Chesterfield, 88 cases of scarlet fever, 2 cases as scarlet fever which were not scarlet fever. From the Whittington and Newbold Urban District, 85 cases of scarlet fever. From the North Derbyshire Hospital, 12 cases of scarlet fever, 9 belonging to the North Derbyshire Hospital District, 2 to the Borough, and 1 belonging to the Whittington and Newbold U.D. Total: 185 cases of scarlet fever, 2 cases admitted as scarlet fever which were not scarlet fever; grand total, 187. Grand total 1911, 163.

There were discharged, having recovered, 187 scarlet fever patients and 1 enteric fever patient. Also 2 patients who had not had the disease for which they were admitted. Three scarlet fever patients were transferred to Mastin Moor Hospital, 1 to Langwith Hospital, and 1 to Morton Hospital. Six scarlet fever patients died.

There remained in the hospital at the end of the year, 1 scarlet fever patient belonging to the Borough of Chesterfield and 12 scarlet fever patients belonging to the Whittington and Newbold Urban District.

Summary.—Patients in the hospital at the beginning of the year, 25; admitted, 187; discharged, 188; transferred to other hospitals, 5; died, 6; in the hospital at the end of the year, 13. The patients admitted during the year, and those who were in the hospital at its commencement, belonged to the following authorities: To the

Borough of Chesterfield, 114; to the Whittington and Newbold Urban District, 89; and the North Derbyshire Hospital District, 9. Total, 212. Total 1912, 175.

Preventive Measures.—When a case of infectious disease is reported, the infected house is visited as soon as possible by a sanitary inspector, and its causation inquired into. Instructions are given verbally and also in printed form, as to the best means of preventing the spread of the disease. Disinfectants are supplied gratuitously. Smallpox patients are removed to the Smallpox Hospital. Scarlet fever, enteric patients, and diphtheria patients are removed to Penmore Hospital when the parents or guardians permit, except in those cases where effective isolation can be obtained at home. It is seldom that objection is taken to removal. Anti-diphtheric serum is supplied, as stated previously, for prophylactic purposes. After removal of the patient or the termination of the case, the sickroom is disinfected with formaldehyde, and the bedding and other infected articles disinfected by the high pressure steam disinfectors at Penmore Hospital.

Bacteriological Examination.—These are made at the County Council Laboratory at Derby, to which 27 specimens were sent for examination, as compared with 41 in 1911 and 66 in 1910.

Sixteen from diphtheria gave 12 positive and 4 negative results; 2 from enteric fever patients, 2 positive. Nine specimens of sputum were examined during the year, all of which contained the bacillus of tuberculosis.

Among the 16 swabs, 1 was sent by the Medical Officer to the Penmore Hospital, 3 by the Medical Officer of Health, and 3 by the School Medical Officer.

**D.—PREVALENCE OF AND CONTROL OVER
ACUTE INFECTIOUS DISEASES.**

TABLE II.
Cases of Infectious Disease notified during the year 1912.

NOTIFIABLE DISEASE	Number of Cases Notified							Total Cases Notified in each Locality							Total Cases Removed to Hospital	
	At all Ages	At Ages—Years						1	2	3	4	5	6	7		
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65									65 and upwards
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera, Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Group)	44	13	25	4	2	2	...	...	8	2	14	20	...	...	...	...
Erysipelas	23	1	4	2	7	6	...	...	4	7	6	4	...	...	...	...
Scarlet fever	188	54	116	16	2	2	...	...	51	42	41	44	10	2	...	102
Typhus fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	3	...	1	1	1	...	...	...	...	1	2	...	...	...	...	2*
Relapsing fever, Continued fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poliomyelitis	2	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...
Pulmonary Tuberculosis	122	2	33	26	42	14	...	...	6	17	40	26	...	33	...	...
Totals	383	1	72	184	49	55	20	2	69	71	104	94	10	35	...	...

* 1 Removed to Chesterfield and N. Derbyshire Hospital: 1 Removed to Chesterfield Union Infirmary.

ISOLATION HOSPITALS: Penmore Hospital, Chesterfield; Small-pox Hospital, Spital, Chesterfield.

The number of cases of infectious diseases notified was 383, compared with 375 for the year 1911.

The deaths were 53, inclusive of 40 from pulmonary tuberculosis. During the year acute anterior poliomyelitis and cerebro-spinal fever were added to the list of diseases notifiable. The number of deaths from the non-notifiable infectious diseases, i.e., measles, whooping cough, influenza, diarrhoea, respiratory diseases, and other tubercular diseases, was 128, as compared with the average, 159.5.

Smallpox.—No case occurred for the seventh year in succession.

Warning was received from the Medical Officers of districts through which persons had passed on their way to Chesterfield who had been in contact with cases of smallpox. These contacts were three in number; one was from Wolverhampton, and two were soldiers in a regiment which, on its return from India, had landed a case en route. These persons were kept under observation for 14 days until danger of their contracting the disease was passed.

During the year smallpox has been imported into nearly all the large seaports of the kingdom, but has not often made its way inland. There has been no large outbreak in the country. The danger to be apprehended is from persons of the vagrant class and habitués of common lodging houses who, on the occurrence of a case in their immediate neighbourhood, instantly change their quarters in the hope of avoiding any irksome restrictions, and may already be infected. With this principle in view, on the occurrence of a case within "tramping" distance of Chesterfield, a copy of the following letter has been sent to the Chief Constable, the Master of the Workhouse, and the keepers of the ten common lodging houses in the Borough:

Dear Sir,

I beg to inform you that smallpox has occurred at, and should be much obliged if you could let me know the names of persons from that district applying for lodgings in your house.

It would be advisable in future, in any case of suspicious illness among your lodgers, to let me know as soon as possible in order that the matter may be investigated.

I am,

Yours truly.

The above procedure was used on the occurrence of cases at Nottingham, Wolverhampton, Kirkby-in-Ashfield (Notts.), Carlton (Notts.), and Wath-on-Dearne.

The vaccination returns for the various parts of the country continue to show a decrease in the number of persons successfully vaccinated. At present, by great efforts on the part of the Port Sanitary Authorities, the spread of the disease has been prevented. Year by year the cordon of vaccinated persons around any case of smallpox becomes less and less effective as a protection against the further spread, and those of us who think the danger small may find a rude awakening in the near future. The Royal Commission, after seven years' deliberation, reported unanimously in favour of vaccination. While it is true that the State provides vaccination, it does not do its duty, in that exemption may be obtained by a simple declaration. The simplest and cheapest method of avoiding an epidemic of smallpox is the thorough vaccination and re-vaccination of the whole population. Our smallpox hospitals could then fulfil some more useful function than that of lying idle for seven years in expectation of an epidemic which they may be totally incapable of dealing with.

Diphtheria and Membranous Croup.—Houses infected, 42; cases, 44; deaths, 3. The number of cases

was equal to the decennial average, but the deaths were only one-half the average number. The case mortality was at the rate of 6.8 per cent., as compared with 13 per cent. in 1911 and 6.2 per cent. in 1910. This mortality is higher than it should be, and is explained by the unwillingness of parents to send for medical advice until the patient is seriously ill. Thus, all the three deaths which occurred, preceded notification, one being uncertified.

The age distribution of the cases is as follows:

	1-2	2-5	5-10	10-15	15-20	20-25	25-30	30-35	Ttl.
Male ...	2	9	9	3	—	2	—	—	25
Female.	1	1	5	8	1	—	1	2	19

The ward distribution is as follows:

Wards.

	North.	South.	Central.	West.
Cases ...	8	2	14	20

No request was received for isolation at Penmore, which was not pressed owing to alterations in the isolation block, and later in the year to the pressure on the accommodation caused by the outbreak of scarlet fever, referred to under that heading. The facilities offered by the County Council Laboratory are not made sufficient use of, only 16 swabs being sent to the Laboratory. From the information at my disposal it appears that only 26 cases out of 44 received antitoxins. This is probably an under-estimate, as parents are in some cases unaware that such treatment has been undertaken.

Antitoxin is supplied free of charge by the Health Committee and can be obtained day and night. The cost of providing it last year was £11 16s. 3d., as against £18 18s. 9d. in 1911 and £12 7s. 6d. in 1910.

Erysipelas.—There were notified 23 cases of erysipelas, with two deaths, one of an infant and one of an adult. Two cases were notified from the Poor Law Infirmary.

Scarlet Fever.—188 cases were notified, as compared with 197 in 1911, and a decennial average of 134. They composed 83 females and 105 males. Houses infected, 138.

The age distribution was as follows:

	1-2	2-5	5-10	10-15	15-20	20-25	25-30	30-35	Ttl.
Male ...	5	28	44	13	9	4	—	2	105
Female.	1	20	43	16	3	—	—	—	83

The ward distribution was as follows:

	Wards.				C. & N.D.
	North.	South.	Central.	West.	Hospital.
Cases ...	51	42	41	44	10

As regards the class of house, 126 were through houses, 5 were single houses, 6 had no through ventilation, and one was a back-to-back house; of the cases notified, one occurred in a 3-roomed house, 75 in 4-roomed, 37 in 5-roomed, and 53 in 6-roomed houses, the remainder in large houses.

The probable source of infection was as follows:

Infected by case discharged from Penmore Hospital	3
Direct contact with previous case in house ...	37
Contact with school case	23
Contact with case in vicinity	20
Contact with case in workshop	1
Indirect contact, i.e., with person who has been in contact but does not himself contract disease ...	2
Not traced	102

There were eight deaths, six of which took place in Penmore Hospital.

The number of cases was above the decennial average of 134. The case mortality was 4.2, as compared with a decennial average of 2.7.

