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CITY OF NOTTINGHAM.

ANNUAL HEALTH REPORT

FOR

1906,

TOGETHER WITH

A SPECIAL REPORT

ON

THE HEALTH OF LACE DRESSING OPERATIVES

(PREPARED FOR THE HOME OFFICE),

BY

PHILIP BOOBBYER, M.D.,

MEDICAL OFFICER OF HEALTH,

MEDICAL SUPERINTENDENT OF ISOLATION HOSPITALS.

Nottingham :

THOS. FORMAN AND SONS, SHERWOOD STREET.

CITY OF NOTTINGHAM.

1906—1907.

HEALTH COMMITTEE.

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„ TUSTIN.

„ WADE.

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

GENTLEMEN,

The following Annual Report is the 18th I have had the honour of preparing as Medical Officer of Health for Nottingham.

The estimated population of the City at the middle of 1906 was 254,567. The census figure of 1901 was 239,753.

The birth-rate shows no sign of recovery, being at practically the same figure as in 1905, viz., 26·55 per 1,000 living.

The crude general death-rate was equal to 15·97 per 1,000 living, the lowest reliable annual death-rate recorded in Nottingham.

The infant deaths were equal to 171 per 1,000 births during the year, a rate no less than 16 per 1,000 higher than that of the preceding year. The increased mortality of infants was chiefly caused by summer diarrhœa, 309 deaths under one year being certified as due to this complaint, as compared with 152 during 1905.

All the other principal epidemic diseases taken together caused only 168 deaths; enteric fever, diphtheria, and whooping-cough accounting for 121 of these in practically equal shares.

The additions made in recent years to the staff and equipment of the Health Department have gone far to bring the latter up to a modern-day standard of efficiency. But so long as the dry system of excrement disposal is suffered to continue as the system in use for the greater part of the City, so long will it be impossible for the department to do itself justice in promoting the health, comfort, and decent living of the population.

There are other matters still requiring attention, to which I have usually referred in the introductions of former Reports, but, as there is none which can compare for importance or urgency with the necessity for converting the dry system to one of water carriage, I will not run the risk on the present occasion of distracting attention from it.

The presence, in large quantity, of dust of various kinds in the atmosphere of our towns, constitutes one of the gravest existent dangers to the health of their inhabitants, and when we consider that the dry closet not only adds greatly to the volume of this dust, but adds also some of its most revolting and injurious constituents, we cannot fail to realize that its removal is a matter of imperative and urgent necessity.

PHILIP BOOBYER.

TABLE I.

Nottingham. Population, Inhabited Houses, Marriages, Births and Deaths for 1906, and for the 10 years 1896-1905.

	Estimated Population.	Inhabited Houses.	† Marriages	Births.	Deaths.			Deaths in Public Institutions.
					Total at all ages.	Under One Year.	Under 5 Years.	
1906	254,567	59,828	2387	6759	4069	1158	1477	764
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
Average of the ten years 1896-1905.	240,610	...	2067	6807	4254	1233	1702	721

* 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 1906, and the 10 years 1896-1905.

	Rate per 1000 of Population.		Per 1000 Births Deaths under 1 year.	Per 1000 of Total Deaths.			Deaths in Public Insti- tutions.
	Birth Rate.	Death Rate.		Deaths under 1 year.	Deaths under 5 years.		
1906	26.55	15.98	171	285	363		188
1905	26.5	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
Average of the ten years 1896-1905.	28.27	17.69	180	288	398		171

TABLE III.

Schedule A—Nottingham. 1906. 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 ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(c) No Statement ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles ..	2	3	..	..	..	..	..	..	..	..	..	..	..	5
3	Scarlet Fever ..	1	9	5	1	1	..	..	..	..	..	..	..	..	17
4	Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza ..	..	1	..	..	..	..	3	..	6	3	6	5	1	25
6	Whooping-Cough ..	22	17	1	..	..	..	..	..	..	..	..	..	..	40
7	Diphtheria ..	3	22	12	3	..	..	1	..	..	..	..	..	..	41
8	Enteric Fever ..	..	1	5	3	6	3	12	4	5	1	..	..	..	40
9	Asiatic Cholera ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Diarrhoea, Dysentery ..	254	45	..	..	..	1	1	..	1	..	2	4	1	309
11	Epidemic Enteritis ..	55	10	..	..	..	..	..	..	..	..	..	1	..	66
12	Other allied Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Continued Fever ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
14	Chicken Pox ..	3	..	..	..	..	..	..	..	..	..	..	..	..	3
15	Hydrophobia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Glanders ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Tetanus ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Anthrax ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
19	Cowpox ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Syphilis ..	14	..	..	..	..	1	1	1	..	1	..	..	..	18
21	Gonorrhœa ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
22	Phagedæna ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
23	Erysipelas ..	3	..	..	..	..	..	1	1	2	1	1	..	1	10
24	Puerperal Fever ..	..	..	..	..	3	3	13	..	..	..	..	..	..	19
25	Pyæmia ..	6	1	..	..	2	..	..	2	2	3	3	2	1	22
26	Infective Endocarditis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Other Allied Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
28	Carbuncle ..	..	..	..	..	..	..	..	..	..	1	1	..	..	2
29	Cancrum Oris ..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
30	Malarial Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31	Rheumatic Fever ..	..	..	1	2	..	1	1	..	1	..	2	..	..	8
32	Rheumatism of Heart ..	..	..	1	..	2	1	2	1	..	2	1	..	..	10
33	Tuberculosis of Brain ..	19	23	6	1	..	..	..	..	1	..	..	..	..	50
34	Tuberculosis of Larynx ..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
35	Phthisis ..	5	7	3	6	18	35	72	81	54	26	9	1	..	317	
36	Abdominal Tuberculosis ..	11	5	4	2	..	..	2	3	2	..	..	..	..	29
37	General Tuberculosis ..	1	3	1	2	..	..	4	..	1	1	1	1	..	15
38	Other forms Tuberculosis ..	..	..	2	1	1	..	..	..	..	..	..	..	..	4
39	Other Infective Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
40	Rheumatoid Arthritis ..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
41	Thrush ..	6	..	..	..	..	..	..	..	..	..	..	..	..	6
42	Actinomycosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
43	Hydatid Diseases ..	..	..	..	..	..	1	1	..	..	..	..	..	..	2
44	Scurvy ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45	Other Diseases due to Altered Food ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
46	Acute Alcoholism ..	..	..	..	..	..	..	..	1	1	..	1	..	..	3
47	Chronic Alcoholism ..	..	..	..	..	..	..	1	3	6	2	1	..	..	13
48	Chronic Industrial Poisonings ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
49	Other Chronic Poisonings ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
50	Addison's Disease ..	..	..	..	..	1	..	..	..	1	..	..	..	..	2
	TOTALS ..	405	149	41	21	34	46	115	97	84	41	30	14	4	1081	

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
51	Osteo-Arthritis .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
52	Gout .. ..	..	..	..	..	..	..	..	..	..	1	..	2	..	3
53	Cancer .. ..	..	..	..	..	2	5	20	48	60	59	21	2	217	..
54	Sarcoma .. ..	..	3	..	..	1	..	4	4	3	1	..	..	16	..
55	Diabetes Mellitus .. ..	..	..	..	..	2	1	..	2	4	7	10	..	1	27
56	Purpura Hæmorrhagica ..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
57	Hæmophilia .. ..	..	..	..	..	..	1	..	..	..	..	..	..	..	1
58	Anæmia .. ..	..	1	..	1	1	..	1	1	2	1	3	..	..	11
59	Lymphadenoma .. ..	..	..	..	1	1	..	..	..	1	..	..	..	..	3
60	Premature Birth	160	..	..	..	..	..	..	..	..	..	..	..	..	160
61	Injury at Birth	11	..	..	..	..	..	..	..	..	..	..	..	..	11
62	Debility at Birth	57	..	..	..	..	..	..	..	..	..	..	..	..	57
63	Atelectasis	23	..	..	..	..	..	..	..	..	..	..	..	..	23
64	Congenital Defects	38	1	..	1	1	..	..	..	..	..	..	..	..	41
65	Myxœdema .. ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
66	Pernicious Anæmia .. ..	..	..	..	..	..	1	1	..	..	..	..	..	1	3
67	Exophthalmic Goitre .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
68	Patent Foramen Ovale ..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
69	Cretinism .. ..	..	1	..	..	..	..	..	1	..	..	..	..	..	2
70	Want of Breast Milk	8	..	..	..	..	..	..	..	..	..	..	..	..	8
71	Atrophy, Debility, Marasmus ..	88	6	..	..	..	..	..	..	..	..	..	..	..	94
72	Dentition	3	6	..	..	..	..	..	..	..	..	..	..	..	9
73	Rickets	6	5	..	..	..	..	..	..	..	..	..	..	..	11
74	Old Age, Senile Decay .. ..	..	..	..	..	..	..	..	..	6	50	114	42	212	..
75	Convulsions	45	6	1	..	..	..	..	..	..	..	..	..	..	52
76	Meningitis	10	10	4	1	..	1	..	1	1	1	..	1	..	30
77	Encephalitis .. ..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
78	Apoplexy .. ..	..	..	..	..	1	1	6	12	19	29	46	31	7	152
79	Softening of Brain .. ..	..	..	..	..	..	..	..	1	5	5	8	..	1	20
80	Hemiplegia .. ..	..	..	..	..	..	..	..	2	6	8	7	4	27	..
81	Genrl. Paralysis of Insane ..	..	..	..	..	1	..	4	7	8	2	..	1	..	23
82	Other forms of Insanity ..	..	..	..	..	..	2	..	2	3	1	5	3	..	16
83	Chorea .. ..	..	..	1	1	..	..	..	1	..	..	..	..	..	3
84	Cerebral Tumour .. ..	..	..	1	1	..	..	..	2	2	..	1	..	..	7
85	Epilepsy .. ..	..	..	..	..	1	3	2	8	3	2	1	..	1	21
86	Laryngismus Stridulus ..	..	..	..	..	..	..	..	..	1	1	..	..	..	..
87	Locomotor Ataxy .. ..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
88	Paraplegia .. ..	..	..	..	..	..	1	..	2	3	4	1	..	11	..
89	Other forms, Brain and Spinal Cord Diseases ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
90	Paralysis Agitans .. ..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
91	Bulbar Paralysis .. ..	..	..	..	..	..	..	..	..	1	1	..	..	..	2
92	Peripheral Neuritis .. ..	..	..	..	..	..	..	..	3	..	1	..	..	..	4
93	Otitis	1	1	1	..	1	..	..	1	..	..	..	..	..	5
94	Disease of Nose, Epistaxis ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
95	Diseases of Eye .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
96	Pericarditis .. ..	..	1	1	..	..	..	..	..	1	..	1	..	..	4
97	Endocarditis	2	1	3	6	3	3	10	32	45	61	82	27	4	279
98	Hypertrophy of Heart .. ..	..	..	..	1	..	..	1	1	4	11	7	9	2	36
99	Angina Pectoris .. ..	..	..	..	..	..	..	..	..	2	4	3	2	..	11
100	Aneurism .. ..	..	..	..	..	..	..	..	5	3	3	3	..	..	14
101	Senile Gangrene .. ..	..	..	..	..	..	..	..	1	3	1	3	1	..	9
102	Embolism, Thrombosis ..	..	..	..	..	1	..	4	1	4	2	1	2	..	15
103	Phlebitis .. ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
TOTALS		452	43	13	13	14	15	35	103	169	216	298	226	66	1663

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.														ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-		
104	Varicose Veins .. ..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
105	Other Diseases, Heart [and Vessels	2	..	..	..	..	..	..	2	..	3	15	13	3	38
106	Degenerated Arteries .. ..	..	..	..	..	..	..	..	..	..	3	1	..	..	4
107	Laryngitis	1	3	..	..	..	..	..	..	..	..	..	..	..	4
108	Croup .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
109	Other Diseases, Larynx [and Trachea .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
110	Acute Bronchitis	68	18	..	..	..	1	2	5	15	33	48	35	3	228
111	Chronic Bronchitis .. ..	..	..	..	..	..	..	1	2	11	35	48	31	3	131
112	Lobar Pneumonia	24	27	9	1	5	3	8	10	15	21	17	9	3	152	
113	Lobular Pneumonia	82	43	2	..	..	..	2	3	3	8	9	13	1	166
114	Pneumonia .. ..	..	..	..	..	..	..	1	..	..	2	1	1	..	5
115	Emphysema, Asthma .. ..	..	..	..	..	..	..	2	..	4	5	3	1	..	15
116	Pleurisy	1	4	2	..	..	1	2	3	2	5	..	3	..	23
117	Other Diseases, Respira- tory System .. ..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
118	Cirrhosis of Lung .. ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
119	Diseases of Mouth and Annxæ .. ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
120	Tonsillitis	1	..	1	..	..	1	..	..	..	..	..	..	..	3
121	Diseases of Pharynx .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
122	Diseases of Esophagus .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
123	Ulcer of Stomach and Duodenum	1	..	..	..	3	1	1	2	2	4	1	..	..	15
124	Other Diseases of Stomach	9	..	..	1	..	..	..	..	1	3	1	1	..	16
125	Enteritis	52	7	3	..	..	1	..	..	1	2	1	2	..	69
126	Appendicitis	1	1	2	3	2	1	1	2	2	2	..	..	..	17
127	Obstruction of Intestine	1	..	2	..	1	..	1	..	2	4	3	6	..	20	
128	Other Diseases of Intestine .. ..	..	..	..	..	..	..	..	1	4	1	2	..	..	8
129	Cirrhosis of Liver	1	..	..	..	..	..	1	7	4	2	3	1	..	19
130	Other Diseases of Liver .. ..	..	..	..	..	..	..	1	1	..	1	..	1	..	4
131	Peritonitis .. ..	..	1	2	1	1	1	1	1	1	..	1	1	..	11
132	Other Diseases, Digestive System .. ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
133	Strangulated Hernia .. ..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
134	Gall Stones .. ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
135	Diseases, Lymphatic Sys- tem and Glands	1	..	1	..	1	..	..	..	1	3	..	..	..	7
136	Acute Nephritis .. ..	..	4	2	..	2	..	5	6	5	5	3	1	..	33
137	Bright's Disease .. ..	..	..	1	..	..	2	5	11	11	19	14	9	..	72
138	Calculus .. ..	..	..	..	..	1	..	..	..	..	1	1	..	..	3
139	Diseases of Bladder and Prostate .. ..	..	..	..	..	..	..	..	2	2	4	3	6	1	18
140	Other Diseases, Urinary System .. ..	..	..	..	..	..	..	..	..	..	..	1	1	..	2
141	Diseases of Testis & Penis .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
142	Diseases of Ovaries .. ..	..	..	..	..	..	..	..	2	2	..	..	..	..	4
143	Diseases of Uterus and Appendages .. ..	..	..	..	1	..	1	..	2	3	1	..	..	..	8
144	Diseases of Vagina and External Genitals .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
145	Diseases of Breast .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
146	Abortion, Miscarriage .. ..	..	..	..	..	..	..	3	1	..	..	..	..	..	4
147	Puerperal Mania .. ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
	TOTALS	245	108	27	7	16	13	38	64	92	168	180	138	14	1110	

TABLE III. Schedule A—continued.

No.	DISEASES.	AGES.													ALL AGES.
		0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	75-	85-	
148	Puerperal Convulsions ..	..	..	..	..	1	..	1	1	..	..	..	..	..	3
149	Placenta Prævia, Flooding ..	..	..	..	..	..	..	2	3	1	..	..	..	..	6
150	Puerperal Thrombosis ..	..	..	..	..	..	..	1	1	..	..	..	..	..	2
151	Other Diseases, Pregnancy [and Childbirth ..	..	..	..	..	..	1	1	3	..	..	..	..	..	5
152	Arthritis, Ostitis, Periostitis ..	4	1	..	..	..	1	3	1	..	5	2	3	..	20
153	Other Diseases, Ossous [System ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
154	Ulcer, Bed sore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155	Eczema ..	8	..	..	..	..	..	..	..	..	..	2	..	..	10
156	Pemphigus ..	1	..	..	..	..	..	..	..	..	1	..	..	..	2
157	Other Diseases, Integu- [mentary System ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
158	Accidents and Negligence:	..	..	..	..	..	..	..	..	..	..	..	..	..	..
159	In Mines and Quarries ..	..	..	..	..	..	2	..	1	1	..	..	..	..	4
160	In Vehicular Traffic ..	..	1	2	1	3	..	..	1	2	1	..	..	..	11
161	On Railways ..	..	..	..	..	..	..	1	2	..	..	..	..	..	3
162	On Ships, Boats, &c. (not drowning) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
163	In Building Operations ..	..	..	..	..	..	..	2	..	1	1	..	..	..	4
164	By Machinery ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
165	By Weapons & Implements ..	..	1	1	..	..	..	..	..	..	..	..	..	..	2
166	Burns and Scalds ..	..	12	4	..	..	..	..	..	1	..	2	1	1	21
167	Poisons, poisonous vapours ..	..	1	1	..	..	..	..	..	..	1	1	..	1	5
168	Surgical Narcosis ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
169	Surgical Neglect ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
170	Effects of Electric Shock ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
171	Corrosions by Chemicals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
172	Drowning ..	..	1	..	..	..	1	1	..	1	..	..	..	..	4
173	Suffocation, Overd. in Bed ..	31	..	..	..	..	..	..	..	..	..	..	..	..	31
174	Otherwise ..	2	..	..	..	..	..	..	..	1	..	..	..	..	3
175	Falls in House or Work- shop ..	1	1	..	2	1	..	..	2	2	1	3	6	..	19
176	Falls not specified ..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
177	Falls in Street ..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
178	Weather Agencies ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
179	Otherwise, not stated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
180	Homicide ..	1	..	..	1	..	2	1	1	..	..	1	..	..	7
181	Suicides:—By Poison ..	..	..	..	..	..	1	..	2	3	..	1	..	..	7
182	By Asphyxia ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
183	By Hanging & Strangulatn. ..	..	..	..	..	..	..	..	4	..	1	3	..	..	8
184	By Drowning ..	..	..	..	..	1	1	..	2	2	2	..	..	..	8
185	By Shooting ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
186	By Cut or Stab ..	..	..	..	..	..	..	..	3	..	..	..	..	..	3
187	By Precipitation from Elevated Places ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
188	By Crushing ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
189	By other and unspecified methods ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
190	Execution ..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
191	Uncertified ..	6	1	..	..	..	..	..	1	4	3	4	2	..	21
TOTALS, Page 11 ..		56	19	8	4	6	9	14	28	19	16	22	12	2	215
TOTALS, Page 10 ..		245	108	27	7	16	13	38	64	92	168	180	138	14	1110
TOTALS, Page 9 ..		452	43	13	13	14	15	35	103	169	216	298	226	66	1663
TOTALS, Page 8 ..		405	149	41	21	34	46	115	97	84	41	30	14	4	1081
GRAND TOTALS ..		1158	319	89	45	70	83	202	292	364	441	530	390	86	4069

Schedule B.—Nottingham. 1906. Deaths Registered from all causes

No.	Causes of Death.	All Ages.	Under 1	1—5	5—15	15—25	25—65	65 & up-wards.	In Public Institutions
1	Small-pox .. .. .	..	..	..	..	..	..	..	..
2	Measles	5	2	3	..	..	..	..	..
3	Scarlet Fever	17	1	9	6	1	..	..	12
4	Typhus Fever .. .. .	..	..	..	..	..	..	..	..
5	Epidemic Influenza	25	..	1	..	..	12	12	1
6	Whooping-cough	40	22	17	1	..	..	..	2
7	Diphtheria, Membranous Croup	41	3	22	15	..	1	..	18
8	Croup .. .. .	..	..	..	..	..	..	..	..
9	Enteric Fever	40	..	1	8	9	22	..	24
10	Asiatic Cholera .. .. .	..	..	..	..	..	..	..	..
11	Diarrhoea, Dysentery	309	254	45	..	1	2	7	15
12	Epidemic or Zymotic Enteritis	66	55	10	..	..	..	1	..
13	Enteritis	69	52	7	3	1	3	3	..
14	<i>Other continued Fevers</i> .. .. .	..	..	..	..	..	..	..	..
15	Continued Fever	1	..	1	..	..	..	..	..
16	Chicken-pox	3	3	..	..	..	..	..	..
17	Erysipelas	10	3	..	..	..	5	2	6
18	Puerperal Fever	19	..	..	..	6	13	..	2
19	<i>Other septic diseases</i> .. .. .	..	..	..	..	..	..	..	..
20	Carbuncle	2	..	..	..	..	1	1	1
21	Cancrum Oris	1	..	1	..	..	..	..	..
22	Intermittent Fever and Malarial Cachexia .. .. .	..	..	..	..	..	..	..	..
23	Tuberculosis of Meninges	50	19	23	7	..	1	..	4
24	Tuberculosis of Lungs	317	5	7	9	53	233	10	64
25	Other forms of Tuberculosis	49	12	8	12	1	13	3	14
26	Alcoholism	16	..	..	..	..	14	2	3
27	Cancer (Malignant new growths)	233	..	3	..	3	144	83	45
28	Premature Birth	160	160	..	..	..	..	..	4
29	Developmental Diseases	135	129	2	2	1	1	..	4
30	Old Age	212	..	..	..	..	6	206	68
31	Meningitis	30	10	10	5	1	3	1	2
32	Inflammation and Softening of Brain	22	..	..	..	..	12	10	10
33	Organic Diseases of Heart and Vessels	413	4	2	11	7	207	182	104
34	Acute Bronchitis	228	68	18	..	1	55	86	37
35	Chronic Bronchitis	131	..	..	..	..	49	82	29
36	Lobar (Croupous) Pneumonia	156	24	27	10	8	56	31	21
37	Lobular (Broncho) Pneumonia	167	82	43	2	..	17	23	9
38	Diseases of Stomach	31	10	..	1	4	13	3	8
39	Obstruction of Intestines	39	2	1	7	4	14	11	23
40	Cirrhosis of Liver	19	1	..	..	..	14	4	3
41	Nephritis and Bright's Disease	105	..	4	3	4	67	27	12
42	Tumours and other Affections of Female Genital Organs	12	..	..	1	1	10	..	7
43	Accidents and Diseases of Parturition	21	..	..	..	2	19	..	3
44	Deaths by Accident or Negligence	118	36	17	12	9	25	19	35
45	Deaths by Suicide	27	..	..	..	3	20	4	4
46	Deaths from Ill-defined Causes .. .. .	..	..	..	..	..	..	..	..
47	All other Causes	730	201	37	19	33	247	193	170
	ALL CAUSES	4069	1158	319	134	153	1299	1006	764

TABLE IV.

Nottingham, 1906. 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 ...	519	2.04	128
2. Pulmonary Diseases	722	2.84	177
3. Tuberculous Diseases	416	1.63	102
B. Infants under 1 year of Age.	Deaths.	Deaths per 1000 Births.	Deaths per 1000 Deaths under 1 year.
4. Wasting Diseases ...	313	46.3	270
5. Convulsive Diseases	58	8.6	48

NOTES.

1. Includes Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping-Cough, Typhus, Enteric, and Simple Continued Fevers, and Diarrhoea.
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 1896-1905, and in the Year 1906.

DISEASE.	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	Ten Years, 1896-1905.		1906.	
											Annual Average.	Proportion of Deaths to 1000 Deaths.	Deaths.	Proportion of Deaths to 1000 Deaths.
Small-pox .. ..	..	..	..	..	..	..	..	2	12	1	1.5	0.352	..	..
Measles .. ..	..	49	104	140	45	96	4	98	44	232	101.5	23.86	5	1.23
Scarlet Fever ..	..	34	33	53	55	11	23	34	29	19	31.8	7.47	17	4.18
Diphtheria .. ..	..	21	23	30	28	29	31	60	69	49	35.2	8.27	41	10.08
Whooping-Cough ..	..	117	59	55	103	96	57	90	91	61	80.0	18.80	40	9.83
FEVERS. (Typhus Enteric (Simple Continued	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	45	54	114	75	79	50	36	57	24	60.9	14.32	40	9.83
	..	1	1	4	1	1	..	..	..	..	0.8	0.19	1	0.25
Diarrhoea .. ..	..	530	385	600	387	361	194	166	346	202	334.8	78.7	375	92.14
TOTAL	585	797	659	996	694	673	339	486	648	588	646.5	152.0	519	127.56
TOTAL, LONDON ..	14,100	11,525	12,565	11,228	10,136	10,203	10,393	8,166	9,990	79,90	10,629	131.4	9,047	127.13
TOTAL, ENGLAND & WALES	66,936	67,051	69,714	69,820	64,059	66,531	53,795	49,150	65,633	51,581	62,427	114.3	60,063	113.19

Birth-Rate, Death-Rate, Infantile Death-Rate, and Death-Rate from Epidemic 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 Princip. Epidemic Diseases.	Small-Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	"Fever."	Diarrhoea	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
1906	26·5	15·9	171	2·04	..	0·02	0·07	0·16	0·16	0·16	1·48	1·63

II. ENGLAND AND WALES.

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

In five yearly periods, 1858-1860, 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	1·30	
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	1·31	
1899	29·3	18·3	163	2·21	0·01	0·31	0·12	0·29	0·30	0·20	0·98	1·33	
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	1·26	
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	1·14	
1906	27·0	15·4	133	1·73	0·00	0·27	0·10	0·17	0·23	0·09	0·87	..	

Principal Vital Statistics of the 76 Greater English Towns for 1906
(taken from the Registrar-General's Annual Summary).

**Populations estimated to middle of 1906 (from increase during
Decennium, 1891-1901).**

	Populations estimated to middle of 1906.	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate.	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases.	Percent- age of uncerti- fied 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	34,547,016	27·0	15·36	15·36	133	7·5	67·4	1·73	1·5
76 Large Towns ..	15,818,360	27·8	15·87	16·86	145	8·2	70·1	2·24	1·0
London	4,721,217	26·5	15·11	15·88	131	7·0	67·1	1·93	0·2
Croydon	151,011	25·7	13·38	13·71	127	6·3	58·7	1·76	—
Willesden	143,622	29·0	11·58	12·42	118	5·6	61·8	1·49	1·2
Hornsey	86,935	18·4	8·84	10·08	85	4·1	57·0	0·97	—
Tottenham	119,503	30·5	13·83	14·92	130	7·2	64·1	2·18	0·1
West Ham	301,617	30·6	15·70	16·79	150	8·5	69·4	3·17	0·0
East Ham	129,886	28·0	11·61	12·38	128	6·2	58·6	2·23	0·2
Leyton	118,287	28·1	11·95	12·29	118	5·8	53·1	2·20	0·3
Walthamstow	121,334	29·3	12·75	13·48	134	6·7	63·1	2·44	0·1
Hastings	67,144	16·3	13·50	12·98	126	6·7	55·2	0·66	0·8
Brighton	128,095	22·3	14·70	14·49	111	7·1	66·2	1·09	0·1
Portsmouth	205,118	28·7	14·91	15·31	130	7·3	61·8	1·84	1·2
Bournemouth	67,702	17·7	13·77	14·55	117	6·5	68·0	0·72	0·4
Southampton	117,312	24·9	13·08	13·00	113	6·3	60·8	1·37	—
Reading	78,987	23·8	12·71	13·15	115	5·9	66·4	1·82	2·8
Northampton	93,749	21·3	11·20	11·64	120	5·0	60·1	1·16	1·7
Ipswich	71,809	26·5	14·87	14·52	142	6·2	68·6	1·17	0·8
Great Yarmouth.. ..	52,613	27·1	17·34	15·87	162	7·4	64·7	2·46	—
Norwich	117,958	26·2	17·72	16·92	172	7·9	72·0	2·99	0·7
Plymouth.. ..	118,014	24·0	16·24	15·83	152	8·1	62·4	1·96	—
Devonport	78,405	27·3	13·12	13·76	111	6·9	55·4	1·38	—
Bristol	363,223	25·9	14·46	14·85	127	7·1	66·2	1·56	0·3
Hanley	66,360	34·0	18·72	20·46	162	9·2	93·5	3·12	1·3
Burton-on-Trent.. ..	52,922	24·1	12·62	13·56	117	6·5	64·2	1·04	3·3
Wolverhampton	100,729	27·5	14·80	15·31	140	7·2	66·5	2·28	0·6
Walsall	91,577	29·6	14·64	15·50	156	6·8	67·4	2·03	0·5
Handsworth	63,819	23·5	10·90	12·00	119	4·4	66·1	1·35	1·2
West Bromwich	68,469	31·9	15·54	15·67	156	7·5	58·9	2·06	1·6
Birmingham	548,022	29·4	16·79	18·06	168	8·4	72·4	2·78	2·8
Kings Norton	72,608	25·6	9·54	9·98	103	4·2	49·1	0·85	2·6
Smethwick	64,531	31·5	14·02	15·34	129	7·0	78·0	2·09	1·8
Aston Manor	82,288	27·5	13·66	15·14	158	6·5	64·2	2·79	0·9
Coventry	76,374	31·6	16·06	16·10	138	7·7	66·1	2·71	2·4
Leicester	232,111	25·2	14·28	15·24	168	6·9	61·7	2·38	1·0
Grimsby	69,359	29·9	14·76	15·81	180	6·7	58·5	2·28	1·2

Principal Vital Statistics of the 76 Greater English Towns for 1906—continued.

	Populations estimated to middle of 1905.	Birth- Rate.	Recorded Death- Rate.	Cor- rected Death Rate.	DEATH-RATES AT AGE PERIODS.			Death- Rate from seven principal epidemic diseases.	Percent- age of uncerti- fied 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 ..	254,563	26·6	16·09	16·95	171	7·2	71·8	2·10	0·5
Derby ..	123,981	25·1	14·23	15·34	115	7·3	77·7	1·40	—
Stockport ..	99,646	26·9	18·95	20·47	186	9·5	82·7	2·89	0·2
Birkenhead ..	117,292	31·9	17·27	18·41	151	8·8	73·6	2·97	0·2
Wallasey ..	64,578	26·5	13·49	14·76	118	7·0	68·3	1·83	0·6
Liverpool ..	739,180	32·7	20·64	22·09	172	11·4	78·4	3·62	3·3
Bootle ..	65,989	33·0	18·23	20·08	150	10·1	80·2	3·38	2·6
St. Helens ..	91,153	34·0	17·23	18·67	158	9·2	76·9	2·02	4·7
Wigan ..	87,588	33·5	18·13	19·89	162	9·8	78·3	2·63	0·9
Warrington ..	69,280	32·5	18·29	19·70	157	10·0	84·5	2·93	3·6
Bolton ..	180,502	25·4	15·17	17·15	140	8·0	81·5	1·72	0·4
Bury ..	58,744	22·6	16·63	18·62	177	8·2	77·7	2·15	2·0
Manchester ..	637,126	29·3	19·17	21·37	167	10·7	81·8	3·09	0·8
Salford ..	231,077	30·2	18·25	20·16	159	10·0	83·0	3·23	0·3
Oldham ..	140,969	26·9	18·75	21·08	146	10·8	82·6	2·75	0·2
Rochdale ..	87,189	23·4	17·42	19·27	140	9·5	84·4	1·79	2·8
Burnley ..	102,808	27·8	19·55	22·04	212	10·0	84·3	3·82	1·1
Blackburn ..	134,015	25·3	16·03	18·13	156	8·2	78·4	2·23	2·9
Preston ..	116,399	28·7	19·18	20·98	199	9·3	81·2	3·58	3·1
Barrow-in-Furness	60,967	30·9	14·01	15·92	125	7·4	72·3	1·45	4·7
Huddersfield ..	94,851	24·3	17·32	18·58	135	9·1	81·2	2·21	1·0
Halifax ..	109,272	18·9	14·93	16·18	115	7·8	79·8	1·36	1·2
Bradford ..	288,544	20·6	16·12	17·82	152	8·5	78·8	2·03	0·8
Leeds ..	463,495	26·2	15·62	17·04	151	8·2	72·3	2·23	0·2
Sheffield ..	447,951	29·9	16·42	17·70	158	8·3	75·8	2·92	2·0
Rotherham ..	61,098	31·8	16·56	17·13	160	8·8	65·8	3·47	3·9
York ..	83,467	26·6	13·67	14·08	124	6·5	63·0	1·75	—
Hull ..	262,426	29·8	16·93	17·35	160	8·5	69·7	2·93	0·7
Middlesbrough ..	100,069	35·6	20·34	22·15	169	11·2	82·8	3·09	1·3
Stockton-on-Tees	52,664	33·8	16·11	16·89	127	8·0	78·4	1·85	0·9
West Hartlepool..	73,387	29·5	13·95	15·32	137	7·4	70·8	1·78	0·4
Sunderland ..	154,385	34·9	18·57	19·15	140	10·2	74·3	1·97	3·4
South Shields ..	111,402	31·8	17·57	18·60	148	9·9	75·7	2·60	4·2
Gateshead ..	123,191	31·9	16·32	17·20	161	8·2	71·8	2·78	5·8
Newcastle-on-Tyne	268,721	30·6	17·15	18·47	151	9·4	71·7	2·23	0·4
Tynemouth ..	54,138	32·2	18·84	19·45	148	10·3	71·4	2·03	2·0
Newport (Mon.)..	74,227	32·5	16·25	17·56	145	8·2	75·4	1·66	0·9
Cardiff ..	183,823	27·3	14·01	15·24	138	7·5	67·0	1·31	0·2
Rhondda ..	127,684	37·3	16·05	17·66	174	7·4	72·8	2·46	0·4
Merthyr Tydfil ..	74,961	36·4	19·08	20·23	179	9·9	65·7	2·31	0·4
Swansea ..	96,848	33·0	18·30	19·63	157	9·1	77·8	1·90	0·2

The City of Nottingham.

SITE and POPULATION DATA, and RATABLE VALUE, 1906.

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 $7\frac{1}{2}$ 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, £1,203,855 10s. 0d. (for Poor Law purposes).

GENERAL VITAL STATISTICS.

Population.—The estimate of population at the middle of 1906, based on the supposition that the proportional increase of the last inter-censal period has continued up to the present, amounts to 254,567. Estimates of population formed in this way, especially after the lapse of a considerable period from the date of the last census, are in the case of most towns liable to wide margins of error. But in the present instance, as on former occasions, we have two independent methods, besides, of forming a rough estimate of the existing population. The first is by multiplying the average number of persons per house (ascertained at the last census) into the number of houses on which a water rate is paid. This method yields a total of over 260,000. The second is by subtracting the deaths from the births, and adding the remainder to the previous year's total of population. This gives us a total of 254,467, which is only 100 less than that arrived at by the first or orthodox method. There are several fallacies, however, underlying both these methods of estimating population, and it is only with a full recognition of this fact that their use is legitimate. For example, as regards the first method, many of the so-called houses upon which water-rate is paid are not dwellings; and in respect of the second, emigration and immigration—especially in centres like Nottingham, with fluctuating industries—are liable to upset all inferences drawn from a simple difference between births and deaths.

