

TWENTY-FOURTH ANNUAL REPORT

OF THE

BOARD OF HEALTH

OF THE

STATE OF NEW JERSEY

AND REPORT OF THE

BUREAU OF VITAL STATISTICS

1900



TRENTON, N. J.:
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BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

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THE OFFICE OF THE BOARD IS IN THE STATE HOUSE, TRENTON.

Table of Contents.

Twenty-Fourth Annual Report of the Board of Health of the State of New Jersey, 1900.

	PAGE.
Report of Secretary.....	1-80
Births.....	3
Marriages.....	3
Deaths.....	3
Infant Mortality.....	11
Consumption.....	14
Diphtheria.....	17
Scarlet Fever.....	20
Typhoid Fever.....	21
Measles.....	27
Whooping-Cough.....	28
Bright's Disease.....	28
Cancer.....	30
Malarial Fevers.....	34
Small-pox.....	36
Notification of Communicable Diseases.....	37
Placarding of Houses.....	43
Public Water-Supplies.....	44
Laboratory of Hygiene.....	45
Disinfection of School Books.....	47
Contagious Diseases of Animals.....	47
Transportation of the Dead.....	48
Local Boards of Health.....	49
Maritime Quarantine.....	54
Cemeteries.....	57
Public Laundries.....	69
Annual Reports.....	69
Medical Inspection of Schools.....	72
Closing Public Schools.....	76
Sanitary Inspection of School Buildings.....	77
Isolation Hospitals.....	79
Map of New Jersey Showing Deaths by Counties..	80
Summary of Reports of Local Boards of Health.....	81
List of Sanitary Districts.....	200
List of Repositories for Laboratory Mailing Cases.....	45

TABLE OF CONTENTS.

	PAGE.
Epidemic Outbreaks.....	215
Contagious Diseases of Animals.....	243
Report on Pollution of Streams.....	253
Report of Bacteriologist.....	289
Report of Health Officer of Perth Amboy.....	301
New Jersey Sanitary Association.....	305
Circulars and Laws.....	313
Report of Bureau of Vital Statistics.....	347

TRENTON, N. J., October 31st, 1900.

To His Excellency Foster M. Voorhees, Governor of the State of New Jersey:

SIR—I have the honor to transmit herewith the twenty-fourth annual report of the Board of Health of the State of New Jersey, and the report of the Bureau of Vital Statistics for the statistical year ending June 30th, 1900.

Very respectfully,

HENRY MITCHELL,

Secretary.

Secretary's Report.

Births.—During the statistical year ending June 30th, 1900, the number of births reported and recorded in New Jersey was 32,270. The following table shows the returns of births during each year for the past sixteen years :

TABLE 1.—BIRTHS RECORDED IN NEW JERSEY FOR THE SIXTEEN YEARS ENDING JUNE 30TH, 1900.

Year.....	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Number of births recorded...	25,189	27,882	28,016	29,084	30,407	31,770	30,023	32,726

Year.....	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Number of births recorded...	34,639	35,108	33,198	33,006	31,595	34,687	29,409	32,270

Marriages.—The following table shows that the number of marriages was larger than during either of the two preceding years, but much smaller than in 1897 and previous years, when non-residents were permitted to marry without license.

TABLE 2.—NUMBER OF CERTIFICATES OF MARRIAGE RECEIVED AND RECORDED DURING THE ELEVEN YEARS ENDING JUNE 30TH, 1900.

	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Marriage certificates } recorded.....	15,954	15,847	16,572	17,627	16,690	16,537	18,774	18,171	13,664	13,336	14,611

Deaths.—The number of deaths recorded in New Jersey for the year ending June 30th, 1900, was 31,474, and the population of the State by the U. S. census of 1900, is 1,883,669. The death-rate for the year is therefore 16.70 per 1,000 living.

REPORT OF THE BOARD OF HEALTH.

TABLE 3.—SHOWING MUNICIPALITIES IN NEW JERSEY HAVING OVER 5,000 INHABITANTS, AND SHOWING ALSO POPULATION, TOTAL DEATHS, DEATHS UNDER ONE YEAR, DEATHS UNDER FIVE YEARS, AND TOTAL DEATH-RATE PER 5,000 POPULATION, FOR YEAR ENDING JUNE 30TH, 1900.

NAMES OF MUNICIPALITIES.	Population— census 1900.	Total number of deaths for year end- ing June 30th, 1900.	Deaths under one year.	Deaths under five years and over one year.	Death-rate per 1,000 population.
Atlantic County—					
Atlantic City.....	27,838	497	93	45	17.85
Bergen County—					
Englewood.....	6,253	111	14	8	17.75
Hackensack.....	9,443	129	10	8	13.66
Burlington County—					
Bordentown.....	4,110	80	6	4	19.46
Burlington.....	7,392	183	17	13	24.76
Camden County—					
Camden.....	75,935	1,299	191	167	17.11
Gloucester City.....	6,840	136	20	13	19.89
Cumberland County—					
Bridgeton.....	13,913	200	38	12	14.38
Millville.....	10,583	167	16	15	15.78
Essex County—					
East Orange.....	21,506	236	37	19	10.97
Montclair.....	13,962	211	39	28	15.11
Newark.....	246,070	4,824	746	682	19.60
Orange.....	24,141	498	79	75	20.63
Hudson County—					
Bayonne.....	32,722	569	123	85	17.39
Harrison.....	10,596	237	31	30	22.37
Hoboken.....	59,364	1,366	221	179	23.01
Jersey City.....	206,433	4,198	646	554	20.34
Town of Union.....	15,187	215	35	33	14.16
Mercer County—					
Trenton.....	73,307	1,204	181	108	16.42
Middlesex County—					
New Brunswick.....	20,006	425	55	25	21.29
Perth Amboy.....	17,699	256	53	42	14.46
South Amboy.....	6,349	88	16	12	13.86
Monmouth County—					
Long Branch.....	8,872	161	14	12	18.15
Morris County—					
Dover.....	5,938	74	8	8	12.46
Morristown.....	11,267	184	22	15	16.33
Passaic County—					
Passaic.....	27,777	583	132	97	20.99
Paterson.....	105,171	1,967	316	248	18.70
Salem County—					
Salem City.....	5,811	117	18	6	20.13
Union County—					
Elizabeth.....	52,130	922	182	105	17.69
Plainfield.....	15,369	246	27	22	16.01
Rahway.....	7,935	123	12	4	15.50
Warren County—					
Phillipsburg.....	10,052	122	19	8	12.14
State.....	1,883,669	31,474	4,727	3,474	16.70

CHART SHOWING DEATHS IN NEW JERSEY, FROM ALL CAUSES, BY AGES, FOR THE YEAR ENDING JUNE 30TH, 1900.

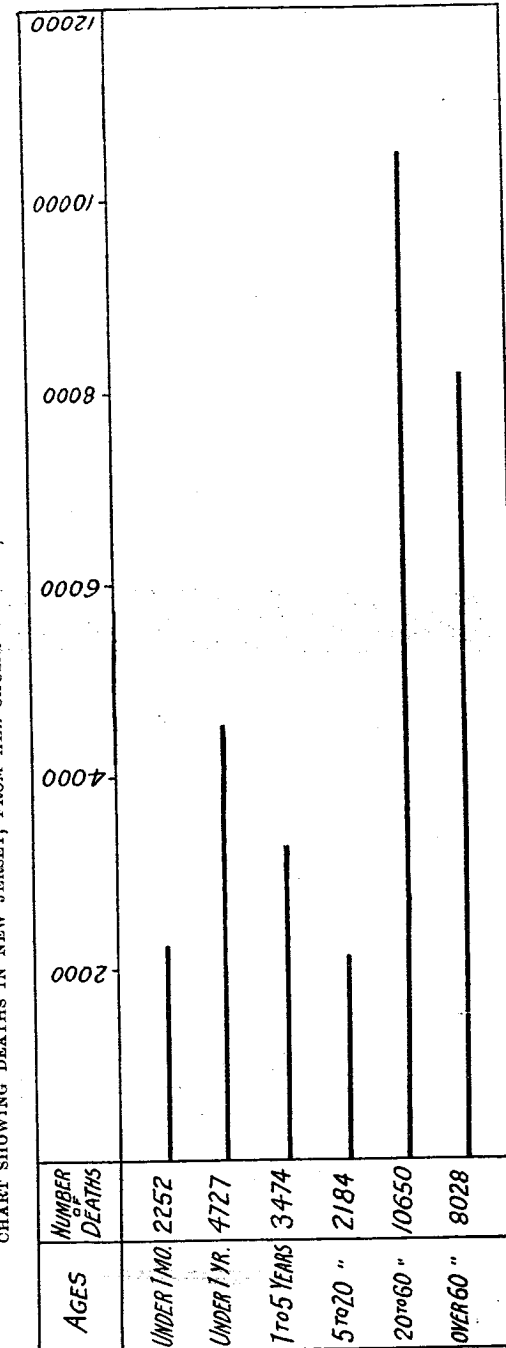


TABLE 4.—DEATHS FROM CERTAIN DISEASES FOR TWENTY-TWO YEARS, 1879-1900,
ARRANGED IN ORDER OF GREATEST FREQUENCY.

NAME OF DISEASE.	Number of Deaths.
Acute Lung	73,806
Consumption	73,309
Diarrheal diseases of children.....	67,442
Adult brain and spinal diseases.....	47,017
Brain and nervous diseases of children.....	41,015
Diseases of heart and circulation.....	40,330
Diphtheria and croup.....	29,989
Digestive and intestinal diseases.....	29,945
Renal and cystic diseases.....	25,243
Violent deaths.....	23,444
Cancer.....	13,991
Typhoid fever.....	12,223
Scarlet fever.....	10,115
Puerperal.....	5,794
Whooping cough.....	5,168
Remittent fever.....	4,567
Measles.....	3,585
Erysipelas.....	2,024
Acute rheumatism.....	1,727
Small-pox.....	848

CHART SHOWING COMPARATIVE MORTALITY FROM TEN SELECTED PREVENTABLE DISEASES FOR THE YEAR ENDING JUNE 30TH, 1900.

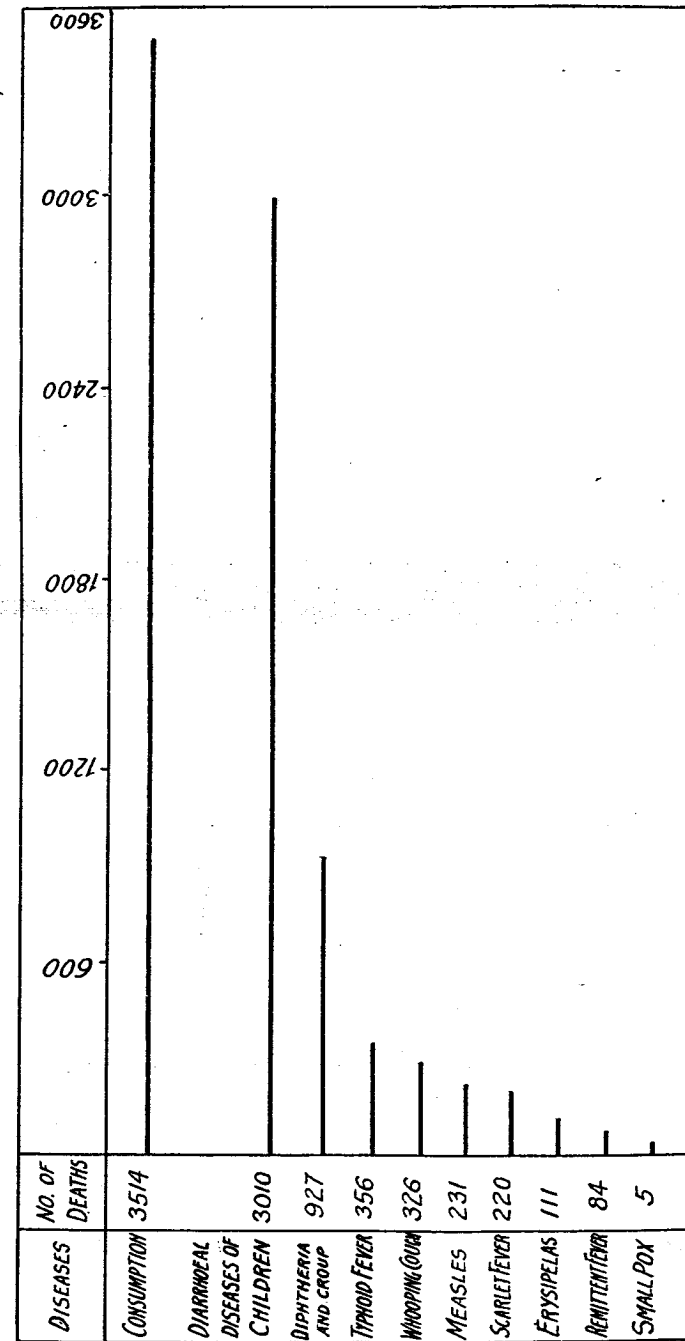


TABLE 5.—DEATHS FROM ALL OF THE CLASSIFIED CAUSES FOR THE YEAR ENDING JUNE 30TH, 1900, COMPARED WITH DEATHS FOR THE PREVIOUS YEAR, AND COMPARED WITH THE YEARLY AVERAGE FOR TWENTY-TWO YEARS, 1879-1900.

CLASSIFIED DISEASES.	Average deaths for twenty-two years, 1879-1900.	Deaths for year ending June 30th, 1899.	Deaths for year ending June 30th, 1900.
Remittent fever.....	207	96	84
Enteric or typhoid fever.....	562	486	356
Small-pox.....	37	.....	5
Scarlet fever.....	459	187	220
Measles.....	162	96	231
Whooping cough.....	234	282	306
Diphtheria and croup.....	1,363	777	927
Erysipelas.....	91	88	111
Diarrhoeal diseases of children.....	3,110	3,568	3,010
Consumption.....	3,180	3,584	3,514
Acute lung diseases.....	3,345	4,322	4,795
Brain and nervous diseases of children.....	1,869	1,954	1,767
Diseases of heart and circulation.....	1,832	2,731	2,852
Renal and cystic diseases.....	1,183	1,925	2,073
Adult brain and spinal diseases.....	2,146	2,842	2,946
Adult digestive and intestinal diseases.....	1,361	1,556	1,700
Cancer.....	635	946	921
Acute rheumatism.....	79	73	73
Puerperal.....	263	267	288

TABLE 6.—DEATHS FROM THE CLASSIFIED CAUSES FOR THE YEAR ENDING JUNE 30TH, 1899, WITH COMPARATIVE INCREASE AND DIMINUTION IN THE NUMBER OF DEATHS FOR THE YEAR ENDING JUNE 30TH, 1900.

CLASSIFIED DISEASES.	Deaths for year ending June 30th, 1899.	Increase and diminution for year ending June 30th, 1900.
Remittent fever.....	96	— 6
Typhoid fever.....	486	— 130
Small-pox.....	.....	+ 5
Scarlet fever.....	187	+ 33
Measles.....	96	+ 135
Whooping cough.....	282	+ 24
Diphtheria.....	777	+ 150
Erysipelas.....	88	+ 23
Diarrhoeal diseases of children.....	3,568	— 558
Consumption.....	3,584	— 70
Acute lung diseases.....	4,322	+ 473
Brain and nervous diseases of children.....	1,954	— 187
Diseases of heart and circulation.....	2,731	+ 121
Renal and cystic diseases.....	1,925	+ 148
Adult brain and spinal diseases.....	2,842	+ 104
Digestive and intestinal diseases.....	1,556	+ 144
Cancer.....	946	— 25
Acute rheumatism.....	73	.....
Puerperal diseases.....	267	+ 21

TABLE 7.—DEATHS IN NEW JERSEY, PER 10,000 POPULATION, FROM THE CLASSIFIED CAUSES FOR TWENTY-TWO YEARS, 1879-1900.

CAUSES OF DEATH.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Remittent fever.....	2.62	2.59	3.71	3.10	2.89	1.84	1.62	1.85	1.61	1.91	1.44
Enteric or typhoid.....	3.17	3.29	4.94	7.43	4.66	5.12	5.02	4.15	3.88	4.50	5.14
Small-pox.....		.13	2.18	3.78	.44	.56	.01	.03	.08	.08	.02
Scarlet fever.....	6.14	5.06	4.30	10.09	7.05	4.33	5.05	1.69	1.89	4.17	3.78
Measles.....	.75	.76	.60	.73	1.08	1.51	1.05	.67	2.20	.53	.33
Whooping cough.....	2.71	1.14	1.02	2.12	1.56	.92	.41	2.09	1.34	1.17	1.97
Diphtheria and croup.....	10.86	7.71	9.72	12.37	9.47	8.21	11.70	9.94	11.37	14.30	11.18
Erysipelas.....	1.34	.96	1.16	.79	.74	.64	.57	.60	.71	.93	.30
Diarrhœal diseases of children.....	18.11	19.15	19.43	15.06	21.96	19.72	22.25	20.32	20.16	25.50	22.99
Consumption.....	27.31	23.99	25.76	29.21	25.81	25.75	25.97	24.45	27.20	24.41	24.50
Acute lung diseases.....	21.16	17.57	17.30	23.18	22.79	17.41	20.07	17.55	19.04	21.74	20.33
Brain and nervous diseases of children, Diseases of heart and circulation.....	16.18	14.43	14.15	16.80	13.92	12.80	14.01	13.53	14.04	14.33	13.66
Renal and cystic diseases.....	9.52	8.63	10.45	9.92	10.21	10.60	11.75	11.49	11.39	12.29	12.63
Adult brain and spinal diseases.....	5.46	4.56	5.24	6.43	6.27	7.14	7.34	7.16	6.50	7.41	7.50
Digestive and intestinal diseases.....	12.37	11.91	12.94	12.78	12.91	13.33	14.32	14.74	14.64	15.23	14.14
Cancer.....	10.2	8.83	9.80	6.22	7.63	8.62	8.91	9.25	9.24	10.73	10.30
Acute rheumatism.....	3.70	3.75	3.83	3.37	3.81	3.87	3.89	4.15	4.21	4.45	4.11
Puerperal.....	.74	.56	.76	.43	.27	.49	.28	.51	.98	.10	.33
Violent deaths.....	1.90	2.15	2.61	2.05	1.63	1.77	2.09	1.96	1.95	1.97	1.80
	*	*	*	6.66	7.50	*	6.59	7.60	7.82	9.59	7.65

CAUSES OF DEATH.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Remittent fever.....	1.85	1.21	1.30	.96	1.02	.85	1.69	1.74	.45	.52	.40
Enteric or typhoid.....	5.42	4.69	4.15	3.28	3.07	3.39	3.35	2.70	2.43	2.62	1.87
Small-pox.....			.25	.27	.06	.13	.01				
Scarlet fever.....	1.45	1.94	6.16	2.89	1.72	1.57	1.06	1.15	1.11	1.01	1.16
Measles.....	1.20	1.69	1.30	.47	1.62	.56	2.26	.88	1.07	.52	1.21
Whooping cough.....	2.57	2.02	1.07	1.54	2.07	1.62	1.60	1.81	.85	1.52	1.61
Diphtheria and croup.....	10.92	11.74	11.74	10.39	8.19	8.75	10.22	7.83	5.24	4.19	4.87
Erysipelas.....	.56	.57	.62	.48	.61	.44	.40	.38	.32	.47	.58
Diarrhœal diseases of children.....	24.47	21.57	26.74	25.87	24.66	22.39	22.15	19.55	16.34	19.23	15.83
Consumption.....	24.46	23.87	23.64	22.28	21.77	21.17	19.53	18.34	17.81	19.31	18.48
Acute lung diseases.....	26.39	27.73	34.31	25.82	26.50	27.49	24.12	22.89	18.86	23.29	25.21
Brain and nervous diseases of children, Diseases of heart and circulation.....	14.10	13.72	14.33	13.46	12.11	11.50	11.74	10.25	9.66	10.53	9.29
Renal and cystic diseases.....	13.49	13.25	14.44	14.16	12.74	13.55	14.03	14.52	12.62	14.72	14.99
Adult brain and spinal diseases.....	7.97	8.11	9.55	9.36	9.16	9.10	9.21	9.92	9.35	10.37	10.90
Digestive and intestinal diseases.....	16.01	15.77	16.25	16.96	15.28	15.69	15.18	14.63	14.91	15.31	15.49
Cancer.....	10.55	10.63	10.74	11.39	9.92	9.49	9.43	8.91	8.19	8.88	9.47
Acute rheumatism.....	4.41	4.34	4.55	4.69	4.63	4.60	4.71	4.83	4.70	5.10	4.84
Puerperal.....	.78	.51	.66	.66	.57	.49	.34	.39	.30	.39	.38
Violent deaths.....	1.73	2.00	1.86	1.33	1.85	1.75	1.64	1.57	1.45	1.44	1.51
	8.57	9.23	9.43	9.99	9.50	8.78	8.29	9.55	8.01	9.29	9.00

* Violent deaths were not separately recorded.

Infant Mortality.—The death-rate among children has continued low, as the accompanying table shows.

The reduction of mortality of those dying under five years of age is believed to be very largely due to the partial sterilization of milk which has, within the past six years, been commonly practiced among the more intelligent classes throughout the State. The addition to milk of preservatives has been charged with causing an increase in the number of deaths under one year, and both clinical and laboratory observations appear to sustain this opinion.

TABLE 8.—DEATHS AMONG CHILDREN UNDER FIVE YEARS OF AGE IN NEW JERSEY PER 100,000 POPULATION FOR TWENTY-TWO YEARS, 1879-1900.

YEARS.	Population.	Number of deaths under five years.	Deaths per 100,000 population among children under five years.
1879.....	1,020,584	7,919	774.9
*1880.....	1,130,892	7,407	654.9
1881.....	1,160,275	7,617	656.4
1882.....	1,189,658	10,512	883.6
1883.....	1,209,048	8,710	724.0
1884.....	1,248,224	7,971	638.5
*1885.....	1,278,033	9,120	713.5
1886.....	1,310,431	8,537	651.4
1887.....	1,342,829	9,245	688.4
1888.....	1,375,227	10,508	764.0
1889.....	1,407,642	10,354	735.5
*1890.....	1,441,017	10,748	745.8
1891.....	1,478,784	10,685	722.5
1892.....	1,511,653	12,369	818.2
1893.....	1,538,799	11,307	735.4
1894.....	1,578,373	9,264	586.9
*1895.....	1,679,942	9,074	542.3
1896.....	1,718,543	8,504	561.1
1897.....	1,764,144	9,643	482.1
1898.....	1,810,008	7,233	402.3
1899.....	1,855,872	10,357	563.0
*1900.....	1,883,669	10,453	555.1

* Census year.

CHART SHOWING NUMBER OF DEATHS IN NEW JERSEY FROM DIARRHOEAL DISEASES OF CHILDREN DURING TWENTY-TWO YEARS, 1879-1900.

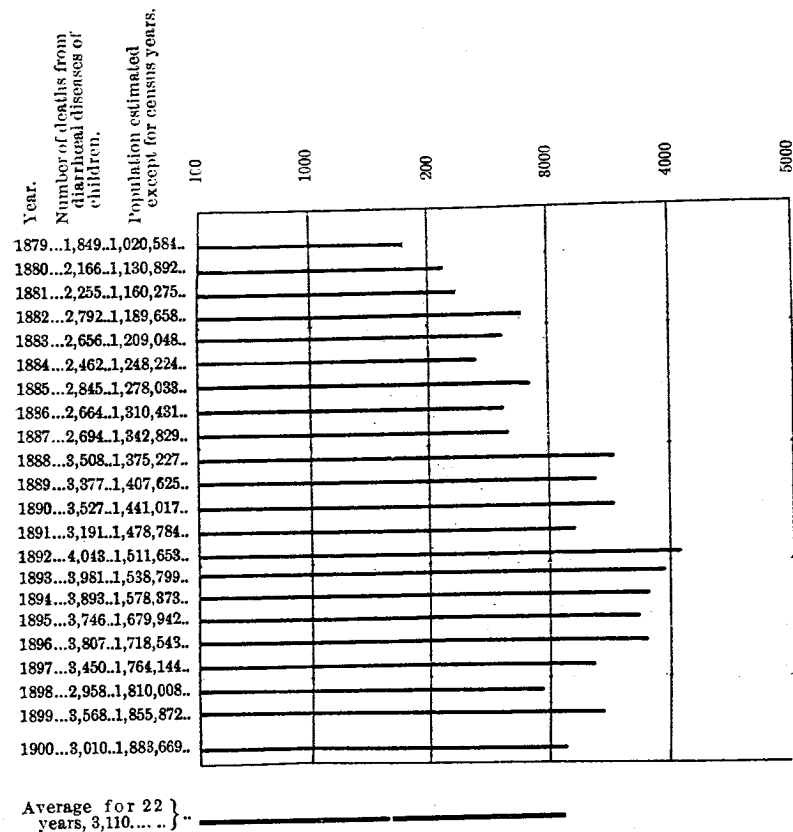


TABLE 9.—SHOWING DEATHS AND DEATH-RATES FROM DIARRHOEAL DISEASES OF CHILDREN IN COUNTIES AND IN CITIES OF NEW JERSEY OF OVER 5,000 POPULATION, FOR THE YEAR ENDING JUNE 30TH, 1900.

NAMES OF COUNTIES AND CITIES.	Population, U. S. census of 1900.	Deaths from diarrhoeal diseases of children exclusive of cities of over 5,000.	Rate per 10,000 population exclusive of cities of over 5,000.	Deaths from diarrhoeal diseases of children in the cities of over 5,000.	Rate per 10,000 population in cities of over 5,000.
Atlantic County	46,402	86	18.53		
Atlantic City	27,838			57	20.48
Bergen County	78,441	99	12.62		
Englewood	6,253			8	12.79
Hackensack	9,443			9	9.53
Burlington County	58,241	74	12.71		
Bordentown	4,110			7	17.03
Burlington	7,392			14	18.94
Camden County	107,643	166	15.42		
Camden	75,935			117	15.41
Gloucester City	6,840			14	20.47
Cape May County	13,201	12	9.09		
Cumberland County	51,193	54	10.55		
Bridgeton	13,913			16	11.50
Millville	10,583			16	15.12
Essex County	359,053	604	16.82		
East Orange	21,506			17	7.90
Montclair	13,962			20	14.32
Newark	246,070			447	18.17
Orange	24,141			54	22.37
Gloucester County	31,905	46	14.42		
Hudson County	386,048	755	19.56		
Bayonne	32,722			50	15.28
Harrison	10,596			21	19.82
Hoboken	59,364			126	21.22
Jersey City	206,433			409	19.81
Town of Union	15,187			24	15.80
Hunterdon County	34,507	20	5.80		
Mercer County	95,365	108	11.32		
Trenton	73,307			90	12.28
Middlesex County	79,762	126	15.80		
New Brunswick	20,006			38	18.99
Perth Amboy	17,699			43	24.29
South Amboy	6,349			11	17.33
Monmouth County	82,057	161	19.62		
Long Branch	8,872			13	14.65
Morris County	65,156	78	11.97		
Dover	5,938			5	8.42
Morristown	11,267			18	15.98
Ocean County	19,747	13	6.58		
Passaic County	155,202	339	21.84		
Passaic	27,777			91	32.76
Paterson	105,171			208	19.78
Salem County	25,530	34	13.32		
Salem City	5,811			10	17.21
Somerset County	32,948	29	8.80		
Sussex County	24,134	11	4.56		
Union County	99,353	170	17.11		
Elizabeth	52,130			117	22.44
Plainfield	15,369			15	9.76
Rahway	7,935			7	8.82
Warren County	37,781	25	6.62		
Phillipsburg	10,052			10	9.95

Consumption.—The death-rate from pulmonary tuberculosis has been lower during the past five years than at any previous period since the records of this bureau were begun (1879). The following table and chart show the diminished mortality :

CHART SHOWING DIMINISHED MORTALITY FROM CONSUMPTION IN NEW JERSEY.

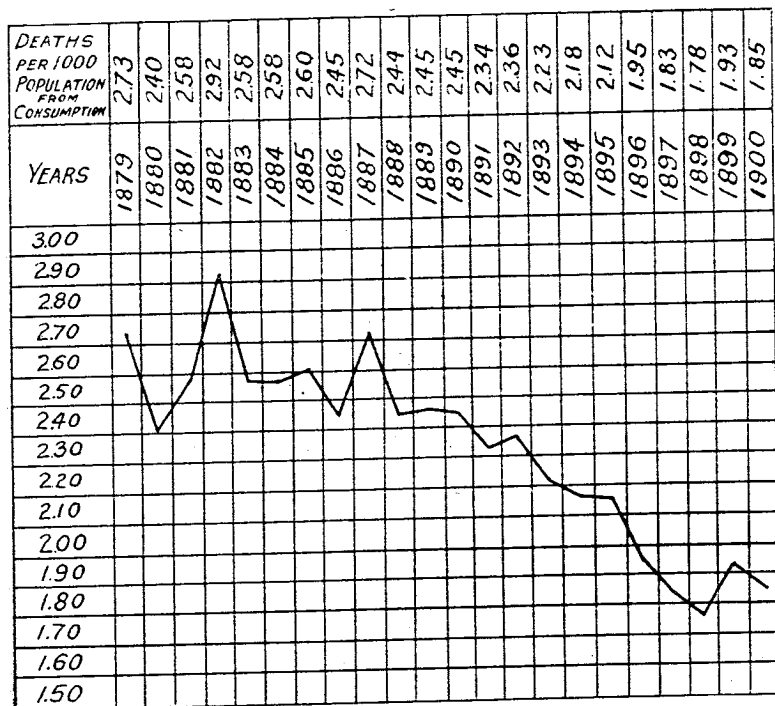


TABLE 10—SHOWING DEATHS AND DEATH-RATES FROM CONSUMPTION IN NEW JERSEY, BY COUNTIES AND CITIES PER 10,000 POPULATION, FOR YEAR ENDING JUNE 30TH, 1900.