The Schools attended by the cases of scarlet fever were as follows:

School.	Average Attendance.	Scarlet Fever Cases.	Incidence per 1,000 attendances.
Derby Road (Girls')...	229	11	48.0
Vicar Lane ...	256	10	39.0
Old Road ...	369	13	35.2
Derby Road (Boys')...	173	6	34.6
St. Thomas' ...	291	8	27.4
Trinity ...	263	7	26.6
Hasland (C. of E.) ...	343	7	20.4
Christ Church...	157	3	19.1
Central ...	870	13	14.9
Hasland (Eyre Street)	236	3	12.7
St. Helen's ...	643	8	12.4
Hipper Street ...	590	7	11.8
Brampton ...	988	11	11.1
St. Mary's ...	298	3	10.0
Spital ...	50	—	—

TABLE.

Showing the Number of Cases of and Deaths from
Infectious Diseases during recent years.

	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Average 10 Years.	1912
Notifiable Diseases.												
SMALL-POX:												
Cases ...	9	43	6	53	...	...	...	...	...	...	11.1	...
Deaths ...	...	1	...	1	...	...	...	...	...	...	0.2	...
DIPHTHERIA & MEM- BRANOUS CROUP:												
Cases ...	23	41	37	19	19	17	39	115	47	77	43.4	44
Deaths ...	4	7	10	3	2	...	11	10	3	10	6.0	2
ERYSIPELAS:												
Cases ...	32	19	32	34	39	40	42	21	23	46	33.2	23
Deaths ...	1	...	...	...	1	1	1	...	2	2	0.8	2
SCARLET FEVER:												
Cases ...	59	51	291	116	63	53	68	272	104	197	134.7	188
Deaths ...	2	...	11	8	2	2	2	1	5	4	3.7	8
ENTERIC FEVER:												
Cases ...	20	22	46	15	17	8	23	10	10	8	17.7	3
Deaths ...	3	3	10	4	5	3	5	1	1	1	3.6	1
PULMONARY } TUBERCULOSIS }	...	...	Not Notifiable.				...	28	51	52	...	122
	29	28	30	29	31	30	35	47	25	44	32.8	41
PUERPERAL FEVER:												
Cases ...	3	1	...	2	3	2	2	6	3	4	2.7	1
Deaths ...	1	1	...	...	1	...	...	...	1	...	0.4	...
CEREBRO SPINAL FEVER & ACUTE POLIOMYELITIS:	...	...	Not	Not	ifiable	...	...	...	...	...	...	2
	...	...	...	...	...	...	...	...	...	...	...	...
TOTALS—Cases ...	146	176	412	239	141	120	417	444	220	375	241.7	383
Deaths ...	40	40	61	45	42	36	54	59	37	67	44.4	13
Non-Notifiable Diseases.												
DEATHS ONLY:												
DIARRHOEA AND } ENTERITIS }	11	38	72	26	44	27	41	27	36	86	41.9	14
MEASLES ...	13	10	2	7	4	9	7	9	8	36	13.3	2
WHOOPING COUGH...	4	8	7	6	8	10	9	2	6	5	6.4	12
RESPIRATORY } DISEASES }	76	78	66	84	66	89	107	83	70	88	80.7	85
OTHER TUBERCU- } LAR DISEASES }	20	19	20	15	23	90	30	29	15	16	19.7	15
TOTALS ...	135	153	167	138	145	145	194	152	135	231	159.5	128

Cases not attending school but having other members of the house attending, 47.

Cases where no children from house attending school, 21.

Cases from Chesterfield and North Derbyshire Hospital, 10.

Enteric Fever.—This disease continues to show a steady abatement. The experience in Chesterfield is the same as in all parts of the country; that is, that the prevalence of enteric fever is more susceptible to sanitary improvements than any other disease.

Of the three cases notified, one died before receipt of notification, the latter being made on a blood examination. The second was a young adult whose work took him about Chesterfield; he was isolated at the Infirmary. The third case contracted the disease seven days after returning from a fortnight at the seaside, where he had been in the habit of eating icecream bought from itinerant vendors; he was isolated at the Chesterfield and North Derbyshire Hospital.

Puerperal Fever.—One case only was notified. Particulars of the case were reported to the County Medical Officer and enquired into by the Inspector of Midwives.

Acute Anterior Poliomyelitis.—Four cases were notified, three from the Chesterfield and North Derbyshire Hospital and one by a private practitioner. Two cases only belonged to the Borough, the two Hospital cases having been brought in from outside districts on account of the paralysis which generally forms a prominent feature of the disease.

Measles.—Measles is not a notifiable disease, but by arrangement with the School Attendance Officers and Teachers, notification is made to me of all infectious and contagious diseases coming to their knowledge. Twenty-two cases were thus notified. This does not, of course,

represent all the cases. Measles has, however, been very slight this year compared with 1911, as there have been only two deaths as against 36 in 1911, and a decennial average of 13.3. All cases notified are visited, and there seems to be more care exercised by the parents than in former years.

Whooping Cough.—102 notifications were received from the school teachers and attendance officers. These were visited, and, as in the case of other infectious diseases, a date given when the child may return to school. In spite of the fact that there were 12 deaths, as against an average of 6.4, the majority of parents do not attempt any isolation or other precautions.

E.—PREVALENCE AND CONTROL OVER **TUBERCULOSIS.**

Deaths from Phthisis.

Year.	Males.	Females.	Persons.
1901 ...	27	23	50
1902 ...	18	11	29
1903 ...	19	9	28
1904 ...	18	12	30
1905 ...	13	16	29
1906 ...	15	16	31
1907 ...	14	16	30
1908 ...	20	15	35
1909 ...	24	23	47
1910 ...	15	10	25
1911 ...	23	21	44
1912 ...	18	23	41
Total	224	195	419

It will be noticed that the number of deaths in 1912 from pulmonary tuberculosis is fairly near the decennial

average of 44, while the number of cases notified is very much greater than in preceding years. Prior to 1909 the notification of this disease was not undertaken, as it was felt that it differed in vital respects from infectious diseases having a short and defined course, and that the sections in the Public Health Act relating to infectious diseases could not without hardship apply. The Public Health (Tuberculosis) Regulations of 1908 made the disease notifiable among Poor Law patients, and the Borough Council, by resolution in December, 1909, made the notification of private practitioners' cases voluntary, with the result that, in 1909, 20 Poor Law and 8 private practitioners' cases were notified. During that year there were 47 deaths; that is, nearly half the cases did not come to the knowledge of the Health Department until after the death of the patient.

In 1910 there were 28 private practitioners' cases and 23 Poor Law cases, with 25 deaths. Dr. Peck, in his report for 1910, stated that "These (notifications) do not represent all the cases, as 15 of the 25 patients who died were not notified."

Under a system of voluntary notification the medical practitioner in attendance on the case felt that until the notification was compulsory he might be subjecting his patient to some supervision or restriction while un-notified cases went free. Also the knowledge that a patient was consumptive was regarded as confidential information not to be divulged.

Probably the greatest deterrent has been the fact that notification obtained publicity without any compensation advantages, disinfection after death being the main form of the Health Department's activities; in fact, the majority of the cases notified voluntarily were notified shortly before death in order that the house might be disinfected.

In May, 1911, the Public Health (Tuberculosis in Hospitals) Regulations ensured the notification of cases coming to the knowledge of medical men attached to general hospitals, and later the Public Health (Tuberculosis) Regulations 1911 made the disease compulsorily notifiable.

In this year, with the various regulations in force for only a part of the year, 52 were notified, with 44 deaths, while for the year under review 122 have been notified and 41 have died. Early in the year the Civic Guild, who have always evinced a keen interest in the public health, made an enquiry into the prevalence of pulmonary tuberculosis in the Borough, and submitted the following recommendations:

- (1) The establishment of an Anti-Tuberculosis Dispensary.
- (2) Establishment of an Open-Air School.
- (3) Reform of Housing.

Of these recommendations the first is now an established fact.

Up to the present time the lot of the consumptive has been very hard. The disease affects mainly those in the prime of life, i.e., between the ages 25 to 45.

When it is remembered that the margin for emergencies in the average wage earner's budget is extremely small, and that a sharp, short illness often leaves its mark financially for months, it can be seen that a disease which incapacitates the patient (often the wage-earner of the family) for months at a time, must have a very serious social effect. This is borne out by the fact that out of 122 persons notified, 32, or 25 per cent., were in receipt of Poor Law relief. With the exception of cases in institutions, cases notified are visited by the Health Visitor and an enquiry made into the circumstances of the case; these include matter relating to housing conditions, source of infection, and habits. Advice is given as to the value of

fresh air, good food, temperance, disposal of infected material, and medical attendance. Co-operation with the Poor Law and charitable agencies is made use of when necessary.

On the death of a patient, or removal to the Workhouse, disinfection of the room of the patient is undertaken. The cases are visited at intervals in order that it may be seen whether the precautionary measures advised are being carried out.

The year 1913 has produced great changes in the tuberculosis question. Under regulations to come in force in February all forms of tuberculosis, as distinguished from pulmonary tuberculosis only, are compulsorily notifiable. Further, under the Insurance Act treatment adequate to the needs of the patient is now obtainable. Shortly, the scheme of the County Medical Officer includes the provision of a sanatorium and dispensary in Chesterfield, and provides for domiciliary visits by medical practitioners. Treatment is available for both insured persons and their dependents.

The following is a summary of the work done during 1912:—

The localities and ages of the patients were as follows:

	Under 5 years	5 and under 15	15 and under 25	25 and under 45	45 and under 65	Total
Central ...	1	12	7	21	6	47
South ...	0	7	6	4	0	17
North ...	1	10	5	8	7	31
West ...	0	9	8	9	1	27
Totals ...	2	38	26	42	14	122

Seventy-one were males and 51 were females.

The deaths, comprising 18 males and 23 females, were as follows:

	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and over	Total
Central ...	1	1	8	4	1	15
South ...	1	0	2	0	0	3
North ...	0	3	3	2	0	8
West ...	0	7	4	3	0	14
Outside Borough	0	0	0	1	0	1
Totals ...	2	11	17	10	1	41

The social status of the patients is shown in that 10 patients were in the Workhouse Hospital during the whole time of observation, while 12 lived at home or in lodgings, with one or more periods of residence in the Workhouse Infirmary. Ten patients lived in three-roomed, 53 in four-roomed, and 59 in five or more roomed houses.