The number of new houses erected during the year cannot at the present time be taken as a criterion, on account of the centrifugal movement of the population now taking place, owing to increased facilities of transit

to and from the suburbs. The number of new houses certified by the City Engineer between November, 1905, and November, 1906, was 1,119, as compared with 993 the year before. These 1,119 new houses would afford accommodation for 5,036 people (at the number per house revealed at the last census), but the actual increase is almost certainly more than 2,000 below this figure.

Presuming that the proportion of the sexes in the population of the City has remained unchanged since the date of the last census (100 males to 114·6 females), the estimated total of 254,567 persons at the middle of 1906 will have been made up of 118,624 males and 135,943 females. The ratio of males to females in the population of England and Wales as a whole is as 100 to 106·7.

Nottingham City now occupies the twelfth place from the highest on the list of the Great Towns of England and Wales, arranged in order of magnitude of estimated population. The town next above it is Hull, with a population of 262,426, and that next below, Salford, with a population of 234,077.

Marriages.—The marriages registered in Nottingham parish during 1906 numbered 2,387, the largest annual total recorded since the unification of the City area in 1899. During 1904 and 1905 the totals were only 2,057 and 2,077 respectively. This sudden advance in the number of marriages is probably, *inter alia*, an indication of increase in local prosperity. The marriage rate of the City, expressed as the number of persons married per 1,000 living, works out for 1906 upon the above figures at 18·75. The corresponding rates for England and Wales and for London were 15·6 and 17·1 respectively. As explained in a previous Report, I have no sufficient data now at my disposal to enable me to

express the marriage-rate as a proportion of the marriageable persons living, in accordance with the recommendation of the Registrar-General, and the method of putting it as a proportion of the total living population has the advantage of rendering it comparable with other contemporary figures similarly prepared (of which there are many), and with past records of the same order.

Nottingham.

Marriages in Year 1906.

	Qr. I.	Qr. II.	Qr. III.	Qr. IV.	TOTAL.
Churches	196	396	407	425	1424
Chapels	16	43	34	25	118
Registrars	169	229	213	234	845
	381	668	654	684	2387

Births.—The births registered in Nottingham during 1906 numbered 6,759, my return of births on this occasion being identical with that of the Registrar-General. The birth-rate per 1000 living to which this number corresponds is 26·55. The actual total of births shows an advance of 114 upon that for 1905, but, owing to the increase of population, the rate is only fractionally higher than that of the preceding year. As stated in my last Annual Report, the rate of 1905 was the lowest on record.

In former Reports I have called attention to the continuous decline of the birth-rate in this City and elsewhere, and have expressed the opinion that the failure of fertility is almost entirely due to wilful action on the part of potential parents directed to its production. Much has been written on the subject both in the medical and general press and periodicals, and elsewhere, since the decline of the birth-rate has become general and pronounced. Some writers support the opinion above enunciated, while others—often with

much scientific knowledge and ingenuity—endeavour to demonstrate that the decline of the birth-rate is due to the operation of laws underlying various conditions more or less generally incidental to modern modes of life—such as luxury, overcrowding and sedentary living in cities, late marriage, and the like—which act in total independence of direct human volition to retard the growth of population. Much, again, might be written in answer to this last argument, but a few words must here suffice. It is true that the growth of population is checked by such agencies as those last-mentioned, but the beginning of their operation is gradual, not sudden, as in the cases under discussion. Moreover, it is possible to point to communities, the age-constitution and conditions of life in which are practically identical, while the birth-rates are unequal. And again, there are many districts in these kingdoms, on the Continent of Europe, in our Colonies (notably Australia), and in America, where the birth-rate has fallen with remarkable abruptness, and in the practical absence of luxury, poverty, overcrowding, or other like unhealthy conditions. Lastly, one has only not to be blind and deaf, and devoid of ordinary understanding and perception, to be aware that means of preventing conception and of producing abortion are now advertised and sold with bare-faced effrontery, and that the rising generation is coming to regard all this with approval. It is not in my province to write a homily on the moral aspect of the questions here raised, but it is certainly legitimate for me to discuss any damage to the health of women occasioned by the means employed to prevent conception or produce abortion, and that the gravest possible injury is often thus caused there is not a shadow of doubt.

I shall mention now by way of illustration only one abortive poison much used in this district, and indeed all over the Midlands, at the present time. The material

in question is diachylon or oleate of lead plaster, formerly much used for surgical strapping. When taken regularly for any considerable period by pregnant women, this material produces abortion in many cases, but poisoning in all, and the poisoning in a large proportion results in paralysis, blindness, insanity, and even death.

A Bulwell woman was convicted at the Nottingham Summer Assizes of 1906, of practising as an abortionist with this agent, and, although no death was actually brought home to her, quite a large number of her victims were discovered, several of them reduced to the condition of helpless cripples as a result of a long course of the poison. She was sentenced to 18 months' hard labour, and, but for the recommendation to mercy made for no very obvious reason by the jury, her sentence, the judge informed her, would have been much heavier.

Of the 6,759 births, 3,535 were male, and 3,224 female. 210 of the male and 194 of the female were illegitimate. The illegitimate births were equal to 5.98 per cent. of all. The corresponding proportion in the three immediately preceding years were 5.7 per cent., 6.4 per cent., and 6.7 per cent.

The birth-rate per 1,000 of population in the 76 great towns of England and Wales taken together during 1906 was 27.8, that in London 26.5, and that in England and Wales as a whole 27.0.

The illegitimate births of England and Wales during 1906 amounted to 4 per cent. of all.

In order to eliminate all fallacy due to population changes in respect of sex, age, and condition as to marriage, the Registrar-General has made an exact comparison, in his Annual Summary for 1906, of the fertility of married women of conceptive ages in proportion to their numbers, in 1870-72 and in 1906 respectively, in London, showing that the actual loss of

fertility in 36 years amounts to 22 per cent., as compared with 24 per cent. yielded by a calculation based on the total population.

At the old birth-rate (of 36 years ago) the births in London during 1906 would have numbered nearly 156,000, instead of the 120,814 actually recorded.

Deaths.—The deaths of Nottingham residents during 1906 numbered 4,069 according to my returns, and 4,084 according to those of the Registrar-General. The discrepancy (of 15) produces only a fractional difference in the respective rates (0·01 per 1,000). The crude death-rate, therefore, or the proportion of the recorded deaths per 1,000 of the estimated population at the mid-year, based upon either total, is equal to 16·0. 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 crude death-rate multiplied by this figure rises to 16·9 per 1,000. If the corrected death-rate at all ages, in England and Wales during 1906, be taken as a standard 1,000, the comparative mortality figure for Nottingham during the year will read as 1,104.

The recorded death-rate for 1906 is the lowest on record, and is 1·7 per 1,000 below the average rate of the preceding ten years.

Of the 4,069 deaths registered during 1906 in Nottingham, 2,130 were of males, and 1,939 of females. The male deaths correspond with a rate of 17·96 per

1,000 males living at the mid-year, and the female to one of 14·26 per 1,000 females. There is thus a difference of 3·70 to the advantage of the females between the respective rates of the two sexes.

The corresponding difference for England and Wales, as a whole, is 2 per 1,000 in favour of females (males 16, females 14).

Had the deaths from diarrhoea been as few in 1906 as in 1905, the crude general death-rate of the town would have been slightly less than 15·3 per 1,000, instead of 16·0 as above recorded.

Both the recorded and the corrected death-rates of Nottingham for 1906 occupy the forty-second place from the lowest among the corresponding rates of the 76 Great Towns of England and Wales, having improved their position by seven and eight places, respectively, as compared with the figures for 1905. Three only of the great towns had corrected death-rates below 12 per 1,000 during 1906, as compared with five in 1905. On the other hand, five of these towns had corrected rates above 21 per 1,000, against four in 1905. The three towns in the first category were King's Norton, Hornsey, and Northampton; and the five in the latter were Oldham, Manchester, Burnley, Liverpool, and Middlesborough.

The infant death-rate of Nottingham, expressed as the proportion of deaths under 12 months per 1,000 births during the year, was 171. The corresponding rate for 1905 was 155, and the mean of such infant rates for the ten years, 1896–1905, was 180.

A glance at the table on page 32 will reveal at once the preponderant death cause, and the explanation of its occurrence. During the 12 weeks comprised between July 14th and October 6th, the deaths from diarrhoea numbered 323, as compared with 149 in the corresponding

period of 1905; the mean temperature was rather more than 61 degrees, as compared with less than 57 degrees in 1905; and the total rainfall $3\frac{1}{2}$ inches, as compared with more than six inches in 1905. During the hottest period of 1906, moreover, between July 14th and September 8th, when the mean temperature was 64·4 degrees, the rainfall was equal to only 1·48 inches, as compared with nearly five inches in 1905.

The infant mortality per 1,000 births in the 76 great towns during 1906 was equal to 145, in the 142 lesser towns to 138, in London to 131, in all England and Wales to 133, and in England and Wales less the 218 towns to 116. All these rates, with the exception of that for London (which is identical with the rate of 1905), show an advance upon the previous year's records of from three to six per 1,000.

The death-rate per 1,000 living between one and 60 years was equal to 7·2 in Nottingham, 8·2 in the 76 great towns, 7·9 in London, and 7·5 in England and Wales. The rates for Nottingham and London are lower than, and those for the great towns and for England and Wales are identical with, the corresponding rates of 1905. The deaths per 1,000 among persons aged over 60 years numbered 71·8 in Nottingham, 70·1 in the 76 great towns, 67·1 in London, and 67·4 in England and Wales. The rate for London is slightly less than that of 1905; all the other rates are in advance of the corresponding figures of the latter year.

Registration Sub-Districts.—The areas of these have remained unaltered since the unification of the City boundaries in the Spring of 1899. But, as I have before explained, the changes made in these sub-districts were so numerous and so considerable before that date, that it is out of the question to form a satisfactory estimate of their populations from the differences between census records, as we do in the case

of districts with stable boundaries. Under these circumstances, I have thought it best to assume that each sub-district has increased its population in the same relative proportion as the whole City. There are obvious objections to this method, the strongest of which is that it cannot possibly yield a reliable result in some of the sub-districts; but as it is apparently the best method that offers as an alternative to assuming that the populations of the sub-districts have remained stationary, I am practically compelled to make use of it.

Births in Registration Sub-Districts. 1906.

District.	Legitimate.		Illegitimate.		Total of each Sex.		Total of both Sexes.
	M.	F.	M.	F.	M.	F.	
Bulwell ..	710	651	63	50	773	701	1474
N.W... ..	706	687	31	42	737	729	1466
N.E.	855	761	49	38	904	799	1703
S.W.	546	463	24	22	570	485	1055
S.E.	510	466	43	42	553	508	1061
TOTALS ..	3327	3028	210	194	3537	3222	6759

The birth-rate of Bulwell is now declining. The rate for 1906 (33·1) is 1·2 per 1,000 below that for 1905 (34·3). The birth-rate of Bulwell has recently been the one fairly high rate in Nottingham. The birth-rate of N.E., 24·2, is identical with that of 1905. The birth-rates of N.W., 23·6, and S.W., 25·1, are fractionally higher than those of the preceding year. The birth-rate of S.E., 29·7, is 1·2 per 1,000 higher than that of the year before. I have pointed out elsewhere that, in this country at least, it is only in communities of the class to which the majority of the Bulwell people belong that the birth-rate is at all well maintained. Hanley (34·0), St. Helens (34·0), Sunderland (34·9),

Middlesborough (35·6), Merthyr Tydfil (36·4), and Rhondda (37·3), were the only great towns with birth-rates of 34 and more per 1,000 during 1906.

The crude general death-rates of the sub-districts were low, with perhaps the one exception of that in S.E., ranging from 14·3 in N.W. and 15·0 in S.W., to 15·9 in Bulwell, 17·2 in N.E., and 17·7 in S.E.

The infant death-rates per 1,000 births during the year ranged from 138—a low rate for such a year—in Bulwell, to 157 in N.W., 168 in S.E., 178 in S.W., and 210 in N.E. The noticeable point here is the comparative lowness of the infant death-rate in that part of the town (Bulwell sub-district) which has the highest birth-rate.

The deaths from the seven principal epidemic diseases per 1,000 of population were as follows, in the several divisions:—Bulwell 1·62, N.W. 1·87, S.W. 1·91, S.E. 2·24, N.E. 2·43. With the exception of the N.W. rate, these figures are below those for 1905, and but for the increased diarrhœa mortality would have been very low indeed. Diarrhœa, as a death-cause, in great measure filled the place vacated by measles in 1906. The increase of diarrhœa mortality was most pronounced in the N.W. and N.E. sub-districts. In the first the deaths numbered 84 in 1906, against 29 in 1905; and in the second 128, against 61 in 1905.

The deaths from scarlet fever in the whole City during the year numbered 17, as compared with 19 in 1905.

When the deaths which occurred in the Isolation Hospital are allocated to the districts to which they belong, we find that the fatal cases had the following distribution:—In Bulwell sub-district, 3; N.W., 2; N.E., 6; S.W., 3; S.E., 3. The distribution of the

disease was, as usual, very general throughout the City, but the proportional incidence was heaviest—and heavier than the number of deaths would suggest—in N.E.

The total deaths attributed to diphtheria numbered 41, against 49 and 69 respectively in the two immediately preceding years. The fatal cases had the following local origin:—In Bulwell, 5; N.W., 11; N.E., 10; S.W., 8; S.E., 7. The highest case mortality, so far as the notified cases enable us to judge, appears to have occurred in the S.E. sub-district.

Whooping-cough caused altogether 40 deaths, as compared with 61 in 1905, and 31 of these deaths were distributed in fairly even proportions over the N.W., N.E., and S.W. sub-districts.

Enteric fever caused 41 deaths in the City during 1906, against 24 in 1905. The distribution of cases and deaths, when these are allocated to the districts in which they originated, is more uniform than usual, but the relative incidence of cases was somewhat heavier in N.W., and of deaths in N.E., than elsewhere in the City. The fatal cases had the following local origin:—Bulwell, 7; N.W., 8; N.E., 14; S.W., 6; S.E., 6.

Diarrhœa was credited with 375 deaths. The N.E. and S.E. sub-districts suffered somewhat more in proportion to their populations than the other divisions, but otherwise the distribution of the fatal cases was comparatively even. The following were the numbers of the latter in the several sub-districts:—Bulwell, 52; N.W., 84; N.E., 128; S.W., 54; S.E., 57.

The total deaths ascribed to phthisis in Nottingham during 1906 numbered 317, against 295 in 1905. The death-rates per 1,000 living were equal to 1·55 in N.E. and 1·34 in S.E., but only slightly over one per 1,000 in the other three divisions, ranging from 1·06 in N.W.

NOTTINGHAM SUB-DISTRICTS.

Summary of Statistics for 1906.

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.																										
	1881.	1891.	1901.	Estimated 1906.																									
Bulwell..	26,712	34,262	41,888	44,478	1474	33.1	707	204	72	15.9	138	1.62	1.10	..	2	3	5	3	7	52	6	27	49	..	117	73	50	..	..
N.W. ..	39,574	53,699	58,388	61,995	1466	23.6	885	230	116	14.3	157	1.87	1.06	..	1	2	11	10	8	84	4	60	66	..	119	151	84	..	..
N.E. ..	53,911	63,870	66,274	70,371	1703	24.2	1212	358	171	17.2	210	2.43	1.55	..	..	6	10	13	14	128	5	66	109	..	226	142	76	..	..
S.W. ..	26,080	32,072	39,510	41,952	1055	25.1	631	188	80	15.0	178	1.91	1.07	..	1	3	8	8	6	54	5	40	45	..	88	152	45	..	..
S.E. ..	40,295	29,974	33,692	35,776	1061	29.7	634	178	80	17.7	168	2.24	1.34	..	1	3	7	6	6	57	5	40	48	..	61	52	30	..	..
The whole City	186,572	213,877	239,752	254,572	6759	26.55	4069	1158	519	15.98	171	2.04	1.25	..	5	17	41	40	41	375	25	233	317	..	611	570	285	..	..

N.B.—Populations at Censuses of 1881, 1891, and 1901, and Estimated for 1906. Births and Deaths from Local Registrars returns, without correction. Notified cases from Health Department Registers, without correction.

and 1·07 in S.W., to 1·10 in Bulwell. The dense, poor neighbourhoods lying about the boundary line between the N.E. and S.E. sub-districts constitute the principal focus of tuberculous infection in Nottingham.

The deaths attributed to cancer and other malignant new growths numbered 233, a total larger by nine than that for 1905, and by eight than that for 1899, the previous highest on record. This increase, however, as previously explained, does not necessarily imply an actual advance in the prevalence and fatality of such new growths. It may possibly be the result of greater knowledge of such ailments, and of more accurate diagnosis. The totals for each of the sub-districts were as follows:—Bulwell, 27 (against 29 in 1905); N.W., 60 (against 65); N.E., 66 (against 55); S.W., 40 (against 46); and S.E., 40 (against 29).

GENERAL REPORT.

EPIDEMIC DISEASES.

The annual summary of the Registrar-General gives the total number of deaths from these diseases in Nottingham during 1906 as 530, whereas the corresponding total in my returns is 519.

The difference of eleven is relatively insignificant, and the more so for the fact that 10 of the 11 deaths are under the heading of diarrhœa, the most numerous group in the epidemic class, and that in which discrepancies of this nature must commonly occur.

The only other epidemic death-cause, under the heading of which these two returns were at variance, was fever (principally enteric). The number of fever deaths on my list was 41, and on that of the Registrar-General 42.

Death-Rates from the Principal Epidemic Diseases.
(Average) for previous Ten Years, and for 1906.

	Nottingham.		London.		76 Towns.
	10 years. 1896-1905.	1906.	10 years. 1896-1905.	1906.	1906.
Small-pox	0·01	..	0·03	..	..
Measles	0·43	0·02	0·51	0·41	0·40
Scarlet Fever ..	0·14	0·07	0·12	0·11	0·12
Diphtheria	0·15	0·16	0·32	0·15	0·19
Whooping-Cough ..	0·34	0·16	0·41	0·26	0·28
Enteric Fever ..	0·26	0·17	0·11	0·06	0·09
Diarrhœa	1·17	1·52	0·81	0·94	1·16
Total Epidemic Rate	2·50	2·10	2·31	1·93	2·24

Small-pox and Vaccination.—Small-pox, I am pleased to say, was entirely absent from Nottingham during 1906. The recent outbreak, so far as Nottingham was concerned, came to an end in August of 1905, after a continuance of 20 months.

Nottingham, 1906. Temperature, Rainfall, and Seasonal incidence of Epidemic Diseases.

		THIRTEEN FOUR-WEEKLY PERIODS ENDING ON													TOTAL.
		Jan. 27	Feb. 24	Mar. 24	April 21	May 19	June 16	July 14	Aug. 11	Sept. 8	Oct. 6	Nov. 3	Dec. 1	Dec. 29	
Mean Temperature	..	39.7	38.1	43.0	44.5	47.5	54.3	59.7	64.0	64.7	54.4	50.1	45.2	37.0	49.4
Rainfall in Inches	..	2.88	1.59	2.05	0.19	1.54	1.68	1.10	0.57	0.91	2.32	3.59	2.64	2.41	23.938
Onsets of Cases of															
Small-Pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever	..	38	30	18	52	32	41	54	52	38	74	76	74	42	619
Diphtheria	..	38	66	31	31	26	38	64	43	33	44	56	53	44	567
Enteric Fever	..	20	19	15	9	9	9	12	19	38	44	48	34	16	292
Recorded Deaths from															
Measles ..	..	..	1	..	1	..	..	..	..	2	..	..	..	1	5
Whooping-Cough	..	5	6	6	6	2	4	2	..	2	3	..	..	3	39
Diarrhoea	..	6	5	2	2	1	5	4	36	173	114	21	5	4	378

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.

With the departure of small-pox there has come a decline in infantile vaccination, as expressed by the proportion of children born during a given period who have been successfully vaccinated before its close. The latest available returns of this character are those for the first half of 1906. The proportion of successful vaccinations of infants born during the period was 66·1 per cent., as compared with 69·51 per cent., 69·54 per cent., and 70·96 per cent. during the three immediately preceding first half-years respectively.

**Vaccination in Nottingham Union. Summary of Statistics,
1883—1906.**

Average of 5 yrs.	Births.	PERCENTAGE.			Certified as Insus-ceptible of Vaccina-tion.	Had Small-Pox.	Certificates granted to "Conscien-tious Ob-jectors."
		Success-fully Vac-cinated.	Died Un-vaccinated.	Not finally accounted for.			
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
1906 1st half-year	3485	66·1	12·5	13·09	10	...	281

† 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.

It is much to be regretted that public opinion, which in this age, more probably than at any other previous period of our history, regulates legislation and the administration of existing law, does not demand a stricter enforcement of the Vaccination Acts than these figures indicate. But not only do we lack to a large extent efficient primary vaccination, we are altogether without legal machinery for enforcing re-vaccination, and the one is quite as necessary as the other. Both are strictly enforced in Germany, with the result that what little small-pox occurs there among aliens and others—there is practically none in the regular population—can be dealt with in the general hospitals of that country at very small expense, and without risk of infection to the general community.

Measles. - There were only five deaths registered as due to measles in Nottingham during 1906, as compared with 232 in 1905, and an annual average of 102 for the ten years ended with the latter year. The highest annual total of deaths from this cause since the extension of the borough in 1877, was 265 in 1880, and the lowest, one in 1895. The annual number of deaths from measles, however, seldom rises above 200 or falls below 40.

**Deaths from Measles, during each of the Four Quarters of 1906,
in the Registration Sub-Districts of the City.**

DISTRICT	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell.. ..	..	..	1	1	2
N.W... ..	..	1	1	..	2
N.E. .. ..	..	..	..	..	..
S.W... ..	1	..	..	..	1
S.E. .. ..	..	..	..	..	..
TOTALS	1	1	2	1	5

What little measles there was in Nottingham during 1906 spread slowly from the south, northward, along the western boundary of the City during the year; S.W., N.W., and Bulwell being successively affected. There was no case reported in S.E. or N.E. throughout the year.

In view of the serious damage to the life and health of the young occasioned both directly and indirectly by measles, much thought has been given by experts and public authorities in recent years to the question of its prevention or mitigation. The disease has sometimes been made notifiable, much instructive and warning literature has been distributed, infected homes have been systematically visited by lady inspectors, disinfection has been more or less thoroughly practised, and schools have been closed wholesale during epidemics. All, however, has been of no avail.

The early age at which most attacks occur—in large communities,—the development of infection some three or four days before rash, the long incubation (12 days circa) all militate against effective prevention, and the inherent tendency of the complaint to induce bronchitis, broncho-pneumonia, and other catarrhal complications, the lack of hospital accommodation and of good home nursing, together operate in maintaining the mortality in spite of all. Given a severe type of measles, such as that of 1905, and no further preventive or nursing facilities than we at present possess, we may expect widespread outbreaks of this disease and high death-rates.

As with small-pox, scarlet fever, pneumonia (and other acute specific maladies), so with measles; we have found open-air treatment highly beneficial for the few bad cases we have had incidentally to deal with at Bagthorpe Hospital recently. The lack of ventilation

in many poor homes probably accounts, in some measure, for the excessive mortality from measles and its complications observed in many slum districts in cold weather.

The question of school closure for measles has received so much local attention of late, that I feel constrained to discuss it briefly here. School closure is a valuable preventive measure in scattered communities, but it is useful in all when the closure is effected early. It is practically useless, however, when the closure is deferred, as it often is, until about half the children on the school books are already absent either as patients or contacts.

Total school closure, however, in cities at least, is now very largely giving place to the closure of infected classes and the careful and discriminating exclusion of contacts, and this change, in my opinion, is for the better.

The death-rate per 1,000 living from measles, in Nottingham during 1906, was equal to only 0·02 (2 per 100,000), as compared with 0·92 (92 per 100,000) in 1905, and an average rate of 0·41 (41 per 100,000) for the 10 years ended with 1905.

In England and Wales as a whole, during 1906, the measles death-rate was 0·27, in London 0·41, in the 76 great towns 0·40, and in the 142 lesser towns 0·22. The actual number of deaths from measles in England and Wales is given by the Registrar General as 9,308 during 1906—a number only slightly exceeding the combined total of deaths from scarlet fever and diphtheria (9421).

Scarlet Fever.—The cases of scarlet fever notified to me during the year (without correction) numbered 611, as compared with 681, 1189, 1420, 966, and 918, in each of the five immediately preceding

years, respectively. The number of separate houses invaded was 485. The total case-mortality was equal to 2·78 per cent., as against 2·8 per cent., 2·3 per cent., 2·4 per cent., 2·4 per cent., and 1·2 per cent. in the five preceding years, respectively. Of the 611 cases notified, 351, or 57·4 per cent., were removed to the Isolation Hospital at Bagthorpe. The deaths among these, and those remaining over from the previous year, less the number still in hospital at the close of 1906, were nine in number, and equal to a case-mortality of 2·6 per cent. The mortality among the cases remaining at home was 3·1 per cent. There was thus, as usual, a considerably lower mortality among the hospital than the home cases, but the difference in favour of the hospital was less than usual, and this is accounted for by the fact that several cases sent to hospital on account of their severity were practically sent in to die, being moribund on admission.

Open-air treatment, as already stated, is still used for all cases of marked severity, but no treatment, of course, is of any avail for malignant or otherwise moribund cases. The open ends of the covered corridors contiguous to each ward-block afford an excellent situation for the practice of open-air treatment.

The cases and deaths in the commonly adopted age-periods were as follows:—0-1 year, 6 cases and 1 death; 1-5 years, 187 cases and 9 deaths; 5-15 years, 335 cases and 6 deaths; 15-25 years, 56 cases and 1 death; 25-35 years, 21 non-fatal cases; 35-45 years, 6 non-fatal cases. The case death-rate under 1 was equal to 16·7 per cent. This is a high figure, but the actual numbers on which it is based are too small to give it material significance. The mean case-mortality under one during the past 10 years has been equal to 10 per cent.

The death-rate in the 1-5 years period was equal to 4·8 per cent., a figure slightly below that of 1905. The case-mortality (for large numbers) is usually higher in the fifth than other years, but this has not recently held good for Nottingham—the first year for some time having shewn the worst figures. In the next two periods, the 5-15 and 15-25 years respectively, the case-mortality was identical, at 1·8 per cent.—a very average rate. There was no death among the cases above the 20th year.

The disease was very generally distributed over the City during 1906, but the N.E. sub-district had a somewhat larger share of cases and deaths, both actually and relatively to its population, than the other divisions.

Notifications of Scarlet Fever, during each of the Four Quarters of 1906, in the Registration Sub-Districts of the City.

DISTRICT.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	19	20	24	54	117
N.W... ..	15	23	36	45	119
N.E.	32	36	67	91	226
S.W.	16	25	28	19	88
S.E.	6	32	8	15	61
TOTALS	88	136	163	224	611

The death-rate from scarlet fever in Nottingham during 1906 was equal to 0·067 per 1,000 (67 per 1,000,000). This rate is remarkably low for Nottingham, and only twice (in 1886 and 1901) since the extension of the borough in 1877, has the annual death-rate from scarlet fever fallen to so low a point. In England and Wales as a whole during 1906 the scarlet fever death-rate per 1,000 was 0·10, in London 0·11, in the 76 greater towns 0·12, and in the 142 lesser towns 0·09.

Diphtheria.—The notified cases of diphtheria during 1906 was 570, to which total the annual numbers have steadily risen since 1901, when they were only 115. As, however, the annual numbers of cases have remained at approximately the same figure—ranging only from 537 to 570,—and the annual deaths have declined from 71 to 41 during the past three years, we have, I think, reasonable ground for hoping that our current local recrudescence will not reach a much higher point than it now stands at. The slight increase in the number of cases notified during the past year, indeed, is more than possibly explicable by the fact that bacterioscopic aid to diagnosis is now more uniformly utilized than formerly. The decline in the annual record of deaths certified as due to diphtheria lends support to this suggestion.

The ratio of certified deaths to notified cases has ranged from 1 to 4, six years ago, to 1 to 14, at the present time.

The early and adequate use of antitoxic serum in the treatment of diphtheria has greatly lowered its mortality, but as this factor has been practically constant and stationary during the past three years, it need not be considered in connection with the argument respecting the progress of the local outbreak during this period.

The number of separate houses invaded during 1906 was 475, as compared with 482 and 499 during the preceding two years respectively.

The cases and deaths were distributed as follows over the usual age-periods:—0-1 year, 11 cases and 3 deaths; 1-5 years, 136 cases and 23 deaths; 5-15 years, 300 cases and 14 deaths; 15-25 years, 73 non-fatal cases; 25-35 years, 32 cases and 1 death; 35-45 years, 11 non-fatal cases; 45-55 years, 5 non-fatal cases; and 55-66 years, 2 non-fatal cases.

The case death-rate under 1 is here equal to 27 per cent., a high figure, but not remarkably high for this period. In the pre-antitoxin days, indeed, all the cases under 1 frequently proved fatal. Between 1 and 5 years the death-rate was equal to 17 per cent., a moderate proportion for the type of disease we have recently experienced. The same may be said, but more emphatically, of the mortality in the 5-15 years period, which reached only 4·7 per cent. Above the 15th year there were 123 cases, with only one death (in the 25-35 years group).

I have in former reports drawn attention to the fact that the number of deaths from diphtheria in Nottingham under the 5th and 10th years, respectively, have recently borne a larger proportion to the total than commonly recorded elsewhere. During 1906 there were 90·2 per cent. of all the deaths under the 10th year, and 63·4 per cent. under the 5th year, as compared with 94 per cent. and 65 per cent., respectively, in 1905, and upwards of 90 per cent. and 60 per cent. for some years past. The normal proportions of deaths at these periods are ordinarily given as, approximately, 80 per cent. and 50 per cent. of all deaths respectively.

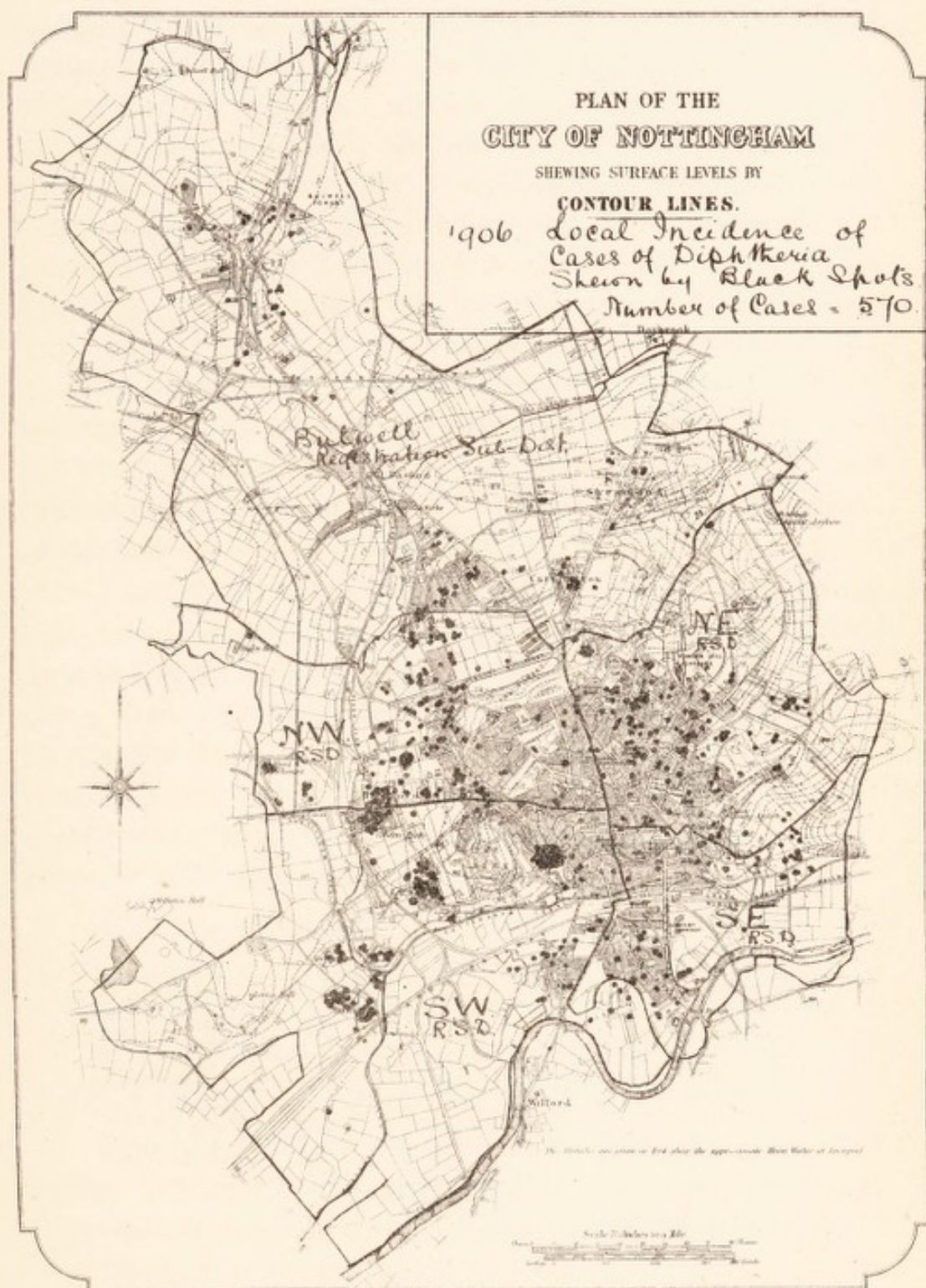
The 41 deaths registered as due to diphtheria in Nottingham during 1906, correspond to a death-rate of 0·16 per 1,000 living. The three immediately preceding annual death-rates for this City were 0·19, 0·28, and 0·26, respectively. The death-rate in England and Wales was 0·17, in London 0·15, in the 76 great towns 0·19, and in the 142 smaller towns 0·17, during 1906. Each of these four rates is higher than the corresponding rate of 1905. Three of the great towns had death-rates from diphtheria during 1906 of 0·50 per 1,000 and upwards. These were Reading and Derby (0·50), and Hull (0·52).

PLAN OF THE CITY OF NOTTINGHAM

SHOWING SURFACE LEVELS BY

CONTOUR LINES.