NAMES OF COUNTIES AND CITIES.	Estimated population.	Number of deaths	
		from consumption	from consumption per 10,000 population.
Atlantic County.....	46,402	66	14.22
Atlantic City.....	27,838	43	15.45
Bergen County.....	78,411	106	13.51
Englewood.....	6,253	14	22.39
Hackensack.....	9,443	18	19.06
Burlington County.....	58,241	91	15.62
Bordentown.....	4,110	8	19.46
Burlington.....	7,392	23	31.11
Camden County.....	107,643	178	16.54
Camden.....	75,935	127	16.72
Gloucester City.....	6,840	13	19.01
Cape May County.....	13,201	23	17.42
Cumberland County.....	51,193	85	16.60
Bridgeton.....	13,913	27	19.41
Millville.....	10,583	25	23.62
Essex County.....	359,053	836	23.28
East Orange.....	21,506	30	13.95
Montclair.....	13,962	27	19.34
Newark.....	246,070	622	25.28
Orange.....	24,141	81	33.55
Gloucester County.....	31,905	38	11.91
Hudson County.....	386,048	942	24.40
Bayonne.....	32,722	45	13.75
Harrison.....	10,596	31	29.26
Hoboken.....	59,364	156	26.28
Jersey City.....	206,433	529	25.63
Town of Union.....	15,187	25	16.46
Hunterdon County.....	34,507	44	12.75
Mercer County.....	95,365	185	19.40
Trenton.....	73,307	139	18.96
Middlesex County.....	79,762	114	14.29
New Brunswick.....	20,006	51	25.49
Perth Amboy.....	17,699	13	7.35
South Amboy.....	6,349	8	12.60
Monmouth County.....	82,057	120	11.62
Long Branch.....	8,872	17	19.16
Morris County.....	65,156	91	13.97
Dover.....	5,938	10	16.84
Morristown.....	11,267	24	21.30
Ocean County.....	19,747	19	9.62
Passaic County.....	155,202	274	17.65
Passaic.....	27,777	50	18.00
Paterson.....	105,171	200	19.02
Salem County.....	25,530	41	16.06
Salem City.....	5,811	16	27.53
Somerset County.....	32,948	39	11.84
Sussex County.....	24,134	29	12.02
Union County.....	99,353	164	16.51
Elizabeth.....	52,130	98	18.78
Plainfield.....	15,369	26	16.92
Rahway.....	7,935	13	16.33
Warren County.....	37,781	29	7.67
Phillipsburg.....	10,052	7	6.96

TABLE 11.—SHOWING THE PROPORTION OF DEATHS FROM CONSUMPTION TO TOTAL DEATHS DURING THE TWENTY-TWO YEARS, 1879-1900.

YEARS.	Total deaths in New Jersey.	Deaths from consumption.	Proportion of deaths from consumption to total deaths.
1879.....	20,444	2,788	13.64
1880.....	18,967	2,714	14.30
1881.....	20,810	2,989	14.36
1882.....	25,910	3,475	13.41
1883.....	23,310	3,121	13.39
1884.....	21,716	3,215	14.80
1885.....	23,807	3,320	13.94
1886.....	22,734	3,205	14.10
1887.....	24,331	3,653	15.01
1888.....	27,173	3,358	12.44
1889.....	26,543	3,449	12.99
1890.....	28,530	3,669	12.96
1891.....	28,840	3,456	11.98
1892.....	32,685	3,575	10.94
1893.....	30,596	3,429	11.21
1894.....	30,004	3,433	11.44
1895.....	30,634	3,542	11.56
1896.....	30,767	3,358	10.92
1897.....	29,822	3,237	10.85
1898.....	27,337	3,225	11.79
1899.....	30,999	3,584	11.56
1900.....	31,474	3,514	11.17

TABLE 12.—SHOWING DEATHS PER 10,000 POPULATION FROM CONSUMPTION IN NEW JERSEY FOR TWENTY-TWO YEARS, 1879-1900.

YEARS.	Population.*	Number of deaths from consumption.	Deaths from consumption per 10,000 population.
1879.....	1,020,584	2,788	27.32
1880.....	1,130,892	2,714	24.00
1881.....	1,160,275	2,989	25.76
1882.....	1,189,658	3,475	29.21
1883.....	1,209,048	3,121	25.81
1884.....	1,248,224	3,215	25.76
1885.....	1,278,033	3,320	25.19
1886.....	1,310,431	3,205	24.46
1887.....	1,342,829	3,653	27.20
1888.....	1,375,227	3,358	24.42
1889.....	1,407,625	3,449	24.50
1890.....	1,441,017	3,669	25.46
1891.....	1,478,784	3,456	23.37
1892.....	1,511,653	3,575	23.65
1893.....	1,538,799	3,429	22.28
1894.....	1,578,373	3,433	21.75
1895.....	1,672,942	3,542	21.17
1896.....	1,718,543	3,358	19.54
1897.....	1,764,144	3,237	18.35
1898.....	1,810,008	3,225	17.82
1899.....	1,855,872	3,584	19.31
1900.....	1,883,669	3,514	18.64

* Population estimated except for census years.

Diphtheria.—The extremely low death-rate from diphtheria which prevailed in New Jersey during the statistical year ending June 30th, 1899, was somewhat increased during the past year, but the following table shows the continuous low mortality from this disease since 1897:

TABLE 13.—DEATHS IN NEW JERSEY FROM DIPHTHERIA FOR TWELVE YEARS, 1889-1900.

Years	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
Deaths from diphtheria.....	1,574	1,575	1,737	1,776	1,677	1,294	1,461	1,758	1,882	950	777	927

TABLE 14.—DEATHS FROM DIPHTHERIA IN THE CITIES OF OVER 5,000 POPULATION IN NEW JERSEY FOR TWELVE YEARS, 1889-1900.

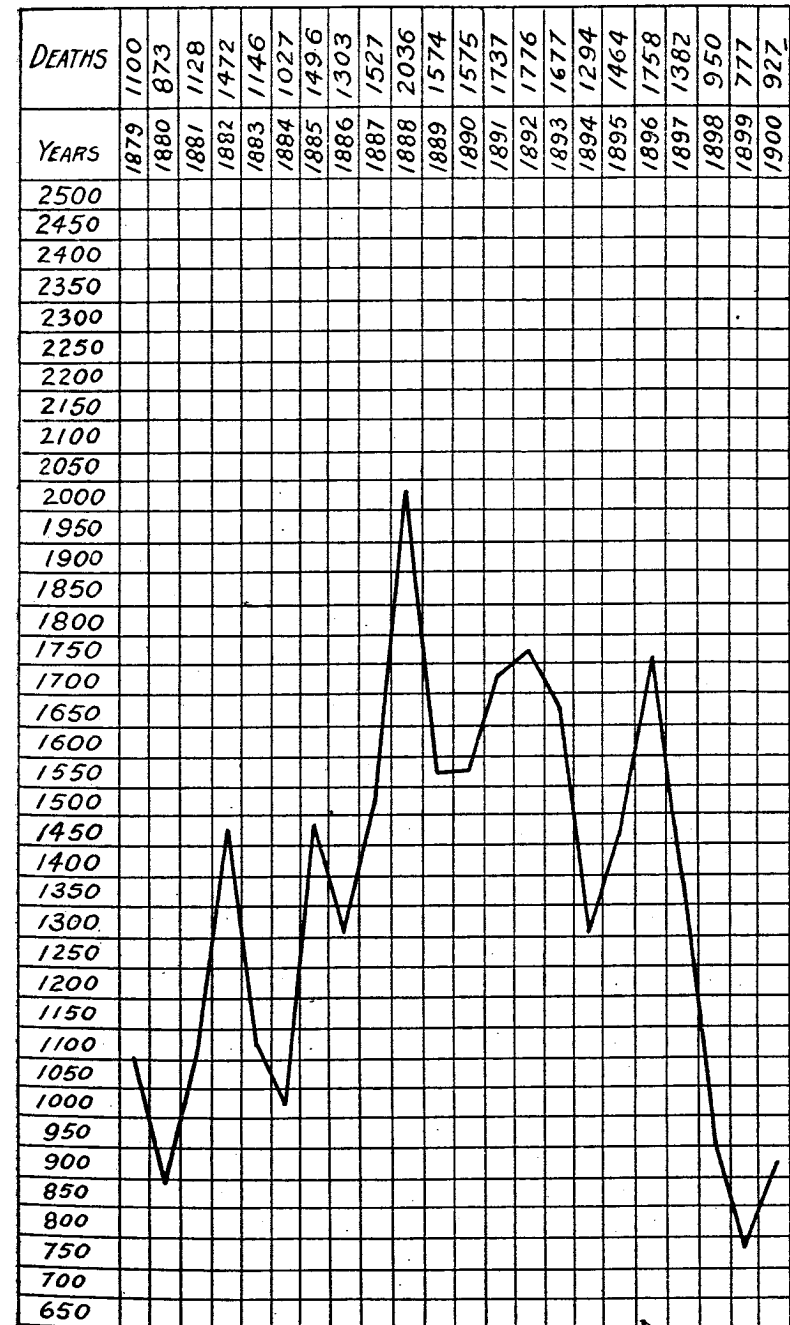
NAME OF PLACE.	Population— Census 1900.	Years												Totals.
		1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	
Atlantic City.....	27,838	8	4	15	8	8	8	7	11	8	5	7	15	104
Bayonne.....	32,722	59	10	14	16	13	13	15	52	14	13	8	15	242
Bordentown.....	4,110		7	2	30	7	1	5	1		1		1	55
Bridgeton.....	13,913	2	6	40	10	2	2	1	8	12	2	4	1	90
Burlington.....	7,392	4	3	10	19	11	16	9	24	9	24	5	5	108
Camden City.....	75,935	32	76	192	150	89	90	84	60	95	48	66	104	1,086
Dover*.....	5,988								5	5	4	1	1	11
Elizabeth.....	52,130	40	40	51	18	47	44	22	49	32	25	27	21	416
Englewood*.....	6,253								8	1	1			4
Gloucester City.....	6,840	11	13	5	6	4	4	7	8	6	1	6	3	69
Hackensack.....	9,443					1	2	2	1	2	5	4	2	19
Harrison.....	10,596	28	8	10	8	6	7	8	15	4	6	4	11	110
Hoboken.....	59,364	162	126	93	70	77	56	95	103	53	45	46	33	959
Jersey City.....	206,433	223	341	295	261	221	272	187	299	229	156	102	119	2,705
Long Branch.....	8,872	4	9	6	2	4	4	2	9	7	2			64
Millville.....	10,583	9	17	27	3	2	7	6	6	3	14	1	14	109
Montclair.....	13,962								9	2	8	4	8	31
Morristown.....	11,267	30	5	5	5	8		9	6	1	4	1		74
Newark.....	246,070	343	314	196	219	275	173	256	330	177	117	126	142	2,668
New Brunswick.....	20,066	50	23	5	25	7	11	17	23	9	10	6	2	192
Orange.....	24,141	22	44	41	39	23	11	15	47	18	29	15	11	315
Passaic.....	27,777	25	20	32	23	14	13	14	29	33	9	10	8	236
Paterson.....	105,171	78	68	161	142	96	151	85	125	177	68	86	101	1,338
Perth Amboy.....	17,699	8	6	29	12	22	20	11	4	18	16	13	9	168
Phillipsburg.....	10,052	12	7	2	8	11	2	10	6	19	5	2	1	85
Plainfield.....	15,369	3	12	4	5	33	14	14	4	1	7	2	2	101
Rahway.....	7,935	1	6	4	2	9	1	3	5	1	2	3	3	40
Salem.....	5,811	13	1		1	6	2	2	15	11	18	8	3	80
South Amboy*.....	6,349								34	5	3	5	5	47
Town of Union.....	15,187	27	44	53	12	17	13	25	10	7	8	7	8	231
Trenton.....	73,307	20	43	67	135	91	86	158	90	33	16	12	19	720
Total.....	1,138,465	1,214	1,248	1,359	1,233	1,104	978	1,070	1,344	1,017	657	574	631	12,474

* Record began 1897.

† Record began 1896.

NOTE.—East Orange was incorporated as a city in 1900, and therefore is not included in the above table.

CHART SHOWING DEATHS FROM DIPHTHERIA IN NEW JERSEY FOR TWENTY-TWO YEARS, 1879-1900.

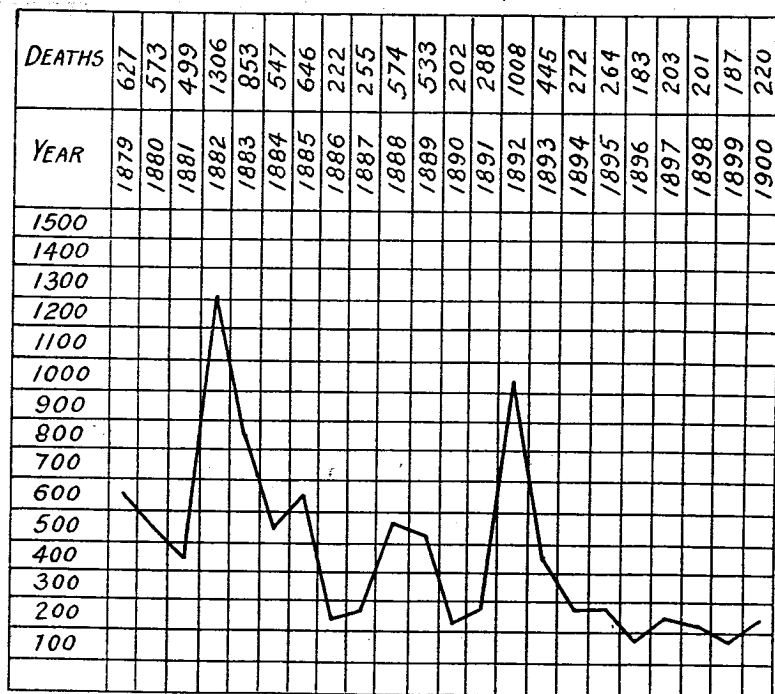


Scarlet Fever.—During the past seven years the mortality from scarlet fever in New Jersey has been remarkably low, and during the year ending June 30th, 1900, the number of deaths recorded from this disease was 220, this being 106 less than the deaths caused by whooping cough, and 11 less than the deaths caused by measles.

TABLE 15.—DEATHS IN NEW JERSEY FROM SIX SELECTED DISEASES FOR YEAR ENDING JUNE 30TH, 1900, ARRANGED IN ORDER OF GREATEST FREQUENCY.

NAMES OF DISEASES.	Number of Deaths.
Diarrhoeal diseases of children	3,010
Diphtheria.....	927
Typhoid fever.....	356
Whooping cough.....	306
Measles	231
Scarlet fever.....	220

CHART SHOWING DEATHS FROM SCARLET FEVER IN NEW JERSEY FOR TWENTY-TWO YEARS, 1879-1900.



Typhoid Fever.—Typhoid fever caused 356 deaths, and the cases were distributed over 113 sanitary districts. In the previous year the deaths from this affection numbered 486, and the districts from which they were reported numbered 114. The average number of deaths in New Jersey from typhoid, for twenty-two years, has been 564, and for the year ending June 30th, 1900, the mortality from this cause is 208 less than said average.

CHART SHOWING DEATHS IN NEW JERSEY FROM TYPHOID FEVER FOR TWENTY-TWO YEARS, 1879-1900.

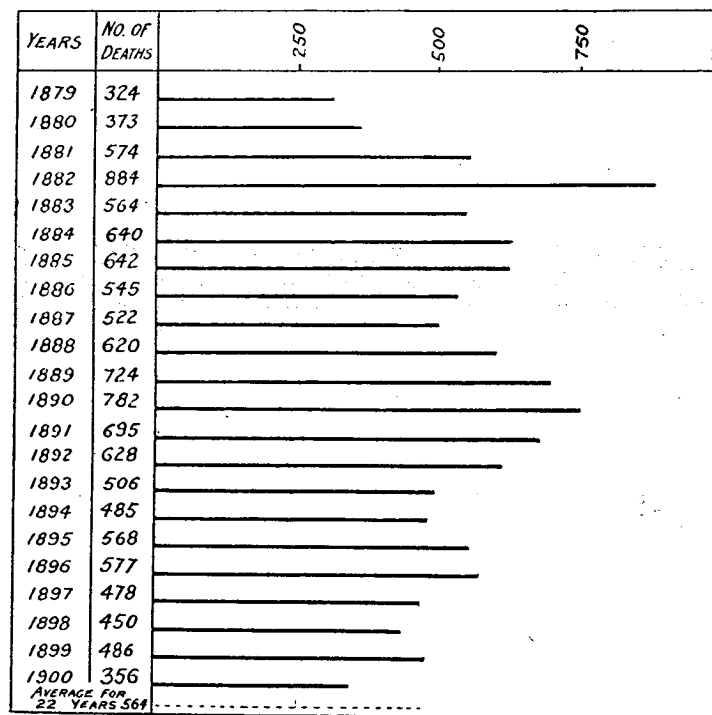


TABLE 16.—LIST OF SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING JUNE 30TH, 1900, WITH NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY, NATURE OF DRAINAGE AND POPULATION.

NAME OF DISTRICT.	Number of deaths from typhoid fever.	Water-supply.	Drainage.	Population.
Acquackanonk township.....	1	Domestic.....	No sewers...	5,351
Alloway township.....	2	".....	".....	1,528
Atlantic City.....	6	Public.....	Sewers.....	27,838
Bass River township.....	1	Domestic.....	No sewers...	800
Bayonne (city).....	4	Public.....	Sewers.....	32,722
Beach Haven (borough).....	2	".....	".....	239
Bedminster township.....	2	Domestic.....	No sewers...	1,925
Beverly township.....	1	Public.....	Sewers.....	1,804
Blairstown township.....	1	Domestic.....	No sewers...	1,576
Bloomfield township.....	1	Public.....	Sewers.....	9,668
Bordentown (city).....	2	".....	".....	4,110
Bridgeton (city).....	2	".....	".....	13,913
Bridgewater township.....	4	Domestic.....	No sewers...	1,601
Burlington (city).....	6	Public.....	Sewers.....	7,392
Camden (city).....	16	".....	".....	75,935
Cape May City.....	1	".....	".....	2,257
Centre township.....	1	Domestic.....	No sewers...	2,192
Clinton township (E).....	1	".....	".....	1,325
Commercial township.....	1	".....	".....	2,982
Delran township.....	1	".....	".....	890
Deptford township.....	1	".....	".....	2,114
Dover township.....	1	".....	".....	2,618
East Orange (city).....	1	Public.....	Sewers.....	21,506
East Newark (borough).....	2	Domestic.....	No sewers...	3,021
Eatontown township.....	5	Public.....	Sewers.....	2,500
Egg Harbor township.....	2	Domestic.....	No sewers...	1,863
Elizabeth (city).....	5	Public.....	Sewers.....	52,130
Elmer (borough).....	1	".....	No sewers...	1,140
Englewood (city).....	3	".....	Sewers.....	6,253
Evesham township.....	1	Domestic.....	No sewers...	1,429
Ewing township.....	2	".....	".....	1,333
Fairfield township.....	2	".....	".....	1,911
Florham Park (borough).....	2	".....	".....	752
Franklin township (B).....	2	".....	".....	2,139
Franklin township (H).....	1	".....	".....	1,258
Franklin township (W).....	1	".....	".....	1,280
Frankford township.....	1	".....	".....	932
Gloucester (city).....	1	Public.....	Sewers.....	6,840
Gloucester township.....	1	Domestic.....	No sewers...	4,018
Hackensack (city).....	2	Public.....	Sewers.....	9,443
Haddonfield (borough).....	1	".....	".....	2,776
Hamilton township (A).....	1	Domestic.....	No sewers...	.....
Hillsborough township.....	1	".....	".....	.....
Hoboken (city).....	19	Public.....	Sewers.....	59,364
Hohokus township.....	1	Domestic.....	No sewers...	1,682

TABLE 16.—LIST OF SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING JUNE 30TH, 1900, WITH NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY, NATURE OF DRAINAGE AND POPULATION—Continued.

NAME OF DISTRICT.	Number of deaths from typhoid fever.	Water-supply.	Drainage.	Population.
Jersey City.....	44	Public.....	Sewers.....	206,433
Kearny (town).....	2	".....	".....	10,896
Lafayette township.....	1	Domestic.....	No sewers...	717
Lakewood township.....	1	Public.....	Sewers.....	3,094
Landis township.....	1	".....	No sewers...	1,240
Little Ferry (borough).....	1	".....	Sewers.....	4,721
Long Branch (improvement com- mission).....	3	".....	".....	8,872
Madison township.....	1	Domestic.....	No sewers...	1,671
Manchester township (P).....	1	".....	".....	3,989
Matawan (borough).....	2	".....	".....	1,511
Medford township.....	1	".....	".....	1,969
Merchantville (borough).....	1	Public.....	Sewers.....	1,608
Middletown township.....	2	Domestic.....	No sewers...	5,479
Millburn township.....	1	Public.....	".....	2,837
Millville (city).....	4	".....	Sewers.....	10,583
Montclair (city).....	1	".....	".....	18,962
Morristown (city).....	2	".....	No sewers...	11,267
Neptune City (borough).....	1	Domestic.....	".....	1,009
Neptune township.....	1	".....	".....	7,943
Newark (city).....	25	Public.....	Sewers.....	246,070
New Brunswick (city).....	1	".....	".....	20,006
Newton township.....	1	".....	No sewers...	4,376
North Bergen township.....	1	".....	".....	9,213
North Plainfield (borough).....	2	".....	Sewers.....	5,009
Ocean City (borough).....	1	".....	".....	1,307
Orange (city).....	5	".....	".....	24,141
Palisade township.....	1	Domestic.....	No sewers...	860
Park Ridge (borough).....	1	Public.....	".....	870
Passaic (city).....	10	".....	Sewers.....	27,777
Paterson (city).....	29	".....	".....	105,171
Pensauken township.....	3	Domestic.....	No sewers...	3,145
Perth Amboy (city).....	2	Public.....	Sewers.....	17,699
Phillipsburg (city).....	2	".....	".....	10,052
Plainfield (city).....	2	".....	".....	15,369
Point Pleasant (borough).....	1	".....	No sewers...	746
Quinton township.....	1	Domestic.....	".....	.....
Rahway (city).....	4	Public.....	Sewers.....	7,935
Raritan (borough).....	1	".....	".....	3,244
Raritan township (Mid.).....	1	Domestic.....	No sewers...	2,801
Raritan township (Mon.).....	1	".....	".....	1,524
Readington township.....	1	".....	".....	2,670
Red Bank (borough).....	1	Public.....	".....	5,428
Rockaway township.....	1	Domestic.....	".....	4,528
Salem (city).....	2	Public.....	Sewers.....	5,811

TABLE 16.—LIST OF SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING JUNE 30TH, 1900, WITH NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY, NATURE OF DRAINAGE AND POPULATION—Continued.

NAME OF DISTRICT.	Number of deaths from typhoid fever.	Water-supply.	Drainage.	Population.
Sandyston township	1	Domestic	No sewers	939
Seabright (borough)	1	Public	Sewers	1,198
South Amboy (borough)	1	"	"	6,349
South Orange (borough)	1	"	No sewers	4,608
South River (borough)	1	"	"	2,792
Springfield township (B)	1	Domestic	"	1,382
Stafford township	1	"	"	1,009
Summit (city)	1	Public	"	5,302
Town of Union	1	"	Sewers	15,187
Trenton (city)	26	"	"	73,307
Union township (B)	1	"	No sewers	1,590
Union township (H)	1	Domestic	"	918
Union township (O)	1	"	"	955
Union township (U)	1	"	"	4,315
Upper Freehold township	3	"	"	2,112
Upper Pittsgrove township	1	"	"	1,725
Vineland (borough)	2	Public	Sewers	4,370
Wall township	3	Domestic	No sewers	3,212
Washington township (G)	2	"	"	1,252
Washington township (M)	1	"	"	2,220
Waterford township	1	"	"	2,161
West Deptford township	2	"	"	1,951
Woodbury (city)	1	Public	"	4,087
Woodbridge township	3	Domestic	"	7,631

TABLE 17.—DEATHS FROM TYPHOID FEVER IN CITIES OF OVER 5,000 POPULATION IN NEW JERSEY, FOR TWELVE YEARS, 1889-1900.

NAME OF PLACE.	Population—Census 1900.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.
		Atlantic City	27,838	6	6	4	4	9	15	3	3	4	7	5	6
Bayonne	32,722	4	7	7	13	7	7	11	3	7	6	12	2
Bordentown	4,110	3	2	2	4	3	3	3	3	2	2	3	2
Bridgeton	13,913	4	3	3	3	2	1	2	1	1	1	4	6
Burlington	7,392	4	6	7	3	1	4	3	3	3	23	49	16
Camden City	75,935	90	82	33	38	33	42	64	32	1	1	1	1
Dover*	5,938												
Elizabeth	52,130	9	19	5	11	3	4	14	8	1	7	5	3
Englewood*	6,253												
Gloucester City	6,840	1	2	5	1	5	2	5	7	2	2	2	1
Hackensack	9,443												
Harrison	10,596	4	6	2	4	2	4	3	3	3	5	2	2
Hoboken	59,364	24	19	14	15	10	17	11	21	9	7	13	19
Jersey City	206,433	132	159	167	123	116	96	174	158	38	79	39	44
Long Branch	8,872	1	4	1	3					1	1	4	3
Millville	10,533	4	3	10	4	4	2	3		2	3	3	1
Montclair†	13,952												
Morristown	11,267	2	2	1	3	1	2	5	4		7	1	2
Newark	216,070	131	194	134	153	63	43	43	61	44	31	85	25
New Brunswick	20,006	5	10	6	9	8	4	2	8	3	6	5	1
Orange	24,141	7	14	9	6	6	11	5	6	3	4	1	5
Passaic	27,777												
Paterson	105,171	26	4	17	15	35	7	24	43	49	33	59	29
Perth Amboy	17,699	2	1	9	1	1	1	1	12	7	3	4	2
Phillipsburg	10,052	5	1	4	3	2			5	1	1		
Plainfield	15,369	1	1	3	3	3	3	3	3	3		3	2
Rahway	7,935	5	1	2	4		2	4	7	1		2	4
Salem	5,311	10	1	3	1	3	1	1			3	1	1
Town of Union	15,137	5	3	5	2	2	2	2		2	3	1	1
Trenton	73,307	20	11	15	15	19	16	11	16	25	22	33	26
Total	1,132,116	512	589	487	457	349	328	410	422	279	294	355	231

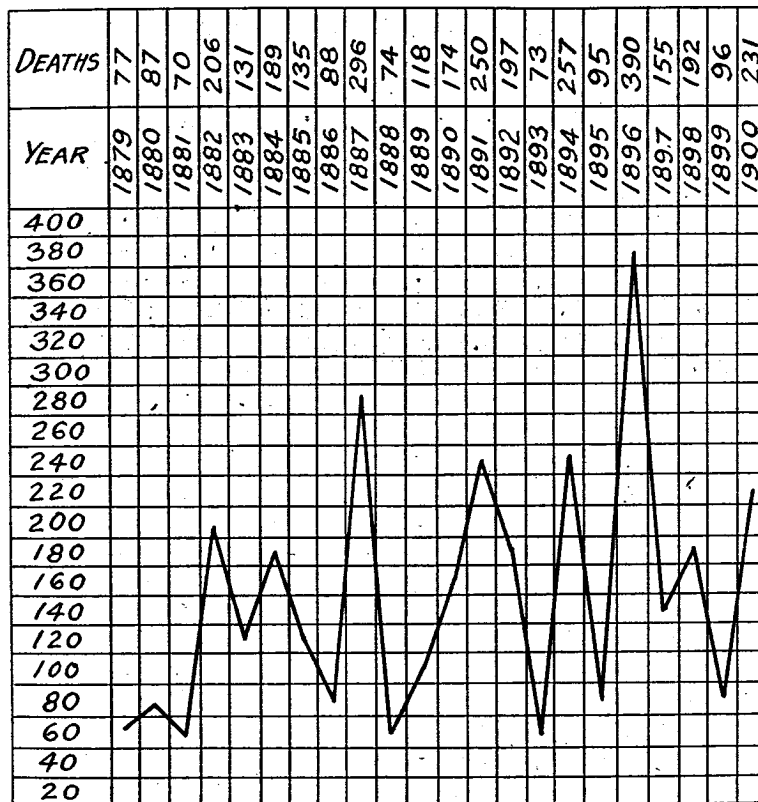
* Record begins in 1897.
† Record begins in 1893.

TABLE 18.—DEATHS FROM TYPHOID FEVER PER 10,000 INHABITANTS IN CITIES OF OVER 10,000 POPULATION, FOR YEAR ENDING JUNE 30TH, 1900.

NAME OF CITY.	Population by census of 1900.	Number of deaths from typhoid fever.	Rate per 10,000 population.
Atlantic City.....	27,838	6	2.19
Bayonne.....	32,722	4	1.22
Bridgeton.....	15,137	2	1.32
Camden.....	75,935	16	2.11
East Orange.....	22,572	1	.48
Elizabeth.....	52,130	5	.96
Harrison.....	11,009	2	1.82
Hoboken.....	59,364	19	3.20
Jersey City.....	206,433	44	2.13
Millville.....	10,926	4	3.66
Montclair.....	14,848	1	.67
Morristown.....	12,420	2	1.60
Newark.....	246,070	25	1.01
New Brunswick.....	21,215	1	.47
Orange.....	26,737	5	1.87
Passaic.....	27,777	10	3.60
Paterson.....	105,171	29	2.76
Perth Amboy.....	16,545	2	1.21
Plainfield.....	15,989	2	1.25
Town of Union.....	15,826	1	.63
Trenton.....	73,307	26	3.55

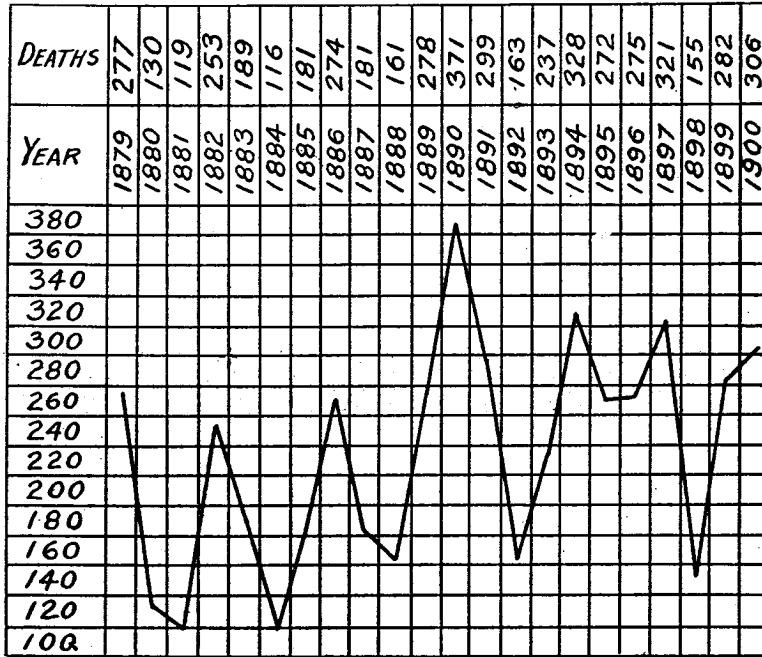
Measles.—Measles continues to reappear in the various sanitary districts of the State with much regularity, almost every locality experiencing an outbreak of this disease every fourth or fifth year. The following chart shows the number of deaths from measles in the State for each year for twenty-two years:

CHART SHOWING DEATHS IN NEW JERSEY FROM MEASLES FOR TWENTY-TWO YEARS, 1879-1900.