There were ten "back-to-back" houses, six single houses with one door only, having no through ventilation, and four single houses having through ventilation.

The occupations of the cases notified were as follows:

Defence of country	1
Professional and their subordinate services	2
Domestic offices or services	2
Commercial occupation	2
Conveyance of men, goods & messages	2
Agriculture	3
In and about mines and quarries ...	9
Metals, machines, implements, and conveyances	5
Building and works of construction ...	5
Brick, cement, pottery and glass ...	2
Skins, leather, hair and feathers ...	2
Paper, prints, books and stationery ...	4
Textile fabrics	2
Dress	3
Food, tobacco, drink and lodging ...	1
Gas, water, electricity and sanitary services	1
General labourer	3
No occupation	39
School children	34
Total	122

Although the number of notifications was much higher than in former years, it is obvious from the following table that the great majority of cases are notified too

late to be of any use either to the Sanitary Authority or the patients themselves :

16 cases were not notified before death.

2 were notified 1 day before death.

1 was ,, 2 weeks ,,

1 ,, ,, 3 ,, ,,

1 ,, ,, 5 ,, ,,

2 were ,, 6 ,, ,,

3 ,, ,, 7 ,, ,,

2 ,, ,, 8 ,, ,,

1 was ,, 9 ,, ,,

2 were ,, 10 ,, ,,

1 was ,, 14 ,, ,,

1 ,, ,, 16 ,, ,,

2 were ,, 17 ,, ,,

1 was ,, 18 ,, ,,

1 ,, ,, 21 ,, ,,

1 ,, ,, 24 ,, ,,

1 ,, ,, 37 ,, ,,

1 ,, ,, 42 ,, ,,

The reason of this delay is largely that the social degradation, before mentioned, causes the appeal to medical assistance to be postponed until the illness is serious. Possibly the optimistic view of the disease held by those affected by pulmonary tuberculosis plays its part.

Two of the notified cases died of other diseases than phthisis.

The cases notified are visited as soon as possible. 241 visits were paid during the year. Those cases in the Workhouse are not visited until they are notified to have left the institution. Cases in common lodging-houses are visited by the Sanitary Inspector.

The enquiries made include the results given below. In 38 of the cases a definite family history of consumption was obtained, in 33 cases the immediate past family history was unknown, and 51 cases apparently proved to be the first case in the family concerned.

It was ascertained that only half the patients occupied a room to themselves, and since the necessity for this isolation has been pointed out, 22, excluding those in the Infirmary, are still unable to provide separate accommodation.

Excluding Infirmary and Hospital in-patients, and the migrant cases in the common lodging-houses, 74 were found to be already sleeping with their windows open. The importance of fresh air has been pointed out, and is apparently understood by the remainder.

Eleven sanitary defects were reported to the Sanitary Inspector, and 50 houses were disinfected.

G.—MEANS FOR PREVENTING MORTALITY IN CHILD BIRTH AND INFANCY.

Notification of Births Act, 1907.—Summary of work done in 1912:

Notifications received (1156)—

By Medical Practitioners	...	...	73
„ Midwives	...	...	998
„ Parents	...	...	85
Number of Illegitimate Births	...	...	58
„ Still Births	...	...	49
„ First Visits	...	...	1089
„ Re-visits	...	...	684

Sanitary Defects reported to Inspector of

Nuisances	...	...	70
-----------	-----	-----	----

The births notified under this Act equal 1,156, of which 998 were notified by midwives, 85 by parents, and 73 by medical practitioners.

There were 49 still births. These numbers do not correspond with the figures in the tables, as the latter are based on births registered, where there may be an interval of six weeks between birth and registration, whereas under the Notification of Births Act notification must be made within 36 hours of birth.

Generally speaking, the mother receives the visit of the Health Visitor in a cordial manner and the instructions given are carried out. The continuous nature of the work is having a good effect, in that the midwives are more and more regarding cleanliness of their patients' bedding and clothing as contributory to their own professional success.

There being comparatively little married female labour in the Borough, natural feeding of infants has been the rule; thus only 45 children were bottle-fed from birth, 15 having the natural feed supplemented by bottle. The after results in the diminution of rickets cannot be too highly estimated. The old enemy of the Health Visitor, the "dummy," continues to flourish. The possible evils on the child's future health, balanced against the crying evil of the present, render defeat a foregone conclusion. In many cases no further visits are necessary, but some cases, either from the precarious state of the infant's health or from other factors which militate against the chance of survival, e.g., insanitary dwellings, poverty, an already large family, are visited more frequently. Thus three children were visited 10, 18, and 30 times respectively. In all, 734 re-visits were made. In 39 cases no visit was made, by request of parents. Twenty-four children died before the Health Visitor saw them, their ages at death being from ten minutes to three days.

Visits as a rule are made on the day of notification, the exception being those births occurring in outlying parts of the town, which are visited twice weekly. There were a few cases of ophthalmia neonatorum brought to my notice. All the cases were sent to the hospital, as this disease demands immediate and specialised treatment in order to avoid loss of sight.

By arrangement with the County Medical Officer of Health, the Borough Health Visitor will now (January, 1913) undertake the supervision of midwives practising

in the Borough. This will prevent much overlapping and afford another means of checking the waste of infant life.

The following is a list of the occupations followed by the wage earner of the households visited in connection with supervision of infants:—

General or local government of county	9
Defence of country	0
Professional and their subordinate services	19
Domestic offices or services	32
Commercial occupations	72
Conveyance of men, goods & messages	91
Agriculture	6
Fishing	0
In and about mines and quarries ...	344
Metals, machines, implements and conveyances	88
Precious metals, jewels, watches, etc. ...	1
Buildings and works of construction	28
Wood, furniture, fittings and decorations	58
Brick, cement, pottery and glass ...	12
Chemicals, oils, grease, soap, resin, etc.	6
Skins, leather, hair and feathers ...	9
Paper, prints, books and stationery...	4
Textile fabrics	8
Dress	1
Food, tobacco, drink and lodging ...	36
Gas, water, electricity and sanitary service	4
Other undefined workers and dealers...	328
Unoccupied	0
Total	1156

H.—VITAL STATISTICS OF THE DISTRICT.

TABLE I.

Vital Statistics of Whole District during 1912 and previous years.

YEAR.	Popu- lation estim- ated to middle of each year.	Births.			Total Deaths registered in district.		Transferable Deaths.		Nett deaths belonging to district.			
		Uncorrected Number.	Nett.		Number.	Rate.	Of Non-residents registered in the district.	Of Residents not registered in the district.	Under 1 year of age.		At all ages.	
			Number.	Rate					Num- ber.	Rate per 1,000 nett births.	Num- ber.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1902	27,765	916	896	32.3	557	20.0	80	1	144	161	478	17.2
1903	28,381	976	956	33.7	536	18.9	92	1	160	167	445	15.7
1904	28,590	926	909	31.6	568	19.6	102	0	155	171	446	16.3
1905	28,890	896	872	30.1	481	16.6	101	4	104	119	384	13.3
1906	29,255	850	830	28.4	568	19.4	117	3	151	182	454	15.5
1907	29,583	872	853	28.8	582	19.7	111	3	159	186	474	16.0
1908	30,690	936	909	29.6	655	21.3	127	3	137	151	531	17.3
1909	31,243	896	888	28.4	565	18.1	116	8	124	140	457	14.6
1910	31,845	889	871	27.4	515	16.2	105	10	138	158	420	13.2
1911	37,550	1119	1101	29.3	768	20.4	146	20	194	176	642	17.1
Aver- ages for years 1902- 1911.	30,379	927	908	29.9	579	19.0	109	5.3	146	161	473	15.6
1912	38,100	1119	1100	28.8	612	16.6	133	21	106	96	500	13.12

Area of District in acres
(land and inland
water) } .2643

Total population at all ages.....37,406
Number of inhabited houses.....7,609
Average number of persons per house .4916 }
At Census
1911.

Vital Statistics of separate Localities in 1912 and previous years in the Borough of Chesterfield.

NAMES OF LOCALITIES.	THE BOROUGH.				NORTH WARD.				SOUTH WARD.				WEST WARD.				CENTRAL WARD.				HOS-PITAL.	UNION WORK-HOUSE.
	Population esti- mated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population esti- mated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population esti- mated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population esti- mated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population esti- mated to middle of each year.	Nett Births.	Nett Deaths at all Ages.	Nett Deaths under 1 year.	Population esti- mated to middle of each year.	Population esti- mated to middle of each year.
1902	27,765	896	478	144	10,073	268	155	38	8,763	289	162	47	8,929	339	161	59	9,210	416	157	70	...	...
1903	28,381	956	445	160	10,248	245	130	34	8,923	295	158	56	9,210	416	157	70	9,309	364	167	67	...	...
1904	28,590	909	466	155	10,323	231	147	40	8,958	314	152	48	9,309	364	167	67	9,450	346	148	37	...	...
1905	28,890	872	384	104	10,440	246	109	28	9,000	280	127	39	9,450	346	148	37	9,532	321	175	62	...	...
1906	29,255	830	454	151	10,646	233	126	35	9,077	276	153	54	9,532	321	175	62	9,901	312	153	52	...	...
1907	29,583	853	474	159	10,425	262	158	53	8,706	279	163	54	9,901	312	153	52	10,250	326	182	51	95	456
1908	30,690	909	531	137	10,860	257	172	35	9,010	326	177	51	10,250	326	182	51	10,560	366	163	52	107	463
1909	31,243	888	457	124	11,003	240	145	30	9,110	282	149	42	10,560	366	163	52	10,970	341	146	61	107	463
1910	31,845	871	420	138	11,048	261	137	41	9,165	269	137	36	10,970	341	146	61	10,970	341	146	61	148	514
1911	37,550	1101	642	194	9,035	206	163	55	8,527	257	118	30	10,213	358	188	61	9,775	280	173	48	132	523
Average of Years 1902 to 1911.	30,379	908	473	146	10,410	244	144	38	8,923	286	149	45	9,832	348	164	57						
1912	38,100	1100	500	106	9,173	217	121	14	8,653	262	83	25	10,360	343	161	44	9922	278	135	23	149	493

TABLE A.
Advanced Vital Statistics, 1912. Urban Districts.

