[Report 1905] / Medical Officer of Health, Nottingham City.

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CITY OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1905,

BY

PHILIP BOOBBYER, M.D.,

MEDICAL OFFICER OF HEALTH,

MEDICAL SUPERINTENDENT OF ISOLATION HOSPITALS.

Nottingham:

THOS. FORMAN AND SONS, SHERWOOD STREET.

CITY OF NOTTINGHAM.

1905—1906.

HEALTH COMMITTEE.

COUNCILLOR ARTHUR CLEAVER, J.P., MAYOR.

Chairman:—

ALDERMAN MUTCH, M.D.

Vice-Chairman:—

COUNCILLOR SAMBORNE COOK, SHERIFF.

ALDERMAN BENNETT.
" BENTLEY.
" JELLEY.
COUNCILLOR ALBERT BALL.
" BARNETT.
" DABELL, M.R.C.S.
" FLEEMAN.
COUNCILLOR LLOYD.
" MARLOW.
" PENDLETON.
" ROBERTS, M.B.
" SIM, M.D.
" TUSTIN.
" J. WHITE.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE OF THE NOTTINGHAM CORPORATION.

GENTLEMEN,

I have now the honour of presenting my 17th Annual Report as Medical Officer of Health for Nottingham.

The population of the City, which at the last census stood at 239,753, is estimated to have reached 251,677 by the middle of 1905.

The birth-rate, to the continual decline of which I have made frequent allusion in recent years, reached during 1905 the unprecedentedly low figure of 26·5 per thousand living.

The general crude death-rate was equal to 16·45, which is also a low rate, but owes its lowness in some measure to the age and sex constitution of the population, which differs considerably from that of the country as a whole.

The infant death-rate was equal to 155 per 1,000 births, another low figure for Nottingham.

The only one of the group of principal epidemic diseases which gave rise to any serious trouble during the year was measles. This disease was certified as responsible for no less than 228 deaths. These deaths were equal to a rate of 91 per 100,000 of the population, and no less than 200 of them occurred during the first three months of the year.

The deaths from the other principal epidemic diseases taken together, excepting diarrhœa, amounted to only 154, ranging from 1 in the case of small-pox to 61 in that of whooping-cough.

The deaths from diarrhœa amounted to 202, a number more than 150 below the annual average of the past 10 years.

The recent remarkable decline in the number of deaths from enteric fever, and in a lesser degree in those from diarrhœa, is certainly in some measure to be ascribed to the better methods of dealing with nightsoil and other refuse which have been adopted during the past 10 years. So far as this branch of public sanitary work is concerned, it now only remains to secure the conversion of the existing dry system of excrement disposal to one of water carriage, in order to justify the boast on the part of the Nottingham Corporation that it has done its best to set its house in sanitary order.

The project started in this City a few years back, for gradually establishing a system of public abattoirs which should ultimately take the place of the private

slaughter-houses now existent in almost every part of the City, has apparently fallen through. This is much to be regretted, and I would ask your serious consideration once more of the many drawbacks attaching to a system of private slaughter-houses in a City like Nottingham.

The subject of the prevention and cure of tuberculosis is receiving less public attention in Nottingham than in most other large Cities of this country at the present time. I may remind you in this connection that several of the temporary wards at Bagthorpe Hospital, and the whole of the small-pox Hospital on Bulwell Forest, still remain empty and available at any time for use as a refuge for consumptive patients. There are now large numbers of such patients in the City much in need of Hospital treatment, who are not in a position to obtain admission to the more expensive sanatoria, and yet of too good a class to seek asylum at the Union Hospital.

PHILIP BOOBBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1905, and for the 10 years 1895-1904.

	Estimated Population.	Inhabited Houses.	† Marriages	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year.	Under 5 Years.	
1905	251,677	58,902	2077	6645	4142	1031	1580	761
1904	248,811	58,000	2057	6880	4314	1239	1666	816
1903	245,985	56,784	2287	6945	4063	1144	1590	789
1902	243,191	55,240	2256	6867	4118	1101	1382	666
1901	240,438	53,107	2255	6801	4346	1330	1774	791
1900	*237,770	52,537	2153	6731	4555	1314	1811	770
1899	239,384	53,052	2037	6910	4689	1470	1954	802
1898	236,137	52,051	1912	6796	4058	1209	1689	636
1897	232,935	...	1895	6742	4277	1362	1869	587
1896	229,775	...	1749	6758	3987	1136	1709	594
1895	226,659	...	1658	6717	4195	1269	1640	522
Average of the *ten* years 1895-1904.	238,108	...	2025	6814	4200	1257	1708	697

* Retrospective estimate based upon Census Return of April, 1901.

Estimates for years 1895—1899 based upon hypothesis that rate of increase between 1881 and 1891 had continued during succeeding decennium.

† The returns of Marriages, from June 1899 onwards, are for the entire municipal area—the new Parish of Nottingham: prior to this, they did not include those of Bulwell, Basford, and North Wilford.

TABLE II.

Nottingham. Annual Rates for 1905, and the 10 years 1895-1904.

	Rate per 1000 of Population.		Per 1000 Births Deaths under 1 year.	Per 1000 of Total Deaths.		
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.	Deaths in Public Institutions.
1905	26·4	16·45	155	249	381	184
1904	27·7	17·34	176	287	386	189
1903	28·3	16·5	165	282	391	194
1902	27·3	16·7	159	267	336	190
1901	28·3	18·1	196	306	408	182
1900	28·3	19·2	196	288	398	169
1899	28·8	19·6	213	313	417	168
1898	28·8	17·2	178	298	416	157
1897	28·9	18·4	202	318	437	137
1896	29·4	17·5	168	278	418	145
1895	29·7	18.5	189	302	391	139
Average of the *ten* years 1895-1904.	28·60	17·90	184	293	399	167

TABLE III.

Schedule A—Nottingham. 1905. Deaths Registered from all causes.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
1	Small-pox														
	(*a*) Vaccinated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(*b*) Unvaccinated ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	(*c*) No Statement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles	48	174	9	..	1	..	..	..	..	..	..	..	..	232
3	Scarlet Fever	2	11	5	1	..	..	..	..	..	..	..	..	..	19
4	Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza ..	1	..	..	..	..	..	2	3	5	2	5	2	..	20
6	Whooping-Cough ..	19	42	..	..	..	..	..	..	..	..	..	..	..	61
7	Diphtheria	1	31	14	1	..	..	..	..	2	..	..	..	..	49
8	Enteric Fever	1	1	1	2	2	4	2	8	1	1	1	..	..	24
9	Asiatic Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Diarrhœa, Dysentery ..	70	8	..	..	..	..	..	..	..	..	2	..	..	80
11	Epidemic Enteritis ..	82	33	5	..	..	..	..	..	..	1	1	..	..	122
12	*Other allied Diseases* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Chicken Pox	1	..	..	..	..	..	..	..	..	..	..	..	..	1
14	Cerebro-spinal Meningitis	..	..	..	..	1	..	..	..	1	..	..	..	..	2
15	Hydrophobia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Glanders	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Tetanus	..	..	..	1	..	1	..	..	2	..	..	..	..	4
18	Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	Cowpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Syphilis	15	3	..	..	..	..	..	..	..	..	..	..	..	18
21	Gonorrhœa	..	..	..	..	..	..	..	..	..	1	..	..	..	1
22	Phagedæna	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Erysipelas	1	..	..	..	..	..	1	..	4	3	1	1	..	11
24	Puerperal Fever	..	..	..	..	1	2	4	5	..	..	..	..	..	12
25	Pyæmia	1	1	2	3	..	..	1	3	2	..	1	..	1	15
26	Infective Endocarditis ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
27	*Other Allied Diseases* ..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
28	Noma Pudendi	1	..	..	..	..	..	..	..	..	..	..	..	..	1
29	Malarial Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30	Rheumatic Fever ..	..	..	1	3	2	..	..	1	3	..	..	..	..	10
31	Rheumatism of Heart ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
32	Tuberculosis of Brain ..	9	22	7	1	1	..	..	..	..	..	..	..	..	40
33	Tuberculosis of Larynx	..	..	..	..	..	1	..	1	1	..	..	..	..	3
34	Phthisis	2	7	3	2	22	37	72	62	52	23	8	5	..	295
35	Abdominal Tuberculosis	18	8	3	1	..	3	1	..	..	..	..	..	..	34
36	General Tuberculosis ..	7	8	..	3	..	1	2	2	..	..	1	..	..	24
37	Other forms Tuberculosis	3	1	..	..	..	3	1	1	3	..	2	..	..	14
38	*Other Infective Diseases*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
39	Rheumatoid Arthritis ..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
40	Thrush	1	..	..	..	..	..	..	..	..	..	..	..	..	1
41	Actinomycosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42	Hydatid Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43	Scurvy	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44	*Other Diseases due to Altered Food*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45	Acute Alcoholism ..	..	..	..	..	..	..	..	..	2	..	..	..	..	2
46	Chronic Alcoholism ..	..	..	..	..	..	..	3	2	4	8	1	..	..	18
47	*Chronic Industrial Poisonings*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
48	*Other Chronic Poisonings*	..	..	..	..	..	..	..	..	..	1	..	..	..	1
49	Leuchæmia	..	..	..	..	..	..	..	1	..	..	1	..	..	2
	TOTALS	283	350	50	18	30	52	90	89	84	42	25	8	1	1122

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
50	Leucocythemia	..	..	..	..	..	..	..	1	..	..	..	..	..	1
51	Osteo-arthritis	..	..	..	..	..	..	..	..	1	3	1	..	..	5
52	Gout	..	..	..	..	..	..	..	..	1	1	..	..	..	2
53	Cancer	..	1	..	..	..	3	5	21	56	64	52	20	1	223
54	Diabetes Mellitus	..	..	3	..	1	3	3	1	6	6	6	1	..	30
55	Purpura Hæmorrhagica	..	..	..	..	..	..	..	..	..	..	..	..	..	..
56	Hæmophilia	1	..	..	..	..	..	..	..	..	..	..	..	..	1
57	Anæmia	..	..	..	1	..	..	2	1	2	3	..	..	..	9
58	Lymphadenoma	..	..	..	..	..	..	..	..	..	1	..	..	..	1
59	Premature Birth	121	..	..	..	..	..	..	..	..	..	..	..	..	121
60	Injury at Birth	2	..	..	..	..	..	..	..	..	..	..	..	..	2
61	Debility at Birth	105	1	..	..	..	..	..	..	..	..	..	..	..	106
62	Atelectasis	34	1	..	..	..	..	..	..	..	..	..	..	..	35
63	*Congenital Defects*	39	1	..	..	..	..	..	..	..	..	..	..	..	40
64	Want of Breast Milk	14	1	..	..	..	..	..	..	..	..	..	..	..	15
65	Atrophy, Debility, Marasmus	94	8	..	..	1	..	..	..	..	1	..	..	..	104
66	Dentition	4	6	..	..	..	..	..	..	..	..	..	..	..	10
67	Rickets	4	5	1	..	..	..	..	..	..	..	..	..	..	10
68	Old Age, Senile Decay	..	..	..	..	..	..	..	..	1	9	85	178	49	322
69	Convulsions	49	5	..	..	..	..	..	..	..	..	..	..	..	54
70	Meningitis	19	17	7	1	..	..	2	..	2	3	..	..	1	52
71	Encephalitis	2	1	1	1	..	..	..	..	..	..	..	..	..	5
72	Apoplexy	..	..	..	..	..	1	..	9	19	33	42	21	2	127
73	Softening of Brain	..	..	..	..	..	2	1	3	6	9	14	11	..	46
74	Hemiplegia	..	..	..	..	..	..	..	1	2	6	9	6	2	26
75	Genrl. Paralysis of Insane	..	..	..	..	..	..	4	8	7	4	1	..	..	24
76	Other forms of Insanity	..	..	..	..	..	1	..	1	2	2	1	..	..	7
77	Chorea	..	..	..	1	2	1	..	..	..	..	..	..	..	4
78	Cerebral Tumour	..	1	..	..	1	1	1	1	1	..	..	..	..	6
79	Epilepsy	..	2	..	3	1	3	5	4	2	4	3	1	..	28
80	Laryngismus Stridulus	..	1	..	..	..	..	..	..	..	..	..	..	..	1
81	Locomotor Ataxy	..	..	..	..	..	..	..	..	..	..	..	1	..	1
82	Paraplegia	..	..	..	..	..	..	1	1	2	2	1	2	..	9
83	*Otherforms, Brain Diseases*	1	1	..	..	..	..	..	2	..	2	1	1	..	8
84	Exopthalmic Goitre	..	..	..	..	..	..	1	2	1	2	..	..	..	6
85	Glosso Bulbar Paralysis	..	..	..	..	..	..	..	..	..	1	1	..	..	2
86	Peripheral Neuritis	..	..	..	..	..	..	1	1	..	1	..	..	..	3
87	Disseminated Sclerosis	..	..	..	..	..	..	..	1	..	..	1	..	..	2
88	Idiocy	..	1	..	..	..	..	..	..	..	..	..	..	..	1
89	Acute Mania	..	..	..	..	..	..	..	1	..	..	..	..	..	1
90	Otitis	1	..	1	..	..	..	1	..	..	..	..	..	..	3
91	Disease of Nose, Epistaxis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
92	Diseases of Eye	..	..	..	..	..	..	..	..	..	..	..	..	..	..
93	Pericarditis	1	..	1	..	1	..	..	2	..	..	1	..	..	6
94	Endocarditis	..	..	1	3	4	4	8	15	34	34	40	15	1	159
95	Hypertrophy of Heart	..	..	..	..	..	..	..	..	..	..	1	1	..	2
96	Angina Pectoris	..	..	..	..	..	..	..	..	..	2	4	..	..	6
97	Aneurism	..	..	..	..	..	..	1	1	1	..	3	..	..	6
98	Senile Gangrene	..	..	..	..	..	..	..	..	..	1	2	6	..	9
99	Embolism, Thrombosis	..	..	..	..	..	..	1	1	1	4	1	2	..	10
100	Phlebitis	..	..	..	..	..	..	..	1	..	1	..	..	..	2
101	Varicose Veins	..	..	..	..	..	..	..	1	..	..	..	..	..	1
	TOTALS	491	53	15	10	11	19	37	80	147	199	270	266	56	1654

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
102	*Other Diseases, Heart and Vessels*	..	1	2	2	1	3	1	14	27	41	44	27	2	165
103	Laryngitis	1	7	..	..	..	..	..	1	..	1	..	..	..	10
104	Croup	..	..	..	..	..	..	..	..	..	..	..	..	..	..
105	Tonsillitis..	1	3	..	..	..	..	..	..	..	..	..	..	..	4
106	*Other Diseases, Larynx and Trachea*	..	1	..	..	..	..	..	..	..	..	..	..	..	1
107	Acute Bronchitis ..	58	16	7	..	..	2	..	9	8	20	32	13	5	170
108	Chronic Bronchitis ..	..	..	..	..	..	..	..	1	14	29	74	27	8	153
109	Lobar Pneumonia ..	8	9	1	..	1	2	5	14	14	8	10	4	..	76
110	Lobular Pneumonia ..	78	70	3	1	..	2	..	6	7	4	5	1	..	177
111	Pneumonia	10	7	2	..	2	..	5	8	2	9	8	2	..	55
112	Emphysema, Asthma ..	..	..	..	..	..	..	..	..	2	5	5	..	..	12
113	Pleurisy	1	1	..	..	..	..	1	2	..	2	..	..	..	7
114	*Other Diseases, Respiratory System*	..	..	1	..	..	..	..	..	1	..	..	..	1	3
115	*Diseases of Mouth and*														
116	*Annexa*..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
117	Diseases of Pharynx ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
118	Diseases of Œsophagus	..	..	..	..	..	..	..	1	..	1	..	1	..	3
119	Ulcer of Stomach and Duodenum	..	..	..	1	1	3	1	4	2	2	..	..	..	14
120	Other Diseases of Stomach	7	2	..	..	..	..	..	..	1	3	4	1	..	18
121	Enteritis	27	3	..	..	2	..	..	1	1	1	4	1	..	40
122	Appendicitis	..	..	1	4	1	1	..	1	..	2	..	..	..	10
123	Obstruction of Intestine	2	..	..	1	..	..	..	..	2	5	5	..	..	15
124	Other Diseases of Intestine	..	..	1	..	..	..	..	..	..	..	3	..	..	4
125	Cirrhosis of Liver ..	..	..	1	..	..	2	1	3	18	7	5	5	..	42
126	Other Diseases of Liver	1	2	..	..	..	..	..	4	1	1	2	..	..	11
127	Peritonitis	..	..	..	..	1	..	2	4	2	..	1	..	..	10
128	*Other Diseases, Digestive System*	2	..	..	..	..	1	..	..	2	2	2	1	..	10
129	Hernia	..	..	..	1	..	..	..	1	2	4	..	2	1	11
130	Gall Stones	..	..	..	..	..	..	..	..	1	..	..	..	..	1
131	*Diseases, Lymphatic System and Glands* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
132	Acute Nephritis	2	2	3	1	1	..	1	..	2	1	..	..	..	13
133	Bright's Disease.. ..	..	..	..	..	2	1	2	8	14	26	13	2	1	69
134	Calculus	..	..	..	..	..	..	..	..	..	..	2	..	..	2
135	Diseases of Bladder and Prostate	..	..	..	..	..	..	..	..	1	4	4	2	..	11
136	*Other Diseases, Urinary System*	..	..	..	..	..	..	..	2	1	1	1	..	..	5
137	Uræmic Convulsions ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
138	Diseases of Testis & Penis	..	..	..	..	..	..	..	..	..	..	..	1	..	1
139	Diseases of Ovaries ..	..	..	..	..	..	..	..	..	3	2	2	1	..	8
140	Diseases of Uterus and Appendages	..	..	..	..	..	..	4	2	1	1	2	..	..	10
141	Diseases of Vagina and External Genitals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
142	Diseases of Breast ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
143	Abortion, Miscarriage ..	..	..	..	..	..	..	..	4	..	..	..	..	..	4
144	Puerperal Mania ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
145	Puerperal Convulsions ..	..	..	..	..	1	1	..	1	..	..	..	..	..	3
	TOTALS	200	124	22	11	13	18	24	92	129	182	228	91	18	1152

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	85–	
146	Placenta Prævia, Flooding	..	..	..	..	..	..	1	..	..	..	..	..	..	1
147	Post Partum Hœmorrhage	..	..	..	..	..	..	1	1	..	..	..	..	..	2
148	Puerperal Thrombosis ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
149	*Other Diseases, Pregnancy [and Childbirth*	..	..	..	..	..	1	1	3	..	..	..	..	..	5
150	Arthritis, Ostitis, Periostitis	1	..	..	..	..	..	..	..	..	..	..	..	..	1
151	*Other Diseases, Osseous [System*	..	..	..	..	..	..	..	1	..	..	..	..	..	1
152	Ulcer, Bedsore	..	..	..	..	..	..	..	..	..	..	..	..	..	..
153	Eczema	3	..	..	..	..	..	..	..	..	..	..	..	..	3
154	Pemphigus	1	..	..	..	..	..	..	..	..	..	..	..	..	1
155	*Other Diseases, Integu- [mentary System*	..	..	..	..	..	..	..	..	..	..	..	..	..	..
156	Impetigo Contagiosum ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
	Accidents and Negligence:														
157	In Mines and Quarries..	..	..	..	..	..	..	2	..	2	..	..	..	..	4
158	In Vehicular Traffic ..	..	1	..	..	..	..	1	..	..	1	..	..	..	3
159	On Railways	..	..	..	..	..	..	1	3	..	..	..	..	..	4
160	On Ships, Boats, &c. (not drowning)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161	In Building Operations	..	..	..	..	..	..	..	..	..	1	..	..	..	1
162	By Machinery	..	..	..	..	..	..	1	1	..	..	..	..	..	2
163	By Weapons & Implements	..	..	..	..	..	..	..	..	..	..	..	..	..	..
164	Burns and Scalds ..	2	13	1	..	..	..	..	2	3	1	..	1	..	23
165	Poisons, poisonous vapours	..	..	..	..	..	1	1	..	1	..	..	..	..	3
166	Lead Poisoning (attempt to procure abortion)..	..	..	..	..	..	1	..	1	..	..	..	..	..	2
167	Surgical Narcosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
168	Surgical Operation ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
169	Effects of Electric Shock	..	..	..	..	..	..	..	..	..	..	..	..	..	..
170	Corrosions by Chemicals	..	..	..	..	..	..	..	..	1	..	..	..	..	1
171	Drowning	..	2	2	..	..	1	2	3	1	..	..	1	..	12
172	Suffocation, Overld. in Bed	31	1	..	..	..	..	..	..	..	..	..	..	..	32
173	„ Otherwise ..	10	2	..	..	..	..	1	1	..	..	1	..	..	15
174	Falls not specified ..	2	..	1	1	1	..	1	3	5	1	1	2	1	19
175	Weather Agencies ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
176	Otherwise, not stated ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
177	Homicide	..	1	..	..	..	..	..	..	..	..	..	..	..	1
178	*Suicides*:—By Poison ..	..	..	..	1	..	1	2	3	1	4	..	..	..	12
179	By Asphyxia	..	..	..	..	..	..	..	..	..	..	..	..	..	..
180	By Hanging & Strangulatn.	..	..	..	..	..	..	2	6	1	2	3	3	..	17
181	By Drowning	..	..	..	..	..	..	2	..	1	2	1	..	..	6
182	By Shooting	..	..	..	..	..	..	..	..	..	..	..	..	..	..
183	By Cut or Stab	..	..	..	..	..	..	2	3	..	1	..	1	..	7
184	By Crushing	..	..	..	..	..	..	..	..	..	..	1	..	..	1
185	By other and unspecified methods	..	..	..	..	..	..	..	..	1	..	..	..	..	1
186	Execution	..	..	..	..	..	..	1	..	..	..	..	..	..	1
187	Uncertified	7	1	..	..	..	..	1	1	2	6	7	2	2	29
	TOTALS, Page 11 ..	57	22	4	2	1	5	24	33	19	19	14	11	3	214
	TOTALS, Page 10 ..	200	124	22	11	13	18	24	92	129	182	228	91	18	1152
	TOTALS, Page 9 ..	191	53	15	10	11	19	37	80	147	199	270	266	56	1654
	TOTALS, Page 8 ..	283	350	50	18	30	52	90	89	84	42	25	8	1	1122
	GRAND TOTALS ..	1031	549	91	41	55	94	175	294	379	442	537	376	78	4142

Schedule B.—Nottingham. 1905. Deaths Registered from all causes

No.	Causes of Death.	All Ages.	Under 1	1—5	5—15	15—25	25—65	65 & upwards.	In Public Institutions
1	Small-pox	1	..	..	..	..	1	..	1
2	Measles	232	48	174	9	1	..	..	5
3	Scarlet Fever	19	2	11	6	..	..	..	10
4	Typhus Fever	..	..	..	..	..	..	..	..
5	Epidemic Influenza	20	1	..	..	..	12	7	..
6	Whooping-cough	61	19	42	..	..	..	..	1
7	Diphtheria, Membranous Croup	49	1	31	15	..	2	..	21
8	Croup	..	..	..	..	..	..	..	..
9	Enteric Fever	24	1	1	3	6	12	1	11
10	Asiatic Cholera	..	..	..	..	..	..	..	..
11	Diarrhœa, Dysentery	80	70	8	..	..	..	2	2
12	Epidemic or Zymotic Enteritis	122	82	33	5	..	1	1	5
13	Enteritis	40	27	3	..	2	3	5	1
14	*Other continued Fevers*	3	1	..	..	1	1	..	1
15	Erysipelas	11	1	..	..	..	8	2	5
16	Puerperal Fever	12	..	..	..	3	9	..	3
17	*Other septic diseases*	18	2	1	5	..	8	2	12
18	Intermittent Fever and Malarial Cachexia	..	..	..	..	..	..	..	..
19	Tuberculosis of Meninges ..	40	9	22	8	1	..	..	4
20	Tuberculosis of Lungs	295	2	7	5	59	209	13	82
21	Other forms of Tuberculosis ..	75	28	17	7	8	12	3	17
22	Alcoholism	20	..	..	..	..	19	1	2
23	Cancer	223	..	1	..	3	146	73	51
24	Premature Birth	121	121	..	..	..	..	..	1
25	Developmental Diseases	183	180	3	..	..	..	..	6
26	Old Age	322	..	..	..	..	10	312	128
27	Meningitis	52	19	17	8	..	7	1	8
28	Inflammation and Softening of Brain	51	2	1	2	2	19	25	22
29	Organic Diseases of Heart ..	344	1	1	9	13	181	139	57
30	Acute Bronchitis	170	58	16	7	2	37	50	5
31	Chronic Bronchitis	153	..	..	..	..	44	109	24
32	Lobar (Croupous) Pneumonia ..	131	18	16	3	5	65	24	20
33	Lobular (Broncho-)Pneumonia ..	177	78	70	4	2	17	6	23
34	Diseases of Stomach	32	7	2	1	4	13	5	5
35	Obstruction of Intestines ..	36	2	..	7	2	17	8	20
36	Cirrhosis of Liver	42	..	..	1	2	29	10	5
37	Nephritis and Bright's Disease ..	82	2	2	4	4	54	16	12
38	Tumours and other Affections of Female Genital Organs ..	18	..	..	..	..	13	5	9
39	Accidents and Diseases of Parturition	16	..	..	..	3	13	..	1
40	Deaths by Accident or Negligence	124	45	20	5	4	42	8	43
41	Deaths by Suicide	45	..	..	1	1	39	4	4
42	Deaths from Ill-defined Causes ..	..	..	..	..	..	..	..	..
43	All other Causes	698	204	50	17	21	247	159	134
	ALL CAUSES	4142	1031	549	132	149	1290	991	761

TABLE IV.

Nottingham, 1905. Deaths and Death-Rates from certain groups of Diseases.

A. All Ages.	Deaths.	Deaths per 1000 of the *population.*	Deaths per 1000 *total Deaths.*
1. Principal Epidemic Diseases ...	588	2·34	142
2. Pulmonary Diseases	653	2·59	158
3. Tuberculous Diseases	410	1·63	99
B. Infants under 1 year of Age.	Deaths.	Deaths per 1000 *Births.*	Deaths per 1000 *Deaths under 1 year.*
4. Wasting Diseases ...	346	52·1	336
5. Convulsive Diseases	100	15·0	97

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping-Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhœa.
2. Includes all Respiratory Diseases except Phthisis (Consumption).
3. Includes Phthisis, Scrofula, Tuberculosis, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Wasting, Debility, Inanition, Premature Birth, and Improper Feeding.
5. Includes Infantile Meningitis, Convulsions, and Dentition.

TABLE V.

Nottingham. Deaths from the Principal Epidemic Diseases in the ten years 1895-1904, and in the Year 1905.

Disease.	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	Ten Years, 1895-1904. Annual Average.	Ten Years, 1895-1904. Proportion of Deaths to 1000 Deaths.	1905. Deaths.	1905. Proportion of Deaths to 1000 Deaths.
Small-pox	..	..	..	..	..	..	..	..	2	12	1·4	0·328	1	0·24
Measles	1	203	49	104	140	45	96	4	98	44	78·4	18·41	232	56·02
Scarlet Fever	50	27	34	33	53	55	11	23	34	29	34·9	8·19	19	4·59
Diphtheria	11	12	21	23	30	28	29	31	60	69	31·4	7·37	49	11·83
Whooping-Cough	33	91	117	59	55	103	96	37	90	91	77·2	18·12	61	14·73
Fevers. Typhus	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fevers. Enteric	55	75	45	54	114	75	79	50	36	57	64·0	15·02	24	5·80
Fevers. Simple Continued ..	..	..	1	1	4	1	1	..	..	..	0·8	0·19	..	..
Diarrhœa	444	177	530	385	600	387	361	194	166	346	359·0	84·3	202	48·88
Total	594	585	797	659	996	694	673	339	486	648	647·1	151·9	588	142.00
Total, London	11,544	14,100	11,525	12,565	11,228	10,136	10,203	10,393	8,166	9,990	10,985	135·3	7,990	109·50
Total, England & Wales	64,901	66,936	67,051	69,714	69,820	64,059	66,531	53,795	49,150	65,633	63,759	115·7	51,581	99·22

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Zymotic Diseases and Phthisis.

(Registrar-General.)

I. NOTTINGHAM.

In five yearly periods, 1856—1890, and in single subsequent years.

	Birth-Rate.	Death-Rate.	Infantile Death-Rate	DEATH-RATE FROM								
				7 Princp. Epidemic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhœa	Phthisis and other Tuberculous Diseases.
1856—1860	36·8	27·2	209	5·98	0·21	0·80	1·08	0 13	0.76	1·02	2·00	3·22
1861—1865	34·8	24·9	192	3·83	0·09	0·43	0·98	0·12	0·51	0·78	1·09	3·19
1866—1870	31·3	23·8	200	4·34	0·07	0·44	0·73	0·09	0·51	0·92	1·57	2·78
1871—1875	34·1	24·9	192	4·30	0·79	0·31	0·53	0·02	0·26	0·84	1·53	2·42
1876—1880	34·6	21·7	175	3·00	0·00	0·35	0·62	0·03	0·43	0·34	1·06	1·85
1881—1885	36·6	20·9	174	3·22	0·06	0·41	0·77	0·12	0·46	0·31	1·09	1·99
1886—1890	30·4	17·9	168	2·39	0·01	0·42	0·11	0·06	0·45	0·31	1·04	1·52
1891	29·8	19·5	169	2·49	0·00	0·51	0·13	0·09	0·56	0·32	0·84	1·69
1892	29·4	18·4	167	2·33	0·00	0·55	0·19	0·13	0·54	0·16	0·73	1·42
1893	30·2	18·4	172	2·62	0·02	0·11	0·37	0·07	0·27	0·31	1·47	1·81
1894	28·6	16·7	174	2·42	0·01	0·60	0·23	0·08	0·53	0·28	0·60	1·80
1895	29·7	18·5	189	2·64	..	0·00	0·23	0·04	0·14	0·24	1·97	2·10
1896	29·4	17·5	168	2·47	..	0·88	0·11	0·06	0·39	0·34	0·69	1·89
1897	28·9	18·4	202	2·81	..	0·21	0·15	0·09	0·49	0·21	1·66	1·88
1898	28·8	17·2	178	2·37	..	0·44	0·14	0·10	0·25	0·24	1·20	1·82
1899	28·9	20·0	210	3·33	..	0·58	0·23	0·13	0·23	0·48	1·68	1·67
1900	28·3	19·2	196	2·35	..	0·19	0·23	0·12	0·43	0·32	1·08	2·02
1901	28·4	18·5	193	2·86	..	0·41	0·05	0·12	0·42	0·35	1·51	1·80
1902	27·8	16·7	159	1·32	..	0·02	0·10	0·12	0·15	0·21	0·72	1·69
1903	28·3	16·5	165	2·05	0·01	0·39	0·14	0·26	0·39	0·14	0·68	1·68
1904	27·7	17·7	176	2·58	0·05	0·18	0·11	0·28	0·36	0·23	1·37	1·90
1905	26·5	16·5	155	2·27	0·00	0·92	0·07	0·19	0·24	0·09	0·76	1·63

II. ENGLAND AND WALES.

In five yearly periods, 1858–1890, and in single subsequent years.