Whooping Cough.—Three hundred and six deaths were certified as being due to whooping cough. The accompanying chart shows that outbreaks of this disease occur about every fourth year :

CHART SHOWING DEATHS FROM WHOOPING COUGH IN NEW JERSEY FOR TWENTY-TWO YEARS, 1879-1880.



Bright's Disease.—In addition to the deaths certified as being due to Bright's disease, all deaths reported as having been caused by albuminuria, uremia, nephritis and renal dropsy are also included in this group.

TABLE 19.—SHOWING NUMBER OF DEATHS FROM BRIGHT'S DISEASE IN NEW JERSEY, IN COUNTIES EXCLUSIVE OF CITIES, AND IN CITIES OF OVER 5,000 INHABITANTS, FOR THE YEAR ENDING JUNE 30TH, 1900.

NAMES OF COUNTIES AND CITIES.	Population.	Deaths from Bright's disease.
Atlantic County.....	46,402	17
Atlantic City.....	27,838	28
Bergen County.....	78,441	27
Englewood.....	6,253	5
Hackensack.....	9,443	11
Burlington County.....	58,241	25
Burlington.....	7,392	10
Camden County.....	107,643	13
Camden.....	75,935	99
Gloucester City.....	6,840	3
Cape May County.....	13,201	8
Cumberland County.....	51,193	13
Bridgeton.....	13,913	16
Millville.....	10,583	6
Essex County.....	359,053	48
East Orange.....	21,506	14
Montclair.....	13,962	10
Newark.....	246,070	280
Orange.....	24,141	35
Gloucester County.....	31,905	20
Hudson County.....	386,048	69
Bayonne.....	32,722	23
Harrison.....	10,596	5
Hoboken.....	59,364	55
Jersey City.....	206,433	188
Town of Union.....	15,187	11
Hunterdon County.....	34,507	17
Mercer County.....	95,365	15
Trenton.....	73,307	73
Middlesex County.....	79,762	20
New Brunswick.....	20,006	23
Perth Amboy.....	17,699	18
South Amboy.....	6,349	.....
Monmouth County.....	82,057	48
Long Branch.....	8,872	11
Morris County.....	65,156	34
Dover.....	5,938	3
Morristown.....	11,267	14
Ocean County.....	19,747	17
Passaic County.....	155,202	17
Passaic City.....	27,777	10
Paterson.....	105,171	94
Salem County.....	25,530	7
Salem City.....	5,811	7
Somerset County.....	32,948	31
Sussex County.....	24,134	10
Union County.....	99,353	10
Elizabeth.....	52,130	50
Plainfield.....	15,369	11
Rahway.....	7,935	14
Warren County.....	37,781	13
Phillipsburg.....	10,052	6

Total in counties exclusive of cities of over 5,000 inhabitants.....	479
Total in cities of over 5,000 inhabitants.....	1,136
Total for State.....	1,617
Rate per 10,000 population.....	8.58

Cancer.—During the twenty-two years, 1879-1900, cancer caused 13,991 deaths in New Jersey, an average of 635 each year. The number of deaths from this disease for the year ending June 30th, 1900, was 921, this number being 25 less than during the previous year, but being 286 in excess of the average for the whole period during which records have been made by this bureau.

CHART SHOWING DEATHS FROM CANCER FOR TWENTY-TWO YEARS, 1879-1900.

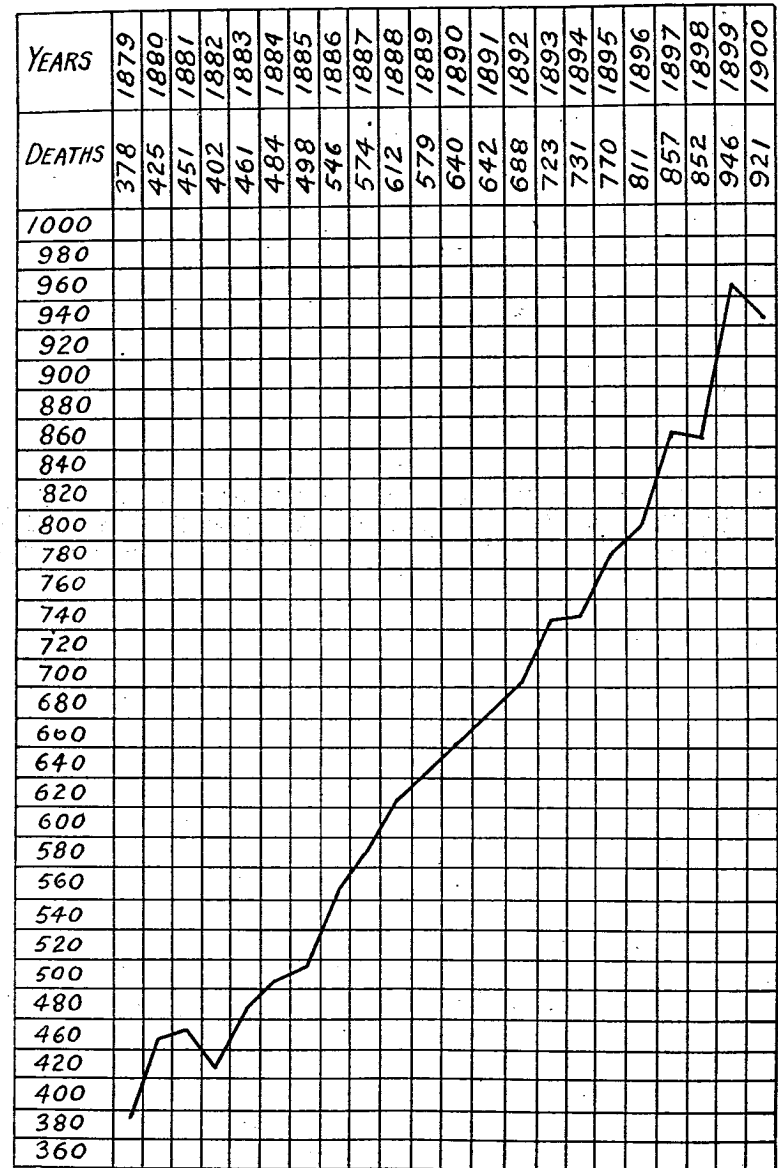


TABLE 20.—SHOWING DEATHS FROM CANCER PER 100,000 POPULATION FOR TWENTY-TWO YEARS ENDING JUNE 30TH, 1900.

YEARS.	Deaths per 100,000 population.
1879.....	37.0
1880.....	37.5
1881.....	38.8
1882.....	33.7
1883.....	38.1
1884.....	38.7
1885.....	38.9
1886.....	41.5
1887.....	42.1
1888.....	44.5
1889.....	41.1
1890.....	44.1
1891.....	43.4
1892.....	45.5
1893.....	46.9
1894.....	46.3
1895.....	46.0
1896.....	47.1
1897.....	48.3
1898.....	47.0
1899.....	51.0
1900.....	48.4

TABLE 21.—DEATHS FROM CANCER, IN NEW JERSEY, FOR THE YEAR ENDING JUNE 30TH, 1900, PER 10,000 POPULATION BY COUNTIES, AND BY CITIES OF OVER 5,000 INHABITANTS.

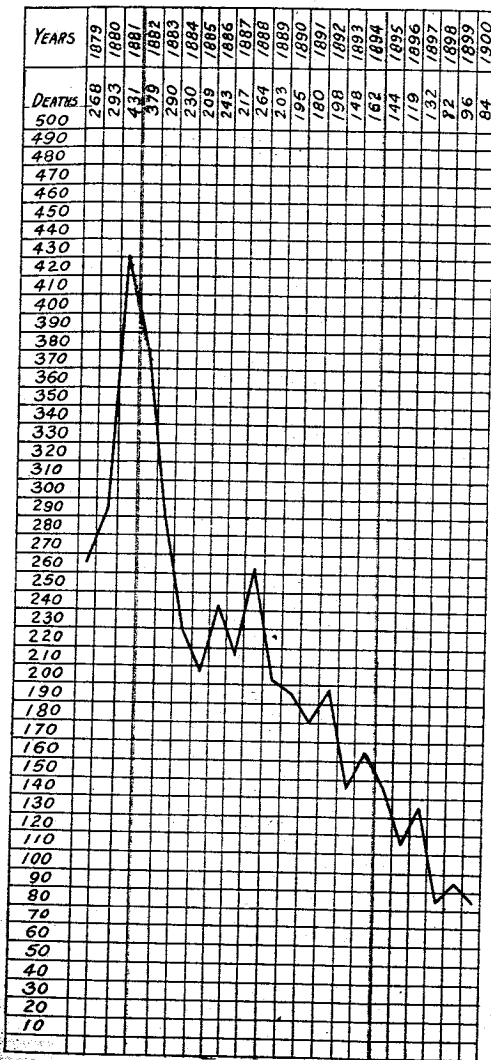
NAME OF PLACE.	Deaths from cancer.	Deaths per 10,000 population.
Atlantic County.....	21	4.53
Atlantic City.....	12	4.31
Bergen County.....	32	4.08
Egglewood.....	3	4.80
Hackensack.....	7	7.41
Burlington County.....	38	6.52
Bordentown.....	4	9.73
Burlington.....	6	8.12
Camden County.....	52	4.83
Camden.....	35	4.61
Gloucester City.....	4	5.85
Cape May County.....	4	3.03
Cumberland County.....	26	5.08
Bridgeton.....	9	6.47
Millville.....	5	4.72
Essex County.....	203	5.65
East Orange.....	6	2.79
Montclair.....	5	3.57
Newark.....	159	6.46
Orange.....	18	7.46
Gloucester County.....	18	5.64
Hudson County.....	181	4.69
Bayonne.....	12	3.66
Harrison.....	4	3.73
Hoboken.....	30	5.05
Jersey City.....	85	4.12
Town of Union.....	10	6.58
Hunterdon County.....	16	4.64
Mercer County.....	50	5.24
Trenton.....	41	5.59
Middlesex County.....	21	2.63
New Brunswick.....	6	2.30
Perth Amboy.....	2	1.13
South Amboy.....	2	3.15
Monmouth County.....	38	4.63
Long Branch.....	7	7.89
Morris County.....	29	4.45
Dover.....	3	5.05
Morristown.....	8	7.10
Ocean County.....	10	5.06
Passaic County.....	71	4.57
Passaic.....	12	4.32
Paterson.....	51	4.85
Salem County.....	9	3.53
Salem City.....	2	3.44
Somerset County.....	17	5.16
Sussex County.....	7	2.86
Union County.....	57	5.74
Elizabeth.....	25	4.80
Plainfield.....	14	9.11
Rahway.....	6	7.56
Warren County.....	21	5.56
Phillipsburg.....	3	2.98

Malarial Fevers.—Eighty-four deaths were certified as being caused by these affections. The following table and chart show the progressive improvement in the mortality due to these diseases.

TABLE 22.--DEATHS FROM MALARIAL FEVERS IN NEW JERSEY FOR TWENTY-TWO YEARS, 1879-1900.

Years.....	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Deaths from malarial fevers.....	268	293	431	379	290	230	209	243	217	264	203	195
Years.....	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.		
Deaths from malarial fevers.....	183	198	148	162	144	119	132	83	96	84		

CHART SHOWING DIMINUTION IN DEATHS FROM MALARIAL FEVERS IN NEW JERSEY DURING TWENTY-TWO YEARS, 1879-1900.



Small-pox.—Ninety-nine cases of small-pox occurred in New Jersey during the year ending June 30th, 1900. The type of the disease was exceedingly mild, only two deaths resulting. A detailed statement relating to the cases reported appears further on in this report.

TABLE 23.—SHOWING SANITARY DISTRICTS IN NEW JERSEY IN WHICH SMALL-POX OCCURRED DURING THE YEAR ENDING JUNE 30TH, 1900, AND ALSO SHOWING DEATHS FROM THE DISEASE.

NAME OF SANITARY DISTRICT.	Cases of small-pox.	Deaths from small-pox.
Bayonne.....	1	
Dover.....	3	
Hackettstown.....	1	
Jersey City.....	2	
Madison township (Middlesex county).....	31	
Morristown.....	23	1
Newark.....	18	1
North Bergen township.....	3	1
Paterson.....	3	
Piscataway township.....	1	
Rahway.....	3	
Rockaway township.....	1	1
Rockaway borough.....	5	
Stafford township.....	1	
Trenton.....	1	
Woodbridge township.....	5	1

TABLE 24.—UNVACCINATED CHILDREN OF SCHOOL AGE IN NEW JERSEY, BY COUNTIES, FOR THE YEARS 1896-1900.

COUNTY.	1896.		1897.		1898.		1899.		1900.	
	Number enrolled.	Unvaccinated.	Number enrolled.	Unvaccinated.	Number enrolled.	Unvaccinated.	Number enrolled.	Unvaccinated.	Number enrolled.	Unvaccinated.
Atlantic.....	7,855	2,663	8,870	2,887	9,282	2,859	9,500	3,156	10,133	3,548
Bergen.....	15,985	2,383	16,951	2,671	18,028	3,123	18,695	4,057	19,693	4,487
Burlington.....	14,450	6,425	14,457	5,935	13,864	5,315	13,966	6,378	13,780	6,348
Camden.....	24,493	6,616	24,890	6,145	25,016	6,947	24,951	8,119	25,940	10,064
Cape May.....	3,157	1,696	3,232	1,906	3,148	1,755	3,171	1,849	3,246	2,061
Cumberland.....	12,394	7,937	12,736	8,347	12,620	8,598	12,375	8,888	12,732	9,265
Essex.....	78,601	4,402	82,408	6,682	85,413	5,918	86,703	5,824	88,941	6,118
Gloucester.....	7,901	3,685	7,978	3,997	7,841	3,794	7,927	4,055	7,789	3,992
Hudson.....	102,716	9,463	109,805	9,615	116,904	9,767	105,883	10,417	.....	.....
Hunterdon.....	8,067	3,312	8,056	3,262	8,069	3,758	7,975	4,094	7,855	4,214
Mercer.....	20,949	4,439	21,018	4,733	21,366	5,617	21,481	5,828	22,674	6,788
Middlesex.....	16,815	4,239	17,649	5,016	17,937	5,872	18,182	6,370	18,839	7,129
Monmouth.....	19,693	5,234	19,933	7,001	19,824	7,309	19,894	8,470	19,983	8,110
Morris.....	14,550	6,937	14,988	7,174	15,208	7,820	15,119	7,688	15,163	4,830
Ocean.....	4,933	3,252	5,045	3,518	5,033	3,422	5,163	3,637	5,067	3,888
Passaic.....	36,253	5,512	37,739	6,737	40,480	7,961	40,821	7,754	40,887	8,339
Salem.....	6,567	3,040	6,533	2,764	6,522	3,242	6,413	3,048	6,171	3,123
Somerset.....	7,283	1,171	7,566	984	7,607	1,816	7,660	1,632	7,729	1,835
Sussex.....	5,792	2,770	5,831	3,907	5,742	4,033	15,714	4,303	5,796	4,335
Union.....	20,929	2,619	21,623	3,010	22,120	3,065	22,641	2,698	22,889	3,754
Warren.....	9,681	5,637	9,509	6,113	9,523	6,888	9,331	6,138	9,361	5,740
Totals.....	438,969	94,481	456,862	102,292	471,517	106,879	463,565	114,433	.....	.....
Percentage of unvaccinated children.....		21.52		22.63		22.67		24.68		

Notification of the Dangerous Communicable Diseases.—By comparison with tables published in preceding annual reports it will be seen that during the past year both physicians and local health officers have complied more fully with the requirements of section 1 of chapter 260 of the laws of 1895 than heretofore, and it seems probable that this voluntary co-operation has been due to a more general recognition of the protection to the public health which is afforded by prompt official action for the isolation of infected persons and the cleansing of infected premises, and every physician knows that this can only be accomplished when early information of the existence of communicable diseases is transmitted to the proper officer as the law provides.

TABLE 25.—COMMUNICABLE DISEASES REPORTED FOR EACH QUARTER DURING THE YEAR ENDING JUNE 30TH, 1900.

Table with 18 columns: NAME OF SANITARY DISTRICT, DIPHtheria (1-4), SCARLET FEVER (1-4), TYPHOID FEVER (1-4), SMALL-POX (1-4). Rows include various districts like Absecon town, Millstone township, etc.

TABLE 25.—COMMUNICABLE DISEASES REPORTED FOR EACH QUARTER DURING THE YEAR ENDING JUNE 30TH, 1900—Continued.

Table with 18 columns: NAME OF SANITARY DISTRICT, DIPHtheria (1-4), SCARLET FEVER (1-4), TYPHOID FEVER (1-4), SMALL-POX (1-4). Rows include districts like Millstone borough, Paterson city, etc., with a summary row at the bottom.

REPORT OF THE BOARD OF HEALTH.

The following circular-letter is sent to local health officers when it is found that reports are not regularly received by the State Board of Health :

OFFICE OF THE BOARD OF HEALTH, OF THE STATE OF NEW JERSEY, TRENTON,

To the Local Board of Health of

The records of this office show that no reports of communicable diseases have been received from your board during the year ending, yet we find that deaths from said diseases have occurred in your sanitary district as follows: Typhoid fever,

The act approved March 22d, 1895, provides that every physician shall report to the local board of health, in writing, the name, age and precise location of every person suffering from any dangerous communicable disease, and it is made the duty of local boards to enforce the law. Local boards are not compelled by law to furnish blanks to physicians, but physicians would be much accommodated if blanks were supplied for their use, to be paid for from the annual appropriation made to the local board.

Section 2 of the above act referred to requires that the facts contained in every report of a communicable disease which is filed with the clerk, secretary, or other designated officer of any local board of health, shall be entered by said local officer in a book kept exclusively for that purpose, and that said facts shall also be transmitted to the office of the State Board of Health on cards which are provided by the State.

The cards issued for the use of local boards in sending reports of cases of communicable diseases are in form as follows :

Report of Preventable Diseases for Week Ending Saturday.....190

[Name of Place].....

TO THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY : Following is a report in accordance with the provisions of Chapter 260, Laws of 1895, showing the number of cases of communicable diseases which occurred in this Sanitary District during the period above named :

Table with columns: DISEASES., New Cases., Existing Cases Previously Reported., Deaths from Preventable Diseases., PRECAUTIONS TAKEN. Rows include Diphtheria, Membranous Croup, Scarlet Fever, Typhoid Fever, Small-pox, etc.

NOTE.—When no communicable diseases occur, no report will be expected from local boards to the State Board of Health.

Total deaths from all causes..... Signature of clerk or other designated officer..... P. O. Address.....

On the back of this card the following is printed :

These cards are for the use of local boards of health in making the weekly reports to the State Board.

Blanks for the use of physicians are not supplied by the State. All such blanks, and also any books needed for recording the reports of communicable diseases, should be furnished by local boards.

The great value of early notification of cases of communicable diseases is recognized by physicians and health officers in all sanitary districts in which the enforcement of the law has become established, and these progressive communities now demand that every other township and municipality in the State shall obtain and furnish information relating to cases of preventable diseases which occur within their boundaries, and said communities also demand that the isolation of patients suffering from such diseases in other districts shall be thorough and effectual, and that the isolation of such patients shall continue until they are no longer a source of danger to other persons, and that the cleansing of infected persons and premises shall be conducted upon approved principles and in accordance with prevailing methods, and the State Board of Health is depended upon to defend

these communities against neglect and inefficiency in restricting the spread of these diseases.

The following blank forms for the use of physicians for reporting communicable diseases are reproduced here for the purpose of suggesting to local boards a convenient method for obtaining reports and for simplifying the work of the local health officer :

Board of Health of.....

Blank to be Filled by the Attending Physician.

....., 190.....

STUB OF REPORT OF COMMUNICABLE DISEASE.

Name
 Age.....
 Sex.....
 Color.....
 Residence.....
 Disease.....
 Date of attack.....
 Date of report.....
 Remarks.....

The following is an extract from section 1 of chapter 260, laws of 1895:

1. That every physician shall, within twelve hours after his first professional attendance upon any person who is suffering from cholera, yellow fever, typhus fever, leprosy, plague, trichinosis, small-pox, varioloid, enteric (or typhoid) fever, diphtheria, membranous croup, scarlet fever, or any other contagious, infectious or communicable disease which hereafter may be publicly declared by the state board of health to be preventable and specially dangerous to the public health, report such sickness to the clerk of the local board of health having jurisdiction over the territory within which such sickness may be, or if such local board of health shall have designated some other officer thereof to receive such reports, then to such officer, which report shall be in writing, signed by such physician, and shall set forth the name, age and precise location of the person suffering from such disease. * * *

1. Full name of patient.....
 2. Age..... 3. Sex..... 4. Color.....
 5. Place of residence (give street and number)
 6. Name of disease.....
 7. Date of attack.....
 8. Remarks
-, M. D.

These blanks are provided and paid for by the local board of health and are furnished to all physicians practicing in the vicinity. They are bound into books of fifty each, so that the stub may be kept by the physician for convenient reference.

Blank books for the use of the clerk, secretary or other designated officer of the local board are conveniently made up of sheets ten inches long and twenty inches wide. For the purpose of quickly tracing a few of the more prevalent diseases, colored inks are used ; diphtheria is recorded in blue, and scarlet fever in red. The following form of ruling has been found to be suitable :

Blank for Use of Local Board of Health.

Record of Communicable Diseases Occurring in During Year Ending

Number.	Date of Attack.		Name of Patient.	Sex.		Color.	Age.	Name of Disease.	Place of Residence.	Person Reporting.	Result.		Date Reported.	Remarks.
	Month.	Day.									Recovered.	Died.		

(If blanks of this description are used, they should be provided by the local board of health. The State Board of Health is not authorized by law to furnish blanks for this purpose.)

In cases where the local board neglects or fails to enforce the law requiring physicians to report all cases of the dangerous communicable diseases, and where the local board refuses or fails to conform to the requirement of the act which provides that a record shall be kept of all such reports received from physicians, and also that a transcript of all reported cases of such diseases shall be regularly forwarded to the office of the State Board of Health, Trenton, the duty of bringing suit for the collection of the penalty will fall upon the State Board of Health ; and upon receipt of satisfactory evidence, showing violation of the law on the part of any person whose duty it is to report these cases, the State Board will at once commence proceedings.

Placarding Houses.—The practice among the health boards of the State in regard to placarding houses varies greatly, and an inquiry into the methods pursued and the results obtained, made by an officer of this board, shows that in dealing with notified cases of the communicable diseases local boards may be placed in four classes : 1. Those which receive, record and transmit the reports made by physicians, and do nothing more. 2. Those which perform the above-mentioned duties and also post placards, but do no more. 3. Those which perform the duties of class 1 and class 2, and also take measures to prevent attendance of infected children at day and Sunday schools, and

apply disinfectants at termination of the illness. 4. Those which (a) promptly and effectually isolate the patient in his own dwelling-place or, when satisfactory domestic quarantine is unattainable, remove the patient to hospital; (b) disinfect and at once liberate all persons who have been exposed to infection, but keep suspects under daily observation during the incubation period of the disease; (c) receive, record and transmit reports made by physicians; (d) show upon map or chart the dwelling-place of every infected person; (e) use no placards.

The use of placards implies the inability of the health board to afford protection to the public against the spread of the disease, and it is in effect a notice to all who may pass that way that an uncontrolled source of danger to life exists in the dwelling placarded.

The regular use of placards is, in fact, a notification to the public that anyone who will may enter and expose himself to infection, and the responsibility for preventing the spread of the disease is thus unloaded by the health board upon citizens of the locality. The inquisitive neighbor who is "not afraid" enters without hindrance, and the absent-minded or near-sighted canvasser walks innocently into the sick-room.

For temporary use and in special cases, where the health officer finds it impossible to at once effect rigid isolation, placards may do good, but there is nothing to justify their indiscriminate employment. Householders complain with good reason against the posting of placards when the isolation of the patient and nurse is disregarded, and when no precautions whatever are exercised by the health officer. It is easy to post a placard, and some inspectors seem to find satisfaction in the act, but in too many cases the placard is an indicator showing that the essential procedures for preventing the spread of the disease have not been taken.

Public Water-Supplies.—The inspection of public water-supplies has been continued, and a statement of the work accomplished appears on subsequent pages of this report. The board believes that results of no less value than those reached in the case of the Rahway river can be gained in many other localities if an additional inspector is supplied. Thus far all inspections of streams, made in accordance with the provisions of chapter 41 of laws of 1898, have been performed, in addition to the duties previously assigned to this bureau, and without any additional assistance. But in the judgment of the

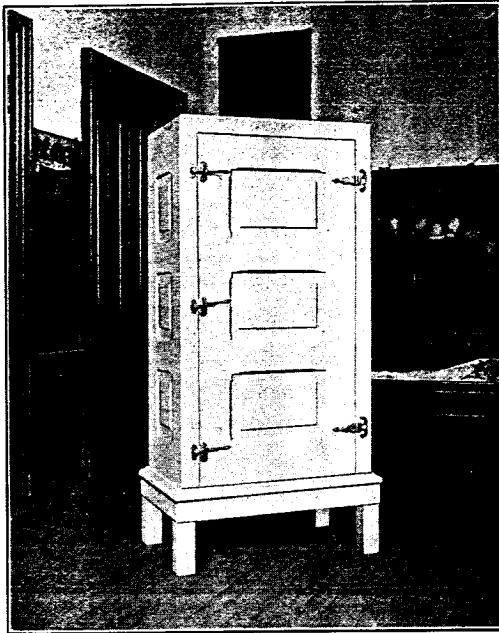
board urgent need exists for the constant employment of one competent inspector in carrying out the purposes of the act referred to.

State Laboratory of Hygiene.—The work of the laboratory has been conducted during the year by Mr. H. O. Baldwin, and the number of repositories has been increased until at present mailing cases can be obtained at 123 depots, representing 90 sanitary districts, 44 new supply stations having been established during the year. It is the purpose of the board to gradually extend this service until every populous locality in the State is within easy reach of a repository. A report of the work performed in the laboratory during the year is published in this volume.

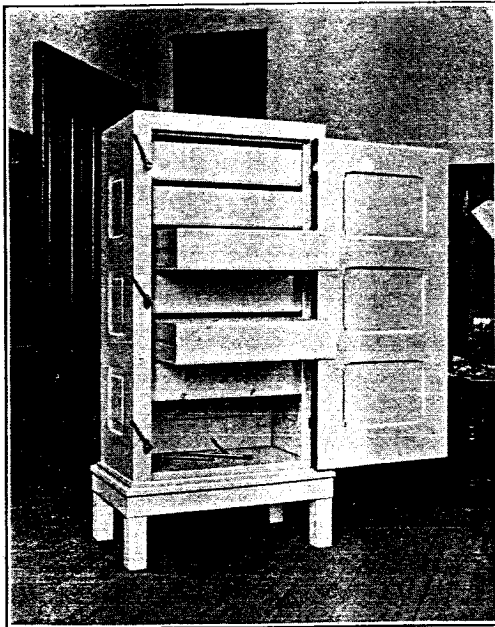
List of places in New Jersey at which mailing cases may be obtained for sending specimens of diseased tissue to the Laboratory of Hygiene, Princeton, N. J.:

- Allentown—Carslake's Pharmacy.
- Alloway—W. L. Ewen.
- Arlington—Dr. J. A. Exton.
- Asbury Park—Board of Health.
- Atlantic City—Board of Health; H. H. Deakyne, druggist; W. C. Wescott, druggist; A. D. Cuskaden, druggist; Wm. F. Ridgeway, druggist.
- Bay Head—Board of Health.
- Bayonne—Frank N. L'Estrange.
- Belmar—Board of Health; Dr. C. H. Thompson.
- Belvidere—Faust Bros., druggists.
- Berlin—Wm. W. Miller, druggist.
- Beverly—Warren Street Pharmacy.
- Bloomfield—Geo. Wood, druggist.
- Bordentown—Carslake's Pharmacy; Dr. Wm. H. Shipp.
- Bound Brook—Chas. F. Manning, druggist.
- Bridgeton—Albert S. Elwell, druggist; Board of Health.
- Burlington—John W. Davis, druggist; H. B. Weaver.
- Caldwell—E. E. Bond.
- Camden—Cooper Hospital; J. S. Baer, druggist; Geo. M. Berringer, druggist; Geo. H. Pechin, druggist.
- Cape May—Drs. Marey and Mecray.
- Cedarville—Board of Health.
- Chatham—Dr. Geo. M. Swain, druggist.
- Closter—L. B. Parsell.
- Crosswicks—C. L. Day.
- Deckertown—H. D. Van Gaasbeck.
- Deerfield—L. B. Phillips.
- Dover—Robert Killgore, druggist.
- East Rutherford—Board of Health.
- Egg Harbor City—Board of Health.

Elizabeth—Elizabeth General Hospital; Geo. J. Martin, Oliver & Drake, druggists; Wm. H. Reibel, druggist; Lewis J. Richards, health officer.
Englewood—Reeder Bros. & Schneider, L. Rockefeller & Co., druggists.
Flemington—Franklin C. Buck.
Freehold—Duryee & Conover, druggists.
Gloucester City—G. B. Beakley, druggist.
Hackensack—Hackensack Hospital Association.
Haddonfield—R. Willard, druggist.
Hightstown—D. H. Cunningham, druggist.
Hoboken—City Hospital, Board of Health.
Imlaystown—F. C. Price.
Jersey City—L. E. Carpenter, druggist.
Lambertville—Samuel W. Cochran, druggist.
Lawrenceville—Dr. H. S. Johnson.
Layton—M. D. Hughes.
Long Branch—W. J. Smyth, Jr., druggist.
Mays Landing—R. Gardner.
Metuchen—Board of Health, Metuchen Pharmacy.
Merchantville—J. W. Kohlerman, druggist.
Millburn—Millburn Pharmacy.
Millville—D. Evans Smith
Montclair—Benhaw & Johnson.
Moorestown—Dr. F. G. Stroud.
Morristown—Henry W. Smith, druggist.
Mount Holly—E. B. Jones.
Newton—Board of Health.
New Brunswick—Wm. Rush & Sons, druggists; J. H. Van Deusen, druggist.
North Plainfield—Board of Health.
Ogdensburg—L. C. Burd.
Orange—Memorial Hospital, W. V. Beegle, A. Mosler, druggist.
Orange Valley—Dr. J. T. Morehouse, druggist.
Park Ridge—H. C. Weer.
Paterson—Board of Health.
Perth Amboy—Board of Health.
Phillipsburg—M. L. Barrett, druggist.
Plainfield—J. H. Laggett, druggist.
Port Oram—H. W. Kice.
Port Norris—S. T. Day.
Princeton—Marseh & Burke, druggists; W. L. Briner, druggist.
Raritan—Board of Health.
Red Bank—Winters & Sheppard, druggists.
Ridgefield Park—H. C. Elsing, M.D.
Riverside—Warren C. Pine, pharmacist.
Riverton—Alex. Marcy, Jr., M.D.
Rockaway—Dr. F. W. Flagge.
Roselle—W. H. Wyatt-Hawath.
Rutherford—Board of Health.
Salem—W. H. Dunn, druggist; Luessen's drug store.
Somerville—James U. Case, druggist.