DISTRICTS	Population to middle of 1912	Birth Rate	Death Rate	DEATH RATES FROM					Infantile Mortal- ity # 1000 Births
				Scarlet Fever	Diphth- eria	Enteric Fever and Diarr- hoea	Pathosis	Respira- tory Diseases	
Ashbourne	4,062	21.17	10.83	...	.49	...	.98	24	58.1
Bakewell	3,090	18.12	12.94	...	...	...	.97	1.94	35.7
Belper	11,730	23.96	10.99	...	...	.08	.51	2.30	121.0
Bolsover	11,760	32.56	10.20	...	.42	.34	.25	1.36	127.9
Brampton and Walton	2,150	20.46	12.09	...	...	...	.93	2.32	136.3
Buxton	10,024	14.16	8.68	...	.09	...	.59	.89	42.2
Chesterfield (Boro')	38,100	28.87	12.75	.18	.05	.39	1.04	2.20	96.3
Dronfield	3,963	24.22	13.87	.25	...	.25	.25	2.52	93.7
Glossop (Boro')	21,724	17.95	14.18	...	...	.59	.96	2.57	112.8
Ilkeston (Boro')	32,440	29.43	11.71	...	.03	.09	.55	2.46	106.8
Long Eaton	20,000	20.40	8.35	.05	.05	.35	.85	1.15	90.6
New Mills	9,152	20.10	14.20	...	.10	.21	.98	2.39	103.2
Swadlincote	18,754	28.58	12.10	...	.05	.32	.48	2.87	115.6
Whittington and Newbold	17,463	30.12	11.11	...	.11	.40	.62	2.29	83.6
England and Wales	...	23.8	13.3	...	...	...	...	...	95.0
96 great towns, including London	17,852,764	24.9	14.6	...	...	...	...	...	101.0
146 smaller towns	...	23.8	13.0	...	...	...	...	...	99.0
London	4,518,191	24.7	14.3	...	...	...	...	...	90.0

TABLE B.
Advanced Vital Statistics, 1912. Rural Districts.

DISTRICT	Population to middle of 1912	Birth Rate	Death Rate	DEATH RATES FROM					Infantile Mortal- ity #1000 Births
				Scarlet Fever	Diphth- eria	Enteric Fever and Diarr- hoea	Phthisis	Respira- tory Diseases	
Ashbourne	10,300	19.32	11.16	...	.09	...	.38	...	75.3
Bakewell (South)	7,940	22.92	12.59	...	...	.12	.25	1.51	54.9
Bakewell (North)	12,519	21.80	11.98	...	.24	.08	.55	2.15	73.2
Basford	1,433	11.86	9.76	...	...	...	...	1.39	142.8
Belper	23,697	20.09	10.46	...	.08	...	.71	1.43	75.6
Chesterfield	73,500	28.57	11.75	...	...	...	.62	...	87.6
Clowne	18,585	31.47	11.78	.10	.21	...	.21	2.09	117.9
Glossop Dale	3,993	15.78	14.77	.25	.25	.25	1.50	4.50	79.3
Hartshorne and Seals	8,060	26.55	9.05	...	...	...	.37	.86	42.0
Sudbury	2,700	17.40	12.22	...	...	.37	.74	.74	21.2
England and Wales (less the 241 Towns)	...	22.6	12.1	...	...	...	...	...	86.0

Death Rate.—The number of deaths registered as occurring in the Borough was 612, equal to a Crude Death Rate of 16.6 per 1,000 living, as compared with an average rate of 19.0 in the previous ten years, and 20.4 for 1911.

Eighty-two occurred in the Chesterfield and North Derbyshire Hospital, 121 in the Union Workhouse, and 6 in Penmore Hospital. These included 77 belonging to the Chesterfield R.D., 21 to Newbold and Whittington U.D., 6 to the Clay Cross U.D., 5 to the Blackwell R.D., 9 to Bolsover U.D., 3 to Clowne R.D., 1 to Sheffield, 5 to Dronfield, 1 to the Belper R.D., 1 to Brampton and Walton U.D., 2 to Alfreton U.D., 1 to Mosborough, and 1 to Chiswick.

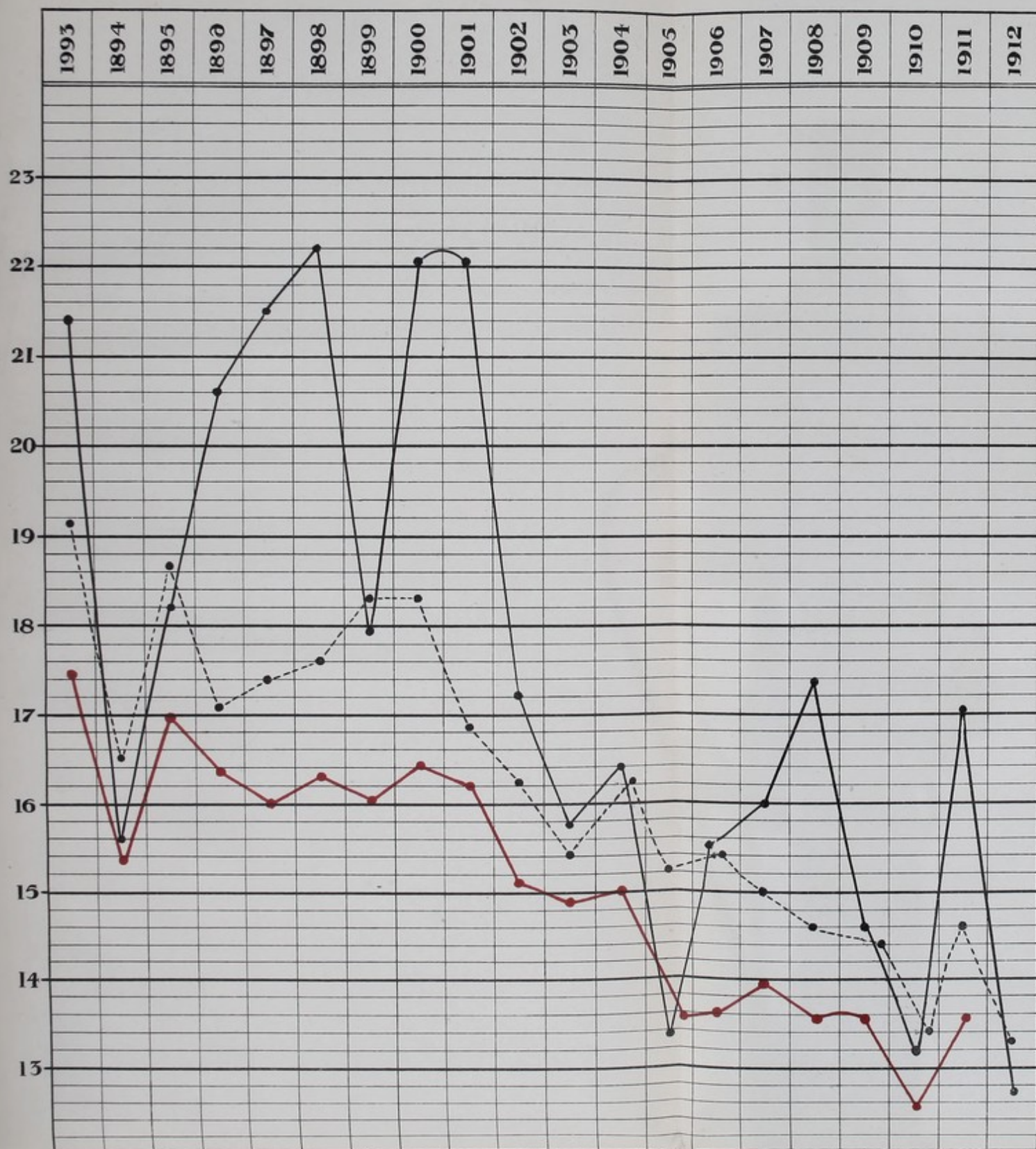
The deduction of these, and the addition of those of 21 persons belonging to the Borough who died in public institutions outside it, gives 500, of which 269 were those of males and 231 those of females, as the number, corrected for public institutions only, to be attributed to the Borough. It is equal to a DEATH RATE of **13.12** per 1,000, which is the lowest rate recorded in the Borough. The rate in England and Wales was 13.3, that in the 96 great towns 14.6, and in the 241 smaller towns 13.0.

The rate in the North Ward was 13.08, in the South 9.59, in the West 15.54, and in the Central 13.6. The rates from the various causes of death are compared with those of other Sanitary Districts of the County in Tables A and B. The causes of death are given in Table III.