1906 Local Incidence of
Cases of Diphtheria
Shown by Black Spots.
Number of Cases = 570.



Two hundred and sixty-eight, out of the 570 notified cases, or 47 per cent. of all, were removed to the City Hospital at Bagthorpe. The deaths among these, plus the balance of 31 cases remaining over from the previous year, but minus the 42 still in Hospital at the close of 1906, numbered 18, and were equal to a rate of 7.0 per cent. The deaths among the 302 cases nursed at home during the year were 24 in number, and equal to a rate of 8.0 per cent. The lower mortality among the hospital cases, as compared with those nursed at home, speaks strongly in favour of hospital treatment for this disease, especially when we remember that a large proportion of the cases sent in were of exceptional severity. Tracheotomy was performed in five cases, either on, or very soon after, admission (with a successful result in four).

Anti-diphtheritic serum, when used sufficiently early and in sufficient quantity, is almost a specific for diphtheria, except in certain very bad cases. It is now given away gratuitously, at the Health Department, to medical men in attendance upon poor patients requiring it. Forty-six flasks of the serum were so distributed during 1906, as compared with 30 and 46, respectively, during 1905 and 1904.

With regard to the use of the serum by the healthy for the purpose of protection against attack, it may be well once again to point out that such protection, though efficient for a time, is only short-lived, seldom extending to more than a fortnight from the date of injection.

The distribution of the disease in the City was again very general throughout the year, but again also—as in both 1905 and 1904—the attack rate was higher in S.W. than elsewhere.

This special incidence in S.W. was due to several localized outbreaks of the disease. The most acute of these was one at the General Hospital in February and March, which arose through the nursing of an undetected case in one of the Medical Wards. Thirty-three persons—most of them members of the nursing staff—were attacked, but the prompt removal of cases and carriers (to Bagthorpe), and the thorough disinfection of those parts of the General Hospital in which the cases had arisen, were speedily instrumental in stopping the further spread of the disease.

Notifications of Diphtheria, during each of the Four Quarters of 1906, in the Registration Sub-Districts of the City.

DISTRICTS.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	12	19	15	27	73
N.W.	36	32	33	50	151
N.E.	32	26	34	50	142
S.W.	53	32	31	36	152
S.E.	11	8	16	17	52
TOTALS	144	117	129	180	570

Whooping-Cough.—Forty-one deaths were certified as due to whooping-cough during 1906, as compared with 61 and 91 in 1905 and 1904, respectively, and an annual average of 80 for the ten years ended with 1904. As in 1905, the disease was most prevalent and fatal in the early part of the year, and fell away continuously and rapidly with each successive month. There were 19 deaths in the first quarter distributed over all the sub-districts, with heaviest incidence in N.E., and lightest in Bulwell; 12 in the second quarter, shared by N.W., N.E., and S.W.; six in the third quarter, again distributed in all the divisions; and three in the fourth quarter, divided between Bulwell and N.W.

Deaths from Whooping-Cough, during each of the Four Quarters of 1906, in the Registration Sub-Districts of the City.

DISTRICT.	FIRST QUARTER.	SECOND QUARTER.	THIRD QUARTER.	FOURTH QUARTER.	TOTALS.
Bulwell	1	..	1	1	3
N.W.	4	3	1	2	10
N.E.	7	5	1	..	13
S.W.	3	4	1	..	8
S.E.	4	..	2	..	6
TOTALS	19	12	6	3	40

Of the 40 deaths from whooping-cough, 22 occurred during the first year, 17 between one and five years, and one at five years of age. The only remarkable point about these figures is the somewhat exceptionally large proportion of deaths under the first year (53 per cent. of all). This high infant mortality from whooping-cough, however, has occurred not infrequently in former years in Nottingham.

The annual whooping-cough death-rate in the City during 1906 was equal to 0·16. The corresponding rate in England and Wales was 0·23, in London 0·26, and in the 76 great towns 0·28, during 1906.

This disease is very often associated with measles, both actually and in our consideration. Both diseases are purely epidemic in character, and cause much aggregate damage to life and health, especially among infants and young children of the working classes. Perhaps the most serious part of the mischief they cause is that which is not immediately fatal, but leaves damaged lungs and other organs to break down in later life.

The deaths directly due to measles and whooping-cough, in the 76 great towns during 1906, were 6,254 and 4,399 in number (respectively equal to 40 per 100,000 and 28 per 100,000). The deaths from measles, in these towns, were numerically nearly equal to the combined deaths from scarlet fever, diphtheria, and enteric fever, and those from whooping-cough to the combined total from scarlet fever and diphtheria. Notwithstanding such startling facts as these, practically nothing is done by Local Authorities to prevent the spread of infection in either disease. Hospital isolation is obviously out of the question, and disinfection is for the most part scarcely necessary, as the infection in both cases appears to be short-lived; but something might be done to rouse

public opinion to a recognition of both as serious maladies, and thus secure the exercise of a little more care than is usual at the present time, on the part of those responsible for the management of cases, to prevent the spread of infection by their agency. It is quite an ordinary thing for children in highly infectious stages of these diseases to be allowed at large in various public places to the common danger.

Enteric Fever.—I have written formerly at such length upon the subject of enteric fever, and the causes of its excessive local incidence in Nottingham, that I feel it is only necessary on the present occasion to recapitulate very briefly, to contrast the present with the past, and to emphasize the obvious lesson taught by the facts and figures adduced.

Nottingham is a City with a large proportion of old, closely built, poor neighbourhoods. Most of the smaller houses are furnished with pail-closets. No new pail-closets are now constructed, but until quite lately they were approved by the Corporation. They numbered at one time 40,300; there are now 36,886 in use. Until within the last few years all the pails were of wood. A wooden pail is always absorbent, and often leaky, with consequences highly unpleasant and dangerous to health, and especially dangerous in times of epidemic sickness. It is theoretically possible to keep dry-closets of this description in clean and decent condition, even in the poorest neighbourhoods. In practice, however, such a condition is unattainable. Careless and incomplete scavenging—at times unavoidable—spillage and soakage, coupled with the action of flies and air-borne dust, necessarily bring about faecal contamination of the whole environment of life in such districts. In hot weather some of our human rookeries literally reek with the odours of the pail-closet.

When cases of enteric fever and other dangerous infectious diseases are nursed at home, and such cases are notified, separate receptacles with tightly fitting covers are provided for the refuse of the infected houses, and their contents frequently removed and burnt. This arrangement is perfect on paper, but, apart altogether from the fact that many cases of infectious sickness are not reported or even detected, especially in their early stages, there are many ways in which such a scheme of differential scavenging may fail of its object.

Again, a dry system of excrement disposal (like the pail-system) almost necessarily implies, by way of justification for its existence, the ultimate return of the fixed nitrogen of fæcal refuse to the soil from which it was derived. It is at once difficult and wasteful to burn it. But here, again, serious nuisance is apt to arise from the accumulation of such refuse at times when the agriculturists cannot immediately utilize it as manure. In the lack of convenient depôts for such material outside the City, there is, or rather was, no reasonable alternative but to dump it inside. Such wholesale dumping of fæcal refuse in the midst of crowded communities, inevitably gives rise in the gross to the same injurious nuisance as the dry-closet produces in detail. I have said there *was* no alternative, because formerly there were no sufficient destructor furnaces for its destruction, but now there are ample destructors for the cremation of all refuse, and however inconvenient the destruction of such fæcal material by fire, there can be no doubt that it should be so destroyed whenever it cannot be immediately sent away for use as manure.

The tables of the actual and relative incidence of enteric fever upon houses with various types of closets, which I have kept (and furnished in my Annual Reports) for many years, clearly demonstrate that the houses

with dry-closets are far more liable to attack with enteric fever than those with W.C.'s. The spot-maps which I have prepared each year also show, (*a*) the same special incidence upon dry-closets, (*b*) a further special incidence upon dense and poor districts where these closets lie thickest, and exhibit their worst and most repulsive features with greatest prominence, and (*c*) an almost complete immunity on the part of good residential districts, like the Park, Mapperley Road, and Carrington.

This graphic testimony of the distribution of enteric fever in the City, moreover, not only lends support to the charge against the dry-closets, but also shows that no blame attaches to the water supply, nor, as a rule, to milk, shell fish, or other like possible vehicles of infection. For, obviously, if these were sources of infection, there must necessarily be a more or less general distribution of the disease in the City, instead of an incidence almost exclusively confined to its poorer neighbourhoods.

The general conclusions, as to the power for harm in the propagation of enteric fever and other diarrhoeal diseases possessed by the dry-closet, at which we have arrived in this City, are borne out by the experience of numerous other observers elsewhere. And these conclusions arrived at, and supported by independent experience and testimony, it becomes the duty of the Local Authority to act in accordance with their teaching, in getting rid of the pail-closets and substituting W.C.'s.

Such a change would undoubtedly exert a powerful influence for good upon the people living in our poor neighbourhoods, for decency and cleanliness of environment are certainly important factors in moulding conduct and morals, and such environment is practically unattainable in many parts of the City while the pail-closet remains; whereas, with the more decent potential of the W.C., there would come at once hope and encouragement in this regard.

**Incidence of Enteric Fever Cases upon Houses with Pail-closets,
Midden-privies and W.c.'s, from 1887 to 1906, and upon Waste-
Water-closets during 1905-06.**

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 „
12,000 „ with water-closets	21 cases ...	1 case in 571 „
6,785 „ with waste-w.c.'s	26 cases ...	1 case in 261 „

1906.

36,886 houses with pail-closets	... 231 cases ...	1 case in 160 houses
300 „ with midden-privies	3 cases ...	1 case in 100 „
14,000 „ with water-closets	21 cases ...	1 case in 667 „
6,785 „ with waste-w.c.'s	30 cases ...	1 case in 226 „

We are often told that the conversion of the pail-closet system to one of water-carriage would cause embarrassment at the sewage farm. This is not the case. Even if all the pail-closets were converted to W.C.'s at once, the change would hardly be noticed at the farm, and it should be remembered that the conversion must of necessity be a matter of time, and gradual. Again, there is a very general impression that the additional expenditure of water, which the conversion of the existing pail-closets to W.C.'s must entail, would be greater than our existing water supply could meet. This also is erroneous. The amount of water required for 37,000 W.C.'s would be a little over 3,500,000 gallons per week, a quantity which could in all probability be afforded without taxing our water supply at all unduly, especially as the increased demand would be of gradual development, and, because, for some time to come at least, we may regard our existing sources of supply as sufficient for all our probable needs—this additional item included.

With so many facilities for specific pollution, especially by the agency of dust and flies, it is matter for surprise that milk—and other food—outbreaks of enteric are not of more frequent occurrence. These do, of course, occur from time to time, but they are seldom of wide extension.

The disease was more evenly distributed over the poorer parts of the City than usual during the past year. N.W. had a somewhat larger share than other sub-districts, the attack rate (per 1,000 of population) being here equal to 1·4, as compared with an average rate of 1·12 for the whole town. The next lower individual district rate was that of Bulwell, identical with the average, at 1·12. So much for the registration sub-districts.

To turn now to streets and neighbourhoods. Radford, Hyson Green, the St. Ann's Well Road neighbourhood, and Sneinton suffered, as usual, the heaviest incidence. The central business streets of the town, the Park, and the Mapperley Road, Mapperley, Carrington, and Sherwood districts were relatively free.

The distribution in time is necessarily always very variable in the case of the endemic type of the disease. This fact is illustrated in the seasonal records of the past few years in Nottingham. For example, in 1905 and 1906, respectively, the proportion of all cases in each of the four quarters were approximately as follows :—

Nottingham, 1906.		Enteric Fever. Cases and Deaths in Weekly Periods.																											
Week ending	January.	February.	March.	April.	May.	June.																							
	6 13 20 27	3 10 17 24	3 10 17 24 31	7 14 21 28	5 12 19 26	2 9 16 23 30																							
Cases	3 4 1 2 11	3 4 5	4 6 4 2 6	.. 5 3 2 ..	3 1 2 2 4	4 2 1 =84*																							
Deaths	.. .. 1 1	..	2 .. 2 2 2	..	..										2 ..	=12*												
Week ending	July.	August.	September.	October.	November.	December.																							
	7 14 21 28	4 11 18 25	1 8 15 22 29	6 13 20 27	3 10 17 24	1 8 15 22 29																							
Cases	1 4 3 3	3 5 3 9	13 6 6 15 17	9 10 4 9 11	23 6 7 11 5	4 6 6 =199*																							
Deaths	1 1 ..	1 1 .. 1	1 .. 2 1 3	3 ..	1 3 2 3 ..	2 1 2 = 29*																							

* Figures made up from weekly returns, without correction.

1st quarter, 1-5th in each year; 2nd quarter 1-4th in 1905, and 1-10th in 1906; 3rd quarter, 1-3rd in 1905, and 3-10ths in 1906; 4th quarter, 1-4th in 1905, and 2-5ths in 1906.

Forty only, out of the 285 total cases, or one-seventh of all, were removed to the City Isolation Hospital.

The smallness of this number is due to the facts: that the General Hospital has some 19 beds devoted to this complaint, that an arrangement exists that

these beds shall be all filled before our hospital is called upon to admit cases, and that the number of cases requiring hospital treatment during 1906 was smaller than in some past years.

A study of the tables of cases and deaths in age-periods for each sex during each of the past three years, which are given below, shews considerable variation in the case-mortality of different years, but the numbers dealt with are too small to be used as a basis for any general deductions respecting the actual fatality of the disease in bulk at the present day.

The general ratio of deaths to cases was; in 1904, equal to 1 in 5·2 (20 per cent.); in 1905, to 1 in 10·2 (10 per cent.); and in 1906, to 1 in 7·1 (14 per cent.).

The cases notified during the year, after correction, numbered 285, and the deaths, 40 by my returns, and 42 by those of the Registrar-General. The death-rates per 1,000 living, yielded by these totals were, respectively, 0·16 and 0·17—16 and 17 per 100,000 of population. The death-rates from enteric fever in Nottingham during the preceding five years have ranged from 0·33 per 1,000 (33 per 100,000) in 1901, to 0·09 (9 per 100,000) in 1905. The total number of deaths, and the death-rate of 1905 were both by far the lowest on record, and the corresponding figures of 1906 have had only three annual records below them since the date of the borough extension (1877).

The death-rate from enteric fever, in England and Wales during 1906, was equal to 0·09 per 1,000, in London to 0·06, in the 76 great towns to 0·09, and in the 142 lesser towns also to the same figure.

NOTE.—I am pleased to notice that, in his Annual Report for 1906, Dr. Handford, the Medical Officer of Health for the County of Notts., who has had a very large experience of Enteric Fever both as a clinical physician and as a Medical Officer of Health in this district, agrees with me in attaching much importance to personal infection and the faecal pollution of all the physical environment of life as factors in the propagation of the disease with us.

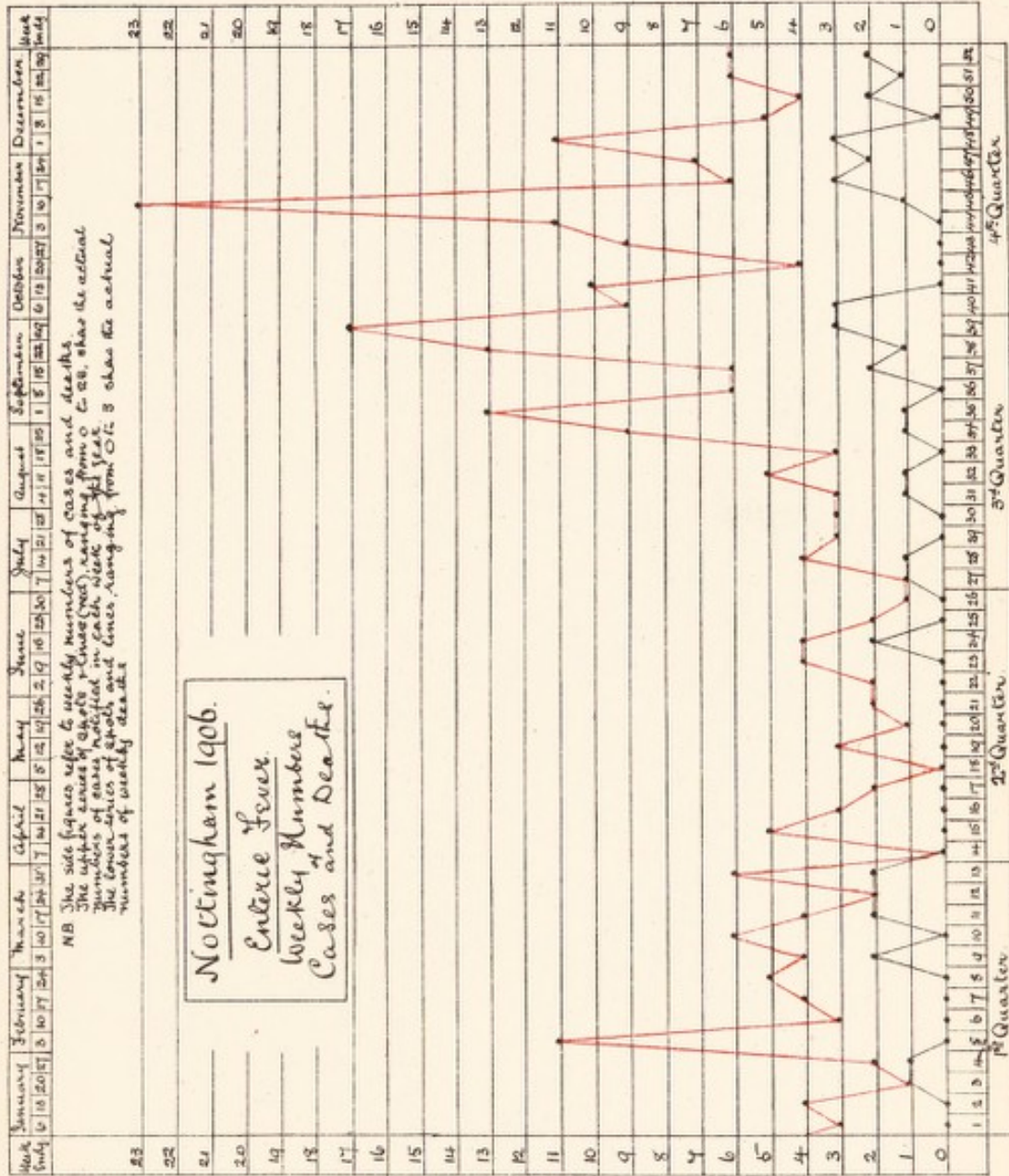
1905.1906.

		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 ..	..	8	49	35	31	11	10	1	..	..	145
	Female ..	1	7	45	36	28	15	6	2	..	..	140
												285
DEATHS	Male ..	..	1	1	6	7	2	3	1	..	..	21
	Female ..	..	..	7	3	5	2	2	..	..	..	19
												40
AVERAGE CASES TO ONE DEATH.												All Ages.
Male ..	..	..	8.0	49.0	5.8	4.4	5.5	3.3	1.0	..	..	6.9
Female	..	..	..	6.4	12.0	5.6	7.5	3.0	..	..	..	7.4
												7.1

NOTTINGHAM, 1906.

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 Deaths }	3 1	2 ...	3 ...	1 ...	9 4	9 ...	14 1	9 1	29 6	21 1	50 7	Bulwell
N.W.	{ Cases Deaths }	10 1	9 2	4 ...	5 ...	12 1	20 ...	14 2	9 2	40 4	43 4	83 8	N.W.
N.E. ...	{ Cases Deaths }	8 ...	9 2	7 ...	2 1	10 4	9 1	15 2	17 4	40 6	37 8	77 14	N.E.
S.W. ...	{ Cases Deaths }	4 1	4 1	4 ...	1 1	6 ...	8 1	9 1	10 ...	23 2	23 3	46 5	S.W.
S.E. ...	{ Cases Deaths }	4 2	2 ...	2 ...	...	2 ...	6 1	5 1	8 2	13 3	16 3	29 6	S.E.



PLAN OF THE
CITY OF NOTTINGHAM

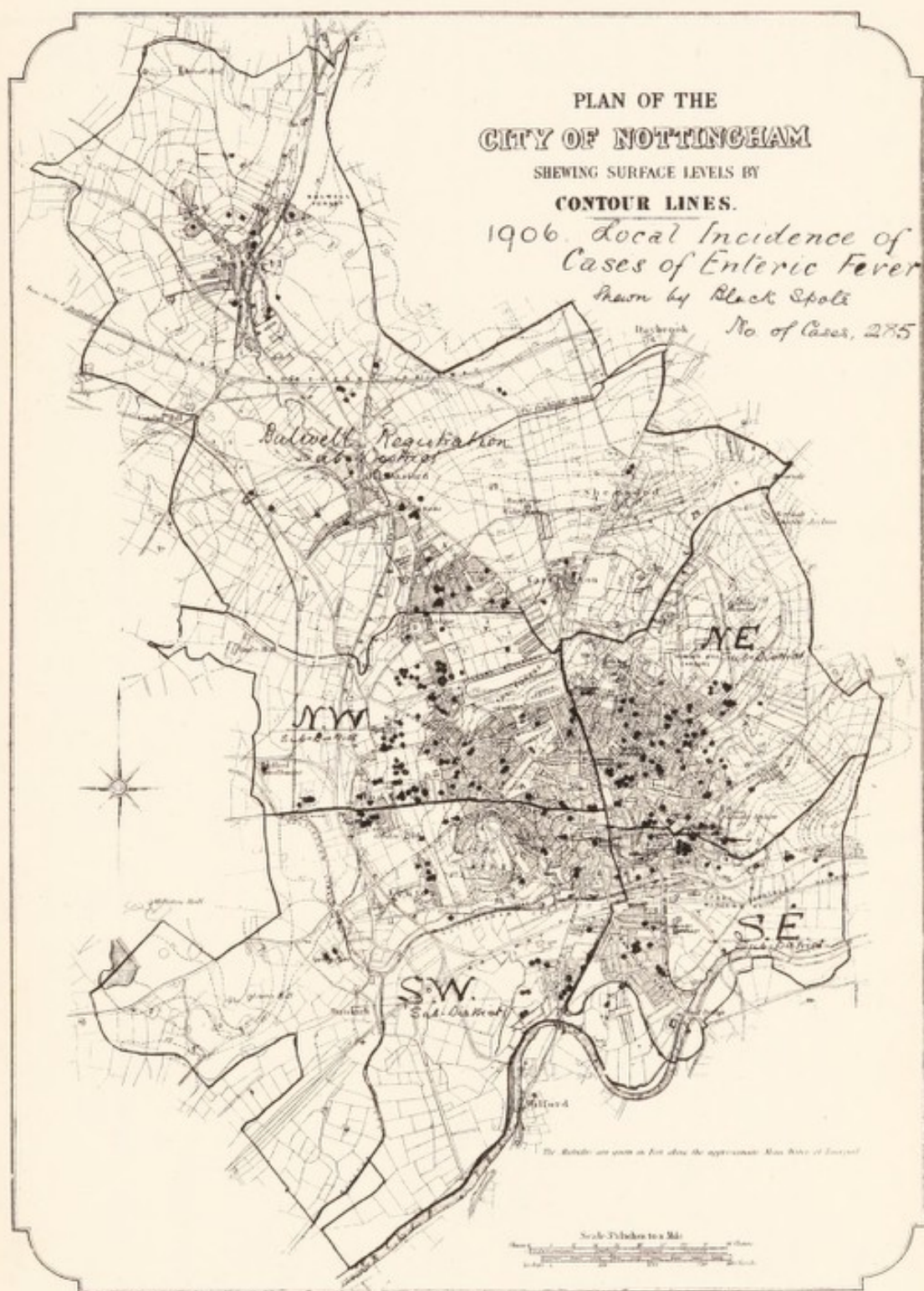
SHOWING SURFACE LEVELS BY

CONTOUR LINES.

1906. Local Incidence of
Cases of Enteric Fever

Shown by Black Spots

No. of Cases, 285



NOTTINGHAM, 1901-1906. ENTERIC FEVER. Onsets of Cases, with Mean Temperature of Air, and Rainfall, in Four-Weekly Periods.

1901	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.
	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
1902	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.
	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	45	58	29	369
1903	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.
	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
1904	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.
	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
1905	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.
	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
	Cases of Enteric Fever ..	9	25	16	17	13	28	26	29	22	16	26	13	14	254
1906	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.
	Mean Temperature ..	39.7	38.1	43.0	44.5	47.5	54.3	59.7	64.0	64.7	54.4	50.1	45.2	37.0	49.4
	Rainfall in Inches ..	2.88	1.59	2.05	0.19	1.54	1.68	1.10	0.57	0.91	2.32	3.59	2.64	2.41	23.938
	Cases of Enteric Fever ..	20	19	15	9	9	9	12	19	38	44	48	34	16	292

NOTTINGHAM, 1891-1906.

GENERAL ENTERIC FEVER DATA.

YEAR.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Population ..	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	254,567
Cases of Enteric Fever ..	375	198*	479	334	422	444	428	423*	607*	505*	535*	375*	200*	296*	255	285
Attack or Case rate ..	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	1.12
Deaths from Enteric Fever ..	70	36	68	61	55	75	45	53	114	75	79	50	36	57	24	40
Death-rate from Enteric Fever..	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	0.16
Mean air temperature ..	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	49.4
Rainfall in inches	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	23.938
Death-rates from Enteric Fever in great towns..	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	0.09

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

Diarrhœa.—The number of deaths during 1906 attributed to diarrhœa, variously described, amounted to 375 according to my returns, and 385 according to those of the Registrar-General. The discrepancy is less than in 1905, but is still greater than it should be, especially in view of the fact that the new rules of classification, now used by the Registrar-General and all other public statisticians dealing with diarrhœa figures, have been most carefully observed in my office. The numbers, however, are unfortunately so large that the discrepancy of 10 between them produces no appreciable difference in the rates they yield. The rate of the larger number is slightly over, and that of the smaller slightly under, 1·5 per 1,000 of population (or 150 per 100,000). The corresponding figures for England and Wales were 0·87 per 1,000 (87 per 100,000), for London 0·94 (94 per 100,000), for the 76 great towns 1·16 (116 per 100,000), and for the 142 smaller towns 0·94 (94 per 100,000).

The diarrhœa death-rate in Nottingham during 1905 was only 0·80 by my figures, and 0·76 by those of the Registrar-General, *i.e.*, practically half the rate for 1906. The mean rate for Nottingham during the 10 years, 1896-1905, was 1·17.

Of the 375 diarrhœa deaths, 309, or 82 per cent., were of infants under 1 year, and 55, or 15 per cent., of those between 1 and 5 years of age. Eleven only, or less than 3 per cent., of the deaths from diarrhœa occurred later on, and eight of these were at ages above 65 years. The deaths under one year were equal to only 75 per cent. of all during 1905. These facts accord with our usual experience, that the principal fluctuations in the annual numbers of deaths from diarrhœa are observed in the 0-1 year age-period.

The deaths of males from diarrhœa in 1906 numbered 206, and those of females 169, as compared with 108 and 94 in 1905, and 184 and 160 in 1904.

Of the deaths under 1 year, the proportions which occurred successively in each of the four quarters of that year may be numerically expressed as follows : — 6, 11, 7, 3.

The corresponding proportions for the four quarters of 1905 were 3, 4, 3, 2.

The higher mortality of the second quarter is probably to be explained by the fact that a large number of children are first fed on other food than their mother's milk during this period.

The disastrous effects of unskilled hand-feeding, especially during the period of prevalence of epidemic diarrhœa, is again borne out by the few local statistics bearing upon the subject which I have at my disposal. Out of 50 fatal cases of infantile diarrhœa under the ninth month, only 5, or 10 per cent. of the children, were stated to have been exclusively breast-fed, and in all probability—if one may judge by one's actual experience in the past—many of the infants returned as purely breast-fed, receive also other food occasionally. Moreover, symptoms of indigestion are frequently misinterpreted by mothers as signifying a need for artificial feeding, and if such a mistake is made, and leads to such feeding of a child in hot weather, a vicious circle is liable to become established, with results disastrous to the child.

Leaflets on infant feeding are now, and have been for many years, distributed in Nottingham, by the District Registrars, Lady Health Visitors, Inspectors of Nuisances, and others, to mothers and other persons in charge of infants. Appreciation of the fact that an infant should if possible be fed with its mother's milk, and, failing this, with clean or sterilized cow's milk, is certainly growing, though growing slowly, in the popular mind. With the earlier registration or

notification of births—which we hope in the near future to secure by Act of Parliament—and the appointment of a properly trained and instructed Lady Visitor to undertake as her sole official duty the visitation of recent mothers, we may, I think, reasonably anticipate, in the not distant future, a steady decline in that infant mortality which is so dark a blot to our modern civilization.

NOTTINGHAM, 1906.

Weekly Deaths from Diarrhœa in Registration Sub-Districts.

	WEEK ENDING																			
	July.				August.				Sept.				October.				Nov.			
	7	14	21	28	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	
Bulwell	..	1	..	1	..	..	2	8	7	10	14	5	2	..	2	1	1	..	..	— 54
N.W.	1	..	1	1	..	4	1	13	10	14	9	9	5	3	1	..	2	..	..	— 74
N.E.	..	..	..	..	6	11	14	20	15	12	18	14	3	3	4	1	..	1	2	— 124
S.W.	..	2	..	..	..	6	..	3	6	7	7	6	3	3	1	2	..	..	1	— 47
S.E.	..	..	1	..	2	3	7	8	9	7	5	2	2	1	1	2	2	..	..	— 52
	1	3	2	2	8	24	24	52	47	50	53	36	15	10	9	6	5	1	3	— 351

The accompanying tables shew

(a) the local incidence of the fatal cases during the diarrhœa season, which may be said to have extended from the week ended August 4th to that ended October 20th, a period of 12 weeks. During this period there occurred 334, or 89 per cent., of all the diarrhœa deaths.

(b) The rainfall and earth temperatures during the period of prevalence. It will be seen that the rainfall was very small, and the deep earth temperature about or above 60 deg. Fahr. during eight weeks of this period, and that the diarrhœa deaths began to fall off as the rainfall increased and the deep temperature diminished.

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 Tem- perature 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 Tem- perature 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 Diarrhoea	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 Tem- perature 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 Tem- perature 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 Diarrhoea	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 Diarrhoea	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 Tem- perature 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 Tem- perature 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 Diarrhoea	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 Tem- perature 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 Tem- perature 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 Diarrhoea	1	..	5	8	12	19	26	20	16	16	6	7	15	3	1	1	..	5	1

1906.

	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
Rainfall ..	..	0.20	0.07	0.24	0.22	0.04	0.46	0.39	0.00	0.06	0.74	0.18	0.00	1.40	0.92	1.50	0.42	0.75	1.69
Earth Temperature 1 ft. below surface ..	61.8	61.9	60.4	65.0	65.0	65.4	61.1	62.2	63.4	65.1	58.6	55.9	50.3	54.4	55.9	49.1	49.5	46.3	45.6
Earth Temperature 4 ft. below surface ..	56.1	57.8	57.6	58.4	59.6	60.5	60.8	60.0	60.1	61.3	61.0	59.5	58.0	56.4	56.7	55.5	53.7	50.6	50.1
Deaths from Diarrhoea	1	3	2	2	8	24	24	52	47	50	53	36	15	10	9	6	5	1	3

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 1906 and other recent years. Further Notification Tables will be found under the special sections dealing separately with notifiable infectious diseases.

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 <i>Cases</i> ..	15	255	500	114	27	6	1	..	..	..	918
Deaths..	..	5	6	..	..	..	..	..	..	..	11
Diphtheria <i>Cases</i> ..	1	42	38	24	6	3	1	..	..	..	115
Deaths..	..	15	13	..	1	..	..	..	..	..	29
Enteric Fever <i>Cases</i> ..	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 <i>Cases</i> ..	5	290	517	122	30	1	1	..	..	..	966
Deaths..	1	12	7	1	1	1	..	..	..	..	23
Diphtheria <i>Cases</i> ..	4	52	99	28	16	7	3	..	..	..	209
Deaths..	4	19	7	1	..	..	..	..	..	..	31
Enteric Fever <i>Cases</i> ..	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 <i>Cases</i> ..	1	6	19	24	55	27	14	3	3	..	152
Deaths..	..	1	..	..	1	..	..	..	..	..	2
Scarlet Fever <i>Cases</i> ..	19	361	703	263	56	14	3	..	..	..	1419
Deaths..	1	14	13	6	..	..	..	..	..	..	34
Diphtheria <i>Cases</i> ..	2	100	225	68	21	6	3	..	1	1	427
Deaths..	1	24	34	1	..	..	..	..	..	..	60
Enteric Fever <i>Cases</i>..	..	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 <i>Cases</i> ..	12	11	57	69	81	45	21	11	1	..	308
Deaths..	4	1	2	..	1	1	1	..	..	..	10
Scarlet Fever <i>Cases</i> ..	9	336	647	140	39	12	2	2	..	..	1187
Deaths..	..	10	17	1	1	..	..	..	..	..	29
Diphtheria <i>Cases</i> ..	9	147	299	56	23	10	3	1	..	..	548
Deaths..	8	23	35	1	2	..	..	..	..	..	69
Enteric Fever <i>Cases</i> ..	1	30	72	74	60	30	21	4	3	1	296
Deaths..	1	3	6	16	12	8	6	3	2	..	57

Nottingham. Notification Data up to the end of 1906.

	SCARLET FEVER.			ENTERIC FEVER.			SMALL-POX.			DIPHTHERIA.			PUERPERAL FEVER.			ERYSIPELAS.			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.	Deaths.	Known cases.	Ratio.	Deaths.	Known cases.	Ratio.	Measles.	Whoop ^{ing} Cough.	Diarrhoea	TOTAL.
1881	353	..	..	61	..	..	..	..	..	..	..	..	..	..	..	..	..	..	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
1906	17	611	35.9	40	285	7.1	..	..	..	41	570	13.9	..	..	..	..	..	..	5	40	375	420

* 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. § Notification of Puerperal Fever and Erysipelas from 1905.

GENERAL DISEASES, etc.

On pp. 7-11 *ante*, will be found the usual table (No. 3) of local deaths registered during the year, set out in age-periods, and according to the death-causes certified.

The original scheme of the table, so far as the grouping of diseases is concerned, has been somewhat altered of late, but the death-causes remain for the most part unchanged, so that the mortality from particular causes in the past and present may be compared without correction, so far at least as the tabular statement is concerned.

The following brief review of the table deals only with certain salient features.

The deaths attributed to **Syphilis** numbered 18, the same number as in 1905, and 14 of these were during the first year of life, and due to the congenital form of the disease. The actual mortality directly and indirectly occasioned by syphilis is of course greatly larger than this. The recorded deaths all occurred in poor families, and the disease is by no means confined to the poor; but, even as a record of deaths from syphilis among the poor alone, the return is palpably incomplete.

Gonorrhœa was again, as in 1905, certified as the cause of one death only. The sinister after-effects of this disease constitute its most serious feature, so far as injury to health is concerned.

Both these records forcibly illustrate the unreliability of death returns in the case of diseases the origin of which involves invidious suggestion. If the whole mortality of these disorders could be ascertained, the magnitude of the total would probably cause surprise to most of us.