												Phthisis only.
1858—1860	34·3	22·2	153	4·03	0·22	0·48	0·89	0·37	0·49	0·79	0·78	2·57
1861—1865	35·1	22·6	151	4·22	0·22	0·46	0·98	0·25	0·52	0·92	0·87	2·53
1866—1870	35·3	22·4	159	4·08	0·10	0·43	0·96	0·13	0·55	0·85	1·06	2·45
1871—1875	35·5	22·0	153	3·76	0·41	0·37	0·76	0·12	0·50	0·60	1·00	2·22
1876—1880	35·4	20·8	144	2·94	0·01	0·39	0·68	0·12	0·53	0·38	0·83	2·04
1881—1885	33·4	19·3	139	2·32	0·01	0·41	0·43	0·16	0·46	0·27	0·65	1·82
1886—1890	31·4	18·9	145	2·25	0·01	0·46	0·24	0·17	0·44	0·20	0·66	1·63
1891	31·4	20·2	149	2·70	0·00	0·43	0·17	0·17	0·46	0·16	0·46	1·60
1892	30·5	18·9	148	2·78	0·01	0·46	0·19	0·22	0·45	0·14	0·50	1·47
1893	30·8	19·2	159	3·16	0·05	0·37	0·23	0·31	0·34	0·23	0·95	1·47
1894	29·6	16·6	137	2·25	0·02	0·39	0·16	0·29	0·41	0·16	0·36	1·38
1895	30·3	18·7	161	2·14	0·00	0·38	0·15	0·26	0·32	0·18	0·87	1·40
1896	29·7	17·1	148	2·18	0·02	0·56	0·18	0·29	0·41	0·17	0·55	1·31
1897	29·7	17·4	156	2·15	0·00	0·40	0·14	0·24	0·35	0·16	0·86	1·34
1898	29·4	17·6	161	2·22	0·01	0·41	0·11	0·24	0·31	0·18	0·96	1·32
1899	29·3	18·3	163	2·21	0·01	0·31	0·12	0·29	0·30	0·20	0·98	1·34
1900	28·9	18·3	154	2·00	0·00	0·39	0·12	0·29	0·34	0·17	0·69	1·33
1901	28·5	16·9	151	2·05	0·01	0·27	0·13	0·27	0·30	0·16	0·91	1· 6
1902	28·6	16·3	133	1·64	0·08	0·38	0·15	0·23	0·29	0·13	0·38	1·23
1903	28·4	15·4	132	1·46	0·02	0·27	0·12	0·18	0·27	0·10	0·50	1·20
1904	27·9	16·2	146	1·94	0·01	0·36	0·11	0·17	0·34	0·09	0·86	1·24
1905	27·2	15·2	128	1·52	0·00	0·32	0·11	0·16	0·25	0·09	0·59	..

Principal Vital Statistics of the 76 Greater English Towns for 1905 (taken from the Registrar-General's Quarterly Reports and Annual Summary).

Populations estimated to middle of 1905 (from increase during Decennium, 1891-1901).

	Populations estimated to middle of 1905.	Birth-Rate.	Recorded Death-Rate.	Corrected Death Rate.	Death-Rates at Age Periods.			Death-Rate from seven principal epidemic diseases.	Percentage of uncertified Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
England & Wales	34,152,977	27·2	15·22	15·22	128	7·5	66·8	1·52	1·6
76 Large Towns ..	15,609,377	28·2	15·73	16·71	140	8·2	69·5	1·88	1·1
London	4,684,794	27·1	15·08	15·85	131	8·3	68·0	1·71	0·2
Croydon	147,704	26·4	12·48	12·79	95	5·8	63·6	0·98	—
Willesden ..	138,080	30·0	11·58	12·42	112	5·6	63·5	1·72	0·6
Hornsey	84,070	18·5	7·57	8·63	66	3·3	53·5	0·46	—
Tottenham ..	116,232	30·9	12·76	13·77	115	6·3	68·0	1·31	—
West Ham ..	294,997	30·7	14·84	15·87	153	7·4	70·0	2·98	0·0
East Ham ..	123,381	29·8	11·66	12·44	124	5·9	64·9	2·27	0·2
Leyton	114,555	28·1	10·33	10·62	94	5·0	49·5	1·37	1·0
Walthamstow ..	116,297	28·9	10·76	11·38	106	5·3	65·8	1·70	0·3
Hastings	66,820	17·7	12·77	12·28	113	6·0	54·4	0·90	0·5
Brighton	127,183	23·0	13·49	13·30	101	6·1	64·1	0·56	0·5
Portsmouth ..	201,975	28·0	16·61	17·05	133	8·7	67·5	2·64	1·4
Bournemouth ..	66,168	16·8	12·34	13·04	83	6·4	59·8	0·50	0·5
Southampton ..	114,897	25·0	14·38	14·30	132	7·2	60·2	2·37	—
Reading	77,674	25·7	13·40	13·86	121	6·4	64·0	1·54	2·7
Northampton ..	92,441	20·9	12·55	13·05	126	6·0	65·1	1·22	1·9
Ipswich	70,802	27·7	14·64	14·30	144	6·6	58·2	1·26	1·7
Great Yarmouth..	52,353	27·4	15·78	14·44	132	6·4	65·4	0·86	—
Norwich	116,741	27·5	16·25	15·52	174	6·4	66·7	1·60	1·0
Plymouth.. ..	116,000	25·6	16·82	16.40	135	8·2	70·3	1·44	0·1
Devonport ..	76,864	29.1	13·92	14·60	113	7·0	62·1	1·05	—
Bristol	358,515	27·0	14·55	14·95	122	7·4	63·7	1·50	0·3
Hanley	64,667	33·6	19·31	21·07	195	9·2	83·4	2·80	1·8
Burton-on-Trent..	52,424	25·4	11·48	12·34	87	6·0	62·9	0·67	1·5
Wolverhampton ..	99,456	28·7	15·00	15·51	137	7·6	63·5	2·26	0·4
Walsall	92,998	29·9	14·14	14·97	141	7·0	63·4	1·42	0·7
Handsworth ..	61,721	24·1	10·07	11·08	80	4·8	62·0	0·63	2·3
West Bromwich ..	67,823	31·6	16·74	16·88	146	8·7	65·2	3·21	1·9
Birmingham ..	542,959	29·3	16·16	17·39	154	8·3	70·4	1·90	3·5
Kings Norton ..	69,630	25·7	9·07	9·48	89	4·2	48·2	0·78	1·7
Smethwick ..	62,605	30·6	13·31	14·56	137	6·6	66·8	1·75	2·2
Aston Manor ..	81,320	26·3	13·14	14·57	145	6·7	60·3	2·02	1·6
Coventry	75,134	28·7	14·57	14·60	108	7·2	68·7	1 49	1·6
Leicester	223,132	25·9	13·26	14·15	148	6·2	62·1	1·62	1·3
Grimsby	68,153	29·2	14·82	15·87	174	6·5	66·6	2·78	1·8

Principal Vital Statistics of the 76 Greater English Towns for 1905—*continued.*

	Populations estimated to middle of 1905.	Birth-Rate.	Recorded Death-Rate.	Corrected Death Rate.	Death-Rates at Age Periods.			Death-Rate from seven principal epidemic diseases.	Percentage of uncertified Deaths.
					Deaths under one year per 1000 Births.	Deaths 1 to 60 years per 1000 living at those ages.	Deaths over 60 years per 1000 living at those ages.		
Nottingham ..	**251,671**	26·5	16·50	17·38	155	8·2	71·7	2·27	0·8
Derby	122,207	25·4	14·56	15·69	151	7·0	71·5	1·52	—
Stockport ..	98,320	27·2	16·73	18·08	168	8·3	71·9	1·96	0·4
Birkenhead ..	116,035	32·0	15·40	16·41	127	7·8	68·8	1·86	0·3
Wallasey	62,460	26·6	12·54	13·72	98	6·5	68·4	1·08	1·5
Liverpool	730,143	33·3	19·63	21·01	153	10·9	78·2	2·59	3·4
Bootle	62,758	33·1	18·20	20·07	155	10·1	73·8	2·88	4·0
St. Helens ..	89,843	36·2	17·05	18·48	134	9·7	74·7	2·13	4·4
Wigan	86,581	33·8	18·62	20·43	164	10·5	73·9	3·14	0·6
Warrington ..	68,301	33·5	17·02	18·33	147	9·6	69·1	2·69	5·0
Bolton	178,111	25·0	15·07	17·04	167	7·7	72·7	1·94	0.4
Bury	58,594	21·8	16·33	18·28	147	8·8	77·4	1·26	1·5
Manchester ..	631,185	29·5	17·99	20·06	157	9·9	79·3	2·25	1·7
Salford	231,514	30·7	16·94	18·71	148	9·3	74·2	2·57	0·4
Oldham	140,225	24·3	17·98	20·22	150	10·5	78·4	2·10	0·0
Rochdale	86,390	21·8	16·68	18·45	133	8·8	89·7	1·25	2·6
Burnley	101,682	26·3	16·56	18·67	173	8·6	77·0	2·33	1·1
Blackburn ..	133,067	24·1	16·21	18·33	146	8·8	79·4	2·01	4·0
Preston	115,721	28·3	17·91	19·59	154	9·5	80·6	3·15	2·8
Barrow-in-Furness	60,306	30·4	14·58	16·57	135	8·3	60·6	1·99	4·0
Huddersfield ..	94,888	23·8	16·97	18·21	119	9·3	80·1	1·10	0·6
Halifax	108,419	19·2	14·62	15·84	131	7·7	72·2	0·98	1·3
Bradford	286,799	21·1	15·23	16·83	144	8·1	71·9	1·42	1·1
Leeds	456,787	27·1	15·25	16·63	151	7·6	73·4	1·61	0·2
Sheffield	440,414	29·8	17·00	18·32	167	8·9	72·2	3·20	2·3
Rotherham ..	59,794	32·0	13·67	14·14	123	7·1	62·1	1·30	2·6
York	82,362	28·0	14·21	14·63	129	6·7	63·5	1·41	0·1
Hull	258,127	30·1	16·26	16·67	152	8·0	70·1	2·37	1·0
Middlesbrough ..	98,369	35·0	20·96	22·82	173	12·2	76·4	2·99	0·8
Stockton-on-Tees	52,425	30·3	17·79	18·65	150	9·8	74·8	2·49	0·9
West Hartlepool..	71,313	29·2	15·85	17·40	146	8·7	81·2	2·04	0·6
Sunderland ..	152,761	34·4	18·62	19·20	142	10·3	73·6	2·24	3·0
South Shields ..	109,360	32·1	16·08	17·02	146	8·8	65·3	1·84	4·3
Gateshead ..	120,620	32·7	15·50	16·34	138	8·2	67·8	1·66	6·4
Newcastle-on-Tyne	264,511	32·1	16·80	18·10	135	9·2	74·7	1·33	0·6
Tynemouth ..	53,595	33·2	19·31	19·94	153	10·0	77·8	1·45	1·0
Newport (Mon.)..	72,880	31·3	15·77	17·04	125	8·4	78·1	1·30	0·5
Cardiff	180,054	28·6	13·35	14·52	118	7·2	66·8	1·14	0·2
Rhondda	124,988	37·5	19·05	20·96	200	9·7	69·8	2·83	0·8
Merthyr Tydfil ..	73,848	38·3	22·11	23·44	193	11.7	74·3	4·04	0·3
Swansea	96,384	31·9	16·66	17·87	131	8·4	77·2	1·37	0·5

The City of Nottingham.

SITE and POPULATION DATA, and RATABLE VALUE, 1905.

Situation and Soil.—Nottingham lies in lat. 52 deg. 57 min. north, and long. 1 deg. 9 min. west, in the S.W. portion of the County of Notts., and in the watershed of the Trent. It stretches about 7½ miles north from the Trent, and has an average breadth of about three and a half miles. It stands for the most part on Bunter sandstone; but on the east the Keuper marls appear; on the north and west, red marl and magnesian limestone of the Permian series; and on the south towards the Trent, and in the valley of the Leen and other small streams, are found the alluvium and gravels of the Trent and its local tributaries.

Area and Altitude.—The City has an area of 10,935 acres, and its altitude varies from about 80 feet (at Trent Bridge) to 425 feet (on Woodborough Road) above ordnance datum (mean water level at Liverpool).

Population: At census of 1881, 186,575; at census of 1891, 213,877; at census of 1901, 239,753.

Average number of persons to each house:—At census of 1881, 4·8; at census of 1891, 4·6; at census of 1901, 4·5.

Average number of persons to an acre, 23.

Ratable Value, £1,196,074 10s. 0d. (for Poor Law purposes).

GENERAL VITAL STATISTICS.

Population.—The population of the City at the middle of 1905, estimated on the assumption that the proportional rate of increase which obtained during the last intercensal period has continued since its close, works out at 251,677.

It is difficult to devise any independent test of the reliability of this figure, but the number of houses upon which water-rate is paid, and which therefore are mostly occupied, and the excess of births over deaths, afford rough criteria which may be utilised on the understanding that they are at best only standards of this provisional order and nothing more. A considerable number of the buildings upon which water-rate is paid are not dwellings at all, and the excess of births over deaths as a basis for forming an estimate is necessarily incomplete without migration figures.

On the inhabited house basis the estimated population amounts to 265,059, and on that of the excess of births over deaths to 251,364, a figure only 300 below that arrived at by the usual method first mentioned above. With these facts before us, I think it is reasonable to assume that the population of the City at the middle of 1905 was slightly above a quarter of a million.

The number of new houses certified by the City Engineer as fit for habitation during each of the past five years have been as follows:—1901, 850; 1902, 1258; 1903, 1630; 1904, 1220; 1905, 993. There was thus a rapid rise up to 1903, and a rapid fall afterwards. The total for the five years is no less than 5951. This number of houses is capable of accommodating a population of 29,755 persons, on the

supposition that the average number of inmates per house remains the same as at the census of 1901, viz., 4·5. Now, the estimated increase of population during the same period is only 11,000 odd, so that we have, on this shewing, house room for 18,000 more persons than the City apparently contains. This fact sufficiently explains the number of unoccupied houses observed on all sides, but especially in the more central residential districts of the City.

The cause of the centrifugal movement of the population is of course to be found in the increased facilities for rapid transit, afforded principally, in this City at any rate, by electric trams, motors and cycles.

The ratio of males to females at the census of 1901 was as 100 to 114·6 ; at the census of 1891 it had been as 100 to 120. At the former proportion the population of the City at the middle of 1905 would be made up of 117,277 males, and 134,400 females. The ratio of males to females in the general population of England and Wales is as 100 to 106·7.

The place of Nottingham on the list of the great towns arranged in order of magnitude of population is now 12th from the top. The town next above it is Hull, with a population of 258,127, and that next below it is Salford, with one of 231,514.

Marriages.—The number of marriages registered during the past year in the Parish of Nottingham shews an increase of 20 upon that of 1904, but is no less than 220 below the total of 1903, and, excepting only the total for 1904, is the lowest annual number recorded since the unification of the City area in 1899.

Nottingham Parish. Annual Marriages.					
1900	1901	1902	1903	1904	1905
2,153	2,255	2,256	2,287	2,057	2,077

But, notwithstanding the recent decline in the number of marriages, the marriage rate as expressed by the number of persons married per 1,000 of the population was equal to 16·27. The marriage rate of London for 1905 was 16·9, and that of England and Wales 15·3. These two rates are, respectively, 1·0 and 0·5 below the preceding 10 years' annual average rate in each case. As the Registrar-General points out, it is preferable to compute the marriage rate as a proportion of the unmarried persons above 15 years of age, but, having no adequate data for such a computation, I am constrained to fall back upon the above method. Whatever the cause or causes, there can be no doubt that the marriage rate of the country as a whole is steadily declining. According to the Registrar-General, the proportion per cent. of married persons in the general population above the age of 15 years, has declined from census to census continuously since 1871. The percentage in 1871 was 54·0, and that in 1901 51·5.

Nottingham.

Marriages in Year 1905.

	Qr. I.	Qr. II.	Qr. III.	Qr. IV.	Total.
Churches	191	336	323	350	1200
Chapels	16	29	32	20	97
Registrars	152	208	221	199	780
	359	573	576	569	2077

Births.—The number of births registered in Nottingham during 1905 was 6,645 by my returns, and 6,652 by those of the Registrar-General. The birth-rate per 1,000 of population per annum corresponding to a total of 6,645 births is 26·4. The actual number of births is lower than in any year since 1894, and the rate is the lowest on record. It is no less than 1·3 per 1,000 below the rate for 1903, which was previously the lowest known. It is of course conceivable that the true

population figure is slightly below the estimate upon which the above rate is calculated, but, on the other hand, we have to face the facts that the actual annual number of births for 1905 is no less than 235 below the total for 1904, 300 below that for 1903, and 169 below the average annual number for the preceding 10 years. All things considered, therefore, we are probably justified in assuming the substantial accuracy of the above rate, and in concluding that the causes of diminished human fertility to which I have so often called attention are still in full operation.

Unfortunately the revolt against parenthood is now extending to all classes, and the means which are now unblushingly advertised and adopted on every hand to prevent the production of living children are not only subversive of decency, modesty, and morality, but also of physical and mental well-being. The sale, too, of abortives and reputed abortives, some of them highly poisonous, is growing in all parts of the country, and the time has certainly come for plain speaking on this subject. Not only is the practice a grievous moral offence and a felony in the eye of the law, but when a poison like lead, which is now much used for the purpose in the form of diachylon plaster, is taken as it often is in large quantities and for a considerable period to this end, irreparable and even fatal injury is frequently done to the maternal organism. Permanent blindness, paralysis, insanity and death not uncommonly result from the taking of lead in this manner.

Of the 6,652 children born in Nottingham during the year, 3,350 were males and 3,302 females. 250 of the males and 198 of the females were illegitimate.

The illegitimate children born were equal to 6·7 per cent. of all, as compared with 6·4 per cent., 5·74 per cent., and 5·80 per cent. in the three immediately preceding years.

The births of the 76 great towns of England and Wales during 1905 were in the proportion of 28·2 per 1,000 living, those of London of 27·1, and those of England and Wales as a whole of 27·2. Each of these rates is the lowest recorded in the series to which it belongs.

The illegitimate births of England and Wales were at the rate of 4 per cent. of all births during 1905.

Deaths.—The deaths among the persons normally resident in Nottingham numbered 4,142 according to my returns, and 4,141 according to those of the Registrar-General. The difference of one is immaterial, and does not affect the rate per 1,000 living, based upon the estimated population at the mid-year. The crude death-rate so calculated is equal to 16·46 (per 1,000 living). The correcting factors furnished by the Registrar-General for each of the great towns, when applied to the recorded death-rates of these towns, furnish a death-rate in each case representing what the rate of mortality would have been with an age and sex constitution of its population identical with that of England and Wales at the last census, and a rate of mortality at certain age-periods corresponding to the mean rate of England and Wales between 1891 and 1900. The correcting factor for Nottingham is a little over one-and-a-twentieth, or 1·0535. Multiplied by this figure, the recorded death-rate 16·5 becomes 17·38 per 1000.

Expressed as a comparative mortality figure, the death-rate of England and Wales being represented by a standard 1,000, the rate of Nottingham during 1905 would be equal to 1,142.

The recorded death-rate of Nottingham for 1905 is almost identical with the rates of 1902 and 1903 (16·7 and 16·5 respectively), and a little less than 1 per 1,000 below that of 1904 (17·34).

The deaths of males during 1905 in Nottingham numbered 2,080, and those of females 2,062. The male deaths were in the proportion of 17·7 per 1,000 males living, and those of females in one of 15·3 per 1,000 females living. The difference in favour of the females is again larger than that of the country as a whole (2 per 1,000 cir.)

Nottingham benefited less, so far as the diminution of its death-rate was concerned, during 1905, from the singularly healthy and equable summer of that year, than many of the other large towns, and this was principally due to an extensive and fatal outbreak of measles, which increased the general rate by nearly 1 per 1,000.

Although the recorded and corrected death-rates of Nottingham for 1905 are both nearly 1 per 1,000 below the corresponding rates for 1904, the City has nevertheless fallen 2 places by its recorded, and 6 places by its corrected rate, on the list of the 76 great towns arranged in order of lowness of death-rates, as compared with its position in 1904. It now occupies the 49th place from the lowest by its recorded rate, and the 50th place by its corrected rate. There were 5 of the great towns with corrected death-rates below 12·0 per 1,000 during 1905, as compared with 2 in 1904, and 4 only with corrected rates above 21 as compared with 14 in 1904. Hornsey, King's Norton, Leyton, Handsworth (Staffs.), and Walthamstow were comprised in the first group, and Liverpool, Hanley, Middlesboro', and Merthyr Tydfil in the last. The corrected death-rate of the 76 great towns taken together, during 1905, was equal to 16·71 per 1,000, that of London to 15·85, and that of England and Wales as a whole (standard rate) to 15·22. The corresponding rates for 1904 were, respectively, 18·31, 17·48, and 16·23 per 1000.

The deaths under 1 year of age per 1,000 children born during 1905 numbered 155. This proportion is no less than 21 below that of 1904, and 29 below the mean proportion for the 10 years 1895 to 1904. The last year in which this so-called infant death-rate touched so low a figure as that for 1905 was 1888, when it was only 151. While there are many factors affecting infant mortality, which may be variously classed according to their principal components, as social, physiological, dietetic, and what not, there can be no doubt that, so far at least as the majority of the great centres of population are concerned, the dominant factor concerned, in determining the rise and fall of this mortality, is the state of the weather as regards temperature and rainfall immediately prior to and during the period of seasonal diarrhœa, *i.e.*, the summer and autumn.

In the majority of town districts, hot and dry weather in summer and autumn is associated with a degree of prevalence and fatality of diarrhœa which is more or less directly proportional to the amount of drought and heat. During the summer of 1905 the mean temperature, but for a short time in July, was relatively very low, and the rainfall large and distributed with exceptional evenness. Rain fell in appreciable quantity on 89 out of the 183 days comprised in the 6 months, April to September, inclusive. There were only two spells of as much as 7 days continuous dry weather during this period. Eleven inches of rain fell during the 6 months, and more than 7 inches during June, July and August.

The infant deaths of the 76 great towns taken together were equal to 140 per 1,000 births, those of the 141 lesser towns to 132, those of London to 131, those of England and Wales to 128, and those of England and Wales less the 217 towns, to 113. All these rates shew a very large reduction (from 12 to 22 per 1,000) as compared with those for 1904.

The deaths among persons aged from 1 to 60 years during 1905, per 1,000 living in the age-period, were equal to 8·2 in Nottingham and in the 76 great towns, to 8·3 in London, and to 7·5 in England and Wales. These rates again are all of them lower than the corresponding rates for 1904.

The death-rate per 1,000 living in the age-period among persons aged 60 years and upwards was 71·7 in Nottingham, 69·5 in the 76 great towns, 68·0 in London, and 66·8 in England and Wales. These rates also are in each case lower than in 1904.

Registration Sub-Districts. — These sub-districts have undergone no alteration since the Spring of 1899, when the area of the City of Nottingham was unified for all purposes of municipal government. Owing, however, to the serious and frequent alterations made in them prior to this date, it is impossible to estimate their populations in detail after the manner adopted for unchanging units of area, on the basis of differences between consecutive census returns for such units. Still, it is manifestly unreasonable, as the distance from the census increases, to consider the details of population—upon which, too, some important rates are based—as altogether stationary, while the total population figure is known to be expanding at a fairly rapid rate. Under these circumstances, I have at this stage assumed a rate of increase for each unit approximately corresponding with that of the town as a whole. The best that can be said for the scheme is, that it involves less error than that of assuming each detail of the population to have remained stationary while the total has advanced considerably. Even with the discount which all these elements of uncertainty demand, the statistics of the sub-districts are sufficiently interesting and useful.

The birth-rate of Bulwell division remains high at 34·3 per 1,000. The rates of N.W., N.E., and S.W. range from 23·3 to 24·8, and are lower than ever before. The rate of S.E. is a medium figure, probably resulting from a blend of relatively prolific and sterile sections of population. It is a curious fact that populations of similar class, in this country at least, though widely separated in many instances geographically, still maintain their birth-rates at a high figure, while other sections of the population are rapidly losing fertility. St. Helens (Lancs.), Tyneside, Rhondda, and Merthyr Tydfil, have birth-rates ranging from 36·2 to 38·3 per 1,000, and all resemble one another and Bulwell both socially and industrially.

Births in Registration Sub-Districts. 1905.

District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell ..	699	655	85	69	784	724	1508
N.W... ..	668	699	29	27	697	726	1423
N.E.	770	798	58	52	828	850	1678
S.W.	494	482	29	24	523	506	1029
S.E.	465	467	49	26	514	493	1007
Totals ..	3096	3101	250	198	3346	3299	6645

The crude general death-rates, excepting only the rate for S.E., were remarkably low, ranging from 14.9 in N.W., 15·2 in S.W., and 15·7 in Bulwell, to 17·5 in N.E., and 19·5 in S.E. The excessive mortality in S.E. occurred (as in 1904) under the headings of measles, whooping-cough, diarrhœa, and phthisis. In all probability, however, a part of the excess is only apparent, not real, and due to an under-estimate of population. Building operations have certainly extended more

actively of late in this district than elsewhere in the City; but, owing to lack of data for particular estimates of population in each sub-district, I have been constrained to assume, as already explained, that the rate of increase obtaining in the City as a whole has proceeded uniformly in each division from its population figure at the census of 1901.

The deaths of infants under 1 year per 1,000 births can of course be taken as they stand, without correction or reservation. They were as follows :—130 in S.W., 133 in Bulwell, 150 in N.W., 162 in N.E., and 211 in S.E. S.W. and Bulwell are remarkably low — for Nottingham ; N.W. and N.E. are medium rates ; S.E. is excessively high. The excess above the normal in the last case is due again to fatal measles, whooping-cough, and diarrhœa.

The total deaths in each district from the 7 principal epidemic diseases grouped together, expressed as mortality per 1,000 of population, were as follows :— N.W., 1·23 ; S.W., 2·08 ; Bulwell, 2·25 ; N.E., 2·88 ; S.E., 3·62. All the rates are high except that of N.E., but the rate for S.E. stands out with special prominence.

Diarrhœa, which swelled the rates in 1904, fell to a comparatively low figure in 1905, and its place was taken principally by measles as regards the whole group, and by measles and whooping-cough as regards S.E. The death-rate for these two diseases taken together in S.E., was just 2·0 per 1,000 during 1905, as compared with less than 0·9 per 1,000 in 1904. The death-rate from measles was fractionally higher in N.E. than in S.E., but that from whooping-cough was much lower. All the other divisions have lower death-rates from measles than these two.

The total deaths from scarlet fever were only 19 as compared with 29 in 1904, and the reduction was shared by all the districts but S.W., where the number of deaths (3) was the same as 1904.

NOTTINGHAM SUB-DISTRICTS.

Summary of Statistics for 1905.

The Deaths and the Notifications are distributed over the Districts to which they properly belong.

	Population.				Births.	Birth Rate.	Deaths.			Death Rates.				DEATHS FROM										Notified Cases of			
	Census.		Approximate Enumeration.	Estimated middle 1905.			Total.	Under 1 year.	From 7 prin. Epidemic Diseases.	Total per 1000 of population.	Under 1 year per 1000 Births.	From 7 prin. Epidemic Diseases per 1000 of pop.	From Phthisis per 1000 of pop.	Small-Pox.	Measles.	Scarlet Fever	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhœa.	Influenza.	Cancer.	Phthisis.	Small-Pox.	Scarlet Fever	Diphtheria.	Enteric Fever.
	1881.	1891.	1901.																								
Bulwell..	26,712	34,262	41,888	43,916	1508	34·3	691	200	99	15·7	133	2·25	1·07	1	36	4	7	10	2	39	..	29	47	14	143	83	27
N.W. ..	39,574	53,699	58,388	61,212	1423	23·3	912	213	75	14·9	150	1·23	1·01	..	22	3	12	3	6	29	5	65	62	2	144	122	61
N.E. ..	53,911	63,870	66,274	69,482	1678	24·2	1219	272	200	17·5	162	2·88	1·22	..	92	4	13	19	11	61	7	55	85	1	181	131	99
S.W. ..	26,080	32,072	39,510	41,422	1029	24·8	630	134	86	15·2	130	2·08	1·23	..	39	3	9	3	3	29	7	46	51	1	102	130	32
S.E. ..	40,295	29,974	33,692	35,324	1007	28·5	690	212	128	19·5	211	3·62	1·42	..	43	5	8	26	2	44	1	29	50	1	111	71	36
The whole City	186,572	213,877	239,752	251,356	6645	26·5	4142	1031	588	16·5	155	2·34	1·17	1	232	19	49	61	24	202	20	224	295	19	681	537	255

N.B.—Populations at Censuses of 1881, 1891, and 1901, and Estimated for 1905.
Births and Deaths from Local Registrars returns, without correction.
Notified cases from Health Department Registers, without correction.

The deaths from diphtheria in the entire City numbered 49, as against 69 in 1904. There was a slight increase of mortality from diphtheria—one and two deaths respectively — as compared with the preceding year, in N.E. and N.W., but a decline in the other divisions. The decline in S.W. was from 27 deaths to 9.

Whooping-cough, as already intimated, shewed an increased mortality in S.E. alone—a reduction elsewhere ; but the reduction was most marked in N.W., N.E. and S.W., the aggregate deaths in which fell from 65 in 1904 to 25 in 1905.

Enteric fever caused a total of 57 deaths in 1904, and of 24 only in 1905. This welcome abatement of mortality was shared by all the sub-districts, but Bulwell and S.E. claimed the major part, having respectively only one-seventh and one-fourth the number of deaths recorded in 1904.

Diarrhœa caused but 202 deaths, as compared with 346 in 1904. The reduction was shared by all the districts very evenly, excepting only N.W., in which the decline was nearly 60 per cent. as compared with the total of the previous year.

There was only one death from small-pox during the year, that of a patient from the Bulwell division (Sherwood).

There were 295 deaths in Nottingham attributed to phthisis during 1905 (as compared with 328 in 1904), and that they were distributed in a relatively even manner in all parts of the City will be seen by the following death-rates from this disease per 1,000 of population :—N.W., 1·01 ; Bulwell, 1·07 ; N.E., 1·22 ; S.W., 1·23 ; S.E., 1·42. The differences in the rates for the several divisions is less than usual, but it will be seen that S.E., as in many previous years, has the highest proportional mortality.

The total deaths ascribed to cancer shew a considerable increase as compared with those of 1904 and other recent years, but this total was exceeded (by 1) in 1899. The number of such deaths in Bulwell was the same as in 1904—29. Those in N.W. shewed an increase of 16 upon the number for the previous year—65 against 49. Those in N.E. were 1 less than in 1904—55 against 56. In S.W. there was again a large advance as compared with the previous year—46 against 32. In S.E. there was a comparatively small increase, the totals for the two years being 29 and 24, respectively.

GENERAL REPORT.

EPIDEMIC DISEASES.

There is an excess of 18 deaths from these diseases in my returns above those given by the Registrar-General, but, as 12 of them are under the heading of epidemic diarrhœa, a disease the classification of which as a death cause invariably gives rise to much difficulty, the discrepancy may be regarded as practically immaterial. The rest of the excess is made up of two deaths ascribed to measles, and one each to scarlet fever, diphtheria, enteric fever, and whooping-cough.

In making comparison between the corresponding figures for other places, particulars of which are furnished on a uniform basis by the Registrar-General, and those of Nottingham, I shall adhere to the details of the latter authority in each case, but in discussing the statistics of our city by themselves, I shall give the figures gathered from my own returns, in order to allow the just comparison between such figures and those of other years obtained in a similar manner.

Death-Rates from the Principal Epidemic Diseases. (Average) for previous Ten Years, and for 1905.