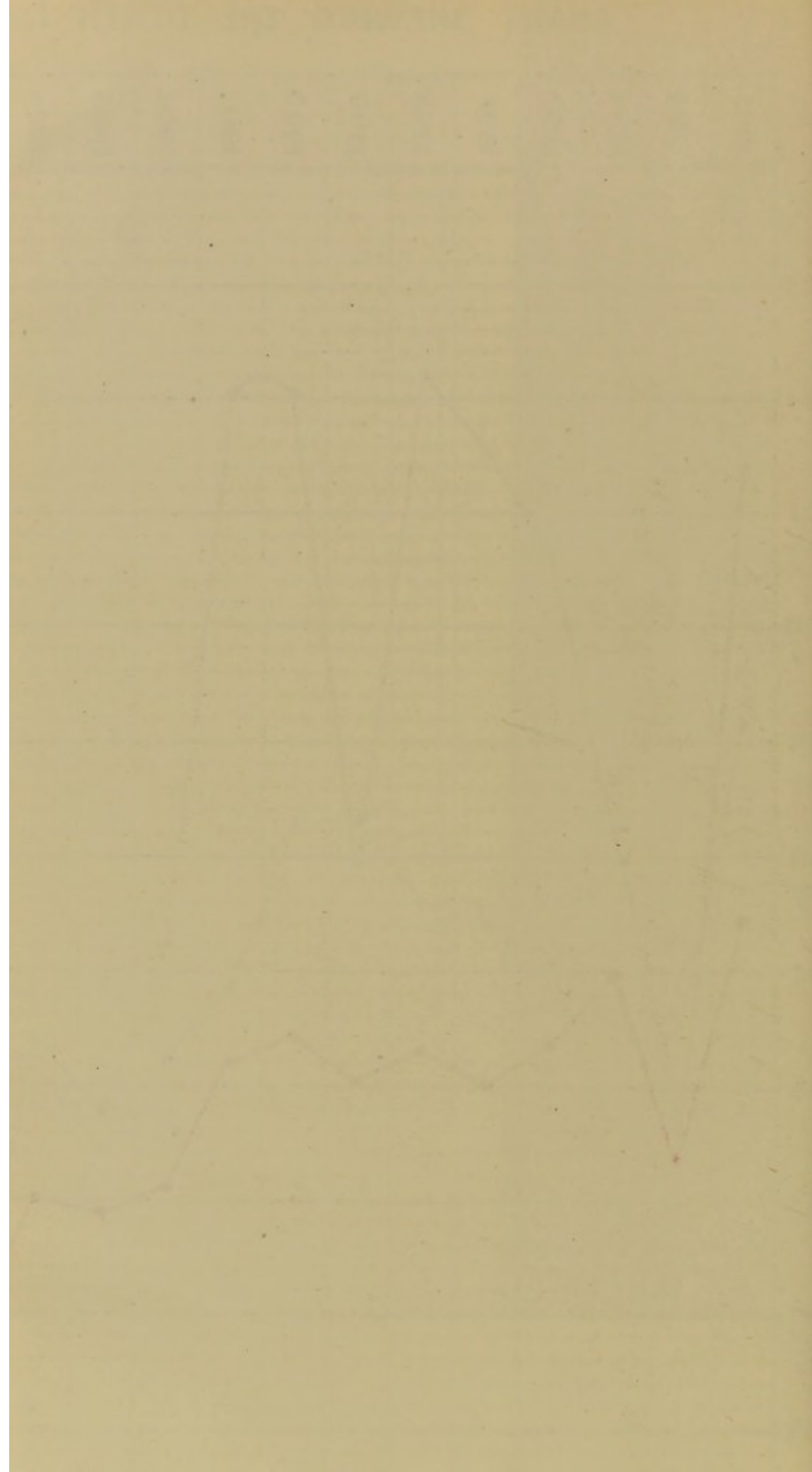
There were 49 inquests held on deaths occurring in the Borough, the cases of death being certified by the Coroner as under: Residents 14, Strangers 25.

				Borough.	Strangers.
Found drowned	...	...	—	...	1
Suicide	...	...	2	...	—
Murder	...	...	4	...	—
Burns	...	...	1	...	7

CHART SHEWING THE DEATH RATES .. 1893-1912.



Continuous line Borough of Chesterfield.
Dotted line - England and Wales.
Red line - - County of Derby.
Death Rate for Chesterfield, 1912, should be 13.12.



			Borough.	Strangers.
Scalds	...	...	1	—
Fall from wall	...	...	1	—
„ vehicle	...	...	1	1
„ roof	...	...	—	1
„ ladder	...	...	1	—
Fall (fractured skull)	...	...	1	—
Fall (Abdomen injured by broken glass)	...	...	—	1
Suffocated	...	...	1	—
Revolving Machine	...	...	1	—
Colliery Accidents	...	...	—	6
Run over by vehicle	...	...	—	6
Lead Poisoning	...	...	—	1
Blood Poisoning	...	...	—	1
			—	—
Total	...	...	14	25

Interments were carried out at the Cemetery, St. Thomas' Church, Christ Church, and Elder Yard Chapel, the numbers being 346, 127, 28, and 2; total 503.

I should like to take this opportunity of thanking those gentlemen by whose courtesy the above figures were obtained.

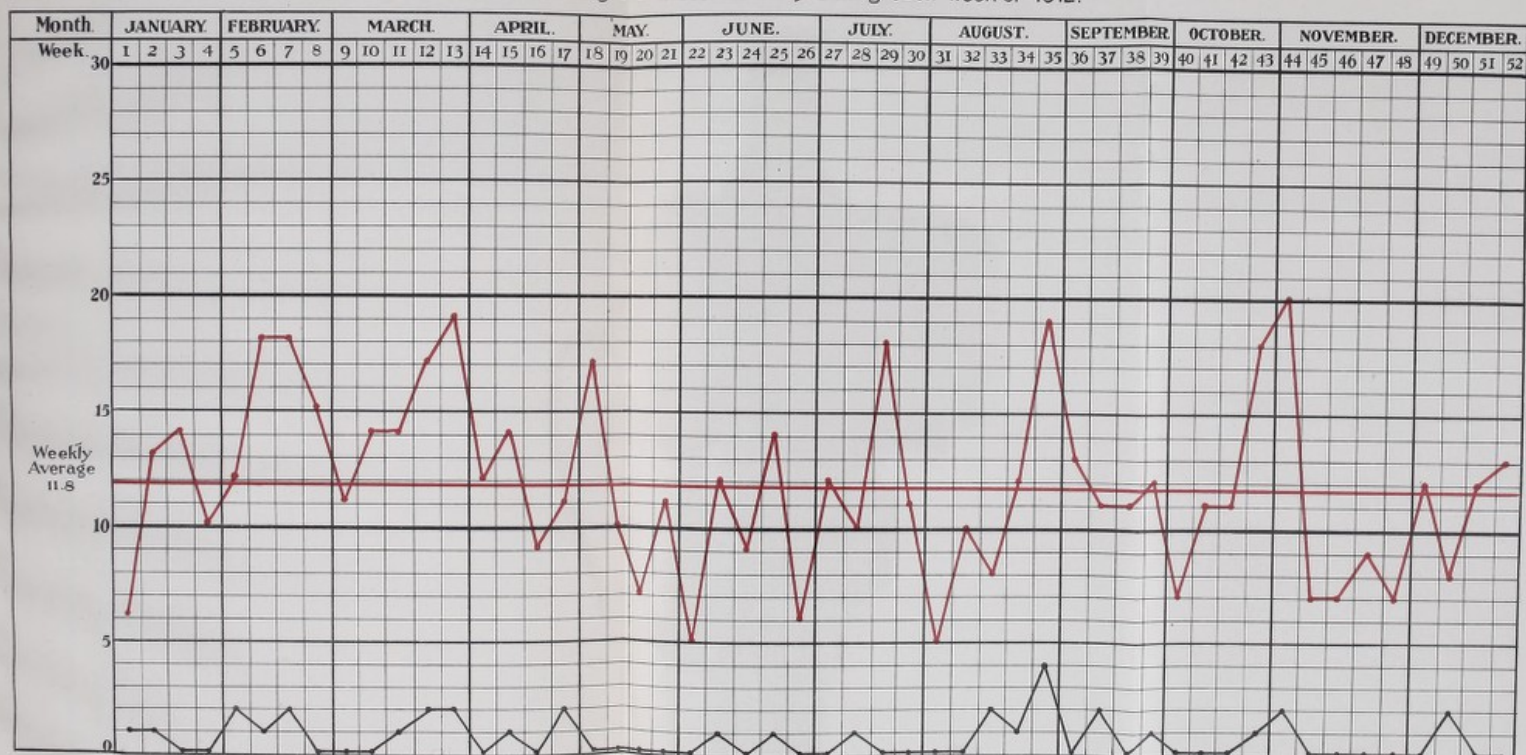
TABLE III.

Causes of, and Ages at Death during the Year 1912.