* **Erysipelas, Puerperal Septicæmia, and Septicæmia** (including **Pyæmia**).—These cognate death causes were apparently somewhat more in evidence than usual, the respective totals of deaths ascribed to them being 10, 19, and 22, as compared with 11, 12, and 18 in 1905, and slightly lower numbers for 1904. Erysipelas and puerperal fever are now both compulsorily notifiable, but while the number of notifications of erysipelas often considerably exceed the number of actual cases, the notifications of puerperal fever usually fall far short of the total of cases which occur. This is the more regrettable, because puerperal fever is for the most part an eminently preventable disease, and is often carried by midwives and others in attendance upon lying-in women, and because the Local Authority have now the power under the Midwives' Act to suspend from practice any woman whom they may consider likely, by reason of her recent contact with cases or from other cause, to communicate infection to her patients. This provision is made principally with reference to puerperal sepsis, but applies also to other infectious diseases.

The cases of erysipelas notified during 1906 numbered 220, and those of puerperal fever only 15, being four less than the deaths registered from this cause.

Acute Rheumatism and Rheumatism of the Heart were given as responsible for 18 deaths, a number slightly in advance of the average of the past five years (15). It must be understood, again, that these figures represent for the most part only the direct and immediate mortality of acute rheumatism. There is much reason for regarding acute rheumatism as a specific infective disease, and its refractoriness to all treatment, apart from other features, lends strong support to this view.

* These diseases (and some others of the infective class) are introduced in this General Section to allow of comparison between their present and past records.

Phthisis & other Tuberculous Diseases.

... These were certified as the cause of 416 deaths during 1906, as compared with 410, 472, 414, and 410 during the preceding four years respectively, and an annual average of 436 for the ten years ended with 1901. The highest annual total during the past 15 years was 481 in 1900, and the lowest 401 in 1899.

The age-distribution of the fatal cases, as I have before observed, has a comparatively narrow range of variation from year to year. During 1906 there were 74 deaths, or 18 per cent. of all, below the fifth year, as compared with 21 per cent. in 1905. In each of these years nearly half of all the cases under five occurred in the first year. During 1906, again, there were 282 deaths, or 70 per cent. of all, between the 20th and 65th year, and 220, or 53 per cent. of all, between the 25th and 55th years, as compared with 65 per cent. and 50 per cent. in 1905.

The following is a list of the fatal cases, arranged as far as possible according to the region of the body affected, and in age-periods :—

Tuberculosis of brain, 50 deaths : 19 under 1 year, 23 between 1 and 5, 6 between 5 and 10, 1 between 10 and 15, and 1 between 45 and 55 years.

Tuberculosis of larynx : One death, at 68 years of age.

Tuberculosis of lungs, or phthisis, 317 deaths : Five under 1 year, 7 between 1 and 5, 3 between 5 and 10, 6 between 10 and 15, 18 between 15 and 20, 35 between 20 and 25, 72 between 25 and 35, 81 between 35 and 45, 54 between 45 and 55, 26 between 55 and 65, 9 between 65 and 75, and 1 over 75 years of age.

Tuberculosis of abdominal organs, 29 deaths : 11 under 1 year, 5 between 1 and 5, 4 between 5 and 10, 2 between 10 and 15, 2 between 25 and 35, 3 between 35 and 45, and 2 between 45 and 55 years.

General tuberculosis, 15 deaths. These were distributed more or less evenly over nine of the 12 usual age-periods between birth and 85 years.

Other forms of tuberculosis, 4 deaths; all between the 5th and 20th year.

The total of 416 deaths from tuberculous diseases, during 1906, are equal to an annual death-rate of 1·63 per 1,000 of population (or 163 per 100,000). The rate from lung consumption, or phthisis, is 1·24 per 1,000 (124 per 100,000), and that from other forms of tuberculosis, 0·39 (39 per 100,000).

So much for the mortality of both sexes taken together.

If we turn now to the sexual deaths, we find that, in Nottingham, as in most other places, women suffer much less than men from all forms of tuberculous disease. My latest returns for *occupied* males and females, respectively, in Nottingham, give a death-rate of 2·41 per 1,000 (241 per 100,000) for males, and 0·86 (86 per 100,000) for females.

The total deaths of all males and females from phthisis during 1906 were, respectively, 182 and 135. The male death-rate from phthisis was equal to 1·53 per 1,000 males, and the female to 0·99 per 1,000 females (153 and 99 per 100,000, respectively).

In a report which I have recently prepared at the request of the Home Office upon the health of persons employed in the Lace Dressing industry, an abstract of which is given at the end of this volume, it is clearly shewn that the annual death-rate from phthisis of females engaged in the industry during the past 10 years has amounted to rather less than 0·50 per 1,000 so employed. More than a thousand women of all ages are engaged as lace-dressers in

Nottingham, and a considerable proportion of those now at work have been more than 50 years at the trade. These women all work in a (relatively) very dry atmosphere, of temperature ranging at all seasons from 70 deg. to 100 deg. or 110 deg. Fahr. The air they breathe in the workrooms, however, is comparatively free from dust, the cubic space is ample, and the ventilation usually good. There is a very general opinion, especially among the laity, that conditions such as here described, which must often involve, in this climate at least, exposure to highly variable temperatures and degrees of humidity, necessarily render the workers liable to respiratory catarrhs and phthisis. But the sickness—and death—returns lend no support to this view. Their suggestion, here of course chiefly of a negative character, is rather that these operatives establish a complete tolerance of the abnormal atmospheric conditions under which they work. Indeed, it would appear that they are less liable to disablement from sickness than most other occupied persons of the same sex, that they continue at work in a large proportion of cases to an advanced age, and that those who so remain at work commonly die of disorders incidental to this period of life.

There is a belief widely current in the lace-dressing trade, that the hot dry atmosphere of the dressing-rooms is highly beneficial to persons of phthisical tendency. The belief has been frequently expressed to myself and my assistants in the course of this inquiry, and although the grounds upon which it is based in particular instances may seem slender and unsatisfactory, its general acceptance by both employers and employed is sufficient, in conjunction with the above negative evidence, to justify its mention here.

I regret to say that, notwithstanding the fact that the notification of phthisis is now generally recognized,

both in this country and abroad, as a powerful preventive instrument when properly utilized, no demand has yet been made for its adoption in Nottingham. Its principal value lies in the opportunity it affords for the diffusion of information concerning the nature of the malady and the best means of dealing with it, among persons suffering from it and those exposed to the risk of infection by it. Judiciously utilized, such information cannot fail in the long run to result in benefit, and to be acceptable, to the entire community.

The leaflet dealing with the prevention of consumption, which has been issued from the Health Department during the past 15 years, is reprinted in the Appendix of this Report.

For some years I have recommended that phthisical patients should be treated, and taught to treat themselves, in some of the disused hospital buildings at Bagthorpe, or on Bulwell Forest. I have pointed out that a large class of patients in this City, who are neither pauper nor affluent, would be glad to avail themselves of such accommodation, and of the opportunity of learning how to order their lives when at home, which such an establishment would afford, and that sufficient money could in most cases be raised either by or on behalf of such patients to pay for the cost of their maintenance. This scheme has now been started in a tentative manner. Several paying patients have been admitted for various periods, and the results achieved, alike from the point of view of the patient and the establishment, have been highly satisfactory.

Alcoholism, Acute and Chronic, was returned as the cause of 16 deaths only. Eleven of these were between the 35th and 55th year. Such a total as 16, however, necessarily represents only a very small fraction of the total mortality from this cause.

Cirrhosis of the Liver was given as responsible for 19 deaths. This disease in adults is more commonly due to alcohol than any other cause, and, as all but one of the deaths attributed to it during 1906 were at ages over 25 years, these may fairly be taken to swell the total of deaths due to alcohol. These deaths, however, like those directly ascribed to alcohol, are certainly far below the actual total.

Inadequate as these numbers are, they seldom fluctuate greatly from year to year, but such was not the case in 1906 as compared with previous years, for the total (19) of 1906 was only about half the average number of other recent years. I can offer no satisfactory explanation of this sudden reduction.

Cancer and other Malignant New Growths.—There is still a increasing tendency in the annual death-roll from malignant new growths greater than can be explained by the growth of population, but whether the increase is actual or only apparent—and due to advance in medical knowledge, improved diagnosis, and the like causes—it is at present impossible to say. I am, however, disposed to think that the increase, so far at any rate as Nottingham is concerned, is rather apparent than real.

The totals for 1906 and the four immediately preceding years, were, respectively, 233, 223, 212, 192, and 223, and the average of these numbers is 217. The average annual number of the five years immediately prior to this was 202. The total of 233 for 1906 is the highest on record. Of this last number, the cases certified as true cancer amounted to 217, and those as sarcoma to 16 only. Of the cases certified as true cancer, 88, or 40 per cent., were of males, and 129, or 60 per cent., of females. During 1905 the respective numbers were 82 and 123, and the sexual proportions almost exactly identical with those of 1906.

Rather more than 95 per cent. of all the cases of malignant tumours occurred after the 35th year, and rather more than 75 per cent. between the 45th and 75th year of life. The deaths from these tumours constituted 5·7 per cent. of all deaths during 1906, as compared with 5·4 per cent. in 1905.

Diabetes Mellitus.—There was a slight reduction in the number of deaths attributed to this disease during 1906, as compared with 1905 and 1904; the number for 1906 being 27, as compared with 30 and 33 in the two preceding years. But, as I have had occasion to observe in previous Reports, there has been an unmistakeable increase in the number of deaths certified as due to diabetes mellitus both in Nottingham and elsewhere in recent times, and as the diagnosis of this complaint has been a fairly simple matter for many years, there is solid ground for the very general belief that it is now more common than it was. We know that the disease is of more frequent occurrence in town than country; that severe mental strain and brain injury are frequent antecedents in many cases; and we also know that all which constitutes—to the disadvantage of our health—the difference between town and country life, including the liability to mental overstrain, is ever increasing; so that we have not only the fact of an (apparent) increase, but an *a priori* condition on which we might presume it.

Premature Birth was returned as the death cause in 160 instances. This number is somewhat larger than usual, but the range has, exceptionally, been as wide as from 121 (1905) to 161 (1902). The common figure is, approximately, 150.

Debility at Birth and Lung Collapse.—There has been a sudden shrinkage in the total deaths attributed to these causes, for during 1906 they numbered

only 80, as compared with 141, 137, and 127 in the three immediately preceding years respectively. The only reasonable explanation of such a sudden change is that deaths ordinarily classified under these headings have here been relegated to others.

Congenital Defects.—The deaths under this heading were 41 in number, as against 40 the year before. These deaths also vary much in number from year to year, because of the possibility of including many of them under different headings. The average annual total is just half that of the past year.

Want of Breast Milk, Atrophy, Debility, and Marasmus.—Owing to the recent alterations in the form of Table 3, it is difficult to compare the aggregate numbers of deaths under these headings during the past three years, since the alterations, with those for years before the alterations were made. The totals for 1906, 1905, and 1904 were, respectively, 102, 119, and 124. If one could feel assured that all the deaths included in this list from year to year were correctly described, their numbers would serve, with other items in the table, as a measure of the growth of maternal care and intelligence in the rearing of infants; but, unfortunately, there is no group of causes under which the certification is more unsatisfactory than this. The fluctuations, therefore, in the annual numbers are of no special significance.

Rickets.—This complaint was given as the death-cause in 11 cases. The annual average of the past five years has been 13, and that of the five years ended with 1901 was 25. This decline in the number of certified deaths is too pronounced to be simply accidental, and I am disposed to think it indicates an actual reduction of the mortality from the disease, and therefore an improvement of the conditions of life among the poor.

The disease known as scurvy rickets, acute rickets, or Barlow's Disease, exhibits the combined characteristics of both scurvy and rickets. It is alleged by many high authorities to be producible by a diet of fresh-boiled milk, as well as by malted milks, condensed milks, and artificial foods generally. With the view of testing the accuracy of this contention (as regards its possible production by boiled cow's milk of good quality), I have for some years made careful note of the condition and history of hand-fed children coming under my personal observation, and respecting whom I have been in a position to obtain reliable and detailed information. I have now in my possession the particulars of 192 middle-class children, all of whom have been fed, either exclusively or for many months continuously, upon boiled cow's milk, and in not one instance among all these has this disease appeared. I can only infer, therefore, that the risk of its production in average children, reared among decent and hygienic surroundings, by a diet of boiled cow's milk, has been, to say the least of it, very much exaggerated.

Old Age, Senile Decay.—The deaths attributed to old age were 212 in number during 1906, as compared with 322 in 1905, 194 in 1904, and 273 in 1903. The fluctuation in these annual totals arises from the varying incidence of numerous disorders to which the aged are specially liable, and which, when present to a considerable extent, often supersede old age as the certified cause of death. If any dominant death cause exists, it is of course much more satisfactory to be informed of it, than to be told that the aged organism is simply worn out, as we are when "old age" is given alone.

Infantile Convulsions.—These were given in 52 cases, as against 54, 46, and 83 in the three immediately preceding years. Convulsions are most fatal in

the first six months of life. Eighty per cent. of the deaths so certified during 1906 were within this period. As, however, they are commonly symptomatic of other (primary) ailments, it were better that these should be given as the death cause when possible, rather than the convulsions arising from them.

(Simple) Meningitis.—The deaths assigned to this cause were 30 in number during 1906. The average annual number of the past five years has been 47, and that of the preceding five years (ended with 1901), 66. What I have said of the secondary nature of convulsions, may in great measure be said of this, for it is more commonly due to a specific infection, like that of tubercle, epidemic cerebro-spinal fever, pneumonia, and other specific fevers, than to mere accidental septic infection.

Apoplexy, Softening of the Brain, etc., occurred as certified causes in 199 instances, as against 199 and 200 respectively in the two immediately preceding years. The deaths so certified have lately somewhat declined, instead of increasing with the growth of population, as one would expect in the case of maladies so relatively constant in prevalence and so easy to distinguish as these.

General Paralysis of the Insane, and other Forms of Insanity, were certified in 39 instances. The annual average of such deaths for the past five years has been 37, while that of the five years ended with 1901 was 36. It is satisfactory to note that, so far at any rate as the death returns go, there is no apparent tendency to an increase under this heading.

Epilepsy occurred as the dominant death cause on 21 certificates. The annual average of the past five years has been 23, and that of the preceding

winter weather, the annual number of deaths from these quinquennium 17. Prior to this last period, however, the annual numbers had been considerably higher. There is no apparent reason for such fluctuation.

Locomotor Ataxia, Paraplegias, etc.—

Diseases of this type were given in 17 instances, as compared with 18, 18, 17 and 16 in the four preceding years, respectively, and an annual average of 19 during the previous quinquennium.

Peripheral Neuritis was certified in four cases, as against three the year before. Both these numbers are certainly far short of the actual totals. Alcoholic neuritis alone is responsible either directly or indirectly for many more deaths than these.

Organic Diseases of Heart and Blood Vessels.—The deaths attributed to this group of diseases amounted during 1906 to 413. The annual average of the five years ended with 1906 has been 378, and that of the immediately preceding five years, 374. The annual totals of deaths from this group of diseases are for the most part singularly uniform, in the absence of special disturbing factors. Such factors are (*a*) the prevalence of diseases like epidemic influenza, which raise the mortality, and (*b*) the occurrence of unusually mild and equable seasons, which lower it. The slight excess above the mean in the total number of deaths for 1906 is probably due to alteration in methods of classification.

Bronchitis, Pneumonia, Pleurisy, etc.

(Diseases of the Respiratory System other than Phthisis).—The total number of deaths returned under this heading during 1906 amounted to 722, as compared with 653, 732, 728, and 749, in the four preceding years respectively, and an annual average of 757 for the five years ended with 1901. In the absence of infective respiratory disorders in epidemic form, and of severe

causes shew comparatively little variation year by year ; but when epidemic influenza is present, as it was in the early nineties, and when severe winter weather lowers the resistance of the poor to disease, and discourages them from properly ventilating their dwellings, the number of such deaths invariably increase in a marked degree. During 1891, when the latest severe outbreak of epidemic influenza reached its highest point of prevalence and fatality, the deaths from this group of disorders numbered 944, *i.e.*, 222 above the number recorded in 1906, and more than 200 above the average of the past 10 years—this too with a population many thousands less than now, or 10 years ago.

Diseases of the Stomach and Gullet (non-malignant).—These are given as responsible for 31 deaths. The average annual number for the five years ended with 1905 was 44, the totals having ranged from 35 to 55 during this period. There were 15 deaths described as due to ulcer of stomach or duodenum, as compared with 14 in 1905.

Simple Enteritis.—This was the reputed cause of 69 deaths during 1905, as against 40, 75, 41, and 39 in the four immediately preceding years, respectively. The number of these deaths always vary directly with the prevalence or non-prevalence of epidemic diarrhœa, and they nearly all occur in summer and autumn. Moreover, most of the deaths are those of infants at ages when epidemic diarrhœa is most fatal. In the present instance, 75 per cent. of all the deaths occurred under the first year, and 87 per cent. under the 5th year of age. The inference is obvious, that the majority of these deaths are due to epidemic diarrhœa. They are, however, excluded from the list of deaths due to this cause by the rules of classification already referred to, and by the observance of which the diarrhœa mortality of various districts are now rendered evenly comparable.

Appendicitis was given as the cause of death in 17 cases. The numbers certified, respectively, in each of the preceding five years were 10, 16, 17, 10 and 11. Most of these fatal cases have come to notice in connection with operations performed for the relief of the condition. It is probable that many other fatal cases occur which escape diagnosis. The above numbers for recent past years, however, are fairly steady, considering the semi-accidental nature of the disease.

Hernia and other (non-malignant) Obstructive Diseases of the Bowels (exclusive of Appendicitis).—These causes are alleged in 22 cases, as against 26, 26, 33 and 29 severally in the four preceding years. The numbers of deaths here, also, are certainly less variable than one would expect with death causes so largely accidental as these.

Acute Nephritis and Bright's Disease.—The aggregate deaths from these disorders numbered 105, as against 83, 96, 90, and 94 in the four preceding years, and an annual average of 93 for the five years before this. There is no very apparent reason for the sudden advance in the number of deaths under this heading.

Diseases of the Bladder and Prostate, etc. (non-malignant).—The deaths from these diseases were apparently 20 in number during 1906. The preceding five years average was also 20—the range extending from 16 to 30.

Diseases (non-malignant) of the Female Organs of Generation.—These were stated to have been fatal in 12 cases, as against 18, 13, 9, 25, and 16, respectively, in the preceding five years.

Accidents of Child-birth.—These accounted for 21 deaths. There were 16 in 1905, and the annual average of the preceding five years was 21—the range being from 17 to 27 during this period. I have reason for thinking that the number of these deaths is understated, but the supervision which is now exercised over the practice of midwives under the Midwives Act will tend, at once, to secure a more accurate return of such deaths, and also to lessen the chance of their occurrence. Although the birth-rate is declining, the growth of population keeps the actual number of yearly births at a fairly even figure year by year. Indeed, the extreme range in the annual totals during the 10 years ended with 1905 was only from 6,645 in 1905 to 6,945 in 1903, and the 10 years average was 6,807, so that the actual numbers of deaths from these causes may be compared year by year without much correction. However, it is interesting to compare the precise ratio of such maternal deaths to the number of births registered year by year. During the past five years the foregoing proportion has been as follows:—1906, 1 in 322; 1905, 1 in 416; 1904, 1 in 405; 1903, 1 in 366; 1902, 1 in 343. But to obtain the full proportion of such maternal deaths to the number of children born, it is necessary to add to the deaths under this heading those of mothers from puerperal septicæmia (already dealt with under the heading of septicæmia). There were 19 such deaths during 1906, and these added to the 21 from other accidents of child-birth brings the total to 40 for that year. With this addition all round, the proportion of maternal deaths to total births becomes 1 in 169 for 1906, 1 in 237 for 1905, 1 in 275 for 1904, 1 in 217 for 1903, and one in 245 for 1902. The figures and ratio for 1906 are deprived of much of the sinister significance they would ordinarily possess, by the fact that many accidents of child-birth have been brought

to light under the new régime of midwifery supervision, which, but for such supervision, would have escaped recognition under other names.

Accidents, Negligence—and Violent Deaths other than Suicide.—These were certified as responsible for a total death-roll of 119 during 1906. The annual totals in each of the four immediately preceding years were, severally, 124, 111, 93, and 106, and the average for the five years prior to 1902 was 114. Of the 119 deaths so certified during 1906, 4 occurred in mines, 11 in vehicular traffic (in public streets), 3 on railways, 4 in building operations, 2 by weapons or implements, 21 by burns and scalds, 5 by poisons, 1 by surgical narcosis (anæsthetic), 1 by surgical neglect, 4 by drowning, 31 by overlying in bed (all under one year), 3 by other methods of suffocation, 19 by falls in house or workplace, 1 by fall in street, 1 by fall unspecified, 7 by homicidal violence, and 1 by execution.

Suicide.—There were 26 cases of reputed suicide during 1906, as compared with 44, 27, 31, 32, and 36 in the five years ended with 1905. One was between 15 and 20 years of age, 2 between 20 and 25, 11 between 35 and 45, 5 between 45 and 55, 3 between 55 and 65, and 4 between 65 and 75. Seven were by poison, eight by hanging and strangulation, eight by drowning, and three by cut or stab.

The deaths from various forms of violence in Nottingham during 1906 were in the proportion of 0·57 per 1,000 of population (57 per 100,000).

Uncertified Deaths.—There were 21 deaths uncertified by either registered medical practitioner or coroner during 1906. The return of the Registrar-General is here identical with my own. These 21 deaths were equal to 0·5 per cent. of all deaths during the year.

The corresponding figure for England and Wales was 1·5 per cent., for London 0·2 per cent., for the 76 great towns 1·0 per cent., and for the 142 lesser towns 1·6 per cent., during 1906.

Inquests.—The inquests held by Mr. C. L. Rothera, the Coroner, or his deputy, during 1906, numbered 281,* and were equal to 6·8 per cent. of all deaths. The total and percentage during 1905 were 287 and 6·9. The proportion borne by coroners' inquests to total deaths in England and Wales during 1906 was 6·8 per cent., in London 9·7 per cent., in the 76 great towns 7·7 per cent., and in the 142 lesser towns 5·8 per cent.

Chart of Meteorology, Births, & Deaths in Nottingham during 1906.—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.

* This figure is furnished by Mr. C. L. Rothera. The Registrar-General gives the number of inquests at 264, equal to 6·5 per cent. of all deaths.

CITY ISOLATION HOSPITAL, BAGTHORPE.

This report has reference only to the general Isolation Hospital at Bagthorpe, Basford; the new Hospital on Bulwell Forest, in the absence of small-pox, being now closed.

The persons admitted to Bagthorpe Hospital during 1906, as patients or contacts, and for observation or quarantine, numbered 680. The numbers so admitted during each of the five years immediately preceding, were 694, 1,099, 808, 618, and 574.

Total Number of Cases in Hospital, 1906.

DISEASE.	Remaining at end of 1905.			Admitted during 1906.			Total cases during 1906.	Total deaths during 1906.	Case-mortality % of total cases, 1906.	Days of average residence.		Remaining at end of 1906.
		Recovered.	Died.		Recovered.	Died.				Non-fatal.	Fatal.	
Scarlet Fever	M. 28	27	1	161	126	4	189	5				31
	F. 24	24	..	190	155	4	214	4				31
Total..	52	51	1	351	281	8	403	9	2·64	54	29	62
Enteric Fever	M. 3	3	..	18	13	2	21	2				3
	F. 3	3	..	22	10	3	25	3				9
Total..	6	6	..	40	23	5	46	5	14·71	72	5	12
Diphtheria ..	M. 9	9	..	119	88	10	128	10				21
	F. 22	22	..	149	120	8	171	8				21
Total..	31	31	..	268	208	18	299	18	7·00	53	4	42
Other Cases ..	M. ..	..	..	11	7	..	11	..	..			4
	F. ..	..	..	10	8	1	10	1	..			1
Total..	..	..	..	21	15	1	21	1	6·25	23	75	5
TOTAL	89	88	1	680	527	32	769	33	5·1	50·5	28	121

The following is an analysis of the admissions during 1906:—Scarlet fever, 351 patients (161 males and 190 females); enteric fever, 40 patients (18 males and 22 females); diphtheria, 268 patients (119 males and 149 females); phthisis, 3 male patients; other

cases, of incidental diseases requiring isolation, of erroneous diagnosis, of persons admitted for observation or quarantine, etc., 18 persons (8 males and 10 females).

The cases remaining in hospital at the close of 1905 were 89 in number: 52 of scarlet fever, 6 of enteric fever, and 31 of diphtheria. Those still in hospital at the end of 1906 numbered 121: 62 of scarlet fever, 12 of enteric fever, 42 of diphtheria, 3 of phthisis, and 2 of other description. Eight persons erroneously certified as suffering from diphtheria, four from enteric, and one from scarlet fever, were sent in during the year. All were speedily isolated, and none contracted any other complaint than that from which he or she was suffering on admission. Fifteen recovered and were discharged, one died of the complaint from which *she* was suffering on admission (tuberculous ulceration of the bowels), and five remained in hospital at the close of the year.

Table shewing the number of Beds occupied during each month of the year 1906.

MONTH.	BEDS OCCUPIED.		MONTH.	BEDS OCCUPIED	
	Highest.	Lowest.		Highest.	Lowest.
January	92	59	July	107	97
February	101	70	August	107	96
March	98	68	September ..	113	95
April	83	74	October	118	115
May	80	72	November ..	121	108
June	95	87	December ..	128	122

The numbers of patients in hospital were relatively low in the first half of the year, but rose considerably in the second half. The mean of the highest numbers in successive quarters were, 96, 86, 106, and 122; and the mean of the lowest, 66, 78, 96, and 115—also in successive quarters. The highest number of patients in hospital at any one time was 128, in December, and the lowest, 68, in March.

**SCARLET
FEVER.**

The total number of scarlet fever cases (reputed or actual) which came to my knowledge by notification or otherwise, during 1906, was 611; and 351, or 57·4 per cent., of these were removed to the Isolation Hospital at Bagthorpe. The proportions of all scarlet fever cases so removed during each of the preceding five years were, respectively, 56 per cent., 39 per cent., 34 per cent., 52 per cent., and 47 per cent. The 351 scarlet fever patients admitted during 1906 consisted of 161 males and 190 females. Those still in hospital at the end of 1905 numbered 52, 28 being males, and 24 females. There were 62 remaining in hospital at the end of 1906, and these were made up of 31 of each sex. These cases, however, must obviously be subtracted from the total number in hospital, in order to obtain the number finally dealt with before the close of the year. The cases so determined numbered 341, 158 being of males, and 183 of females. The latter includes one member of our own nursing staff, who contracted scarlet fever while at work in the wards.

There were five deaths of males, equal to 3·16 per cent. of male cases, and four of females, equal to 2·19 per cent. of female cases. The corresponding case death-rates in 1905, were 1·6 per cent. for the male cases, and 3 per cent. for the female. The total case-mortality for both sexes was equal to 2·64 per cent. This rate is 0·34 per cent. above that of 1905 (2·31 per cent.), 0·74 above that for 1904 (1·90 per cent.), and no less than 1·55 per cent. above that for 1903 (1·09 per cent.).

The table below contains the usual details of age and sex distribution and mortality, and of actual death-causes in fatal cases.

There was again, as last year, only one case of malignant scarlet fever admitted, but several cases, six of which proved fatal (two of males and four of females) were complicated with septic infection.

Age and Sex Distribution of Non-fatal and Fatal Cases of Undoubted Scarlet Fever under treatment in Hospital during 1906, exclusive of those remaining at the close of the year, but inclusive of those carried over from 1905.

AGE PERIODS.	MALES.		FEMALES.	
	Recoveries.	Deaths.	Recoveries.	Deaths.
Under 1 year	3	..	1	..
Between 1 and 2 years	4	1	13	..
" 2 and 3 "	7	..	7	..
" 3 and 4 "	21	2	16	1
" 4 and 5 "	14	1	16	1
" 5 and 10 "	55	1	68	1
" 10 and 15 "	27	..	29	..
" 15 and 20 "	9	..	6	1
" 20 and 25 "	6	..	12	..
" 25 and 30 "	4	..	7	..
" 30 and 35 "	1	..	1	..
" 35 and 40 "	1	..	2	..
Over 40 years	1	..	1	..
TOTALS	153	5	179	4

TOTAL CASES, 341; deaths, 9; *case-mortality*, 2·64%.

MALE CASES, 153; deaths, 5; *case-mortality*, 3·16%.

FEMALE CASES, 183; deaths, 4; *case-mortality*, 2·19%.

Above cases constituted as follows:—

52 left over from 1905
351 admitted during 1906

—
403
62 left over for 1907

—
341 of definite issue during 1906.
—

Actual Age at Death, and Cause in Fatal Cases.

MALES. (5)			FEMALES. (4)		
1 year ..	..	Toxæmia.	3 years..	..	Profound Toxæmia.
3 " ..	..	"	4 " ..	..	"
3 " ..	..	Scarlet Fever and Pneumonia.	5 " ..	..	Toxæmia, with sup- purative Otitis and Rhinitis.
4 " ..	..	Cerebellar Abscess.	16 " ..	..	Toxæmia, Pleurisy, and Pericarditis.
6 " ..	..	"		
		complicated with Congenital Heart Disease.			

Under the heading of scarlet fever in the general report, I have contrasted the hospital and home mortality. The home case-mortality, I may mention once more, was equal to 3·1 per cent., or 0·5 per cent. above that in hospital. I may also mention once more that several of the cases sent to hospital were so sent on account of their severity, and some were actually moribund on admission. All cases of marked severity, or complicated with septic trouble, are still nursed as far as possible in the open air, with results which are certainly highly beneficial in many, and, as far as I have been able to gather, injurious in none.

Complications among Scarlet Fever Cases during 1906.

COMPLICATIONS.	Cases affected.	Percentage of all Cases.
Albuminuria and Nephritis ..	17	5·0
Rhinorrhœa	58	17·0
Otorrhœa	51	14·9
Arthritis	13	3·8
Abscess—Cervical	5	1·5
Mastoid	2	0·6
Second attacks	4	1·1
Pneumonia	2	0·6
Conjunctivitis	3	0·9
Pleurisy and Pericarditis ..	1	0·3

The return cases, which, according to our method of reckoning, are those cases which develop in any house to which a hospital patient returns after discharge, within 21 days of such discharge, apparently numbered only four during 1906, these being the only cases which came to our knowledge and are recorded in our register. They occurred, one each in August and October, and two in November. These four cases are equal to 1·17 per cent. of all the hospital cases finally dealt with during the year, as compared with 1·28 per cent., 3·48 per cent., 2·18 per cent., and 3·68 per cent., respectively, in the four preceding years.

Of the 285 cases of enteric fever, or reputed enteric fever, which occurred in Nottingham during 1906, 40 only, or 14 per cent., were admitted to Bagthorpe Hospital. As already explained elsewhere, the comparative smallness of this number is due to the fact that, under the existing arrangement affecting the provision of hospital treatment for cases of enteric fever requiring it, only those cases are admitted to Bagthorpe which cannot find accommodation at the Union Infirmary as regards paupers, and the General Hospital as regards non-paupers, and the number of such cases has been less in recent than in former years owing to the diminishing prevalence of the disease.

**ENTERIC
FEVER.**

Age and Sex Distribution of Cases of Enteric Fever under treatment in Hospital during 1906, including those left over from 1905, but excluding those remaining at the end of 1906.

AGES.	MALES.		FEMALES.	
	Recovered.	Died.	Recovered.	Died.
Under 5 years	3	..	..	..
Between 5 and 10 years	2	..	1	..
" 10 " 15 "	3	..	5	1
" 15 " 20 "	2	1	1	..
" 20 " 25 "	3	1	1	..
" 25 " 30 "	1	..	..	1
" 30 " 35 " .. ..	..	..	3	..
" 35 " 40 "	1	..	2	..
Over 40 years	1	..	..	1
TOTALS ..	16	2	13	3

TOTAL CASES, 34.—Deaths, 5. *Case-mortality*, 14·7%.

MALE CASES, 18.—Deaths, 2. *Case-mortality*, 11·1%.

FEMALE CASES, 16.—Deaths, 3. *Case-mortality*, 18·75%.

The above 34 cases are made up as follows:—

6 remaining at end of 1905.

40 admitted during 1906.

46

12 remaining at end of 1906.

34 finally dealt with during the year.

In the fatal cases death was due to Toxæmia, 4; Pneumonia, Intestinal Hæmorrhage, and Heart failure, 1.

Of the 40 cases admitted during 1906, 18 were of males and 22 of females, and there were three of each sex left over from the previous year. Seven cases were admitted during the first quarter, two only during the second, 15 in the third (13 of these in September), and 16 in the fourth (nine in November).

There were five deaths among the 34 cases finally dealt with during the year, equal to a case-mortality of 14·7 per cent. There were two deaths in 18 male cases, giving a case-mortality of 11·1 per cent., and three deaths in 16 female cases, giving a case-mortality of 18·75 per cent.

The accompanying table gives the exact age and sex incidence and mortality, and the causes of death in fatal cases.

I have again written at some length on the subject of enteric fever in the epidemic disease chapter of this report, giving particulars of its local history during 1906 and other recent years.

DIPHTHERIA. Two hundred and sixty-eight of the 570 notified cases of diphtheria were removed to the City Isolation Hospital at Bagthorpe during 1906. This number of removals is equal to 47 per cent. of all. The cases removed, and their proportion to the whole number of cases during the two preceding years were, respectively, 234, and 44 per cent., and 132, and 24 per cent.

The admissions during 1906 were made up of 119 male, and 149 female cases. There were 31 left over from 1905 (9 male and 22 female), and 42 (21 of each sex) remaining at the end of 1906, to be finally accounted for in 1907.

The quarterly number of admissions were singularly uniform, much more uniform in fact than those in successive months. The admissions in consecutive quarters were, respectively, 68, 62, 67, and 71.

Age and Sex Distribution of Cases of Diphtheria under treatment during 1906, including those left over from 1905, but excluding those remaining at end of 1906.

AGES.	MALES.		FEMALES.		Monthly Admissions.
	Recovered.	Died.	Recovered.	Died.	
Under 1 year ..	..	..	..	..	Jan. 11
Between 1 and 2 years	2	2	1	..	Feb. 43
" 2 and 3 "	4	..	1	1	March 14
" 3 and 4 "	6	2	6	..	April 14
" 4 and 5 "	16	3	16	2	May 17
" 5 and 10 "	42	2	47	4	June 31
" 10 and 15 "	14	1	20	1	July 30
" 15 and 20 "	8	..	12	..	Aug. 15
Over 20 years ..	5	..	39	..	Sept. 22
					Oct. 26
					Nov. 25
					Dec. 20
TOTALS	97	10	142	8	268
					whole year.