	Nottingham.		London.		76 Towns.
	10 years. 1895–1904.	1905.	10 years. 1895–1904.	1905.	1905.
Small-pox	0·01	0·00	0·04	0·00	0·00
Measles	0·33	0·92	0·53	0·37	0·39
Scarlet Fever ..	0·15	0·07	0·13	0·12	0·13
Diphtheria	0·13	0·19	0 37	0·12	0·16
Whooping-Cough ..	0·33	0·24	0·41	0·32	0·29
Enteric Fever ..	0·28	0·09	0·13	0·05	0·08
Diarrhœa	1·26	0·76	0·84	0·73	0·83
Total Epidemic Rate	2·49	2·27	2·45	1·71	1·88

Nottingham, 1905. Temperature, Rainfall, and Seasonal incidence of Epidemic Diseases.

		Thirteen Four-weekly Periods Ending on													
		Jan. 28	Feb. 25	Mar. 25	April 22	May 20	June 17	July 15	Aug. 12	Sept. 9	Oct. 7	Nov. 4	Dec. 2	Dec. 30	Total.
Mean Temperature		37·0	40 9	43·6	44·1	49·3	54·8	63·5	61·6	58·7	51·0	44·1	39·8	39·5	48·3
Rainfall in Inches		0·77	0·58	2·36	1·63	0·73	2·26	1·22	2·16	2·68	1·47	1·38	2·06	0·69	20·010
Onsets of ascertained Cases of	Small-Pox	2	2	5	6	2	1	..	1	..	..	..	..	..	19
	Scarlet Fever	71	56	51	46	62	58	34	34	47	51	70	57	38	675
	Diphtheria	66	72	51	20	28	46	44	34	25	30	42	32	47	537
	Enteric Fever	9	25	16	17	13	28	26	29	22	16	26	13	14	254
Recorded Deaths from	Measles	43	57	80	37	7	3	2	2	..	..	..	..	..	231
	Whooping-Cough ..	11	15	16	7	2	2	1	1	..	..	2	1	1	59
	Diarrhœa	1	3	4	4	3	6	8	65	58	26	7	4	3	192

The figures in this table are compiled from the weekly returns, and are therefore subject to some correction; also, as the dates of onset are taken instead of dates of notification in the case of the notifiable diseases, it will be found that the numbers here do not coincide with those of other tables dealing with the same subject, but giving dates of notification instead of dates of onset.

Small-pox.—In my Annual Reports for 1902, 1903 and 1904, I have given full particulars of the cases of small-pox which occurred in the City, from the commencement of the recent outbreak at the close of 1902 down to the close of 1904, and of the action taken by the Health Department under your authority for dealing with such cases and the infection to which they give rise. In these Reports also I have given some account of the behaviour of the disease in other parts of the United Kingdom prior to and during the same period. To these Reports, therefore, reference may be made for all detailed information on the subject of the outbreak, down to the close of 1904. I shall now give in briefest outline the principal facts connected with the outbreak down to the latter date, and then recount its final stages, which came to a close with a last, imported case in July.

The disease found entry to the City at the close of 1902 by the infection of a male tramp, who communicated it to a large number of persons in the Hyson Green district, at a public-house on the Radford Road, where he and they continually met. From this centre it spread to almost all parts of the City, and remained prevalent until the end of July. From this date to the beginning of November no fresh case occurred, but at this time the disease was re-introduced by a tramp, and became generally and thickly disseminated, owing to the criminal negligence of several persons who, when they or those dependent on them became infected, failed to notify the Health Department of the fact or to take any precautions against the spread of the disease. The total number of cases which came to my knowledge during 1903 was 152. Owing, however, to the undetected spread of the disease above referred to, it obtained a much firmer hold in the City during the first quarter of 1904 than at any other period. No less than 165 cases came to

my knowledge during this time. In the next quarter there was a sharp decline, only 85 cases being recorded, and in the latter half of the year the cases numbered only 58. More than 200 of the 308 cases recorded during 1904 were originally traceable to infection propagated by the above-mentioned concealed cases. The part played by tramps in disseminating the disease was much less important during 1904 than in 1903. There were 14 tramps among the 152 patients locally dealt with during 1903, as compared with only 4 among 308 in the next year. The average type of the disease has been extremely mild of late, but, with a case mortality of from 8 to 10 per cent. which we have lately experienced among the unvaccinated, and the serious illness, discomfort and disfigurement to which the latter are still liable, even with the lessened severity of type, the arguments in favour of vaccination still hold the field with overwhelming force. Although the vaccinated constituted more than 60 per cent. of all cases, there was no death of any person with visible vaccination scars during the whole outbreak, and no attack among persons properly vaccinated within 10 years of the date of exposure to infection.

As already stated in my Report for 1904, the disease gave rise to relatively little trouble in Nottingham after the close of 1904. There were 19 further cases in all from Dec. 31st, 1904, to July 28th, 1905, when the last case was admitted to hospital, and all were due to imported infection. There were 2 cases in January, 3 in February, 5 in March, 7 in April, 1 in June, and 1 in July. The ages ranged from 6 to 61. Thirteen were vaccinated, or stated to be vaccinated, one only (a female, *aet.* 32) had been revaccinated prior to the date of exposure to infection. Three, including a fatal female case, *aet.* 50, were alleged to have been vaccinated in infancy, but bore no visible vaccination marks. There were 3 tramp cases. All

the cases were isolated at the new Hospital on Bulwell Forest, and although the severe cases were, as now commonly with us, nursed in open tents less than 100 ft. west of the boundary fence on the Bestwood Road, there was no spread of infection to the outside. From the commencement and up to the close of the outbreak, posters, handbills and leaflets dealing with the subject of small-pox and vaccination, were freely posted and circulated in all parts of the City ; and by such means, by the loyal support of the local press, and by the popular dread of the disease, the steady support of the great mass of the general community for our scheme of prevention (further details of which are given in my Reports for 1902, 1903 and 1904) was secured and maintained. The removal of patients to hospital was carried out without difficulty in almost every instance. Upon only one occasion was it necessary to obtain a magisterial order for such removal. In this case, which occurred at Basford, the patient could not have been nursed at home without serious risk to the rest of the household to which he belonged, and the community at large.

The name and address of each fresh patient coming to my notice has been sent from my office to the following public and private official persons in the City of Nottingham, not later than the evening of the day upon which the diagnosis was established :

(1) The Secretary, General Hospital, Nottingham.
(2) The House Surgeon, Children's Hospital, Nottingham.
(3) Mr. G. Muncaster Howard, Clerk to the Nottingham Guardians.
(4) Mr. W. J. Abel, Clerk to the Education Committee.
(5) Mr. J. H. Brown, Engineer to the Gas Department.
(6) Mr. F. W. Davies, Engineer to the Water Department.
(7) Mr. J. Potter Briscoe, City Librarian.
(8) Dr. R. R. Giddings, Surgeon to the Post Office.
(9) Mr. J. Smith, Supervisor of Taxes.
(10) Miss M. Bowers, Secretary, Charity Organization Society.

NOTTINGHAM, 1905.

HISTORY OF SMALL-POX CASES DISCOVERED IN THE CITY DURING THE YEAR.

No. of Case.	Initials of Name.	Sex.	Age.	Address whence removed.	Source of Infection.	Condition as regards Vaccination. V.—Vaccinated. i.—Primary Vaccination, with number indicating age in years, or inf.(=under 1 year of age) at time. ii., iii., etc.,—Re-vaccination, with numbers ditto. G.—good vaccn. B.—bad vaccn. F.—fair vaccn. M.—vaccn. marks, with number following.	Character of Attack. H.—Hæmorrhagic. C.—Confluent. D.—Discrete. V.M.—Very Mild. Mod.—Modified.	Date of Rash.	Date of Admission.	Result.	Date of Death or Discharge, and Number of Days in Hospital.
1	A. F.	F.	33	18, Walter Street	E. O., 11, Oliver Street (Laundress), case No. 301, 1904 Report	V. i. inf. (?), M imperceptible	D., severe	5-1-1905	5-1-1905	Recovery	24-1-'05—19 days.
2	W.W.at H.C.'s	M.	74	51, Cromwell Street	Ditto	V. i. inf., G., M 4	D., severe	6-1-1905	8-1-1905	Ditto	27-1-'05—19 „
3	C. M. C.	F.	21	664, Mansfield Road, Sherwood	Commercial traveller, with S.P. from Hucknall	Unvaccinated	C., severe	13-2-1905	15-2-1905	Ditto	25-3-'05—38 „
4	H. M.	M.	23	87, Carlton Road	Tramp, outside City	Ditto	C., severe	21-2-1905	24-2-1905	Ditto	5-4-'05—40 „
5	E. C.	F.	18	664, Mansfield Road, Sherwood	C. M. C., No. 3	V. i. inf., G., M 4; ii., G., M 2, two days after exposure	V.M., aborting	26-2-1905	26-2-1905	Ditto	18-3-'05—20 „
6	R. G.	M.	52	42A, Liddington Street	Friend with S.P. at Hucknall Torkard	V. i. inf., G., M 4	V.M.	4-3-1905	6-3-1905	Ditto	22-3-'05—16 „
7	S. A. W. at G.'s	F.	27	Ditto	R. G., No. 6	V. i. inf., G., M 4	V.M., mod.	15-3-1905	15-3-1905	Ditto	5-4-'05—21 „
8	A. E. E.	F.	16	Mapperley Hall, Nottingham	E. C., No. 5.	V. i. inf., G., M 4	V.M., mod. and aborting	12-3-1905	16-3-1905	Ditto	22-4-'05—37 „
9	H. M.	M.	48	Weatherall's Common Lodging House, Canal Street	Lodging house, Hucknall Torkard	V. i. inf., B., M 4	C., severe	20-3-1905	20-3-1905	Ditto	24-5-'05—65 „
10	E. M.	F.	16	543, Mansfield Road, Sherwood	A. E. E., No. 8	V. i. inf., B., M 3	C.-semi, severe	31-3-1905	21-4-1905	Ditto	6-5-'05—15 „
11	P. M.	M.	6	Ditto	E. M., No. 10	Unvaccinated	D., severe	16-4-1905	21-4-1905	Ditto	6-5-'05—15 „
12	W. M.	M.	43	Ditto	Ditto	V. i. inf., G., M 4	D., mild	22-4-1905	21-4-1905	Ditto	17-5-'05—26 „
13	E. E.	F.	50	6, Winchester Street, Sherwood	Ditto	Reputed V. inf., but marks imperceptible	C., H.	19-4-1905	21-4-1905	Death	5-5-'05—14 „
14	A. R. S.	F.	16	12, Hall Street, Sherwood	Ditto	Unvaccinated	D., severe	22-4-1905	23-4-1905	Recovery	20-5-'05—27 „
15	E. S.	M.	22	Ditto	Ditto	Ditto	D.,complicated with syph.	22-4-1905	23-4-1905	Ditto	4-5-'05—11 „
16	E. S.	F.	28	Ditto	Ditto	Ditto	D., mild	23-4-1905	23-4-1905	Ditto	4-5-'05—11 „
17	B. C.	M.	32	8, Ditto	Ditto	V. i. inf., G., M 4; ii. F., M. 1	D., mild, aborting	23-4-1905	24-4-1905	Ditto	13-5-'05—19 „
18	W. B.	M.	61	Basford Workhouse	"The Mount," common lodging house, Heanor	V. i. inf., M imperceptible	C.-semi, very severe	31-5-1905	3-6-1905	Ditto	1-7-'05—28 „
19	J. B.	M.	61	11, Atlas Street.	Outside City (Derby?)	V. i. inf., G., M 3	D., unmod.	25-7-1905	28-7-1905	Ditto	16-8-'05—19 „

(11) Mr. Herbert Clarke, Vaccination Officer.

(12) Mr. W. L. Hardstaff, Vaccination Officer.

(13) The Public Vaccinator, or Vaccinators, of the City in whose districts such fresh cases are resident.

(14) Miss H. G. Bowers, Lady Health Visitor.

(15) Miss Sophie Buckoll, Lady Health Visitor.

(16) The owners or rent collectors of houses in which cases have occurred.

Small-pox was the registered cause of 113 deaths in England and Wales as a whole, of 10 in London, of 51 in the 76 great towns, and of 22 in the 141 lesser towns, during 1905. Such deaths were recorded during the year in 17 of the greater, and in 14 of the lesser towns. Three or more Small-pox deaths were registered in each of the following towns in addition to London:—Barnsley (3), Bradford (7), Burnley (4), Dewsbury (3), Hull (3), Leeds (3), Nuneaton and Chilvers Coton (3), Southampton (4), South Shields (4), Oldham (5).

Vaccination.—The amount of successful primary vaccination carried out in Nottingham, expressed as a percentage of children born during the year vaccinated before its close, was, for the first half-year, 69·5 per cent., and for the second half 68·9 per cent., making 69·2 per cent. for the whole year, as compared with 68·2 for 1904.

There has been relatively little variation in the amount of primary vaccination annually carried out in Nottingham during the past four years—or since the commencement of the recent serious small-pox outbreak—but the fact that the proportion of primary vaccinations, expressed as above, has remained so comparatively steady, at just above or just below 70 per cent., is a little remarkable.

Under the influence of panic, at the height of an epidemic, one would expect to see a higher figure than 70 per cent, and in the reaction of

indifference which follows, a number considerably lower —as we have seen in the past. But the possibility of such variation in a matter of this kind is undesirable. It points to the fact that the present situation as regards vaccination in this country is highly unsatisfactory, and of this situation it is not too much to say that it has been created by the half-hearted and incomplete legislation of recent years.

Vaccination in Nottingham Union. Summary of Statistics, 1883–1905.

	Births.	Percentage.			Certified as Insusceptible of Vaccination.	Had Small-Pox.	Certificates granted to "Conscientious Objectors."
		Successfully Vaccinated.	Died Unvaccinated.	Not finally accounted for.			
Average of 5 yrs. 1883–88 ...	6194	74·3	12·4	13·0	10	...	...
1889	5398	67·3	12·0	12·1	12	...	...
1890	5084	69·8	11·7	14·0	11	...	...
1891	5033	67·1	12·0	16·0	8	...	...
1892	5142	63·8	12·0	16·2	15	...	...
1893	5193	64·4	13·4	17·7	24	...	...
1894 1st half-year	2632	62·5	12·7	11·2	9	...	...
1895 do.	2758	43·1	14·2	15·3	11	...	...
1896 do.	2728	29·4	11·7	16·4	3	...	...
†1896–97 ...	5313	18·97	15·60	52·88	3	...	...
†1897–98 ...	5391	23·05	17·23	30·47	4	...	684
‡1898–99 ...	5857	42·4	15·5	10·2	28	...	543
§†1899–1900 ...	6904	50·8	15·13	7·5	15	...	682
†1900–1901 ...	6699	57·83	14·73	10·7	21	...	1146
Jan. to Dec., 1901	6827	65.13	13·90	10·18	51	...	718
1902 1st half-year	3336	69·87	11·66	12·20	85	...	183
1902 entire year	6766	70·97	12·62	9·55	21	...	443
1903 1st half-year	3443	70·96	10·49	11·27	9	...	261
1903 2nd do.	3506	70·02	12·55	7·81	5	1	214
1904 1st half-year	3522	69·54	12·99	13·31	9	2	142
1904 2nd do.	3408	66·87	12·12	15·43	9	...	181
1905 1st half-year	*3359	69·51	10·98	13·22	16	...	195
1905 2nd do.	*3296	68·88	10·95	12·71	3	...	243

† June of first year to July of second.

‡ Including Returns of Basford, Bulwell, and North Wilford for April, May, and June, 1899.

§ First Twelve Month's Return from New Parish of Nottingham.

* Nos. of births as furnished on Vaccination Returns.

What we require to place vaccination on a satisfactory footing, is compulsory vaccination and re-vaccination strictly enforced, as in Germany. With this, small-pox would lose its terrors, as it has already, under such a regime, in the latter country.

Measles.—The deaths attributed to measles in Nottingham during 1905 numbered no less than 232. This is the largest annual total of such deaths since 1880, when they numbered 265. Next below the 232 of 1905 comes 203 in 1896, and, after this, 175 in 1886. In only four other years since 1877 (the date of the Borough extension) has the total exceeded 120, and in but five others has it touched 100.

The large measles mortality of 1905 was not due to an accident of distribution in time between two years, as a study of the monthly deaths in 1904-05 will shew, but to an unusually high case fatality during the whole outbreak. In the absence of compulsory notification for measles, it is impossible to give an exact case-mortality for any considerable proportion of the cases, but an examination of the mortality returns for certain groups of cases among children attending, or whose brothers and sisters attended, some of the public elementary schools, leaves no room for doubt that the case-mortality was much higher than usual. In my Annual Report for 1904 I mentioned that a considerable proportion of the deaths at the commencement of the outbreak occurred during the first week after the appearance of rash. Acute initial fever with convulsions, broncha-pneumonia, and severe intestinal catarrh (*ileo-colitis*) were the most prominent of the actual death causes in the cases investigated by me at this time. This sinister feature became more pronounced as the outbreak developed, and out of 137 deaths which occurred between January 28th and March 25th, 57 took place before the 8th day from the onset. Such a fact implies extreme severity of type in the disease, a severity of type which in the majority of cases would go far towards determining the issue, whatever the line of treatment adopted. There were 6 instances in which 2 deaths, 2 in which 3 deaths, and 1 in which 4 deaths came to my knowledge in single

families during the outbreak. The following table of 350 cases will give some idea of the age-incidence and mortality :—

NOTTINGHAM, 1905.

Table of 350 cases of Measles, shewing age-incidence, and mortality at age-periods.

36 cases	..	..	under 2 years	6 deaths	(16.6 %)
25 „	..		between 2 and 3 years	4 „	(16 %)
53 „	..		„ 3 and 4 „	3 „	(5.7 %)
73 „	..		„ 4 and 5 „	2 „	(2.7 %)
80 „	..		„ 5 and 6 „	4 „	(5 %)
47 „	..		„ 6 and 7 „	–	—
24 „	..		„ 7 and 8 „	1 „	(4 %)
8 „	..		„ 8 and 9 „	–	—
2 „	..		„ 9 and 10 „	–	—
1 „	..		at 11 years	–	—
1 „	..		at 15 years	–	—

There were stated to be five instances of second attack in the above group.

The course taken by the disease in its spread through the City was from the south, northward, but by the end of February it had obtained a firm hold in almost all districts. The part of the City which suffered least was the N.W. district, extending from New Basford on the N. to Derby Road on the S., and from Mansfield Road on the E. to the City boundary on the W. There were only 22 deaths, or less than one-tenth of all, in this district, the population of which is one-fourth of the entire population of the City. The death-rate here was only 0·36 per 1,000. The parts of the City which suffered most were the N.E. and S.E. districts, which lie E. of a line drawn from the Church Cemetery by the M.R. Station to Wilford Bridge, and stretch from Mapperley to the Trent. There were 92 deaths from measles in the N.E. district with a population of 69,000, and 43 in the S.E. district with a population of 35,000. The death-rates from measles were, respectively, 1·3 and 1·2 per 1,000 in these two districts. There can be no

doubt that in a town like Nottingham, several parts of which were at one time separate villages and are still sundered (as Bulwell, Basford, Sherwood and Mapperley) by wide, sparsely inhabited areas, the schools frequently act as infecting centres for diseases of this type. This view being adopted, it was decided, with the concurrence of the Education Committee, first (in February), to close all infant schools in the path of the epidemic, and second (in March), all the infant schools throughout the City. This general closure came into operation on March 20th, and continued to April 30th.

Deaths from Measles, during each of the Four Quarters of 1905, in the Registration Sub-Districts of the City.

District	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell.. ..	26	10	..	..	36
N.W...	12	9	1	..	22
N.E.	84	8	..	..	92
S.W.	32	7	..	..	39
S.E.	38	4	1	..	43
Totals	192	38	2	..	232

It is much to be regretted, in view of the damage caused by measles, especially when, as in this instance, it assumes an unusually severe type, that so little can be done to check its inroads or mitigate its severity.

Measles was given as the cause of 10,841 deaths in England and Wales as a whole, of 1,751 in London, of 6,058 in the 76 great towns, and of 1,468 in the 141 lesser towns, during 1905. Among the greater towns only Great Yarmouth and Rotherham returned no deaths from measles during 1905, but 25 of the lesser towns enjoyed this distinction. The highest mortality per 1,000 of the population occurred at Portsmouth (1·08), Southampton (1·14), Stockton-on-Tees (1·40), West

Bromwich (1·76), and Merthyr Tydfil (1·83). The rate in the last place was almost exactly double the (exceptionally high) rate in Nottingham (0·92). In other words, had the death-rate from measles in Nottingham been equal to that in Merthyr Tydfil the actual number of deaths in Nottingham would have been 460, instead of 232.

Scarlet Fever.—The cases of scarlet fever notified during 1905 numbered 681, as against 1189, 1420, 966, 918 and 1394 in each of the preceding 5 years respectively. The number of separate houses invaded was 504. The case-mortality was equal to 2·8 per cent., as compared with 2·3 per cent. during 1904, and 2·4 per cent. in 1903. Three hundred and eighty-two cases, or 56 per cent. of all, were removed to Bagthorpe Hospital, as against 39 per cent. in 1904. If we add to these 382 cases admitted during 1905 the 60 remaining at the close of 1904, we obtain a total of 442 under treatment in the institution during the year. There were 9 deaths among these 442 hospital cases. The case-mortality was therefore equal to 2·036 per cent. Of the 299 known cases remaining at home during the year, 10 ended fatally. The case-mortality amongst these works out at 3·34 per cent.

The difference of 1·3 per cent., in favour of the hospital, between the two case-mortality rates, cannot be said to be due to the lack of severe cases in hospital, as no less than 46 of the cases admitted during 1905 were of marked severity, and selected on that account for the special open-air treatment reserved for such cases. In my opinion the line of safety and success in dealing with cases of acute specific diseases, and many others, lies in the direction of open-air treatment. With due precautions against exposure of the person to extremes of temperature and wet, the results are excellent. There are no drawbacks, so far as I am aware, except

those which arise from the natural prejudice of the patients and their friends against a new thing not generally adopted.

The cases and deaths were distributed over the usual age-periods, as follows:—0-1 year, 8 cases and 2 deaths; 1-5 years, 211 cases and 11 deaths; 5-15 years, 343 cases and 6 deaths; 15-25 years, 85 non-fatal cases; 25-35 years, 26 non-fatal cases; 35-45 years, 8 non-fatal cases. The case death-rate under 1 year was high, being equal to 25 per cent. The rate in the 1-5 years period is usually the highest of all, but during 1905 it was nearly double the rate of the previous year. In the next period, 5-15 years, the case-mortality was equal to only 1·7 per cent., as compared with 2·6 in 1904. Beyond this age-period we have the exceptional record of 119 cases without a death.

Notifications of Scarlet Fever, during each of the Four Quarters of 1905, in the Registration Sub-Districts of the City.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	53	29	17	44	143
N.W...	32	42	27	43	144
N.E.	39	48	46	48	181
S.W.	32	25	16	29	102
S.E.	37	36	21	17	111
Totals	193	180	127	181	681

The distribution of the disease over the various divisions of the City in each quarter of the year is given in the accompanying table. It was exceptionally uniform. The drop in the third quarter was unusual.

The death-rate from scarlet fever in Nottingham during 1905, per 1,000 living, was equal to only 0·07 (7 per 100,000). This rate is exceptionally low. The only lower annual death-rates from scarlet fever since the borough extension (1877) were those of 1901 (0·05), and 1886 (0·06). The death-rate per 1,000 from scarlet

fever in England and Wales was 0·11, in London 0·12, in the 76 great towns 0·13 during 1905. There were 299 deaths from scarlet fever in Liverpool, constituting one-seventh of all the deaths from this cause recorded in the 76 great towns during the year.

Diphtheria.—The increase in the local prevalence and fatality of diphtheria, which had been so striking from 1901 onwards, was stayed in 1905. The corrected number of cases notified during the year was 537, as compared with 548 in 1904, 423 in 1903, 209 in 1902, 115 in 1901, and an annual average of 84 for the preceding 10 years. The deaths in 1905 numbered 49, as against 71, 60, 31, and 29 respectively in the above mentioned years. The average mortality of one death in 11 cases during 1905 compares very favourably with 1 in 7·7, 1 in 7·1, 1 in 6·7, and 1 in 4, which was the corresponding record of the 4 preceding years. The number of separate houses invaded was 482, as compared with 499 in 1904. The cases and deaths had the following age distribution:—0-1 year, 5 cases and 1 death; 1-5 years, 149 cases and 31 deaths; 5-15 years, 266 cases and 15 deaths; 15-25 years, 68 non-fatal cases; 25-35 years, 28 non-fatal cases; 35-45 years, 10 non-fatal cases; 45-55 years, 8 cases and 2 deaths; 55-65 years, 2 non-fatal cases; 65-75 years, 1 non-fatal case. The case-mortality in the first year is low, being equal to only 20 per cent. In several recent years, all the known cases in this period have had a fatal ending—and such an experience is not at all unusual elsewhere. The mortality between 1 and 5 was equal to 20 per cent. of the 149 cases in this period. This is not remarkable, as the deaths in the 4th and 5th years are commonly more numerous than those at other ages. Among patients aged from 5 to 15 years there was an exceptionally moderate case death-rate of 5·6 per cent. Above 15 years there were 107 attacks, with two deaths, both in the 45-55 years group, which had only 8 cases.

There is, as I have said, nothing remarkable about a high death-rate at the early ages — the highest mortality is commonly under the 5th year—but the unusual feature about the mortality for 1905 and other recent years, is the proportion of the deaths under 5 and under 10, respectively, to the total deaths. These are commonly given as about 50 per cent. and 80 per cent. respectively, of all deaths. In Nottingham, however, in recent years—and without a preponderant infant population—the proportion borne by such early deaths to the total deaths has been uniformly much higher than this. In 1902 the deaths under 10 were equal to 90 per cent. of all, and in 1902 and 1904 to 93 per cent. In 1905 the deaths under 5 were equal to 65 per cent., and those under 10 to 94 per cent. of all diphtheria deaths.

The total of 49 deaths certified during 1905 as due to diphtheria in this City were equal to a death-rate of 0·19 per 1,000 living. The corresponding rates for 1904 and 1903 were 0·28 and 0·24 respectively, and those for the three preceding years identical at 0·12 per 1,000. The death-rate per 1,000 in England and Wales was 0·16, in London 0·12, in the 76 great towns 0·16, and in the 141 lesser towns 0·15 during 1905.

Five of the great towns had diphtheria death-rates ranging from 0·33 to 0·39. These were Hanley (0·33), Portsmouth (0·34), Salford (0·36), West Hartlepool (0·38), and Middlesbrough (0·39).

Two hundred and thirty-four, or 44 per cent. of all the cases occurring in the City, were removed to Bagthorpe Hospital. These, with 21 remaining at the close of 1904, make a total of 255 under treatment in the hospital during the year. The deaths among these were 19 in number, and equal to a case-mortality of 7·45 per cent. The deaths among the 303 cases

remaining at home numbered 30, and were equal to a case-mortality of just under 10 per cent. It is satisfactory to be able to claim an advantage for hospital, as compared with home treatment, especially in view of the fact that a large number of the cases sent to the hospital were of extreme severity. Tracheotomy was performed in five, and three of these ended in recovery. One was hopeless from the outset, having been practically moribund on admission.

Anti-diphtheritic serum, the utility of which—when used early in attacks—is now almost universally recognized, even amongst the laity, is still given away at the Health Department to medical men in attendance upon poor patients who require it. This serum is now somewhat freely injected for protective purposes, to guard against attack. Under these circumstances, it is well to bear in mind that the protection it affords, when so used, though complete for a time, frequently does not extend beyond a period of 14 days from the date of injection, and never lasts for long. This has been clearly demonstrated in the history of some of the cases recently under treatment at Bagthorpe Hospital.

Notifications of Diphtheria, during each of the Four Quarters of 1905, in the Registration Sub-Districts of the City.

Districts.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	33	10	15	25	83
N.W.	24	25	37	36	122
N.E.	53	29	29	20	131
S.W.	45	27	20	38	130
S.E.	44	8	9	10	71
Totals	199	99	110	129	537

The distribution of the disease in the City during 1905 was very general and even, but the attack-rate

per 1,000 was again, as in 1904, higher in S.W. than other sub-districts. In the latter it ranged from just under, to just over 2 (per 1,000); in S.W. it was well over 3. The disease, however, was not, either actually, or relatively to cases of local origin, so fatal in this district as elsewhere. There was only 1 death to 14·4 cases originating in S.W., as compared with 1 in 12 in Bulwell, 1 in 10 in N.W. and N.E., and 1 in 9 in S.E.

Whooping-Cough.—This disease was certified as the cause of 61 deaths during 1905, as compared with 91 in 1904, and 92 in 1903. It is commonly associated with measles, and it ran concurrently with it to a remarkable degree during 1905. But, whereas measles assumed a specially fatal type in the latter year, whooping-cough appears to have been considerably less severe and less fatal than usual. The disease, after slowly declining throughout 1904, increased with the measles outburst at the beginning of 1905, but fell off with the decline of measles at the end of the 2nd quarter of the latter year. In the 3rd quarter of 1905 there were 2 deaths only from measles, and one only from whooping-cough in the entire City. The distribution of fatal cases in each of the sub-districts during each quarter of the year is given in the accompanying table.

Deaths from Whooping-Cough, during each of the Four Quarters of 1905, in the Registration Sub-Districts of the City.

District.	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	Totals.
Bulwell	8	2	..	..	10
N.W...	3	..	..	..	3
N.E.	14	2	..	3	19
S.W.	2	..	1	..	3
S.E.	19	6	..	1	26
Totals	46	10	1	4	61

The 61 deaths referred to whooping-cough in Nottingham during 1905, accord with a death-rate per 1,000 living of 0·24, as compared with a rate of 0·36 for 1904, and an average annual rate of 0·34 for the ten years ended with 1903.

The corresponding rate in England and Wales was 0·25, in London 0·32, in the 76 great towns 0·29, and in the 141 lesser towns 0·23 during 1905.

As in the case of measles, so with whooping-cough, very little is done at present by local authorities in the way of prevention. But, when one considers the eminently infectious nature of the complaint, the large mortality it often directly causes, and the constitutional damage which frequently results from non-fatal attacks, one cannot but conclude that in the public interest it is desirable to treat it more seriously. For example, it would seem desirable at the least to prevent the going at large of children suffering from the disease in the acute stages. At the present time, however, it is a common experience to meet in various places of public resort with children who are evidently suffering from whooping-cough in a highly infectious stage.

The first thing needful in this, as in other similar reform movements, is the education of public opinion. Local Authorities and their officers cannot—in this country at any rate—go far without its support.