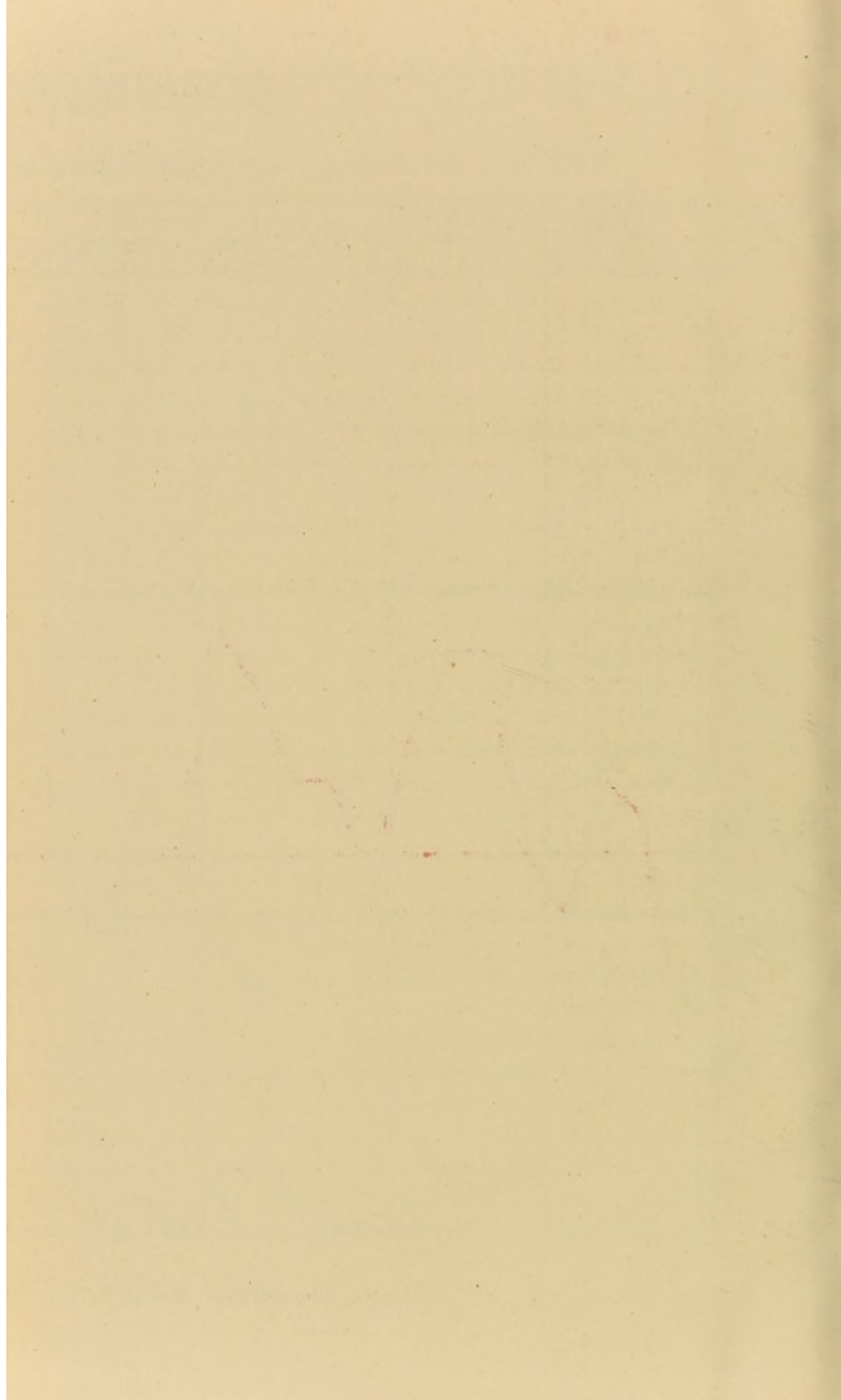
CAUSES	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District
	ALL AGES	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards	
All Causes { Certified ...	487	105	23	18	16	31	58	115	121	...
{ Uncertified ...	13	1	1	1	1	...	3	4	2	...
Enteric Fever ...	1	...	...	...	...	...	1	...	...	...
Small Pox ...	...	...	...	...	...	...	...	...	...	...
Measles ...	2	...	...	2	...	...	...	...	...	...
Scarlet Fever ...	8	...	1	2	4	1	...	...	...	6
Whooping Cough ...	12	8	3	1	...	...	...	...	...	...
Diphtheria and Croup ...	2	...	...	1	1	...	...	...	...	...
Influenza ...	2	...	...	...	...	...	...	1	1	...
Erysipelas ...	2	1	...	...	...	...	...	1	...	...
Phthisis (Pulmonary Tuberculosis) ...	41	...	...	...	2	11	17	10	1	9
Tuberculous Mening- itis ...	5	2	...	1	2	...	...	...	...	4
Other Tuberculous Diseases ...	10	1	2	1	...	2	4	...	...	5
Cancer, malignant disease ...	21	...	...	...	...	1	2	15	3	13
Rheumatic Fever ...	2	...	...	...	1	...	...	1	...	...
Meningitis ...	5	2	1	...	...	2	...	...	...	...
Cerebro-Spinal Men- ingitis ...	...	...	...	...	...	...	...	...	...	...
Organic Heart Disease ...	50	...	...	...	...	2	4	29	15	18
Bronchitis ...	49	4	1	2	...	1	1	18	22	20
Pneumonia (all forms) ...	35	6	8	4	1	2	4	5	5	10
Other diseases of res- piratory organs ...	1	...	...	...	...	...	...	...	1	...
Diarrhoea and Enteritis ...	14	11	1	1	...	...	...	1	...	...
Appendicitis and Typhlitis ...	1	...	...	...	...	1	...	...	...	8
Cirrhosis of Liver ...	7	...	...	...	...	...	1	4	2	6
Alcoholism ...	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease ...	16	...	...	...	1	1	4	6	4	7
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	...
Other accidents and diseases of Pregnancy and Parturition ...	4	...	...	...	...	1	3	...	...	...
Congenital Debility & Malformation inclu- ding Premature Birth ...	54	53	1	...	...	...	...	...	...	3
Violent Deaths, exclu- ding Suicide ...	15	4	...	3	1	1	4	1	1	31
Suicide ...	4	...	...	...	...	1	1	...	2	...
Other Defined Diseases ...	70	4	2	...	3	4	12	21	24	41
Poliomyelitis ...	...	...	...	...	...	...	...	...	...	...
Diseases ill-defined or unknown ...	67	10	4	1	1	...	3	6	42	28
	500	106	24	19	17	31	61	119	123	209

BOROUGH OF CHESTERFIELD.

Chart showing the Gross Mortality during each week of 1912.



Note: The red line indicates the deaths from all causes registered in the Borough; the black line the deaths from the seven principal zymotic diseases.

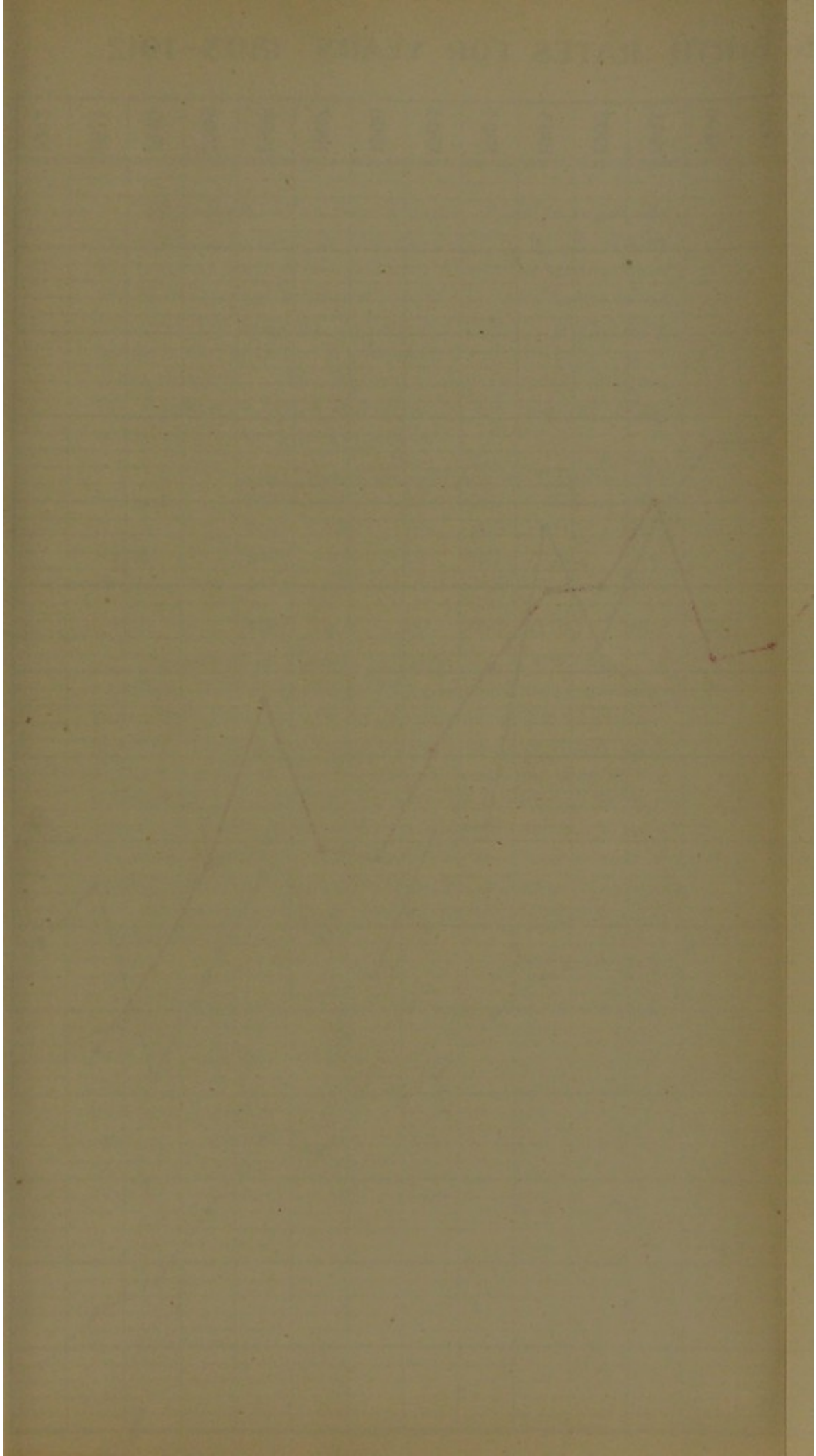


Other Defined Diseases.—Table IV. gives the number of deaths from various causes, and 70 as the number of deaths from "other defined diseases." They are as follows:—