Disinfecting Cabinet Closed.



Disinfecting Cabinet Open.

South Amboy—Anna Manning, Board of Health.
 South Bound Brook—J. T. Robinson, M.D.
 South Orange—Mrs. J. A. Griffing, druggist.
 Summit—John Boyd Risk.
 Trenton—Mercer Hospital, Dr. W. B. McGalliard; C. D. Laird, druggist; D. W. Baker, druggist; J. J. Strausser, druggist; J. S. Mathis, druggist; A. G. Holcombe, druggist; Horace W. Richards, druggist.
 Town of Union—August Frank, druggist.
 Vineland—Alfred Pierson, druggist.
 Wanaque—Dr. D. N. Shipper.
 Westfield—Bayard Pharmacy, H. P. Condit; John F. Dowall, druggist.
 West Hoboken—F. H. Eckert, druggist.
 Westwood—Dr. Theo. E. Townsend.
 Williamstown—Dr. J. G. Edwards, druggist.
 Woodbury—J. W. Merritt, druggist.
 Woodstown—S. H. Miller.

Disinfecting School Books.—In September, 1900, an experimental cabinet was constructed under the direction of this board for disinfecting the books, kindergarten materials and utensils used by pupils in the public schools. The cabinet is made of wood, with a tightly-fitting door, has a cubical contents of twenty-four cubic feet, and is provided with drawers having wire bottoms. Tests extending over several weeks show that germicidal effects can be obtained by disengaging in the cabinet the formaldehyde contained in 60 c.c. of a 40 per cent. solution of the gas. Books were treated by placing them upright, widely opened, upon the wire cloth bottom of the drawers, and the formalin was poured into a shallow tray over which was suspended numerous strips of wicking, the lower ends of the wicking dangling in the solution. After the pupils were dismissed for the day the cabinet was loaded with the articles to be disinfected, and when the formalin was poured into the tray the door was closed and firmly clamped. Upon removing the articles from the cabinet and distributing them for use the following morning, the odor of the gas was found to adhere strongly to the woolen balls, but it was not perceptibly carried by books, pencils and other articles having smooth surfaces. No growth occurred in test cultures placed between the leaves of books and under the loose folds of paper. Control cultures were used in each case, and growth was uniformly observed.

Contagious Diseases of Animals.—This department of the work of the board is thoroughly systematized, and both prompt and appropriate action is taken in all reported cases of the dangerous com-

municable diseases of animals, except in two districts, and measures for the improvement of the service in those localities have been taken.

A report of cases brought to the attention of the board during the past year, with a statement showing the action taken in each case, is published on a subsequent page.

Transportation of the Dead.—In response to a demand from the transportation companies doing business in New Jersey, the Legislature passed an act March 23d, 1900, to regulate the shipment of dead human bodies, and to require that precautions necessary to prevent the escape of offensive odors and fluids from coffin-boxes should be taken by undertakers who deliver human remains to railroad, steamboat and express companies. The requirements of this act, so far as they relate to the preparations of dead bodies for transportation, conform very closely to the regulations now in force in several of the States, including the State of New York, and in every instance where the preparation of the remains for shipment has been in accordance with these requirements, the dead body has reached the point of destination without causing a nuisance.

During the first few weeks after the law went into effect, some annoyance was experienced because the form of transit permit, provided for by the New Jersey statute, was not supplied with coupons, and it was found that the authorities of the city of New York refused to allow transportation of corpses through that city unless a coupon was detached from the transit permit and delivered to the gatekeeper at the ferry. In this requirement New York city appears to be alone, no other city or State having such a rule, so far as can be ascertained. To meet this requirement on the part of New York city, new forms of transit permits, expressly prepared for use in shipping dead bodies into or through the city of New York, were printed and distributed to local registrars of vital statistics. To correct certain minor defects in the act referred to, relating to the transmission of duplicate transit and burial permits to the Bureau of Vital Statistics in Trenton, a bill will be prepared for the consideration of the next Legislature.

In connection with the enforcement of the act above referred to, the following circular-letter was mailed to the local registrars of vital statistics in the sanitary districts located along the borders of the State :

OFFICE OF THE BOARD OF HEALTH AND
BUREAU OF VITAL STATISTICS OF
THE STATE OF NEW JERSEY. }

TRENTON,

Subject—Duties of local health authorities at State boundaries in relation to the preparation of transit permits, &c., in cases where no certificate of death accompanies dead bodies transported into the State.

DEAR SIR—We desire to call your attention to the provisions of section 4 of chapter 156 of the Laws of 1900, a copy of which is sent to you by this mail. This section is intended to simplify and regulate the present manner of transporting the bodies of persons dying without the State. It provides that where no certificate, in accordance with the requirements of the New Jersey law, accompanies the dead body upon its entrance into the State, any member, inspector or officer of the local board of health at the State boundary may, after due inquiry, make a certificate of death in the form prescribed by the second section of the act above referred to, and deliver the same to the person or persons applying therefor. The undertaker's certificate, which should accompany the body, and the transit permit may also be provided by the local authorities of the sanitary district at the point where the body enters the State. Information concerning the cause of death in cases where no physician's certificate, undertaker's certificate or transit permit accompanies the dead body, from without the State, will usually be most readily obtained by telegraphic communication with the physician who last attended the deceased person, or with the undertaker who shipped the remains. An examination of the box containing the dead body, to learn that no fluids or offensive odors are escaping therefrom, will warrant the preparation of a certificate showing that the dead body may be safely conveyed by public carrier. A transit permit can then be issued.

Very respectfully,

HENRY MITCHELL,
Secretary.

Local Boards of Health.—To keep the sanitary district clean, and to keep it free from the dangerous communicable diseases, comprise the most important duties of boards of health, and a concentration of effort upon these purposes will be far more profitable than vain endeavors to accomplish all of the work which the comprehensive health laws of New Jersey permit.

In previous annual reports of this board the urgent necessity for improving the grade of the sanitary inspectors employed by local boards of health has been often pointed out, and the movement, first begun in the United States by the trustees of Rutgers College, for the examination of candidates for appointment by local boards to the office of sanitary inspector, has now been taken up by numerous States and institutions, and a change for the better in the qualifications of these officers is already insured. It is admitted that in cer-

tain districts the health inspector is wholly unacquainted with the principles of hygiene and the art of preventing the spread of diseases, and it is greatly to be desired that some method of testing for fitness shall soon become an essential prerequisite to future appointments. The bill designed to improve the inspection service which was considered by the Legislature in 1896, and which failed to pass at that time, contained features which would, if enacted into law, greatly increase the efficiency of local sanitary administration.

The following principles were incorporated in the bill referred to :

1. All candidates for appointment to the office of sanitary inspector to be tested for fitness by a central authority.

2. Term of office for sanitary inspectors to be five years.

Inasmuch as Rutgers College has already given this matter some attention, it seems desirable that the authorities of that institution should be empowered to conduct the necessary examinations, and to issue an eligible list from which all new appointments should be made by local boards of health.

The supervision of plumbing, which has been conducted by local boards with varying degrees of success during the past twelve years, has gradually gravitated toward the building departments in cities, and the time is probably not distant when the control of the construction of drains, both within and outside of buildings, will be wholly given over to building departments in municipalities wherever such departments are established. A disposition has been repeatedly exhibited on the part of the trade to use the restrictions which the law has placed upon plumbing and drainage construction, for the promotion of financial interests, and commercialism has entered into sanitary operations more boldly in connection with the execution of plumbing ordinances than in any other departments of public health administration.

The authority contained in the laws authorizing local boards of health to impose fees for permits or licenses was defined in the case of *Blanke v. The Board of Health of the City of Hoboken*, at the November Term of the Supreme Court, 1899. Following is a copy of the record in this case :

NEW JERSEY SUPREME COURT,

November Term, 1899.

DIEDRICH BLANKE

v.

THE BOARD OF HEALTH OF THE
CITY OF HOBOKEN.

} Certiorari.

SYLLABUS.—A license fee of two dollars required of milk venders by an ordinance of the board of health of Hoboken is valid. It is not for the purposes of revenue, but is a reasonable compensation for the expense of issuing license and making the necessary inspection of milk.

Argued at February Term, 1899, before Justices Depue and Van Syckel.

William S. Stuhr, Esq., for the prosecutor.

E. A. S. Lewis, Esq., for the defendant.

The opinion of the court was delivered by

VAN SYCKEL, J. The certiorari in this case brings up for review the legality of the conviction of the prosecutor of violating section 1 of the ordinance of the board of health of Hoboken, which requires a permit from the board for selling milk in said city.

The alleged infirmity in the conviction is that the board of health had no power by its ordinance to impose a license fee of two dollars.

The board was duly organized under the laws of this State (P. L. 1897, p. 270). It thereby had power to adopt and alter ordinances prohibiting the sale, or having in possession for sale, any milk containing any unhealthful ingredient, constituent or substance, or which has been transported or stored in an unclean manner or place, or which is produced from cows which are diseased, or which are kept or stabled under unhealthful conditions. It could also and did adopt an ordinance requiring any person engaged in the sale of milk to furnish to said board, when so requested, a statement as to the locality from which said milk was procured, and also a full and complete list of the persons from whom said milk was purchased, and the names and addresses of all customers or persons to whom he may sell or deliver milk. The act of 1897 likewise gives the board power to prescribe a penalty of not less than ten nor more than one hundred dollars for the violation of ordinances. The penalty was fixed by the board at twenty-five dollars.

The second section of the act of 1897 was amended in 1898, but the amendment does not affect this controversy (P. L. 1898, p. 428). No express power is given to require a license fee by way of taxation for raising revenue, and therefore a license fee for that purpose could not be supported. *Benson v. Hoboken*, 4 Vroom 280; *North Hudson Railway v. Hoboken*, 12 Vroom 71; *Muhlenbrinck v. Commissioners*, 13 Vroom 364; *Clark v. New Brunswick*, 14 Vroom 175; *Morgan v. Orange*, 21 Vroom 389. But these cases recognize the power to pass ordinances in such instances requiring a license fee sufficient to pay the expense of the license and the necessary expense of inspecting the milk. This license fee is manifestly for that purpose and not for the purpose of revenue. It is of the highest importance for the preservation of the public health that milk should be most carefully and constantly inspected. For the labor and expense which will fall upon the board in the proper discharge of this duty, a license fee of two dollars is a very reasonable charge. In our judgment the ordinance is valid and the proceedings certified should be affirmed, with costs.

The more progressive local boards are studying more closely the causes of the deaths which occur in their respective districts, and the value of records which show deaths, and causes of death, by blocks, by streets and by houses, has been fully demonstrated. The grouping of deaths from infectious diseases in the locality where the first case appeared, is very clearly shown on local maps of large scale by the use of colored pins.

A new record-blank, recently adopted by the authorities of Princeton University for recording conditions on premises where students board or lodge, is appended :

RECORD OF SANITARY INSPECTION.

PREPARED UNDER THE SUPERVISION OF THE SANITARY COMMITTEE OF PRINCETON UNIVERSITY.

1. Number..... street. Date
2. Owner..... Address.....
3. Tenant.....
4. Size of lot Has lot been filled in?.....
5. Area of lot..... Area covered by buildings
6. Elevation of house sill above curb..... Ground-water level below curb.....
7. House erected..... Number of stories high.....
8. Material of construction.....

9. Fire-escape..... Roof.....
10. Back dwelling on lot.....
11. Foundation ; damp?.....
cause of dampness?.....
12. Cellar: how floored?..... ; under all of house?..... ; outside entrance?.....
number and size of windows..... ; cellar damp?.....
does ground-water rise above cellar bottom?..... ; is cellar well ventilated?.....
13. House faces ; sun exposure
14. Number of sleeping-rooms.....
15. Heating ; has furnace an air-tight fresh air box?.....
size and length of air box..... Location of air intake.....
16. Lighting.....
17. Gas pipes tested?.....
18. Yard: accumulations in
condition of.....
19. Privy vault: sizeft. xft.; distance from privy vault to dwellingft.; distance from privy vault to wellft.; construction of privy vault.....
quantity of accumulations in privy vault.....
date when privy vault was last emptied.....
20. Cesspool: size, construction, location and ventilation.....
21. Water-supply.....
22. Analysis of well water.....
23. Is water-supply delivered through tank?.....
24. Stable..... ; number of stalls..... ; how floored.....
disposal of fluid excreta
storage of solid excreta.....
25. Chickens kept on premises?.....
26. Garbage: how stored?..... ; frequency of removal.....
27. House used for boarders?..... For other business?.....
28. House used for lodgers?
29. Is house in good repair, and is house and premises maintained in a cleanly and healthful condition?.....
30. House connected with public sewer?.....
31. Material and size of main drain.....
32. Trap on main drain.....
33. Inlet on house drain for fresh air.....
34. Number and location of drainage fixtures.....
35. Are all fixtures trapped?.....
36. Are all traps protected against syphonage?.....
37. Water-closets: style of..... ; how flushed.....
38. Condition of water-closets.....
39. Window in water-closet apartment?.....

40. Have house drains been tested for leakage?.....; by what methods?.....
 Dates and results
41. Number of inhabitants of house Number of lodgers
- Number of boarders.....
42. Diseases reported, with dates
43. Deaths, with dates and causes of death.....
44. Supplementary notes *.....

Inspector.

Maritime Quarantine.—To better secure the enforcement of precautionary measures for preventing the introduction of the dangerous communicable diseases by maritime vessels and maritime traffic, an act was passed March 21st, 1900, which provides (Section 1) that no infected vessel, person, baggage or merchandise, shall land or be landed in New Jersey until a permit therefor shall have been issued by the authorized sanitary officer. No such permit shall be granted until the vessel, person, baggage and merchandise shall have been examined and purified in accordance with regulations made by the Board of Health of the State of New Jersey. Section 2 provides that no infected vessel, passenger, crew, baggage or merchandise shall be brought to any wharf in New Jersey, a permit therefor having been issued by a quarantine officer of the city of New York, until such permit from the New York officer shall have been deposited in the office of the local board of health of the place of destination named in the said permit, nor until an additional permit to land said passengers, crew, baggage, merchandise and other materials shall have been granted by the local board of health, and no such permit to land shall be granted by the local board of health, except subject to regulations prescribed by the Board of Health of the State of New Jersey. This section does not apply to any port or place for which a health officer is appointed by the Board of Health of the State of New Jersey under the provisions of Section 3. Section 3 provides that the Governor shall appoint a health officer for the port of Perth

* A diagram of the premises, also showing adjoining lots, giving location of outbuildings, cesspools, wells, &c., forms a part of each record.

Amboy, and that in time of threatened epidemic the State Board of Health may appoint a health officer for any port or maritime place excepting the port of Perth Amboy. Section 3 also authorizes the State Board of Health to adopt, alter and amend regulations for the guidance of local boards of health and local officers in the performance of the duties required by this act. Section 4 provides that any infected vessel, and certain other vessels, entering the port of Perth Amboy shall come to anchor at some place designated by the officer of said port. Section 5 authorizes the health officer of the port of Perth Amboy to detain and purify all infected vessels, persons, baggage and merchandise, which may enter said port. Section 6 specifies the fees which are to be charged by local boards of health and health officers for the duties performed in accordance with the requirements of this act. Section 7 authorizes the health officer of the port of Perth Amboy to appoint one or more deputies, subject to the approval of the secretary of the State Board of Health, and provides for the compensation of said deputies from the fees allowed to said health officer. Section 8 provides that local boards of health, in ports or places in which no health officer has been appointed under the provisions of Section 3 of this act, may detain vessels, persons, baggage and merchandise. Section 9 provides for the collection of moneys due on account of any expenses incurred by any health officer or local board of health in enforcing the provisions of this act. Section 10 repeals certain acts. The penalty provided for the violation of the provisions of this act is a fine not exceeding \$3,000 or imprisonment not exceeding one year or both.

The entrance to the harbor of Perth Amboy is circuitous and the channel is too narrow to admit of the anchorage of vessels of deep draught nearer than the eastern end of the dredged channel off Sequin's Point, a distance of seven miles from the most southerly wharf in Perth Amboy, and because of the difficulties of navigation foreign vessels do not enter the port except on full tides and during daylight.

Upon the request of the State Board of Health Captain W. C. DeHart, superintendent of anchorages, New York harbor, has indicated the nearest point to Perth Amboy where an anchorage ground for quarantinable vessels desiring to enter Perth Amboy can be maintained, and after conference the following order has been issued by the health officer of the port :

OFFICE OF THE HEALTH OFFICER OF THE PORT,
PERTH AMBOY, N. J., September, 1900.

DESIGNATION OF ANCHORAGE FOR QUARANTINABLE VESSELS.

In accordance with the provisions of section 4 of chapter 69 of the laws of 1900, I hereby designate the anchorage place for every vessel which, between the first day of March and the first day of December in any year, or within any other time in any year designated by resolution of the board of health of the State of New Jersey, shall come from any port in the United States south of Cape Henlopen, or from any West India, Bahama or Bermuda island port, or from any port or place where any communicable disease exists, into that portion of the waters of this State known as Raritan bay or Sandy Hook bay south of a straight line extending from Ward's point to the northerly extremity of Sandy Hook, and every vessel at any time coming into said waters on board of which any person shall have died while at any port in the United States south of Cape Henlopen or at any foreign port, or while between any such port and said Raritan bay or Sandy Hook bay, or on board of which there are contained any baggage, merchandise or materials by which any communicable disease may be introduced into this State, or on board of which the health officer of the port of Perth Amboy shall have reason to believe that any person or persons may be sick with any communicable disease, or on board of which such health officer shall have reason to believe there may be any baggage, merchandise or materials by which any communicable disease may be introduced into this State.

Said anchorage place shall be to the southward and westward of buoy No. 1 of the dredged channel off Sequin's Point, and within a radius of one mile from the said buoy No. 1.

Said vessels shall remain at this anchorage until visited by the health officer of Perth Amboy.

E. A. HULTS, M.D.,

Health Officer of the Port of Perth Amboy.

PERTH AMBOY, N. J., October 22d, 1900.

An inspection of the harbor of Perth Amboy was made by representatives of the State Board of Health, August 15th, 1900, and the necessity was observed for the substitution of a motor launch in place of the rowboat at present employed for the boarding of vessels by the health officer or his deputy. In some conditions of wind and currents it is impossible for one man in a rowboat to intercept an incoming vessel, and if masters of vessels obey the harbor requirements and remain at anchor until the health officer reaches the anchorage grounds, much needless delay ensues. This board therefore recommends that provision be made by the Legislature for the maintenance of a launch service at that port.

Cemeteries.—During the past year seven descriptive maps, showing proposed new cemeteries or enlargement of cemeteries already established, have been filed in the office of the State Board of Health. Following is a list of all such maps which have been filed in this office under the provisions of the act approved March 25th, 1885 :

TABLE 26.—SHOWING LIST OF MAPS RELATING TO ESTABLISHMENT OR ENLARGEMENT OF CEMETERIES, ON FILE IN THE OFFICE OF THE STATE BOARD OF HEALTH.

MAP FILED.	NAME OF CEMETERY	LOCATION OF CEMETERY.	ESTABLISHED OR ENLARGED.
Dec. 3, 1885.....	Harleigh Cemetery.....	Camden.....	Established.
May —, 1886.....	.....	Salem City.....	"
Aug. 3, 1886.....	.....	Fanwood Township.....	"
..... 1886.....	.....	U. Penn's Neck Twp.....	"
April 1, 1887.....	.....	Ewing Township.....	Enlarged.
May 17, 1887.....	Riverview Cemetery.....	.....	"
May —, 1887.....	Laurel Grove.....	Manchester Twp.....	Established.
Sept —, 1887.....	.....	Camden.....	"
Oct. 21, 1887.....	Palmyra Cemetery.....	Cinnaminson Twp.....	"
..... 1888.....	The Sharey Tefilo.....	Montclair.....	"
Dec. 31, 1888.....	Abraham Cemetery.....	Newark.....	Enlarged.
March 19, 1893.....	Hudson Co. Catholic Cem.....	Jersey City.....	Established.
June 30, 1893.....	Holy Sepulchre.....	South Orange Twp.....	Enlarged.
.....	Holy Sepulchre.....	Manchester Twp.....	"
Sept. 2, 1890.....	.....	Saddle River Twp.....	Established.
March 15, 1892.....	Woodland Cemetery.....	Dennis Township.....	"
Feb. 6, 1893.....	Berry Lawn Cemetery.....	Carlstadt.....	Enlarged.
Sept. 12, 1893.....	.....	Belleville Township.....	Established.
April — 1894.....	Evergreen Cemetery.....	Clinton Township.....	Enlarged.
June 25, 1895.....	Jersey City and Harsimus.....	Jersey City.....	"
Feb. 19, 1896.....	Mount Prospect.....	Newark.....	Established.
April 28, 1896.....	Phillipsburg Cemetery.....	Phillipsburg.....	Enlarged.
June 17, 1896.....	.....	Belleville Township.....	Established.
June 19, 1896.....	Fairmount Cemetery.....	Lopatcong Township.....	"
Oct. 22, 1896.....	.....	Union Township.....	"
Nov. 13, 1896.....	.....	Little Falls Twp.....	"
Jan. 5, 1897.....	.....	Burlington.....	"
Feb. 8, 1897.....	Forest Hill.....	Belleville Township.....	"
Feb. 17, 1897.....	.....	Saddle River Twp.....	"
Nov. 27, 1897.....	Grove Church.....	North Bergen Twp.....	Enlarged.
March 18, 1898.....	.....	New Barbadoes Twp.....	"
July 18, 1898.....	Weehawken Cemetery.....	North Bergen Twp.....	"
April 18, 1899.....	Mountain View.....	Clinton Township.....	"
May 19, 1899.....	Greenwood.....	Wall Township.....	Established.
Sept. 15, 1899.....	Dover Mt. Sinai.....	Randolph Township.....	"
Oct 16, 1899.....	First Presbyterian Church.....	Rahway City.....	Enlarged.
Oct. 31, 1899.....	Flower Hill.....	North Bergen Twp.....	"
Dec. 12, 1899.....	Oheb Shalom.....	Union Township.....	Established.
March 15, 1900.....	Oakdale Cemetery.....	Roselle.....	"
July 17, 1900.....	Rumsen Cemetery.....	Shrewsbury Twp.....	Enlarged.
Aug. 30, 1900.....	Cedarcroft.....	North Arlington.....	Established.
Sept. 26, 1900.....	{ Passaic Hebrew Inde- pendent Ben. Asso..... }	Bergen County.....	"

Following is a report of the Standing Committee on Cemeteries, Burial and Transportation of the Dead, concerning application of the First Presbyterian Church of the city of Rahway for reversal of the decision of the local authorities approving of the proposed extension of the cemetery owned by said church :

To the Board of Health of the State of New Jersey:

GENTLEMEN—A map, showing a proposed extension of the cemetery of the First Presbyterian Church of the city of Rahway, was received and filed in the office of the State Board of Health, October 16th, 1899, and information was received showing that the consent and approval of the common council of the city of Rahway, and also of the local board of health of said city was given for the extension of said cemetery. An inspection of the site of the proposed enlargement of the cemetery of the First Presbyterian Church of the city of Rahway was made October 19th, 1899, and a report of this inspection has been placed on file in the office of the State Board of Health. The annexed appeal, signed by twenty-nine persons and dated October 17th, 1899, was received.

A hearing in this case was appointed by the undersigned committee, to be held November 21st, 1899, and the following persons were present: B. A. Vail, Esq., Walter E. Cladek, M.D., Mr. T. A. Kidd, Rev. George H. Pason, Mr. W. H. C. Coles, Mr. Hart, Leslie Lupton, Esq., Mr. Robert B. Vail, Mr. F. W. Langstroth and Mr. Frank H. Bliss.

Hon. B. A. Vail stated that he was counsel for the church association, that the church had owned a cemetery in the city of Rahway for over 150 years, and that they desired to obtain land lying to the west of the present cemetery in order to enlarge it. The present cemetery is nearly filled up, and unless additional land is obtained not many more burials can be made in it. A petition was presented to the common council, and the common council granted a permit to enlarge the cemetery. The board of health also gave their permission to enlarge the cemetery. The only objection known to have been made to the extension of the cemetery was that it was located near the water works. He also stated that the water is obtained from a well supplied by the river, and that no drainage from the proposed extension of the cemetery could reach this well. An affidavit made by David M. Wright, superintendent of the Rahway water works, was read by Mr. B. A. Vail, and is attached to this report.

Walter E. Cladek, M.D., stated that he was a practising physician in the city of Rahway and a member of the local board of health of that place; that he had been on the ground which it is proposed to add to the present cemetery; that there had been a cemetery located near the water works for many years, and he could not see how contamination from the land which it is proposed to add to the cemetery could reach these water works.

Mr. T. A. Tidd, superintendent of the cemetery, stated that the cemetery is a necessity to the community. He said that the cemetery is already full, and that if additional lands cannot be obtained burials must cease. The average number of burials per year is 150. He stated that 10, possibly 20, new lots were sold last year. Only 40 new lots are at present left to sell. He stated that the land which they wished to annex for cemetery purposes was so situated that drainage would not flow therefrom into the water-supply to the city of Rahway. He stated, in response to a question, that a fund for the permanent care of the cemetery of the First Presbyterian Church was being established by donations, and that the amount thus far subscribed was about \$3,000. None of this sum is obtained from the sale of lots.

Rev. George H. Payson, pastor of the First Presbyterian Church, stated that the proposed plan of extension would only bring the cemetery 160 feet nearer the water works, and he thinks this extension would do no harm. He said that, in his judgment, it was absurd to claim that the health of the city of Rahway would be affected

by the pollution of the water-supply by the extension of the cemetery. He further stated that there was another cemetery in the city of Rahway, which is at present a wilderness and likely to remain so, and that it is reported that persons interested in said cemetery are promoting the movement to prevent the extension of the cemetery of the First Presbyterian Church.

Mr. W. H. C. Coles, vice president of the board of trustees of the First Presbyterian Church, said that the common council and board of health were practically unanimous in agreeing to the extension of the cemetery.

Mr. Hart stated that the cemetery was kept in fine order, and served the purpose of a recreation ground for the public.

Leslie Lupton, Esq., stated that the proposed extension of the cemetery would include land having a sharp grade toward the river above the intake of the water works.

Mr. Robert B. Vail, president board of water works, stated that three-quarters of the seven and a-half acres of land, which it was proposed to add to the cemetery, sloped toward the well supplying the water works. He said observations have shown that the well is not water-tight, and that he does not believe that the planks which were originally placed in the bottom of the well are still intact and serve as a barrier against the entrance of water from the hillside, for pieces have been found floating in the well which were decayed, indicating that the bottom is disintegrating and becoming broken up.

Mr. F. W. Langstroth, member of the common council of the city of Rahway, said that council had passed the resolution granting permission for the extension of the cemetery without referring it to a committee or looking over the ground, and that at a meeting held since the time the resolution was passed four men who had voted for the resolution said if they had understood the matter they would not have voted for it. He also stated that the attention of the board of water works was not drawn to the proposed extension of the cemetery until after action had been taken by the common council and board of health. He stated that the land which it is proposed to occupy for cemetery purposes slopes at a very steep grade directly toward the intake of the water works and that, in his judgment, the use of this land for burial purposes will endanger the water-supply of the city. He further stated that, in his opinion, it would be unwise to grant any further extension to the cemetery under consideration, because it is undesirable to bury the dead in close proximity to a source of public water-supply. He stated that no public necessity exists for the enlargement of this cemetery, and that another cemetery equally well located is at present without patronage, and ample opportunity exists there for the burial of all persons dying in the city of Rahway.

Mr. Frank H. Bliss, president common council, stated that the application for the extension of the cemetery came before the common council and was approved by them without knowing where the land lay, and that if he had known that it sloped toward the water works he would not have voted for it, and did not think other members of the council would have done so.

Upon careful examination of the facts before us, the undersigned committee believes that a portion of the land which it is proposed to add to the cemetery of the First Presbyterian Church in the city of Rahway is so situated that the ground-water of this locality may find its way to the well supplying water for the water works of the city, and we therefore recommend that action shall be taken by the State Board

of Health reversing the approval granted by the municipal authorities and the local board of health of the city of Rahway for the enlargement of the cemetery of the First Presbyterian Church of said city.

Very respectfully,

EDWARD R. O'REILLY,

JOHN A. GITHENS,

Committee.

TRENTON, N. J., December 12th, 1899.

Report of the Committee on Cemeteries, Burial and Transportation of the Dead, relating to inquiry concerning the petition in reference to the enlargement of Flower Hill Cemetery, township of North Bergen, county of Hudson, New Jersey :

To the Board of Health of the State of New Jersey :

GENTLEMEN—Upon request of interested persons, a hearing in the case of the application, signed by twenty freeholders of the township of North Bergen, addressed to the State Board of Health, requesting reversal of the action of the local authorities in granting consent to the enlargement of the Flower Hill Cemetery, situated in said township, was held March 9th, 1900. The following persons were present: William H. Murray M.D., chairman of committee; E. R. O'Reilly, M.D., member of committee; Abel I. Smith, attorney for the cemetery company; G. W. Butts, John N. Rosenbaum, J. R. Gallagher, Mr. Asmus, William Wilington and John Reger.

The application of the Flower Hill Cemetery Company to the township committee of the township of North Bergen, for the enlargement of said cemetery, dated June 15th, 1899, a copy of which was filed with the State Board of Health by Abel I. Smith, attorney, will be found in appendix. (See Appendix A.)

For report of an inspection of the proposed extension of Flower Hill Cemetery, signed by A. Clark Hunt, M.D., State Sanitary Inspector, and dated February 7th, 1900, see Appendix B.

For map of Flower Hill Cemetery, received in the office of the State Board of Health, and filed October 31st, 1899, see Appendix C.