Enteric Fever.—I have written much in former Reports upon the subject of enteric fever in Nottingham, and have certainly had large occasion for doing so. With a mean death-rate from this disease for the past 15 years exactly 50 per cent. in advance of that for the other great towns grouped together, the medical officer of health for the affected district need look no further for a text, but may well seek a remedy. The disease in great measure has been confined to the poorer parts of the

town with close-set houses in narrow streets, alleys and courts. The explanation of such incidence is not far to seek. One naturally turns to the ubiquitous pail-closet, with its leaky and uncleanable wooden pail and fæcal contents as the central cause, and, for principal vehicles of infection, to flies and dust in summer, and dust and soil soakage at other times. Dust and flies and excremental slops pollute houses, food, persons, and clothing. The pollution, moreover, is not confined to private dwellings, but operates equally, and with much greater power for harm, upon the food-shops of the slums. Also, in addition to the nuisance in this distributed form, we had (we no longer have) the huge accumulations of nightsoil at the refuse depots, washed by the rain, baked by the sun, and yielding wholesale soakage and dust and pabulum for flies. Facts like these, and others which the imagination can readily supply, constitute a picture of causative factors sufficiently striking without the aid of sentimental colour to deepen its effect. The small local rainfall and the porous nature of the subsoil over the greater part of the City, probably explain in great measure the more active operation of the causative factors I have mentioned, in the case of Nottingham, than in other centres of population —especially in the North of England—where so-called dry closets are also still in general use. Fortunately for Nottingham, the situation has lately been much improved. Steel pails have been substituted for those of wood, scavenging is more thoroughly and systematically done, pails are now in most cases removed for emptying, and cleansed before return, the accumulations of nightsoil have disappeared from the depots, and destructors have been built (and are in course of construction), which can, if necessary, deal with any nightsoil that may in the future be left on our hands by the agriculturists. Still, I feel confident that we are not yet out of the wood, and that, given favourable conditions for the growth and spread of the disease, we

may yet have serious trouble from endemic typhoid fever. We cannot consider ourselves reasonably safe until W.C.'s are substituted for pail-closets—midden-privies have now sunk to a relatively negligible quantity, and the few that remain are rapidly becoming less.

The table shewing the proportional incidence of enteric fever upon houses furnished with pail-closets, midden-privies, and W.C.'s, respectively, which I have now kept up to date for many years, accompanies this section. It clearly bears out the view that enteric fever is much more prone to invade houses with dry closets than those with W.C.'s. The figures for 1905 include the incidence upon houses with waste-water-closets. It will be seen that, so far as liability to invasion by enteric fever is concerned, houses with this type of closet—as I think might be expected—occupy an intermediate position between houses with pail-closets and those with ordinary W.C.'s.

The incidence upon houses with waste-water-closets is a new item in the table, but, with this exception, the figures for past years may be evenly compared with those of 1905. Each year's return tells the same tale, though with varying degrees of accentuation, and this tale is, that the midden-privy has the heaviest proportional incidence, that the pail-closet comes next to the privy in this regard, and that the W.C. has by far the lightest incidence.

Of other vehicles of infection, milk came under suspicion on three occasions during the year, and the sale of the suspected milk in each case was temporarily inhibited.

The distribution of the disease in the City was very general in poor neighbourhoods, but the only serious concentration of cases occurred in the Meadow Platts, in lower Sneinton, in Poplar, in the district

Incidence of Enteric Fever Cases upon Houses with Pail-closets, Midden-privies and W.c.'s, from 1887 to 1905, and upon Waste-Water-closets during 1905.

1887 to 1898 (Average).

Houses with pail-closets - 1 case of enteric fever in 120 houses.
,, ,, midden-privies - 1 case of enteric fever in 37 houses.
,, ,, water-closets - 1 case of enteric fever in 558 houses.

1899.

Houses with pail-closets - - 1 case in 70 houses.
,, ,, midden-privies - 1 ,, 18 ,,
,, ,, water-closets - - 1 ,, 296 ,,

1900.

Houses with pail-closets - - 1 case in 92 houses.
,, ,, midden-privies - 1 ,, 20 ,,
,, ,, water-closets - - 1 ,, 407 ,,

1901.

Houses with pail-closets - - 1 case in 84 houses.
,, ,, midden-privies - 1 ,, 12 ,,
,, ,, water-closets - - 1 ,, 255 ,,

1902.

Houses with pail-closets - - 1 case in 129 houses.
,, ,, midden-privies - 1 ,, 21 ,,
,, ,, water-closets - - 1 ,, 294 ,,

1903.

Houses with pail-closets - - 1 case in 267 houses.
,, ,, midden-privies - 1 ,, 50 ,,
,, ,, water-closets - - 1 ,, 504 ,,

1904.

Houses with pail-closets - - 1 case in 166 houses.
,, ,, midden-privies - 1 ,, 50 ,,
,, ,, water-closets - - 1 ,, 407 ,,

1905.

37,048 houses with pail-closets ... 204 cases ... 1 case in 181 houses
400 ,, with midden-privies 4 cases ... 1 case in 100 ,,
1,200 ,, with water-closets... 21 cases ... 1 case in 571 ,,
6,785 ,, with waste-w.c.'s... 26 cases ... 1 case in 261 ,,

north and east of Alfred Street, in the Meadows, in Radford, and at New Basford (Scotholme). The spot map at the end of this section gives as nearly as possible the locality of occurrence of each case. Owing to the smallness of the scale, individual houses cannot of course be shewn, but the locality can be identified by the main streets, which are all marked.

With regard to seasonal distribution. Although the total number of cases were relatively low, there was no week of the year in which one or more cases were not reported. Endemic enteric fever, like that of Nottingham, naturally displays a tendency to linger and spread in an insidious manner, but it seldom illustrates this tendency more forcibly than it did during 1905. Roughly speaking, one-fifth of the cases occurred in the first quarter, one-fourth in the second, one-third in the third, and one-fourth again in the fourth. The, usually autumnal, rise took place in the summer months. The maximum monthly numbers of cases and deaths were in July, instead of October and November. There were 5 deaths in July, 3 in August, 4 in September, 2 in October, and 1 only (Nov.) during the last 2 months of the year.

Nottingham, 1905. Enteric Fever. Cases and Deaths in Weekly Periods.

Week ending	January. 7	14	21	28	February. 4	11	18	25	March. 4	11	18	25	April. 1	8	15	22	29	May. 6	13	20	27	June. 3	10	17	24	
Cases	2	1	2	2	2	7	5	6	8	2	5	4	6	2	7	3	4	2	3	5	4	1	8	5	11	=107*
Deaths	..	..	..	..	..	1	1	1	..	..	..	..	2	..	..	1	1	..	1	1	1	..	..	..	..	=10*

Week ending	July. 1	8	15	22	29	August. 5	12	19	26	September. 2	9	16	23	30	October. 7	14	21	28	November. 4	11	18	25	December. 2	9	16	23	30	
Cases	3	10	8	6	6	5	5	5	7	9	3	8	3	4	3	7	5	4	13	3	9	1	1	3	6	2	5	=144*
Deaths	1	..	1	1	2	..	..	1	2	..	2	1	1	..	..	..	..	2	..	..	1	..	..	..	..	..	..	=15*

* Figures made up from weekly returns, without correction.

The attack-rate per 1,000 of population was 0·6 in the Bulwell sub-district, 1·0 in N.W., 1·4 in N.E., 0·8 in S.W., and 1·0 in S.E. The death-rate was heaviest both actually and relatively in N.E.; it was low elsewhere. Eleven out of the 24 total deaths occurred in the N.E. district, 6 in N.W., 3 in S.W., and 2 each in Bulwell and S.E., or rather among cases originating in these several sub-districts, for many died in hospital.

The tables below gives the cases and deaths of males and females respectively, and the number of cases to one death of each in several age-periods, and also the total mortalities and case death-rates of each, for the years 1902 to 1905, inclusive. The figures are too small to suggest anything of importance beyond the unwisdom of attempting to draw general conclusions in this or other matters from small particular data. For example, between 1902 and 1904 there was a rising case mortality, and some extraordinary oscillations in the sexual death-rates; during 1905 there was a general decline in the case mortality, and an adjustment of the mean figures for each sex to an almost identical total (1 in 10·4 m., and 1 in 10·0 f.).

NOTTINGHAM.

Enteric Fever. Cases and Deaths (distinguishing Males and Females) in Age-Periods.

1903.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.	
Cases	Male ..	..	7	25	35	24	10	3	3	..	..	107	200*
	Female ..	..	3	32	27	20	8	2	..	1	..	93	
Deaths	Male ..	..	1	7	3	6	3	2	1	..	..	23	36*
	Female ..	..	..	3	4	3	2	..	..	1	..	13	
Average Cases to One Death.												All Ages.	
Male ..	..	..	7·0	3·6	11·7	4·0	3·3	1·0	3 0	..	..	4·6	5·5
Female	..	..	..	10·7	6·8	6·6	4·0	..	..	..	7	7·1	

1904.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.	
Cases	Male ..	1	16	40	35	35	19	9	3	3	1	162	296
	Female ..	..	11	36	39	24	11	12	1	..	..	134	
Deaths	Male ..	1	1	3	8	12	7	3	3	2	..	40	57
	Female ..	..	2	3	8	..	1	3	..	..	..	17	
Average Cases to One Death.												All Ages.	
Male		1·0	16·0	13.3	4·4	2·9	2·7	3·0	1·0	1·5	..	4·0	5·2
Female ..		..	5·5	12·0	4·9	..	11·0	4·0	..	..	..	7·9	

1905.

		0-1 yrs.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75.	Totals at all Ages.	
Cases	Male ..	1	17	40	25	17	16	6	2	1	..	125	255
	Female ..	1	11	38	41	18	13	7	1	..	..	130	
Deaths	Male ..	..	1	1	1	2	4	1	1	1	..	12	25
	Female ..	1	1	2	5	1	3	..	..	..	..	13	
Average Cases to One Death.												All Ages.	
Male		..	17·0	40·0	25·0	8·5	4·0	6·0	2·0	1·0	..	10·4	10·2
Female ..		1·0	11·0	19·0	8·2	18·0	4·3	..	..	..	..	10·0	

* These totals include a few unverified cases.

Twenty-two cases only of enteric fever were admitted to Bagthorpe Hospital during the year, but the smallness of this total is explained by the relative smallness of the total number of enteric fever cases, and the understanding which exists that the City Isolation Hospital shall take only those cases which the General and Union Hospitals are unable to deal with. One of the cases admitted to Bagthorpe ended in death, the rest in recovery.

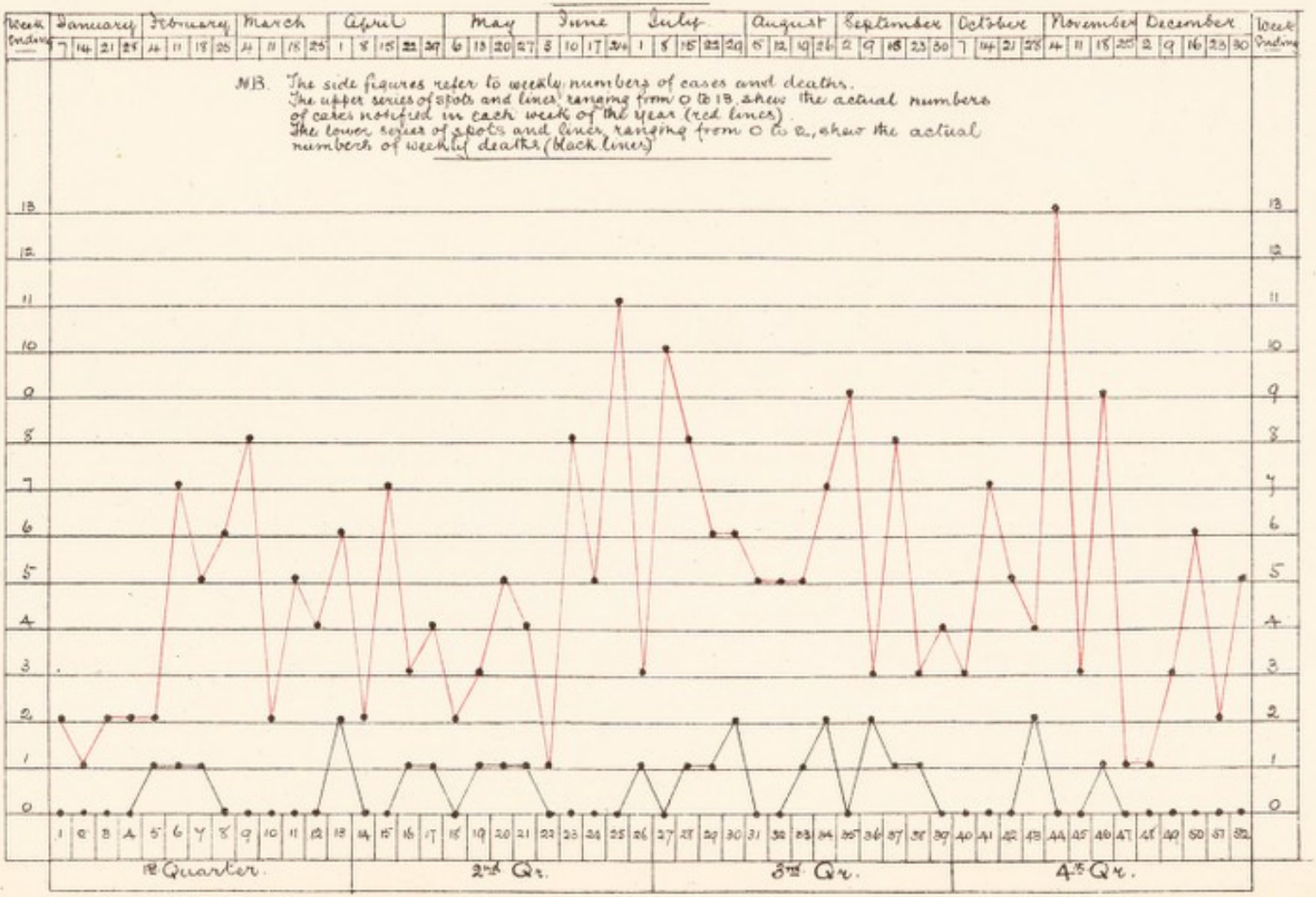
The corrected total of cases of enteric fever notified to me during the year was 255, in 237 separate houses. The deaths were 24 in number according to my returns, and 23 according to those of the Registrar-General. The death-rate per 1,000 of population was equal to 0·09 (9 per 100,000), as compared with rates of 0·23, 0·14, 0·21, 0·35 and 0·32, in the five immediately preceding years, and an average annual rate of 0·28 for the 10 years ending with 1904. The total of deaths, and the death-rate for 1905, are alike the lowest on record for any full year in this City. The lowest previous annual totals were 36, in 1892 and 1903, and 44 in 1885.

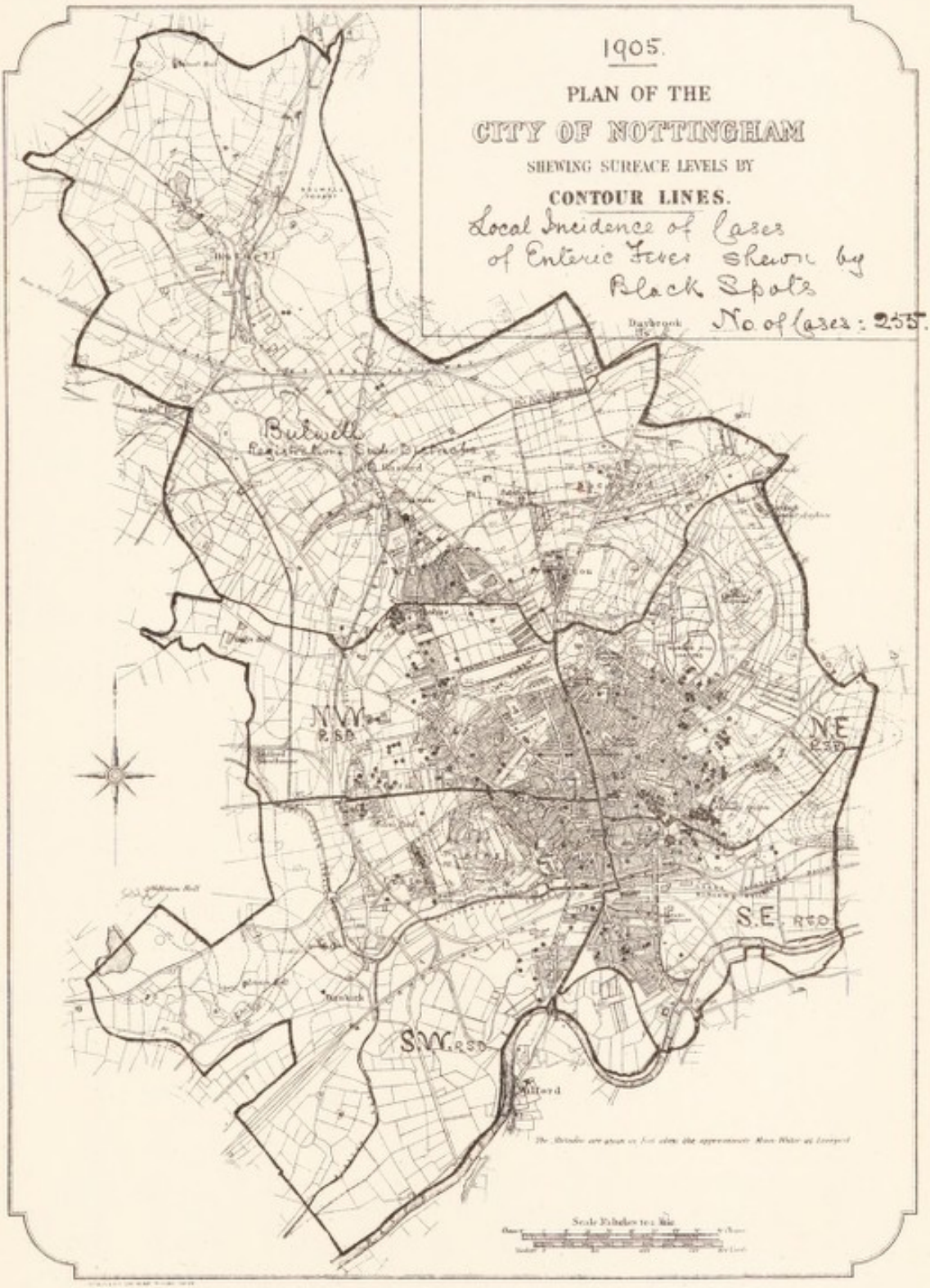
The death-rate per 1,000 living from enteric fever during 1905, was 0·09 in England and Wales, 0·05 in London, 0·08 in the 76 great towns, 0·13 in the 141 smaller towns, and 0·09 in England and Wales less the 217 towns.

ENTERIC FEVER.—Cases and Deaths, Male and Female, during each of the Four Quarters of the Year in Registration Sub-Districts.

		First Quarter.		Second Quarter.		Third Quarter.		Fourth Quarter.		Totals.				
		Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males	Females.	Both Sexes.		
Bulwell	Cases	3	2	5	2	4	4	6	1	18	9	27	Cases	Bulwell
	Deaths	...	...	1	...	1	...	...	...	2	...	2	Deaths	
N.W.	Cases	4	8	8	9	6	11	8	7	26	35	61	Cases	N.W.
	Deaths	1	...	...	1	2	1	1	...	4	2	6	Deaths	
N.E. ...	Cases	10	8	9	6	15	27	16	8	50	49	99	Cases	N.E.
	Deaths	1	2	...	...	1	6	1	...	3	8	11	Deaths	
S.W. ...	Cases	4	4	6	5	4	5	4	...	18	14	32	Cases	S.W.
	Deaths	...	...	2	1	...	...	...	...	2	1	3	Deaths	
S.E. ...	Cases	4	5	2	8	3	2	5	7	14	22	36	Cases	S.E.
	Deaths	1	...	...	...	...	...	...	1	1	1	2	Deaths	

Nottingham
1905.
Enteric Fever
Weekly Numbers
of
Cases and Deaths




1905.
PLAN OF THE
CITY OF NOTTINGHAM
SHEWING SURFACE LEVELS BY
CONTOUR LINES.
Local Incidence of Cases of Enteric Fever shewn by Black Spots
No. of Cases: 255.
Bulwell
N.W. R.S.D.
N.E. R.S.D.
S.E. R.S.D.
S.W. R.S.D.
Wilford

NOTTINGHAM, 1900-1905. ENTERIC FEVER. Onsets of Cases, with Mean Temperature of Air, and Rainfall, in Four-Weekly Periods.

	Four-weekly periods ending	Jan. 27.	Feb. 24.	March 24.	April 21.	May 19.	June 16.	July 14.	Aug. 11.	Sept. 8.	Oct. 6.	Nov. 3.	Dec. 1.	Dec. 29.	Totals.
1900	Mean Temperature	39·0	34·175	38·325	41·725	46·075	53·825	57·55	60·75	55·35	53·00	48·225	42·775	43·725	47·269
	Rainfall in Inches	3·386	2·732	1·288	1·068	1·452	3·353	1·201	4·300	1·049	1·710	1·255	2·024	2·005	26·823
	Cases of Enteric Fever ..	21	30	15	21	17	28	12	36	61	70	83	69	38	501
	Four-weekly periods ending	Jan. 26.	Feb. 23.	March 23.	April 20.	May 18.	June 15.	July 13.	Aug. 10.	Sept. 7.	Oct. 5.	Nov. 2.	Nov. 30.	Dec. 28.	Totals.
1901	Mean Temperature	37·025	33·875	39·4	40·425	49·05	54·5	58·6	62·5	57·225	52·7	45·975	38·425	35·25	46·534
	Rainfall in Inches	2·418	1·162	1·621	1·995	0·483	0·825	1·760	2·280	1·173	1·205	1·439	1·669	3·371	21·401
	Cases of Enteric Fever ..	42	32	35	46	23	18	13	32	81	74	53	35	36	520
	Four-weekly periods ending	Jan. 25.	Feb. 22.	March 22.	April 19.	May 17.	June 14.	July 12.	Aug. 9.	Sept. 6.	Oct. 4.	Nov. 1.	Nov. 29.	Dec. 27.	Totals.
1902	Mean Temperature	41·400	30·950	43·025	41·025	44·475	50·325	58·725	55 100	56·700	52·375	48·150	43·475	41 050	46·67
	Rainfall in Inches	2·157	1·008	1·856	1·698	1·255	2·246	0·751	2·679	2·570	1·419	2·016	0 931	1 508	21·524
	Cases of Enteric Fever ..	44	10	9	24	14	15	31	21	30	38	46	58	29	369
	Four-weekly periods ending	Jan. 24.	Feb. 21.	March 21.	April 18.	May 16.	June 13.	July 11.	Aug. 8.	Sept. 5.	Oct. 3.	Oct. 31.	Nov. 28.	Dec. 26.	Totals.
1903	Mean Temperature	36 9	44·6	41·7	43·6	45·3	52·9	56·8	57·1	55 8	54·0	49 3	42·9	38·5	47·6
	Rainfall in Inches	1·862	0·353	2·746	1·513	4·407	0·929	1·354	2·107	5·141	2·868	6·205	1·882	0·882	32·249
	Cases of Enteric Fever ..	16	14	17	6	8	6	9	17	20	15	31	21	21	200
	Four-weekly periods ending	Jan. 30.	Feb. 27.	March 26.	April 23.	May 21.	June 18.	July 16.	Aug. 13.	Sept. 10.	Oct. 8.	Nov. 5.	Dec. 3.	Dec. 31.	Totals.
1904	Mean Temperature	38·8	38·4	39·2	46·8	50·1	55·9	61·2	63·1	58·1	52·6	48·9	39·1	37·2	48·4
	Rainfall in Inches	1·65	3·19	1·21	1·52	0·42	1·36	0·37	2·48	3·01	1·51	0·40	1·07	1·53	19·733
	Cases of Enteric Fever ..	20	28	21	31	18	7	11	23	59	31	21	19	6	295
	Four-weekly periods ending	Jan. 28.	Feb. 25.	March 25.	April 22.	May 20.	June 17.	July 15.	Aug. 12.	Sept. 9.	Oct. 7.	Nov. 4.	Dec. 2.	Dec. 30.	Totals.
1905	Mean Temperature	37 0	40·9	43·6	44·1	49·3	51·8	63·5	61·6	58 7	51·0	44 1	39 8	39·5	48·3
	Rainfall in Inches	0·77	0 58	2·36	1·63	0·73	2·26	1·22	2·16	2·68	1·47	1·38	2·66	0 69	20 010
	Cases of Enteric Fever ..	9	25	16	17	13	28	26	29	22	16	26	13	14	254

Nottingham, 1890-1905.

GENERAL ENTERIC FEVER DATA.

Year.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Population ..	211,695	214,606	217,550	220,551	223,584	226,659	229,775	232,935	236,139	239,384	237,770	240,438	243,191	245,993	248,811	251,677
Cases of Enteric Fever	337	375	198*	479	334	422	444	428	423*	607*	505*	535*	375*	200*	296*	255
Attack or Case rate	1·59	1·74	0·91	2·17	1·49	1·86	1·93	1·83	1·79	2·53	2·12	2·22	1·54	0·812	1·19	1·01
Deaths from Enteric Fever ..	58	70	36	68	61	55	75	45	53	114	75	79	50	36	57	24
Death-rate from Enteric Fever..	0·27	0·33	0·15	0·31	0·28	0·24	0·34	0·21	0·22	0·48	0·32	0.329	0·21	0·14	0·23	0·09
Mean air temperature ..	47·3	50·4	45·5	49·0	47·9	47·0	48·2	48·1	49·2	48·3	47·269	46·534	46·67	47·7	48·4	48·3
Rainfall in inches	17·698	25·889	21·579	20·165	20·252	20·753	22·992	23·726	19·750	22·635	26·823	21·401	21·524	32·368	19·733	20·010
Death-rates from Enteric Fever in great towns..	0·19	0·20	0·15	0·24	0·19	0·20	0·19	0·18	0·20	0·22	0·20	0·17	0·15	0·12	0·10	0·08

* Number obtained from Weekly Returns of Notifications without subsequent correction.

Diarrhœa.—The deaths from epidemic diarrhœa, computed in accordance with the new rules of classification to which I have referred in former Reports, numbered 202 according to my returns, and 190 according to those of the Registrar-General. It is somewhat disheartening to find so large a discrepancy even as this, when one has done all in one's power to avoid such difference. The deaths have been tabulated with the utmost care, and with the strictest observance of the rules of classification mentioned above, and I can only say that I am at a loss to understand the lack of concurrence. The deaths in my total represent a death-rate of 0·80 per 1,000 (80 per 100,000), those of the Registrar-General one of 0·76 (76 per 100,000). The corresponding rate in England and Wales was 0·59, in London 0·73, in the 76 great towns 0·83, and in the 141 lesser towns 0·57 for 1905. The mean annual rate for Nottingham during the 10 years ending with 1904 was 1·21. Of the 202 deaths computed by me to have been due to epidemic diarrhœa during 1905, 152 or 75 per cent. occurred during the 1st year of life, and 41 or 20 per cent. between 1 and 5 years. The deaths under 1 year were 84 per cent. of all during 1904, but the deaths under 5 years bore almost exactly the same proportion to the total diarrhœa deaths in 1904 as in 1905, viz., 95 per cent. The deaths of males were slightly more numerous than those of females in both years, viz., 108 males as compared with 94 females in 1905, and 154 males and 137 females in 1904. Of the deaths under 1 year, those in each consecutive quarter of this period were in the respective numerical proportion of 3, 4, 3 and 2. During 1904 the excess was in the 4th quarter. It is difficult to account for the alteration in quarterly incidence here apparent. A preponderant mortality in the 4th quarter is readily understood, as we have then the combined influence of teething and weaning to weaken the child's power of resistance and lay it open

to attack through its new food, but in the case of the 2nd quarter we have no special alteration in the child's life and surroundings to explain a higher death-rate at this period.

Dr. Newsholme and other careful observers have shewn that in certain towns the proportion of breast fed, or reputedly breast fed, children is larger than has been commonly supposed; but, while recognizing very fully the value of the information thus given to us, we must not lose sight of facts like the following, which go to modify its simple significance:—(1) the practice of mothers in this regard varies much in different districts —in many industrial centres a large proportion of mothers with babies systematically go out to work, and leave the latter in charge of others, (2) the methods of feeding described by parents and others are not always as stated, and (3) a considerable proportion of nursing mothers—from their state of health, or their habits, or both—are totally unfit to nurse their babies. When we consider all this, and, further, the frequently filthy condition of the babies' persons and surroundings, together with the fact that infants among the poor are continually sucking and licking various dirty things, not the least objectionable of which are the fingers so often put into their mouths, we realize that the problem of safeguarding the young life against the dangers of intestinal contamination is, like most other human problems—especially social and physiological problems —not simple and direct, but complicated in a high degree. It is indeed a fortunate circumstance, in towns like Nottingham especially, that epidemic diarrhœa is not liable to propagate at all seasons, because the constant fæcal contamination of the house and its curtilage from dry closets, to which I have referred under the heading of enteric fever, is an equally or even more potent factor for diarrhœa. Heat and drought are often spoken of as the causes of diarrhœa, but it

cannot be too often urged that it is the fæcal or other organism of diarrhœa which actually causes the mischief under favourable meteorological conditions, and that dirt is the vehicle by which that organism reaches the food and our bowels.

The following table of weekly deaths from diarrhœa in each of the registration sub-districts shews (*inter alia*) that the disease is practically confined to the late summer and early autumn. Nearly 80 per cent. of all the deaths took place between the middle of July and the end of September.

NOTTINGHAM, 1905.

Weekly Deaths from Diarrhœa in Registration Sub-Districts.

	Week ending																					
	July					August				Sept.					October				Nov.			
	1	8	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4			
Bulwell	..	..	..	..	2	3	4	1	3	4	1	4	4	1	..	..	..	1	1	—		29
N.W.	..	..	1	..	3	3	2	3	2	3	1	..	2	..	1	1	..	2	..	—		24
N.E.	..	..	1	2	4	3	11	8	4	7	1	1	6	..	..	..	..	1	..	—		49
S.W.	..	..	1	..	1	5	2	4	5	1	..	..	2	1	..	..	..	..	..	—		22
S.E.	1	..	2	6	2	5	7	4	2	1	3	2	1	1	..	..	..	1	..	—		38
	1	..	5	8	12	19	26	20	16	16	6	7	15	3	1	1	..	5	1	—		162

The tables of earth temperatures 1 ft. and 4 ft. below the surface, respectively, are given as usual at the end of the section, and except that a deep earth temperature of some 58° (instead of 56° as stated by Dr. Ballard) is usually an essential antecedent to an outbreak of diarrhœa, these Nottingham records will be found to yield strong support to Dr. Ballard's well known views on the relation of soil temperature to diarrhœa.

The leaflet on infant rearing and feeding, and the prevention of diarrhœa, which has been in use in the Health Department since 1892, is still distributed by the District Registrars of Births and Deaths, and by Lady Health Visitors and others, and may be obtained at the Health Department by anyone interested in the subjects with which it deals. The leaflet is reproduced in the Appendix of this report.

1900.

	WEEK ENDING																	
	July 7	July 14	July 21	July 28	Aug. 4	Aug. 11	Aug. 18	Aug. 25	Sept. 1	Sept. 8	Sept. 15	Sept. 22	Sept. 29	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3	Nov. 10
Earth Temperature 1 ft. below surface ..	60·1	62·6	64·4	67·8	63·6	59·2	62·7	62·7	59·4	57·9	56·5	57·1	56·6	52·2	53·1	48·6	48·2	48·6	49·1
Earth Temperature 4 ft. below surface ..	56·5	57·1	59·4	61·7	62·8	61·1	60·4	61·2	60·4	59·6	58·7	58·0	57·7	56·6	55·2	53·9	52·2	51·3	51·3
Deaths from Diarrhœa	..	7	7	19	32	27	22	30	33	31	16	20	17	9	10	5	8	5	2

1901.