	YEARS.								TOTALS
	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65 and over	
CIRCULATORY DISEASES									
Arterio Sclerosis	...	...	...	...	...	...	1	2	3
Aneurysm	...	...	...	...	...	...	1	...	1
Ulcerative Endocarditis	...	...	...	...	1	...	...	...	1
Acute Pericarditis	...	...	...	1	...	...	...	...	1
Cerebral Hæmorrhage	...	...	...	...	...	1	5	13	19
" Embolism	...	...	...	...	...	...	...	1	1
" Softening	...	...	...	...	...	...	1	1	2
" Thrombosis	...	...	...	...	...	1	...	...	1
GENERAL DISEASES									
Rickets... ..	...	1	...	...	...	...	...	...	1
Syphilis	2	...	...	...	...	...	...	...	2
Lymphatic Leukæmia	...	...	...	...	1	...	...	...	1
Diabetes	...	...	...	...	...	1	2	...	3
Pernicious Anæmia	...	...	...	...	...	1	2	...	3
Atelectasis	1	...	...	...	...	...	...	...	1
MENTAL DISEASES									
Epilepsy	...	...	...	...	...	...	1	...	1
Chronic Dementia	...	...	...	...	...	...	1	2	3
Congenital Idiocy	...	...	...	...	1	...	...	...	1
Cerebral Tumour	...	...	...	...	...	2	1	...	3
General Paralysis of the Insane	...	...	...	...	...	3	2	1	6
INTESTINAL DISEASES									
Inflammation of Gall Bladder	...	...	...	...	...	1	...	...	1
Gangrenous Stomatitis	...	1	...	...	...	...	...	...	1
Intestinal Obstruction	1	...	...	1	...	1	2	1	6
Dysentery	...	...	...	1	...	...	...	...	1
Perforating Gastric Ulcer	...	...	...	...	1	1	...	...	2
SEPTIC DISEASES									
Pyæmia	...	...	...	...	...	...	1	...	1
Cystitis... ..	...	...	...	...	...	...	...	2	2
Cellulitis	...	...	...	...	...	...	1	1	2
TOTALS... ..	4	2	...	3	4	12	21	24	70

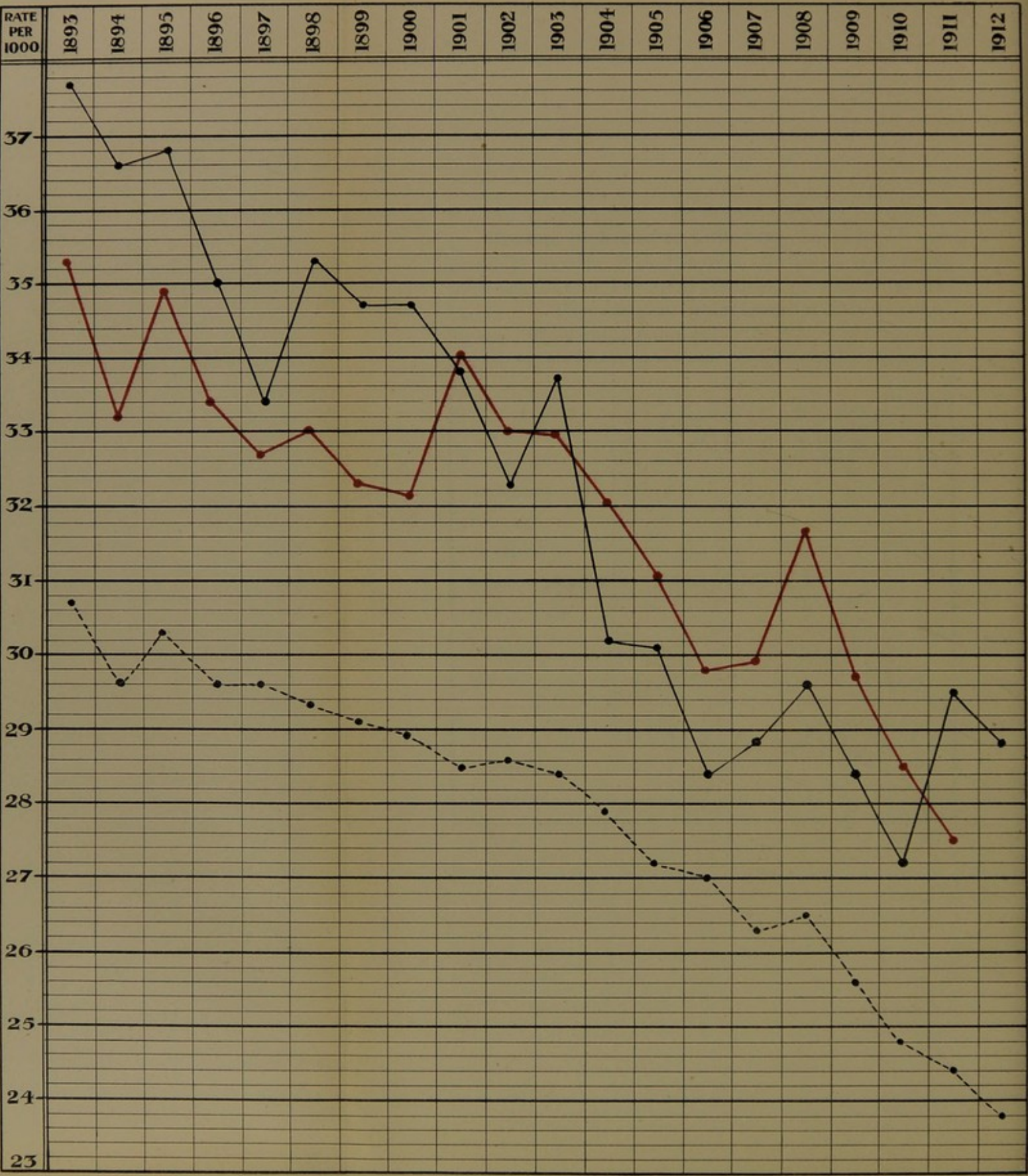
Diseases Ill-defined or Unknown.—In Table IV. are given the number of deaths from all causes, and among them are 67 who died from diseases “ill-defined or unknown.” This category is inclusive of 13 uncertified deaths. They are as follows:—

	YEARS.								TOTAL.
	0-1	1-2	2-5	5-15	15-25	25-45	45-65	65 and over	
Convulsions...	10	3	1	...	...	...	...	...	14
Teething ...	...	1	...	...	...	...	...	...	1
Diphtheria ...	...	...	...	1	...	...	...	...	1
Internal Obstruction	...	...	...	...	...	1	...	...	1
Heart Disease ...	...	...	...	...	...	2	4	1	7
Apoplexy ...	...	...	...	...	...	...	1	...	1
Old Age ...	...	...	...	...	...	...	1	41	42
Totals ...	10	4	1	1	...	3	6	42	67
Certified ...	9	3	...	...	...	...	2	40	54
Uncertified ...	1	1	1	1	...	3	4	2	13



Continuous line - Birth Rate Chesterfield.
Dotted line - Birth Rate England and Wales.
Red line - Birth Rate County of Derbyshire.

CHART SHEWING BIRTH RATES FOR YEARS 1893-1912.



Birth Rate.—The total number of births registered as occurring in the Borough was 1,119, of which number 575 were males and 544 females. Included among these are 19 belonging to other districts, the total figure being precisely the same as that of last year. Thirty-three births occurred in the Workhouse, 19 of which belong to other districts. The births are distributed as follows, the Workhouse births belonging to the Borough being distributed to their proper wards:

	Male	Female	Ille- gitimate	Le- gitimate	Totals	Rate per 1000 liv'g
Central ...	137	141	16	262	278	28.0
North ...	113	104	8	209	217	23.6
South ...	135	127	11	251	262	30.0
West ...	183	160	13	330	343	33.1
	568	532	48	1052	1100	28.8

The corrected number of births was 1,100, which is equal to a BIRTH RATE of **28.8** per 1,000 living, as compared with a decennial average number of 908 and a rate of 29.9. The accompanying chart shows the steady drop in the birth rate in the Borough and a similar drop in the rates of England and Wales and the County of Derbyshire. It should be borne in mind that we are fairly near the lowest attainable rate as regards the death rate, and further reductions cannot be hoped for, whereas the birth rate can be reduced to a rate at which the deaths outnumber the births.

			Natural Increase		
	Population	Net Births	Net Deaths	Number	Rate per 1000
1902 ...	27765	896	478	418	15.0
1903 ...	28381	956	445	511	18.0
1904 ...	28590	909	466	443	15.49
1905 ...	28890	872	384	488	16.8
1906 ...	29255	830	454	376	12.8
1907 ...	29583	853	474	379	12.8
1908 ...	30690	909	531	378	12.3

1909	...	31243	888	457	431	13.79
1910	...	31845	871	420	451	14.1
1911	...	37550	1101	642	459	12.2
Average.		30379.2	908.5	475.1	433.4	14.2
1912	...	38100	1100	500	600	15.7

Illegitimacy.—Illegitimacy has an important bearing on the question of infant mortality. The total number of illegitimate births was 67. After correction for those in the Union Workhouse was 48, equal to a rate of 43.6 per 1,000 births. The rates for 1911, 1910, 1909, and 1908 being 50.8, 40.1, 42.8 and 44 respectively. That of 1910 being the lowest recorded for the Borough (as was the rate of 1909 at the time). The rate for the five years ending 1904 was 52.9, and for the five years ending 1909, 53.1. The rates of England and Wales for the same periods were 39.4 and 40.1 respectively.

The rate was 36.9 in the North Ward, 42.0 in the South, 37.9 in the West, and 57.5 in the Central.

TABLE IV.