TOTAL CASES, 257*.—Deaths, 18. *Case-mortality*, 7.0 %.

MALE CASES, 107.—Deaths, 10. *Case-mortality*, 9.3 %.

FEMALE CASES, 150.—Deaths, 8. *Case-mortality*, 5.3 %.

* Total finally dealt with.

The 257 cases are made up of—

31	"	remaining at end of 1905.
268	"	admitted in 1906.
<hr/>		
299		
42	"	left over at end of 1906.
<hr/>		
257	"	finally dealt with during the year.
<hr/>		

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

CAUSES OF DEATH.—Toxæmia, 2; Hæmorrhagic toxæmia, 4; Toxæmia and Heart paralysis, 3; Heart paralysis, 5; Heart paralysis and Broncho-pneumonia, 1; Broncho-pneumonia, 3.

ANTITOXIN.

268 cases admitted:—

208 recovered; of these 174 had 967,000 units of antitoxin, or an average of 5,557 per case.

18 died; of these 16 had 150,000 units, or an average of 9,375 per case.

42 carried over into 1907.

TRACHEOTOMIES.

F.	1	aged 4	Recovered.
	1	" 5	"
M.	1	" 4	"
	1	" 4	"
	1	" 6	Died.

There were 18 deaths in the 257 cases dealt with during the year; the total case-mortality, therefore, was equal to 7·0 per cent. The male cases numbered 107, and deaths 10; the male case-mortality, therefore, was equal to 9·3 per cent. The female cases were 150 in number, and deaths 8; the female case-mortality, therefore, was equal to 5·3 per cent.

Further details of age and sex incidence and mortality, and of actual death-causes in fatal cases, are given in the accompanying tabular statement.

In my Annual Report for 1905, I drew attention to the marked decline in the case-mortality for 1905, as compared with that of 1904. The total case-mortality for 1905 was 8·5 per cent., and that for 1904 16·4 per cent. It is gratifying to be able to record a further reduction in the case-mortality of 1906 as compared with that of 1905, the case-mortality of 1906 (7·0 per cent.) being 1·5 per cent. below that of the preceding year (8·5 per cent.).

Among the 302 recorded cases of diphtheria nursed at home there were 24 deaths, making a case-mortality equal to 8·0 per cent. This figure, again, is 1·0 per cent. higher than that of the hospital cases. This difference in favour of the hospital may seem comparatively slight, but is the more significant for the fact that a large proportion of the cases sent to us are exceptionally severe, several indeed, as mentioned under scarlet fever (*ante*), being practically moribund on admission.

Tracheotomy was performed upon five patients, either at the time of admission or very soon afterwards. Three of these patients were males, two aged 4, and one 6 years, and this last patient died; two were females, *æt.* 4 and 5 years, respectively, and these, with the two younger males, recovered.

The value of the statistics of hospital cases is largely discounted by the fact that these cases are more or less specially selected, and such no doubt is the case here, but, making proper allowance for this fact, we may still gather useful information from the behaviour of the disease in respect of age and sex incidence and mortality, as illustrated by the accompanying table.

In the first place we have to remember that the prompt and skilful use of diphtheria antitoxin has almost revolutionized the treatment of diphtheria, especially in the case of infants and young children. It enables us both to protect against attack, for a short time at least, and also to mitigate the severity of the acute stage of the malady in all but malignant and exceptionally severe cases. All but two of our fatal cases during 1906 had their antitoxin after the fifth day, *i.e.*, too late for utility—the antitoxin, it should be remembered, is never retrospective in its action. Before its introduction, the performance of tracheotomy upon children under five for diphtheria was followed by death in a large proportion of cases; with its aid this operation is usually now instrumental in saving life, even in the case of young infants. The cases at early ages in the table are too few for their statistics to be at all generally instructive; but it is worthy of notice that two infants in the second year (both males), treated late with antitoxin, succumbed, while another in the same year (female), who received it early, recovered. Again, it may be noted that, while the case-mortality from the second to the fifth year ranged from 14 per cent. to 17 per cent., it fell off abruptly after the fifth year, being only 6 per cent. and less from the fifth to the fifteenth year, and that there were 69 cases without a death after the 15th year of age. Heart paralysis, toxæmia, and broncho-pneumonia were the preponderating death-causes in fatal cases. Secondary heart paralysis may occur even as late as the tenth week from onset. This

is a most distressing and almost entirely intractable complication of the disease. Antitoxic serum, to the average amount per patient of 5,557 units, was injected on admission into all cases which could possibly be benefited by such injection. Also, as previously stated, 46 flasks of serum were given away to medical men in attendance upon poor patients at their own homes.

Dr. Jacob, the City Bacteriologist, states that he had examined and reported upon 2,953 specimens from cases of diphtheria and reputed diphtheria sent to him during 1906. No case of diphtheria is now discharged from the Isolation Hospital until the secretions of the nose, throat, and ears have been examined and found free from the specific bacillus on two separate occasions.

Table showing monthly admissions of Cases of Scarlet Fever, Enteric Fever and Diphtheria, and "Other Cases," together with the monthly numbers of return cases of Scarlet Fever during 1906.

MONTHS.	CASES ADMITTED.				Return Cases of Scarlet Fever.
	Scarlet Fever.	Enteric Fever.	Diphtheria.	Other Cases.	
January	26	1	11	—	—
February	12	3	43	1	—
March	10	3	14	3	—
April	32	—	14	1	—
May.. .. .	27	1	17	3	—
June	32	1	31	—	—
July	37	..	30	—	—
August	36	2	15	3	1
September	37	13	22	3	—
October	40	3	26	—	1
November	43	9	25	2	2
December	19	4	20	5	—
TOTALS	351	40	268	21	4

Table of "Other Cases" admitted during 1906.

1	Wrongly certified as Scarlet Fever.	
4	" " Enteric Fever.*	
8	" " Diphtheria.	
2	Tonsillitis.	
1	Septic Lymphangitis of arm.	} Hospital Staff.
1	" " " foot.	
3	Phthisis.	
1	Typhus (?).	
21		

* One of these (a case of tuberculous enteritis) ended fatally.

Three patients with tuberculous phthisis were admitted to the Glebe Farm enclosure at Bagthorpe during the year, for sanatorium treatment and instruction—one of them was the junior clerk in the Health Department, and another an employee at the Eastcroft,—and two of them derived so much benefit from the treatment as to be able to return to their ordinary occupations. I wish once again to advocate the general opening of the disused Glebe Farm buildings and other empty buildings at Bagthorpe, and on the Bulwell Common small-pox enclosure, for the reception, treatment, and instruction of phthisical patients, belonging to the very large class who cannot gain admission to the more expensive sanatoria, and will not resort to the Union.

**TUBERCULOUS
PHTHISIS.**

The cost of the City Isolation Hospitals during the year ended March 31st, 1907, is stated by the City Accountant to have been £6,637, but from this amount must be deducted the sums spent upon the repair of roads, and upon the wages of a caretaker at the now empty small-pox hospital on Bulwell Common, in order to obtain the net cost of working and maintaining the hospital as such during the year. The money spent on the roads amounted to £350, and on the caretaker of the hospital, and on the hospital, at Bulwell £40—£390 altogether. If we deduct this from the £6,637 above given, we have left £6,247 as the cost of working the hospital during the period in question. If we divide this sum by the numbers of occupied beds, and of patients finally disposed of during the year, we obtain, respectively, £60 as the cost per bed per annum, and £9 12s. 9d. as the cost per patient, both of which may be regarded as sufficiently satisfactory amounts, considering the size of the hospital, and the relatively small number of patients dealt with.

Dr. William Habgood resigned the appointment of Resident Medical Officer at the Isolation Hospital, and Assistant to the Medical Officer of Health, at Christmas

of 1905, and Dr. Owen H. Peters, a distinguished graduate of Melbourne University who had also studied State Medicine in London, was appointed to succeed him, and still holds the appointment.

Dr. Habgood carried out the duties devolving upon him during his period of office in a manner to reflect the highest credit upon him both as a man and a Medical Officer; and I am pleased to be able to write in the same terms and entirely without reservation of his successor, Dr. Peters.

Miss Helen Wallace, who had been matron of the hospitals for more than ten years, and earned during this period the affection and respect alike of patients, committee, and colleagues, was still in office at the close of 1906, but then intimated her intention of resigning early in the current year in view of her approaching marriage.

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) vaccination and 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 1906:—

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 - - - -	21
2. Do. do. with a negative result -	61
	82

(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 - - - -	409
2. Do. do. with a negative result	2544
	2953

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

Widal's reaction—

1. Positive result - - - -	85
2. Negative result - - - -	67

152

(d) In connection with diseased or otherwise unwholesome meat and fish.

2 samples of beef for actinomycosis.

8 „ beef and pork for tuberculosis.

1 „ fish for tuberculosis.

4 „ meat suspected of unwholesomeness.

2 „ brawn for injurious organisms.

19 „ American canned foods for bacterial and other contamination.

In my Report for 1905, I alluded to the sudden and altogether unexpected death of Mr. Frederick George Williams, the superintendent for many years of this department, and chief Infectious Diseases Inspector for the City, which took place on January 11th of 1906. Mr. Williams was a valued and faithful servant of the Corporation for a long period, and his death entailed a serious loss upon the Health Department and the town at large. He was succeeded by Mr. Harry Ward, Cert. R. San. I., who for several years had been a District Inspector of Nuisances in this City.

The Mortuaries.—The numbers of bodies of either sex admitted to each of the three public mortuaries during each month of the year are given in the accompanying table.

Number of Bodies, Male and Female, taken into each of the Public Mortuaries during each month of the year 1906.

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	5	7	1	5	1	1	7	13
FEBRUARY	8	3	3	0	2	1	13	4
MARCH	7	10	3	1	0	0	10	11
APRIL	7	2	3	5	0	0	10	7
MAY.. ..	8	7	3	1	0	0	11	8
JUNE	6	3	4	2	0	0	10	5
JULY	7	1	4	5	1	0	12	6
AUGUST	7	5	5	2	0	0	12	7
SEPTEMBER ..	3	2	9	1	0	0	12	3
OCTOBER	6	7	6	1	0	1	12	9
NOVEMBER.. ..	4	1	4	4	0	1	8	6
DECEMBER.. ..	10	5	4	3	0	0	14	8
	78	53	49	30	4	4	131	87

TOTAL, BOTH SEXES—218.

The total for 1906 is 38 less than that for 1905, but the falling off in numbers has been general, and simply indicates a diminished necessity for mortuary accommodation during the past year. It must be remembered that only the Leen Side and Hyson Green mortuaries were specially built for the purpose; the Bulwell mortuary is simply a small adapted outbuilding adjoining the Bulwell Police Station. This latter building, however, is often a great convenience both to the public and the Coroner.

Public Lavatories.—The following are the situations of the existing public lavatories of the City for each sex:—

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 extent to which these conveniences are used by the public is very unequal, especially those provided for women, but as the amount of public patronage extended to them is for the most part continually increasing, there need be no hesitation in adding to their number, even without a public demand for such addition. Public-houses, hotels, and other refreshment places now commonly make such provision where no public lavatories exist, but it is for many reasons preferable that it should be made where necessary by

the Local Authority rather than by these establishments. The central lace market is still without a public convenience of this character, and there can be no doubt of the need for one somewhere within its precincts. There are other situations where these conveniences are needed, but none where they are more needed than here.

I may point out once more that the costly underground lavatory is only necessary in situations where a convenient site for one above ground cannot be obtained at a reasonable cost.

Common Lodging Houses.— There are now (at the end of 1906) 57 of these houses on the City Register (including two belonging to, and managed by, the Corporation), as compared with 55 at the end of 1905. The total bed-accommodation is now sufficient for 1,129 persons, the total number of beds having been augmented by 44 (single beds) during 1906. Two transfers were applied for, and both were granted. Six double beds were removed (from three houses), and replaced with single ones. The numbers of beds in houses Nos. 22 and 35 were reduced by one in each case, in order to increase the cubic space allowance per head in these houses.

Common Lodging Houses.						Situation:—
In Red Lion Street (and yards opening thereon) ..	..	..	..	..	..	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
" Peel Street .. ..	..	..	..	..	..	1
" Pear Street .. ..	..	..	..	..	..	1

Common Lodging Houses. Accommodation Data, 1906.

For Males only.	For Females and Married Couples.	For Females only.	Mixed Houses.	TOTAL.
27	15	1	14	57

	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, 1905..	55	8	27	15	4	2	1	1,085
New Houses opened ..	2	..	1	1	..	..	..	43
Houses re-opened ..	1	..	1	..	..	..	..	11
Houses closed ..	1	1	..	..	..	..	..	10
Houses on Register at end of 1906	57	..	..	..	..	..	..	1,129

All the houses were limewashed and cleansed throughout both in April and October, in accordance with the specific requirement of the Public Health Act, 1875.

The two new houses added to the register during the year are of the "better class" description, the Peel Street house, belonging to the Church Army, being conspicuously superior.

The general condition of the common lodging houses at the present time shows a marked improvement as compared with that of only a few years back, and so far as regards the houses devoted to the poorer nomads, it is hardly to be expected that they should improve much further, unless the lodgers frequenting them should show themselves more worthy than they seem at present of better conditions.

The two Corporation houses, that for men only in Popham Street, and that for women only in North Church Street, are both of them declining in popularity, and this by reason of the remediable defects at once apparent to a superficial examination.

The house for men, in Popham Street, is clean and well managed, but its situation is bad, and its equipment poor and altogether behind the times. It cannot compete, therefore, with other houses run by private enterprise, and with a more intelligent appreciation of the requirements of the better class of poor travellers and casual labourers.

Situation of lodging house.	No. of beds.	No. of Lodgers admitted in each of the years.									
		1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Popham Street...28 (Men only.)	6,568	6,608	6,792	7,965	8,262	9,282	9,194	8,821	8,798	8,754	
Nth.ChurchSt...20 Formerly Parliament St. (Women only.)	6,374	6,422	7,053	*3,603	3,612	4,631	5,123	4,529	4,215	3,867	
		12,942	13,030	13,845	11,568	11,874	13,913	14,317	13,350	13,013	12,621

* House closed July 14th to December 24th.

The North Church Street House, for women, is defective in many important particulars, alike with regard to equipment and management. It fails to meet the requirements of respectable working women, domestic servants, and other like persons, and is hardly used at all by people of this class. I am strongly of opinion that this house should undergo a radical alteration and reform, so as to render it acceptable to the latter class of persons, for whom there is at present no adequate cheap lodging-house accommodation existent in the City.

The Church Army Home in Peel Street is an excellent model of a superior common lodging-house. It contains separate cubicles, with baths, lavatory basins, W.C.'s, and other conveniences of modern type, and is properly managed and maintained. It is well patronized and pays its way, which is more than can be said of either of the Corporation houses.

I would strongly recommend that both the latter be re-modelled upon the lines of the fore-mentioned house. Such a change would have the effect of satisfying a well-marked public need, and also of supplying

models of what common lodging-houses should be for the benefit of the keepers of these houses throughout the City. Many other towns have provided houses of this class, and in all cases within my knowledge the result has been satisfactory and successful.

Mr. G. A. Read, Cert. R. San. I., continues to act in a highly satisfactory manner as Inspector of Common Lodging Houses in Nottingham.

Housing of the Working Classes Act, 1890.—The housing problem, as it is now commonly called, has so much wider a significance than the name implies, that it is well to remind the public of this fact, especially when, as at present, the subject is so much to the front. It might, indeed, be more fitly described as the problem of the poor. Although, at first sight, when we think of town slums and country hovels, the one thing needful for the poor appears to be better housing, a little consideration will shew that there are other factors of the problem which it is idle to ignore, because a satisfactory solution depends as much upon their proper treatment as the actual housing itself. Such matters are, (*a*) the wage question, which largely dominates the economic aspect of the housing problem, (*b*) the drink question, and (*c*) the recreation question.

With regard to the first, I shall only say that labourers with families cannot live decently on wages of £1 a week and under in our modern cities, though many make the attempt. One of the resultant evils is the employment of mothers, to the detriment of their offspring.

With regard to the drink question: this is so intimately bound up with, and correlated to, ~~with~~ all that poverty, vice, ignorance and overcrowding connote, that it is impossible adequately to discuss it alone.

There are certain prominent facts, however, concerning alcohol which may well be remembered; such, for example, as, that, although it is one of the anodynes of suffering humanity, it is undoubtedly a poison, that it does no good to anyone, and causes misery, disease and death to millions. It is certainly a move in the right direction to limit the facilities for procuring it.

The lack of definite and worthy occupation for leisure hours is one of the great needs of modern cities. Much has been said against compulsory military training, but in all probability its introduction in this country would do good, by teaching "law, order, duty, and restraint" to many who have at present no opportunity of learning them, and affording an occupation and a hobby for leisure time when the period of training was over.

The difficulty of dealing with the actual housing problem in different localities, moreover, is complicated by the fact that so few districts are quite alike in their circumstances and requirements, and consequently that no cut-and-dried plan of reform will meet the case of all. For example; tenement blocks are required in one case, rural cottages in another; people in one district can travel to and from their work, in another they must live in its immediate vicinity.

The system of pulling down mean rookeries without providing suitable new houses for their inhabitants, can only lead in most cases to an exaggeration of the original evils, by driving the poor people closer together in any neighbouring slum districts which remain. This has often happened in Nottingham and other places, where the evicted tenants, being unable to take to the new houses provided under the requirements of the Local Government Board, on account of their higher rent or too distant position, have simply

crowded into the nearest poor neighbourhood which could afford them shelter, giving rise in many instances to the establishment therein of small furnished tenements of the poorest class.

Some thousands of poor houses have been cleared away in this City, by railway and tram extensions, by street improvements, and by the condemnation of one area and of many individual dwellings, during the 30 years which have elapsed since the borough extension, but, although the appearance of the town has been greatly improved by these clearances, the condition of the poorest slum denizens as regards house accommodation has probably not changed at all for the better during this period.

It will be remembered that 30 houses in Poplar (scheduled as 27 on account of the combined use of three) were condemned under Sec. 32, Part II., of the Housing of the Working Classes Act, 1890, during 1904 and 1905, and closed by an order of the magistrates, confirmed on appeal by the Recorder at Quarter Sessions. These houses were totally unfit for use, and too old and decayed for repair, but, owing to the hardship entailed upon their owners, who were poor people and had bought them in good faith, it was not thought desirable, for the time being at least, to secure further slum improvement by this method of procedure.

Three houses only therefore, which could not be left, were condemned during 1906. These were situate as follows :—

2 Ashton's Yard, Bridlesmith Gate. 1 house.

44 and 46 St. Peter's Street, Old Radford. 2 houses.

The work of cleansing and repairing poor dwellings at the instance of the Health Department still continues without interruption, and doubtless an occasional total closure as above, has the effect of

quicken the attention of house owners and agents to the condition of their houses, and of reconciling them to our action in securing their improvement. One hundred and thirty-one houses were cleansed and repaired under notice from the Health Department during 1906.

Canal Boats Acts, 1877 to 1884; and Regulations, 1878.—Mr. F. W. Franks, Cert. R. San. I., Chief Clerk of the Health Department and Inspector of Canal Boats, states in his Official Report for 1906 that he has visited the canals and other navigable waters of the City on 81 occasions, and examined 130 boats, during the year. The visits have been paid at almost all hours within the period prescribed by the Acts (6 a.m. to 9 p.m.), and at nearly regular intervals. He has been allowed free access to the boats, and has been well received on all occasions. The number of women carried on the boats was 26, and of children nine; four of the latter being under five years, and five between five and twelve years of age. The only infringement of the Acts and Regulations discovered was the lack of painting in two cabins. The defect was repaired at once in each instance by the owners on receipt of notice. No case of infectious disease was reported on any boat within the City, nor was it necessary to detain any boat for cleansing during the year. The number of boats and the individual boats upon the Nottingham register have alike remained unchanged, since 1905, at 155.

Factory and Workshop Acts, 1891-1901.—On pp. 123-125 of this Report will be found tables drawn up in the form approved by the Secretary of State for the Home Department, setting out, for the year 1906, the inspections made, notices issued, and defects found and remedied by officers of the Local Authority, particulars of home-work and outworkers,

and of lists of these received from employers (Sec. 107), of inspections of outworkers' premises, of outwork found on unwholesome and infected premises (Secs. 108-110), and of action taken to prevent its issue to such premises (Secs. 109, 110), the numbers of workshops on the local register (Sec. 131), matters notified by the Local Authority to His Majesty's Inspector (Sec. 133) and *vice versa*, and underground bakehouses in use at the end of the year (Sec. 101).

The form of these tables has lately, since 1905, undergone some alterations, but the meaning of all the sections is so clear as to call for no further explanation than that furnished by their own headings. I must mention, however, that in stopping outwork on infected premises, it is, and has been our practice for many years, (1) to remove at once for disinfection any lace or wearing apparel found on such premises, and return it after disinfection to the business house from which it was issued, (2) to give notice to the outworkers that no fresh material is to be taken into the home until the home premises have been finally disinfected at the termination of illness. This course gives rise to less friction than that of sending formal notice to the employer, and in our local experience it is quite efficacious.

At the end of this Report will be found an abstract of a Report which I have lately prepared at the request of the Home Office upon the Health of Lace Dressing Operatives. The production of this Report was considerably delayed (*inter alia*) by the illness and unexpected death (January 17th, 1907) of Mrs. Sarah Ann Exton, one of the Workshop Inspectors of the Nottingham Health Department, who had collected much of the material from which the Report was compiled. Although Mrs. Exton's death belongs to the current year, I cannot close this section for 1906 without expressing my sincere regret for the loss of an old friend and colleague. Mrs. Exton was an unassuming woman, but did her work

thoroughly and well, and was much esteemed by the few who knew her intimately. Her extensive practical knowledge of factory life among women was often of the greatest possible value to the Health Department.

Shop Hours Acts, 1892 to 1895.—The general provisions of these Acts are set out in the official notice required to be posted up in any “retail and wholesale shops, markets, stalls, and warehouses,” including “licensed public-houses and refreshment houses of any kind,” in which assistants (under the age of 18 years) are employed for hire, which is reproduced as before in the Appendix of this Report.

The principal provision of the Acts is contained in the last paragraph of the notice, which reads:—

“And Notice is Hereby Given that no young person can be employed in or about these premises for a longer period than 74 hours, including meal-times, in any one week.”

No case of infringement of these Acts has been brought to my notice during 1906, but as offences under the Acts can in most cases only be proved by the young persons illegally employed, it is not to be expected that many such offences should come to light.

The Midwives Act, 1902.—There are now practising in Nottingham 48 midwives duly certified under this Act, as compared with 49 at the first of April, 1905, when certification on the ground of previous practice, or other qualification as a midwife, came to an end. The Central Midwives Board were duly notified by us in January (as provided under Sec. 8) of the names and addresses of all midwives who, during the preceding twelve months, had apprised us (in writing) of their intention to practise in Nottingham. A current copy of the Roll of Midwives is kept (as also required under Sec. 8) in the Office of the Health Department at the Guildhall.

During the whole of 1906 the supervision of the local midwives was carried out on behalf of the Local Supervising Authority (the Health Committee) by myself and the two Lady Health Visitors, Miss Bowers and Miss Buckoll, but during the current year a special officer has been appointed to act as Inspector of Midwives, under my direction, in the person of Miss Kate Steen, a lady in all respects very highly qualified for the post. This lady has already commenced to give instruction to these women in some of the niceties of their calling, and in the requirements of the Midwives Act, and of the Rules of the Central Midwives Board affecting their practice and conduct.

The following are some of the more important matters, notified in connection with the practice of Midwives, of which we have had to take official cognizance during the year 1906 :—

1. One hundred and twenty-six still-births, requiring investigation by us before the bodies in question were buried.

2. Eighty-five cases of labour in connection with which it became necessary for the midwives to send for medical assistance, or advise that such assistance should be sent for.

3. Eight cases of puerperal fever occurring in cases attended by midwives.

Four midwives in attendance upon the last-mentioned cases were suspended from practice for various periods, and their persons, clothing, and outfits cleansed and disinfected in order to prevent the spread of infection. These precautions were effectual in all cases.

Diseases of Animals Act, 1894, Orders, Regulations, etc., of the Board of Agriculture.—No less than 36 separate outbreaks of reputed Swine Fever were notified during the year, and duly reported to the Board of Agriculture and the Health Committee, but the diagnosis in every instance was proved by subsequent *post-mortem* examination to have been incorrect.

Four cases of glanders in horses occurred (three in February and one in March) upon premises in Hawkrigge Street. One of the horses died naturally, the other three were slaughtered under the direction of the Health Committee, and compensation was paid to the owner.

Two cows affected with anthrax were brought from the same premises in Carlton (one each, in February and March), to our Eastcroft knackery. Prompt disinfection of premises, utensils, and persons, as directed by me, was carried out under the supervision of Inspector Moore, for both the glanders and anthrax outbreaks, and there has been no spread of infection in either case.

The Nottingham Allotment Gardens Swine Fever Order of January 7th, 1904 (affecting the Mill-in-the-Hole Allotment Gardens) was still in force at the close of 1906, the Board of Agriculture being of opinion that, under existing conditions, these allotment gardens are not fit and proper places for the keeping of swine.

The Swine Fever (Regulation of Movement) Order of 1903 was made applicable on January 19th, 1906, to a scheduled area comprising the administrative counties of Nottingham and Derby, and the county boroughs of Nottingham and Derby, excepting only the area above referred to (as the Mill-in-the-Hole Allotment Gardens), and was still in force at the close of the year.

I have already furnished an abstract of this latter Order in my report for 1905, but owing to the continual demands made upon us for information concerning the Order, I think it well to give the abstract again this year. It reads as follows:—

(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 depôt, 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 removed 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 depôt (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 Depot.—For the first time since the opening of this chamber, in 1898, there has been a decline, instead of an advance, in the annual number of animals destroyed, as compared with the record of the immediately preceding year. The number of dogs destroyed during 1906 was 1,448, as compared with 1,507 in 1905; and the number of cats 428, against 548 in 1905. The total for 1906 is thus 1,876, as against 2,055 in the previous year.

The apparatus is ordinarily in use on Monday and Friday afternoons, but it is also put in operation on other days when the number of animals for destruction is sufficiently numerous. Owners and others interested in any of the animals sent down are allowed to witness the (painless) death of the animals if they desire it.

It is much to be hoped that this humane and useful apparatus will retain its popularity, and continue to be extensively used.

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

	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Dogs ..	422 ..	472 ..	731 ..	770 ..	856 ..	1078 ..	1325 ..	1507 ..	1448
Cats ..	64 ..	108 ..	180 ..	297 ..	371 ..	455 ..	735 ..	548 ..	428

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

Slaughter Houses.—The slaughter houses now on the City register number 153, no alteration having been made in the list during the year.

One application was made for an annual permit (under the Public Health Acts Amendment Act) in respect of a proposed new slaughter house, but this was refused.

It is my duty once more to remind you that Nottingham is still without even the nucleus of Public Slaughter Houses, and that for three special reasons the substitution of public for private slaughter houses is to be desired. These special reasons are,

(1) That public slaughter houses promote efficiency in, and greatly facilitate, meat inspection ;

(2) That they tend to promote the humane treatment of animals, as cruelty, once known, would not be tolerated within them ;

(3) That the discontinuance of private slaughter houses secures at once the removal of a danger and a nuisance from those streets through which cattle are now driven to slaughter, and likewise the abatement of the invariable nuisance associated with the proximity of such establishments to human dwellings and crowded thoroughfares.

Offensive Trades.—Two applications were received during the year for leave to establish the trade of tripe-boiler, and one for leave to establish that of soap-boiler. No written permits were granted, but it was understood that these trades might be established, and continue so long as no nuisance was produced by them.

Unwholesome Foods.—The appended lists of various food-stuffs surrendered to, or seized by, the Food Inspectors, Messrs. H. T. Moore, and Samuel

Billington, Cert. R. San. I., during the past year, speak for themselves. The aggregate amount of condemned food material here scheduled is again larger than in any previous year. The fact is in some measure to be explained by the exceptionally hot and dry summer season. Such explanation, however, in no wise detracts from the merit of the Inspectors, as, but for their vigilance and activity, much of this unwholesome material would find its way to the human stomach.

BUTCHERS' MEAT.

DESCRIPTION.	Weight.	
	Imp. Stones.	lbs.
Beef	8093	5
Mutton	183	3
Veal	267	6
Pork	805	8
Lamb	3	6
Viscera	2364	3
Boneless Beef	46	6
Boneless Pork	16	0
Hams	7	6
Sausages	34	7
Tripe	9	2
Brawn	0	7
Salt Beef	10	10
Total	11841	13

GAME, &c.

	Imp. Stones.
Rabbits	1020
Hares	36
Caper-cailzie	28
Black Game	18
Grey Hens	15
Ptarmigan	8½
Quails	6
Venison	2
Partridges	1½
	1135½

POULTRY.

	Imp. Stones.
Chickens	52
Ducks	8½
Geese	6
Turkeys.. .. .	5½
	72

WET-FISH.

	Imp. Stones.
Hake	1224½
Cod	1004½
Herrings	804½
Sprag	727
Mixed Fish	612¾
Roes	324
Whiting	302

Wet Fish—continued.

	Imp. Stones.
Haddock	257
Mackerel	243
Halibut	143½
Ling	114
Coalfish	108½
Salmon	49
Sprats	42
Catfish	31
Plaice	27
Lemon Soles	26
Chitterling	26
Skate	22
Soles	21½
Sea Trout	12
Witches.. .. .	8
Sea Bream	6½
Smelts	6½
Pollock	6
Dabs	5
Conger Eel	4
Megrims	2
Gurnard	2
Turbot	1
Red Mullet	1
	6162¾

SHELL FISH.

	Imp. Stones.
Mussels	2865½
Whelks	407
Shrimps	375
Cockles	273
Crabs	114½
Prawns	50
Crayfish	28
Oysters	12
Picked Shrimps	6½
	<hr/> 4131½

DRY FISH.

Finnies	349½
Bloaters	306
Kippers	164
Reds	17
	<hr/> 836½

FRUIT.

Pears	188½
Grapes	165
Oranges	72
Bananas	70
Blackberries	15
Apples	8
Lemons	8
Rhubarb	4
Gooseberries	4
Walnuts	2
Raspberries	2
Figs	1
	<hr/> 539½

VEGETABLES.

Carrots	3140
Cabbage	765
Celery	748
Savoys	406
Potatoes	376
Parsnips	300
Lettuces	186
Radishes	156
Turnips	156
Kidney Beans	151½

Vegetables—continued.

	Imp. Stones.
Onions	1½
Parsley	85
Turnip-tops	70
Tomatoes	57
Cauliflowers	54
Broad Beans	52
Vegetable Marrows	48
Brussel Sprouts	20
Cucumbers	18
Watercress	7
Spinach	6
	<hr/> 6913½

TINNED FOODS.

Tomatoes	1001
Milk	403½
Lobster	167½
Apricots	131½
Pineapple	125½
Beef	120½
Salmon	96
Apples	62½
Pears	56
Peaches	36½
Sardines	24½
Tongues	22½
Rabbits	13½
Blackberries	1
Plums	½
Gooseberries	½
Potted Meats	½
Herrings	½
Shrimp Paste	½
Brawn	½
Bilberries	½
	<hr/> 2264½

MISCELLANEOUS.

Eggs	262
Fruit Pulp	96
Yeast	33½
	<hr/> 391½

The results of legal proceedings in connection with the sale, exposure for sale, deposit for the purpose of sale, or of preparation for sale, of food material, diseased, unsound, unwholesome, or unfit for the food of man, will be found in a later section headed "Prosecutions."

Ice Creams.—As the Nottingham Corporation Act, 1905, is of such recent date, it may be well to recite once more the provisions affecting the manufacture,

storage, and sale of ice cream made under Secs. 58 & 59 of this Act. These are that—

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.

The two insanitary ice-creameries referred to in the 1905 Report have now been closed under the provisions of this Act as above recited. Various improvements have been effected in several of the still-existing establishments.

Sale of Food and Drugs Acts, 1875-1899. Adulteration and Abstraction.—

The samples taken under these Acts during 1906 and given to Mr. S. R. Trotman, the City Analyst, for analysis, numbered 600, as compared with 604 and 602 in the two preceding years respectively. Four hundred and eighty-three, or 80 per cent., were certified by him as pure or genuine or practically such. The corresponding proportions in 1905 and 1904 were, respectively, 88 per cent. and 81 per cent.

Milk	No. of Samples.	No. Pure.	No. Deficient or Adulterated.		
			Deficient in Fat.	Added Water.	With Boric Acid.
..	225	.. 200	1. 27%	1. 32%	1. 45 grs. per gall.
			1. 19%	1. 15%	
			2. 18%	1. 13%	
			1. 16%	2. 12%	
			1. 15½%	1. 11%	
			1. 12%	1. 8%	
			1. 10½%	1. 7%	
			1. 10%	1. 6½%	
			1. 9%	1. 5%	
			1. 8%	1. 4%	
			1. 6½%	1. 3%	
			1. 6%	1. 2½%	
			3. 5%	1. 2%	
			1. 4½%		
			1. 4%	14	
			4. 3%		

22

					Added Water.	
Milk, Separated	2	..	1	..	..	1. 9½%
Milk, Condensed	1	..	1	..	..	Pure.
Milk, Condensed (Skimmed)	1	..	1	..	..	Separated milk
Milk, Dried	.. 1	..	1	..	..	Pure.