	WEEK ENDING																	
	July 6	July 13	July 20	July 27	Aug. 3	Aug. 10	Aug. 17	Aug. 24	Aug. 31	Sept. 7	Sept. 14	Sept. 21	Sept. 28	Oct. 5	Oct. 12	Oct. 19	Oct. 26	Nov. 2	Nov. 9
Earth Temperature 1 ft. below surface ..	61·0	64·1	66·6	64·9	64·5	63·3	62·4	62·3	59·9	57·4	57·6	56·4	57·3	56·4	51·0	50·5	46·0	46·4	42·9
Earth Temperature 4 ft. below surface ..	55·9	57·4	58·9	60·5	60·5	60·8	60·9	60·7	60·5	59·2	58·4	57·8	57·5	57·4	56·0	54·6	52·7	51·2	49·8
Deaths from Diarrhœa	5	4	15	34	40	46	36	41	28	22	8	7	8	5	2	5	3	1	3

1902.

	WEEK ENDING																	
	July 5	July 12	July 19	July 26	Aug. 2	Aug. 9	Aug. 16	Aug. 23	Aug. 30	Sept. 6	Sept. 13	Sept. 20	Sept. 27	Oct. 4	Oct. 11	Oct. 18	Oct. 25	Nov. 1	Nov. 8
Earth Temperature 1 ft. below surface ..	62·3	61·7	62·0	58·4	58·2	57·7	57·5	58·3	58·3	58.7	57·0	53·5	54·0	52·0	49·7	50·0	48·0	48·9	47·9
Earth Temperature 4 ft. below surface ..	56·7	57·6	58·0	58·0	57·6	57·2	55·9	57·2	57·3	57·7	58·0	56·6	55·6	54·9	53·6	52·4	51·4	50·8	50·3
Deaths from Diarrhœa	2	2	2	3	6	1	3	4	5	12	15	26	12	15	14	7	7	4	2

1903.

	WEEK ENDING																	
	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22	Aug. 29	Sept. 5	Sept. 12	Sept. 19	Sept. 26	Oct. 3	Oct. 10	Oct. 17	Oct. 24	Oct. 31	Nov. 7
Earth Temperature 1 ft. below surface ..	62·8	62·1	60·9	60·5	59·8	59·3	59·6	57·4	56·2	57·6	55·0	51·4	56·6	56·8	53·8	50·4	49·6	48·4	45 6
Earth Temperature 4 ft. below surface ..	55·0	56·4	55·8	53·0	57·9	57·9	58·0	57·9	57·1	56·9	57·1	54·1	54·1	56·1	55·9	53.0	53·0	51·9	50·9
Deaths from Diarrhœa	2	5	2	3	6	8	5	18	14	13	16	11	7	7	10	4	6	4	2

1904.

	WEEK ENDING																		
	July 9	July 16	July 23	July 30	Aug. 6	Aug. 13	Aug. 20	Aug. 27	Sept. 3	Sept. 10	Sept. 17	Sept. 24	Oct. 1	Oct. 8	Oct. 15	Oct. 22	Oct. 29	Nov. 5	Nov. 12
Rainfall ..	0·09	0·09	0·26	1·73	0·32	0·17	1·20	1·16	0·57	00·8	0·26	0·35	0·84	0·06	0·08	0·19	0·07	0 08	0·60
Earth Temperature 1 ft. below surface ..	62·2	67·4	66·8	63·5	66·5	60·9	57·3	56·5	60 0	57·9	58·4	54·7	57·9	49·3	47·9	51·0	47·1	47·8	46·3
Earth Temperature 4 ft. below surface ..	55·6	57·4	58·7	59·5	60·1	60·7	59·4	58·4	58·2	58·2	57·4	56·9	55·9	54·5	53·1	52·4	51·9	51·0	50·2
Deaths from Diarrhœa	3	1	4	12	30	48	62	54	31	18	19	8	9	9	3	3	3	1	1

1905.

	WEEK ENDING																		
	July 1	July 8	July 15	July 22	July 29	Aug. 5	Aug. 12	Aug. 19	Aug. 26	Sept. 2	Sept. 9	Sept. 16	Sept. 23	Sept. 30	Oct. 7	Oct. 14	Oct. 21	Oct. 28	Nov. 4
Rainfall ..	0·38	0·01	0·63	0·03	0·56	0·99	0.58	0·65	0·61	0·65	0·77	0·01	0·01	0·70	0·75	0·05	0·27	0·25	0·81
Earth Temperature 1 ft. below surface ..	60·3	63·2	67·5	66·1	65·1	61·1	60·3	61·0	59·7	58·1	58·4	54·0	53·3	51·8	47·1	49·7	42·6	40·3	44·2
Earth Temperature 4 ft. below surface ..	53·2	57·4	58·9	60·7	61·2	61·2	60·3	60·1	60·1	59·5	58·9	58·2	56·7	55·6	54·3	53·1	51·1	48·4	47·2
Deaths from Diarrhœa	1	..	5	8	12	19	26	20	16	16	6	7	15	3	1	1	..	5	1

SCHOOL CLOSURE ON ACCOUNT OF INFECTIOUS DISEASE.

FOR MEASLES

(and Whooping Cough).

A.—COUNCIL SCHOOLS.

Clarendon Street	...	February 15th to March 12th.
Bosworth Road	...	,, 15th to ,, 6th.
Shelton Street	...	,, 20th
Blue Bell Hill	... ...	March 3
Lenton Board	... ...	,, 6
Bath Street	... ...	,, 6
Carlton Road	... ...	,, 6
Colwick Street	... ...	,, 6
London Road	... ...	,, 6
Sneinton Board	... ...	,, 6
Sycamore Road	... ...	,, 6
Collygate Road	... ...	,, 6
Sherwood	... ...	,, 8
Forster Street	... ...	,, 18

B.—TRUST SCHOOLS.

St. Marks	... ...	March 1
St. Andrews	... ...	,, 4
All Saints	... ...	,, 6
Colville Street	... ...	,, 10
St. Matthias	... ...	,, 10

All, with a few exceptions, closed continuously till May 1st.

All the Infant Departments in the City Schools were closed from March 20th to May 1st, 1905.

FOR MUMPS.

St. Patrick's Roman Catholic, Infants' Department, was closed one week previous to the Xmas. Holidays on account of Mumps.

Tables giving the cases and deaths, in age-periods, of the notifiable infectious diseases, the ratio of deaths to cases, and the deaths from the non-notifiable infectious diseases, which have occurred in Nottingham during 1904 and other recent years. Further Notification Tables will be found under the special sections dealing separately with notifiable infectious diseases.

1900.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	15	393	779	165	34	6	..	2	..	..	1394
Deaths..	1	34	18	1	1	..	..	..	..	..	55
Diphtheria *Cases*..	1	26	45	25	10	6	1	2	..	..	116
Deaths..	1	16	8	..	..	..	1	2	..	..	28
Enteric Fever *Cases*..	1	33	138	150	110	53	16	10	1	..	512
Deaths..	..	8	9	20	16	12	6	4	..	..	75

1901.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	15	255	500	114	27	6	1	..	..	..	918
Deaths..	..	5	6	..	..	..	..	..	..	..	11
Diphtheria *Cases*..	1	42	38	24	6	3	1	..	..	..	115
Deaths..	..	15	13	..	1	..	..	..	..	..	29
Enteric Fever *Cases*..	7	43	169	141	96	47	25	2	5	..	535
Deaths..	2	3	15	21	16	9	12	1	4	..	83

1902.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Scarlet Fever *Cases*..	5	290	517	122	30	1	1	..	..	..	966
Deaths..	1	12	7	1	1	1	..	..	..	..	23
Diphtheria *Cases*..	4	52	99	28	16	7	3	..	..	..	209
Deaths..	4	19	7	1	..	..	..	..	..	..	31
Enteric Fever *Cases*..	1	19	100	87	85	41	23	15	4	..	375
Deaths..	..	2	10	8	17	6	4	2	1	..	50

1903.

	0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox *Cases*..	1	6	19	24	55	27	14	3	3	..	152
Deaths..	..	1	..	..	1	..	..	..	..	..	2
Scarlet Fever *Cases*..	19	361	703	263	56	14	3	..	..	..	1419
Deaths..	1	14	13	6	..	..	..	..	..	..	34
Diphtheria *Cases*..	2	100	225	68	21	6	3	..	1	1	427
Deaths..	1	24	34	1	..	..	..	..	..	..	60
Enteric Fever *Cases*..	..	10	57	62	44	18	5	3	1	..	200
Deaths..	..	1	10	7	9	5	2	1	1	..	36

1904.

		0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox	*Cases..*	12	11	57	69	81	45	21	11	1	..	308
	Deaths..	4	1	2	..	1	1	1	..	..	..	10
Scarlet Fever	*Cases..*	9	336	647	140	39	12	2	2	..	..	1187
	Deaths..	..	10	17	1	1	..	..	..	..	..	29
Diphtheria	*Cases..*	9	147	299	56	23	10	3	1	..	..	548
	Deaths..	8	23	35	1	2	..	..	..	..	..	69
Enteric Fever	*Cases..*	1	30	72	74	60	30	21	4	3	1	296
	Deaths..	1	3	6	16	12	8	6	3	2	..	57

1905.

		0-1 yr.	1-5 yrs.	5-15 yrs.	15-25 yrs.	25-35 yrs.	35-45 yrs.	45-55 yrs.	55-65 yrs.	65-75 yrs.	Over 75 yrs.	Total.
Small-Pox	*Cases..*	..	..	1	7	4	1	3	2	1	..	19
	Deaths..	..	..	..	..	..	..	1	..	..	..	1
Scarlet Fever	*Cases..*	8	211	343	85	26	8	..	..	..	..	681
	Deaths..	2	11	6	..	..	..	..	..	..	..	19
Diphtheria	*Cases..*	5	149	266	68	28	10	8	2	1	..	537
	Deaths..	1	31	15	..	..	..	2	..	..	..	49
Enteric Fever	*Cases..*	2	28	78	66	35	29	13	3	1	..	255
	Deaths..	1	1	3	6	2	8	1	1	1	..	24

Nottingham. Notification Data up to the end of 1905.

	Scarlet Fever *			Enteric Fever †			Small-Pox. *			Diphtheria. ‡			Deaths from Non-Notifiable Zymotic Diseases.			
	Deaths.	Known cases.	Ratio of known cases to Deaths.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Measles.	Whooping Cough.	Diarrhœa.	TOTAL.
1881	353	..	..	61	..	..	4	..	..	7	..	..	34	88	202	324
1882	280	1029	3·7	71	68	1·0	51	446	8·7	21	..	..	133	73	225	431
1883	59	428	7·3	73	159	2·2	2	23	11·5	34	125	3·7	14	76	168	258
1884	37	384	10·4	68	218	3·2	..	11	..	39	113	2·9	145	129	377	651
1885	31	390	12·6	44	326	7·4	2	10	5·0	28	85	3·0	112	116	163	391
1886	13	351	27·0	61	317	5·2	2	12	6·0	10	68	6·8	175	90	328	593
1887	22	615	28·0	74	411	5·6	..	2	..	10	50	5·0	58	153	315	526
1888	25	643	25·7	89	426	4·8	12	59	4·9	34	152	4·5	115	81	157	353
1889	32	1047	32·7	66	395	5·9	..	..	..	11	66	6·0	86	153	263	502
1890	33	984	29·8	58	348	6·0	..	..	..	16	64	4·0	52	47	185	284
1891	28	895	31·9	70	396	5·6	..	..	..	21	103	4·9	110	121	180	411
1892	43	1163	27·0	36	205	5·6	..	..	..	30	76	2·5	118	117	158	393
1893	82	1511	18·4	68	490	7·2	5	53	10·6	15	81	5·4	25	59	358	442
1894	51	1164	22·8	62	363	5·8	4	59	15·8	18	56	3·1	134	118	134	386
1895	51	1250	24·5	55	461	8·3	..	3	..	11	47	4·2	1	33	444	478
1896	27	731	27·1	75	478	6·4	..	..	..	12	60	5·0	203	91	175	469
1897	34	517	15·2	45	428	9·5	..	..	..	21	75	3·6	49	117	530	696
1898	32	931	29·1	54	423	7·8	..	..	..	23	85	3·7	104	59	385	548
1899	53	2500	47·2	114	613	5·4	..	..	..	30	142	4·7	140	54	600	792
1900	55	1394	25·3	75	505	6·7	..	..	..	28	116	4·1	45	103	387	535
1901	11	918	83·5	79	535	6·8	..	7	..	29	115	3·97	96	96	361	553
1902	23	966	42·0	50	375	7·5	..	..	..	31	209	6 74	4	37	194	235
1903	34	1420	41·8	36	200	5·6	2	152	76·0	60	423	7·05	98	92	166	356
1904	27	1189	44·0	58	296	5·1	10	308	30·8	71	546	7·7	44	89	344	477
1905	19	681	35·8	24	255	10·6	1	19	19·0	49	537	10·9	232	61	202	495

1905. Puerperal Fever: Deaths, 12; known cases, 12; ratio, 1·0.
Erysipelas: Deaths, 11; known cases, 110; ratio, 10·0.

* Notification of Small-Pox and Scarlet Fever, from February, 1882.
† Notification of Enteric Fever and Typhus, from June, 1883.
‡ Notification of Diphtheria, from August, 1885.

GENERAL DISEASES, etc.

The deaths which occurred in the City of Nottingham during 1905 are set out as usual, in age periods, and, as far as possible, according to the certified causes, in Table III. (p.p. 8 to 12).

This table has recently undergone some alteration in form to meet the demands of modern medical knowledge concerning the nature and causation of disease. The classification and grouping of diseases has been changed to some extent, but the changes have not in any case been such as to interfere with a just comparison between the current and past figures for individual death causes. The following comments relate only to matters of salient interest in Table III.

The deaths ascribed to **Syphilis** were 18 in number. Of these 15 were under 1 year, and three between 1 and 5 years. I may once more point out that such deaths are necessarily due to the congenital form of the disease, and that they represent only a very small fraction of all the damage to human life done by this most loathsome of death causes.

Gonorrhœa was returned as the cause of only one death (between 55 and 65 years of age). This disease again, though a fertile source of mischief by secondary complications in advanced life, seldom finds mention in death certificates.

Erysipelas, Puerperal Septicæmia, and Septicæmia (including **Pyæmia**) were credited with 11, 12 and 18 deaths respectively. These numbers, though somewhat in advance of the corresponding numbers for 1904, are very closely in accord

with those for other recent years, and call for no special comment. It should be remembered, however, that both erysipelas and puerperal septicæmia are now notifiable diseases, and that the Local Authority, moreover, has power to suspend from practice any registered midwife who may appear to be in a condition to communicate the last or any other infectious disease to her patients.

The number of cases of puerperal fever notified during 1905 was 12, and of erysipelas, 110.

A considerable proportion of puerperal fever cases are not notified ; the case-mortality, therefore, is not so formidable as the above figures (cent. per cent.) would indicate.

There were 11 deaths ascribed to **Acute Rheumatism** and **Rheumatism of the Heart,** as compared with an average of rather more than 15 for the preceding 5 years. It should be recollected, however, that heart disease due to rheumatism frequently proves fatal many years after the acute attack of rheumatism from which it sprang, and thus that the rheumatism finds no mention on the death certificate.

Phthisis & other Tuberculous Diseases.—The deaths certified as due to tuberculous diseases numbered 410 during 1905. The corresponding totals for the three immediately preceding years were respectively, 472, 414, 410. The average annual number for the 10 years ended with 1901 was 436, the numerical range extending from 401 (1899) to 481 (1900) during this period. The age-incidence of fatal tuberculosis varies between comparatively narrow limits year by year. During 1905 there were 85 deaths, or 21 per cent. of all, under the 5th year, and 268, or rather more than 65 per cent.

of all, between the 20th and 65th year. Nearly half (199) of all the deaths from tubercle occurred between the 25th and 55th year of age.

Perhaps the most interesting and important fact brought out by our recent investigations of the age and sex incidence of fatal tuberculosis, was the difference in the rate of mortality from this cause among industrially occupied males and females respectively, from the age of 15 upwards. The death-rate of the males was equal to 2·408 per 1,000, that of the females to only 0·881, *i.e.*, the female death-rate was little more than a third of the male rate.

Classified according to the region of the body affected, and in the usual age-periods, the deaths from tubercle in 1905 were as follows:—Tuberculosis of brain, 40 deaths: 9 under 1 year, 22 between 1 and 5, and 7 between 5 and 10 years.

Tuberculosis of lung (Phthisis) 295 deaths: only 14 were before the 15th year, and 9 of these were under the 5th year. There were 22 deaths between 15 and 20, 37 between 20 and 25, 72 between 25 and 35, 62 between 35 and 45, and 52 between 45 and 55. There were only 36 deaths from phthisis from this period onwards, and two-thirds occurred before the 65th year.

Tuberculosis of bowels and other abdominal organs, 34 deaths:—18 of these occurred in the first year of life, 8 between 1 and 5, 3 between 5 and 10, and 4 between 20 and 35 years.

General tuberculosis, 24 deaths:—15 of these were before the end of the 5th year, 3 between 10 and 15, and 5 between 20 and 25 years.

Other forms of tuberculosis, 14 deaths:—3 of these were in the first year, 3 between 20 and 25, 3 between 45 and 55, and 2 between 65 and 75 years.

The proportion of deaths at the several age-periods, as already stated, is very similar from year to year. It is almost as uniform in fact as the annual total of deaths from all tuberculous diseases, which, as we have seen, has varied only between 401 and 481 in 14 years —a very narrow range, especially in view of the frequent occurrence of disturbing factors like influenza and measles outbreaks, and meteorological variations.

The 410 deaths from all diseases of a tuberculous character during 1905 correspond with a death-rate of 1·63 per 1,000 of population. The 295 deaths from lung consumption, or phthisis, were equal to a rate of 1·17 per 1,000 living.

I have once more to call attention to the fact that the voluntary notification of phthisis, which has been found in other districts to work smoothly and much to the advantage of many sufferers and their families, has not yet been put in practice here, except as regards the General Hospital and certain other Public Institutions of the City, the medical officers of which have now carried it out for many years.

The spread of tuberculous infection from patients to those around them, may in most cases be readily avoided by the observance of certain simple rules, and for lack of knowledge of these rules, or the importance of observing them, the disease is certainly often suffered to spread. Cases of secondary infection, sometimes multiple, in invaded houses, not infrequently come to my notice where no precautions whatever against infection have been adopted. Again, as regards the interests of the patients themselves, there is still much ignorance and prejudice to be overcome on the subject of fresh air; and although medical men in general practice are now doing much to enlighten their patients' minds on this subject, and disabuse them of their errors, there is obviously a wide field for other

instructors and missioners to supplement the efforts of the medical men, and carry instruction to places beyond their reach. Educated Health Visitors, qualified as nurses and inspectors, can do much in these directions. Their function, when it meets, does not clash in the slightest degree with that of the medical men, but is rather supplemental and auxiliary to it.

I may remind you that the disused small-pox hospital buildings on the Bagthorpe Hospital enclosure, and the empty hospital on Bulwell Forest, are still available for the accommodation of phthisical patients, and that there are many such patients belonging to the large section of the community intervening between the well-to-do and the pauper class who would be glad to avail themselves of such accommodation. Both sets of buildings are well situated for the purpose, and could be readily converted into fairly suitable wards for phthisical patients at a trifling outlay. The cost of keeping up such sanatoria is comparatively small, and many patients of the class I have referred to would be glad to pay a reasonable charge for their maintenance.

A leaflet dealing with the prevention of consumption, which has been issued from the Health Department during the past 14 years, is reproduced in the Appendix of this report.

Alcoholism, Acute and Chronic, was credited with 20 deaths during 1905, all but one at ages ranging from 25 to 65 years, and 14 between 45 and 65 years. This number is in very close agreement with the average of other recent years, but it goes without saying that the actual mortality from alcohol is greatly larger than this.

Cirrhosis of the Liver, which in adults is most commonly due to alcoholic intemperance, was certified as the cause of 42 deaths during 1905. The

average annual number for the past three years stands also at the same figure. With the exception of 1 death in the 5 to 10 period, all the mortality under this heading was of adults. A large majority of the deaths, moreover, were at ages practically corresponding with those of the deaths attributed directly to alcohol. We may take it, therefore, that the deaths under this heading are for all practical purposes simply supplemental to those under that of Alcoholism.

Cancer and other Malignant New Growths were certified as having caused 223 deaths during 1905. The totals for 1904, 1903, and 1902 were, respectively, 212, 192, and 223, and the annual average of the preceding 5 years was 202. Ninety per cent. of the deaths occurred between the 35th and 75th years, and among those due to true cancer the female exceeded the male mortality by exactly 50 per cent. The male deaths from true cancer were 82 in number, the female 123. There has undoubtedly been a slightly greater increase in the number of deaths certified as due to malignant new growths in recent years than can be explained by the increase of population; but whether this is due either wholly or in part to increase of medical knowledge, more careful diagnosis, and the like causes, it is impossible at present to say. For my part, I am disposed to think that the advance in the number of deaths locally certified as due to malignant new growths, at any rate, admits of such explanation completely. It is interesting to note that the deaths from such causes during 1905 were slightly more numerous than those from diarrhœa, slightly less than those from measles, equal to about ¾ of those from phthisis, and constitute 5 per cent. of the total deaths from all causes during 1905.

The deaths returned as due to **Diabetes Mellitus** numbered 30, as compared with 33, 27, and

21 in the three immediately preceding years, respectively, and an annual average of 18 for the 5 years prior to these. There has been a steady increase in the local deaths attributed to this disease in recent years, and as a similar advance has been observed elsewhere, and many authorities are of opinion that the increase is a real one, there is sufficient ground for further inquiry and observation. There can be no doubt that brain injury, worry, and strain are powerful exciting causes of this malady, and there is also no doubt that the liability of the average civilized man to such injurious influences is also continually increasing.

Premature Birth was given as the cause of 121 deaths during 1905. These deaths were 22 less than in 1904, but such a range of variation in numbers is exceptional, and has seldom occurred in recent years.

Debility at Birth and Lung Collapse were the certified causes of death in 141 cases, as compared with 137, 127, and 111 in 1904, 1903 and 1902, respectively, and an annual average of 161 in the preceding 5 years. It is difficult to account for the variations which have taken place in the total annual deaths returned from these causes in recent years. It may be that other explanations of the deaths are certified, and that the latter thus find their way to different categories.

Congenital Defects were given as the cause of 40 deaths, as against 15, 28 and 14 in the three preceding years, and a previous 5 year's average of 25. Here, again, the variations in annual totals of deaths are, in all probability, due to simple accidents of classification.

Want of Breast-Milk, Atrophy, Debility, and Marasmus were certified in 119 instances, as compared with 124 in 1904. Owing to recent changes

in the classification of Table III., affecting the death causes included under this heading, it is difficult to make an exact comparison with past figures. There is no doubt, however, that the numbers of deaths returned under these and like causes are considerably less than they were. But it seems doubtful whether all the reduction observed is due to a corresponding decline in the deaths from such causes, for there probably never was a time when more hand-feeding of infants with substitutes for mother's milk was practiced, and such substitution for the natural food is certainly the commonest cause of early failure of nutrition.

Rickets.—The deaths from rickets are given as 10. There were 18, 15 and 10 in the three preceding years, and an annual average of 25 for the five years ended with 1901. Notwithstanding the relative prevalence of hand-feeding or partial hand-feeding and prolonged lactation for infants among the poor, the general condition of life in the slums—and rickets is mainly a disease of the slums—have improved so greatly in recent years, that I am disposed to think the decline in the number of deaths lately recorded may represent an actual reduction in the prevalence and fatality of the disease. It should be remembered that want of light and fresh air are highly important factors in its production, as well as lack of proper food. A child cannot properly assimilate the best of foods if deprived of proper light and ventilation.

Old Age, Senile Decay.—The numbers of deaths attributed to old age vary so much year by year with the presence or absence of maladies like influenza, by which, when prevalent, the deaths of aged persons may be directly caused, that it is practically impossible to make comparison of one year's deaths with another. The number of deaths ascribed

to old age in 1905 was 322, whereas there were 193 and 273 respectively in 1904 and 1903, and a preceding 5 year's average of 171.

Infantile Convulsions were returned as the cause of 54 deaths, as compared with 46 in 1904, and 83 in 1903. It is seldom that infantile convulsions tell the whole tale of the death cause; they are more frequently symptomatic of other ailments, *e.g.*, fever, rickets, local inflammation. When possible, the primary cause should, of course, be given.

Simple Meningitis and Encephalitis were given as death causes in 57 instances. The numbers for 1904, 1903 and 1902 were, respectively, 34, 52 and 62, and the average for the preceding 5 years 66. Tuberculosis and cerebro-spinal fever account for most of the cases of meningeal inflammation, but it must not be forgotten that there are several other kinds of such mischief, and, when fatal, these may not inappropriately be grouped under the above heading.

Apoplexy, Softening of the Brain, etc., were certified in 199 cases, as compared with 200 in 1904. The number of deaths from these causes has stood close to 200, but usually above, for many years past. Owing to the relatively uniform prevalence of these complaints, and the facility of their diagnosis, one would expect an even greater uniformity in the annual totals of deaths than one actually finds. For some reason, notwithstanding the growth of population, there has lately been a slight shrinkage in the annual total of deaths certified under these causes.

General Paralysis of the Insane, and other Forms of Insanity, were assigned as death causes in 31 cases. The corresponding deaths in 1904,

1903, and 1902, were 53, 26, and 35, and the average for the five preceding years was 36. Our local records furnish no evidence of an increased mortality under this heading.

The deaths attributed to **Epilepsy** numbered 28, as compared with 19, 22, and 26, in the three immediately preceding years, and a previous five year's average of only 17. As, however, prior to this last period the deaths had been considerably more numerous, too much importance must not be attached to the apparent recent increase above indicated.

Locomotor Ataxy, Paraplegia, and other like Diseases were put forward in 18 cases, as compared with 18, 17, and 16, in the three preceding years, and a previous five years average of 19. There were only 3 deaths attributed to **Peripheral Neuritis,** as compared with 13 the year before.

Organic Diseases of Heart and Blood Vessels.—The number of deaths assigned to all these causes totalled 363 during 1905, as compared with 389 in 1904, 340 in 1903, and 390 in 1902, and an annual average of 374 for the preceding 5 years.

Bronchitis, Pneumonia, Pleurisy, etc. (Diseases of the Respiratory System).—The total of deaths under this group of causes was 653. The corresponding aggregates for 1904, 1903, and 1902, respectively, were 732, 728, and 749, and the average annual total for the five years ended with 1901 was 757. The total for 1905, therefore, was very considerably below the average of other years, and probably marks the relative rarity to a corresponding extent of infective respiratory complaints.

Diseases of the Stomach and Gullet (non-malignant).—The number of deaths given as due to these diseases was 35, against 38 in 1904, and 55,

40 and 50, respectively, for the three immediately preceding years. The deaths ascribed to ulcer of the stomach and neighbouring gut were 14 in number.

Simple Enteritis was given as the cause of 40 deaths. The corresponding figures for the three preceding years were 75, 41, and 39 respectively. As the majority of these deaths were those of infants during the diarrhœa season, it is again probable that they were due to the epidemic form of diarrhœa, although their description as above forbids their inclusion (under the accepted rules of classification) as diarrhœa deaths.

Appendicitis was certified as having caused 10 deaths. The numbers for the four preceding years were 16, 17, 10, and 11. Those for earlier years are not available. There is unfortunately no question of the truth of the death certification under this heading, and the explanation of the absence of past records is to be found in the fact that the disease was not recognized until recently.

Hernia and Other (non-malignant) **Obstructive Diseases of the Bowels** (exclusive of Appendicitis) appear to have proved fatal in 26 cases. The numbers for the three preceding years were 26, 33, and 29. Earlier records again are not here available.

Acute Nephritis and Bright's Disease were certified in 83 instances, as compared with 96, 90, and 94 in the three preceding years, and an annual average for the five years prior to this of 105. Although it is impossible at present to say whether the recent slight decline in the number of deaths under these headings is only apparent, or real, the reduction is of sufficient importance and interest to call for further observation and inquiry.

Diseases (non-malignant) **of the Bladder, Prostrate, &c.,** occurred in 16 instances, against 18 the year before, and an average about these figures for several past years.

Diseases (non-malignant) **of the Female Organs of Generation.**—These were given in 19 cases, as compared with 13, 9, and 25 in the three preceding years, respectively, and an annual average of 20 for the preceding five years.

Accidents of Child-birth.--These were certified in 16 cases, as compared with 17, 19 and 20 in the three preceding years, and an annual average of 27 for the five years ended with 1901. The shrinkage in these deaths is without doubt mainly due to the more careful attention now given to poor mothers by midwives. The work of all registered midwives it will be remembered is at the present time superintended by the Local Supervising Authority under the Midwives Act. The decline in the birth-rate must also tend to reduce the number of such deaths, but it must be remembered that the figures here given represent actual numbers and not rates. The proportion of these maternal deaths to the total number of registered births (6,645) was 1 in 416, as compared with 1 in 405 in 1904, 1 in 366 in 1903, and 1 in 343 in 1902. There were 12 deaths from puerperal septicæmia during 1905. These should be added to the other accidents to obtain the complete total of accidental deaths of child-birth. Such addition brings the ratio of 1905 up to 1 in 237, as compared with 1 in 275 in 1904, 1 in 217 in 1903, and 1 in 245 in 1902.

Accidents and Negligence were stated to have occasioned 124 deaths during 1905. The totals for 1904, 1903, and 1902, were 111, 93, and 106, respectively, and the average annual number for the preceding 5 years was 114. Of the 124 deaths from such causes during 1905, 4 occurred in mines, 3 in the streets from vehicular traffic, 4 on railways, 1 in building work, 2 by machinery in motion, 23 by burns and scalds, 5 by poison and poisonous vapour (two of these through the use of lead as an abortifacient), 1 by surgical

operation, 1 by a corrosive chemical, 12 by drowning, 32 by overlying in bed (31 under 1 year, one between 1 and 5 years), 15 by other methods of suffocation, 19 by falls, one by accident unexplained, and one by homicide.

Suicide during 1905 was certified in 44 cases, as compared with 27, 31, 32, 36, and 31, in the five immediately preceding years. One was between 10 and 15 years, 1 between 20 and 25, 8 between 25 and 35, 12 between 35 and 45, 4 between 45 and 55, 9 between 55 and 65, 5 between 65 and 75, and 4 between 75 and 85. Twelve were by poison, 17 by strangulation, 6 by drowning, 7 by cut or stab, 1 by crushing, and 1 by method not specified.

Uncertified Deaths.—These deaths number 29, according to my returns, and 32, according to those of the Registrar-General. The latter number is equal to 0·8 per cent. of all deaths during the year. The corresponding proportion for England and Wales as a whole during 1905 was 1·6 per cent., for London 0·2 per cent., for the 76 Great Towns 1·1 per cent., and for the 141 lesser Towns 1·7 per cent.

Coroner's Inquests.—The inquests held in the City during 1905 by Mr. C. L. Rothera (the Coroner) or his deputy, numbered 287, and were equal to 6·9 per cent. of all deaths. The corresponding total and percentage for 1904 were 278 and 6·3 per cent. The proportion of Coroner's inquests to total deaths in England and Wales as a whole during 1905 was 6·8 per cent., in London 9·0 per cent., and in the 76 Great Towns 7·8 per cent.

Chart of Meteorology, Births, and Deaths in Nottingham during 1905.—The usual Chart of this description, prepared under the direction of the City Engineer (Mr. Arthur Brown) and myself, will be found at the end of this Report. Its scheme is identical with that of last year.

CITY ISOLATION HOSPITALS, AT BAGTHORPE (BASFORD), AND ON BULWELL COMMON.