A protest against the review of the proceedings taken by the local authorities in relation to the extension of Flower Hill Cemetery was presented in writing by Abel I. Smith, attorney. (See Appendix D.)

Upon invitation of the chairman of the committee, Mr. J. R. Gallagher expressed his views in reference to the case under consideration, as follows: The action of the township committee and of the local board of health, granting consent to the enlargement of the Flower Hill Cemetery, was taken without public notification and no opportunity was given interested parties to appear before the township committee and protest against the enlargement of said cemetery; that when it was found, during the month of June, 1899, that an application had been made for the enlargement of the cemetery, a protest, signed by four hundred and twelve (412) property owners, was filed with said township committee against the enlargement of said cemetery. Mr. Gallagher stated that the original application for the enlargement of said Flower Hill Cemetery has been altered, and that the first application asked for the addition of only two acres to the lands occupied by the cemetery company, while the new application asks for the addition of eight acres to the said cemetery. Mr. Gallagher

stated that about one hundred thousand (100,000) dead bodies are now buried within a district one-half mile wide by one mile long, and that Flower Hill Cemetery is located within this district. He stated that the Flower Hill Cemetery is maintained only for speculative purposes, and that its enlargement is not required by the necessities of the residents of Hudson county. He further stated that all the wells supplying drinking-water in the vicinity of the district above referred to have long ago been polluted and rendered useless, and that this contamination of the ground-water was due, in his judgment, to the defilement of the soil by the great number of burials which have been made in this locality. He stated that during certain conditions of the atmosphere offensive odors pervade these cemeteries, due to insufficient covering of dead bodies with earth. He said that the majority of the dead bodies buried in the district above referred to come from outside of the State of New Jersey, and that there is already an abundance of cemetery accommodation for all persons dying within this State. In reply to inquiries, Mr. Gallagher stated that no burials have been improperly made in Flower Hill Cemetery within his knowledge, but that burials in adjoining cemeteries were referred to in his remarks, and the graves in these cemeteries had, in numerous instances, been proved to be too shallow. In response to a question, Mr. Gallagher stated that he had no knowledge that sickness had resulted on account of the presence of these cemeteries in this locality. Mr. Gallagher stated that in his opinion the enlargement or establishment of cemeteries in this locality will depreciate the value of property in the township.

Mr. Asmus, Mr. Wilington and Mr. Reger stated that they objected to the cemetery for the same reasons stated by Mr. Gallagher.

Mr. Abel I. Smith made a lengthy argument to show the necessity for the enlargement of the Flower Hill Cemetery. He stated that the application was made in good faith, and all the metes and bounds of the proposed extension were shown on a map accompanying the application, and the township committee passed a resolution on June 15th, 1899, granting permission for the extension of the cemetery. He said it was true that a cemetery might be a menace to the public health if conducted in the manner in which the Weehawken Cemetery is conducted, where there are twelve thousand (12,000) bodies buried in eight acres of land, but he did not think that a cemetery would affect the health of the people living nearby if it was properly managed. He stated that the land which it is proposed to add to the cemetery could not be used for any other purpose; that the drainage from it is down hill upon the meadows and sparsely-settled tracts of land, and that the people living nearby use water supplied by the Hackensack water works and do not need wells. Mr. Smith further stated that only about twelve bodies from out of the State are buried in the Flower Hill Cemetery each year, and that these were the bodies of members of families owning lots in the cemetery but who have moved away from the place. He said the cemetery company had learned that these tracts of land were in the market for sale; that the company made arrangements for purchasing them and made application, on June 15th, 1899, to the board of health and township committee of North Bergen township for permission to extend their cemetery; that they expended twenty-five or thirty thousand dollars (\$25,000 or \$30,000) for this land and then waited until October 23d, 1899, thinking probably objection would be made by the people to the extension of the cemetery. After that date title was taken for the land and five thousand dollars (\$5,000) was expended in making streets, paths, &c. Three or four lots have been sold during the past few weeks.

There is a reservation of fifty (50) feet of land around the cemetery, and no burials are to be made along the boulevard.

Mr. Butts stated that six thousand dollars (\$6,000) had been provided for the care of the cemetery, which was to be increased by 10 per cent. of the net profits each year until the sum of twenty-five thousand dollars (\$25,000) was reached.

In response to questions, Mr. Rosenbaum stated that the strip of land bordering on the boulevard was of a rocky nature and unsuited for burial purposes.

For copy of resolution of township committee granting consent to the enlargement of Flower Hill Cemetery, see Appendix E.

For argument by Abel I. Smith & Mabon, attorneys for Flower Hill Cemetery Company, see Appendix F.

For communications relating to the Flower Hill Cemetery, signed by J. R. Gallagher, see Appendix G.

For letters from Corbin & Corbin and minutes of a special meeting of the local board of health of North Bergen township, see Appendix H.

For opinion of J. E. Walschied, see Appendix I.

For application of freeholders of the township of North Bergen, for the reversal of the action of the local authorities relating to the enlargement of the Flower Hill Cemetery, see Appendix J.

The committee recommend that the appeal be dismissed.

Very respectfully,

WM. H. MURRAY,
EDWARD R. O'REILLY,

Committee on Cemeteries, Burial and Transportation of the Dead.

TRENTON, N. J., April 12th, 1900.

Following is the application of the Oakdale Cemetery Company for reversal of the action of the local authorities of the borough of Roselle in refusing to permit the establishment of a cemetery in said borough:

NEW JERSEY STATE BOARD OF HEALTH.

In the matter of the application of the Oakdale Cemetery Company for the consent and approval of the State Board of Health to locate a cemetery in the borough of Roselle, county of Union. } Petition.

To the New Jersey State Board of Health:

The petition of the Oakdale Cemetery Company, a corporation of the State of New Jersey, respectfully shows unto your honorable body—

(1) That on or about the seventeenth day of July, eighteen hundred and ninety-nine, the Oakdale Cemetery Company, desiring to locate a new cemetery and burying-ground on the premises known as the Hallett farm, on the north side of Rahway avenue, and east of Wood avenue, in the borough of Roselle, in the county of Union and State of New Jersey, made application in writing to the mayor and common council of said borough of Roselle, and to the board of health of the said borough of Roselle, pursuant to the provisions of the statute in such case made and provided, for the consent and approval of said mayor and common council and of said board

of health for the location of said cemetery and burying-ground; that true copies of the applications referred to are hereto annexed; the map herein referred to as being annexed to said petitions being a duplicate of the map now on file in the office of your honorable body, at Trenton, New Jersey.

(2) That the board of health of the borough of Roselle, on the twenty-fourth day of July, eighteen hundred and ninety-nine, granted the application of the said Oakdale Cemetery Company, and the action of the board was certified on the face of the original petition filed by the said Oakdale Cemetery Company in words and language following:

"ROSELLE, July 24th, 1899.

"Permit granted on above application by order of board of health.

"H. C. PIERSON, M.D.,

"President.

"VAN S. ROOSA,

"Secretary."

(3) That on the sixth day of September, eighteen hundred and ninety-nine, the said Oakdale Cemetery Company was notified that the application to the said mayor and common council of the borough of Roselle had been refused, such notification being in writing, in words and language following:

"ROSELLE, N. J., September 6th, 1899.

"Mr. W. Howard Lake, President Oakdale Cemetery Company, Flemington, N. J.:

"DEAR SIR—I am directed to inform you that at the last meeting of the mayor and council of the borough of Roselle, held September 1st, the special committee to whom was referred your application for permission to locate a cemetery in the borough, reported it back unfavorably, and recommended that it be not granted, which recommendation was adopted by vote of council.

"Yours truly,

"G. A. RAWLINS,

"Borough Clerk."

(4) That by reason of the refusal of the said mayor and common council to grant the said application, the said Oakdale Cemetery Company has, notwithstanding the consent of the local board of health, been prevented from locating the said cemetery and burying-ground in said borough, and pursuant to the statute in such case made and provided, the Oakdale Cemetery Company hereby makes application to your honorable body for your consent and approval to the location by it of a cemetery or burying-ground on the premises known as the Hallett farm, on the north side of Rahway avenue, and east of Wood avenue, in the said borough of Roselle, in the county of Union and State of New Jersey, containing forty-nine and six-fifteenths acres, more or less, as shown on map annexed hereto, the map so annexed being a copy of map on file in the office of your honorable body.

All of which is respectfully submitted this fifth day of April, nineteen hundred.

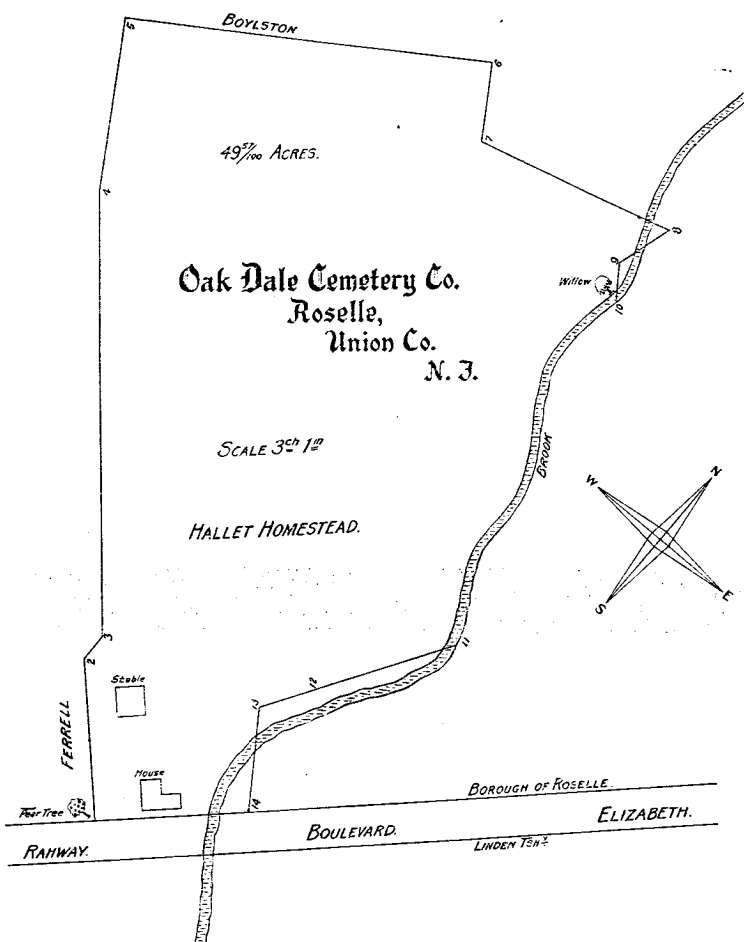
OAKDALE CEMETERY COMPANY,

By W. HOWARD LAKE,

President.

J. H. DEMOTT,

Secretary.



Report of the Standing Committee of the Board of Health of the State of New Jersey on Cemeteries, Burial and Transportation of the Dead, relative to the application of the Oakdale Cemetery Company :

Board of Health of the State of New Jersey :

GENTLEMEN—A hearing in the case of the application of the Oakdale Cemetery Company for the establishment of a cemetery in the borough of Roselle was given November 21st, 1899, the following persons being present: Mr. John I. Howe, Mr. Oscar Gesner and Mr. John M. Meeker. Each of these persons expressed strong disapproval of the proposal to establish a cemetery in the borough of Roselle. No person was present to advocate the establishment of said cemetery, but information

has been received showing that notice to Mr. De Mott, informing him that a hearing would be given, did not reach him in time to permit the notification of the parties interested in the establishment of the cemetery. A second hearing in this case was given in Clark's Hotel, Elizabeth, Monday, April 23d, 1900, thirteen persons being present beside the undersigned members of the committee and the secretary of the board.

J. R. Harding, attorney for the Oakdale Cemetery Company, stated that the local board of health of the borough of Roselle had given consent to the establishment of the cemetery, but that the council has refused to permit the cemetery to be located in the borough. He said that the opposition of citizens to the establishment of the cemetery had been largely withdrawn, and that a petition would be filed with the State Board of Health showing the names of persons who had withdrawn their objections.

Mr. John M. Meeker stated that he was opposed to the establishment of the cemetery in the borough of Roselle. He regarded it as unnecessary, and asserted that seven-eighths of the taxpayers do not want it. Cemeteries are located in the vicinity of the borough, and the convenience of the residents is fully met. Mr. Meeker stated that he was a member of the council at the time when the application of the cemetery company was refused, and that council is still strongly opposed to the granting of the privilege of locating a new cemetery within the incorporated district. He also stated that the opposition of citizens has not been withdrawn, and that the public sentiment of residents of Roselle is strongly opposed to the establishment of any cemetery within the borough. He stated that the reasons for the opposition were mainly because of the fact that it was the general opinion that property values will be depreciated by the placing of a burial ground in the vicinity of dwellings. He also stated that the passing of funeral processions would constitute a nuisance.

Mr. Oscar Gesner stated that he lived in Linden, 250 feet from the line of the proposed cemetery. He stated that permission for the establishment of three cemeteries has recently been granted in Linden, and that inasmuch as ample cemetery accommodation was already provided, the addition of another to the three already agreed upon in this vicinity is unnecessary. He stated that all residents of the locality objected to the establishment of this cemetery. It will lower property values and render the locality undesirable as a residence. Mr. Gesner stated that he did not oppose cemeteries on general principles, but believed that they should be located where they will not interfere with residents, and that the site selected for this cemetery is unsuitable. He stated that he believed that the ground-water would be contaminated, and that the public health would thereby suffer. The cemeteries of the surrounding region supply all needed facilities for the accommodation of the residents of Roselle and Linden.

Mr. John I. Howe stated that he attended the previous hearing in regard to this matter, and objected then, as he now does, to the establishment of the Oakdale Cemetery on the Hallett homestead in the borough of Roselle. He stated that 75 per cent. of the people in Roselle owned lots in cemeteries in the adjoining districts, and that there is no necessity for a cemetery in Roselle so far as the accommodation of the citizens of that place is concerned. This cemetery is not intended for the people of Roselle, but it is a purely speculative investment on the part of the promoters, and is in no way connected with the interests of the people of the locality, except to depreciate their property and damage their borough as a place of residence. He

stated that there is no person in Roselle who desires that this cemetery shall be established except the individuals who are interested in the sale of the land which it is proposed by the cemetery company to purchase for cemetery uses

Mr. John H. Chilver stated that he is a resident of Roselle, and has expended from fifteen to twenty thousand dollars in the improvement of his property, and that if the proposed cemetery is established it will adjoin his lands and ruin the value of his improvements. Mr. Chilver stated that the land which it is proposed by this cemetery to occupy is unfitted for the burial of the dead; that graves six feet in depth will contain at least two feet of water in ordinary conditions of weather. He stated that the land is underlaid with shale rock covered by a layer of hardpan, and that water will not penetrate this material. He stated that it is notorious that the vicinity of cemeteries is gradually filled up by stone-yards, and that dwelling-houses of the better sort slowly disappear from such localities. His house is located 1,500 feet from the line of the proposed cemetery.

Mr. C. B. Banta stated that he is a resident and taxpayer of the borough of Roselle, and that in his opinion the local interests will be damaged by the establishment of a cemetery in this locality. He stated that shale rock underlies the surface of the ground, on the site of the proposed cemetery, from three to five feet below the surface, and that the land of the cemetery is wholly unfit for burial purposes.

Mr. J. T. Dunn stated that the cemetery company's rights, under the law, to use land which they have purchased for any purpose which they may desire is unquestionable. He claimed that it was his lawful right to invest his money as he might deem best, and that his privilege might not be interfered with by persons who chance to be opposed to the business which he desired to conduct. He stated that careful inquiry had been made into the nature of the soil of the proposed site of the cemetery and that it had been found satisfactory to the owners.

Mr. J. H. DeMott stated that the lands included in the cemetery purchase have been examined and found satisfactory for burial purposes.

Mr. Lake stated that he had made investigations for the purpose of learning the nature of the soil on the Hallett farm, and had examined the earth for a distance of from five to six feet in depth and found no rock. In some places he found hardpan and clay.

Following is a report of an inspection of the proposed site of the Oakdale Cemetery, in the borough of Roselle, made by A. Clark Hunt, M.D., an officer of this board:

"To the Board of Health of the State of New Jersey:

GENTLEMEN—On the 17th of July, 1899, the Oakdale Cemetery Company made application to the local board of health and the mayor and common council of the borough of Roselle, Union county, New Jersey, for permission to locate a cemetery within the borough limits. A map of the proposed cemetery was filed with the application. On the 24th of July, 1899, the board of health of the borough of Roselle granted the application, and on the 6th day of September, 1899, the mayor and common council refused the application of the cemetery association. Under such circumstances, it being impossible for the cemetery company to make any further progress in the matter, an appeal was made by the Oakdale Cemetery Company to the State Board of Health in compliance with the law. This appeal bore date of April 5th, 1900, and was received at this office April 6th, 1900.

"The farm which it is proposed to purchase, or has been purchased, for cemetery purposes is what is known as the Hallett farm. It is located on the Rahway and

Elizabeth boulevard, and this boulevard constitutes the dividing line at this point between the borough of Roselle and Linden township. The farm is irregular in form and consists in all of about 49 acres. There are no houses, aside from the house which is located on the premises near this plot, except one small house in the rear of the farm. A brook forms the boundary line between this farm and the farm which lies on the easterly side. This brook crosses the boulevard near the house, and thence runs into Morse's brook and thence into Staten Island Sound. The waters of this brook are not used for potable purposes. On the southerly side of the Hallett farm there is a strip of about 150 feet between the farm and road, which runs along the southerly side. The ground is flat throughout, but fairly-well drained by the brook along its easterly border. The location is at least a mile from the thickly-settled portion of Roselle, but there is one fine residence located between a quarter and a half of a mile in the rear of the Hallett homestead. There are two residences across the Rahway and Elizabeth boulevard, which are located in Linden township.

"Respectfully submitted,

"A. CLARK HUNT,
"Sanitary Inspector."

Accompanying this report is the application of the Oakdale Cemetery Company for reversal of the action of the mayor and common council of the borough of Roselle refusing to grant permission for the establishment of a cemetery by said company in said borough, and also a paper signed by five persons withdrawing objections before, made to the establishment of said cemetery.

WM. H. MURRAY, } Committee.
E. R. O'REILLY, }

TRENTON, June 8th, 1900.

The action of the council of the borough of Roselle in refusing to permit the establishment of the proposed Oakdale cemetery was sustained.

In response to a letter of inquiry, the following reply was received:

NORTH ARLINGTON, N. J., September 8th, 1900.

State Board of Health, Trenton, N. J.:

GENTLEMEN—In answer to your letter would state that the petition of the Cedarcroft Cemetery Association was presented at a meeting of the mayor and council, held August 7th, 1900, and it was rejected. At a meeting of the mayor and council, held November 8th, 1899, a petition was received from the North Arlington Cemetery Association, asking for the privilege of establishing a cemetery in this borough. The said petition was laid over until a meeting held January 2d, 1900, when action was taken on same and petition was granted. At a meeting of the board of health, held March 6th, 1900, the action of the mayor and council granting privilege to North Arlington Cemetery Association was approved. I would state that on the lower end of our borough we have a very large cemetery, and on the upper end at Kingsland there are two large cemeteries. The plot which the Cedarcroft Cemetery

Association wish to occupy comprise about twenty-three acres right in the center and most desirable part of our borough. As this is only a small borough, and as we have at present large cemeteries at either end, and the North Arlington Cemetery Association holding privilege to establish a cemetery in this borough, we thought this was sufficient. Trusting that above explanation will be satisfactory, I remain

Yours respectfully,

A. G. CRAWFORD,
Borough Clerk, and Secretary Board of Health.

The application of the Cedarcroft Cemetery Association for authority to establish a cemetery in the borough of North Arlington, and for a reversal of the decision of the local authorities, was received August 30th, 1900.

An inspection of the site of the proposed cemetery was made by Dr. A. C. Hunt, and his report follows :

Board of Health of the State of New Jersey :

GENTLEMEN—An application having been made for the location of a cemetery within the borough of North Arlington, an examination was made of the proposed site September 13th, 1900, and I would respectfully report as follows :

North Arlington borough is located in Bergen county, north of Kearny (formally Arlington), in Hudson county. It is bounded on the north by Kingsland township, Bergen county ; on the south, by the town of Kearny, Hudson county ; on the east, by the Hackensack meadows, and on the west, by the Passaic river, reaching to a point nearly opposite Belleville, in Essex county. The borough is about two miles square. The number of inhabitants is about 450.

The ground selected for the proposed cemetery is located at the northern end of the borough, and is a narrow strip of land consisting of about 23 acres, owned by Mr. Kingsland. The land faces on Schuyler avenue and reaches back to a point not far from the Wood Ridge road. The soil is as well adapted as any in that section for burial purposes, and with the exception of a very small portion of ground, consisting of a swale on either side of a brook, could be used for cemetery purposes.

Within two miles of the location of the proposed cemetery there are three cemeteries. The North Arlington and Arlington Cemetery consists of 40 acres in North Arlington and 60 acres in Arlington, of this 12 acres are in use and laid out, and the remainder awaits development. On either side of North Arlington borough, in Kingsland township, and about one-half mile from North Arlington, is located the Hillside Cemetery, consisting of 50 acres, of which 3 have been laid out and are in use. Within one-half mile of North Arlington is located the Catholic Cemetery, near the D., L. & W. tracks, and this consists of five or six acres. Only a few burials have been made in this plot. To reach the site of the new cemetery it is necessary to pass the North Arlington and Arlington Cemetery in coming from the south, and the Hillside Cemetery in coming from the north. In addition to the above, there are three cemeteries located in Belleville, which is not over a mile and a half from the proposed site, but these cemeteries are connected with churches and are nearly all of them filled. The proposed location for the new cemetery is between Ridgewood avenue and Schuyler avenue, and so nearly does it cover the entire distance

that it would be impossible to lay out streets north and south between these avenues. I was informed by the mayor of the borough that this would entirely block the growth of the locality in this direction. The objection was also made that already there are several large tracks of land exempt from taxation, and that the cemetery is not needed, and that the local authorities, consisting of the borough council and the local board of health, have absolutely refused to grant permission to this company. The company is organized, and consists of persons living outside of the borough and having no special interest in its growth and prosperity. There are no houses at the present time located near the site proposed for the new cemetery.

In conclusion, I would state that an examination of the locality, and of the size and capacity of adjacent cemeteries, clearly shows that no more cemeteries are at the present time needed in the borough of North Arlington.

Respectfully submitted,

A. CLARK HUNT,
State Sanitary Inspector.

September 13th, 1900.

A hearing was requested in this case, and September 18th was fixed as the date when the Committee on Cemeteries would listen to statements from interested parties, and notices of the day and hour of the hearing were sent to all persons concerned. On September 15th a communication was received from the attorney of the Cedarcroft Cemetery Association stating that his clients had decided to abandon their proposition to establish a cemetery in North Arlington.

Public Laundries.—Infection of garments by contact with soiled water in public laundries is a recognized source of danger, and local boards of health in cities are advised to make (under the provisions of subsection 3 of section 12 of chapter 68 of the laws of 1887) ordinances to regulate the business of these establishments, at least to the extent of requiring that all clothing, except blankets and other heavy woolen goods, shall be boiled for not less than thirty minutes. Woolens, after having been washed in clean hot water, should be dried out of doors, and should, if possible, be exposed to unobstructed sunlight for at least one day.

Back Numbers of Annual Reports.—Requests for back numbers of the Annual Reports of the New Jersey State Board of Health increase in frequency from year to year, but the supply has long ago been exhausted. The board has forwarded the reports regularly to 69 public libraries in New Jersey, and 44 libraries outside of the State are also on the mailing list. Following is a list of libraries to which the annual report of the Board of Health of the State of New Jersey is sent :

Buchtel College, Akron, Ohio.
 New York State Library, Albany, N. Y.
 College Department, University of State of N. Y., Albany, N. Y.
 Massachusetts Agricultural College, Amherst, Mass.
 Free Public Library, Asbury Park, N. J.
 Public School Library, Atlantic City, N. J.
 Johns Hopkins Hospital, Baltimore, Md.
 Medical and Surgical Faculty of Maryland, Baltimore, Md.
 Free Public Library, Bayonne, N. J.
 Blairstown Scribner Library, Blairstown, N. J.
 German Theological School of Newark, Bloomfield, N. J.
 Boston Public Library, Boston, Mass.
 Boston Society of Civil Engineers, Boston, Mass.
 Massachusetts School of Technology, Boston, Mass.
 The American Statistical Association, Boston, Mass.
 Treadwell Library, Massachusetts General Hospital, Boston, Mass.
 Bordentown College Library, Bordentown, N. J.
 Ivy Hall Seminary, Bridgeton, N. J.
 South Jersey Institute, Bridgeton, N. J.
 West Jersey Academy, Bridgeton, N. J.
 Brooklyn College of Pharmacy, Brooklyn, N. Y.
 Medical Society of County of Kings, Brooklyn, N. Y.
 Medical Department of Buffalo University, Buffalo, N. Y.
 Library Company of Burlington, Burlington, N. J.
 University of Vermont, Burlington, Vt.
 Camden County Bar Association, Camden, N. J.
 Free Library, Camden, N. J.
 Chatham Circulating Library, Chatham, N. J.
 College of Physicians and Surgeons, Chicago, Ill.
 Western Society of Engineers, Chicago, Ill.
 The John Crerar Library, Chicago, Ill.
 Cleveland Medical Library Association, Cleveland, Ohio.
 El Paso County Medical Society, Colorado Springs, Col.
 Ohio State University Library, Columbus, Ohio.
 New Hampshire State Library, Concord, N. H.
 Medical Department of the Free Public Library, Decatur, Ill.
 Lafayette College Library, Easton, Pa.
 Public Library and Reading Room, Elizabeth, N. J.
 Northwestern University Library, Evanston, Ill.
 Longstreet Library, Peddie Institute, Hightstown, N. J.
 Centenary Collegiate Institute, Hackettstown, N. J.
 Academical Society Library, Hoboken, N. J.
 Franklin Lyceum, Hoboken, N. J.
 St. Mary's Library, Hoboken, N. J.
 Stevens Institute of Technology, Hoboken, N. J.
 Medical Department of the Public Library, Indianapolis, Ind.
 Free Public Library, Jersey City, N. J.
 Law Library Association, Jersey City, N. J.
 Public School Free Library, Jersey City, N. J.

New Jersey Home for Disabled Soldiers, Kearny, N. J.
 Public Library, Lakewood, N. J.
 Stryker Library, Lambertville, N. J.
 Lawrenceville School Library, Lawrenceville, N. J.
 Free Reading Room and Library, Long Branch, N. J.
 Cornell Hall, Drew Theological Seminary, Madison, N. J.
 I. S. Bradley, Librarian, Madison, Wis.
 Library and Reading Room, Millville, N. J.
 State Bacteriological Laboratory, Minneapolis, Minn.
 Medical Library, Montreal, Canada.
 Friends Library Association, Moorestown, N. J.
 Morristown Library, Morristown, N. J.
 Morristown Seminary, Morristown, N. J.
 Montclair Library Association, Montclair, N. J.
 Burlington County Lyceum of History and Natural Science, Mount Holly, N. J.
 Board of Trade, Newark, N. J.
 Essex County Law Library, Newark, N. J.
 Free Public Library, Newark, N. J.
 Library Association, Newark, N. J.
 Public School Libraries, Newark, N. J.
 Free Circulating Library, New Brunswick, N. J.
 Rutgers College Library, New Brunswick, N. J.
 Sage Library, Theological Seminary, New Brunswick, N. J.
 Dennis Library, Newton, N. J.
 Astor Library, New York City.
 Library Columbia University, New York City.
 Cornell University, Medical College, New York City.
 New York Academy of Medicine, New York City.
 Department of Pathology, College of Physicians and Surgeons, New York City.
 Library of Reform Club, New York City.
 School of Pedagogy, New York University, New York City.
 Library of Teachers' College, New York City.
 Library of Civic Club, Orange, N. J.
 Free Library, Orange, N. J.
 Free Public Library, Paterson, N. J.
 Pennington Institute, Pennington, N. J.
 College of Physicians, Philadelphia, Pa.
 Public Library and Reading Room, Plainfield, N. J.
 Public School Library, Plainfield, N. J.
 American Whig Society, Princeton, N. J.
 Closophic Society, Princeton, N. J.
 College of New Jersey Library, Princeton, N. J.
 Theological Seminary, Princeton, N. J.
 Rahway Library Association, Rahway, N. J.
 Red Bank Circulating Library, Red Bank, N. J.
 Library of School District No. 40, Bergen county, Rutherford, N. J.
 Salem Library Company, Salem, N. J.
 Medical Department, University of California, San Francisco, Cal.
 Horace Kephart, Librarian, St. Louis, Mo.

Shrewsbury Library Association, Shrewsbury, N. J.
 Somerville Public Library, Somerville, N. J.
 Seaton Hall College, South Orange, N. J.
 South Orange Free Public Circulating Library Association, South Orange, N. J.
 Ramsey County Medical Society, St. Paul, Minn.
 Library Association, Summit, N. J.
 University College of Medicine, Syracuse, N. Y.
 New Jersey State Library, Trenton, N. J.
 State Normal School, Trenton, N. J.
 Union Library and Free Reading Room, Trenton, N. J.
 Library Association, Vineland, N. J.
 Luzerne County Medical Society, Wilkesbarre, Pa.
 Medical Library, Winnipeg, Canada.
 Pilesgrove Library Association, Woodstown, N. J.
 Woodbury Library Company, Woodbury, N. J.

Medical Inspection of Schools.—Section 255 of chapter 96 of the laws of 1900 provides that "every board of education may employ a competent physician to be known as the medical inspector, fix his salary and define his duties. Said medical inspector shall visit the schools in the district in which he shall be employed at stated times, to be determined by the board of education, and during such visits shall examine every pupil referred to him by a teacher. He shall at least once during each school year examine every pupil to learn whether any physical defect exists, and keep a record from year to year of the growth and development of such pupil, which record shall be the property of the board of education, and shall be delivered by said medical inspector to his successor in office. Said inspector shall lecture before the teachers at such times as may be designated by the board of education, instructing them concerning the methods employed to detect the first signs of communicable disease and the recognized measures for the promotion of health and prevention of disease. The board of education may appoint more than one medical inspector."