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.			
Cream ..	13	5	With Boric Acid.			
			1. 42 grs. per pint.			
			1. 39.2 " "			
			1. 31.5 " "			
			1. 28.7 " "			
			2. 21 " "			
			1. 9.8 " "			
			1. A trace.			
			8			
			With Foreign Fat.	With added Water.	With Boric Acid.	
Butter ..	80	71	1. 95%	1. 10.6%	1. 26.6 grs. per lb.	
			3. 90%	1. 4.5%	1. 17.5 " "	
			4	2	1. 11.2 " "	
			3			
			With Boric Acid.			
Margarine ..	8	7	1. 15.4 grs. per lb.			
Lard ..	5	5	.. All Pure.			
Dripping ..	2	2	.. Both Pure.			
			Deficient in Fat.			
Cheese ..	6	5	.. 1. 25%			
			With Boric Acid.			
Bacon ..	5	1	2. 14 grs. per lb.			
			1. 9 " "			
			1. 7 " "			
			4			
			With Boric Acid.			
Ham ..	2	—	1. 21 grs. per lb.			
			1. 9.1 " "			
			2			
Bread ..	5	5	.. All Pure.			
Baking Powder	1	1	.. Pure.			
Custard Powder	1	—	Artificially coloured.			
Treacle..	4	4	.. All Pure.			
			White crystals			
			coloured with Caramel.			
Demerara Sugar	3	1	1. 100%			
Honey ..	2	2	.. Both Pure.			
			With Salicylic Acid.			
Jam ..	16	8	1. 1.75 grs. per lb.			
			1. 0.14 " "			
			1. 0.12 " "			
			3			
Marmalade ..	1	1	.. Pure.			
Red Currant Jelly	1	—	Artificially coloured.			
Raspberry ..	1	—	Artificially coloured.			
Lemon Curd ..	2	—	1 contains Salicylic Acid.			
Preserved Greengages..	1	1	.. Pure.			
Preserved Pears	1	1	.. Pure.			
Preserved French Beans	1	1	.. Pure.			
			With Copper.			
Preserved Peas	4	3	1. 0.005%			
Preserved Haricot Beans	2	—	With Copper.			
			1. 0.009%			
			1. 0.005%			
			2			

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.	
Preserved Spinach..	5	—	.. .. .	With Copper. 2. 0.04% 3. 0.02%
				5
Sausages ..	10	3	..	With Boric Acid. 1. 63 grs. per lb. 1 contains Sulphites. 1. 28 " " 1. 20.3 " " 1. 13.3 " " 1. 12.6 " " 1. 11.9 " "
			6	
Potted Beef ..	5	3	..	1. 46.2 grs. per lb. 1. 26.6 " "
				2
Mince Meat ..	5	5	..	.. All Pure.
Coffee ..	22	14	..	With Chicory. 1. 80% 1. 61% 1. 57% 2. 50% 1. 44% 2. 40%
				8
Coffee & Chicory	1	—	..	With Chicory. 1. 90%
Cocoa ..	2	2	..	.. Both Pure.
Cocoa Powder..	3	2	..	With added Starch. 1. 33%
Tea Dust ..	1	1	..	.. Pure.
Arrowroot ..	2	2	..	.. Both Pure.
Pepper ..	12	12	..	.. All Pure.
Mustard ..	8	7	..	With added Starch. 1. 25%
Ground Ginger	8	8	..	.. All Pure.
Ground Nutmeg	2	2	..	.. Both Pure.
Vinegar ..	13	12	..	With Acetic Acid. 1. 75%
Olive Oil ..	11	11	..	.. All Pure.
Cod Liver Oil..	1	1	..	.. Pure.
Ale ..	8	2	..	With Arsenic. 2. $\frac{1}{180}$ th gr. per gallon. 3. $\frac{1}{360}$ th " " 1. $\frac{1}{720}$ th " "
			6	
Whisky ..	4	3	..	Deficient in Proof Spirit. 1. 7%
Cherry Whisky	1	—	..	Deficient in Proof Spirit. 1. 49%
Rum ..	10	8	..	Deficient in Proof Spirit. 1. 25% 1. 6%
			2	
Gin ..	6	5	..	Deficient in Proof Spirit. 1. 3%
Brandy ..	6	4	..	Deficient in Proof Spirit. With foreign Spirit. 1. 30% 1. 50%

	No. of Samples.	No. Pure.	No. Deficient or Adulterated.					
Ginger Wine ..	2	2	..	..	..	..	..	Both Pure.
Red Currant Wine..	1	—	..	..	..	..	..	Artificially coloured.
Lime Juice Cordial..	1	—	..	..	..	..	..	Trace of Sulphurous Acid.
Claret and Lemonade..	1	—	..	Mixture of Lemonade and an Aniline Dye.				
Jap Nuggets ..	1	1	..	..	..	..	..	Pure.
Chocolate Nougat	1	1	..	..	..	..	..	Pure.
French Nougat	1	1	..	..	..	..	..	Pure.
Cream Chocolate Nougat..	1	1	..	..	..	..	..	Pure.
Jap Waste ..	1	1	..	..	..	..	..	Pure.
Laudanum ..	5	5	..	..	..	..	..	All Pure.
Sweet Nitre ..	6	3	..	..	..	..	..	Deficient in Ethyl Nitrite. 1. 28% 1. 20% 1. 13%
<hr/>								
Cream of Tartar	3	3	..	..	..	..	..	3 All Pure.
Citrate of Magnesia..	5	4	..	..	..	..	..	Deficient in Magnesium Sulphate. 1. 75%
Precipitated Sulphur	3	3	..	..	..	..	..	All Pure.
Ground Gentian Root..	1	1	..	..	..	..	..	Pure.
Paregoric Elixir	3	3	..	..	..	..	..	All Pure.
Sulphonal ..	2	2	..	..	..	..	..	Both Pure.
Antipyrin ..	4	4	..	..	..	..	..	All Pure.
Prescription con- taining Bromide of Potassium ..	15	14	..	..	..	..	..	Deficient in Ammonia. 1. 20%
<hr/>								
600		483	129					
Total Samples.		Pure.	Deficient or Adulterated.					

The fact that several of the samples show more than one defect, explains the discrepancy between the figure representing the total number of samples and the sum of the pure and deficient or adulterated samples.

The Dairies, Cowsheds, and Milkshops Orders, 1885 to 1899. Clean and Sterilized Milk, etc.—The number of persons whose names appear upon the Nottingham register as milk-sellers is now 691, 208 new names having been added during the year. Twenty-eight of the premises, however, on which it was proposed to establish the business anew, were found to be more or less objectionable, and four of them insuperably so. After certain defects had

been repaired in the 24, the sale of milk from them was permitted, but in the case of the four it was forbidden, and the persons concerned, I am pleased to say, abandoned the idea of setting up as milk-sellers on these premises.

All dairy premises are now regularly visited by Mr. J. A. Sutton, Cert. R. San. I., the Milk Inspector of the City, and the local regulations with regard to the ventilation, lighting, and cleansing of premises, and the cleansing of milk-vessels are systematically enforced. Each dairy is limewashed at least twice in the year, and when milk is kept for sale in open vessels, the use of covers for such vessels is insisted on.

The cowkeepers on the local register now number 68, eleven persons having given up the business during the year, and two having taken to it anew. There are 127 cowsheds in the City, containing 851 cows. Several cows have been found during 1906 to be suffering from some condition likely to render their milk unwholesome, and the milk from these cows has been destroyed. But the utmost vigilance and firmness is required to prevent the use of such milk as human food.

Although much has been done in recent years to improve the conditions under which milch cows are kept in this City, and their milk drawn, stored, and transmitted, much still remains to be done before these conditions can be considered as even tolerably satisfactory. It is an extremely difficult task to induce the average cowkeeper to practice habits of cleanliness, and enforce the same practice upon his employees, but it is gratifying to be able to record the fact that so far as the cow-keepers in this City are concerned, an intelligent appreciation of the necessity of scrupulous cleanliness and care, alike in the keeping of milch cows and the drawing, storage, and transmission of milk, is steadily growing.

The ideal milk food, both for adults and infants, is undoubtedly the fresh unboiled article; but for some time to come at least it will be necessary, whenever ordinary cow's milk is used for delicate and sensitive subjects—like young infants for whom their natural food (*i.e.*, breast-milk) is not available—to boil such milk before using it.

I have elsewhere in this Report expressed the opinion, based upon a considerable experience, that the danger of scurvy-rickets and other nutritional maladies accruing from the use of such cooked milk, has been greatly exaggerated. Dr. L. W. Marshall of this City, and many other medical men with large experience of infant feeding, and of infantile ailments, also hold this opinion.

The leaflet on infant feeding, which has been issued by us since 1892, is reproduced in the Appendix of this report.

Prosecutions.—Proceedings have been taken (in respect of offences under the Public Health Acts and Sale of Food and Drugs Acts) on 33 occasions during the past year, and with a successful result in each case. Particulars of the offences alleged, and the penalties inflicted, are given at length in the accompanying table. The number of prosecutions is quite up to the average, and it is gratifying to be able to record that the offences alleged were satisfactorily proved in each case.

PUBLIC HEALTH ACTS.

OFFENCE.						RESULT.
Sale and exposure for sale of unsound Brawn	..	..	..	..	..	Fine of £2.
Exposure for sale of unsound Brawn	..	..	..	..	..	£1.
" " " Sausages and Beef	..	..	..	..	..	£2.
" " " Figs	..	..	..	..	..	£1 10s.
" " " Sardines	..	..	..	..	..	10s. 6d.
Sale of unsound Tongue	..	..	..	..	..	£1 10s.

SALES OF FOOD AND DRUGS ACTS.

OFFENCE.		RESULT.
Sale of Milk containing 12% added water		Fine of £1.
" " 12% "		" 1/-
" " 7% "		" £2.
Sale of Milk containing 32% added water and 27% deficient in fat		" £4.
" " 15% " 9% "		" £2.
" " 11% " 5% "		" £5.
" " 13% " 8% "		" £2.
" " 4% " 10% "		" £5.
Sale of Milk 19% deficient in fat		" £2.
" " 18% "		" 10/-
" " 10½% "		" 10/6
Sale of Cream containing Boric Acid, 21 grs. per lb.		Ordered to pay costs.
Sale of Butter containing 10% excess of moisture		Fine of 10/- and costs.
Sale of Margarine unlabelled		Fine of 10/-
Sale of Sausages containing 63 grs. of Boric Acid per lb.		" £1.
Sale of Coffee containing 80% of Chicory		" 10/-
" " 57% "		" £1.
" " 50% "		" £1.
Sale of Brandy 30% deficient in Proof Spirit		" £1.
" " Rum 25% "		" 10/-
" " Whisky 7% "		" £1.
" " Rum 6% "		" £1.
Sale of Brandy containing 50% Spirit other than Grape Spirit		" £1/5
Sale of Malt Vinegar containing 75% of Acetic Acid Vinegar		" £2.
Sale of Sweet Nitre 28% deficient in Ethyl Nitrite		Fine of 5/- & 22/- costs.
" " 20% "		Fine of £1/5
Refusal to sell to Inspector		" £3.

Notices.—The number of official notices issued in writing by the Health Department during 1906 was 1,480. Of these 1,273 were non-statutory, and 207 statutory. The corresponding numbers for 1905 were 1,099, and 211. It must be remembered, however, that the greater part of the remedial work carried out at the instance of the Health Department is done in response to verbal intimations.

District Inspectors, and Inspector of Dairies, Cowsheds, etc.—Particulars of the work done at the instance of these officers are given in the table on page 126 of this report.

The greater part of the work, structural and otherwise, here specified, is carried out under notice, or by suggestion from these officers, but there are some

items for which other (special) Inspectors are responsible—*e.g.*, the repair of structural defects in, or removal of refuse from slaughter-houses, food-shops, and school premises—and these, when not accounted for elsewhere, are included in the column appropriate to the Inspector in whose district they occur. There has been a decline in the number of items of work done, as compared with the previous year, but this is accounted for in some measure by the transfer of the No. 1 District from Inspector Ward, Cert. R. San. I.,—who succeeded the late Inspector Williams as Infectious Diseases Inspector—to Inspector Byrns, and the appointment of Inspector Harry Womersley, Cert. R. San. I., to No. 2 District. Both Inspectors Byrns and Womersley are experienced and energetic officers, but the first, though long resident in Nottingham, is new to his district, and the second came to us from Halifax. It is hardly to be expected they should accomplish as much at the outset as when quite at home in their districts. The shrinkage in work done is also due to some decline in the items returned for the Bulwell district. There has been a large increase of items under the special heading of improvements to cowsheds, for which Inspector John Arthur Sutton is responsible. This increase is one of much importance, and quite as likely to be beneficial to human health as if the improvements were effected in human dwellings. It is much to be regretted that more work of this kind is not done in the districts outside the City, from which the major part of the milk consumed within it is derived.

Lady Inspectors.—The Lady Inspector and Health Visitor is now doing a large and ever increasing amount of highly useful work.

In all that pertains to the home as such, the advice and assistance of well-informed, well-trained, and tactful women must necessarily be of the greatest

possible value to poor mothers and housewives, who, to say the least, are seldom sufficiently instructed in their maternal and household duties to perform either satisfactorily without such outside aid.

Again, in the inspection of work-places and workshops where females are employed, the services of properly trained women are indispensable. Under the Midwives Act, too, it is essential that a qualified nurse and midwife should exercise supervision over the midwives whose practice this Act is intended to regulate. The visitation of houses, moreover, containing children of school-age suffering from minor infectious diseases, like measles, whooping-cough, and infectious skin disorders, naturally falls within the province of women inspectors, and these officials also are the best lieutenants of the medical officers entrusted with the supervision of the health of school children.

The inspection of workshops and of midwives is dealt with by special lady inspectors, but the rest of the wide field of work, here sketched in outline, is covered in some measure at least by the two Lady Health Visitors.

Up to the end of 1906, Miss Helen Bowers and Miss Sophie Buckoll, both holding the Cert. R. San. I., acted in this capacity, but upon the death of Mrs. S. A. Exton, in January of the current year, Miss Buckoll became Workshop Inspector, and Miss Mary Sprott Jarvis, a lady fully qualified as a nurse and as an inspector of nuisances, succeeded Miss Buckoll as Lady Health Visitor.

It is difficult to express the activities of these Lady Health Visitors in figures, but some idea of the ground they have specially traversed may be gathered from the fact that they have paid 417 visits to schools and school premises, and 2,655 visits to private houses during the past year.

ANNUAL REPORT of the MEDICAL OFFICER OF HEALTH for the year 1906, for the County Borough of NOTTINGHAM (City) on the administration of the Factory and Workshop Act, 1901, in connection with

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

[INSPECTORS WILLIAM FLINT and SARAH A. EXTON (Deceased).]

1.—Inspection.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR
INSPECTORS OF NUISANCES.

PREMISES. (1)	Number of		
	Inspections. (2)	Written Notices. (3)	Prosecutions (4)
Factories (Including Factory Laundries.)	338	12	..
Workshops (Including Workshop Laundries.)	3,500	72	..
Workplaces (Other than Outworkers' premises included in Part 3 of this Report.)	..	..	..
TOTAL	3,338	84	..

2.—Defects Found.

PARTICULARS. (1)	Number of Defects.			Number of Prosecu- tions. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts :—*</i>				
Want of Cleanliness	344	314		
Want of Ventilation	8	5		
Overcrowding	7	7		
Want of drainage of floors	3	3		
Other nuisances	90	85		
†Sanitary accom- modations ..	12	11		
(insufficient)	75	72		
(unsuitable or defective)	4	4		
(not separate for sexes)				
<i>Offences under the Factory and Workshop Act :—</i>				
Illegal occupation of underground bake- house (S. 101)	1	1		
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	261	245		
Other offences .. .. .	..	..
(Excluding offences relating to out- work which are included in Part 3 of this Report.)				
TOTAL	805	747		

* Including those specified in sections 2, 3, 7 and 8, of the Factory and Workshop Act as remediable under the Public Health Acts.

† Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the Nottingham City Council. The standard of sanitary accommodation enforced is that of the Sanitary Accommodation Order of the Home Office, dated 4th February, 1903.

3.—Home Work.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.							Number of Inspec- tions of Out- workers' premises. (10)	OUTWORK IN UN- WHOLESOME PREMISES, SECTION 108.				OUTWORK IN IN- FECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.				Number of Ad- dresses of Out- workers received from other Councils. (6)	Numbers of Ad- dresses of Out- workers forwarded to other Councils. (7)	Prosecutions.		In- stances, served. (11)	Prose- cutions, served. (12)	In- stances, (13)	In- stances, (14)	Orders made (S. 110). (15)	Prose- cutions (Sec- tions 109, 110) (16)	
	Twice in the year.		Once in the year.				Failing to keep or permit in- spection send of lists. (8)								Failing to keep or ing to lists. (9)
	Lists,† (2)	Out- workers,† (3)	Lists, (4)	Out- workers. (5)											
	(1)														
Wearing Apparel (1) making, &c. (2) cleaning and washing ..	26	391	16	107	6	246	..	} 750	..	..	..	20	20	..
Lace, lace curtains and nets	13	13	..
Furniture and up- holstery ..	76	1435	124	1760	..	136	327	327	..
Fur pulling ..															
Umbrellas ..															
Paper Bags and Boxes ..															
Brush making ..															
Stuffed Toys ..															
File Making ..															
Electro Plate ..															
Cables and Chains															
Anchor and															
Grappels ..															
Cart Gear...															
Locks, Latches, and Keys ..															
TOTAL ..	102	1826	140	1867	6	382		750				360	360		

† The figures required in columns 2 and 3 are the total number of lists received from employers who sent them both in February and August as required by the Act and of the entries of names of outworkers in those lists. They will, therefore, usually be double of the number of such employers and (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—Registered Workshops.		5.—Other Matters.	
Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)	Class. (1)	Number. (2)
<p>Important classes of workshops, such as workshop bakehouses, may be enumerated here.</p> <p>Bakehouses (including 42 underground)</p> <p>Other Workshops</p> <p>Total number of Workshops on Register ..</p>	204	<p><i>Matters notified to H.M. Inspectors of Factories:—</i></p> <p>Failure to affix Abstract of the Factory and Workshop Act (S. 133)</p> <p>Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (S. 5)</p> <p>Other</p>	48
	1,500	<p>Notified by H.M. Inspector ..</p> <p>Reports (of action taken) sent to H.M. Inspector ..</p>	50
	1,704	<p><i>Underground Bakehouses (S. 101):—</i></p> <p>Certificates granted during the year</p> <p>In use at the end of the year</p>	48
			42

Date, 16th May, 1907.

(Signature) PHILIP BOOBYER, Medical Officer of Health.

NOTE.—The Factory and Workshop Act, 1901 (s. 132), requires the Medical Officer of Health in his Annual Report to the District Council to report specifically on the administration of that Act in workshops and workplaces, and to send a copy of his Annual Report, or so much of it as deals with this subject, to the Secretary of State (Home Office). If the annual report is presented otherwise than in print, it is unnecessary to include in the copy sent to the Home Office the portions which do not relate to factories, workshops, laundries, workplaces or homework. The duties of Local Authorities and the Medical Officer of Health under the Act of 1901 are detailed in the Home Office Memorandum of December, 1904. A further Memorandum, on the Homework Provisions of the Factory Act, was issued to all District Councils and Medical Officers of Health in October, 1906.

NOTTINGHAM, 1906.

Abatement of Nuisances (in Districts).

DESCRIPTION OF WORK DONE.	Inspector Womersley. Cer. R. San. In.	Inspector Old.	Inspector Byrns.	Inspector Betts.	Inspector Sutton. Cer. R. San. In.	TOTAL.
Houses Repaired	6	6	9	51	..	72
„ Cleansed	19	3	25	2	10	59
„ Overcrowding of, Abated ..	8	1	5	2	..	16
Bath Wastes Disconnected ..	1	2	1	4	..	8
„ Trapped	1	4	..	7	..	12
Sink Wastes Disconnected ..	15	2	9	16	..	42
„ Trapped	26	..	3	1	1	31
Drains Repaired and Cleansed ..	104	117	221	209	..	651
„ Trapped	42	91	30	97	1	261
Water-Closets Repaired, &c. ..	40	15	38	67	..	160
Pail-Closets Repaired	105	74	200	186	..	565
„ Provided .. ..	..	..	..	..	..	..
Waste-water-Closets Repaired, &c. ..	14	7	4	14	..	39
Ashpits Abolished	9	11	7	50	..	77
Privies Abolished	2	18	8	56	..	84
Water-Closets provided in lieu of Privies	4	24	10	52	..	90
Water-Closets provided in lieu of Pail-Closets	22	2	1	9	..	34
Soft-water Cisterns Cleansed ..	7	6	5	9	..	27
Courts and Yards Paved	47	50	50	65	2	214
Piggeries Abolished	6	17	5	4	..	32
Stables, etc., Drained	3	13	1	1	..	18
Cowsheds, Cleansed, Limewashed, Repaired, &c. .. ..	..	..	..	..	181	181
Urinals Repaired, etc.	2	2	3	6	..	13
Manure Pits Repaired, etc. ..	5	2	4	3	2	16
Offensive Accumulations Removed	25	26	20	13	8	92
Miscellaneous	106	21	89	85	34	335
TOTALS	619	514	748	1,009	239	3129

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 BOOBYER, 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 BOOBYER, 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 be lawfully 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.

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.

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 BOOBYER, 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 BOOBYER, M.D., *Medical Superintendent.*

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 36,886, as against 37,048 in 1905, and 37,225 in 1904. The whole of the pails now in use are made of galvanized steel, the last of the wooden tubs having disappeared about six months ago.

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

The pails emptied during the year numbered 2,550,514, equal to 49,048 per week. Each pail was emptied on an average 69·14 times during the year, as against 69·13 times during 1905.

The following table gives the number of pails emptied during each of the past 16 years :—

Number of Pails Collected, 16 Years ending December 31st, 1906

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	482,239	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
1906	1,440,157	636,002	474,355	2,550,514	49,048

Ashpits.—There are now some 1,200 ashpits in the City, and the majority are emptied about once in four months, though some of the larger pits are left for longer periods.

Ashpits were emptied on 3,117 occasions during 1906.

We have removed from these ashpits, during the year, 3,575 loads of wet refuse and 1,616 loads of dry ashes; we have also removed 171 loads of liquid from 58 cesspools, giving a total of 5,362 loads.

The totals for the five previous years were as follows:—

1901	1902	1903	1904	1905
<hr/> 4650	<hr/> 7933	<hr/> 8031	<hr/> 6473	<hr/> 5655

Dry Ash Bins.—There are now on the books 19,200 ash pans or tubs, (10,410 worked from the Eastcroft Depôt and 8,790 from the district depôts). The number at the end of 1905 was 17,564, and at the end of 1904, 14,242, thus showing an increase on the three years of 4,958.

This increase is all practically due to the erection of new property, and represents a gradual increase in the work of the Department. During this period the cost of emptying dry ash bins has increased by about £300 per year.

The number of loads collected by the dry ash carts during the year was 20,013, and by the pot carts 2,608; a total of 22,621, or 435 per week, as against 381 per week during 1904.

Slaughter House Refuse.—975 loads, weighing 962 tons, have been collected from 272 galvanized steel pails at 66 slaughter-houses. Each pail is brought to the depôt to be emptied, and before being returned is washed thoroughly clean. The amount received for the hire of pails, during 1906, was £34.

The following table shows the total number of loads collected in each district during the past 12 years.

Number of Loads Collected.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
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	68,579
Night Ashpits	2,460	2,278	2,391	2,406	2,263	2,372	2,291	2,148	1,758	1,293	1,325	1,161
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	12,482
Slaughter-house	975	1,037	1,021	1,034	1,023	1,058	1,123	1,060	918	964	970	975
Pot Cart	1,348	1,379	1,390	1,360	1,371	1,817	2,043	2,215	2,421	2,515	2,582	2,608
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	30,286
Night Ashpits								1,037	2,047	2,032	1,648	1,597
D.A. Tubs								5,085	6,346	5,603	5,806	6,705
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	22,588
Night Ashpits	1,951	2,666	2,844	3,276	2,779	2,083	2,363	2,426	2,003	1,507	939	817
D.A. Tubs										1,772	2,026	2,442
TOTALS	142,116	144,349	144,055	146,089	146,683	147,037	147,943	149,552	151,551	151,276	149,284	150,240
WEEKLY AVERAGES ..	2,733	2,775	2,770	2,809	2,821	2,828	2,845	2,876	2,914	2,909	2,871	2,889

Disposal of Refuse.—All our refuse during the past year has been satisfactorily disposed of. Notwithstanding the fact that prices were increased at the beginning of the year, and the services of the salesmen dispensed with, it has not been necessary to accumulate any stock, all the nightsoil having been sent direct to farmers, and the dry ashes and general refuse, with the exception of a small quantity collected at Bulwell has been destroyed.

The Eastcroft Destructor has been at work 4,387 hours, and has consumed 25,939 tons, 11 cwts., 1 qr., an against 24,284 tons during 1905. It has produced 1,119,618 Units of Electricity and evaporated 6,216,700 gallons of water. Of the above refuse 4,024 tons were brought by rail from Basford at a cost of £263.

The Radford Destructor has been at work throughout the year, but only working nine hours per day. 6,175 tons of refuse have been destroyed and 1,892 tons of clinker and flue dust has been the result. 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.

During the year the nightsoil has gone away as follows :—

By boat, 14,242 tons. By rail, from Eastcroft, 12,759 tons; Basford, 6,602 tons; and Radford, 4,865 tons. By traction engine, from Eastcroft, Radford, and Basford, 6,489 tons. By road drays to farms, 3,394 tons. This gives a total of 48,351 tons, being 3,185 tons less than the previous year.

The following table shows the quantities of nightsoil sent out by rail and boat during the past 12 years :—

Disposal of Refuse.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
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	3,009
Average Weight per Wagon..	T. C. Q. 7 17 2	T. C. 7 18	T. C. Q. 7 19 3	T. C. Q. 7 19 1	T. C. Q. 8 1 2	T. C. 8 0	T. C. Q. 8 1 2	T. C. Q. 8 2 2	T. C. Q. 8 3 0	T. C. Q. 8 2 1	T. C. Q. 8 3 0	T. C. Q. 8 1 0
No. of Boats sent out ..	359	574	514	479	592	734	633	580	613	491	415	492
Average Weight per Boat ..	T. C. Q. 32 10 0	T. C. 32 10	T. C. 32 17	T. C. Q. 33 6 1	T. C. Q. 33 2 2	T. C. Q. 31 10 1	T. C. Q. 29 17 2	T. C. Q. 29 3 2	T. C. Q. 29 13 3	T. C. Q. 29 17 0	T. C. Q. 28 9 3	T. C. Q. 28 19 0

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

	1902	1903	1904	1905	1906
	Tons.	Tons.	Tons.	Tons.	Tons.
Dry Ashes ...	10,898	11,901	14,139	13,959	14,266
Wet Ashpit Refuse	1,981	1,517	1,242	1,373	1,128
Trade Refuse					
(General)...	2,629	3,397	3,687	3,283	3,450
Trade Refuse					
(Butchers, &c.)...	2,038	2,430	2,597	2,383	2,335
Ashes from Basford and Bulwell...	1,830	4,884	3,251	2,852	4,024
Rammel from Radford	612	1,074	126	—	—
	<hr/> 19,988	<hr/> 25,203	<hr/> 25,042	<hr/> 23,850	<hr/> 25,203

The following material has been collected from the refuse and sold, realizing the sum of £281 19s. 11d., as against £232 6s. 6d. in 1905.

	Tons.	Cwts.	Qrs.
Solder (recovered from old tins) ...	1	5	2
Light Tins (from solder furnace) ...	81	16	0
Heavy Iron ...	21	8	0
Light Iron and Tins...	71	10	2
Light Hoops ...	17	3	0
Galvanized Scrap ...	53	19	0

DEPÔTS.—These are now three in number, situate as follows:—Eastcroft, London Road; Ilkeston Road, Radford, and Vernon Road, Basford.

The improvements at the Eastcroft are practically completed, and, as a result, it is now possible to carry on the work of the depôt more efficiently than before, and with a minimum of damage to the health of the workmen and horses. The old Destructor chimney has been pulled down without any expense to the Committee, and another old chimney which is useless and much in need of repair has been sold, and will be pulled down at an early date. The new premises at Basford have only recently been occupied, and the necessary re-arrangement of the work is not yet complete, but already the workmen appreciate the arrangements made for their comfort and convenience. Building operations in the Radford district are still in active progress, and, in consequence of the additional work entailed upon the depôt, the stabling accommodation of the latter has proved insufficient.

HORSES.

Total number of Horses, December 31st, 1905...	109
Disposed of during 1906	9
Purchased during 1906	6
Number of Horses at Easteroft	64
" " Basford	22
" " Radford	14
" " Bulwell	4
" " Bagthorpe	2
Total number	106

The average working life of the horses disposed of was $6\frac{1}{4}$ years, as against $8\frac{1}{2}$ years during 1905. This apparent falling off is not due to illness amongst the horses, but to the fact that we are now better horsed than formerly. It has been found possible to dispose of three young horses that were not very suitable for our work; these three were sold for £50, the other six for £25 6s. The horses purchased have cost £53 each.

As in the previous year, the health of the horses during 1906 has been very satisfactory. This good health I attribute to the extra comforts which have been provided during the last few years, and which in my opinion, have been well worth the money expended.

The cost of horse-keep during the year has been 13/1 per horse per week, as against 13/- during 1905. During the three years previous to 1905, the amounts were 13/7, 14/1, and 16/9 respectively.

Rolling Stock.—This consists of 62 drays, 58 carts, 1 wagon, 31 Railway wagons, and 7 canal boats. The whole have been kept in good repair during the year. Experiments have been made with various covers on the dry ash carts, but up to the present none has proved satisfactory for the class of cart used in Nottingham.

Cleansing of Courts, Alleys, Yards, and Closets.—This work has now been placed on a permanent footing, and eight men are continually engaged in washing out and disinfecting courts, alleys, yards, and closets in the Meadow Platts district; 150 courts and alleys, and 1,670 closets are cleansed by them every week in this neighbourhood.

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NOTTINGHAM, 1907.

ABSTRACT OF REPORT

UPON

THE HEALTH OF LACE-DRESSING OPERATIVES.

THIS REPORT WAS PREPARED AT THE REQUEST OF THE HOME OFFICE, AND HAS BEEN SENT IN TO THAT OFFICE. IT IS NOW PUBLISHED WITH THE ANNUAL HEALTH REPORT OF THE CITY, AT THE REQUEST OF THE SECRETARY OF STATE FOR THE HOME DEPARTMENT.

CONTENTS OF REPORT

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GENERAL REPORT.

When I first undertook, in 1905, to prepare a report upon the health of persons engaged in the occupation of lace-dressing, I certainly did not realize the difficulties involved in the production of a satisfactory report on the subject. I was, of course, aware that a certain proportion of the operatives would be found not to be continuously engaged in the work, but I was not prepared for the discovery which I ultimately made, that the number of such persons was very considerable, and, further, that the difficulty of following up the subsequent history of those who had been engaged in lace-dressing for a time, and had then abandoned it, would prove almost insuperable.

It may be useful at the outset to explain what is meant by lace-dressing, and to give some account of the conditions under which the work is carried on. I shall therefore now give a general description of lace-dressing, which applies very generally to the process wherever it is performed.

The lace, after having been bleached, and, in some cases, dyed, and then dipped in starch solution, is taken in rough and wet condition to the dressing- (or drying) rooms (usually over 100 yards long, by 15 to 20 yards wide, and 9 to 10 feet high), and there stretched upon horizontal frames to dry. In the case of some fine silk nets, the unstarched fabric is placed upon the drying and stretching frames, and the dressing applied to the stretched material on the frames. The dressing-rooms are heated by steam, or hot water pipes, and their temperature usually ranges, in this country, from 75° to 100° Fahr. It is made to vary to suit the requirements of different materials, and according to the condition of the external air. In very hot and dry weather, all artificial heat is occasionally

dispensed with for cotton goods; but for silk goods, which are reputed to require specially quick drying, artificial heat is always employed, and the temperature of some silk-lace-dressing rooms in Lyons (France) is said often to be as high as between 130° and 140° Fahr. The drying process is assisted by large revolving fans placed directly over the drying material.

The Stenter dressing or drying machine calls for special mention, as its use frequently modifies the distribution of hot air in the rooms where it is employed. In this machine, which is used principally for lace curtains, the fabric is carried by an endless chain into an atmosphere heated by multi-tubular boilers (the air being driven through the steam-heated boiler tubes), and the whole mechanism, with its contained lace material, is usually boxed in with wooden casing furnished with ventilating openings. In rooms where this machine is in use, the temperature seldom rises above 80° Fahr., except in the immediate neighbourhood of these openings and at the feeding end of the machine.

The cubic space in almost all lace-dressing rooms is necessarily large, both actually and relatively to the number of persons employed in them. This is insured by the large dimensions of the frames and fans, and the comparatively small number of workpeople employed upon each frame. In most cases within my knowledge the cubic space works out at from 2,000 to 6,000 cubic feet per head.

The ventilation in most instances is fairly good, as the means of heating are usually redundant, and would soon raise the temperature unduly, unless the windows were opened and kept open. Moreover, the moisture evaporated from the wetted fabric would sometimes seriously diminish the relative dryness of the air, unless facilities for diffusion were given by ventilation. The window openings which serve as outlets very commonly extend to the ceiling, and are also very generally furnished with pivot sashes horizontally swung, a form of sash which allows a maximum of opening when the casement lies in a horizontal plane.

Owing to the difficulty already referred to of following up the history of lace-dressing operatives who have ceased to work as such, I have been compelled to rely to a larger extent than I originally intended upon the testimony of employers and employees with respect to the length of time the operatives in this industry have continued at the work, and the state of their health before, during, and after this period.

The first table accompanying this Report contains a list of the principal lace and net-dressing firms of Nottingham, with the numbers of adult females, females over 40 years of age, young persons and children, (ordinarily) employed by each firm respectively, and the approximate number of men also engaged in the trade. The table gives, in addition, the wages paid to different grades of the lace-dressing employees.

There are here 27 firms, employing (normally), altogether, 1,002 adult females (159 of whom are over 40 years), 408 young persons, and 7 children. Eleven firms employ less than 20 adult females each, five between 20 and 30 each, four between 30 and 40, three between 50 and 62, one 74, one 90, one 110, and one 117.* The men (chiefly labourers) number approximately 221.† The wages paid to women range from 12/10 to 14/- per week for ordinary female lace-dressers (2½d. to 3d. per hour for week of 56 hours), and from £1 to £1/10/0 for forewomen in lace-dressing rooms. The men working in and about the lace-dressing rooms are paid £1/0/0 a week as a rule.

The employers, managers, and others were officially interviewed at the factories by myself, and by (the late) Mrs. Exton and Mr. Flint, the local workshop inspectors, and were informed of the object of our visit. The testimony of these people, as furnished in the accompanying schedule, is to the general effect, without exception, that the occupation of a working lace-dresser is a healthy and popular one. The oft-recurring statement by the employers, and others, that "no one has left through ill-health," may be taken as substantially correct so far as serious illness is concerned, but there can be no doubt that many people are upset at the outset by the high temperature of the lace-dressing rooms, and subsequently abandon the work altogether in consequence. The allegations, however, by employers and others that regular employees have exceptionally good health, continue long at the work, and, doing so, live to old age, and often to extreme old age, are borne out by independent testimony.

* The number of persons found actually at work at the time of our visits to the various lace-dressing rooms were very much less than those here given. This illustrates at once the fluctuation to which the trade is liable, and the amount of casual labour in lace-dressing.

† The number of men fluctuates greatly. This total was returned by the Secretary of the Notts. Lace-Dressing Association, on March 25th, 1907.