The number of persons admitted to the City Hospitals at Bagthorpe, Basford, and on Bulwell Common, during 1905, for treatment or observation, or during disinfection of their houses and goods, was 694. The numbers admitted with like object in the five immediately preceding years were, 1,099, 808, 618, 574, and 785.

The total for 1905 was made up as follows :— Scarlet fever, 382 patients (187 males, and 195 females) ; enteric fever, 22 patients (10 males and 12 females) ; diphtheria, 234 patients (102 males and 132 females) ; small-pox, 19 patients (10 males and 9 females) ; other cases of erroneous diagnosis, of contacts, of persons requiring temporary accommodation during the disinfection of their homes, etc., 37 (17 males and 20 females). The cases remaining in hospital at the end of 1904 numbered 93 : 60 of scarlet fever, 1 of enteric fever, 21 of diphtheria, 8 of small-pox, and 3 of other descriptions. Those remaining at the close of 1905 were 89 in number :—52 of scarlet fever, 6 of enteric fever, and 31 of diphtheria.

Eight reputed cases of scarlet fever, and 21 of diphtheria, sent in during the year, proved after admission to have been incorrectly certified. All these were successfully isolated, and subsequently sent out without having contracted any complaint during their detention.

The first table in this section gives the number of patients of either sex in each of the above mentioned categories, remaining in hospital at the close of 1904

and 1905, and admitted during 1905, with the numbers of recoveries and deaths respectively, and the case-mortality in each category in the course of the latter year. The results of those cases remaining in hospital at the close of 1905 will be dealt with in the Report for 1906.

There were more patients in hospital during the first four and last two months of the year than during the intervening six months, the range of all the highest and all the lowest numbers of beds occupied in monthly periods, respectively, being each 33—as regards the first, from 116 in February to 83 in May, and, as regards the second, from 101 in March to 68 in August.

Total Number of Cases in Hospital, 1905.

Disease.	Remaining at end of 1904.			Admitted during 1905.			Total cases during 1905.	Total deaths during 1905.	Case-mortality % of total cases, 1905.	Days of average residence.		Remaining at end of 1905.
		Recovered.	Died.		Recovered.	Died.				Non-fatal	Fatal.	
Scarlet Fever M.	30	30	..	187	156	3	217	3				28
Scarlet Fever F.	30	30	..	195	165	6	225	6				24
Total..	60	60	..	382	321	9	442	9	2·03	51	15	52
Enteric Fever M.	..	..	..	10	6	1	10	1				3
Enteric Fever F.	1	1	..	12	9	..	13	..				3
Total..	1	1	..	22	15	1	23	1	4·34	63	8	6
Diphtheria .. M.	13	13	..	102	83	10	115	10				9
Diphtheria .. F.	8	8	..	132	101	9	140	9				22
Total..	21	21	..	234	184	19	255	19	7·45	45	8	31
Small-pox .. M.	3	3	..	10	10	..	13	..				..
Small-pox .. F.	5	5	..	9	8	1	14	1				..
Total..	8	8	..	19	18	1	27	1	3·7	25	14	..
Other Cases .. M.	..	..	..	17	17	..	17	..	..			..
Other Cases .. F.	3	3	..	20	20	..	23	..	..			..
Total..	3	3	..	37	37	..	40	..	..	18	..	..
Total	93	93	..	694	575	30	787	30	3·8	49	10	89

Table shewing the number of Beds occupied during each month of the year 1905.

Month.	Beds Occupied.		Month.	Beds Occupied	
	Highest.	Lowest.		Highest.	Lowest.
January	101	90	July	94	79
February	116	99	August	86	68
March	114	101	September .	87	74
April	107	86	October	98	77
May	83	71	November .	110	88
June	96	83	December	114	96

SCARLET FEVER

The number of scarlet fever cases reported to me during 1905 was 681, and 382, or 56 per cent. of these were removed to the City Hospital. The proportions of total scarlet fever cases removed in each of the three immediately preceding years were 39 per cent., 34 per cent., and 52 per cent., respectively. Of the 382 scarlet fever patients admitted during 1905, 187 were males, and 195 females. Those remaining at the end of 1904 numbered 60, and consisted of 30 of each sex. There were 52 patients remaining in hospital at the close of 1905. These consisted of 28 males and 24 females. The last (52) cases must be taken from the total under treatment to obtain the number of those finally dealt with during the year.

These amounted to 390, 189 being males, and 201 females. Four members of the hospital staff—three nurses and one ward-maid—were attacked with scarlet fever and admitted as patients during the year.

There were three deaths among all the males, equal to 1·6 per cent. of the male cases, and 6 among the females, equal to 3 per cent. of the female cases. The corresponding case-mortalities in 1904 were 2·25 per cent. for males, and 1·55 per cent. for females. The higher and lower death-rates of each sex were therefore transposed in either year, and curiously enough, these inverse rates correspond very closely.

The case-mortality for both sexes, taken together, was equal to 2·3 per cent. This rate is 0·40 higher than that of 1904 (1·90), and no less than 1·21 higher than that of 1903 (1·09).

I give here the usual table of age and sex incidence and mortality, and of actual death causes in fatal cases.

There was only one malignant case of scarlet fever admitted during the year, but the proportion of septic cases showed a considerable increase as compared with the record for 1904.

Age and Sex Distribution of Non-fatal and Fatal Cases of Undoubted Scarlet Fever under treatment in Hospital during 1905, exclusive of those remaining at the close of the year, but inclusive of those carried over from 1904.

AGE PERIODS.	MALES.		FEMALES.	
	Recoveries.	Deaths.	Recoveries.	Deaths.
Under 1 year	3	..	—	2
Between 1 and 2 years	6	..	6	..
" 2 and 3 " ..	15	1	13	..
" 3 and 4 "	14	..	16	..
" 4 and 5 " .. .	18	2	23	1
" 5 and 10 "	72	..	60	3
" 10 and 15 "	34	..	32	..
" 15 and 20 "	11	..	14	..
" 20 and 25 "	5	..	20	..
" 25 and 30 "	3	..	7	..
" 30 and 35 "	3	..	1	..
" 35 and 40 "	2	..	3	..
Over 40 years	..	..	—	..
TOTALS	186	3	195	6

Actual Age at Death, and Cause in Fatal Cases.

MALES. (3)

2 years.. ..	Septicæmia
4 " .. .	Syncope.
4 "	Septicæmia

FEMALES. (6)

4 months ..	Septic Ear trouble
6 " ..	Debility.
4 years.. ..	Syncope.
6 "	Septic Ear trouble.
7 "	Cerebral Abscess.
7 "	Malignant type of fever (case moribund on admission.)

Complications among Scarlet Fever Cases during 1905.

Complications.	Cases affected.	Percentage of all Cases.
Albuminuria and Hæmaturia	38	8·5
Adenitis	30	6·7
Rhinorrhœa	64	14·5
Otorrhœa	67	15·0
Bronchitis	1	0·2
Arthritis	12	2·7
Abscess—Cervical	6	1·3
" Introcranial	2	0·4
" Gluteal	1	0·2
" Purotid	1	0·2
Exudative Tonsillitis	12	2·7
Septicæmia	2	0·4
Diphtheria	2	0·4
Secondary Rash	2	0·4

In the section of the Report dealing with epidemic diseases in general, and under "scarlet fever," I have made comparison between the case-mortality in hospital and at home, and shown that there is a difference of 1·37 per cent. between these two rates, in favour of the hospital. I must, however, point out that I have again reckoned the hospital mortality as a proportion of all the cases under treatment in that institution during the year, without deducting those cases the issue of which was not determined at the year's end, because it was necessarily impossible to make any satisfactory correction for such cases among the home section, and also because some rebate is necessary from the home total for cases of wrong diagnosis.

The return cases entered in the hospital register were only five in number, 1 in April, 2 in July, 1 in September, and 1 in November, and equal to 1·28 per cent. of all hospital cases finally dealt with, but judging by past records I am disposed to think that this number is incomplete. Such cases had occurred in the following proportions in each of the three immediately preceding years, respectively: 3·48 per cent., 2·18 per cent., and 3·68 per cent.

The cases of enteric fever admitted to Bagthorpe Hospital during 1905 numbered 22 (10 males and 12 females). These constituted only 8·6 per cent. of all the cases (255) which occurred in the City during the year. Two of the cases were admitted in July, 2 in August, 3 in September, 7 in October, and 8 in November.

Age and Sex Distribution of Cases of Enteric Fever under treatment in Hospital during 1905, including those left over from 1904, but excluding those remaining at the end of 1905.

Ages.	Males.		Females.	
	Recovered.	Died.	Recovered.	Died.
Under 5 years	1	..	1	..
Between 5 and 10 years	3	..	2	..
„ 10 „ 15 „	..	..	1	..
„ 15 „ 20 „	..	1	1	..
„ 20 „ 25 „	2	..	2	..
„ 25 „ 30 „	..	..	..	..
„ 30 „ 35 „	..	..	1	..
„ 35 „ 40 „	..	..	1	..
Over 40 years	..	..	1	..
Totals ..	6	1	10	..

Total Cases, 17.—Deaths, 1. *Case-mortality*, 5·9%.
Male Cases, 7.—Deaths, 1. *Case-mortality*, 14.3%.
Female Cases, 10.—Deaths, 0.

Cases remaining in Hospital at end of 1905—(M. 3, F. 3).

The above 17 cases are made up as follows:—

1 remaining at end of 1904.
16 admitted during 1905.

17
6 remaining at end of 1905.

23 treated during the year.

In the fatal case death was due to Toxæmia and Heart failure.

As already explained under the heading of enteric fever, in that part of the Report dealing with epidemic diseases in general, the smallness of the number of admissions to Bagthorpe for this disease is due to its diminished prevalence, and the consequent approximate sufficiency of the accommodation provided at the General Hospital and Union Infirmary for cases specially requiring hospital treatment.

I have mentioned that all the cases admitted to Bagthorpe Hospital during the year were taken in between July and November, inclusive. This period embraced the season of greatest prevalence of the disease for 1905. Until July there was no demand for further accommodation than that provided by the two other hospitals, but during this month the fever wards of the General Hospital were completely filled, and as only paupers could be sent to the Union, and certain non-paupers required removal from home, the City Hospital, as in other years, received the overflow.

The single enteric patient left over from 1904 recovered. Among the 22 admitted during the year, there was only 1 death, that of a male, aged 18. Sixteen recovered and left the hospital, and 6 remained still under treatment at the close of 1905. The case mortality of the 17 cases finally dealt with was equal to 5·9 per cent., that of males 14·3 per cent., and that of females *nil*. The cause of death in the fatal case was toxaemia and consequent heart failure.

I have dealt at some length with the subject of enteric fever, especially in its local aspects, under its appropriate heading in the epidemic disease section of this Report. This section should, therefore, be consulted for further information concerning the behaviour of the disease in the City during 1905, and other recent years.

DIPHTHERIA

Two hundred and thirty-four out of a total of 537 cases which came to light during the year were removed to Bagthorpe Hospital. The cases removed were equal to 44 per cent. of all. The corresponding number and percentage for 1904 were 132 and 24 per cent. The total for 1905 was made up of 102 male and 132 female cases. There were 21 (13 m. and 8 f.) left over from 1904, and 31 (9 m. and 22 f.) remaining at the close of 1905. The total number of

cases, therefore, finally dealt with during 1905, was 224 (106 m. and 118 f.) The highest number of monthly admissions was 34 in February; the lowest, 5 in April. The average monthly number was 19·5. The quarterly admissions were as follows:—1st quarter, 82; 2nd quarter, 47; 3rd quarter, 49; 4th quarter, 56. Of the 224 cases whose records were completed during 1905, 19 ended fatally. These were equal to 8·5 per cent. of all. The male cases numbered 106, and deaths 10; the male case-mortality, therefore, was equal to 9·4 per cent. The female cases were 106 in number, with 9 deaths; the female case-mortality was, therefore, equal to 7·6 per cent.

The corresponding rates for 1904 are sufficiently interesting by way of contrast with these for quotation in detail. The total case-mortality in 1904 was 16·4 per cent., the male case-mortality 20 per cent., and the female 13·6 per cent. Each of these rates it will be seen is just double its fellow for 1905.

The percentage of deaths among the cases nursed at home during the year 1905, was equal to 10—30 deaths among 303 cases,—leaving a margin in favour of the hospital of 1·5 per cent. This fact appears the more gratifying, too, when one recollects that a large number of the cases sent to hospital were of a specially severe type. Tracheotomy was performed on 5 patients (2 females *aet.* 8, 2 females *aet.* 4, and one male *aet.* 4). Three of these ultimately recovered (2 females *aet.* 8, and one male *aet.* 4).

If we bear fully in mind the fact that the value of our hospital statistics for purposes of comparison is necessarily somewhat discounted by the special circumstances attending the collection of groups of cases in an isolation hospital, we may obtain some useful information from the accompanying table of cases and deaths in age-periods.

Age and Sex Distribution of Cases of Diphtheria under treatment during 1905, including those left over from 1904, but excluding those remaining at end of 1905.

Ages.	Males.		Females.		Monthly Admissions.
	Recovered.	Died.	Recovered.	Died.	
Under 1 year ..	1	1	1	..	Jan. 27
Between 1 and 2 years	4	..	..	1	Feb. 34
„ 2 and 3 „	3	..	4	1	March 21
„ 3 and 4 „	11	3	8	3	April 5
„ 4 and 5 „	15	2	7	1	May 19
„ 5 and 10 „	38	3	45	3	June 23
„ 10 and 15 „	14	0	16	0	July 26
„ 15 and 20 „	3	0	7	0	Aug. 11
Over 20 years ..	7	1	21	0	Sept. 12
					Oct. 17
					Nov. 18
					Dec. 21
Totals	96	10	109	9	234 whole year.

Total Cases, 224*.—Deaths, 19. *Case-mortality*, 8·5 %.
Male Cases, 106.—Deaths, 10. *Case-mortality*, 9·4 %.
Female Cases, 118.—Deaths, 9. *Case-mortality*, 7·6 %.

* Total finally dealt with.

The 224 cases are made up of—

21 „ remaining at end of 1904.
234 „ admitted in 1905.

255
31 „ left over at end of 1905.

224

Of the cases of true Diphtheria admitted, 2 were complicated with Scarlet Fever.

Causes of Death.—Broncho-pneumonia, 1; Syncope, 13; Paralysis, 5.

ANTITOXIN.

234 cases admitted:—

184 recovered; of these 102 had 528,000 units of antitoxin, or an average of 5,176 per case.

19 died; of these 9 had 82,000 units, or an average of 9,111 per case.

31 carried over into 1906.

TRACHEOTOMIES.

F. 1 aged 8 Recovered.
1 „ 8 „
1 „ 4 „
1 „ 4 Died.
M. 1 „ 4 „

For example, we find that the case-mortality (excepting only the single fatal male case under 1 year) was heaviest, as usual, in the 4th year for both sexes, but heavier for females than males. There were 11 male cases and 3 deaths in the 4th year. The male

case-mortality was, therefore, 21 per cent. in this year. There were 8 female cases and 3 deaths in the 4th year. The female case-mortality was here, therefore, 37 per cent. In the 5th year the case-mortality was 13 per cent. for males, and 14 per cent. for females; but from this age onwards, also as usual, the mortality rapidly declined.

Heart failure or paralysis was recorded as the actual death cause in 18 out of the 19 total deaths, and broncho-pneumonia in the 19th. Two of the patients admitted with diphtheria suffered also from scarlet fever at the time of admission, but, and this is unusual, no scarlet fever patient developed diphtheria while in hospital.

In making comparison of hospital and home mortality in the diphtheria section of that part of the Report devoted to epidemic diseases in general, I have (as in the case of scarlet fever) compared all the known hospital cases with all the known home cases, without correction of the former for those left over at the year's end, and for the principal reason that no reliable correction of any kind is practicable for the home cases.

Anti-diphtheritic serum, averaging 5,176 units per case, was injected in all acute cases admitted sufficiently early to afford any hope that such treatment might be useful. The serum was also provided gratuitously on 33 occasions, for the benefit of poor patients requiring it at home.

I have already elsewhere recorded the fact, clearly demonstrated in our recent hospital experience, that the protection conferred by small doses of this serum, injected for purposes of protection, frequently does not extend beyond a period of 14 days from the date of injection.

Dr. Jacob, the City Bacteriologist, reports that he has examined and reported upon 412 specimens from cases and reputed cases of diphtheria sent to him for examination during the year. No diphtheria case is now discharged from Bagthorpe Hospital until the secretions from the nose, throat, and ears have been examined and found clear on two or three successive occasions.

SMALL-POX

A full account of the 19 small-pox cases which came to my notice during the year, is given under the heading of small-pox in that part of the Report dealing with epidemic diseases in general. I shall here, therefore, only mention that 19 cases were admitted during the first seven months of the year, 2 in January, 3 in February, 3 in March, 9 in April, and one each in June and July, and that these, with 8 left over from 1904 (27 in all), constituted the whole number under treatment during the year. There was only one death, that of a woman, *aet.* 50 years, reputed to be vaccinated but bearing no vaccination marks.

Table showing monthly admissions of Cases of Scarlet Fever, Enteric Fever, Diphtheria and Small-Pox, and "Other Cases," together with the monthly numbers of return cases of Scarlet Fever during 1905.

Months.	Cases Admitted.					Return Cases of Scarlet Fever. *
	Scarlet Fever.	Enteric Fever.	Diphtheria.	Small-Pox.	Other Cases.	
January	37	—	27	2	—	—
February	24	—	34	3	2	—
March	31	—	21	3	4	—
April	23	—	5	9	1	1
May	39	—	19	—	2	—
June	39	—	23	1	4	—
July	18	2	26	1	2	2
August	32	2	11	—	6	—
September	30	3	12	—	—	1
October	46	7	17	—	9	—
November .. .	37	8	18	—	4	1
December	26	—	21	—	3	—
Totals	382	22	234	19	37	5

* Probably not consistently recorded, 3 only mentioned.

Table of "Other Cases" admitted during 1905.

8	Wrongly certified as Scarlet Fever.
8	Small-Pox contacts, &c.
21	Wrongly certified as Diphtheria.
37	

12 persons not reckoned as hospital inmates were also temporarily housed at the hospitals during the disinfection of their homes, and for other like reasons.

EXPENDITURE

The cost of the two City Hospitals, the General Isolation Hospital at Bagthorpe and the Small-pox Hospital on Bulwell Common, for the year ended March 31st, 1906, is given by the City Accountant as £6,845, that of the first as £6,095, and that of the second as £750. As, however, the Small-pox Hospital was practically closed very shortly after the commencement of the financial year, and £550 of the £750 above mentioned was spent in the purchase, removal, and re-erection of the "second-hand dormitory" erected during the year upon the Bulwell Common Small-pox Enclosure, it will be seen that it is undesirable to include any considerable part of this amount in the same category as the expenditure upon ordinary hospital administration and maintenance, of which the first and larger sum consists.

Again, when we recollect that the Bagthorpe institution serves as a base and general store for the other at Bulwell, and that male and female staff, vehicles, horses, laundry, disinfecting apparatus and other equipment at the older hospital serve also for the new hospital at need, we realize that it is extremely difficult to determine the amount of use to which these are put on behalf of either hospital, and to apportion the consequent indebtedness of each.

I mention this, because a certain amount of cost was incurred in housing, maintaining, and disinfecting contacts (both at Bagthorpe and Bulwell), in maintaining (at Bagthorpe) persons whose homes were

undergoing disinfection, as well as that involved in the more ordinary hospital work of dealing with the few actual small-pox patients which cropped up at intervals towards the close of the outbreak, and yet no reliable separate account of such cost is forthcoming.

If now we apportion the £6,295 actually expended in maintenance and administration during the year, among the beds in use and the persons admitted during this period, without distinction of hospital or disease, we obtain a cost per bed of £60, and a cost per patient of £9 0s. 4d., both fairly satisfactory figures under the circumstances.

Twenty-nine pounds were expended on the maintenance of those small-pox contacts and suspects which came under our supervision in their own homes between March 31st, 1905, and the close of the epidemic period. This period extended beyond the date of the last local case, as the disease remained prevalent in districts outside, after its disappearance from the City.

Dr. Rees Jones continued to act as Resident Medical Officer to the City Hospitals and as general assistant to me down to the end of January, when he was engaged (temporarily at first, afterwards permanently) by the Corporation of Lincoln as Deputy-Medical Officer of Health to that City.

Dr. William Habgood, a gentleman with previous experience of public health work, and who desired to re-enter the service, was appointed as Dr. Rees Jones' successor, and continued in office to the close of the year.

Miss Helen Wallace continues to act as Matron to the Hospitals.

Handbills, Leaflets, &c. *(Distributed from the various sections of the Health Department.)*—Leaflet literature, relating to (*a*) the feeding and care of infants,

(*b*) the prevention of diarrhœa and cholera, (*c*) the special advisability of vaccination during the prevalence of small-pox, (*d*) the prevention of tuberculous consumption, (*e*) the care of scarlet fever patients discharged from Fever Hospitals, (*f*) the provisions of the Shop Hours Acts, and (*g*) the Home Office requirements as regards "sanitary accommodation" in Factories, will be found reprinted in Appendix A of this Report.

WORK IN DEPARTMENTS.

Municipal Laboratory of Bacteriology.

—Dr. Jacob furnishes the following report of work done during 1905:—

Particulars of Material received for Examination.

(*a*) In connection with Human cases of Tuberculosis or suspected Tuberculosis.

1. Specimens examined for tubercle bacilli, with a positive result - - -	51
2. Do. do. with a negative result -	89
	140

(*b*) In connection with Human Cases of Diphtheria, or suspected Diphtheria.

1. Specimens (throat, nose and ear swabs) examined for bacillus diphtheriæ, with a positive result - - - - -	170
2. Do. do. with a negative result -	251
	421

(*c*) In connection with Human Cases of Enteric Fever.

Widal's reaction—

1. Positive result - - - -	124
2. Negative result - - - -	73
	197

Besides the above, Dr. Jacob has also done useful bacteriological work in connection with the inspection and supervision of food supplies. He has reported upon two cases of anthrax and one of glanders (for this section) during the year.

But it is in connection with the diagnosis of diphtheria, referred to in the table above, that the Bacteriological Laboratory has been of most public service of late. It would be difficult to exaggerate the importance of bacterial diagnosis in the preventive treatment of this disease.

Disinfecting Department.—The disinfecting apparatus of the City are now utilized for many purposes besides disinfection for the principal epidemic diseases. But for all such exceptional work a small charge is made.

It is certainly a good thing to encourage cleanliness, of which disinfection is one of the most radical forms, but at the same time we should avoid encouraging an unreasonable dread of all microbial activity—a form of aberration of frequent occurrence now-a-days—for there can be no doubt that within strict limits the self-protecting forces of our bodies are strengthened by exposure to the action of micro-organisms. When called upon, however, to deal with pathogenic organisms, especially in the case of any of the dangerous infectious diseases, there can be no doubt about our duty. We must do all in our power to destroy the infective virus by which they are propagated.

Notwithstanding the increased employment of the disinfecting staff and stations for the minor purposes above mentioned, the bulk of the work done, whether in dwellings, schools and other buildings, or at the stations, is still necessarily that arising in connection with the principal acute specific diseases to which I have just referred, and when the cases of these become

relatively less numerous, as they did last year, the work falls off. The chief diseases of this class with which we have had recently to deal are small-pox, scarlet fever, diphtheria and enteric fever, and there was a marked decline of all but diphtheria during 1905, with a corresponding shrinkage in the work of the Department.

Owing to the necessity for more complete and consistent disinfection in the case of small-pox than of any other of the more serious infectious diseases, the work thrown upon the disinfecting staff during the prevalence of small-pox is always more extensive and exacting than any other they are called upon to do.

The extreme pressure upon both staff and apparatus during 1904, made it impracticable to keep a complete record of the articles passing through the Bagthorpe Hospital Station; the return for the Eastcroft Station, therefore, was given alone for that year. The number of articles at the last station, however, was far above the usual annual number for both; and had the record been complete the total number of articles would probably have been more than 48,000. The decline in the number of houses and other premises disinfected during 1905, as compared with 1904, was more than 33 per cent.

Articles Disinfected at the Public Stations in Nottingham, 1893-1905.

	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
Bedding ..	8521	2943	10990	8822	4483	7550	22385	14582	12758	13002	13765	14391	11112
Clothing ..	11266	20579	12652	9012	4768	5554	14605	10517	9403	3785	9707	9268	10527
Furniture & Hngngs.	726	1541	1277	2184	1382	2130	2722	2397	3257	4455	2828	3145	2803
Miscells. Articles	10573	10303	13272	8394	8341	7699	14093	9498	9410	11498	12204	10558	11447
TOTAL ..	31086	35366	38191	28392	18974	22933	53805	36994	34828	32740	38504	37362†	35889

No. of houses and other premises disinfected during 1905 = 1243.

Although this Report is for the year 1905, I cannot forbear mentioning the death of Inspector Frederick Geo. Williams, an old, faithful, and highly efficient officer of the Corporation, which occurred with tragic suddenness on January 11th, 1906. Mr. Williams, as chief Infectious Diseases Inspector, had charge of the disinfecting department, and the way in which his duties were performed in this department and elsewhere was exemplary. Rectitude of conduct and unflagging industry were two of Mr. Williams's most conspicuous characteristics both as an official and as a man.

The Mortuaries.—The table accompanying this section gives the number of bodies (male and female) taken to each of the Public Mortuaries of the City during each month of the year.

Number of Bodies, Male and Female, taken into each of the Public Mortuaries during each month of the year 1905.

Month.	Leen Side.		Hyson Green.		Bulwell.		Total per Month.	
	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.	Male Bodies.	Female Bodies.
January	12	6	3	3	0	0	15	9
February	10	7	4	3	0	0	14	10
March	7	5	5	4	0	0	12	9
April	4	3	6	5	1	0	11	8
May	7	3	4	4	0	1	11	8
June	6	3	4	2	0	0	10	5
July	6	10	11	2	0	0	17	12
August	4	3	5	4	0	0	9	7
September ..	10	9	2	4	1	0	13	13
October	7	2	7	3	2	0	16	5
November	5	3	6	3	0	1	11	7
December	7	6	4	4	2	1	13	11
	85	60	61	41	6	3	152	104

Total, both Sexes—256.

The table calls for little comment. Both the Leen Side and Hyson Green establishments are fulfilling a very useful purpose, and are now extensively used—145 bodies were taken to the first, and 102 to the second, during the year. The small adapted building at Bulwell, though less frequently utilized, is at times a great convenience to the neighbourhood.

The smallest number of bodies taken in at these mortuaries in any month was 15, in June, and the largest, 25, in July. The average monthly number of admissions was 25·6.

The Public Lavatories of the City, now in use, are situated as follows :—

For Men—Parliament Street (underground).
Milton Street („).
Gedling Street.
Shambles.
Carrington Street Bridge.
Trent Bridge.

For Women—Milton Street (underground).
Gedling Street.
Shambles.
Trent Bridge.

The public patronage of these well appointed conveniences, though steadily increasing, is still much less than might reasonably be expected. The vicinity of the tram terminus at Sherwood, the Lace Market, and the open space at the junction of the Derby and Alfreton Roads opposite the principal entrance to the General Cemetery, are new situations in which such lavatories might advantageously be provided.

Common Lodging Houses.—There were 55 common lodging houses on the City Register at the close of 1905, including the two Corporation Houses. The total bed accommodation is now sufficient for 1,085

persons, shewing an increase of 5 single beds since the close of 1904. Six transfers were applied for during the year, and all were granted. One new "better class" house in Clare Street was opened and registered, and one small and inconvenient house in Fleet Place was closed and taken off the register during the year. All the houses were limewashed and cleansed throughout both in April and October, as required by the Public Health Act of 1875.

The condition of these houses, viewed from a sanitary standpoint, is undergoing a slow but continuous improvement, but there can be no doubt that in this City, and most other large centres of population, there still is—as there has been from the outset—much room for such improvement.

It is matter for regret that one cannot observe a similar change for the better in their denizens, but when we consider that people of the tramp class constitute the bulk of the lodgers, and that these vagrants are what we know them to be because of their decadent tendencies, it is hardly reasonable to look for improvement in their condition.

One reproach of these houses is their use for immoral purposes, but a moment's reflection will show that, generally speaking, unless we can insist upon the production of evidence of marriage on the part of every couple applying for joint accommodation, we are practically powerless to prevent such use of the houses. The best remedy for the evil is the elimination of double beds, and this remedy we are now endeavouring on all possible occasions to apply.

The situation and capacity of each of the Common Lodging Houses under private management in the City is given in the following tables :—

Common Lodging Houses. Situation:—

In Narrow Marsh	41
„ Millstone Lane	1
„ Canal Street and Leen Side	4
„ Main Street, Bulwell	2
„ Portland Place, Coalpit Lane	1
„ Water Street	1
„ Washington Street	1
„ North Church Street	1
„ Popham Street	1
„ Cherry Street	1
„ Clare Street	1
	55

Common Lodging Houses. Accommodation Data, 1905.

For Males only.	For Females and Married Couples.	For Females only.	Mixed Houses.	Total.
25	15	1	14	55

	No. of Houses.	Bed Accommodation.						Registered amount of bed accommodation for lodgers.
		Less than 10 beds.	10 to 20.	21 to 30.	31 to 40.	41 to 50.	51 to 60.	
Houses on Register, 1904..	55	8	26	14	4	2	1	1,080
New House opened ..	1	..	1	..	..	..	..	14
Houses closed	1	1	..	..	..	..	..	9
Houses on Register at end of 1905	55	..	..	..	..	..	..	1,085

The two Corporation Lodging Houses, that in Popham Street for men only, with 28 beds, and that in North Church Street for women only, with 20 beds, have each once more in the past year, as during 1904, received less lodgers than in the immediately preceding year. The falling off in the case of the Popham Street house is trifling—amounting to 23 only—but that in the case of the North Church Street house, amounts to 314. The Popham Street house, though well managed, is a dreary place in a bad situation, and cannot compete successfully with some of the new houses under private

management. As regards the North Church Street house, I fear it is not attracting the class of women it was hoped would use it in its new and better situation, *i.e.*, *bona-fide* working women in need of temporary respectable lodging.

Situation of lodging house.	No. of beds.	No. of Lodgers admitted in each of the years.									
		1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Popham Street (Men only.)	28	7,331	6,568	6,608	6,792	7,965	8,262	9,282	9,194	8,821	8,798
Nth. Church St. Formerly Parliament St. (Women only.)	20	6,252	6,374	6,422	7,053	*3,603	3,612	4,631	5,123	4,529	4,215
		——	——	——	——	——	——	——	——	——	——
		13,583	12,942	13,030	13,845	11,568	11,874	13,913	14,317	13,350	13,013

* House closed July 14th to December 24th.

The following paragraph from a former Report expresses my views in respect of the future provision of Common Lodging House accommodation by the Local Authority in Nottingham :—

> "I have long advocated the establishment of "better class Common Lodging Houses in Notting- "ham, furnished with single cubicles, decent "interior lavatories, and a refreshment department, "such as one now sees in considerable numbers in "London and most other large towns. There can "be no doubt of the need for such hostels here, "and, judging by the experience of other places, if "too much money is not spent upon them—in "building, equipping and maintaining—and they "are properly managed, they are almost certain to "pay their way, even if they do not make a profit, "and many of them do that."

Mr. G. A. Read, Cert. R. San. I., the Inspector of Common Lodging Houses, has again done excellent special service, during 1905, in connection with the tracing of small-pox contacts among persons frequenting the Common Lodging Houses of the City.