In several school districts medical inspectors have already been appointed, and the results of their work will doubtless soon become apparent. One instance, showing the value of this new service, has just been reported, as follows: A pupil in the kindergarten department of one of the municipalities of the State was observed to be much deformed by cicatrices of an old ulceration involving one side of the face and including one eye. The question arose as to whether it is justifiable to advise the exclusion from the schools of children who are so deformed that their presence will excite in the minds of

other pupils sentiments of horror and disgust. But it was found that in this case a muco-purulent discharge from the eye was flowing down upon the cheek, and a specimen of this fluid was forwarded to the State Laboratory of Hygiene, in Princeton. The report from the laboratory announced that gonococci were present in the discharge. The board of education at once ordered that the infected child should be excluded from the school. It is worthy of notice in relation to this case that the pupil referred to was provided with a certificate from the family physician stating that the affection of the eye was not communicable.

It is very desirable, in carrying into effect the purpose of the Legislature in the enactment of the act above quoted, that the line to be drawn between the duties of the medical inspector and those of the local health board shall be sharp and well defined. The medical inspector should devote himself solely, in his official relation, (1) to the medical questions relating to the detection of the presence, among the pupils, teachers and janitors, of cases of communicable diseases; (2) to observations concerning the growth and development of each child; (3) to observations and records relating to the vision and hearing of the pupils; and (4) to the avoidance of hysteria, chorea and various other school-made diseases.

There is nothing in the law which requires or authorizes medical inspectors to assume responsibilities relating to the sanitary condition of school buildings, nor is it a part of their duty to direct or conduct the disinfection and purification of infected apartments. All of these matters should receive attention from the local health board, and complications of an unpleasant nature are liable to arise if the medical inspector intrudes into a department over which he has no control. The medical inspector of schools will be doing all that is necessary or that can reasonably be expected in this particular, if he calls attention in his weekly, monthly or annual reports to the defects which he may observe in the condition of the school buildings, the water-supply, the lighting and heating, or to over-crowding and other errors of management which may affect the health of pupils unfavorably.

Section 122 of the general school law (chapter 96 of the laws of 1900) gives to boards of education authority to protect the schools against the attendance of infected pupils or teachers, and section 22 of

chapter 68 of the laws of 1887 provides "that any board of education, school trustees or other body having control of the public schools may, on account of the prevalence of any contagious disease, or to prevent the spread of such contagious disease, prohibit the attendance of any teacher or scholar upon any school under their control, and may specify the time during which such teacher or scholar shall remain away from such school, and may prohibit the attendance of any unvaccinated child who has not had the small-pox, and shall also have the power to decide how far re-vaccination shall be required if a case or cases of small-pox have occurred in the city or district."

Section 23 of the same act makes provision for the free vaccination of school children, as follows: "That at the enrollment of the children by the clerks of the school districts in the townships of this State, or by other proper officers in the cities or municipalities, inquiry shall be made as to how many of the children within the school age are unvaccinated, and the same shall be designated by a mark on the said roll, and in case any are found to be unvaccinated, whose parents desire them to be protected from small-pox, and who, in the judgment of the board of education or the trustees of the school districts, are unable to pay therefor, the clerk of said district, or other authorized person, may give to the said child or children a permit to appear at the office of any regularly-licensed physician in said district or municipality to be vaccinated, and such physician, on presentation of said permit, with his certificate appended thereto that the said vaccination has been by him successfully performed, shall be entitled to receive from the said township or local municipal authority the sum of fifty cents for each case so certified, and the same shall be paid in the same manner that other bills for current expenses are paid therein."

Sections 123 and 124 of the general school act contain provisions similar to those above quoted, and it seems to be desirable that supervision of the vaccination of school children should be placed by school boards wholly in the hands of their respective medical inspectors, for in this manner the vaccinal status of the pupil is far more likely to be studied and protection against small-pox made thorough and effective.

Through his influence with the teachers the medical inspector can hope to secure improvement in the personal hygiene of the children, for example and training in cleanliness of the person and of the clothing, and instruction in ventilation and in the selection and

preparation of foods will be stimulated by occasional conferences between teachers and the school physician.

To prevent misunderstandings, it is very desirable that rules for the guidance of the medical inspector of the schools should be prescribed by each board of education, for in the absence of such rules the work of the school is liable to endless interruption.

Rules for this purpose might embrace the following suggestions:

1. The medical inspector shall visit the school buildings within his district as nearly as possible at the hour of 10 A. M. each school day.

2. Every teacher shall, before 10 A. M. each day, send to the desk of the medical inspector a statement in writing, on blank cards provided for this purpose, showing name of every pupil who appears to be ill or who is suspected to be infected with any communicable disease. Every such pupil shall be isolated at the discretion of the teacher until the arrival of the medical inspector.

3. Upon his arrival at the school building the medical inspector shall proceed to inspect the pupils referred to him by the teachers, and if any pupil is found to be, in his judgment, too ill to remain in school, or if any pupil is believed by the medical inspector to be affected with any one of the communicable diseases, the medical inspector shall deliver to every such pupil a notification addressed to the parent or guardian, written on a blank form provided by this board, advising that the child shall be placed in the care of the family physician, and also excluding the child from school until recovery has occurred. No pupil shall be again admitted to school until he shall bring a certificate from his attending physician showing that he is no longer ill, or shall be adjudged by the medical inspector to be free from infection.

4. The medical inspector shall preserve, in a suitable file, all written statements received from the teachers, and he shall also make and preserve duplicates of all notifications sent to parents or guardians.

5. The medical inspector shall, at his convenience, once in each year, determine the weight, height, strength and proportions of each pupil, and keep records of all such facts.

6. The medical inspector shall vaccinate all pupils and teachers who may make application for this service. He shall be reimbursed by the board of education for the cost of vaccine used in said vaccina-

tions. He shall keep a record showing the vaccinal status of every pupil, teacher and janitor. No pupil shall be admitted to the schools of the district unless satisfactory evidence is produced to show that said pupil has been successfully vaccinated, nor unless re-vaccination has been performed within five years.

Closing Public Schools.—The closing of public schools for preventing the spread of contagious diseases is very rarely necessary, and the objections to this measure are so serious that its employment should be reserved for conditions which cannot be met in any other manner. To close the schools because three or four or more cases of scarlet fever or diphtheria occur among the pupils is too often the only effort made to restrict the spread of the disease, and this action may generally be regarded as evidence showing that the health officer or school officer who is responsible for the closing of the school thereby admits his inefficiency and incompetency.

It should be a source of humiliation to any capable sanitary officer or school officer to find himself so insufficiently supported by his official associates that he is unable to apply to the school building under his control the recognized methods of purification and cleansing during outbreaks of the dangerous communicable diseases, and thus render the building and everything within it free from infection and entirely safe for the admission of all uninfected pupils. Daily inspection of the pupils by a competent medical officer, and the instant exclusion of pupils, teachers and janitors found to be infected, will permit and fully warrant uninterrupted continuance of the school work.

The following suggestions for cleaning school buildings are reprinted from Circular 89:

Each day, during the prevalence of infectious disease, after the school is dismissed, the janitor is to scrub with warm water, soap and a stiff scrubbing brush, all parts of doors, casings and other woodwork which can be touched by the hands of the children, including seats and desks. The floor should be in good repair and without open cracks or crevices. It should be sprinkled with clean water daily before being swept. Lead pencils (there should be no slates) should every day be immersed in a 5 per cent. solution (1 to 20) of carbolic acid and wiped dry. The difficulty attending the cleansing of books should cause great care to be taken by teachers to prevent books from being passed from hand to hand, or touched by anyone

except the child to whom they belong or to whom they may be assigned. Books which have been used by a pupil who is suffering from any one of the communicable diseases, should be destroyed by fire, or they may be treated by exposure to formaldehyde gas. During each vacation the walls and woodwork, including doors, desks and floors, should be wetted with a solution of bichloride of mercury (1 to 1,000), and the windows should be kept open to admit great floods of sunlight and pure air. Finally scrub with clean water. Water coolers are unclean and unnecessary. They should not be allowed in school buildings. When practicable, drinking fountains, consisting of a jet of water rising from the center of a piece of marble, requiring no cups, should be supplied. Individual seats and desks should be provided in every school. Light and airy cloak-rooms should always be provided, and hooks should be so separated that the garments of different pupils will not come into contact."

When health officers countenance the closing of public schools during ordinary outbreaks of scarlet fever and diphtheria, instead of advising the rigid employment of measures for keeping the building and its contents clean and free from infection, we witness one of the consequences of our present defective system of creating such officers, and until instruction has been provided for sanitary inspectors, and their appointment to office made to depend upon their fitness for the duties which they are expected to perform, uniformity in the service of the various districts cannot be obtained.

Inspection of Public School Buildings.—Following is a report of an inspection of a school building in the town of Kearny:

To the Board of Health of the State of New Jersey:

GENTLEMEN—In accordance with a request received from the board of health of the town of Kearny, an inspection was made December 21st, 1899, of the heating and ventilating system of public school building No. 5 in said town, all the members of the local board of health, with one exception, being present and assisting in said examination.

The following conditions were observed:

1. The building is heated by direct radiation from steam coils placed in each room.
2. For the ventilation of the class-rooms, steam coils are placed within and near the bottom of vertical brick shafts, said shafts having openings of about 131 square inches in area, guarded by flap-valve registers placed near the floor in each room.
3. Two receptacles for excreta are placed in the basement of the building beneath class-rooms, each of said receptacles being about two feet wide, two feet deep and sixteen feet long. A urinal, twelve feet long, is connected with the privy pit on the boys' side of the building. Conduits from each of these receptacles connect with the main chimney, into which is carried the smoke and gases from the fire beneath the

steam boiler. It has been the custom on these premises to burn the excremental accumulations at the end of each school year. It was observed that the draft produced by the hot gases from the fire beneath the boiler was noticeable at a point about twelve inches below the privy seats, but no draft could be detected by the use of a match flame when held above the line of the top of the pit. The provision for carrying off offensive odors from the surface of the urinal was found to be inadequate, there being no movement of air toward the ventilating flues at point of two inches above the opening in the floor.

4. The privy receptacles were found to be filled with excreta to about one-half of their capacity.

5. The water-supply of this building is taken from the public mains of the town.

From the foregoing statement, it will be seen that the objectionable method of direct radiation is depended upon for warming the class-rooms of this building, and that the size of the exits for foul air is inadequate, and renders impossible the maintenance of the air of the various rooms in a state of sufficient purity to insure protection against the evils attending re-breathing the air of the rooms. But attention is more particularly called to the storage of excreta in the basement of this building.

This board is on record concerning its objection to the retention of excrementitious materials within school buildings, and it has uniformly declared that no such matters should under any circumstances whatever be allowed to accumulate in such buildings. The so-called dry closets are in fact privy vaults, and they differ in principal from ordinary door-yard privy vaults only because of the addition of a horizontal flue which terminates in a chimney. In the absence of sewers and a public water-supply, expediency has compelled boards of education to sometimes resort to makeshift methods in providing privy accommodations for public school buildings, and the trade has not been slow in reaching out for whatever profits might be obtained by joining with school boards in their endeavor to meet the advancing demands for "all modern conveniences" regardless of the absence of water-supplies and sewers, and consequently during the progressive decade just closing hundreds of public school buildings throughout the country have been equipped with "dry closets" in the basement. These devices have been heralded as one of the "new things" of the period, and protests from sanitarians against the return to ancient methods, modified only by very unreliable and uncertain attachments, proved to be faint and feeble compared with the praises of "dry closets" which were widely advertised by the hustling salesmen employed by the manufacturers of the "sanitary dry closet system." But in course of time the objections, which have existed since the beginning of civilization, to the defilement of the air of buildings by the presence therein of human excreta, have, here and there, in this town and in that, gradually forced themselves upon the attention of parents, teachers and boards of school trustees, and in numerous instances the privy pit in school buildings has given way to the water closet, or to earth closets located in the yard. The risks and dangers to health due to emanations from human excreta are established beyond possible doubt, and it is also true that in every large group of persons there will be found one or more who is affected by some one of the pathological conditions which are conveyable through fecal infection, and when we consider that all of the evils which certainly attend large accumulations in dwellings of the discharges from bowels and bladder are sure to occur on school premises where these accumulations exist, if it should chance that the air-draft up the chimney is insufficient to carry off the gases, dried flakes and dust, which escape from the surface of such a mass while desiccation is occurring, then

we will hesitate, when serving as guardians of the children who are by law required to enter and remain for hours, daily, within these buildings, to tolerate the storage of the most filthy of all substances in the same structure with the children whom we love and whom we earnestly desire shall have healthy bodies as well as cultivated minds. The principle which should guide in the disposal of excreta, and to which all sanitarians adhere, has been stated as follows: All excreta should be removed from every building inhabited by human beings as quickly as possible and conveyed away as far as possible.

It appears that at the time of the erection of public school No. 5, in the town of Kearny, no public sewer was within reach of the building, but at present both sewer and water are available, and we therefore recommend that a water-carriage system for the removal of excreta shall be substituted for the dangerous construction which is at present in use in said building.

Very respectfully,

HENRY MITCHELL,
Secretary.

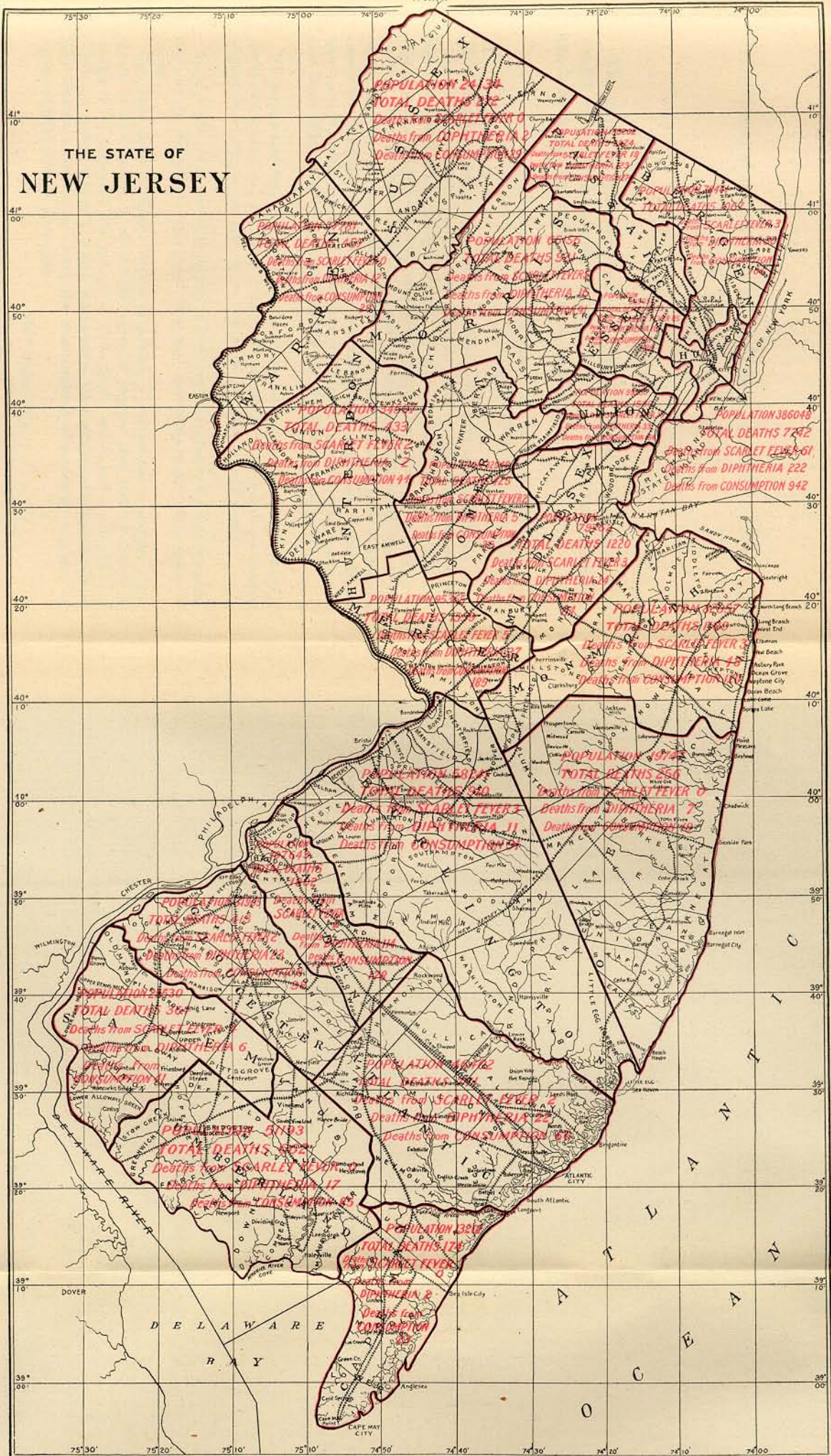
TRENTON, N. J., December 22d, 1899.

During the vacation period of 1900, the storage pits for excreta were removed from public school building No. 5, in the town of Kearny, and a water-carriage system was installed.

Reference to previous reports of this board, and to recent records of other States, shows that the nuisance created in public school No. 5, in Kearny, by the storage of excreta within the school building, has been repeatedly experienced in many localities, and it is safe to predict that this unpleasant experience will continue until the very last one of these indoor privy vaults shall have been removed.

Isolation Hospitals.—Chapter 132 of the laws of 1900 authorizes the cities of New Jersey to provide hospitals for the treatment of infectious and contagious diseases, and gives to every such city hospital the privilege of receiving cases of said diseases from other portions of the county in which such hospital may be located. The advantages which promise to result from the provisions of this act may be foreseen in the case of the city of Newark, where it is proposed to erect a municipal hospital which shall be designed to afford facilities for the treatment of all cases of dangerous communicable diseases which may occur anywhere within the county of Essex. A movement has started in Asbury Park for the erection of a municipal hospital which shall be available for the relief of persons suffering from communicable diseases who may be temporarily living in a hotel or boarding-house, or who may be residing in adjoining sanitary districts, for the growth and development of the hotel and boarding-house business

along the seashore has gradually attracted public attention to the necessity of making provision for the care, comfort and safety of patrons of these establishments in cases where infectious diseases occur in such buildings. Few persons occupying private houses in coast resorts have need of isolation hospital accommodations, but the hotel guest is hard pressed for a refuge when attacked by one of the more serious contagious or infectious disorders, for if he remains in his hotel the proprietor is liable to suffer heavy loss by reason of the departure of other guests, and the unfortunate victim of the disease is compelled to go. But where shall he go? He cannot leave the city by rail or other public conveyance because he would endanger fellow-travelers, and no choice is left except to pay the price demanded for the privilege of remaining in the hotel, or rent a private house for his own exclusive use. And here arises another difficulty, for owners of property do not willingly accept tenants who are affected with infectious diseases, fearing that such occupancy may endanger subsequent renting. Either of these alternatives involves a very considerable expenditure, and there are many persons who find themselves unprepared to suddenly add such a sum to the outlay which has been anticipated and provided to meet the expected expenditure for the summer vacation.



MAP OF THE STATE OF NEW JERSEY, SHOWING:

Population of each county by census of 1900.
 Total deaths in each county for the year ending June 30th, 1900.
 Deaths in each county from scarlet fever for the same period.
 Deaths in each county from diphtheria for the same period.
 Deaths in each county from consumption for the same period.

Summary of Reports from Local Boards of Health.

The inquiries addressed to local boards of health suggesting particular topics for the annual report of 1900 were sent to secretaries of the local boards about September 1st, as follows :

BOARD OF HEALTH OF THE STATE OF NEW JERSEY, }
TRENTON, September 1st, 1900. }

To Local Boards of Health :

Section thirty-seven of the act approved March 31st, 1887, reads as follows :

37. *And be it enacted*, That the local board of health of every township, city, borough, town, and other municipality, shall, on or before the first day of October in each year, in addition to other reports required, prepare an annual report of the condition of the public health within the limits of its jurisdiction, stating therein any special cause for the deterioration of health or of hazard thereto, and shall therein answer any inquiries which may have been addressed to such local board by the state board of health, and such local board shall forward a copy of such report to the state board of health on or before the fifteenth day of October in each year.

The act approved June 15th, 1895, requires that the annual report of the State Board of Health shall be completed one month earlier than heretofore. Local boards are therefore urgently requested to forward their reports to us as early as October 1st, if possible.

Local boards are requested to include in their reports replies to the accompanying inquiries, in addition to such other facts and statements as they may desire to present.

The State Board of Health desires to publish a comprehensive abstract of the reports of local boards, to show what degree of progress each sanitary district is making in the promotion and protection of the public health, and to this end local boards are requested to make a clear statement of the needs and sanitary defects of their districts, as well as to record the local hygienic advancement and give an account of official duties performed.

Very respectfully,
HENRY MITCHELL, M.D.,
Secretary.

ANNUAL REPORT
OF THE
LOCAL BOARD OF HEALTH OF

1.
(Name of sanitary district.)
County of for the year ending October 1st, 1900.
2. Names and addresses of the officers and members :

NAMES.	ADDRESSES.
.....President.
.....Member.
....."
....."
....."
..... { Registrar of Vital Statistics.
.....Secretary.
.....Inspector.
....."
....."
....."

3. Population by Census of 1900 :
.....
4. Communicable diseases :

NAMES OF DISEASES.	Number of cases reported.	Number of deaths.
Diphtheria.....
Membranous Croup.....
Scarlet Fever.....
Typhoid Fever.....
Small-pox.....
Varioloid.....

5. Do physicians promptly report communicable diseases ?
.....
6. Isolation hospital :
Has your board provided satisfactory facilities for isolating cases of infectious diseases?.....
7. Public water-supply :
(a) Average daily quantity used.....
(b) Number of dwellings connected during the year ending October 1st, 1900,
.....
(c) Have any extensions been made?.....

8. Sewerage :
(a) Number of premises connected with the sewers during the year?.....
(b) Have there been any extensions during the year?.....
9. Garbage, rubbish and ashes :
Has there been any improvement in the removal of refuse substances?.....
10. Nuisances :
(a) Number investigated during the year.....
(b) Number abated.....
(c) Number of prosecutions for failure to abate nuisances.....
11. Dairies and milk depots :
Is there a regular inspection of dairy premises and milk depots in your district? Are records kept of such inspections, and do the records show
(a) the character of the water-supply, (b) the methods employed in washing cans and utensils, and in the (c) collection, (d) cooling, (e) transportation and (f) delivery of the milk?.....
12. Schools :
(a) Has medical inspection of the public schools of your district been regularly established?.....
(b) What is the proportion of unvaccinated school children in your district?.....
13. State bacteriological laboratory :
(a) Is there a supply-station in your district for mailing-cases for sending specimens of diseased tissue to the State bacteriological laboratory in Princeton?.....
(b) If supply-stations are desired, please name one or more centrally located drug stores where they may be established.....
14. Comotories :
(a) Do cemetery keepers make records of all interments?.....
(b) Are any burials made without burial permits?.....
15. Blank forms for records, notices, etc. :
Local boards are requested to transmit, when forwarding annual report, a copy of all ordinances, rules and regulations which have been adopted during the past year, and also samples of all new blanks now in use.
16. Amount appropriated for the uses of the board :.....
17. Meetings :
How many meetings have been held by the board during the year?.....
- Signature, official title and P. O. address of the person filling out this report. {
.....
.....
.....

ATLANTIC COUNTY.

Town of Absecon.—MEMBERS AND OFFICERS—Elmer C. Bates, Daniel Walters, Jr., Japhet Adams, D. J. Champion, Edward Brandt, Harry T. Foulds; G. B. Lutts, Secretary; T. W. Madden, M.D., Inspector.

Three meetings were held during the year.

Buena Vista Township.—MEMBERS AND OFFICERS—Alfred Pennock. Buena; Oscar Wiegand, Jr., Cedar Lake; Edward J. Smith, Richland; Thomas H. Hults, Vineland; Douglass Reed, Secretary, Buena.

Egg Harbor City.—MEMBERS AND OFFICERS—George F. Breder; V. P. Hoffman, Secretary; H. G. Regensburg, Theo. H. Boysen, M.D., J. U. Elmer, Inspectors.

Communicable diseases were reported as follows: Diphtheria, 27; fatal cases, 5; scarlet fever, 4 cases. Average quantity of water furnished to consumers daily, 50,000 gallons. Premises connected with water-mains during year, 15. No sewers. Complaints investigated, 15. Nuisances abated, 12. Amount expended, \$77.85. Fourteen meetings were held.

Egg Harbor Township.—MEMBERS AND OFFICERS—Walter Fifield, Bakersville; Theodore Smith, Scullville; John Blackman, Steelmanville; Dr. Samuel C. Edwards, Linwood; Abraham R. Vickers, Bakersville.

Four cases of scarlet fever and 6 of typhoid fever were reported. One nuisance was abated. Appropriation, \$50. Five meetings were held.

Galloway Township.—MEMBERS AND OFFICERS—C. Bodine Somers, Oceanville; Adolphus Johnson, Port Republic; Anthony Kienzle, Secretary, Cologne; Edmund Madden, Inspector, Absecon.

Three cases of diphtheria were reported. Two meetings were held.

Hamilton Township.—MEMBERS AND OFFICERS—D. E. Iszards, Jos. L. Veal, A. G. Stewart, Jr.; Jos. Hammill, Registrar; Charles E. Cain, Secretary. All of Mays Landing.

Two meetings were held.

Town of Hammonton.—MEMBERS AND OFFICERS—Marcellus L. Jackson; Dr. Chas. Cunningham, Inspector; Wm. C. Cunningham, John C. Anderson, John T. French; J. L. O'Donnell, Secretary; Joseph H. Garton, George Bernshouse.

Four cases of diphtheria, 1 of membranous croup and 1 of scarlet fever were reported. Five meetings were held.

ATLANTIC COUNTY—Continued.

Linwood Borough.—NAMES OF MAYOR AND COUNCIL—James Somers, Joseph Steelman, Reuben L. Somers, William Scull, William Lear, John C. Steelman; Jas. Farrish, Borough Clerk; J. Thompson Steelman, Steelmanville.

No organized board of health.

Mullica Township.—MEMBERS AND OFFICERS—Reuben Brooker, Elwood; Chas. Saalman, Egg Harbor City; Alex. J. McKeone, Elwood; Wesley W. Phillips, Elwood; John T. Irving, Secretary, Elwood.

One case of typhoid fever occurred. One nuisance was abated. One meeting was held.

Pleasantville Borough.—MEMBERS AND OFFICERS—L. H. Barrett, Samuel Bartlett, Frank Reinar, Pardon R. Adams, Wilbur Reed; John Sanders, Secretary; Dr. R. M. Sooy, Inspector.

Five cases of typhoid fever occurred. Monthly meetings were held.

BERGEN COUNTY.

Allendale Borough.—MEMBERS AND OFFICERS—Peter D. Rapelje; Dr. R. R. Letts, Inspector; Jno. A. Williamson, J. J. Pullis, Smith Roswell; Garret G. Smith, Secretary.

Two cases of diphtheria and 7 of scarlet fever were reported, none of which were fatal. Population by census of 1900 was 698. One nuisance was reported and abated. Appropriation, \$30. Six meetings were held.

Bergen Township.—MEMBERS AND OFFICERS—Deidrich Tolke, Archille Jacollucci; Daniel Saviello, Secretary; P. Grueter, Inspector, all of Wood Ridge.

Two nuisances were abated. Amount appropriated for use of board, \$25. Four meetings were held.

Bergenfield Borough.—MEMBERS AND OFFICERS—Conrad H. Fricke, Wm. B. May; Howard Demarest, Secretary; John J. Huyler, Frederick Briesscher, Inspectors.

Population by census of 1900, 700. Two cases of scarlet fever were reported. Five dwellings were connected with the public water-

BERGEN COUNTY—*Continued.*

supply during the year. One suit was instituted for enforcement of the ordinances of the board. The result was favorable, and the nuisance was abated. Four meetings were held.

Carlstadt Borough.—MEMBERS AND OFFICERS—Henry Kreiling, Jr., Charles William Fleischmann; Herman Foth, Secretary; Ernest F. Sickenberger, Inspector.

Five cases of diphtheria, with 2 deaths, 1 case of membranous croup, with 1 death, and 4 cases of scarlet fever, with 1 death, were reported. Nuisances abated, 18. Annual appropriation, \$100. Eleven meetings were held.

Cliffside Park Borough.—MEMBERS AND OFFICERS—Samuel A. Brown, M.D., S. W. McClave, Edward George, Geo. W. Laird, Jean Henri Raas; R. H. Nutt, Secretary. All of Cliffside.

One case of scarlet fever was reported. Water-supply is obtained from the Hackensack Water Company. Five meetings were held.

Cresskill Borough.—E. B. Westervelt, Registrar.

No organized board of health.

Delford Borough.—MEMBERS AND OFFICERS—E. Blauvelt, T. Knight, C. H. Storms, H. A. Bingham; G. F. Moore, Secretary; W. P. Ackerman, Inspector. All of Oradell.

Two nuisances were abated. Appropriation, \$25. Three meetings were held.

Dumont Borough.—MEMBERS AND OFFICERS—G. H. Hiller, R. S. Dox, R. C. Dixon; Wm. P. Cox, Borough Clerk; J. E. Pratt, M.D., Inspector.

One case of diphtheria was reported.

East Rutherford Borough.—MEMBERS AND OFFICERS—Dr. Wm. E. Ogden, A. Bolle, A. De Vries; P. B. S. Hodges, Inspector; Wm. E. Novo.

Communicable diseases were reported as follows: Diphtheria, 4; scarlet fever, 11; typhoid fever, 1. Dwellings connected with water-mains during past year, 20. No sewers. Thirty nuisances were abated. Twelve meetings were held. No appropriation is made for the uses of the board, but bills are paid on presentation to the governing body.

BERGEN COUNTY—*Continued.*

Edgewater Borough.—MEMBERS AND OFFICERS—Wm. Eirkhoff, Charles F. Carlough, John V. Signell, Geo. W. Allison; Edward Fischer, Secretary.

Seventeen nuisances were abated. Amount of appropriation, \$100. Fourteen meetings were held.

Englewood City.—MEMBERS AND OFFICERS—Henry Booth, Patrick L. Kenny, Wm. C. Davis, Dr. J. W. Proctor; Robert Jamieson, Registrar; Arthur Gatfield, Secretary; Harry Smith, Inspector.

Seven cases of diphtheria, 6 of scarlet fever, and 5 of typhoid fever were reported. An isolation hospital is maintained for the care of cases of the dangerous communicable diseases. Average daily quantity of water furnished to consumers, 97,000 gallons. Premises connected with water-mains during past year, 39. Sewer extension, 1,169 feet. Premises connected with sewer during past year, 25. Complaints investigated, 480. All nuisances discovered were abated. Appropriation, \$1,000. Twenty-one meetings were held.

Englewood Cliffs Borough.—Dr. Joseph Huger, Fort Lee, states that there is no board of health in the borough.