The employees were interviewed by the same three persons, alone or together, at various times, at the factories and at home, and were encouraged to speak freely. All these, again, are agreed in stating that work in the lace-dressing rooms, even for many years continuously, entails no damage to health. Many of them suffer, they say, a good deal from common colds, but when one makes particular inquiry about the amount of illness of this character among them, it does not appear to be so great as among ordinary factory workers of either sex and of all working ages. The same may also be said respecting the degree of their liability to other minor ailments, especially in winter time; the women, at any rate, being remarkably free from such troubles. Their statements to this effect are corroborated by the attendance books, which shew very few absences on the part of the regular hands.

Turning now to more serious diseases to which lace-dressers have been thought to be liable, we certainly find no special tendency to phthisis, nor other lung disease among the women (who alone work continuously in the dressing-room), and this is the more remarkable for the fact that the majority belong to a very poor class, and live in poor houses and neighbourhoods, and that many lead irregular and intemperate lives.

Probably the strongest argument in support of the contention that lace-dressing, as now carried on in Nottingham, is a healthy occupation, is to be found in the fact that large numbers of women have worked at it for very long terms of years continuously, have had good health while doing so, and have lived to advanced old age, either at work or in retirement. I have alluded elsewhere to the question which naturally arises, as to how far the case of these women is to be regarded as an illustration of the survival of the fittest, but up to this point have answered it only by general statements. I shall now endeavour to furnish a more satisfactory answer by means of facts recorded in the accompanying schedule (C).

Although, as I have said, there are a good many people who have left this work for various causes after having tried it for a time, there are on the other hand large groups of those who have taken it up and adhered to it continuously during the whole period of their working lives, and the duration of these has certainly, in the majority of cases, been remarkably long. I will take the illustration of this fact afforded by the record of one firm included

in the accompanying schedule (C), page 21, Messrs. H. C. Eden & Co., Roden Street, Nottingham.* There are many others like it, as an examination of the schedules will shew, but this is perhaps the most striking. The firm regularly employs 13 persons in its lace-dressing rooms, 12 females and one male. Eleven of these are of ages ranging from 37 to 72 years. Two are over 70, three between 60 and 70, and four between 50 and 60 years of age. One has been at work 54 years, one 53, two 52, two 50, one 46, one 34, one 33, one 30, and one 24 years. The mean of all the ages is 58.1 years, and that of the years (continuously) at work 43.5 years. Messrs. Eden are certainly very good employers, but there is apparently nothing exceptional about the conditions under which their employees work, as compared with those which obtain in average lace-dressing rooms elsewhere. The only possible inference to be drawn from facts and figures like these, is that the workpeople have established an absolute tolerance of the abnormal atmospheric conditions which exist in the lace-dressing rooms, and that life, and vigorous life, can be maintained to old age under these conditions.

It was at one time my intention to give the death-rates at age-periods of the people engaged in this work, but after consideration I realized that such rates would not be of much value, unless they included also the mortality of those (numerous) persons who, having done the work for a time, had subsequently given it up. For it might be urged that the unfit were likely to be eliminated, and that most of the people now employed, especially the long service hands, were exceptional examples of survival under conditions intolerable to the average individual. An effort was made to obtain a return of such persons, but the labour involved was so great, and the information obtained so incomplete and otherwise unsatisfactory, that the attempt was ultimately abandoned.

A further effort was made to ascertain the length of time for which deceased persons entered on the death returns as lace-dressers during the past ten years had been engaged in this occupation during life. This was only very partially successful. A few particulars were obtainable concerning the history of persons whose deaths had been registered during the years 1904-1906, but the rest, owing to

* I find that the temperature in Messrs. Eden's lace-dressing rooms is usually below the average, but the records of other firms with mean lace-dressing room temperatures of about 100 F. are almost equally good.

the lapse of time and the nomad habits of the people, were found to be untraceable. Under these circumstances it only remained (such few details as above mentioned excepted) to furnish a list of the deaths of lace-dressers recorded during the past ten years, and to draw what lesson was possible from the cause or causes given in each case, and from the absence of other causes the presence of which might, *a priori*, have been expected.

All the discoverable deaths of lace-dressers who have died in Nottingham during the ten years, January 1st, 1897, to December 31st, 1906, are given in the accompanying schedule (E). The following is a brief summary of the schedule of deaths. (It contains the names of 30 females and 39 males.) After this summary there follow a few particulars of lace-dressers' deaths in recent years (1904 to 1906) which I have been able to gather.

During 1897 there were 7 deaths of lace-dressers, 2 only of which appear of any special interest in connection with this inquiry; 1, female, æt. 45, from phthisis, the other, female, æt. 29, from pneumonia.

During 1898 there were 12 deaths, but only 3 of these, from the causes given, seem to call for notice; (1) female, æt. 40, from pneumonia; (2) male, æt. 30, from phthisis; and (3) male, æt. 34, also from phthisis. Deaths from cerebral hæmorrhage in old age, from bronchitis in extreme old age, from nephritis and heart disease, here recorded, do not apparently call for special mention.

During 1899 there were 7 deaths; one of these, female, æt. 18, was due to phthisis; the others again call for no special mention.

During 1900 there were 8 deaths. Four of these were at ages ranging from 69 to 75; one, male, æt. 25, was from phthisis. The rest are not of special interest in this connection.

During 1901 there were 2 deaths only; one, male, æt. 63, the other, female, æt. 46, both from heart disease.

During 1902 there were 7 deaths. Two of these were over 80, and one at 69. There were deaths from heart and kidney disease, but these again might be due to various causes altogether independent of the occupation.

During 1903 there were 5 deaths. Three of these, female, 54, female, 27, and female, 20, were certified as due to phthisis; the others are unimportant.

During 1904 there were 8 deaths. One, female, æt. 82, from old age, and 2, male, æt. 19 and 20 respectively, from phthisis; the others possessed no interest in connection with this inquiry.

During 1905 there were 6 deaths. One, male, æt. 28, was from pneumonia, and 2, both male, and both æt. 21, from phthisis. The other deaths call for no particular mention.

During 1906 there were 7 deaths. One, male, æt. 65, was from pneumonia; the others are of no special interest here.

Of the deceased persons who died during the three years ending December 31st, 1906, and who are described upon the death returns as lace-dressers, the following few particulars have been gathered:—

1904.

John E. K., æt. 20, died of phthisis, 7/1/04, 17, Conway Grove; at the trade 3 or 4 years, with intervals at other work; good health prior to fatal illness, but for marked tendency to respiratory catarrh; father, not a lace-dresser, died of phthisis 13 years before.

Fanny Clarke W., æt. 24, died of "fatty heart and lung disease," 5, St. John's Terrace, Denman Street; was *not* a lace-dresser, but a lace-drawer.

1905.

John H. L., æt. 28, died of acute lobar pneumonia, 8/1/05, 21, Red Lion Street; at the trade from boyhood; had good health up to fatal illness, which father does not attribute to occupation.

James S., æt. 21, died from phthisis, 8/10/05, 8, Smith's Yard, Thoresby Street; at the trade 5 years; always delicate, spitting blood from childhood. Sister has phthisis.

1906.

Walter M., æt. 31, died of peritonitis, 20/5/06, 23, Conway Street; *not* a lace-dresser, but a lace-presser.

William W., æt. 51, died 14/10/06, 11, Ebenezer Terrace, Lowdham Street; after an operation. Object unknown.

During the 10 years there were 12 deaths from phthisis, and two from pneumonia, among persons entered upon the death returns as lace-dressers. Seven of the deaths from phthisis were of males, and five of females. The two deaths from pneumonia were of females.

The death-rate from phthisis among the females is very low for the class to which these women belong. It is equal on these figures to only 0·5 per 1,000 of female lace-dressers, as compared with a rate of 1·4 for the City population as a whole, and one of 0·881 for all occupied females above 15 years of age in Nottingham (see Nottingham Annual Health Report, 1905, p.77).*

The death-rate from phthisis among the males, on the other hand is high, but, owing to the smallness of the number of men employed, and the continual fluctuation in this number, the expression of their phthisis mortality by means of a definite rate would be at once useless and misleading.

In considering the physical conditions surrounding the work of the women and men, respectively, engaged in lace-dressing, it should be borne in mind that while the women remain more or less constantly in the hot and relatively dry air of the lace-dressing rooms proper, most of the men are continually passing in and out of these rooms, and a certain proportion are almost exclusively employed in the dipping and dyeing rooms, the atmosphere of which varies much in temperature, and is often saturated with moisture. In addition to such male employees, moreover, there are many men who are commonly classed by their employers, and by associations to which they belong, as lace-dressers, because they are engaged in work ancillary to the industry, but who are actually labourers, porters, carters, etc., and some even fitters. The health of these men, as they are not continually subject to the special atmospheric conditions of the lace-dressing rooms, does not come within the scope of this inquiry. I mention them only to explain their exclusion, and the difficulty of forming a just estimate of the sickness and death-rates of males engaged in the industry, when all, however employed, are lumped together under a common designation.

* The 30 deaths of female lace-dressers during the 10 years, 1897-1906 occurred at the following ages and age-periods:—One at 13 years (osteo myelitis), one at 18 (phthisis), eight between 20 and 30, two between 30 and 40, 6 between 40 and 50, 5 between 50 and 60, two between 60 and 70, one at 71, one at 72, one at 75, one at 82, and one at 83. The general death-rate works out at 3 per 1,000 per annum of living lace-dressers.

INQUIRY CONCERNING THE HEALTH OF LACE-DRESSING
OPERATIVES.

The following schedules and tabular statements are included in the Report:—

- A.*—A list of lace-dressing firms, with the numbers of (protected) persons employed by each.
- B.*—Statements with reference to the history and health of employees, made by employers, managers, foremen, forewomen, etc., in response to questions put to them in connection with this inquiry.
- C.*—Statements with regard to their own personal history and health, made by individual female employees separately interviewed in home or workplace.
- D.*—Similar statements by male employees.
- E.*—Deaths from various causes, among persons described at the time of death as lace-dressers, in Nottingham, during the 10 years 1897-1906, inclusive.
- F.*—The temperatures (Fahr.) in several lace-dressing rooms.
- G.*—Dry and wet bulb readings, and corresponding relative humidity of each, in certain lace-dressing and dipping rooms.

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Schedule A.

Inquiry concerning the Health of Lace-Dressing Operatives.

Notts. Lace and Net Dressers' Association.

HANDS EMPLOYED.

	Total Average Adult Female Dressing Hands Employed.	Females over 40 approx.	Young Persons.	Children.
Anglo-Scotian Mills, Beeston..	7	..	2	..
Adams, Thos., Ltd.	117	5	67	..
Bulwell Finishing Co... ..	34	..	7	3
Clarke, W. & Son, Ltd. ..	27	3	4	..
Cleaver & Co.	25	6	12	..
Copestake, Crampton & Co. ..	17	4	2	..
Dobson Bros.	74	13	20	..
Dobson, W. E. & F.	60	20	40	..
Eden, H. C.	16	12	4	1
Hicking, G. & W. N.	62	10	7	..
Hooton, Spray & Burgess ..	19	4	12	..
Jacoby, M., & Co., Ltd. ..	38	2	33	..
Lambert & Co., Ltd. (W. J. & T.)	110	30	54	..
Lindley & Lindley	90	12	78	..
Matthews, H. E.	18	4	2	..
Ordoyno & Co.	16	5	..	..
Pearson & Sons, G.	29	1	10	..
Pratt Hurst & Co.	14	2	12	3 (boys)
Robinson & Clements	14	2	..	..
Spencer & Stevens	10	1	4	..
Stokes & Sewell	50	2	4	..
Swain, R. H.	27	1	4	..
Walker, David	10	..	..	..
Willis & Co.	29	1	10	..
Wood, H.	11	9	5	..
Willoughby, C. E.	39	1	6	..
Wright's Finishing Co., Ltd...	39	9	9	..
	1,002	159	408	7

The number of men engaged in and about the lace-dressing rooms is approximately 221* They are not there so constantly as the women, and have other work to do in the factories besides lace-dressing.

WAGES:—

Ordinary female lace dressing hands .. 12/10 to 14/- per week.
 (2½d. to 3d. per hour for week of 56 hours.)
 Forewomen in L. D. rooms £1 to £1 10s. per week.
 Male labourers, etc. £1 per week.

* March 25th, 1907.

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Schedule B.

Inquiry concerning the Health of Lace-dressing Operatives.

Testimony of Employers and Employees.

(Given on Official Visit to Employers).

THOMAS ADAMS & Co., Nottingham Road.

The foreman states that during forty years he only remembers one death, and that was caused directly by the fault of the victim (a woman).

T. I. BIRKIN & Co., Palm Street, Basford.

The manager does not remember a single death among the employees of the dressing-rooms. One woman left eight or ten years ago with scrofula (Mary Severn), and she is still living in Chelsea Street, Old Basford.

BULWELL LACE FINISHING CO.

Have had no deaths, and none has left the lace-dressing rooms through ill health. The foreman thinks if consumptive patients were sent to their dressing-rooms they would soon be well.

CLARKE & Co., Lace-Dressers, Egerton Street.

Have had no deaths nor any illness in the dressing-rooms beyond ordinary ailments.

A. CLEAVER, Lenton Boulevard.

The forewoman has been here 19 years, and she says that there have been no deaths during this period, and that no one has left through ill health. Some of the workpeople have been away for a day or two with colds and other minor ailments, and then returned to work.

COPESTAKE, CRAMPTON, & Co., Hounds Gate.

Have recently lost one of their employees. This was a Mrs. B., æt. 78 years, who died of heart failure on November 30th, 1904. She was away from the rooms for five years during her married life. They have two pensioners. Mrs. B., æt. 73, of 2, Marriott's Yard, St. James' Street, who has been pensioned for many years, "had a bad leg which made her give up work." The other is Miss P., of 46, Neville Street. She has had a pension for ten years, and is 74 years of age. She came to them as a young girl.

DOBSON BROS., Queen's Road.

No employee has left through ill health, and there has been no death in recent years.

Schedule B.

W. E. & F. DOBSON, Queen's Road.

Have only had one death, seven or eight years ago, and that was from child-birth. One of their late employees, Mrs. Rice, was in the dressing-rooms 52 or 53 years. She was 73 years of age last Christmas. On the 1st of March last year, Mr. Dobson pensioned her off with 6/- per week.

EDEN & Co., Roden Street.

Have only lost two of their workpeople in 33 years. One of them was ill when she entered their employment, and was only there one month. She died of consumption, and was about 30 years of age. The other was with them a year or two. She was about 50 at the time of her death, and had a complication of diseases. Mr. Eden, who has an excellent record for keeping his workpeople a great number of years, says his people generally die of old age.

G. & W. N. HICKING, Queen's Road.

Have had three deaths in five years. One was that of a girl, 19 years of age, from consumption. Her father, a brother, and a sister, however, all died of the same disease. Another was of a woman, æt. over 70, who had been employed in the lace-dressing rooms for more than 50 years. The last was that of a young man, æt. 24 years, who had been discharged from the militia as "physically unfit." He died of consumption—a phthisical taint had been the cause of his discharge from the militia.

LINDLEY & LINDLEY, Plantation Works, Bobbers Mill.

Have had no deaths or disabling illness among their employees. The girls and women in the dressing-rooms lose very little time through ill health.

MATTHEWS & Co., Roden Street.

Have lost two of their employees. Jane C. died at 76 years of age, of heart failure, after three weeks' illness. Mrs. F., an old lace dresser, æt. 59, died of dropsy, after ten or eleven weeks' illness. She was attended by Dr. Marriott, of St. Ann's Well Road, at her home, Newark Street, Sneinton.

ORDOYNO & Co., Woolpack Lane.

We saw their eldest hand, who has been 50 years in their service. She has no recollection of anyone leaving through ill health.

G. PEARSON & Co., Arnold Road.

Two of the workpeople who have been employed in the dressing-rooms for thirteen years have no recollection of a death among their fellows during that time, or of any person leaving through ill health.

Schedule B.

ROBINSON & CLEMENTS, Dakeyne Street.

Have not lost any employees through ill health, except married women, for confinement, etc. These often come back regularly, when they have ceased having children.

SPENCER & STEVENS, Roden Street.

No one has left through ill health. Mrs. H., of 27, Camden Street, left eight weeks ago in the best of health. She is now living at home with her husband looking after their house.

SWAIN & Co., Dakeyne Street.

Say that no regular employees have left except married women for their confinements, and they often return when their confinements are over.

SWAIN & Co., Island Street.

Have only had one death, that of a woman over 70, due to old age.

STOKES & SEWELL, Wilford Road.

Have been in business only eight years. One of the forewomen who has been with them seven years, says they have had no death during that period, and none has left their employment on account of the work. One girl whom they employ was said to be in consumption when she came to them. She was away some time ago, but has now been with them over two years continuously, and is certainly much better than when she first came.

WRIGHT & Co., Lace-Dressers, Great Freeman Street.

There has been no death among the dressing-room people, and none has left through ill health.

WRIGHT'S FINISHING Co., Carlton Road.

Only one girl has left this firm through illness. She started there as a half-timer on the death of her father, who had been one of their employees. Her mother (not a lace-dresser) is also dead. She has worked full time for six months, and came back recently to see if she could be taken on again. She was told to call again. We have examined this girl, and made inquiry about her family history. She is suffering from phthisis, to which apparently there is a strong hereditary tendency in her family.

WILLIS & Co., Dakeyne Street.

None has left here through ill health. James Hind, one of their late employees, was 55 years in the lace-dressing rooms. He never had a doctor except when he broke his leg. He died at 67 of heart failure.

Schedule B.

D. WALKER, Carrington Street.

Has no recollection of anyone leaving through ill health. He has had no deaths.

F. WRIGHT & Co., Dryden Street.

Had one girl (E. M., aged about 15) who left on account of her health a fortnight ago. We saw the girl at her home, 137, Alfreton Road, and she looked quite well. Her stepmother said she had picked up wonderfully since she left. The girl said she suffered from dizziness and biliousness when at work. The stepmother said her mother suffered in the same way at the same employment.

Woods & Co., Roden Street.

Mr. Woods knows of no employee who has left through ill health.

C. E. WILLOUGHBY, Gauntley Street.

Have not lost any of their employees through death, and none has had to give up the work on account of her health. Their people lose very little time through ill health.

We visited some of the old pensioners, who corroborated the statements made about them at the works.

Mrs. B., of 2, Marriott's Yard, St. James' Street, said she was 73 years of age, and had received her pension for 24 years. A diseased bone in one ankle was the cause of her leaving work. She spoke well of her employers.

Miss P., of 46, Neville Street, said she was 74, and had received a pension of 5/- per week for ten years. She began work as a lace-dressing hand at 13 years of age, and for several years frequently worked until midnight in the dressing-rooms. She thought the temperature of the latter was often much higher in former years than at the present time. She volunteered the statement that the Factory Acts have been a boon to women workers.

Mrs. B., æt. 75, of the same address, living with the last named Miss P., had been employed continuously for 30 years as a lace-dresser. She stated that her health had been good during this period. She appeared strong and well at the time of our visit.

Mrs. R., aged 73, 6, Lewis Place, Ranccliffe Street, said she was in good health after 52 years' work in lace-dressing rooms, and that she had loved her work, and was sorry to leave it. She thought the pension of 6/- a week she received was a good one, as her work had not been hard.

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Schedule C.

Inquiry concerning the Health of Lace-Dressing Operatives.

PERSONAL STATEMENTS BY FEMALE EMPLOYEES.

Messrs. Thos. Adams & Co., Nottingham Road Lace-dressing Rooms.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	No record of special ailments except where stated
L. T. ..	55	..	45	..	
E. T. ..	29	..	16	Lost 2 weeks only with colds.	
S. T. ..	67	..	47	..	
A. D. ..	44	Domestic servant ..	21	Has suffered from colds.	
M. B. ..	30	..	14	Do.	
A. B. ..	25	..	14	..	
P. C. ..	32	..	15	..	
D. M. ..	22	..	9	..	
E. C. ..	24	..	10	..	
M. C. ..	22	..	8	..	
E. R. ..	31	..	17	..	
H. T. ..	36	..	20	..	
L. G. ..	40	..	27	..	
M. A. E.	23	Domestic servant ..	7	..	

The foreman in the lace-dressing rooms here, J. D., æt. 65, has been a lace dresser 48 years, and says his health has always been excellent.

T. I. Birkin, Lace-Dressers, Palm Street, Basford.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	No record of special ailments.
E. T. ..	44	..	29	..	
S. T. ..	30	..	14	..	
M. B. ..	29	Three years previously in factory at other work..	13	..	
E. B. ..	31	..	7	..	
A. W. ..	19	..	7	..	
M. E. M.	18	..	2	..	
E. J. ..	27	..	7	..	
A. W. ..	19	..	5	..	
A. P. ..	25	Chambermaid	3	..	
S. E. M.	14	..	$1\frac{7}{12}$..	
E. B. ..	26	..	9	..	

Schedule C.**Bulwell Lace Finishing Co., Forest Side, Bulwell.**

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. L. ..	21	Domestic Servant ..	2	..
A. L. ..	18	..	4	..
E. B. ..	16	..	2	..
M. D. ..	18	..	4	..
E. W. ..	19	..	6	Anæmia some time ago.
E. S. ..	22	..	8	..
M. M. ..	21	..	8	..
M. T. ..	15	..	2	..
A. T. ..	17	Lace-mender	1½	..
M. W. ..	20	Hosiery hand	3	..
S. H. ..	18	..	4	..
M. W. ..	20	..	6	Anæmic.
F. U. ..	20	Domestic Servant ..	2	..
L. R. ..	17	..	2	..

No record of special ailments exc. where stated

Most of the girls leave the factory on their marriage.

Two male employees in the lace-dressing rooms here (æt. 16 and 45 years for 3 and 8 years, respectively. Both have good health.

Several youths are employed here. They seldom stay long at one time; they ring the changes between coal-mining and lace-dressing.

Clarke & Co., Lace-Dressers, Egerton Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. A. G.	63	52 years in trade ..	30	..
A. T. ..	42	32 years in trade ..	16	..
B. M. ..	65	50 years in trade ..	37	..
M. McL.	47	32 years in trade ..	25	..
K. D. ..	43	35 years in trade ..	15	..
M. W. ..	25	8 years in trade ..	..	..
M. R. ..	25	10 years in trade ..	1½	..

No record of special ailments.

Five males employed here, æt. respectively, 20 to 35, and for periods from 4 to 18 years (the two eldest had each been 18 years). All said their health was good. One, æt. 22, was phthisical when he began, but had since become robust.

Schedule C.

Cleaver & Co., Lace-Dressers, Lenton Boulevard.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
S. S. ..	42	..	30	..
F. E. ..	20	..	6	..
Mrs. W.	39	Domestic servant ..	20	..
M. A. W.	43	Farm servant at 8 years of age	9	..
K. W. ..	44	..	20	Off one week only through illness
V. R. ..	15	..	1½	..
H. G. ..	18	..	2	..
B. B. ..	58	Hosiery work 15 years. This occupation suits her very much better..	20	..
M. B. ..	19	Cigar maker. Likes this work much better ..	2	..
A. S. ..	23	..	6½	..
A. L. ..	19	..	3½	..
J. W. ..	33	..	15	..
M. J. ..	21	..	4	..
L. B. ..	48	Started work at 7 years of age .. ..	..	..
M. A. G.	16	..	1¾	..
S. A. R.	19	..	6	..
A. B. ..	28	..	12	..
H. M. ..	34	Domestic servant. Has better health here ..	16	..
M. A. R.	22	Hosiery worker. Has better health at Lace Dressing	7	..
F. M. ..	23	..	7	..
A. D. ..	17	..	1	..
A. P. ..	17	Lace mender. Has better health here	2	..
E. A. ..	22	Cotton Mill-hand ..	3½	..

No record of any special ailments.

Schedule C.

Copestake, Crampton & Co., Hounds Gate.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	No record of special ailments, except catarrhs.
M. W...	38	..	26	..	
M. B. ..	74	Started work at 13. ..	..	Now suffers from heart weakness
K. D. ..	18	5½ years in trade.. ..	2	..	
M. N. ..	39	..	5	..	
M. H. ..	29	Domestic servant and laundress	5	Better health here.	
E. C. ..	21	..	5	..	
D. D. ..	16	..	2	..	
M. B. ..	23	Hosiery hand	4	Better health at Lace dressing	
R. R. ..	21	At Lambert's for 3 years	3	..	
M. W...	30	..	15	..	
M. C. ..	43	Started work at 14 years of age	22	..	

Three young adult males also employed here. One, æt. 21 suffers from bronchitis, and has done so from childhood.

Schedule C.

Dobson Bros., Lace-Dressers, Queen's Road.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
S. A. W.	37	..	23	..
M. G. ..	25	..	10	..
A. C. ..	23	..	8	..
S. S. ..	18	..	4	..
M. A. P.	52	..	38	..
S. C. ..	16	..	1½	..
B. ..	55	..	46	..
E. P. ..	50	..	34	..
E. S. ..	19	..	4	..
M. B. ..	30	..	17	..
A. C. ..	19	Cigar maker	3	Good health here.
M. M. ..	19	..	5	..
R. S. ..	31	Lace Gasser	16	Better health here.
A. H. ..	56	Started work at 11 years of age	45	Six weeks off during this time. Better now than ever.
M. M. ..	..	Tailoress	30	Better health at this work.
M. K. ..	39	Lace clipper	20	Do.
K. D. ..	53	Started work at 7 years of age .. ..	..	..
E. S. ..	45	..	32	Has put on flesh in recent years.
A. C. ..	57	..	47	Away 5 weeks, when she broke blood-vessel. Good health since.
H. C. ..	45	22 years in trade	9	..
K. J. ..	30	..	40	..
M. A. ..	37	..	13	..
S. A. S.	38	..	28	..
E. R. ..	40	Lace finisher	18	..
B. G. ..	40	..	25	..
A. M. ..	57	..	43	..

General record of good health.

Schedule C.

W. E. & F. Dobson, Lace-Dressers, Queen's Road.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
E. C. ..	49	..	30	..
K. W. ..	21	..	8	..
E. K. ..	40	..	27	..
K. M. ..	52	Started work at 7 years of age	45	Bronchitis during past 4 or 5 years.
M. M. ..	30	..	16	..
A. B. ..	26	..	12	..
A. W. ..	21	..	7	..
M. C. ..	47	..	34	..
M. C. ..	27	..	14	..
K. O'H.	40	..	24	..
S. T. ..	25	..	5	..
P. K. ..	19	..	6	..
P. C. ..	19	..	5	..
E. W. ..	36	..	22	..
M. C. ..	50	..	34	..
K. T. ..	22	..	8	..
M. A. B.	34	..	19	..
A. P. ..	50	..	30	..
E. W. ..	54	..	40	..
M. McM.	62	..	46	..
A. W. ..	26	..	6	..
A. W. ..	17	..	2	..
M. C. ..	45	..	15	..
K. M. ..	45	..	18	..

General record of good health except for minor ailments.

Four males employed here, of ages ranging from 27 to 43 years, and of years of service from 5 to 11. All have good health.

Schedule C.

H. C. Eden & Co., Lace-Dressers, Roden Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	
M. C. ..	56	..	34	..	} No ailments complained of in any case
M. A. R.	72	..	52	..	
M. A. ..	37	..	24	..	
C. S. ..	19	..	3	..	
S. A. B.	56	..	46	..	
M. P. ..	56	..	33	..	
M. S. ..	59	..	50	..	
G. W. ..	26	..	10	..	
S. T. ..	40	..	30	..	
M. A. K.	62	..	52	..	
M. R. ..	67	..	54	..	
A. M. ..	64	..	50	..	

One male employed in lace-dressing rooms here, æt. 70. He has been so employed for the past 53 years. His health was good till the death of his wife two years ago, when he had a nerve breakdown.

Schedule C.

G. & W. N. Hicking, Lace-Dressers, Station Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	General record of good health.
A. B. ..	18	..	4	..	
M. F. ..	36	..	23	..	
R. H. ..	22	Sweetmeat packer ..	5	..	
S. A. N.	28	Lace mender	2	Much better health at lace-dressing.	
T. M. ..	20	..	5	..	
E. E. ..	20	..	6	..	
E. M. ..	35	Half-time in lace factory at 10 years of age ..	20	..	
M. F. ..	19	..	4	..	
E. F. ..	21	..	5	..	
M. A. ..	39	..	23	..	
G. C. ..	20	..	4	..	
K. S. ..	19	Started work at 13 years of age	6	..	
E. W. ..	19	..	4	..	
S. B. ..	62	..	40	Remarkably good health.	
M. A. C.	38	..	24	..	
B. C. ..	40	..	30	..	
A. T. ..	33	..	13	Started this work at 20 years of age, on account of delicate health. Much better since.	

Three males employed in lace-dressing rooms, at. 60, 44, and 40 years respectively, have been so employed, severally, for 36, 26, and 20 years. The eldest states that he has had a fortnight's illness since he took up the work. The others say they have had uniformly good health.

Schedule C.

G. & W. N. Hicking, Lace-Dressers, Queen's Road.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	General record of good health.
M. H. ..	57	..	48	..	
L. M. ..	25	At Stokes & Sewell, 2 yrs.	5	..	
S. B. ..	29	In trade 4 yrs. previously	8	..	
H. B. ..	27	Do. 5 years ..	7	..	
P. D. ..	25	Do. 5 years ..	6	..	
M. N. ..	26	At Lambert's 6 years previously	6	..	
P. H. ..	23	..	9	..	
E. S. ..	18	..	2	..	
K. P. ..	40	..	28	..	
H. T. ..	38	..	24	..	
E. B. ..	39	Domestic servant ..	20	..	
E. A. ..	52	..	40	..	
M. R. ..	25	..	11	..	
M. S. ..	33	Started work at 10 years of age	23	..	
K. P. ..	19	..	4 $\frac{1}{2}$..	
M. A. D.	29	..	14	Never a day's illness.	
M. S. ..	62	..	40	Do.	
M. W. ..	28	..	10	Very good health since in the lace-dressing trade.	
A. H. ..	53	Silk winder	35	..	
S. M. ..	25	..	11	..	
M. T. ..	19	..	4	..	
H. P. ..	25	..	7	..	
M. B. ..	37	..	13	..	
E. R. ..	57	..	40	..	
M. B. ..	40	Domestic servant, 5 years	15	Not a day's illness since in the trade.	

Schedule C.

W. J. & T. Lambert & Co., Lace-Dressers, Talbot Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. E. C.	49	..	38	..
K. L. ..	42	At Lindley's 16 years ..	14	..
M. C. ..	23	..	8	..
M. R. ..	23	..	7	..
H. B. ..	38	..	25	..
L. ..	37	..	24	..
C. D. ..	34	..	21	..
M. B. ..	23	..	10	..
L. M. ..	28	..	14	..
E. F. ..	30	..	16	..
M. B. ..	56	..	32	..
M. W. ...	75	..	40	..
M. H. ..	50	..	40	Not lost more than a day through illness.
A. W. ..	58	..	37	..
M. P. ..	50	..	40	..
M. C. ..	48	..	30	..
K. S. ..	45	..	24	..
L. C. ..	21	..	7	..
S. A. P.	46	..	35	..
M. D. ..	48	..	37	..
A. H. ..	23	Lace-joiner	1 $\frac{5}{12}$	..
M. A. C.	47	..	30	..
M. M. ..	33	..	20	..
E. P. ..	20	..	7	..

No record of special ailments.

Seven males employed in Lace-Dressing rooms here, æt. 21 to 40 years, (5 over 34). Four have worked here over 20 years. All have had good health.

Messrs. Lindley & Lindley, Lace-Dressers.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation	Record of health during this period.
E. M. ..	48	..	32	..
R. H. ..	22	2 years at T. Adams's ..	6	..
A. T. ..	24	3 years do. ..	6	..
M. R. ..	29	..	12	..
M. M. ..	39	..	26	..
S. B. ..	22	..	8	..
H. S. ..	22	3 years at Pratt, Hurst ..	5	..
S. A. W.	24	..	8	..

No special ailments complained of except common catarrhs.

Many casual employees are engaged from time to time for short periods by this firm

Schedule C.

H. C. Matthews, Lace-Dresser, Roden Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	General record of good health.
M. G. ..	44	Started work at 8 years of age	28	..	
A. L. ..	36	.. ..	11	..
H. C. ..	48	.. ..	12	..
H. L. ..	18	.. ..	4	..
H. C. ..	29	.. ..	12	..
S. A. S.	18	.. ..	4	..
M. McM.	39	.. ..	27	..
M. S. ..	60	.. ..	21	..
M. A. D.	50	Started work at 9 years of age	41	Never had an hour's illness.	
F. S. ..	31	.. ..	17	..
S. L. ..	25	8 years in trade	2½	..	
B. ..	50-60	.. ..	..	..

S. A. F., an old hand, æt. 57, died recently of dropsy after a fortnight's illness.

Mr. R., the head dyer, has been here 26 years. He began work as lace-dresser at 15.

Ordoyno & Co., Lace-Dressers, Woolpack Lane.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of Health during this period.
M. F. ..	75	..	50	No illness during this period except influenza 2 years ago.
C. W. ..	42	..	21	Not a month's illness during this time.
M. G. ..	56	..	38	No illness.
M. F. ..	..	..	3	Do.
M. B. ..	28	..	5	Once looked consumptive, but now apparently robust.

Many occasional hands work here from time to time. There is no record of ill-health among them beyond ordinary minor ailments.

Schedule C

G. Pearson, Sons & Co., Lace-Dressers, Arnold Road, Basford.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. M. ..	27	..	9	..
M. P. ..	32	..	13	..
G. L. ..	18	Five years in trade ..	$7\frac{1}{2}$	Has had anæmia.
E. S. ..	18	Domestic servant ..	2	Anæmia dating from puberty.
M. C. ..	23	..	7	..
S. A. S.	20	Cigar maker	2	..
A. E. M.	20	Laundress; likes this work much better ..	4	Anæmic, but does not think it is the work. Has not lost any time thro' illness.
M. D. ..	18	One year at Thos. Adams.	$1\frac{1}{2}$	..
A. F. ..	18	..	$2\frac{1}{2}$	..
P. ..	22	..	8	..
M. S. ..	21	..	5	..
M. J. ..	29	Away two years at other work	14	..
M. M. ..	20	Lace-joiner. Two years in trade	$2\frac{2}{3}$	..
C. C. ..	19	..	4	Anæmic.
E. W. ..	19	In trade 4 years, also been cotton-factory hand ..	$3\frac{1}{2}$	..
E. A. P.	15	..	1	..
M. V. ..	23	Nine yrs. at Thos. Adams.	1	..
A. F. ..	18	..	4	..
L. A. ..	27	..	15	..
M. H. ..	18	..	1	..
T. T. ..	16	..	3	..
L. S. ..	21	..	8	..
M. S. ..	25	..	12	..
M. S. ..	40	Twelve years at T. Adams.	14	..
M. S. ..	25	Started work at 14 years of age	5	..
M. L. ..	28	Nine years in trade. Domestic servant 3 yrs.	4	..
M. A. R.	22	..	9	..
M. A. G.	18	..	5	Away once through influenza.
E. H. ..	30	..	13	..
L. C. ..	16	Lace folder	1	..
L. W. ..	19	..	4	..
A. C. ..	21	..	7	..
E. P. ..	19	..	4	..
M. B. ..	21	Lace mender $3\frac{1}{2}$ years ..	$1\frac{1}{2}$	Anæmic while lace-mending, better here.