Housing of the Working Classes Act, 1890.—No fresh houses were condemned during 1905, but the closing order made by the magistrates, under Sec. 32, Part II., of the above Act, in respect of houses in Pinder Street (Nos. 16, 18, and 20), Leather Street (Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9), Wharf Street (Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10), and Brewery Street (Nos. 1, 3, 5, 7, 9), all in Poplar, was confirmed (September, 1905) by the Recorder, on appeal to Quarter Sessions.

The Officials, the Local Authority, the Magistrates, and the Recorder, all agreed without difficulty in condemning the property, but all were distressed to realize, as they did in the end, that the closure of the houses would mean financial ruin to certain thrifty people, who, attracted by the relatively large return afforded while the houses remained open and occupied, and knowing nothing of the risk of owning such property, had invested their life-savings in purchasing them. On the closure of the houses, the income of these people ceased, and with regard to their indirect resources, I need only mention that they were not in a position to obtain the means of re-habilitating the property.

At first it was thought that the Corporation might be able to purchase the entire site, and convert it to some useful purpose—possibly obliterating the three narrow streets which at present divide it up so awkwardly—but on inquiry it was discovered that the value of the property had been greatly over-estimated, and that in order to compensate the putative owners in any measure for their loss, the Corporation would have to pay for the land—the houses were worthless—an amount many times greater than its market value. Under these circumstances, the Local Authority were powerless to assist these poor people. We can only hope that their case may be a warning to others,

deterring them from buying poor and decayed property, however large the immediate return from it. The very fact that such property makes a large immediate return on outlay is a danger signal to the experienced investor.

In several former Annual Reports, I have gone at some length into the modern housing question, and pointed out that while in the ultimate future we might possibly see a part at any rate of our slum denizens, or rather their descendants, dispersed over a semi-rural suburban area—according to the Garden City ideal—, for the present we must in great measure be content with (*a*) effecting improvement in the existing dwellings and their surroundings, and insisting upon their decent maintenance, and (*b*) securing such amendments in our building bye-laws as will safeguard the City, as far as possible, against the production of future slum property.

Two hundred and five houses have been cleaned or repaired, or both cleaned and repaired, in whole or in part during the year. An ever increasing amount of this work is being done in Nottingham, and the effect of such work is excellent and far reaching in its influence upon both landlords and tenants.

When people in general have once realized that dirty and unwholesome dwellings will not be tolerated, but dealt with like any other remediable nuisances which daily form the subject of action by the Health Department, they will, whether as landlords or tenants, see the wisdom and profit of looking after their property or their homes, as the case may be, without official reminder. This matter, like so many others, is simply one of education.

Canal Boats Acts, 1877 to 1884; and Regulations, 1878.—Mr. F. W. Franks, Cert. R. San. I., Chief Clerk, and Inspector of Canal Boats, reports that he has paid 78 visits to the canals and

other navigable waters in the City during 1905, and that he has inspected 126 boats altogether on these occasions. The inspections have been made at various times within the daily period laid down by the Acts (6 a.m. to 9 p.m.), and as far as possible at regular intervals. No objection to his visit and inspection has on any occasion been offered, and the boats have on all occasions been thrown open to inspection.

The cabins were clean in all the boats. The women carried numbered 14. The children under 5 years and between 5 and 12 years were each two in number. Three notices were issued to owners for infringements of the Acts and Regulations, as follows:

Defective water receptacle - -	1
Absence of Certificate - - -	1
Overcrowded cabin - - - -	1
	3

These defects were remedied at once on receipt of notice.

No case of infectious sickness was reported on any canal boat during the year, nor was it necessary to disinfect or otherwise to cleanse any boat passing through the City. The total number of boats now on the local register is 155, four fresh registrations having taken place during the year.

Factory and Workshop Acts, 1891-1901.—On p.p., 124 and 125 of this Report will be found tables drawn up in the form prescribed by the Secretary of State for the Home Department, setting forth for 1905, the inspections made, notices issued, defects found and remedied, or referred to H.M. Inspectors, matters notified by the Local Authority to H.M. Inspectors and *vice-versa*, particulars of underground bakehouses (Sec. 101), lists of out-workers (Sec. 107),

particulars of action in respect of home work or unwholesome (Sec. 108) or infected premises (Sec. 110), and the number of workshops on the local register (Sec. 131) at the end of 1905.

The Medical Officer of Health is required (Sec. 132, F. W. Act, 1901) to send a copy of his Annual Report, or so much of it as relates to the above subjects, each year to the Secretary of State for the Home Department.

The tables speak for themselves for the most part, but one or two matters call for special mention.

It was thought that the underground bakehouses of the City had been finally dealt with—so far as Sec. 101 of the above Act was concerned—in 1903 and 1904; but three others, in use without certificates of fitness from the Local Authority, were discovered during 1905. The closure of these was secured without delay or difficulty.

Owing to the greatly diminished prevalence of all diseases of the dangerous infectious class, except diphtheria (which declined but slightly), during 1905 as compared with 1904, there was necessarily much less to be done under Sec. 110, in stopping home work in infected families during 1905 than in the previous year.

It may be noted that action under this Section in respect of small-pox usually gives rise to much less irritation, and consequent opposition, than when called for in the case of any other disease of the acute specific class. The popular dread of small-pox creates an actual demand for precautions which are barely tolerated when other diseases are in question.

I have been engaged for some time in preparing a Report upon the health of persons employed in lace-dressing-rooms, the atmosphere of which is much heated (75° to 100° F.); but, owing to the sudden and

totally unexpected death of Inspector Williams, who had assisted me in drawing up the statistical parts of this and other Reports, and to my recent employment in obtaining evidence, on behalf of the Board of Agriculture, for the Butter Committee, the completion of this Report has been unavoidably delayed.

Shop Hours Acts, 1892 to 1895.—It is now well known that these Acts forbid the employment of any young person (under 18 years of age) in any retail or wholesale shop, market, stall, or warehouse, for a longer period than 74 hours, including meal times, in any one week. But, notwithstanding this knowledge, and the fact that the official notice setting forth these and other items is required to be, and usually is, exhibited in a conspicuous place on all such premises where young persons are employed for hire, there can be no doubt that the provisions of the Acts are frequently infringed. The difficulty of enforcing these provisions lies in the fact that the persons against whom the offences are committed are in most instances those alone by whom they could be proved, and as these persons would almost necessarily lose their employment by coming forward, and are unwilling to sacrifice themselves in this way, witnesses are seldom obtainable to prove the offences.

The official notice above referred to is reproduced in the Appendix of this Report.

Shop Hours Act, 1904. An Act to provide for the early closing of Shops.—The principal provision of this Statute, which came into force on August 15th, 1904, enacts (Sec. 1) that "An order (in this Act referred to as a closing order) made by a local authority and confirmed by the central authority, in manner provided by this Act, may fix the hours on the several days of the week at which either

throughout the area of the local authority, or in any specified part thereof, all shops or shops of any specified class are to be closed for serving customers."

The earliest hour which the closing order may prescribe is 7 p.m., except upon one specified day in each week, when it may be as early as 1 p.m.

Fairs (lawfully held), charitable bazaars, post offices, drug stores, public-houses, refreshment houses or restaurants, tobacco shops, newspaper shops, and railway bookstalls and refreshment bars are exempted.

No action has up to the present been taken in Nottingham under this Act. There can be no doubt, however, that if the provisions of the Act were uniformly enforced, and if there were no unfair competition on the part of exempted establishments with those which were closed by the order, the effect of an order under the Act would be beneficial to a large and hard-working section of the community, and entail practically no loss of business or other hardship to anyone.

The difficulty of securing the united support of any large body of shopkeepers for a scheme of early closing, will probably lie in the way of the success of this Act.

The Shop Hours Act, 1892 to 1895, the Seats for Shop Assistants Act, 1899, and this last Act, together, are known as the Shops Regulation Acts, 1892 to 1904.

The Midwives Act.—On April 1st, 1905, it became unlawful for any person, not certified under this Act, to take or use the title of midwife, or to describe herself as certified under the Act, or as a person specially qualified to practice midwifery.

For more than a year prior to the 1st of April, public notices had been posted in various parts of the City, and private intimation sent to as many practising midwives as could be found, drawing attention to the above primary fact and other principal provisions of the Act.

Before the 1st April, 45 local midwives had obtained certificates, and all these, and 4 others besides, 49 in all, sent us information during the year of their intention to practise in Nottingham. One of these women, however, died before the close of the year, thus reducing the total to 48 at the year's end.

The supervision of the local midwives still rests with myself and the two Lady Health Visitors, Miss Bowers and Miss Buckoll, and, although the Local Sanitary Authority have done nothing at present towards the provision of superior instruction for these women, it cannot be said that we have been inactive in asserting our new authority over the local midwives in matters of discipline, as the following record will show :—

1. Two midwives were reported to the Central Midwives Board for serious breaches of the Board's Regulations made under Sec. 3 of the Act. One was strongly censured, and the other had her name removed from the Roll.

2. Four midwives were suspended with the view of preventing the spread of infection by their personal agency.

3. Seven midwives have been called upon to give an explanation of their conduct under certain apparently compromising circumstances.

The Central Midwives Board were furnished during January of the current year (as required under Sec. 8) with the names and addresses of those midwives who,

during 1905, had notified us of their intention to practise in Nottingham. A current copy of the Roll of Midwives is kept (as required also under Sec. 8) in the Office of the Health Department, at the Guildhall.

One hundred and twelve notifications of still-births occurring in the practice of midwives, were received by me during the year, and the circumstances of each, as far as possible, were investigated by the Lady Visitors.

Diseases of Animals Act, 1894. Orders, Regulations, etc., of the Board of Agriculture.—Twenty-eight reputed cases of swine fever were notified during the year to the Board of Agriculture and the Health Committee, but in no single case was the diagnosis confirmed on subsequent *post-mortem* examination.

Four cases of glanders occurred on premises in Talbot Street in January and February of 1905. These were the last of a long series of cases in the same establishment. One case occurred at the stables of the Nottingham Carriage Co., in Muskham Street, on July 18th. Six further cases followed at the same stables in August, three on the 5th, and three again on the 19th. One isolated case occurred on premises in George Street in September.

All but one of the horses attacked in this series of outbreaks, were slaughtered under the direction of the Health Committee. The single exception—one of those in the Nottingham Carriage Co.'s stables—was slaughtered by the owner without direction from the Health Department.

Three sheep with scab were discovered at the Cattle Market in December, and detained, till free from the disease, in a field on "the Hook," beyond the Trent.

The regulations affecting the movement of swine in Nottingham, issued on the 7th January, 1904 (affecting the Mill-in-the-Hole Allotment Gardens), and the 11th March, 1904 (for the rest of the City), were still in force at the close of 1905; but, on the 5th January of the current year (1906), an Order of the Board of Agriculture was issued, to come into force on the 19th January, 1906, by which the Swine Fever (Regulation of Movement) Order of 1903 was applied to a Scheduled Area, comprising the administrative counties of Derby and Nottingham and the county boroughs of Derby and Nottingham, and, excepting only the Allotment Gardens of Mill-in-the-Hole, Nottingham, which remained under the provisions of the Order of the 7th January, 1904, above referred to.

The following is a brief abstract of the provisions of the Swine Fever (Regulation of Movement) Order of 1903:—

(1)—*Article* 5.

Pigs from outside the Scheduled Area may be brought into the City of Nottingham by licence of the Local Authority,

(*a*)—To the Cattle Market.
(*b*)—To a distributing depot, that is to say, to a lair or saleyard, *or*
(*c*)—To a private place.

If brought into the Market (which must be duly authorised by the Local Authority), swine can only be moved out of the Market for immediate slaughter by a second licence: if brought into a distributing place (lair or saleyard) also duly authorised, swine can be moved again for slaughter only, also by licence: if brought from outside the Area to a slaughter-house in the City, they must there be slaughtered without further removal.

All swine brought in under the above Article must be duly marked by the owner of the swine in accordance with the Order.

(2)—*Article* 3.

Store pigs (though not specified as such in the Order) may be brought in to private premises by licence from the Local Authority, on a declaration by the owner or his agent, countersigned by the

Police, that such swine have not been in contact with any swine suffering from Swine Fever, and have been on the premises from which they are to be moved for 28 days before the date of declaration.

Swine so moved must be detained on the premises to which they are moved for 28 days after arrival.

N.B.—A Market will be held each Saturday for store swine from within the Scheduled Area. No store swine from outside the Scheduled Area can be brought into the Market, nor can any store swine from the Market be taken beyond the Scheduled Area.

(3) All kinds of swine may be moved without licence within the Scheduled Area, provided they be not taken to a Market.

Movement into a Market or distributing depot (lair or saleyard) entails possible contact with swine from outside, and generally necessitates marking and licensing.

NOTE.

Licences for movement of swine into the City of Nottingham from outside the Scheduled Area, and for movement of swine out of Markets, lairs and saleyards, by second licence after being so brought in, can be obtained on application to the Medical Officer of Health, at the Health Department, Guildhall, Nottingham.

Lethal Chamber for Dogs, Cats, &c., at the Eastcroft Sanitary Depôt.—There was again, in 1905, a considerable increase in the number of dogs destroyed, as compared with the record for the preceding year (1507 as against 1325), but a decline in the number of cats (548 as compared with 735). In addition to the dogs and cats, however, 2 monkeys, 3 rabbits, and 4 birds were sent down for destruction during 1905.

The numbers of animals annually destroyed since the opening in 1898 are given below:—

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Dogs	422	472	731	770	856	1078	1325	1507
Cats	64	108	180	297	371	455	735	548

2 monkeys, 3 rabbits, and 4 birds also destroyed during 1905.

This apparatus is still performing a very useful function, by killing off in an absolutely painless and decent manner a large number of small animals, which, for various reasons, their owners wish to have destroyed.

There is no objection to the attendance of owners or their agents to witness the operations of the lethal chamber upon animals sent or brought down by them for destruction.

Slaughter Houses.—The number of slaughter houses now on the City register is 153, the same as at the close of 1904. No new slaughter-house has been opened, nor old one closed, during the past year.

I have once more to deplore the abeyance of the scheme, at one time much discussed, for providing public slaughter-houses in this City. The example recently set by the City of London, in this regard, is one which might advantageously be followed by Nottingham and many other like places.

Offensive Trades.—Four applications have been received during the year for leave to establish the trade of gut cleaner in the City. No written consent to the establishment of such a trade has in any case been granted.

Unwholesome Food Material.—The inspection of butchers' meat, and of cattle, sheep and pigs, is still very efficiently carried out by Inspector Moore, and that of fish, game, poultry and general provisions, by Inspector Billington, Cert. R. San. I.

The lists which follow contain the description and amounts of the various food materials given up by, or seized from, their owners during 1905. Several aggregates and items are large beyond all precedent.

The total amounts of butchers' meat and of tinned foods, for example, are greatly in excess of those taken in any previous year.

The results of legal proceedings arising out of the seizure of unwholesome foods by the two above-mentioned officers are given under the heading of prosecutions.

BUTCHERS' MEAT.

Description.	Weight. Imp. Stones.	lbs.
Beef	5481	10
Mutton	137	4
Veal	353	12
Pork	822	10
Viscera	1722	3
Lamb	6	2
Sausages	15	7
Tripe	20	12
Goat	3	10
Total	8564	0

GAME, &c.

	Imp. Stones.
Rabbits	229¼
Black Game	85¼
Hares	36
Caper-cailzie	16
Ptarmigan	10
Wood Pigeons	9
Hazel Hens	4
Wild Duck	4
Partridges	½
Green Plover	¼
	394¼

POULTRY.

Ducks	110¼
Turkeys	66
Chickens	60¼
Geese	37
	273½

WET-FISH.

Hake	1350
Herrings	1339½
Cod	577¼
Mackerel	314½
Ling	289
Halibut	214½
Whiting	212
Mixed Fish	182½
Lemon Soles	173½
Haddock	155
Fish Roes	146
Sprats	131

Wet Fish—*continued.*

	Imp. Stones.
Sprag	118½
Gurnard	90
Skate	80
Coalfish	52
Witches	42
Salmon	37¼
Catfish	36
Dabs	34½
Sea Bream	34
Codling	19
Plaice	15
Salmon Trout	12½
Smelts	5½
Conger Eel	5
Megrims	4½
Soles	4
John Dory	4
Grilse	2½
Brill	½
	5695½

SHELL FISH.

Mussels	2674
Shrimps	452
Whelks	321
Cockles	188
Oysters	172½
Prawns	139
Crabs	103
Periwinkles	69
	4118½

DRY FISH.

	Imp. Stones.
Kippers	182
Bloaters	142
Finnies	130
	454

FRUIT.

Black Currants	688½
Strawberries	257
Oranges	242
Pears	40
Apples	38
Raspberries	12½
Gooseberries	10
Plums	8
Bananas	4
	1300

VEGETABLES.

Potatoes	5378
Vegetable Marrows	469½
Kidney Beans	428
Cabbage	394
Carrots	368
Cauliflowers	320
Turnips	224½
Savoys	216
Broad Beans	148
Lettuces	128
Tomatoes	116
Brussel Sprouts	105
Celery	84
Cucumbers	41
Parsley	28
Peas	24
Parsnips	16

Vegetables—*continued.*

	Imp. Stones.
Spinach	15
Artichokes	12
Onions	10
Radishes	6
Leeks	5
	8536

TINNED FOODS.

Tomatoes	939½
Milk	510¾
Beef	232
Lobster	250¼
Salmon	148½
Pineapple	126¾
Apricots	101¼
Sardines	33¾
Pears	39
Tongues	30
Peaches	33¼
Rabbits	17
Blackberries	4½
Brawn	3½
Apples	1½
Herrings	1½
	2473

MISCELLANEOUS.

Fruit Pulp	2166
Eggs	377½
Yeast	10
Cheese	9
Blue-buttons	8¼
Preserved Damsons	1
	2571¾

Ice Creams.—Under the Nottingham Corporation Act, 1905, Secs. 58 and 59, the following new provisions are made:—

58. (1) Any person being a manufacturer or vendor of, or merchant or dealer in ice cream or other similar commodity, who within the City—

(*a*) Causes or permits ice cream or any similar commodity to be manufactured, sold, or stored in any cellar, room, or place which is in a condition to render such commodity or materials injurious to health, or in which there is an inlet or opening to a drain; or

(*b*) In the manufacture, sale, or storage of any such commodity, does any act or thing likely to expose such commodity to infection or contamination, or omits to take any proper precaution for the due protection of such commodity from infection or contamination; or

(*c*) Omits on the outbreak of any infectious disease amongst the persons employed in his business to give notice thereof to the Medical Officer ;

shall be liable for every such offence to a penalty not exceeding forty shillings.

(2) In the event of any inmate of any building (any part of which is used for the manufacture of ice cream or similar commodity) suffering from any infectious disease, the Medical Officer may seize and destroy all ice cream or similar commodity or materials for the manufacture of the same, in such building, and the Corporation shall compensate the owner of the ice cream, commodity, or materials so destroyed.

59. (1) Any officer duly authorized by the Corporation in that behalf shall at all reasonable times have the same power of entry and inspection into and of the premises of any manufacturer or vendor of or merchant or dealer in ice cream or other similar commodity, for the purpose of inspecting such premises and the materials or commodities or articles of food therein as an Officer of the Corporation would have under Section 102 of the Public Health Act, 1875, in the cases therein mentioned.

(2) Any person refusing entry into such premises as aforesaid, or obstructing such officer as aforesaid in the execution of his duty, shall be liable to a penalty not exceeding forty shillings for each offence.

In accordance with these provisions, action has already been taken for the closure of two local establishments in which the manufacture of ice cream for sale has hitherto been carried on, and which could not be further used for such purpose without serious risk of exposing the "commodity to infection or contamination."

Sale of Food and Drugs Acts, 1875-1899. Adulteration and Abstraction.—The number of samples taken under these Acts during 1905, and handed to Mr. S. R. Trotman, the City Analyst, for analysis, was 604, as compared with 602 during 1904. Five hundred and thirty-three, or nearly 88 per cent., were reported to be practically pure or genuine.

The proportion of genuine samples during 1904 was 81 per cent.

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.	
Milk	287	261	Deficient in Fat.	Added Water.
			1. 78%	1. 46%
			1. 30%	1. 25%
			2. 13%	1. 23%
			1. 10%	2. 20%
			2. 8%	2. 15%
			1. 7%	1. 12%
			5. 6%	1. 11%
			2. 3%	2. 10%
			1. 2·3%	2. 8%
				1. 7%
			16	1. 6½%
				1. 6%
				1. 5½%
				2. 5%
				1. 3%
				20
Milk, Separated	2	2	.. ..	.. Both Pure.
Milk, Skimmed	2	2	.. ..	.. Both Pure.
Milk, Condensed	5	5	.. ..	.. All Pure.
Cream	1	1	.. ..	.. Pure.
			With Foreign Fat.	With Boric Acid.
Butter	81	68	1. 100%	1. A trace.
			2. 95%	
			6. 90%	
			2. 80%	
			1. 9%	
			12	
Margarine	8	8	.. ..	.. All Pure.
Lard	8	8	.. ..	.. All Pure.
Dripping	1	1	.. ..	.. Pure.
				Deficient in Fat.
Cheese	5	4	.. ..	.. 1. 50%
Bread	10	10	.. ..	.. All Pure.
Flour	8	8	.. ..	.. All Pure.
Treacle	8	8	.. ..	.. All Pure.
Demerara Sugar	2	2	.. ..	.. Both Pure.
Sugar	1	1	.. ..	.. Pure.
Honey	5	5	.. ..	.. All Pure.
Sausage	5	5	.. ..	.. All Pure.
				With Boric Acid.
Fish Paste	1	—	.. ..	.. 1. 0·4%
				With Boric Acid.
Lemon Curd	3	2	.. ..	.. 1. 0·4%
Jam, Raspberry	3	3	.. ..	.. All Pure.
Coffee	3	3	.. ..	.. All Pure.

	No. of Samples.	No. Pure.	Deficient or Adulterated.	No.
			With added Mineral matter.	
Cocoa ..	5	4	1. 3%	
Arrowroot	5	5	All Pure.	
Pepper ..	4	4	All Pure.	
			With added Starch.	
Mustard	8	6	1. 10%	
			1. 7½%	
				2
Ground Ginger	2	2	Both Pure.	
			With Acetic Acid.	
Vinegar	15	13	1. 90%	
			1. 70%	
				2
Olive Oil	10	10	All Pure.	
Cod Liver Oil	5	5	All Pure.	
			With Arsenic.	
Ale	10	4	3. $\frac{1}{90}$th grain per gallon.	
			3. $\frac{1}{120}$th " "	
				6
			Deficient in Proof Spirit.	
Whisky	11	8	1. 9%	
			2. 2½%	
				3
Gin	9	9	All Pure.	
			Deficient in Proof Spirit.	
Brandy	3	2	1. 1·5%	
			With Salicylic Acid.	
Ginger Wine	7	6	1. 3 grains per pint.	
Orange Wine	1	1	Pure.	
Lime Water	7	7	All Pure.	
Laudanum	3	3	All Pure.	
			Deficient in Nitrous Ether.	
Sweet Nitre	4	3	1. 8%	
Tartaric Acid	1	1	Pure.	
Friars' Balsam	6	6	All Pure.	
Glycerine	1	1	Pure.	
Liquorice Powder	1	1	Pure.	
			Deficient in Magnesia.	
Gregory's Powder	4	1	1. 49%	
			1. 13%	
			1. 9%	
				3
Seidlitz Powder	9	9	All Pure.	
Sal Volatile	5	5	All Pure.	
			With foreign Liquid.	
Turpentine	13	7	1. 50%	
			1. 40%	
			3. 15%	
			1. 10%	
				6
Precipitated			With Arsenious Oxide.	
Sulphur	6	3	1. $\frac{1}{5}$th grain per pound.	
			2. Trace of Arsenic.	
				3
	604 Total Samples.	533 Pure.		81 Deficient or Adulterated.

It will be noticed that, as usual, the last numbers do not balance. The discrepancy is due to the fact that several of the samples showed more than one defect.

The Dairies, Cowsheds, and Milkshops Orders, 1885 to 1899.—Clean and Sterilized Milk.—The number of cowkeepers, dairymen, and purveyors of milk on the City Register at the close of 1905 was 674, 190 fresh names, practically all of the last class, having been added during the year. Three of the persons who registered, however, were subsequently informed that they would not be allowed to keep or sell milk on the premises they had devoted or proposed to devote to this purpose, and consequently desisted; but, as I have pointed out in former Reports, there are still many places where milk is sold in the City which, though perhaps not unwholesome for the keeping, preparation, and storage of other foods, are altogether unsuitable for so sensitive and important a raw food-material as milk—for example, small general provision shops, butchers' shops, dwelling rooms, and cellars.

The local regulations, approved by the Local Government Board in 1894, and made under Section XIII. of the Dairies, Cowsheds, and Milkshops Order of 1885, forbid, among other things, the keeping of milk for sale in proximity to anything liable to communicate any foreign matter or quality to it, and most of the places here referred to contain many things and much effluvium and dust which must necessarily act in this manner.

The majority of small shopkeepers are agreed that there is but little profit to be made by selling driblets of milk over the counter, and are willing to give up their milk-business if others in similar circumstances

will do likewise. But here the difficulty of reform comes in. It is practically impossible to treat all, and all at once, alike, *i.e.*, to the extent of stopping the sale of milk from such places as I have referred to, immediately, all over the City.

The regular dairies and milkshops of Nottingham are in much better condition than they were even a short time back, and are still rapidly improving under the supervision of Mr. J. A. Sutton, Cert. R. San. I., who now acts as Milk Inspector for the City. All such premises have been limewashed at least twice during the past year, and in other respects kept as far as reasonably possible in the condition demanded by the regulations.

Concerning the cowsheds of the City, of which there are now 138 in use (registered in the names of 77 cowkeepers, and containing some 776 dairy cows), one can speak also for the most part in the same favourable terms. The change for the better, indeed, recently effected in these buildings and their surroundings, constitutes one of the best pieces of remedial work effected by the Health Department during the past few years. The cows, moreover, are now inspected, and any shewing signs of ill-health are, if possible, removed, or, failing this, their milk is condemned. Many of the cowkeepers, too, are beginning to recognize the necessity of insisting upon the frequent washing of their milkers' hands, of grooming their cows, and of straining and chilling their milk immediately after it has been drawn. *

With the exception, therefore, that the small milk-vendor, with his insanitary conditions, still persists in Nottingham, the City is in a fair way towards the attainment of better things as regards that section of its milk supply for which it is directly responsible.

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* In the City of New York it is a punishable offence for a milk dealer to have in his possession any milk at a higher temperature than 40°.

But while this City, and many others like it, are setting their houses in order in this respect, and fulfilling their obligations under the Dairies, Cowsheds, and Milkshops Orders, such action unfortunately does not help them greatly towards obtaining a pure milk supply, so long as the major part of the milk consumed in the towns comes (as it now does) from outside their borders, unless the rural districts follow suit, which, speaking generally, up to the present they have shown no disposition to do. The condition of many rural cowsheds and their surroundings is almost incredibly filthy—cows, utensils, buildings, soil, simply reeking with fæcal liquids.

Cow-dung from the cows' udders and teats, and elsewhere, all the dirt which the process of milking can remove from the milkers' often otherwise unwashed hands, and the products of tuberculous disease in some of the cows' udders, are the commonest polluting agents of country milk at its source of origin. If we add to these the dirt which reaches the milk in transit, while contained in imperfectly cleansed milk-cans with cap-shaped tops and leaky covers, we obtain a fair notion of the extent to which much of our country milk is contaminated before it reaches the towns.

I fear, however, we must look to the education of public opinion to help us in this matter, rather than to the spontaneous initiative of local governing bodies.

There can be no doubt that if the public fully understood the risk they and their children run, in drinking unboiled milk from many of the farms and dairies at which it is now produced, there would be a demand for reform as loud and imperative as that which has recently arisen in connection with the American canned-meat scare.

It must not be inferred that the impure milk sent into our towns is entirely responsible for such troubles as the epidemic diarrhœa, tabes mesenterica, and other intestinal disorders, from which certain sections of their communities suffer so terribly, but there can be no doubt that, with the large fæcal, tuberculous, and other pollutions to which it is now subject, it must be one of the causes of these ailments.

The best safeguard against the dangers—especially to hand-fed infants—of milk contaminated as above described, or in the home of the consumer, is sterilization, or boiling, immediately before use. The damage to the nutritive value of fresh milk from the process of boiling has, to say the least, been greatly over-estimated.

The leaflet on infant feeding, which has been circulated from the Health Department during the past 14 years, is reprinted in the Appendix of this Report.

Prosecutions.—The following is a list of the offences under the Sale of Food and Drugs Acts, the Public Health Acts, and the Housing of the Working Classes Act, 1890, in respect of which proceedings were taken or (in the last case) defended by authority of the Health Committee during 1905, with the results in each case. All the actions were successful. It is regrettable that more uniformity of punishment cannot be secured for like offences, than this list, coupled with a knowledge of the circumstances of each case, seems to indicate.

PUBLIC HEALTH ACTS.

Offence.	Results.
Sale of unsound Shell Fish (Whelks)	Fine of £2.
Exposing Fish Roes.	„ £2/10/- & costs
„ Plums	„ £2.
Exposure for sale of two Pigs unfit for food	„ £5.
„ „ one Pig unfit for food	Ordered to pay costs.

SALES OF FOOD AND DRUGS ACTS.

Offence.	Result.
Sale of Milk containing 23% added water	Fine of 10/-.
" 11% "	" £2.
Sale of Milk containing 39% added water and 19% deficient in fat.	" £2.
" 24½% " 14½ "	" £1.
" 20% " 13% "	" £2.
" 18% " 30% "	" £2.
" 15% " 8% "	" £1.
" 15% " 6% "	" £2.
" 10% " 13% "	" £5.
Delivery of Milk containing 3% " 6% "	" £2.
Sale of Skimmed Milk 25% deficit in Milk solids.	£3.
" " 21% "	" £1/10/-
Sale of Skimmed Milk from an unlabelled bucket.	" 10/-
Sale of Butter containing 11% excess of water.	" £1.
Sale of Butter containing 95% of fat other than butter fat.	" 5/-
" 95% " "	" 15/-
" 90% " "	" £6.
" 90% " "	" £5.
" 90% " "	" £1.
" 80% "	£1 & costs
" 80% " "	" £1.
Sale of Tincture of Opium 50% deficient in Alcohol	" 9/6 costs
" Gregory Powder 49% deficient in Magnesia	" £1.
" Malt Vinegar containing 90% of Acetic Acid Vinegar	" £1.
" Margarine, unlabelled	" 10/-

HOUSING OF THE WORKING CLASSES ACT, 1890.

Closing Order of Justices in respect of 27 insanitary houses, confirmed by the Recorder on appeal to Quarter Sessions.

Notices.—The formal notices in writing, issued from the Health Department during 1905, were as follows:—Ordinary, 1099; Statutory, 211. There was an increase of ordinary notices amounting to 145, but a decrease of 32 in the Statutory notices, as compared with those sent out in 1904.

In addition to these notices, however, there are numerous intimations conveyed by word of mouth, or by letter, in response to which much remedial work is carried out every year.

District Inspectors and their Work.—The usual table of nuisances abated at the instance of the District Inspectors in given on page 126 of this Report. The aggregate shows an increase of 59 upon

that for 1904, and there is little in the separate items calling for special mention beyond what has already been made incidentally under various sections in this Report.