Infant Mortality.—Nett deaths from stated causes at various ages under 1 year of age :—

CAUSE OF DEATH.		Under 1 week.	1-2 weeks.	2-3 Weeks	3-4 weeks.	Total under 4 weeks.	4 weeks & under 3 months.	3 months & under 6 months.	6 months & under 9 months.	9 months & under 12 months.	Total Deaths Under 1 Year.
ALL CAUSES	Certified ...	26	6	4	4	...	20	11	16	18	105
	Uncertified ...	...	...	...	...	...	1	...	...	...	1
Small-Pox ...		...	...	...	...	...	...	...	...	...	...
Chicken-Pox ...		...	...	...	...	...	...	...	...	...	...
Measles ...		...	...	...	...	...	...	...	...	...	...
Scarlet Fever ...		...	...	...	...	...	...	...	...	...	...
Whooping-Cough ...		...	...	...	...	...	...	1	3	4	8
Diphtheria and Croup...		...	...	...	...	...	...	...	...	...	...
Erysipelas ...		...	...	...	...	...	...	1	...	...	1
Tuberculous Meningitis		...	...	...	...	...	...	...	1	1	2
Abdominal Tuberculosis		...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases		...	...	...	...	...	...	1	...	...	1
Meningitis (<i>not Tuberculous</i>)		...	...	...	...	...	...	...	1	1	2
Convulsions ...		1	1	...	1	3	3	1	2	1	10
Laryngitis ...		...	...	...	...	...	...	...	...	...	...
Bronchitis ...		...	...	1	...	1	...	1	1	1	4
Pneumonia (all forms)		...	...	...	...	...	1	...	1	4	6
Diarrhoea ...		...	...	...	...	...	...	1	1	2	4
Enteritis ...		1	...	1	...	2	1	1	2	1	7
Gastritis ...		...	...	...	...	...	...	...	...	...	...
Syphilis ...		...	...	...	...	...	...	1	1	...	2
Rickets ...		...	...	...	...	...	...	...	...	...	...
Suffocation, overlying		...	...	...	...	...	1	...	...	...	1
Injury at birth ...		2	...	...	...	2	...	...	...	...	2
Atelectasis ...		1	...	...	...	1	...	...	...	...	1
Congenital Malformation		3	1	...	...	4	...	1	1	...	6
Premature Birth ...		17	4	2	2	25	1	...	...	...	26
Atrophy, Debility, and Marasmus		1	...	...	1	2	14	2	1	2	21
Other Causes ...		...	...	...	...	...	...	...	1	1	2
Totals...		26	6	4	4	40	21	11	16	18	106

Nett Births in the Year	f Legitimate	1052
	(Illegitimate	48
Nett deaths in the Year	f Legitimate Infants	97
	(Illegitimate Infants..	9

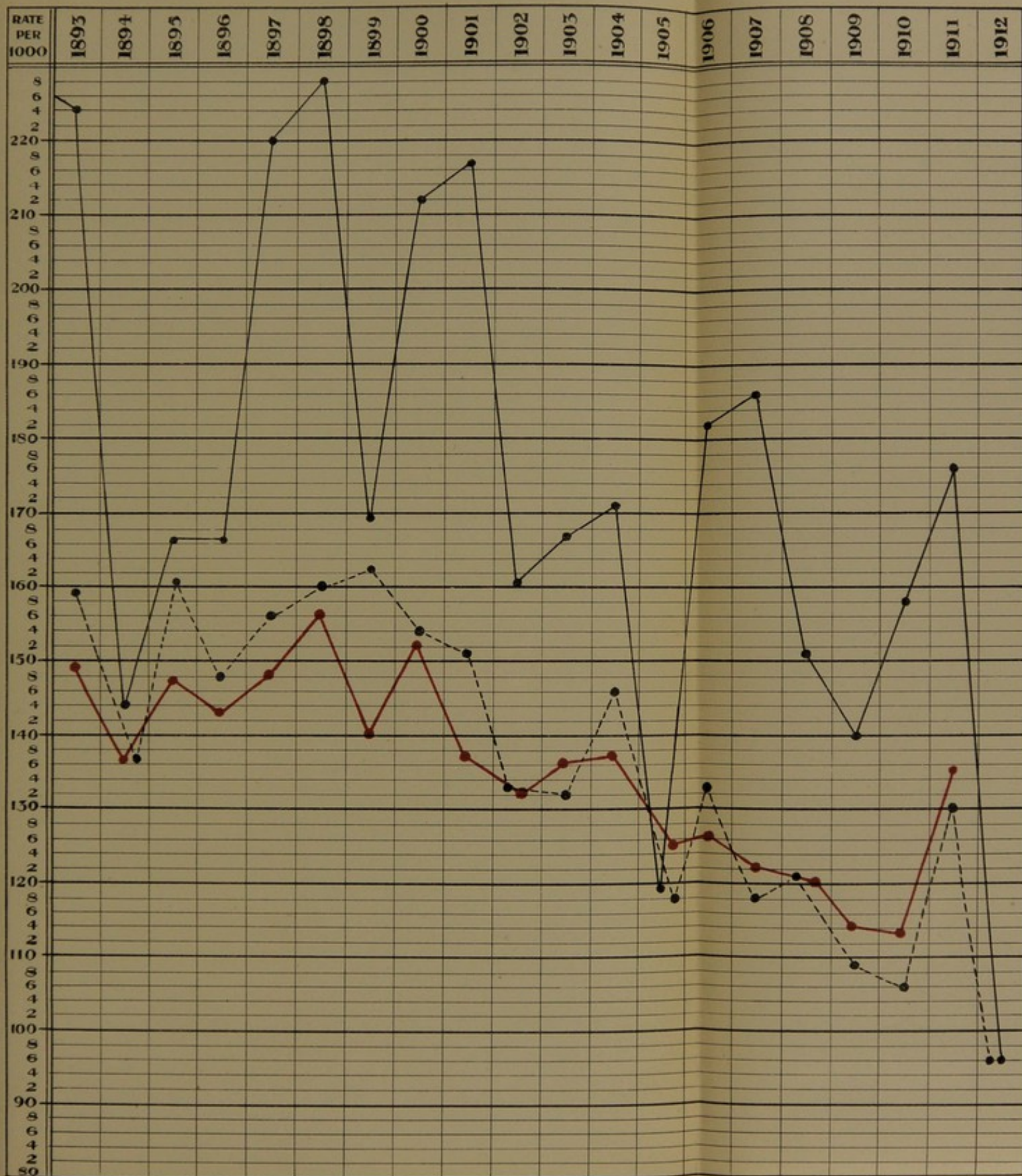
Infantile Mortality.—The year 1912 has seen a great reduction in the number of children who failed to reach one year of age. There were 106 deaths and an INFANTILE MORTALITY RATE of **96** per 1,000 born, as against 194 and a rate of 176 for 1911, and a decennial average of 146 and a rate of 160.

The reduction in mortality is not peculiar to Chesterfield nor to the County. It is universal over the whole country, and is largely due to the abnormally wet summer with its consequent absence of dust and flies. This absence of dust and flies has meant that the food of children has not been infected with the germs of diarrhoeal diseases.

In the Borough, as is well known, two-thirds of the sanitary conveniences are of the privy midden type; that is to say, large collections of decaying animal and vegetable refuse which form an admirable breeding place for flies. The presence of one privy midden in an otherwise sanitary neighbourhood serves as a breeding ground for flies, which carry their filth to food stored, according to an experiment conducted by the Medical Officers of the Local Government Board, within a range of 700 yards. Dr. Peck showed that in an outbreak of enteric fever in 1901, privy-midden houses furnished 72 per cent. of the deaths, while they formed only 63 per cent. of the total houses in the Borough.

The summer of 1912 will long be remembered as one of continuous wet and cold. Its effect on the infantile mortality has been that the breeding of flies has been adversely affected, and the streets, courts and alleys have received a constant daily flushing, thus preventing the formation or accumulation of dust. The Borough has been during the last year in a condition similar to that of a water-closeted town, and instead of 68 deaths of infants from diarrhoea there have been only 11. The chief causes of death have been: Premature births 26, various forms of inanition 21, and convulsions 10.

CHART SHEWING INFANTILE MORTALITY · 1893-1912.



Continuous line · Borough of Chesterfield.
Dotted line · · England and Wales.
Red line · · · Derbyshire.

REPORT ON THE PROGRESS OF THE AMERICAN MEDICAL ASSOCIATION FOR THE YEAR 1917

By the Executive Committee of the American Medical Association
Presented at the Annual Meeting of the Association, held at the
Hotel Hamilton, Chicago, Ill., June 1-5, 1918

REPORT OF THE EXECUTIVE COMMITTEE OF THE AMERICAN MEDICAL ASSOCIATION
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Five deaths took place in the Workhouse and five in the Hospital, of which four did not belong to the Borough. Allocating the remaining six to their appropriate wards, the rate of infantile mortality is:

	Net Births	Net Deaths	Infantile Mortality per 1000 Births
Central ...	278	21	75
North ...	217	16	73
South ...	262	24	91
West ...	343	45	160
Borough ...	1100	106	96

In considering Table V. it should be remembered that the number of deaths from premature birth and congenital defects, and to a lesser extent the number of deaths from atrophy and marasmus, is not affected by the work of the Health Visitor, deaths from these causes being due to the pre-natal conditions of the mother, such as ill-health, lack of food, and working right up to the time of confinement. Deaths from convulsion are generally due to errors of feeding. It is difficult to say what influence the maternity benefit of the Insurance Act will have on the infantile mortality. Providing that a judicious outlay of the money is made, there ought to be a reduction.

The following table is abstracted from Table V.:

	Premature Births and Congenital Defects	Diarrhoeal Diseases	Atrophy and Marasmus	Convulsions
1905 ...	24	19	16	12
1906 ...	35	36	24	13
1907 ...	37	22	32	19
1908 ...	32	33	12	7
1909 ...	40	24	23	4
1910 ...	29	28	27	9
1911 ...	29	68	33	15
1912 ...	32	11	21	10
Average of 8 years	32.2	30.0	23.4	11.0

The following table shows the results of the experiments conducted on the effect of the different doses of the vaccine on the development of the disease. The results are given in the following table:

Dose	Number of animals	Number of animals dying	Number of animals recovering
1	10	0	10
2	10	0	10
3	10	0	10
4	10	0	10
5	10	0	10
6	10	0	10
7	10	0	10
8	10	0	10
9	10	0	10
10	10	0	10

The results of the experiments show that the vaccine is highly effective in preventing the disease. The results are given in the following table:

The following table shows the results of the experiments conducted on the effect of the different doses of the vaccine on the development of the disease. The results are given in the following table:

Dose	Number of animals	Number of animals dying	Number of animals recovering
1	10	0	10
2	10	0	10
3	10	0	10
4	10	0	10
5	10	0	10
6	10	0	10
7	10	0	10
8	10	0	10
9	10	0	10
10	10	0	10