No record of special ailments except where stated.

Anæmia, due to lead poisoning (by means of diachylon), is of very common occurrence in this neighbourhood. At the Nottingham Assizes in the Summer of 1906, during the hearing of the case against Sarah Wardle (abortionist), of Bulwell, it was proved that lead-poisoning from the use of diachylon as an abortifacient was exceedingly prevalent in Basford and Bulwell.

Schedule C.

Robinson & Clements, Lace-Dressers, Dakeyne Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	No record of special ailments, except where stated.
C. P. ..	59	..	51	Good health.	
A. H. ..	15	..	$\frac{10}{12}$..	
P. D. ..	32	..	19	..	
K. C. ..	17	Cigar maker	1	Much better health since lace dresser	
M. W. ..	17	..	2	..	
L. W. ..	16	..	2	..	
H. W. ..	24	Harness maker	$1\frac{1}{2}$	Much better health since lace dressing	
R. C. ..	51	In the trade off and on since 7 years of age ..	..	Never robust, but no disease.

R. H. Swain, Lace-Dresser, Island Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	No record of special ailments, except where stated.
A. G. ..	33	Started as half-timer ..	22	..	
E. T. ..	24	Lace-clipper at home ..	3	..	
S. B. ..	19	..	6	..	
A. F. ..	19	..	4	..	
E. W. ..	19	..	3	..	
E. P. ..	45	Started at 13 years of age	7	Never had a Doctor	
W. S. ..	15	..	1	..	
A. S. ..	20	..	5	..	
B. J. ..	15	..	$1\frac{1}{2}$..	
K. S. ..	19	..	4	..	
B. G. ..	19	..	5	Anæmia for a short time after starting this work but better now.	
K. M. ..	20	..	6	..	
M. D. ..	52	37 years at Wright's Finishing Co. ..	3	..	

Schedule C.**R. H. Swain, Lace-Dresser, Dakeyne Street.**

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. H. ..	33	..	26	..
V. M. ..	13	..	1 $\frac{1}{4}$	..
M. W. ...	22	..	1 $\frac{8}{12}$	..
F. G. ..	21	Laundress 2 years ..	6	..
L. S. ..	22	..	8	..
L. H. ..	14	..	1	..
E. H. ..	26	..	11	..
D. D. ..	20	..	3	..
E. S. ..	48	..	20	..
M. A. H.	27	..	10	..
C. M. ..	34	..	16	..
G. F. ..	21	..	7	..

No record of absence through illness, except in case of colds.

Spencer & Stevens, Lace-Dressers, Roden Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. B. ..	47	..	35	..
M. B. ..	31	..	13	..
A. H. ..	40	..	13	..
M. J. ..	37	..	12	..

All have healthy record and good appearance.

Many occasional hands employed here from time to time.
 Their health, with few exceptions, is reported to be good.

Schedule C.

Stokes & Sewell, Lace-Dressers, Wilford Road.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
H. M. ..	39	..	18	..
S. D. ..	40	..	20	..
C. L. ..	27	..	14	..
M. L. ..	55	In the trade from 17 yrs. of age	20	Paraplegia 5 months ago, now recovered.
L. W. ..	24	..	11	..
M. T. ..	17	..	1	..
M. H. ..	24	..	11	..
A. F. ..	20	..	3½	..
E. K. ..	45	Lace hand	17	Better health here.
M. K. ..	51	Domestic servant ..	33	..
L. ..	26	..	17	Away odd days with colds.
A. C. ..	22	..	6	..
S. P. ..	25	At Lambert's 3 years ..	5	..
A. R. ..	21	..	6	..
L. R. ..	35	At Dobson's 6 years ..	6	..
S. R. ..	20	..	6	..
E. W. ..	34	..	11	..
K. F. ..	24	..	11	..
E. M. ..	31	..	18	..
E. E. K. ..	22	..	9	..
A. P. ..	24	..	9	..
E. W. ..	36	Started work at 13 years of age in a cotton mill	2	Better health here.
M. P. ..	25	..	12	..
A. P. ..	31	Eight years in trade ..	7	..
K. K. ..	20	..	5	Anæmia before starting work here. Better now.
E. G. ..	20	..	6	..
E. K. ..	20	..	7	..
M. L. ..	17	Cigar maker	2	Better health here.
W. W. ..	21	..	7	..

General record of good health except for common colds.

Schedule C.**Woods & Co., Lace-Dressers, Roden Street.**

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. B. ..	40	..	10	..
L. M. ..	21	..	7	..
E. A. T. ..	22	..	7	..
M. R. ..	50	Started work at Lambert's at 12 years of age ..	1½	..
L. A. ..	50	Started work at Dobson's at 14 years of age ..	..	..
M. B. ..	40	..	28	..
S. A. S. ..	21	..	7	..
M. S. ..	60	..	15	..

Bad colds complained of in several cases, no other ailments mentioned

Wright & Co., Lace-Dressers, Great Freeman Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. W. ...	41	..	26	Only needed a Doctor once.
M. B. ..	52	38 years in trade.. ..	9	..
A. ..	44	..	20	..
M. M. ..	64	..	53	..
C. B. ..	15	..	¾	..
E. F. ..	20	..	6	..
M. M. ..	42	..	8	..
M. P. ..	42	..	30	..
C. D. ..	17	..	2	..
A. H. ..	15	..	2	..
E. A. B. ..	17	..	1	..
M. D. ..	25	..	12	..
M. W. ...	23	..	13	..
M. S. ..	24	..	10	..
M. L. ..	31	..	18	..
M. B. ..	30	..	15	..

No record of any special ailments.

Six male workpeople in Lace-Dressing rooms here of ages ranging from 20 to 55 years, and periods of employment from 3 months to 32 years. Health of all very fair.

Schedule C.

Willis & Co., Lace-Dressers, Dakeyne Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
F. W. ..	28	In the trade 14 years ..	2	..
K. E. ..	17	In the trade 2 years ..	$\frac{5}{12}$	..
L. W. ..	16	..	$\frac{3}{4}$	..
E. B. ..	27	In the trade 15 years ..	9	..
M. F. ..	25	..	13	..
M. D. ..	46	In the trade 26 years ..	15	..
M. Y. ..	23	Do. 15 years ..	$\frac{1}{4}$	..
E. D. ..	34	..	19	..
A. McL.	18	..	2	..
T. N. ..	19	In the trade 5 years ..	1	..
M. C. ..	41	Do. 24 years ..	15	..
M. T. ..	40	..	28	..
E. B. ..	17	..	2	..
C. B. ..	17	..	2	..
N. H. ..	21	..	7	..

No record of any special ailments.

J. H., æt. 65, was employed here for 15 years. He died 24th October, 1905 of heart failure.

F. Wright, Lace-Dresser, Dryden Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. G. ..	49	25 years in trade ..	4	..
E. S. ..	43	..	30	Suffers from recurrent erysipelas
A. McD.	20	..	7	..
M. F. ..	24	..	13	..
H. P. ..	19	..	3	..
A. S. ..	19	..	6	..
L. S. ..	20	..	5	..
E. C. ..	18	..	5	..
M. W. ..	23	..	10	..
E. H. ..	19	..	6	..

No record of special ailments except in case mentioned.

Six male employees here have worked for periods ranging from 28 to 2 years. All claim to have had good health at the lace-dressing work.

Schedule C.

C. B. Willoughby, Lace-Dressers, Gauntley Street, Bobbers Mill.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.
M. D. ..	32	Hosiery hand	7	..
M. J. ..	20	..	6	..
M. H. ..	30	..	16	..
M. C. ..	21	..	5	..
M. C. ..	28	..	12	..
M. R. ..	22	..	5	..
M. A. ..	25	..	11	..
A. S. ..	24	..	10	..
F. R. ..	27	9 years at Thos. Adams's. Domestic servant ..	1½	Health much improved since lace-dresser.
A. L. ..	24	..	10	..
M. C. ..	27	..	11	..
S. M. ..	33	..	17	..
A. R. ..	20	..	6	..
E. W. ..	23	..	10	One fortnight away
M. H. ..	21	..	7	..
M. W. ..	18	..	5	..
S. H. ..	22	..	7	..
M. D. ..	18	Friller, 10 months ..	3	Has much better health here.
S. H. ..	22	..	7	Never been away through ill health
M. C. ..	23	..	9	..

No record of special ailments, except common colds.

Schedule C.

Wright's Lace-Finishing Co., Carlton Road.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	
A. N. ..	42	In the trade 25 years ..	20	..	No record of special ailments
C. D. ..	32	..	14	..	
H. T. ..	18	Laundress	3	Better health here	
R. M. ..	13	..	10 days	..	
E. C. ..	21	..	7	..	
A. W. ..	18	..	4	..	
M. B. ..	15	..	$\frac{1}{2}$..	
A. K. ..	15	..	2	..	
H. A. ..	26	..	13	..	
H. W. ..	17	..	4	..	
M. T. ..	27	..	14	..	
M. A. M.	14	..	$\frac{10}{12}$..	
M. L. ..	34	..	19	Away 6 weeks with colds.	
L. W. ..	13	..	$\frac{8}{12}$..	
A. A. ..	21	..	7	..	

There are three male employees here, æt. respectively 28, 56, and 62 years, who have severally worked 6, 20, and 24 years in the Lace-Dressing rooms. All claim to have had very good health throughout.

D. Walker, Lace-Dresser, Carrington Street.

Employee.	Age.	Previous occupation, etc.	Years and Fractions in present situation.	Record of health during this period.	
A. W. ..	20	Cigar maker	2	Much better health since lace-dressing	General record of good health, but colds occasionally.
G. O. ..	21	..	7	..	
M. S. ..	27	..	12	Formerly consumptive but is now strong and well.	
S. T. ..	31	14 years in the trade ..	11	..	
M. C. ..	21	..	5	..	
F. W. ..	18	..	$4\frac{1}{2}$..	
M. W. ...	20	..	6	Has had no illness	
M. S. ..	22	..	6	..	
L. W. ..	22	..	6	Has never been away through illness.	

Two males employed in Lace-Dressing rooms here, æt. 20 and 25, for 5 and 9 years respectively. Both have, and have had good health from outset.

NOTTINGHAM.

Schedule D.

Inquiry concerning the Health of Lace-Dressing Operatives.

PERSONAL STATEMENTS BY MALE EMPLOYEES.

Messrs. Cleaver & Co., Lenton Boulevard.

Lace-Dressing Rooms.

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
W. A.	54	40	No illness.
A. T.	20	11 months	$\frac{1}{2}$ day's illness.
L. M.	25	8	No illness.
E. S.	35	15	7 days' bowel disturbance.
J. H. G. ..	40	18	No illness.
A. E. C. ..	16	$2\frac{1}{2}$	7 days with cold.
D. L.	17	4	2 days subject to fainting fits; the last one a year ago.
J. P.	$15\frac{1}{2}$	$1\frac{1}{2}$	No illness.
A. S.	20	6 months	$\frac{1}{2}$ day's illness. Health not so good as at other employment.

Lace-Dipping Rooms.

E. M.	40	28	Attack of enteric fever lasting 4 weeks, 4 years ago.
S. M.	36	23	Rheumatic fever twice. Influenza twice. Now under medical treatment for after effects of old illness.
H. M.	28	16	Several common colds. No illness last 3 years.
H. S.	26	8	No illness.

Schedule D.**G. Pearson, Sons & Co., Arnold Road.****Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
G. F. H. ..	31	18	Two days' illness with rheumatism.
W. S. ..	33	5	No illness.
E. R. ..	16	3	Common colds only.
W. P. ..	41	23	No illness.
S. R. ..	40	19	No serious illness.

Dipping Rooms.

H. S. ..	29	6	No illness.
W. L. ..	38	5	No illness. Health better since he took to present employment.
W. S. ..	42	6	No illness.
R. F. ..	45	24	No illness.
J. W. W. ..	24	9	One week's illness; diarrhoea?

H. E. Matthew, Roden Street.**Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
G. S. ..	19	4	No illness.

Dipping Rooms.

S. R. ..	42	26	A few common colds.
E. S. ..	21	7	Supposed to be phthisical, but has not been once absent through illness during past 18 months.

Robinson & Clements, Dakeyne Street.**Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
W. M. ..	51	35	No illness.
H. F. ..	24	8	No illness.

Schedule D.**Willis & Co., Dakeyne Street.
Lace-dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
S. C.	21	3	No illness.
J. C.	22	8	No illness.
J. F.	19	6	No illness.

**R. H. Swain, Dakeyne Street and Island Street.
Lace-dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
S. T.	16	2	No illness.
R. McM. ..	30	17	Common colds.
H. S.	17	2 months	No illness.
J. W.	18	10 months	No illness.
S. W.	17	1½	One week's illness.

Dipping Rooms.

C. L.	22	4	No illness.
J. H. S. ..	20	2	No illness. Health quite as good as when at other work.
J. A.	16½	2	No illness.
C. E. B. ..	34	8	Occasional colds. Health improved since he took up present work.
M. H.	16	1	No illness.
G. T. S. ..	32	9	Three days' illness.

**Stokes & Sewell, Wilford Road.
Lace-dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
A. B.	23	2½	No illness.
A. W.	32	14	Slight colds.
L. S.	23	8	One attack of bronchitis, lasting a fortnight; another less severe— no disabling attacks since.
L. S.	20	1½	Common colds. Health quite as good as when at other work.
C. H.	16	1½	No illness.
J. L.	17	3 months	No illness.

Schedule D.**Lindley & Lindley, Bobbers Mill.****Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
G. W.	50	36	No illness.
H. H.	21	6	Common colds.
A. F.	31	6 months.	Health better since he took up lace-dressing.
C. B.	31	8½	No illness.
H. H.	45	29	10 days' illness with stomach disturbance.
J. G.	41	22	3 weeks' absence altogether from common colds.
H. W.	40	25	1 month's absence through attack of influenza 6 years ago.
H. S.	46	30	A fortnight's absence with influenza.
S. C.	31	8	One week's illness.
S. F.	20	1½	No illness.
T. C.	49	6	No illness.

Lace-Dipping Rooms.

S. W.	34	14	Common colds.
A. D.	23	9½	No illness.
R. L.	18	3	4 days' illness.
M. S.	19	4	A fortnight's absence through tonsillitis.

C. E. Willoughby, Mill-in-the-Hole, Gauntley Street.**Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
J. C.	35	9	Common colds.
C. C.	34	10	No illness.
C. S.	21	4½	Common colds.

Lace-Dipping Rooms.

J. O.	40	20	No illness.
F. H.	22	3	No illness. Health quite as good as when at other work.

Schedule D.**Dobson Bros., Queen's Road.****Lace-Dressing Rooms.**

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
S. P.	40	25	Common colds.
C. L.	17½	2	Common colds.
W. A.	17½	1	No illness.
T. C.	25	10	No illness.
W. H.	21	9 months.	No illness.
G. J.	24	3 years.	No illness.
J. E.	16	9 months.	No illness.
T. B.	18	10 months.	No illness.
W. E.	31	12 months.	One attack of pleurisy 7 years ago.

Lace-Dipping Rooms.

J. B.	26	11	Common colds.
J. L.	17½	5	No illness.
W. S.	38	20	No illness.
H. A.	44	30	No illness.
J. B.	21	4	No illness.

Schedule D.

G. & W. N. Hicking, Queen's Road.

Lace-Dressing Rooms.

Name.	Age.	Number of years employed in Dressing Rooms.	Record of health during this period.
A. N.	22½	1	No illness.
B. B.	17½	2½	No illness.
J. C.	23½	6	Common colds.
M. P.	17½	1½	No illness.
J. B.	16½	4 months	No illness.
R. J. T.	46	20	An attack of appendicitis recently.
J. S.	20½	7	An attack of pleurisy.
J. H.	17	3	No illness.
J. T.	18	5	One week's illness.
T. L.	19½	5	Two months' illness, with a fever 3 years ago.
T. O. N.	36	8	Common colds.
S. R.	34	10	No illness.
A. T.	32	10	No illness.
J. D.	32	5	No illness.
S. B.	31	15	Neuralgia from bad teeth.

Lace-Dipping Rooms.

J. K.	28	10	Common colds.
R. S.	35	20	Common colds.
A. G.	18	2½	No illness.
A. P.	21	4	No illness.
W. D.	17½	2½	No illness.
T. B.	19	2	No illness.

NOTTINGHAM.

Inquiry concerning the Health of Lace-Dressing Operatives.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1897.

F. C., 43 years, 3, Northumberland Terrace, Northumberland Street, lace dresser. Uncertain (heart disease). Inquest. Feb. 1st, 1897.

T. D., 45 years, 26, Apple Yard, Old Street, lace-dresser. Cerebral hæmorrhage, 34 hours. Dr. V. Whitgreave. March 26th, 1897.

W. B., 31 years, 29, Rick Street, lace-dresser. Enteric fever, cardiac dilatation. Dr. C. W. Milner. March 28th, 1897.

M. C., 42 years, 29, Storer Street, lace-dresser. Carcinoma untari, intestinal obstruction. Dr. C. W. Milner. Jan. 19th, 1897.

B. W., 29 years, 5, Dennett's Terrace, Beaumont Street, lace-dresser. Heart disease (aortic), anasarca. Dr. C. E. Cornwall. July 7th, 1897.

A. M., 45 years, lace-dresser, 43, Stanhope Street. Phthisis. Dr. E. D. Marriott, Aug. 20th, 1897.

E. H., 29 years (single), 18, Clare Street, lace-dresser. Pneumonitis, 5 days. Dr. V. Whitgreave. Oct. 19th, 1897.

*R. D. W., 61 years, 1, Belvoir Hill, lace-dressing rooms manager. Pneumonia, heart failure. Dr. W. Thomson. Sept., 29th, 1907.

* Not a working lace-dresser.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1898.

Z. H., 57 years, Beech Avenue Workhouse, of 2, Haywood Street, lace-dresser. Cerebral hæmorrhage, coma. Dr. G. E. Dodson. Feb. 25th, 1898.

R. G., 78 years, Beech Avenue Workhouse, lace-dresser (of Belmont Place). Bronchitis. Dr. H. G. Ashwell. March 4th, 1898.

W. G., 41 years, 4, Plantation Terrace, lace-dresser. Nephritis. Convulsions. Dr. C. W. Grant. Feb. 11th, 1898.

S. W., 40 years, Beech Avenue Workhouse, of 5, Currant Street, lace-dresser. Pneumonia, syncope. Dr. G. E. Dodson. April 8th, 1898.

Schedule E.

W. A., 30 years, 23, Newark Street, lace-dresser. Phthisis. Dr. G. Thompson. March 11th, 1898.

H. S., 16 years, Beech Avenue Workhouse, of 1, Carlton Court, Platt Street, lace-dresser. Cerebral tumour, tertiary syphilis (Congenital). Dr. G. E. Dodson. August 26th, 1898.

M. W., 56 years, 74, Randolph Street, lace-dresser. Mitral disease. Dr. H. L. DeCaux. July 25th, 1898.

J. N., 56 years, 39, Davis Street, lace-dresser. Valvular disease of heart. Dr. J. B. Sim. May 12th, 1898.

W. S., 62 years, General Hospital, of 36, Hunt Street, lace-dresser. Enlarged prostate, cystitis, retention, etc. Dr. A. J. Martineau. Sept. 17th, 1898.

G. G., 57 years, 27, Florence Street, lace-dresser. Malignant disease of pancreas. Dr. W. Hunter. July 18th, 1898.

A. B., 56 years, General Hospital, of 7, Butt Houses, Derby Road, lace-dresser. Intestinal obstruction, strangulation of band, laparotomy. Dr. J. Prestwick. Nov. 7th, 1898.

J. C., 34 years, 16, Prince Regent Street, lace-dresser. Phthisis. Dr. E. D. Marriott. Nov. 6th, 1898.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1899.

T. A., 34 years, Highfield Yard, Sherwood, lace-dresser. Morbus cordis, syncope. Dr. A. B. Gass. Feb. 7th, 1899.

E. S., 24 years, 193, Wilford Road, lace-dresser. Gastric ulcer, peritonitis, cardiac failure. Dr. R. H. Brown. Feb. 22nd, 1899.

E. J., 64 years, 6, Argyle terrace, Shakespeare Street, lace-dresser. Heart disease. Dr. E. Hynes. July 2nd, 1899.

M. McG., 18 years (single), 5, Brook Street, lace-dresser. Tuberculosis pulmonalis. Dr. B. B. Burke. Sept. 8, 1899.

S. R., 65 years (single), 12, Carrington Terrace, Salford Street, lace-dresser. Cancer of uterus, hæmorrhage, exhaustion. Dr. W. Thomson. Sept. 20th, 1899.

K. T., 42 years (single), 11, Providence Court, Millstone Lane, lace-dresser. Apoplexy, 7 days. Dr. J. B. Sim. November 15th, 1899.

J. T., 62 years, 7, Earl Street, lace-dresser. Chronic interstitial nephritis, heart disease. Dr. T. J. Dabell. Oct. 14th, 1899.

Schedule E.**DEATHS OF LACE-DRESSERS REGISTERED DURING 1900.**

E. H., 71 years, Beech Avenue Workhouse, of Sneinton Road, lace-dresser. Bronchitis. Dr. F. A. H. Clarke. March 6th, 1900.

S. N., 75 years, 9, Gadd Street, lace-dresser. Bronchitis. Dr. F. Lander. March 31st, 1900.

T. J., 56 years, 222, Gordon Road, lace-dresser. Angina pectoris, 3 years. Last attack 24 hours. Dr. E. R. P. Watkins. April 6th, 1900.

W. McG., 69 years, 22, Woolpack Lane, lace-dresser. Senectus. Dr. E. R. P. Watkins. February 15th, 1900.

F. F. C., 69 years, 28, Broad Street, lace-dresser. Morbus cordis, syncope. Dr. C. W. Milner. August 11th, 1900.

A. W., 25 years, 9, Lees Yard, Narrow Marsh, lace-dresser. Phthisis pulmonalis. Dr. R. Taylor. July 9th, 1900.

H. B., 29 years, Beech Avenue Workhouse, of 3, Foundry Yard, lace-dresser. Acute nephritis. T. H. O. Shaughnessy. Dec. 9th, 1900.

*A. T., 44 years, 6a, Burns Street, lace-dresser. Sloughing tonsil. Dr. R. Chicken. Nov. 22nd, 1900.

W. E. S., 40 years, 149, Kirkwhite Street, lace-dresser. Pernicious anæmia. Dr. W. Hunter. Dec. 1st, 1900.

* Wife of proprietor of lace-dressing rooms.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1901.

F. M., 63 years, 10, Evelyn Street, lace-dresser. Morbus cordis, anasarca. Dr. E. R. P. Watkins. Jan. 18th, 1901.

M. T., 46 years, 240, Sherwood Street, lace-dresser. Heart failure. Dr. S. Gill. Dec. 21st, 1901.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1902.

J. R., 69 years, 212, Coventry Road, lace-dresser. Bronchitis, senile debility. Dr. A. L. Bartram. Jan. 16th, 1902.

I. D., 81 years, 40, Shakespeare Villas, Shakespeare Street, lace-dresser. Senile decay. Dr. P. Tresidder. Feb. 17th, 1902.

Schedule E.

W. J. B., 49 years, 5, Chestnut Grove, Mapperley Road, lace-dresser. Cancer of the stomach, six months. Dr. J. S. Bolton. April 26th, 1902.

S. B., 53 years, 72, Upper Eldon Street, lace-dresser. Chronic valvular disease, embolism. Dr. G. Cole. Jan. 1st, 1902.

*G. H., 68 years, 47, Lenton Road, lace-dresser (retired). Phlebitis, embolism of the heart. Dr. E. W. Paul. March 11th, 1902.

J. W., 36 years, Beech Avenue (of 9, Trinity Square), formerly a lace-dresser. Hemiplegia, heart failure (kidney disease). Dr. H. Bates. Aug. 19th, 1902.

S. M., 83 years, Beech Avenue Workhouse, of Sheridan Street, lace-dresser. Senile decay, exhaustion. Dr. D. E. N. Alexander. Sept. 5th, 1902.

M. M., 31 years, Nottingham Workhouse, of 12, Woburn Street, lace-dresser. Heart disease. Dr. J. Hindshaw. Dec. 28th, 1902.

* Owner of lace-dressing rooms.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1903.

E. S., 44 years, Nottingham Workhouse, of 4, Chapel Street, lace-dresser. Exhaustion from epilepsy. Dr. J. Hindshaw. Jan. 27th, 1903.

M. A. S., 54 years, 26, Albion Street, lace-dresser. Phthisis. Dr. E. R. Appleby. Feb. 10th, 1903.

A. C., 27 years, 25, Finch Street, lace-dresser. Phthisis. Dr. T. D. Poole. July 24th, 1903.

E. F., 13 years, 17, Leopold Street, lace-dresser. Osteo-myelitis of femur. Dr. J. H. Cox. Nov. 1st, 1903.

M. H. M., 20 years, 6, Orchard Square, Poplar Street, lace-dresser. Chlorosis and phthisis, heart failure. Dr. H. W. Horan. July 28th, 1903.

Schedule E.**DEATHS OF LACE-DRESSERS REGISTERED DURING 1904.**

L. T., 82 years, 65, Norton Street, Radford, lace-dresser. Senile decay. Dr. J. B. Roberts. March 21st, 1904.

J. E. K., 20 years, 17, Conway Grove, lace-dresser. Pulmonary tuberculosis, 12 months. Asthenia. Dr. E. P. Watkins. Jan. 7th, 1904.

A. R., 28 years, 38, Millstone Lane, lace-dresser. Puerperal mania, convulsions. Dr. C. W. Milner. March 11th, 1904.

W. W. S., 19 years, 21, Washington Street, lace-dresser. Phthisis pulmonalis. Dr. J. B. Sim. April 27th, 1904.

M. A. S., 64 years, Nottingham Workhouse, of 3, Kelly Court, lace-dresser. Cirrhosis of liver, ascites, exhaustion. Dr. D. M. Johnson. Sept. 18th, 1904.

J. H., 64 years, 32, Musters Street, Bulwell, lace-dresser. Morbus cordis, exhaustion. Dr. P. E. Tresidder. Oct. 31st, 1904.

H. A. J., 24 years, 13, Truswell's Place, Ilkeston Road, lace-dresser. Diarrhoea, child-birth. Dr. J. B. Roberts. Oct. 20th, 1904.

F. C. W., aged 24 years, 5, St. John's Terrace, Denman Street, lace-dresser. Fatty degeneration of heart, disease of lungs. Inquest. Nov. 22nd, 1904.

DEATHS OF LACE-DRESSERS REGISTERED DURING 1905.

J. H. L., 28 years, 21, Red Lion Street, lace-dresser. Pneumonia. Dr. Milner. January 8th, 1905.

B. McL., 21 years, 18, Finkhill Street, lace-dresser. Phthisis. Dr. E. B. Appleby. January 6th, 1905.

H. McL., 55 years, 17, Shelton Street, lace-dresser. Syncope due to fatty degeneration of heart and incompetent mitral valve. Inquest. August 30th, 1905.

E. A. W., Samaritan Hospital, of 412, Alfreton Road, aged 59, lace-dresser. Ovarian cyst (gangrenous), pulmonary embolus. Dr. G. A. Robinson. Nov. 16th, 1905.

H. M. (single), 72 years, 49, Hutchinson Street, lace-dresser. Intestinal obstruction, nine days. Dr. T. Geraty. Dec. 29th, 1905.

J. S., 21 years, 8, Smith's Yard, Thoresby Street, lace-dresser. Phthisis, seven months. Dr. E. D. Marriott. Nov. 8th, 1905.

Schedule E.**DEATHS OF LACE-DRESSERS REGISTERED DURING 1906.**

C. H., 50 years, Nottingham Workhouse, of 56, Leighton Street, lace-dresser. Cerebral hæmorrhage, apoplexy. Dr. C. Dismore. March 1st, 1906.

J. B., 65 years, 2, Thoresby Street, lace-dresser. Pneumonia, syncope. Dr. C. Milner. Jan. 24th, 1906.

W. H. B., 71 years, Nottingham Workhouse, of Freeman Street, lace-dresser. Sapræmia. Dr. H. McManus. May 3rd, 1906.

W. M., 31 years, 23, Conway Street, lace-dresser. Peritonitis. Dr. S. Tresidder. May 20th, 1906.

J. L., 58 years, 29, Duke Street, lace-dresser and army pensioner. Chronic bronchitis, cardiac failure. Dr. C. W. Allen. Sept. 1st, 1906.

T. H. L., 51 years, 52, Leighton Street, lace-dresser. Carcinoma of bladder, cachexia. Dr. T. J. Dabell. July 14th, 1906.

W. W., 51 years, 11, Ebenezer Square, Lowdham Street, lace-dresser. Chronic nephritis, 12 months, exhaustion. Dr. G. Cole. Oct. 14th, 1906.

NOTTINGHAM.

Schedule F.

Inquiry concerning the Health of the Lace-Dressing Operatives.

Atmospheric Temperatures taken on June 1st, 1906, in several of the lace-dressing rooms in Nottingham, selected at random and visited without notice. The highest temperature was 99°, and the lowest 72° F. All were taken about six feet from the floor, in those parts of the rooms most frequented by the work-people (*i.e.*, along the sides of the iron frames upon which the drying fabric is stretched).

Temperature in degrees Fahrenheit, of Lace-Dressing Rooms,
June 1st, 1906.

DOBSON BROS., Queen's Road.

		12.30 p.m.		2.30 p.m.		4.30 p.m.
No. 1 Room ...	...	97°	...	90°	...	90°
No. 2 „ ...	...	99°	...	95°	...	99°
No. 3 „	96°	...	94°	...	98°
No. 4 „	98°	...	98°	...	94°

G. & W. N. HICKING, Queen's Road.

12.30 p.m., 97°	2.30 p.m., 93°	4.30 p.m., 97°
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M. JACOBY & Co., Daybrook

12.30 p.m., 88°	2.30 p.m., 88°	4.30 p.m., 86°
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SPRAY & BURGASS, Colwick Works, Colwick.

		12.30 p.m.		2.30 p.m.		4.30 p.m.
No. 1 Room	97°	...	97°	...	90°
No. 2 „	96°	...	97°	...	98°
No. 3 „	95°	...	97°	...	96°

R. H. SWAIN, Island Street.

12.30 p.m., 98°	2.30 p.m., 98°	4.30 p.m., 98°
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C. E. WILLOUGHBY, Scotholme Works.

		12.30 p.m.		2.30 p.m.		4.30 p.m.
Stenter Room	74°	...	76°	...	72°
Upstairs „ (ordinary)		82°	...	84°	...	84°

It should be remembered that the actual temperature required in lace-dressing rooms in winter, is, to say the least, not any higher than in summer; a low relative humidity being the special desideratum in the atmosphere of the rooms, and this being often obtainable at a moderate actual (internal) temperature with a dry, cold external atmosphere (in winter time).

NOTTINGHAM.

Schedule G.

Inquiry Concerning the Health of Lace-Dressing Operatives.

DRY AND WET BULB READINGS

And corresponding relative humidity in several lace-dressing and dipping-rooms, selected at random and visited without notice.
(Fahrenheit scale).

Highest temp. in L.D. room 106°
Lowest 67°
Driest air 27 % of Saturation.

ADDRESS.	Hour.	Place.	Temperature.		Relative Humidity.
			Dry Bulb.	Wet Bulb.	
June 9th, 1906.					
C. E. Willoughby, Mill-in-the-Hole	3.30 p.m. ..	Dressing-room .	100	80	36 %
June 28th, 1906.					
R. H. Swain, Island Street	12.50 p m. ..	Dressing-room ..	95	74	33 %
Do.	12.30 p.m. ..	Dipping-room ..	66	59	64 %
June 29th, 1906.					
Dobson Bros., Queen's Road	12.30 p.m. ..	Dressing-room ..	82	67	42 %
Do.	12.50 p.m. ..	Dipping-room ..	69	66	83 %
June 29th, 1906.					
G. & W. N. Hicking, Queen's Road	11.40 a.m. ..	Dressing-room ..	94	75	37 %
Do.	12.0 p.m. ..	Dipping-room ..	63	56	63 %
July 2nd, 1906.					
C. E. Willoughby, Mill-in-the-Hole	3.50 p.m. ..	Dressing-room ..	106	78	27 %*
Do.	3.30 p.m. ..	Stenter-room ..	76	63	46 %
July 2nd, 1906.					
Lindley & Lindley, Ltd., Plantation Side ..	4.50 p.m. ..	Dressing-room ..	81	70	53 %
Do.	4.20 p.m. ..	Dipping-room ..	90	75	44 %

*Dr. W. N. Shaw, of the Meteorological Office, informs the writer that he has known drier air than this in L.D. rooms.

NOTTINGHAM.

Inquiry concerning the Health of Lace-Dressing Operatives.

SUMMARY.

Number of women employed as lace-dressers (max.) 1,002, of whom 159 are over 40 years of age.

Number of young persons here included, 408.

Number of men engaged as lace-dressers, porters, labourers, etc. (approx.), 221.*

Number of deaths of persons described on death-returns as lace-dressers during 10 years 1897-1906=69.

Number of deaths of females (in this total), 30.

“ “ “ “ “ from phthisis, 5.

“ “ “ “ “ „ pneumonia, 2.

(There were two deaths of females from bronchitis, but both were over 70).

The highest temperature discovered in lace-dressing rooms was 106° F.

The lowest “ “ “ “ “ was 67° F.

The driest air discovered contained only 27% of saturation.

The moistest “ “ “ “ “ 53% “

All persons in the trade—employers and employees alike—are agreed in stating that work in properly managed and ventilated lace-dressing rooms entails no injury to health. Of the employees interrogated, 11 had worked in lace-dressing rooms over 50 years, 21 over 40 years, 33 over 30 years, and 66 over 20 years.

My own observations and inquiries, and those of my assistants, confirm the opinion expressed by persons in the trade, as also do those of local medical men of position and experience whom I have consulted on the subject. So far as our observations go, they seem to indicate that a relatively dry and pure air of a temperature as high as 100° F. can be borne without injury by average persons of both sexes during the whole working period of their lives.

PHILIP BOOBYER,

Medical Officer of Health for Nottingham.

* At the present time (March, 1907) there is a boom in the lace trade, and some lace-dressing firms are working day and night. As women cannot be employed at night, a considerable number of men are now, for the time being, acting as lace-dressers after 8 p.m.