Fairview Borough.—MEMBERS AND OFFICERS—F. W. Schneider, C. N. Driggs, W. G. Wingerath; Jno. C. Bush, Registrar; Geo. A. Storms, Secretary.

Two cases of diphtheria were reported. Dwellings connected with water-mains during year, 10. No sewers. Three nuisances were abated. Amount appropriated, \$50. Twelve meetings were held.

Franklin Township.—MEMBERS AND OFFICERS—C. H. Bush, Crystal Lake; John P. Smith, Crystal Lake; John W. Courter, Campgan; John W. Ackerman, Secretary, Wyckoff; E. W. Hamilton, M.D., Inspector, Oakland.

Seven cases of diphtheria, 1 of membranous croup, 8 of scarlet fever and 7 of typhoid fever were reported. One nuisance was abated. Two meetings were held.

Garfield Borough.—MEMBERS AND OFFICERS—Geo. S. Davenport, M.D., David Dwyer, J. Vander Platt, Franz Bierman; P. J. Scanlon, Secretary; Max Merkel, Inspector.

Five cases of diphtheria and 2 of scarlet fever were reported. Average daily quantity of water furnished to consumers, 50,000

BERGEN COUNTY—*Continued.*

gallons. Dwellings connected with water-mains during the year, 10. No sewers. Nuisances abated, 40. Appropriation, \$125. Ten meetings were held.

Hackensack City.—MEMBERS AND OFFICERS—R. G. Wool, T. A. Haring, Lemuel Lozier, W. P. Amerman, John McD. Gamwell, Samuel T. Crissy; A. E. Conklin, Secretary; Robert Ballagh, Inspector; Dr. Frederick Hallett.

Communicable diseases were reported as follows: Diphtheria, 15; scarlet fever, 12; typhoid fever, 3. Premises connected with sewer during past year, 135. Appropriation, \$600. Twelve meetings were held.

Harrington Township.—MEMBERS AND OFFICERS—Wm. L. Linderman, Closter; Joseph F. Mount, Haworth; John W. Van Blarcom, Norwood; Wm. J. Demarest, Secretary, Norwood; Lewis B. Parsell, M.D., Inspector, Closter.

One case of diphtheria and 2 of membranous croup were reported. Eight nuisances were abated. One suit was brought for violation of the ordinances of the board. Seventeen meetings were held.

Hasbrouck Heights Borough.—MEMBERS AND OFFICERS—Frank S. Flagg, E. L. D. Hester, A. K. Goodrich, Jas. S. Valentine; John G. Martin, Secretary; Dr. G. B. Gale, Inspector.

Two cases of diphtheria, 2 of membranous croup, and 1 of scarlet fever, were reported. Appropriation, \$75. Seven meetings were held.

Hohokus Township.—MEMBERS AND OFFICERS—Richard Wanamaker, Mahwah; John C. Ryerson, Ramseys; Henry A. Winter, Ramseys; Dr. C. P. De Yoe, Ramseys; John Ackerman, Secretary, Wyckoff; Jacob J. Young, Inspector, Ramseys.

Fifteen cases of scarlet fever were reported. One nuisance was abated. Appropriation, \$100. Three meetings were held.

Leonia Borough.—MEMBERS AND OFFICERS—Peter S. Newell, Arthur Bogert, C. H. Eaton; H. M. Thompson, Secretary; J. Talmage Wyckoff, M.D., Inspector.

Public water-supply is furnished by the Hackensack Water Company. Six dwellings were connected during the past year. Appropriation, \$200. Monthly meetings were held.

BERGEN COUNTY—*Continued.*

Little Ferry Borough.—MEMBERS AND OFFICERS—George Soll, Little Ferry; R. Van Sadeso, Little Ferry; Charles Heuer, Little Ferry; A. Woods, Secretary, Little Ferry; Henry C. Elsing, Inspector, Ridgefield Park.

Five cases of diphtheria; 1 of scarlet fever, and 1 of typhoid fever were reported. Appropriation, \$50. Monthly meetings were held.

Lodi Borough.—MEMBERS AND OFFICERS—James J. Mason, Christopher Tattenall, Walling Van Vout, John Hagerty; Jacob Van Hook, Secretary. All of Lodi. E. E. Conover, M.D., Inspector, Hasbrouck Heights.

One case of diphtheria, and 2 of typhoid were reported. Daily water consumption, 20,000 gallons. Dwellings connected during past year, 20. Extensions, 2,600 feet. No sewers. Three nuisances were abated. Appropriation, \$150. Monthly meetings were held.

Lodi Township.—MEMBERS AND OFFICERS—Herrman Schmidt, Woodridge; Peter Strunk, Woodridge; August Schieffer, Little Ferry; Julius Pries, Secretary, Woodridge; Robt. L. Craig, Inspector, Woodridge.

One case of diphtheria was reported. Appropriation, \$75. Five meetings were held.

Maywood Borough.—MEMBERS AND OFFICERS—Philip Thorne, Gustav Jaeger, Charles Schminke, D. S. Price; F. T. May, Secretary.

One meeting was held. Following is a report of an inspection of two chemical works and a tile factory located in the borough:

Board of Health of the State of New Jersey:

GENTLEMEN—An inspection was made June 22d, 1900, of three factories in Maywood, and I would report as follows:

Located about one-quarter of a mile west of the depot there are three factories in a group. One is known as the American Essence Extracting Company, another as the Schaefer Alkaloid Works, and the third as the Maywood Art Tile Company. The waste liquids from the essence factory are drained into a cesspool, and do not directly contaminate any water-course. The discharge from the tile works consists of nothing but clay in suspension. In the alkaloid works there is a large quantity of water used for extracting purposes and for cooling the stills during distillation. The manufactured products consist of strychnine, pilocarpine and one or two other alkaloids. A tile drain leads from this factory to a low, swampy spot, and into this the washings are allowed to pass. I was informed by the superintendent that six or eight pails full of water containing some of the extracted products found its way into this swampy ground, and thence by a drain to the brook which is located 200 yards further west. This brook empties into Saddle river and thence into the Hackensack

BERGEN COUNTY—Continued.

river. There was evidence of the deposit of greenish material along the side of the drain. The owners of the property said that they would exclude these washings from the brook in the future.

Respectfully submitted,

A. CLARK HUNT,
Sanitary Inspector.

Midland Township.—MEMBERS AND OFFICERS—David H. Hopper, Valetta; John W. Winters, Oradell; Jacob H. Blauvelt, Ridgewood; John D. Bogert, Secretary, Ridgewood; Wm. L. Vroom, M.D., Inspector, Ridgewood.

Eight cases of scarlet fever and 1 of typhoid fever were reported. Two meetings were held.

Midland Park Borough.—MEMBERS AND OFFICERS—Thomas Holt, Midland Park; John Klopman, Wortendyke; John L. Guyre, Wortendyke; Jacob Leenas, Secretary, Wortendyke; Dr. Wm. L. Vroom, Inspector, Ridgewood.

Five cases of diphtheria and 3 of scarlet fever were reported. No meetings were held by the board.

Montvale Borough.—MEMBERS AND OFFICERS—Jacob Terkinle, James D. Van Riper, F. C. Ackerman; John B. Hering, Clerk.

One case of diphtheria was reported. Appropriation, \$50.

Old Tappan Borough.—MEMBERS AND OFFICERS—James J. O'Connor, Rivervale; Emmet Post, Tappan, N. Y.; John Maver, Tappan, N. Y.; Joseph Flate, Rivervale; R. B. Haring, Secretary, Tappan, N. Y.

Six cases of diphtheria and 2 of scarlet fever occurred. Four meetings were held.

Orvil Township.—MEMBERS AND OFFICERS—Edw. West, Jr., Hohokus; James Vandyne, Waldwick; Frank Wagner, Waldwick; J. B. Ver Nooy, Secretary, Waldwick.

Six cases of diphtheria and 1 of typhoid fever were reported. Appropriation, \$75. Two meetings were held.

Palisade Township.—MEMBERS AND OFFICERS—James E. Collins, New Bridge; Jacob B. Christie, River Edge; Ignatz Dunst, Peetzburgh; Wm. Ely, Secretary, New Bridge; Dr. W. P. Ackerman, Inspector, Oradell.

One case of scarlet fever and 2 of typhoid fever were reported. Two deaths from diphtheria and 1 of membranous croup occurred. Three nuisances were abated. Four meetings were held.

BERGEN COUNTY—Continued.

Palisades Park Borough.—MEMBERS AND OFFICERS—Morgan E. Jenkins, Paul Herzog, Wm. Eichenlaub, A. I. Parkyns, Ambrose S. Phipps; Wm. T. Miller, M.D., Secretary.

Two cases of diphtheria were reported. Appropriation, \$100. Monthly meetings were held.

Park Ridge Borough.—MEMBERS AND OFFICERS—Henry C. Neer, M.D., Peter Nelson, Joseph Tuculant; Henry Strohsahl, Secretary; Charles E. Terhune, Inspector.

Three cases of scarlet fever and 1 of typhoid fever were reported. Appropriation, \$50. One nuisance was abated. Two meetings were held.

Ridgefield Borough.—MEMBERS AND OFFICERS—Peter Hall, Andrew McGill, B. O. Tedmon, Wm. B. Reuckart; B. F. Underwood, Secretary.

Dwellings connected with public water-mains during the year, 19. Connected with sewers, 17. Nuisances abated, 2. Annual appropriation, \$30. Ten meetings were held by the board.

Ridgefield Park Village.—MEMBERS AND OFFICERS—Hugh Innes, H. Linweber, J. W. De Groat; W. H. Hunter, Registrar; Edgar T. Bonds, Secretary; H. C. Elsing, M.D., Inspector.

Three cases of scarlet fever, 3 of diphtheria and 3 of typhoid fever were reported. A system of sewers is being introduced. Six nuisances were abated. Annual appropriation, \$100. Five meetings were held.

Ridgefield Township.—MEMBERS AND OFFICERS—John Brown, John A. Brandt, James Burns; Thomas F. Mallon, Secretary; Joseph Huger, M.D., Inspector. All of Fort Lee.

Two cases of diphtheria and 2 of scarlet fever were reported. Public water was introduced May 1st, 1900. Nuisances abated, 6. Annual appropriation, \$400. Sixteen meetings were held.

Ridgewood Village.—MEMBERS AND OFFICERS—Cornelius P. Croute, John R. Stevens, Lorenzo Terwillige, Wm. L. Vroom, Jos. H. Christopher; Thos. Terhune, Registrar; J. Blauvelt Hopper, Secretary; John T. De Mund, M.D., Inspector; Peter E. Pulis, Assistant Inspector.

BERGEN COUNTY—*Continued.*

Three cases of scarlet fever and 3 of typhoid fever were reported. Twelve meetings were held.

Riverside Borough.—MEMBERS AND OFFICERS—John A. Jenkins, Cherry Hill; Joe Vanderbeek, River Edge; Frank Pierce, River Edge; F. G. Stebbins, River Edge; J. A. Weston, Registrar, Cherry Hill; Wm. W. Herrick, Secretary, River Edge; J. H. Demarest, Inspector, Hackensack.

One case of diphtheria and 3 of scarlet fever were reported. Annual appropriation, \$75. Eight meetings were held.

Saddle River Borough.—MEMBERS AND OFFICERS—U. Savage, A. H. Ackerman, F. L. Blackledge; T. Vel. Woodruff, Registrar.

Seven cases of scarlet fever were reported.

Saddle River Township.—MEMBERS AND OFFICERS—Wm. H. Ackerman, Warren Point; Sela Doremus, Dundee Lake; John Strehl, Fair Lawn; Isaac A. Hopper, Secretary, Fair Lawn; Dr. Davenport, Inspector, Garfield.

One case of scarlet fever was reported. One nuisance was abated. Eight meetings were held.

Teaneck Township.—MEMBERS AND OFFICERS.—Peter I. Ackerman, Hackensack; William Bennett; Jonathan Hawkins, Secretary, Englewood.

Tenafly Borough.—MEMBERS AND OFFICERS—J. J. Haring, M.D.; S. G. Clarke, James Delehanty; Frederick L. Colver, Secretary; James B. W. Lansing, M.D., Inspector.

One case of diphtheria occurred. Annual appropriation, \$150. Six meetings were held.

Union Township.—MEMBERS AND OFFICERS—Henry Danton, Lyndhurst; James H. McKenna, Lyndhurst; Charles Rodgers, Avondale; Thomas E. Buckley, Lyndhurst; Dr. Trautwein, Inspector.

Three nuisances were abated. Ten meetings were held.

Upper Saddle River Borough.—MEMBERS AND OFFICERS—Edward Smith, Ramseys; John Straut, Ramseys; John Swartz, Saddle River; Herman F. Hopper, Saddle River; Levi C. Fredericks, Saddle River; J. B. Collins, M.D., Ramseys; A. A. Zabriskie, Saddle River; Henry Zabriskie, Secretary, Saddle River.

One case of diphtheria and one of scarlet fever occurred. Ten meetings were held.

BERGEN COUNTY—*Continued.*

Washington Township.—MEMBERS AND OFFICERS—Daniel O'Mara, Etna; Edward C. Sarson, Westwood; Peter J. Westervelt, Westwood; Nicholas Cleveland, Secretary, Westwood.

Three cases of diphtheria and 3 of scarlet fever were reported. Four meetings were held.

Woodcliff Borough.—MEMBERS AND OFFICERS—S. B. Reed, Woodcliff; G. J. Ackerman, Park Ridge; John H. Wortendyke, Woodcliff; William English, Woodcliff; David H. Tice, Saddle River; G. J. Wortendyke, Secretary, Woodcliff.

One meeting was held.

Wood Ridge Borough.—MEMBERS AND OFFICERS—Joseph H. Schmitt, Paul Fisher, Isador Lazard; Wm. H. White, Secretary; H. W. Ostrowski, Inspector.

One case of diphtheria occurred. Six dwellings were connected with water-mains during the year. Five nuisances were abated. Appropriation, \$50. Ten meetings were held.

BURLINGTON COUNTY.

City of Beverly.—MEMBERS AND OFFICERS—Dr. J. Currie, Geo. Smith, Wm. K. Vansierer, Chas. Parsons, Jr., J. P. Haines; Dr. B. F. Soby, Secretary; Chas. F. Richardson, Inspector.

Four cases of scarlet fever were reported. Amount appropriated for board, \$75. Seventeen meetings were held.

Beverly Township.—MEMBERS AND OFFICERS—W. W. Weiler, Delanco; Robert Stuart, Beverly; H. N. Perkins, Beverly; Jos. B. Carter, Secretary, Delanco; H. K. Weiler, M.D., Inspector, Delanco.

Two cases of diphtheria and 1 of scarlet fever were reported. Four nuisances were abated. One suit was instituted for failure to abate nuisance. Vaccination is required as a prerequisite for attendance in public schools. Six meetings were held.

City of Bordentown.—MEMBERS AND OFFICERS—L. D. Tebo, M.D., Edwin L. Thompson, Rob't T. Bantle, D. R. Brown, Sam'l E. Burr; Wm. H. Shipp, M.D., Secretary; H. N. Jobs, Secretary.

Communicable diseases were reported as follows: Diphtheria, 6; scarlet fever, 5; typhoid fever, 25. Average daily consumption of

BURLINGTON COUNTY—*Continued.*

water, 250,000 gallons. Dwellings connected to mains during year, 7. Nuisances investigated, 150; abated, 125. Amount appropriated, \$100. Fifteen meetings were held.

Bordentown Township.—MEMBERS AND OFFICERS—Frederick W. Taylor, Dr. W. H. Shipp, William Warrack, George Stricker; Milton R. Cox, Secretary. All of Bordentown.

One suit was instituted for violation of ordinance. Annual appropriation, \$100. Monthly meetings were held.

Following are reports of inspections of six dairy premises in Bordentown township:

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—J. I. Klein (Owner).

ADDRESS—Bordentown.

TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at barn.

Distance of well from stable. About 40 feet.

Distance of well from manure pile. Twenty feet.

Source of water-supply for washing utensils and cans. Surface well at house.

If from well, describe surroundings. Located under kitchen; privy about 40 feet distant; depth of well not known.

Was sample taken for analysis? No.

Cattle.

Number of cows. Twelve.

Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.

How frequently removed? Very often.

Quantity of manure at time of this inspection. Very small quantity.

Utensils.

How washed and dried? Rinsed with cold water, washed with hot water, placed in air and sun to dry.

Where are the utensils washed? In shed.

Any appliance for sterilizing cans, pails and dippers? No.

Bottles—how washed and dried? None used.

BURLINGTON COUNTY—*Continued.**Collection of Milk.*

Quantity of milk produced daily? About 50 quarts.

When pail is full of milk what is done with it? Poured in can.

Where does the can stand? In pump-house.

Is milk cooled? Yes. How? By setting in tubs of water.

Is milk bottled? No.

Where is milk stored? In cellar.

How long is milk stored before being shipped? One night.

Source of ice supply. From different neighbors.

If shipped, to whom and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 50 quarts.

Quarts sold in bottles? None.

Ever run short? Yes.

If so, where is supply obtained? Nearby neighbors.

How many persons handle the milk? Two.

All in good health? Apparently.

Date of last sickness among persons on dairy premises? Mrs. Klein said she knew of no serious sickness on premises in last four years, except that a baby had died, but this child was not affected with a communicable disease.

C. J. MERRELL,

Inspector.

NOTE.—Statements on this blank in regard to utensils and milk were made by Mrs. J. I. Klein.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—Jos. De Cou (Tenant).

ADDRESS—Bordentown.

TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at barn, about 20 feet deep.

Distance of well from stable. About 20 feet.

Distance of well from manure pile. Twenty feet.

Source of water-supply for washing utensils and cans. Surface well under kitchen.

If from well, describe surroundings. Well about 50 feet deep, said to be lined with brick and cement nearly to bottom of well; privy on lower level about 65 feet distant.

Was sample taken for analysis? No.

BURLINGTON COUNTY—*Continued.**Cattle.*

Number of cows. Twenty-seven. Breed. Grade.
 State of health. Apparently good.
 Ever examined? No.
 Amount, kind and quality of feed used. Wheat bran.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Twice a year.
 Quantity of manure at time of this inspection. About 10 wagon loads.

Utensils.

How washed and dried? Rinsed with hot water; carefully washed with hot water and placed in open air to dry.
 Where are the utensils washed? Under kitchen porch.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 125 quarts.
 Are milkers' hands washed before milking? Yes.
 Are clean garments put on? No.
 When pail is full of milk what is done with it? Strained in can.
 Where does the can stand? In cellar.
 Is milk cooled? Yes. How? By setting in creamer of ice box.
 How long after milking? Directly.
 Is milk bottled? No.
 Where is milk stored? In ice box in cellar.
 How long is milk stored before being shipped? About a day.
 Source of ice supply? Pond at Chesterfield Mill.
 If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 125.
 Quarts sold in bottles? None.
 Ever run short? Yes.
 If so, where is supply obtained? Mr. Burdsall, neighbor.
 How many persons handle the milk? Five
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? It was stated that there had been no sickness on the premises during the last two years.

C. J. MERRELL,

Inspector.

NOTE.—All statements in regard to cattle, utensils and milk were made by Mr. Jos. De Cou.

BURLINGTON COUNTY—*Continued.*

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—Benj. Holloway (Owner).
 ADDRESS—Bordentown.
 TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at barn, about 16 feet deep.
 Distance of well from stable. Twenty feet.
 Distance of well from manure pile. Five feet.
 Source of water-supply for washing utensils and cans. Surface well at house, about 15 feet deep, covered with wooden platform.
 If from well, describe surroundings. Open drain near by; privy about 30 feet distant.
 Was sample taken for analysis? Yes. Marks. B. Holloway.

Cattle.

Number of cows. Fourteen. Breed. Grade.
 State of health. Apparently good.
 Ever examined? No.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Twice a year.
 Quantity of manure at time of this inspection. About 20 loads.

Utensils.

How washed and dried? Washed with hot water, placed in open air to dry.
 Where are the utensils washed? On porch.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 90 quarts.
 Are milkers' hands washed before milking? Yes.
 Are clean garments put on? No.
 Udders of cows cleaned? No.
 When pail is full of milk what is done with it? Strained in can.
 Where does the can stand? Outdoors.
 Is milk cooled? Yes. How? By setting in tubs of cold water.

BURLINGTON COUNTY—*Continued.*

How long after milking? Directly.
 To what temperature? Not known.
 Is milk bottled? No.
 Where is milk stored? In cellar.
 How long is milk stored before being shipped? One night.
 Source of ice supply? None used.
 If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? Ninety quarts.
 Quarts sold in bottles? None.
 Ever run short? Yes.
 If so, where is supply obtained? Nearby dairymen.
 How many persons handle the milk? Three.
 All in good health? Apparently good.
 Date of last sickness among persons on dairy premises? Mr Holloway said there had been no sickness on premises in a long time.

C. J. MERRELL,
Inspector.

NOTE—Statements in regard to cattle, utensils and milk were made by Mr. Holloway's son.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—J. H. Colkitt (Owner).
 ADDRESS—Bordentown.
 TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at house; water pumped by wind-mill to barn.
 Distance of well from privy vault. About 50 yards.
 Source of water-supply for washing utensils and cans. Same as used for cattle.
 If from well, describe surroundings. Surface well, said to be 15 feet deep, and surrounded with brick and cement, located under kitchen.
 Was sample taken for analysis? No.

Cattle.

Number of cows. Fourteen. Breed. Jersey, Guernsey.
 State of health. Apparently good.
 Ever examined? No.
 Amount, kind and quality of feed used. Wheat bran, small quantity.
 Cows pastured? Yes.

BURLINGTON COUNTY—*Continued.**Manure.*

How and where stored? Yard adjoining stable.
 How frequently removed? Twice a year.
 Quantity of manure at time of this inspection. Large quantity, probably 50 wagon loads.

Utensils.

How washed and dried? Washed in hot water, dried in sun and air.
 Where are the utensils washed? In kitchen.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? Same as utensils.

Collection of Milk.

Quantity of milk produced daily? About 60 quarts.
 Are milkers' hands washed before milking? Yes.
 Are clean garments put on? No.
 Udders of cows cleaned? Yes. How? With cloths.
 When pail is full of milk what is done with it? Strained in can.
 Where does the can stand? Outside stable, in open air.
 Is can kept covered? Yes.
 Is milk cooled? Yes. How? Set in tubs of water.
 How long after milking? Directly.
 To what temperature? Not known.
 Is milk bottled? Small quantity; about 2 quarts.
 How long is milk stored before being shipped? About a day.
 Source of ice supply. Longstreet's pond, near by.
 If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 140.
 Quarts sold from bottles? For one customer, about 2 quarts.
 Ever run short? Yes.
 If so, where is supply obtained? Harry Oldry, Crosswicks; Chas. Tindall, Crosswicks.
 How many persons handle the milk? Two.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Mr. Colkitt stated that he had lived on the place 17 years and that there had been no serious sickness during that time.

C. J. MERRELL,
Inspector.

NOTE.—All statements in regard to cattle, utensils and milk were made by Mr. J. H. Colkitt.

BURLINGTON COUNTY—*Continued.*

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—E. P. Newell (Owner).
 ADDRESS—Bordentown.
 TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Pumped up by ram from spring. Water of brook in summer.
 Distance of well from stable. About 100 yards.
 Source of water-supply for washing utensils and cans. Surface well under milk-house. About 22 feet deep.
 If from well, describe surroundings. Drain from house sink discharges on ground about 9 yards distant. Privy vault (brick), 16 yards distant. Hog-yard adjoining milk-house.
 Was sample taken for analysis? Yes. Marks—E. P. Newell.

Cattle.

Number of cows. Twenty-five. Breed. Guernsey, Jersey.
 State of health. Apparently good.
 Ever examined? Yes. By whom? Dr. Stull, Trenton.
 Date of last examination. About three years ago.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Three or four times a year. Small quantity.

Utensils.

How washed and dried? Washed in hot water, dried in sun.
 Where are the utensils washed? In milk-house.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottels—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? One hundred quarts.
 Are milkers' hands washed before milking? Yes.
 Are clean garments put on? No.
 Udders of cows cleaned? Yes. How? With cloths.
 When pail is full of milk what is done with it? Run through three strainers into cans.
 Where does the can stand? On platform, outside stable.

BURLINGTON COUNTY—*Continued.*

Is milk cooled? Yes. How? Setting in tubs of water.
 How long after milking? Directly.
 To what temperature? Not known.
 Is milk bottled? No.
 How long is milk stored before being shipped? About 8 hours.
 Source of ice supply. Dealers in Bordentown.
 If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 100.
 Quarts sold in bottles? None.
 Ever run short? Yes.
 If so, where is supply obtained? Nearby dairyman.
 How many persons handle the milk? Three.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Mr. Newell said he could not give the exact date of the last sickness on the premises, as there had been no sickness in a number of years.

C. J. MERRELL,
 Inspector.

NOTE.—All statements on this blank in regard to cattle, utensils and milk were made by Mr. E. P. Newell.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—Wm. Allen (Owner).
 ADDRESS—Bordentown.
 TOWNSHIP—Bordentown. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Hydrant in house Bordentown city water. Brook in field during summer.
 Source of water-supply for washing utensils and cans. Same as used for cattle.

Cattle.

Number of cows. Two. Breed. Guernsey.
 State of health. Apparently good.
 Ever examined? No.
 Amount, kind and quality of feed used. Wheat bran.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Every two or three weeks.
 Quantity of manure at time of this inspection. About three wagon loads.

BURLINGTON COUNTY—Continued.

Utensils.

How washed and dried? Washed with hot water, dried in sun and open air.
Where are the utensils washed? In kitchen.
Any appliance for sterilizing cans, pails and dippers? No.
Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 15 quarts.
Are milkers' hands washed before milking? Yes.
Are clean garments put on? No.
Udders of cows cleaned? Yes How? With cloth.
When pail is full of milk what is done with it? Strained in can and set down cellar.
Where does the can stand? In house.
Is milk cooled? No.
Is milk bottled? No.
Where is milk stored? In cellar.
Source of ice supply. None used.
If shipped, to whom, and where? Mr. Allen sells his milk in small quantities to customers who call at the house for it at any time during the day.

Distribution.

Quarts sold from cans? About 12.
Quarts sold in bottles? None.
Ever run short? No.
How many persons handle the milk? Two.
All in good health? Apparently.
Date of last sickness among persons on dairy premises? Mr. Allen stated that he knew of no sickness on the place during the last twenty years. All statements on this blank in regard to the cattle, water, utensils and milk were also made by Mr. Allen.

C. J. MERRELL,
Inspector.

City of Burlington.—MEMBERS AND OFFICERS—William C. Farrar, Alfred Platt, John B. Cassady, M.D., Alfred P. Silpath, Thos. H. Birch, J. Frank Clime; Franklin C. Woolman, Secretary; William M. Jeffries, Inspector.

Three cases of diphtheria and 12 of typhoid fever were reported. Average daily consumption of water, 450,000 gallons. Total number of premises connected with the water-mains, 1,600; 4 new connections having been made during the past year. There are 1,570 school children in the city and 861 of them are unvaccinated. Appropriation, \$400. Fourteen meetings were held.

BURLINGTON COUNTY—Continued.

Chester Township.—MEMBERS AND OFFICERS—Dr. Joseph Stokes, Moorestown; George Brock, Moorestown; Arthur J. Collins, Moorestown; Benj. Rogers, Secretary, Moorestown; Dr. F. G. Stroud, Moorestown.

Communicable diseases were reported as follows: Diphtheria, 14; scarlet fever, 6; typhoid fever, 5. Average daily quantity of water used in Moorestown, 300,000 gallons. Eleven dwellings were connected with the water-mains during the year. No sewers. Nuisances abated, 24. Annual appropriation, \$75. Three meetings were held.

Following is a report in reference to investigation of a complaint made by the citizens of the township of Chester:

To the Board of Health of the State of New Jersey:

GENTLEMEN—Investigation of a complaint as to a nuisance at Moorestown, was made February 5th, 1900, and I would respectfully report as follows:

A factory, which is owned by Mr. George Esherrick, is located in what is known as West Moorestown. On the south side is Third street, on the west side is Union street, and on the north side of the factory is what is known as West Central street. The product which is manufactured at the factory is what is known as vanillin. It is an imitation of vanilla, made by synthetic chemical action. A number of chemicals enter into its composition, but the two against which there has been a serious complaint made are the vapors of hydro-chloric acid and the odor of cloves. In the process of manufacture hydro-chloric acid is given off during distillation, and this is allowed to pass by a pipe directly into the street. Oil of cloves is heated to a very high temperature, and as a result this very persistent odor is complained of by those living in the vicinity of the factory. The factory has been but two months in operation, and the same process of manufacture was carried on heretofore in Stockton, Camden county, and in Elizabethport, Union county. The managers stated that there had been no complaint made against them in these places. The inspector of the board of health, Dr. Stroud, informed me that there was no evidence of illness being produced by the odors coming from the works, but that the people had complained especially of the acid odor, which was carried a long distance. The manager informed me that it was the intention of the company to erect a high stack to carry the acid vapors to a much higher point, so that they might be diffused more rapidly. It was stated to the inspector of the board that in all probability the local board of health could take no action in the premises, as there was no evidence that the condition complained of had or would cause sickness, and that therefore if anything was to be done it should be by individuals who could bring action before the grand jury for indictment, or suits for damage to property, or as a final resort for the individuals who are damaged to apply to the Chancellor for an injunction to restrain the operation of the works under the present conditions.

Very respectfully,

A. CLARK HUNT,
State Medical Inspector.

BURLINGTON COUNTY—*Continued.*

Chesterfield Township.—MEMBERS AND OFFICERS—E. M. Ridgway, Crosswicks; C. E. Wallace, Chesterfield; B. H. Middleton, Crosswicks; Newton H. Chaffee, M.D., Chesterfield; Charles B. Holloway, Secretary, Chesterfield.

One case of typhoid fever was reported. Two meetings were held. Following are reports of three dairy inspections in this township:

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—D. C. Coleman (Tenant).
ADDRESS—Bordentown.
TOWNSHIP—Chesterfield. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at barn.
Distance of well from stable. Thirty feet.
Source of water-supply for washing utensils and cans. Well at house.
If from well, describe surroundings. Surface well about 36 feet deep; privy 13 yards distant; well surrounded with brick and cement, covered with wooden platform.
Was sample taken for analysis? No.

Cattle.

Number of cows. Nine. Breed. Grade.
State of health. Apparently good.
Ever examined? Yes. By whom? Dr. Harker.
Date of last examination. About two months ago.
Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
How frequently removed? Yard kept nearly clean.
Quantity of manure at time of this inspection. None at all.