There is but small disposition on the part of owners of pail-closets to substitute w.c.'s for these insanitary conveniences; and so long as the latter are recognised as a legitimate form of closet by the Local Authority, it will be a difficult matter to secure their abolition to any considerable extent. In most other great towns where they exist, or have existed, in large numbers, this fact has been recognized by the local authority, and steps taken to push the adoption of w.c.'s in their place. In my opinion the time is ripe for such action in Nottingham, and the grounds upon which I base this opinion have been set out in numerous Reports in past years, and are repeated under the heading of Enteric Fever in this report.

The Inspectors are continually discovering gross nuisances in connection with the abuse and dilapidation of these closets, and the best remedy in almost all such cases is the radical one of abolishing the closet, and substituting a w.c.; but such a remedy is in many cases very hard to apply, so long as the pail-closet, as such, is tolerated by the local authority, because the majority of owners, on grounds of economy, prefer the repair of the pail closet to the provision of a w.c.

Lady Health Visitors.—I have, at present, no tabulated statement of the work of these ladies to furnish, but their function extends into so many sections of the Health Department's work, and finds such frequent mention in various parts of this Report, that a separate tabular statement of their work is hardly necessary.

Among the more important duties they have performed in the past year, I may mention the following :—

During the serious measles outbreak of the first three months of the year, they did excellent service as intelligent intermediaries between the Health Department, the schools, and the infected homes. Throughout the year they have made numerous enquiries on behalf of the Education and Health Departments concerning cases, and reputed cases, of infectious sickness and other ailments occurring among the children in attendance at various schools. They have distributed leaflet literature on the subjects of infant feeding, diarrhœa, phthisis, and minor ailments, and amplified and applied the instructions afforded by such literature in dealing with particular cases brought to their notice. They have exercised a continuous general supervision over registered midwives, and investigated all cases of still-birth notified to me by midwives under the Midwives Act.

It is sometimes urged, as there is often no immediate reduction of infant mortality from diarrhœa and other ailments, and no apparent general improvement in the condition of the poor as a result of such ladies' ministrations, that they were doing practically no good. The inference, however, is unjust, as it takes no account of the educational value of their work (and educational processes are always of slow operation), and of the fact that it is impossible to compare one season with another in an instructive manner, without more assurance of a coincidence or gaugeable variation of dominating conditions at the different periods than we can ordinarily obtain.

NOTTINGHAM. 1905.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, AND HOME-WORK.

[Inspectors Flint (Male) and Exton (Female).]

1.—Inspection.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions
Factories (including Factory Laundries) ..	223	5	..
Workshops (including Workshop Laundries)	3,450	53	..
Workplaces	..	..	..
Home-workers' Premises	510	..	..
Total	4,183	58	..

2.—Defects Found.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts :—				
Want of Cleanliness	409	375		
Want of Ventilation	10	9		
Overcrowding	7	7		
Want of drainage of floors	..	..		
Other nuisances	95	92		
Sanitary accommodations .. insufficient	14	12		
Sanitary accommodations .. unsuitable or defective	44	37		
Sanitary accommodations .. not separate for sexes	12	10		
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (S. 101)	3	3	..	..
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	226	214		
Failure as regard lists of outworkers (S. 107)	..	..		
Giving out work to be done in premises which are unwholesome (S. 108)	..	..		
Giving out work to be done in premises which are infected (S. 110) ..	54	54		
Allowing wearing apparel to be made in premises infected by scarlet fever or small-pox (S. 109)	5	5		
Other offences	4	4		
Total	883	822		

3.—Other Matters.

Class.		Number.	
Matters notified to H.M. Inspectors of Factories :—			
Failure to affix Abstract of the Factory and Workshop Act (S. 133)		52	
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Act (S. 5)	Notified by H.M. Inspectors	23	
	Reports (of action taken) sent to H.M. Inspectors	21	
Other		..	
Underground Bakehouses (S. 101) :—			
In use during 1903		95	
Certificates granted	in 1903	28	
	in 1904	15	
In use at the end of 1905		42	
Homework :—		Number of	
		Lists.	Outworkers.
Lists of Outworkers (S. 107) :—			
Lists received		150	1,964
Addresses of outworkers	forwarded to other Authorities	190	440
	received from other Authorities	5	
Homework in unwholesome or infected premises :—		Wearing Apparel :	Other.
Notices prohibiting homework in unwholesome premises (S. 108)		..	
Cases of infectious disease notified in homeworkers' premises		5	115
Orders prohibiting homework in infected premises (S. 110)		4	38
Workshops on the Register (S. 131) at the end of 1905.			
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Bakehouses (including underground) ..	213	
	Other Workshops	1,400	
	Total number of Workshops on Register ..	1,613	

NOTTINGHAM, 1905.

Abatement of Nuisances (in Districts).

Description of Work Done.	Inspector Ward. Cer. R. San. In.	Inspector Old.	Inspector Byrns.	Inspector Betts.	Inspector Sutton. Cer. R. San. In.	Total.
Houses Repaired	50	40	10	33	12	145
,, Cleansed	7	..	10	5	39	61
,, Overcrowding of, Abated..	6	9	3	3	8	29
Bath Wastes Disconnected ..	1	4	4	1	..	10
,, Trapped	...	4	4	11	..	19
Sink Wastes Disconnected ..	1	..	12	15	..	28
,, Trapped	12	2	2	2	5	23
Drains Repaired and Cleansed ..	191	71	214	188	10	674
,, Trapped	25	124	83	74	3	309
Water-Closets Repaired, &c. ..	14	11	85	62	7	179
Pail-Closets Repaired	95	57	151	202	17	522
,, Provided	..	..	..	2	..	2
Waste-water-Closets Repaired .	3	20	9	23	1	56
Ashpits Abolished	20	26	23	16	1	86
Privies Abolished	30	38	23	29	3	123
Water-Closets provided in lieu of Privies	31	55	26	26	3	141
Water-Closets provided in lieu of Pail-Closets	15	14	..	2	..	31
Soft-water Cisterns Cleansed ..	4	5	5	12	..	26
Courts and Yards Paved	44	98	94	92	1	329
Piggeries Abolished	7	18	4	6	2	37
Stables, etc., Drained	2	10	2	..	..	14
Urinals Repaired, etc.	12	5	3	4	3	27
Manure Pits Repaired, etc. ..	1	6	4	3	3	17
Offensive Accumulations Removed	21	29	30	24	18	122
Miscellaneous	169	89	111	103	62	534
Totals	761	735	912	938	198	3544

APPENDIX A.

HANDBILLS AND LEAFLETS.

City of Nottingham. The Feeding and Care of Infants.

1.—The natural and best food for a young infant is its mother's milk.

2.—The child should be suckled once every two hours during the day, and once every four hours during the night, until it is about three months old, and at gradually lengthening intervals after the lapse of this period.

3.—The child should, if possible, receive no other food than its mother's milk until it is at least six or seven months old.

4.—During the suckling period the mother should take plenty of good, plain, nourishing food, but should avoid alcoholic stimulants and spices.

5.—The mother should wash her nipples after each time of suckling. If they become sore she should apply some glycerine or lanoline to them, and, if necessary, use a nipple-shield carefully cleaned with soap and warm water after each time of using.

The following instructions may be advantageously followed, at the earlier ages in cases where the mother is unable to suckle her infant, and at the later ages in all cases.

(*a*) During the first six weeks after birth the child should be fed every two hours throughout the day, reckoned between 4 a.m. and 10 p.m., and once again between these hours in the night. Its food should consist of one part of fresh, pure cow's milk, and two parts of water, mixed and boiled, and, after boiling, sweetened with a small teaspoonful of Porto Rico sugar to each pint (of the mixture). Barley water may sometimes with advantage be used instead of plain water, but lime water is better avoided. The mixture should be kept in a clean covered vessel, and in a clean cool place, between meals. The temperature of the food given to a young child should be 95 degrees Fahrenheit, *i.e.*, about the heat of the human hand. One-and-a-half ounces (three tablespoonfuls) to two ounces (four tablespoonfuls) should be given to a child each time it is fed.

Two bottles should always be used, each alternately; one being scalded and rinsed, and afterwards left to soak, while the other is in actual use. The bottles should have no tube or neck, but have a mouth large enough to admit the first finger, and this should be fitted with an india-rubber teat only. The teats should be washed inside and out, after each time of using, with soap and warm water.

(*b*) From six weeks to three months old the child should be fed with a mixture of equal quantities of cow's milk and water, with sugar as above; but two teaspoonfuls of cream may now be advantageously added to each meal. The quantity given at each meal should be about four ounces (eight tablespoonfuls). The interval between meals should now be gradually but continually lengthened.

(*c*) From three months to seven months old the child should have a mixture of two parts of cow's milk to one of water. About four ounces (eight tablespoonfuls) should at first be given at each meal, but, the intervals between meals being still lengthened, a larger quantity than this will soon be required for each. The quantity of cream given with each meal may now be increased from two to three or four teaspoonfuls.

The following is a useful working rule for the feeding of a child, with such substitutes for mother's milk as mentioned above, during the period in which liquids should be exclusively used :—

Begin with about 16 oz. a day of twenty-four hours, as under (*a*). Increase this by the addition of 1 oz. to 2 oz. a week up to the end of the first month. After the first month add 4 oz. a month up to the end of the seventh month. At this period, unless the child is regularly to have some quantity of the farinaceous food mentioned in the next paragraph, its milk should amount to at least 40 oz. a day. At nine months a milk-fed child should have three pints in the twenty-four hours.

(*d*) From seven months to twelve months old the child should be given five meals in a day of twenty-four hours. The number of meals will thus have been reduced by a little more than one-half (from eleven to five) in the first seven months. Each meal should consist at the first of about five or six ounces (ten or twelve tablespoonfuls) of undiluted cow's milk, with cream as under (*c*); but three of the meals may also each contain about a teaspoonful or more of some whole-meal farinaceous food, well boiled and stirred up with the milk. All the meals in this period should be given between 6 or 7 a.m. and 9 or 10 p.m.

(*e*) From twelve months to eighteen months old the child should again be fed only during the day, and at about the same intervals (on five occasions) between early morning and night. The amount of milk should be about twice as great as given under (*d*), and porridge, bread and milk, bread and gravy, bread and butter, and a lightly boiled egg occasionally, may with advantage be given with, or in place of the milk as time goes on. It must not be forgotten, however, that pure fresh cow's milk, well boiled, is an excellent and sustaining food, as well as a palatable drink for human beings at all ages.

The quantities of food given above are those generally suitable, but the capacity of children for food varies much, and signs of indigestion due to over-feeding should not be overlooked because a comparatively moderate amount of food is being taken.

It is unwise for a mother to undertake the medical treatment of her child, except, perhaps, to the extent of giving it a little opening medicine occasionally. She should never give it sleeping or quieting medicine except under medical advice.

A young child should not on any account sleep in the same bed with nurse or parents.

A young child should be warmly but loosely clothed over the whole of its body and limbs, and as few pins as possible should be used in dressing it.

It should be remembered that a young child is exceedingly liable to suck or to swallow anything within its reach which admits of being so treated.

It should also be borne in mind that a young child has no dread of fire or hot things unless or until it is actually burnt.

PHILIP BOOBBYER, M.D.,
Medical Officer of Health, Nottingham.

City of Nottingham. Prevention of Diarrhœa and Cholera.

These diseases may in great measure be avoided by the exercise of common care. Cleanliness of person and surroundings and a judicious diet are the best possible safeguards against them. Their germs enter the system through contaminated air, water, and food; it is most important, therefore, to secure the utmost possible purity of these three vital agents.

All parts of a house should be freely ventilated both by day and night:—there is as a rule much less harm to be apprehended from too much than too little fresh air, whatever its temperature or degree of moisture. No decomposing refuse should be allowed to remain in the house or its neighbourhood; all vegetable refuse should be burnt in the kitchen fire. The floors of all rooms, passages, and stairways should be frequently washed with soap and water, and all private courts, alleys, and yards should be flushed with fresh water, as often as possible. All dirty walls should be scraped and limewashed. All drains in the neighbourhood of the house should be flushed at short intervals, and all obstructions to the drainage and faults in the drains, which cannot be dealt with by the tenant, should be reported at once to the **Health Department in the Guildhall.** It is most important that all house drains should be completely disconnected from the sewers. All other offensive nuisances which are not receiving the necessary attention should also be at once reported.

The Public Water Supply of the town is now happily above the suspicion of contamination, but no water even from this source should be allowed to stand before being used for drinking purposes, and all water from private wells or other like sources should invariably be boiled before use.

Only sound and fresh flesh of any kind should be used as food, and this should be well cooked. The same remark applies to cooking vegetables of every description. Unripe or over-ripe fruit should be rigorously avoided. Infants under nine months of age should receive nothing but milk, or milk and water, well boiled, when the milk is from any other source than the mother's breast. All food utensils, and especially milk vessels and babies' feeding bottles, should be well washed and soaked before use, in clean, and, if possible, boiling water.

A qualified medical man should be at once called in to every case of severe bowel disturbance. It is a wise precaution to disinfect with strong solution of carbolic acid the bowel discharges of all Diarrhœa patients, before placing them in the closet pan or pail. All articles or material soiled with such discharges should be at once soaked and cleansed with the same solution.

After it has been ascertained that a patient is suffering from Asiatic Cholera it is essential that the strictest isolation should be maintained at home or in hospital, and that all discharges from the patient's body should be disinfected and placed in a separate receptacle, which will be provided and scavenged by the Corporation; and, further, that all articles soiled with such discharges should be promptly disinfected, or destroyed by fire. Persons attending upon Cholera patients should not touch with their hands, their own or other persons' faces, or any food or food utensil intended for their own or other unaffected person's use. Any case suspected to be one of **Cholera** should be at once notified to me at the **Health Department in the Guildhall.**

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

(Circulated during recent Small-Pox Outbreak.)

City of Nottingham. Small-Pox and Vaccination.

Small-Pox is once more prevalent in this District and many other parts of the Country, and numerous fresh cases are reported daily. It is, therefore, desirable for people resident in Nottingham (and elsewhere) to seek protection against it.

Good Recent Vaccination is an Efficient Protection against Small-Pox, and the degree of protection it confers is directly proportional to the recentness and thoroughness of the operation.

All persons who have not been properly vaccinated or re-vaccinated within the past ten years, should be well vaccinated without delay.

The risk of injury from vaccination when considered in relation to the total amount of vaccination work done, is altogether insignificant.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

Official Notice under the Shop Hours Acts, 1892 to 1895, to amend the Law relating to the Employment of Young Persons in Shops.

Notice is Hereby Given that, under the above Acts, a young person cannot be employed in or about a shop for a longer period than seventy-four hours, including meal times, in any one week.

A young person cannot, to the knowledge of his employer, be employed in a shop who has been previously on the same day employed in any factory or workshop, as defined by the Factory and Workshop Act, 1878, for the number of hours permitted by the said Acts, or for a longer period than will, together with the time during which he has been so previously employed, complete such number of hours.

In every shop in which a young person is employed, a Notice must be kept exhibited by the employer in a conspicuous place, referring to the provisions of these Acts, and stating the number of hours in the week during which young persons may lawfully be employed therein. If any employer fails to keep exhibited this Notice in the manner required, he is liable to a fine not exceeding forty shillings.

Where any young person is employed in or about a shop contrary to the provisions of these Acts, the employer will be liable to a fine not exceeding one pound for each person so employed.

City of Nottingham. Prevention of Tuberculous Consumption.

This disease is infectious, and liable to spread among persons living in contact with those suffering from it. It is, however, in many cases entirely curable under appropriate treatment.

Where the lungs are principally affected, the spit of the patients contains most of the poison. This should, as far as possible be received into a vessel containing a strong solution of Carbolic Acid (1 of Carbolic to 20 of Water), and all washing materials and utensils soiled by the patients should be soaked in the same solution before being washed.

The spit and other infectious matters from consumptive patients, whether disinfected or not, should always be destroyed (if possible by fire) before they become dry. They are most dangerous when dried, especially when taking the form of dust.

Consumptive patients should always sleep alone.

The rooms of consumptive patients should be freely ventilated both by day and night, and should be disinfected and cleaned (with damp cloths that have been soaked in disinfecting liquid) at short intervals.

Consumptive patients should spend as much time as possible in the open air. In case of the death or removal of any consumptive patient, the Health Department will undertake the disinfection of the infected house and materials.

A considerable proportion of milch cows suffer from tuberculous disease, and the milk of such cows, especially when the udders are affected, is liable to be highly charged with the tuberculous poison. It has been shown that animals taking tuberculous milk in the raw state are exceedingly liable to contract the disease; all ordinary cow's milk, therefore, should be sterilized or boiled before use.

PHILIP BOOBBYER, M.D.,

Guildhall, Nottingham. *Medical Officer of Health.*

Nottingham Corporation. Bagthorpe Hospital. Scarlet Fever.

To Parents, Guardians, and Others.

Although every care is exercised to prevent the carriage of infection by persons discharged from Bagthorpe Hospital, it is impossible in some instances to insure against such an accident, for no one can say with certainty how long the scarlet fever poison may lurk in the system. Parents and others are warned against allowing recently discharged patients to come into unnecessarily intimate contact with others. No person discharged from a Fever Hospital should be allowed to sleep in the same bed as another until at least a fortnight after such discharge. A short holiday in the country, spent as far as possible apart from others and in the open air, is always desirable for persons convalescing from scarlet fever. But all persons recovering from scarlet fever should be warmly clothed, and otherwise protected against cold. Any recently discharged person who complains of sore throat, nose, or ears, or who has a breaking out on the skin, should be at once isolated, and placed under the care of a medical man. In any case the Corporation cannot accept responsibility or liability for the outbreak of infection occurring among the companions of persons recently discharged from hospital.

PHILIP BOOBBYER, M.D., *Medical Superintendent.*

The Council of any County or Borough, and in the City of London the Common Council, may appoint such Inspectors as they may think necessary for the execution of these Acts within the areas of their respective jurisdictions, and Sections 68 and 70 of the Factory and Workshop Act, 1878, shall apply in the case of any such Inspector as if he were appointed under that Act, and as if the expression "Workshop," as used in those sections, included any shop within the meaning of these Acts.

In these Acts, unless the context otherwise requires, "Shop" means retail and wholesale shops, markets, stalls, and warehouses, in which assistants are employed for hire, and includes licensed Public-houses and Refreshment-houses of any kind.

"Young person" means a person under the age of eighteen years.

Other words and expressions have the same meanings respectively as in the Factory and Workshop Act, 1878.

Nothing in these Acts applies to shops where the only persons employed are members of the same family dwelling in the building of which the shop forms part, or to which the shop is attached, or to members of the employer's family so dwelling, or to any person wholly employed as a domestic servant.

And Notice is Hereby Given, that no young person can be employed in or about these premises for a longer period than seventy-four hours, including meal times, in any one week.

The Sanitary Accommodation Order of 4th February, 1903.

In pursuance of Section 9 of the Factory and Workshop Act, 1901, I hereby determine that the accommodation in the way of sanitary conveniences provided in a factory or workshop shall be deemed to be sufficient and suitable within the meaning of the said section if the following conditions are complied with and not otherwise:—

1. In factories or workshops where females are employed or in attendance there shall be one sanitary convenience for every 25 females.

In factories or workshops where males are employed or in attendance there shall be one sanitary convenience for every 25 males: provided that—

(*a*) In factories or workshops where the number of males employed or in attendance exceeds 100, and sufficient urinal accommodation is also provided, it shall be sufficient if there is one sanitary convenience for every 25 males up to the first 100, and one for every 40 after;

(*b*) In factories or workshops where the number of males employed or in attendance exceeds 500, and the District Inspector of Factories certifies in writing that by means of a check system, or otherwise, proper supervision and control in regard to the use of the conveniences are exercised by officers specially appointed for that purpose it shall be sufficient if one sanitary convenience is provided for every 60 males, in addition to sufficient urinal accommodation. Any certificate given by an Inspector shall be kept attached to the general register, and shall be liable at any time to be revoked by notice in writing from the Inspector.

In calculating the number of conveniences required by this order, any odd number of persons less than 25, 40, or 60, as the case may be, shall be reckoned as 25, 40, or 60.

2. Every sanitary convenience shall be kept in a cleanly state, shall be sufficiently ventilated and lighted, and shall not communicate with any work-room except through the open air or through an intervening ventilated space: provided that in work-rooms in use prior to 1st January, 1903, and mechanically ventilated in such a manner that air cannot be drawn into the work-room through the sanitary convenience, an intervening ventilated space shall not be required.

3. Every sanitary convenience shall be under cover and so partitioned off as to secure privacy, and if for the use of females shall have a proper door and fastenings.

4. The sanitary conveniences in a factory or workshop shall be so arranged and maintained as to be conveniently accessible to all persons employed therein at all times during their employment.

5. Where persons of both sexes are employed, the conveniences for each sex shall be so placed or so screened that the interior shall not be visible, even when the door of any convenience is open, from any place where persons of the other sex have to work or pass; and, if the conveniences for one sex adjoin those for the other sex, the approaches shall be separate.

6. This order shall come into force on the 1st day of July, 1903.

7. This order may be referred to as the Sanitary Accommodation Order of 4th February, 1903.

A. AKERS DOUGLAS,
One of His Majesty's Principal
Secretaries of State.

Home Office, Whitehall,
4th February, 1903.

APPENDIX B.

From Mr. John Terry, Wharf Superintendent :—

COLLECTION OF REFUSE.

Pail Closets.—The pail closets now on the books number 37,048, as against 37,225 in 1904, and 37,432 in 1903. Of this number about 33,000 are now provided with galvanized steel pails, and the remaining 4,000 with wooden tubs, but the whole of these will have been replaced in another six months.

Each pail is brought to the depôt to be emptied, and before being returned is washed out with a solution of Carbolic Acid.

There have been 2,561,426 pail emptyings during the year, equal to 49,258 per week, each pail being emptied on an average 69·13 times, as against 69·91 times during 1904.

The following table gives a comparative statement of the number of pails emptied during the past 15 years :—

Number of Pails Collected, 15 Years ending December 31st, 1905

Year.	Nottingham	Basford and Bulwell.	Radford and Lenton.	TOTAL.	Weekly Average.
1891	1,593,674	560,127	432,324	2,496,125	48,002
1892	1,523,965	580,061	446,687	2,550,713	49,052
1893	1,525,804	587,718	443,960	2,557,482	49,182
1894	1,559,608	605,349	445,606	2,610,563	50,203
1895	1,594,130	631,219	432,450	2,657,799	51,111
1896	1,598,814	636,951	441,126	2,676,891	51,478
1897	1,568,172	636,744	444,859	2,649,775	50,957
1898	1,542,856	638,493	468,070	2,649,419	50,950
1899	1,529,546	637,420	478,475	2,645,441	50,874
1900	1,522,549	640,976	475,195	2,638,720	50,745
1901	1,510,423	640,653	476,124	2,627,200	50,523
1902	1,496,922	638,370	481,970	2,617,262	50,332
1903	1,488,385	641,390	482,289	2,612,064	50,232
1904	1,477,526	644,031	481,018	2,602,575	50,049
1905	1,450,262	636,984	474,180	2,561,426	49,258

Ashpits.—There are in the City just over 1,200 ashpits, and we have emptied 3,215 during the year, thus each ashpit has been emptied on an average about once in four months; several of the pits, however, are very large and difficult of access, and these are left longer than others of less capacity.

We have removed from these ashpits 3,912 loads of wet refuse, and 1,582 loads of dry ashes; we have also removed 161 loads of liquid from 61 cesspools, giving a total of 5,655 loads; the totals for the four previous years were as follows :—

1901	1902	1903	1904
4,650	7,933	8,031	6,473

Dry Ash Bins.—There are now on the books 17,564 ash pans or tubs (9,758 worked from the Eastcroft Depôt, and 7,806 from the district depôts). The number at the end of 1904 was 16,096, and in 1903, 14,242, thus showing an increase on the two years of 3,322.

This increase has been a steady one for the past four years, and as it is all practically due to the erection of new property, it represents a permanent increase in the work of the department. In fact, during this period the cost of emptying dry ash bins has increased by about £1,200.

The number of loads collected by the dry ash carts during the year was 18,266, and by the pot carts 2,582. The total was thus 20,848, or 401 per week, as against 381 per week during 1904.

Slaughter-House Refuse.—970 loads, weighing 968 tons, have been collected from 276 galvanized steel pails at 66 slaughter-houses. Each pail is brought to the depôt to be emptied, and before being returned is washed clean. The amount received for the hire of pails was £34 2s. 6d.

The following table shows the total number of loads collected in each district during the past 11 years :—

Number of Loads Collected.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
NOTTINGHAM:—											
Pail-Closets	75,911	76,134	74,675	73,469	72,835	72,502	71,925	71,282	70,876	70,358	69,060
Night Ashpits	2,460	2,278	2,391	2,406	2,263	2,372	2,291	2,148	1,758	1,293	1,325
D.A. Pits and D.A. Tubs ..	8,820	9,518	10,230	11,851	13,275	14,055	15,018	11,000	11,673	11,658	12,016
Slaughter-house	975	1,037	1,021	1,034	1,023	1,058	1,123	1,060	918	964	970
Pot Cart	1,348	1,379	1,390	1,360	1,371	1,817	2,043	2,215	2,421	2,515	2,582
BASFORD & BULWELL:—											
Pail-Closets	30,058	30,331	30,321	30,404	30,353	30,522	30,507	30,398	30,543	30,668	30,332
Night Ashpits								1,037	2,047	2,032	1,648
D.A. Tubs								5,035	6,346	5,603	5,806
RADFORD & LENTON:—											
Pail-Closets	20,593	21,006	21,183	22,289	22,784	22,628	22,673	22,951	22,966	22,906	22,580
Night Ashpits	1,951	2,666	2,844	3,276	2,779	2,083	2,363	2,426	2,003	1,507	939
D.A. Tubs										1,772	2,026
TOTALS	142,116	144,349	144,055	146,089	146,683	147,037	147,943	149,552	151,551	151,276	149,284
WEEKLY AVERAGES ..	2,733	2,775	2,770	2,809	2,821	2,828	2,845	2,876	2,914	2,909	2,871

Disposal of Refuse.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905
No. of Wagons sent out ..	4,109	3,134	3,091	3,595	3,145	1,984	3,077	3,151	3,130	3,142	3,289
	T. C. Q.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.
Average Weight per Wagon ..	7 17 2	7 18	7 19 3	7 19 1	8 1 2	8 0	8 1 2	8 2 2	8 3 0	8 2 1	8 3 0
No. of Boats sent out ..	359	574	514	479	592	734	633	580	613	491	415
	T. C. Q.	T. C.	T. C.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.	T. C. Q.
Average Weight per Boat ..	32 10 0	32 10	32 17	33 6 1	33 2 2	31 10 1	29 17 2	29 3 2	29 13 3	29 17 0	28 9 3

Disposal of Refuse.—With the completion of the two Destructors, the difficulty of disposing of the refuse now appears to have been overcome. With the exception of a small quantity collected at Bulwell, the whole of the dry ashes and refuse, other than manure, has been destroyed.

The Eastcroft Destructor has been at work 4,879 hours, and has consumed 24,284 tons, 4 cwts., 3 qrs., as against 24,764 tons during 1904. It has produced 1,085,470 Units of Electricity, and evaporated 6,186,470 gallons of water. Of the above refuse, 2,852 tons were brought by rail from Basford at a cost of £175.

The Radford Destructor has been at work throughout the year, but only working nine hours per day. 7,695 tons of refuse have been destroyed, and 2,727 tons of clinker and flue dust have been produced. The disposal of the clinker is now our greatest difficulty, owing to there being no demand for it, and no land in the Radford district available as a tip.

The demand for night-soil has again been much greater than the supply, with the result that you have been able to dispense with the services of both salesmen, and also to raise the price of the material by threepence per ton, and at the present time we are booked up with orders for the next three months.

During the year the night-soil sold as manure has been transported as follows:—By boat, 11,823 tons; by rail, from Eastcroft, 13,728 tons; from Basford, 6,503 tons; and from Radford, 6,573 tons; by traction engine from Eastcroft, Radford, and Basford, 8,280 tons; taken direct to farms by drays, 4,229 tons, and carted by farmers, from Radford, 400 tons. This gives a total of 51,536 tons, being 2,635 tons less than the previous year, but 4,310 tons more than in 1902.

The following table shows the quantities of night-soil sent out by rail and boat during the past 11 years:—

The whole of the refuse received at the Eastcroft (excepting that from pail closets) is weighed, and the figures for the past four years are as follows:—

	1902	1903	1904	1905
	Tons.	Tons.	Tons.	Tons.
Dry Ashes	10,898	11,901	14,139	13,959
Wet Ashpit Refuse ...	1,981	1,517	1,242	1,373
Trade Refuse (General)...	2,629	3,397	3,687	3,283
Trade Refuse (Butchers, &c.)	2,038	2,430	2,597	2,383
Ashes from Basford & Bulwell	1,830	4,884	3,251	2,852
Rammel from Radford...	612	1,074	126	—
Totals	19,988	25,203	25,042	23,850

The following have been collected from the refuse and sold, realizing the sum of £232 6s. 6d. :—

	Tons	Cwts.	Qrs.
Solder (recovered from old tins)	1	10	2
Light tins (from solder furnace)...	94	3	0
Heavy Iron	12	14	0
Light Iron and Tins	55	18	0
Light Hoops	34	16	1
Galvanized Scrap	21	2	0

DEPÔTS.—These are four in number, situate as follows:—Eastcroft, Radford, Basford, and Bulwell.

Considerable improvements have again been effected during the year. At Eastcroft the re-arrangement of the workshops has been completed, the very much needed machinery has been fixed, and already considerable benefit has been derived from its use. In future we shall be able not only to repair the whole of the vehicles in use, but to build all new ones, instead of having to purchase them as hitherto. At Radford Depôt a new washing shed has been erected and is greatly appreciated by the workmen. This Depôt is now complete, but if the district continues to grow at the present rate, it will soon be necessary to provide some additional stabling. We still occupy very unsatisfactory premises at Basford and Bulwell, but considerable progress has now been made with the new depôt, so that at a very early date the present arrangement will cease.

HORSES.

Total number of Horses, Dec. 31st, 1904 ...	109
Disposed of during 1905	16
Purchased during 1905	16
Number of horses at Eastcroft	67
,, ,, Basford	23
,, ,, Radford	13
,, ,, Bulwell	4
,, ,, Bagthorpe...	2
Total No., Dec. 31st, 1905 ...	109

The average working life of the horses disposed of was $8\frac{1}{8}$ years, which is an extremely good record, and compares most favourably with 1902 and 1903, when it was 7 and $4\frac{1}{2}$ years respectively. The 16 horses sold during the year realised £124 10s. 6d. Each horse purchased cost £53.

As in the previous year, the health of the horses has been very satisfactory, there having been no cases of serious illness. This good health I attribute to the extra comforts which have been provided during the past three years, which, in my opinion, have been well worth the money expended.

The cost of horse-keep during the year has been 13s. per horse per week. This, considering the amount of work performed by your horses, is a very reasonable sum, and compares favourably with the three previous years, when the amounts were 13s. 7d., 14s. 1d., and 16s. 9d. respectively.

Rolling Stock.—This has been kept in good condition during the year, and now consists of 62 drays, 58 carts, 1 wagon, 30 railway trucks, and 7 canal boats.

Cleansing Courts, Passages, &c.—This work is carried out by two men who devote the whole of their time to washing out and disinfecting the closets, courts, &c., in the Narrow Marsh and Carlton Road districts. These places are now in a much better condition than formerly, and during the coming summer it is intended to put on additional men and thus extend a work which is greatly appreciated by all whose duty brings them in contact with these districts.

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