Utensils.

How washed and dried? Washed with hot water, placed in air and sun to dry.
Where are the utensils washed? In kitchen shed.
Any appliance for sterilizing cans, pails and dippers? No.
Bottles—how washed and dried? None used.

BURLINGTON COUNTY—*Continued.**Collection of Milk.*

Quantity of milk produced daily? About 70 quarts.
Are milkers' hands washed before milking? Yes.
Are clean garments put on? No.
Udders of cows cleaned? Yes. How? With cloth or straw.
When pail is full of milk what is done with it? Poured in can.
Where does the can stand? Outside by pump.
Is can kept covered? Yes.
Is milk cooled? Yes. How? By placing in tubs of cold water.
How long after milking? Directly.
Is milk bottled? No.
Where is milk stored? Milk is delivered after it is cooled.
Source of ice supply. None used.
If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 70 quarts.
Quarts sold in bottles? None.
Ever run short? Yes.
If so, where is supply obtained? Nearby dairymen.
How many persons handle the milk? Three.
All in good health? Apparently.
Date of last sickness among persons on dairy premises? Mr. Coleman said there had been no serious sickness on the premises for the last nine years.

C. J. MERRELL,
Inspector.

NOTE.—Statements in regard to cattle, utensils and milk were made by Mr. D. C. Coleman.

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—Frank Applegate (Tenant).
ADDRESS—Bordentown.
TOWNSHIP—Chesterfield. COUNTY—Burlington.

Water-Supply.

Source of water-supply for watering stock. Well at barn.
Distance of well from stable. About 30 feet.
Distance of well from manure pile. Five feet.
Source of water-supply for washing utensils and cans. Well at house.
If from well, describe surroundings. Surface well, 21 feet deep, located under kitchen; wooden drain from sink within 5 feet; privy about 23 yards distant.
Was sample taken for analysis? Yes. Marks. F. Applegate.

BURLINGTON COUNTY—*Continued.**Cattle.*

Number of cows. Nineteen. Breed. Grade.
 State of health. Apparently good.
 Ever examined? Yes. By whom? Dr. La Jamber, Bordentown.
 Date of last examination. Three weeks ago.
 Amount, kind and quality of feed used. Malt sprouts and corn.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Twice a year.
 Quantity of manure at time of this inspection. About 25 wagon loads.

Utensils.

How washed and dried? Rinsed with cold water, scalded and washed with hot water, placed in air and sun to dry.
 Where are the utensils washed? In ice house.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 110 quarts.
 Are milkers' hands washed before milking? Yes.
 Udders of cows cleaned? Yes.
 When pail is full of milk what is done with it? Poured in can.
 Where does the can stand? In stable.
 Is milk cooled? Yes. How? By setting in tubs of cold water.
 How long after milking? Directly.
 Is milk bottled? No.
 Where is milk stored? In ice house.
 How long is milk stored before being shipped? Over night.
 Source of ice supply? Crosswicks creek.
 If shipped, to whom, and where? All retailed in Bordentown.

Distribution.

Quarts sold from cans? About 110.
 Quarts sold in bottles? None.
 Ever run short? Yes.
 If so, where is supply obtained? Mrs. Campbell, neighbor.
 How many persons handle the milk? Four.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Mr. Applegate said there had been no sickness on the premises in ten years.

C. J. MERRELL,

Inspector.

NOTE.—All statements in regard to cattle, utensils and milk were made by Mr. Frank Applegate.

BURLINGTON COUNTY—*Continued.*

RECORD OF DAIRY INSPECTION.

June 20th, 1900.

NAME OF DAIRYMAN—H. F. Satterthwaite (Tenant).
 ADDRESS—Bordentown.
 TOWNSHIP—Chesterfield. COUNTY—Burlington. B. C. Kuser, owner, Trenton, N. J.

Water-Supply.

Source of water-supply for watering stock. Well at barn.
 Distance of well from stable. About 50 feet.
 Distance of well from manure pile. About 40 feet.
 Source of water-supply for washing utensils and cans. Well and cistern located under kitchen.
 If from well, describe surroundings. Surface well about 30 feet deep; privy about 50 feet distant; drain from sink, said to be iron pipe, about 15 feet from well.
 Was sample taken for analysis? Yes. Marks—H. F. Satterthwaite.

Cattle.

Number of cows. Twenty-eight. Breed. Grade.
 State of health. Apparently good.
 Ever examined? Yes. By whom? Dr. Harker.
 Date of last examination. About a year ago.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Kept clean nearly all the time.
 Quantity of manure at time of this inspection. About three wagon loads.

Utensils.

How washed and dried? Washed with hot water, dried in open air and sun.
 Where are the utensils washed? In kitchen.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 200 quarts.
 Are milkers' hands washed before milking? Yes.
 Are clean garments put on? No.
 Udders of cows cleaned? Yes. How? Brushed off with straw or cloth.
 When pail is full of milk what is done with it? Poured in can.
 Where does the can stand? In stable.
 Is can kept covered? No.

BURLINGTON COUNTY—*Continued.*

Is milk cooled? Yes. How? By running through aerator.
 How long after milking? Directly.
 To what temperature? Sixty-two degrees.
 Is milk bottled? No.
 Where is milk stored? In ice-box.
 How long is milk stored before being shipped? Over night.
 Source of ice supply. Pond on farm.
 If shipped, to whom, and where? All retailed in Bordertown.

Distribution.

Quarts sold from cans? About 130.
 Quarts sold in bottles? None.
 Ever run short? Yes.
 If so, where is supply obtained? Nearby dairymen.
 How many persons handle the milk? Five.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Mr. Satterthwaite stated that his father had been ill and died of typhoid fever on the premises about two years ago.

C. J. MERRELL,
 Inspector.

NOTE.—Statements in regard to cattle, utensils and milk were made by Mr. H. F. Satterthwaite.

Cinnaminson Township.—MEMBERS AND OFFICERS—Clayton Conrow, Cinnaminson; William P. Schmierer, Howard A. Taylor, Riverton; Timothy Morton, Secretary, Parry; Joshua D. Janney, M.D., Inspector, Cinnaminson.

The public water-supply is obtained from the Riverton and Palmyra Water Company.

Delran Township.—MEMBERS AND OFFICERS—Alexander Bright, Bridgeboro; Samuel Caldwell, Bridgeboro; Smith Lloyd, Bridgeboro; Daniel A. Kendall, Secretary, Riverton; James Richardson, Inspector, Riverside.

Four cases of scarlet fever were reported, but other cases of this disease occurred, physicians failing to report them. Three meetings were held.

Eastampton Township.—MEMBERS AND OFFICERS—Harry W. Githens, Smithville; Joshua M. Reeves, Smithville; Joseph R. Stiles, Mount Holly; Chas. H. Dennis, Jr., Secretary, Smithville; Geo. W. Vanderveer, M.D., Inspector, Mount Holly.

One case of diphtheria was reported. Appropriation, \$30. Three meetings were held.

BURLINGTON COUNTY—*Continued.*

Evesham Township.—MEMBERS AND OFFICERS—J. W. Bowell, C. H. Heisler, W. J. Evens; S. D. Farrow, Assessor; P. V. B. Stroud, M.D., Secretary. All of Marlton.

One case of diphtheria and 2 of typhoid fever were reported. One nuisance was abated. Two meetings were held.

Fieldsborough Borough.—MEMBERS AND OFFICERS—Joseph V. Carter, August Beller, William I. Leonard, William Leatherbury, Secretary; John Maley, Inspector.

Florence Township.—MEMBERS AND OFFICERS—Charles Lynch, George Beaty, Walter Scully; John Adams, Secretary. All of Florence.

Three cases of diphtheria and 4 of typhoid fever occurred. One meeting was held.

Mansfield Township.—MEMBERS AND OFFICERS—Albert N. Dobbins, Columbus; George W. Green, Georgetown; Howard N. Shreve, Kinkora; Elwood D. Erhart, Secretary, Columbus; George W. H. Calver, M.D., Inspector, Columbus.

Ten cases of diphtheria were reported. Two meetings were held.

Mount Laurel Township.—MEMBERS AND OFFICERS—Richard G. Dudley, Moorestown; Robert T. Evans, Masonville; Wm. A. Wilkins, Masonville; W. P. Lippincott, Secretary, Hartford; Dr. Thorn, Inspector, Moorestown.

One meeting was held.

Northampton Township.—MEMBERS AND OFFICERS—Frederick Shemeley, Joseph Shreve, T. L. Atkins; R. H. Parsons, M.D., Inspector; M. H. Girven, Secretary.

Two cases of diphtheria, 7 of scarlet fever, and 9 of typhoid fever were reported. Physicians do not in all cases report communicable diseases. Nuisances abated, 15. Fifteen meetings were held.

Pemberton Borough.—MEMBERS AND OFFICERS—Anthony J. Morris, Mayor; Wm. H. Heisler, Andrew Rosbach, Harry Norcross, Earl Lippincott, Wm. H. Smith, Harry Ridgway; John H. Antrim, Secretary.

Two nuisances were abated.

Riverside Township.—MEMBERS AND OFFICERS—Henry Taubel, E. Schwab-
 enland, Wm. Stewart, Emma P. Weeks, M.D.; Wm. T. Stecher, Secretary; H. K. Wieler, M.D. Inspector. All of Riverside.

BURLINGTON COUNTY—Continued.

Communicable diseases were reported as follows: Diphtheria, 10; scarlet fever, 13; typhoid fever, 3. Twelve nuisances were investigated and abated. Seven meetings were held.

Riverton Borough.—MEMBERS AND OFFICERS—John C. S. Davis, C. C. Reinhard, Walter G. Wilson, Alfred J. Briggs; Ira B. Cottrell, Assessor; Alex. Marcy, Jr., Secretary.

Fourteen cases of scarlet fever and 4 of typhoid fever were reported. Connections with water-mains during the year, 19. With sewers, 8. Six nuisances were investigated and abated. Annual appropriation, \$100. Four meetings were held.

Shamong Township.—MEMBERS AND OFFICERS—John W. Crane, Indian Mills; S. L. Doughty, Oriental; E. E. Bowker, Secretary, Tabernacle.

Southampton Township.—MEMBERS AND OFFICERS—Wm. H. Brannin, Vincentown; Eugene Antrim, Red Lion; Wm Cowperthwait, Medford; Lewis S. Brown, Secretary, Vincentown; J. C. Brown, M.D., Inspector.

Five cases of typhoid fever were reported. Appropriation, \$50.

Springfield Township.—MEMBERS AND OFFICERS—John A. Hancock, Columbus; Thomas Asay, Jacksonville; Thomas T. Warren, Wrightstown; Theodore F. Wright, Secretary, Jobstown.

Washington Township.—MEMBERS AND OFFICERS—J. C. Lane, Lower Bank; T. H. Sooy, Green Bank; G. W. Thomas, Jenkins; W. S. Sooy, Secretary, Green Bank; J. E. Card, M.D., Inspector, Lower Bank.

Two meetings were held.

Woodland Township.—MEMBERS AND OFFICERS—Chas. H. Pitman, Woodmansee; Victor Ritzendollar, Chatsworth; J. W. Thompson, Chatsworth; W. J. Buzby, Secretary, Chatsworth.

One meeting was held.

CAMDEN COUNTY.

City of Camden.—MEMBERS AND OFFICERS—Henry H. Davis, M.D., Reuben H. Gaskill, Charles Watson, S. G. Bushey, M.D., Jno. S. Baer, M.D., M. F. Middleton, M.D., J. W. Fithian; H. C. Kramer, Registrar; Eugene B. Roberts, Secretary; J. F. Leavitt, M.D., Inspector; Henry B. Francis, Inspector; Joseph A. Starr, Inspector; J. O. George, D. V.S., Inspector.

Population, census 1900, 75,935. Communicable diseases were reported as follows: Diphtheria, 402; deaths, 86; membranous croup, 24; deaths, 13; scarlet fever, 122; deaths, 3; typhoid fever, 31; deaths, 11. The board of health of the city of Camden has urgently presented to the governing body of the city the necessity of providing an isolation hospital for the reception and care of cases of communicable diseases. Average daily consumption of water, 14,000,000 gallons. New water connections, 327. New sewer connections, 630. Sewer extensions, $1\frac{7}{10}$ miles. Complaints investigated, 1,126, and 805 nuisances were abated. Four prosecutions were instituted for violation of ordinances. Medical inspection of schools has been regularly undertaken by the board of public instruction. It is estimated that 33 per cent. of children attending schools are unvaccinated. Annual appropriation, \$3,500. Sixteen meetings were held.

Following is a copy of an ordinance adopted by the city of Camden, June 25th, 1900:

“AN ORDINANCE regulating the traffic in rags, old paper, junk, &c., in the city of Camden, and providing for the conducting, governing and licensing of rag stores and junk shops, and the sanitary conditions thereof.

“Section 1. BE IT ORDAINED by the Board of Health of the City of Camden, That it shall be unlawful for any person or persons to carry on the business of buying and selling rags, old paper and junk in the city of Camden without a license for that purpose first had and obtained from the board of health of said city, under a penalty of twenty dollars for each offense.

“Section 2. AND BE IT ORDAINED, That the clerk of the said board of health be and he is hereby empowered to grant to any person or persons who shall apply therefor in writing, and shall pay a license fee of five dollars, a license to engage in and carry on in said city, the business of buying and selling rags, old paper and junk, which said license shall expire at the end of one year from the date of its issue.

“Section 3. AND BE IT ORDAINED, That no person shall keep, or allow to be kept, in any building or premises, or on any ground of which he may be the owner, lessee, tenant, or occupant, any rags, old paper, or junk, from which there shall arise, or be cast off, any impure or obnoxious, offensive or foul odors, smell or gas, annoying or hurtful, or dangerous to any person, or which shall be decayed, filthy, or in any other unsanitary condition, under a penalty of twenty dollars for each offense.

CAMDEN COUNTY—*Continued.*

"Section 4. AND BE IT ORDAINED, That it shall be the duty of every person licensed under this ordinance to keep his or her shop, or store, in a good sanitary condition, and free and clear of all impure, obnoxious, foul and offensive odors or smells, under a penalty of twenty dollars for each offense.

"Section 5. AND BE IT ORDAINED, It shall be the duty of the nuisance inspector to look after and report on all violations of this ordinance, and to make complaint against all persons so violating this before the recorder, mayor, or one of the aldermen of this city."

Centre Township.—MEMBERS AND OFFICERS—Wm. H. Bray, Mount Ephraim; Howard M. Haines, Haddon Heights; Abram E. Rowand, Chew's Landing; Dr. Oran A. Wood, Magnolia; J. H. Jackson, Secretary, Magnolia.

Three cases of diphtheria, 16 of scarlet fever and 3 cases of typhoid fever were reported. One nuisance was abated. Three meetings were held.

Chesilhurst Borough.—No organized board of health. Albert Ladynski, Borough Clerk.

Collingswood Borough.—MEMBERS AND OFFICERS—John W. Moore, Frank H. Bond, Albert F. Clark, Benj. Mahan, Thomas Jack, James Dobbs; Robert S. Duff, Secretary; Dr. Edward E. Sheldon; Paul T. Shinn, Solicitor.

Average daily quantity of water furnished to consumers, 63,403 gallons. Dwellings connected with water works during the past year, 20. Extension of water-mains, 5,244 feet. Sewers are under construction. Complaints investigated, 13. Nuisances abated, 12. Amount expended, \$150. Thirteen meetings were held.

Delaware Township.—MEMBERS AND OFFICERS—Richard C. Kaighn, Ellisburg; Samuel T. Matlack, Haddonfield; Joseph Henchman, Merchantville; William Graff, Haddonfield; W. B. Jennings, M.D., Secretary, Haddonfield.

One nuisance was abated. Appropriation, \$20. Two meetings were held.

Gloucester Township.—MEMBERS AND OFFICERS—John W. Stetser, Chews; James McWilliams, Cross Keys; Wm. M. Godfrey, Blackwood; Joseph E. Hurff, M.D., Blackwood; Willard T. Gibbs, Secretary, Clementon.

Two cases of diphtheria, 1 of membranous croup, 14 of scarlet fever, and 1 of typhoid fever were reported. Five meetings were held.

CAMDEN COUNTY—*Continued.*

Haddon Township.—MEMBERS AND OFFICERS—Samuel Wood, Haddonfield; Chas. H. Schnitzler, Howard C. Walton, Woodlyn; James Macaulay, Westmont; Dr. W. B. Jennings, Haddonfield.

Two cases of diphtheria, 1 of scarlet fever and 1 of typhoid fever were reported. Ten nuisances were abated. Monthly meetings were held.

Haddonfield Borough.—MEMBERS AND OFFICERS—Dr. L. L. Glover, Wm. J. Boning, Chas. N. Hillman, E. B. Gustin; Wm. H. Harrison, Secretary; Dr. Wm. B. Jennings, Inspector.

Six cases of scarlet fever and 2 of typhoid fever were reported. Fifteen nuisances were abated.

Merchantville Borough.—MEMBERS AND OFFICERS—Dr. D. H. Bartine, Dr. J. W. Marcy, F. W. Kleinz, A. H. Moses, G. C. Mick; W. B. Stewart, Secretary; J. B. Wilson, Inspector.

One case of membranous croup and 3 of typhoid fever were reported. Forty nuisances were investigated. Appropriation, \$125. Ten meetings were held.

Pensaukin Township.—MEMBERS AND OFFICERS—Chas. Jennings, Merchantville; Job Pidgeon, Pensaukin; Henry Gaskill, Merchantville; Kellum Bennett, Delair; Harry E. Horner, Secretary, Merchantville.

Appropriation, \$50. Three meetings were held.

Voorhees Township.—MEMBERS AND OFFICERS—Edw. C. Gardner, Kirkwood; John H. McCulley, Kirkwood; T. Dixon, Gibbsboro; S. H. Gardiner, Assessor, Ashland.

Waterford Township.—MEMBERS AND OFFICERS—Chas. D. Heath, Berlin; Wm. L. Walker, Waterford; M. S. Bittle, Berlin; H. N. Gillon, Secretary, Berlin; Dr. F. O. Stem, Inspector, Berlin.

Two cases of diphtheria, 3 of scarlet fever, and 1 of typhoid fever were reported. Appropriation, \$50. Three meetings were held.

Winslow Township.—MEMBERS AND OFFICERS—Joseph G. Strock, Cedar Brook; I. R. Imhoff, Winslow; Geo. Ware, Sicklerville; Michael G. Burdsall, Secretary, Tansboro.

Four cases of diphtheria and 6 of scarlet fever were reported. Two meetings were held.

CAPE MAY COUNTY.

Anglesea Borough.—MEMBERS AND OFFICERS—James Murnin, Jason Buck, Adolph Anderson, Ellsworth E. Hewitt; Geo. W. Dougherty, Secretary.

Annual appropriation, \$100. A sanitary code has been recently adopted. Four meetings were held, and the board was newly organized in September.

Avalon Borough.—No organized board of health. Walter A. Smith, Borough Clerk.

City of Cape May.—MEMBERS AND OFFICERS—Lafayette M. Hall, Albert B. Little, J. Stratton Ware, Geo. L. Lovett, John W. Thompson; Lewis T. Stevens, Secretary; Alonzo L. Leach, M.D., Inspector.

Nuisances investigated, 50; all of which were abated. Appropriation, \$400. Fifteen meetings were held.

Cape May Point Borough.—No organized board of health.

Dennis Township.—MEMBERS AND OFFICERS—Charles E. Foster, South Seaville; Frederick Schmidt, Woodbine; Samuel Bishop, Eldora; Leaming M. Rice, Jr., Secretary, Dennisville; Eugene Way, Inspector, Dennisville.

One case of diphtheria, 2 of scarlet fever, and 2 of typhoid fever were reported. One nuisance was abated. One meeting was held.

Holly Beach Borough.—MEMBERS AND OFFICERS—W. H. Bright, Chas. Colburg, J. Lenord, C. Norton; A. C. Pentland, Secretary.

One case of diphtheria was reported.

Lower Township.—MEMBERS AND OFFICERS—James H. Thomas, Daniel Scellenger, Jacob Barnet; W. C. Rutherford, Secretary, Cold Spring.

Appropriation, \$125. Five meetings were held.

Middle Township.—MEMBERS AND OFFICERS—V. N. Erricson, Dias Creek; Luther M. Swain, Swanton; Theodore Younson, Cape May Court House; J. Morgan Dix, M.D., Cape May Court House; Stillwell H. Townsend, Secretary, Cape May Court House.

Cases of communicable diseases are not reported by physicians. Two nuisances were abated. Two meetings were held.

CAPE MAY COUNTY—Continued.

Ocean City.—MEMBERS AND OFFICERS—T. C. Hutchinson, M.D., Frank Dare, C. E. Edwards; Luther L. Wallace, Secretary; Frank B. Warner, Inspector.

Appropriation, \$200. Ten meetings were held.

Sea Isle City Borough.—MEMBERS AND OFFICERS—Charles H. Clouting, Alfred S. Steelman; Henry A. De Roche, Secretary; Dr. N. Davis, Inspector.

Three cases of diphtheria and 1 of typhoid fever were reported. Dwellings connected with the public water-mains during the year, 150. A new sewer system is being introduced. Five nuisances were abated. Appropriation, \$150. Seven meetings were held.

Upper Township.—MEMBERS AND OFFICERS—Anthony B. Smith, Beesley's Point; Belford Smith, Tuckahoe; Washington Van Gilder, Petersburg; Albert G. Corson, Registrar, Palermo; Jesse T. Young, Secretary, Beesley's Point; Randolph Marshall, Inspector, Tuckahoe.

Three meetings were held.

West Cape May Borough.—MEMBERS AND OFFICERS—Thos. Hughes, Levi Eldredge, Edward Phillips, Frank Newkirk; A. G. Stevens, M.D., Secretary. All of Eldredge.

Six nuisances were abated. Appropriation, \$40. Two meetings were held.

Wildwood Borough.—MEMBERS AND OFFICERS—Dr. G. J. R. Miller, John N. Reeve, Treasurer; J. Albert Harris, Jed Du Bois; Nelson S. Hays, Secretary; W. H. Washburn, Inspector.

Average daily quantity of water used, 20,000 gallons. Number of dwellings connected with water-mains during the year, 30. Number of premises connected with sewer, 45. Nine nuisances were abated. Five meetings were held.

CUMBERLAND COUNTY.

City of Bridgeton.—MEMBERS AND OFFICERS—Ellsmore Stites, M.D., Theodore G. Davis, M.D., Jacob G. Streets, M.D., John C. Applegate, M.D., Wm. H. Ballenger, Frank L. Hewitt; Isaac T. Nichols, Secretary; Charles E. Bellows, Inspector.

CUMBERLAND COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 7; membranous croup, 2; scarlet fever, 15; typhoid fever, 26. Average quantity of water pumped daily, 844,000 gallons. Premises connected with water-mains during year, 79; extension, 2,275 feet. Premises connected with sewer during year, 67. Ten nuisances were abated. Two prosecutions for violation of ordinances were instituted. Appropriation, \$664. Fourteen meetings were held.

Commercial Township.—MEMBERS AND OFFICERS—C. M. Robbins, Port Norris; Reuben Sharp, Haleyville; E. J. Cook, Assessor, Port Norris; R. W. Chamberlain, Secretary, Port Norris.

Two nuisances were abated. Three meetings were held.

Deerfield Township.—MEMBERS AND OFFICERS—Wm. H. Van Leer, Jr., Deerfield Street; Samuel M. Fox, Bridgeton; Dr. Chas. C. Phillips, Secretary, Deerfield Street; Elijah R. Parven, Inspector, Deerfield Street; Chauncey Kilborn, Inspector, Rosenhayn.

Two cases of diphtheria, 3 of scarlet fever, and 1 of typhoid fever were reported. Three meetings were held.

Downe Township.—MEMBERS AND OFFICERS—John W. Page, Newport; Charles T. Sheppard, Newport; James M. Bateman, Dividing Creek; Dr. A. P. Glanden, Newport; John P. Joslin, Newport; George E. Butcher, Secretary, Dividing Creek.

Three cases of diphtheria, 2 of scarlet fever, and 2 of typhoid fever were reported. One meeting was held.

Fairfield Township.—MEMBERS AND OFFICERS—George B. Williams, E. C. Swing, Wm. H. Westcott; E. H. Whiticar, Secretary; N. Howard Burt, Inspector. All of Fairton.

Two nuisances were abated. Two meetings were held.

Greenwich Township.—MEMBERS AND OFFICERS—William Glaspey, Geo. S. Watson; J. W. Butler, Secretary, Greenwich; S. M. Watson, Inspector.

One meeting was held.

Hopewell Township.—MEMBERS AND OFFICERS—E. G. Ayars, Seely; James F. Glaspey, Bridgeton; C. W. West, Shiloh; Walter L. Minch, Assessor, Shiloh.

CUMBERLAND COUNTY—*Continued.*

Landis Township.—MEMBERS AND OFFICERS—O. H. Adams, M.D., Vineland; Edwin Kyte, Vineland; Stephen Crane, Willow Grove; Wm. Hollwarth, Vineland; Howard M. Dolbey, Secretary, Vineland.

One case of diphtheria and 7 of typhoid fever were reported. Amount appropriated, \$86. One meeting was held.

Lawrence Township.—MEMBERS AND OFFICERS—E. L. Mulford, Cedarville; David W. Sheppard, George M. Dilks, Millville; Furman B. Sheppard, Registrar, Cedarville; Henry S. Long, Secretary, Cedarville; Walter P. Glanden, M.D., Inspector, Cedarville.

Two cases of diphtheria were reported.

Maurice River Township.—MEMBERS AND OFFICERS—Charles Grossmein, Port Elizabeth; Charles W. Champion, Dorchester; Horace P. Bickley, Delmont; Henry Reeves, Jr., Secretary, Leesburg; Col. J. Howard Willets, Inspector, Port Elizabeth.

One nuisance was abated. Two meetings were held.

City of Millville.—MEMBERS AND OFFICERS—Edwin Conover, S. C. Smith, R. B. Radcliffe, W. G. Champion, J. W. Wade, M.D.; L. H. Hogate, Secretary; Frank Bullock, Inspector.

Thirteen cases of diphtheria and 14 cases of typhoid fever occurred. Fifteen nuisances were abated. Annual appropriation, \$200. Six meetings were held.

Stow Creek Township.—MEMBERS AND OFFICERS—H. Ellsworth Hoffman, Shiloh; Ephraim Mulford, Roadstown; Charles D. Fogg, Shiloh; Reuben A. Fogg, Secretary, Shiloh.

Vineland Borough.—MEMBERS AND OFFICERS—Walter Foulk, E. C. Howe, Robert Pond, Wm. M. Ruhl; W. E. Bates, Secretary; N. P. Marvel, Inspector.

Two cases of diphtheria, 3 of scarlet fever and 6 of typhoid fever were reported. A new sewer system has recently been introduced. Eight nuisances were abated. Appropriation, \$1,600. Eighteen meetings were held.

ESSEX COUNTY.

Belleville Township.—MEMBERS AND OFFICERS—Dr. E. O. Cyphers, J. T. Boylan, P. D. Ackerman, Thos. Breen, Wm. Connolly; J. J. Hannan, Secretary; Martin McGann, Wm. King, Inspectors.

Communicable diseases were reported as follows: Diphtheria, 11; scarlet fever, 12; typhoid fever, 3. Average quantity of water used daily, 165,000 gallons. New water connections, 45. Fifty nuisances were abated. Eleven meetings were held.

Bloomfield Town.—MEMBERS AND OFFICERS—Dr. Charles F. Bailey, Wm. S. Dodd, Allen Andrew, John F. Capen, T. H. Johnson; Wm. L. Johnson, Secretary; Seymour P. Gilbert, Inspector.

Twenty cases of diphtheria, 30 of scarlet fever, 3 of typhoid fever and 2 of small-pox were reported. Average daily quantity of water used 1,500,000 gallons. Dwellings connected with water-mains during year, 116. Extension of water-mains, about 2 miles. New sewer connections, 110. Nuisances investigated, 260. Four suits were instituted, and fines to the amount of \$100 were collected. Amount appropriated to the board, \$2,500. Monthly meetings were held.

Caldwell Borough.—MEMBERS AND OFFICERS—James Best, Wm. W. Wright, Dr. E. E. Peck, Isaac E. Baldwin; Thos. W. Biggs, Secretary; Edw. M. Jackson, Inspector.

Six cases of diphtheria were reported during the year. Six nuisances were investigated and abated. Four meetings were held.

Clinton Township.—MEMBERS AND OFFICERS—Dr. W. R. Ward, Lyons Farms; Jacob W. Fisher, Waverly; John J. Quinn, Parkview; W. H. Goldsmith, Secretary, Lyons Farms.

One case of diphtheria was reported.

East Orange.—MEMBERS AND OFFICERS—E. M. Brewster, Roger H. Butterworth, Chas. M. Matthews, Geo. M. Riley, Harvey Mott; S. M. Long, City Clerk; W. D. Mitchell, M. D., Secretary; Wm. T. Bowman, Inspector.

Communicable diseases were reported as follows: Diphtheria, 29; fatal cases, 3; scarlet fever, 47; fatal cases, 3; typhoid fever, 10; fatal case, 1. Average daily quantity of water used, 2,500,000 gallons. Premises connected with sewer during year, 143. Sewer

ESSEX COUNTY—Continued.

extensions, 2½ miles. Complaints investigated, 90. Nuisances abated, 80. Appropriation, \$2,000.

Glen Ridge Borough.—MEMBERS AND OFFICERS—F. C. Osterhout, E. E. Wright, Charles T. Howe; H. K. Benson, Secretary; Dr. H. C. Harris, Inspector and Health Officer.

Seventeen cases of diphtheria, 1 case of membranous croup, 10 cases of scarlet fever and 1 of typhoid fever occurred. Extensions of water-mains during year, 1 mile. Premises connected with sewers during year, 46. Sewer extensions, 2 miles. Nuisances abated, 2. Appropriation, \$100. Thirteen meetings were held.

Town of Irvington.—MEMBERS AND OFFICERS—F. Ulrich, Irvington; J. Woodruff, Irvington; A. Webb, Irvington; C. Bougas, Manhattan Park; F. Winkler, Irvington; Edwin Berry, Secretary, Irvington; Ira Meeker, Inspector, Irvington.

Appropriation, \$200. Thirteen meetings were held.

Livingston Township.—MEMBERS AND OFFICERS—H. H. Haven, Livingston; W. W. De Camp, Roseland; Pell T. Collins, Livingston; George E. De Camp, Secretary, Roseland; Dr. E. E. Peck, Inspector, Caldwell.

Three meetings were held.

Millburn Township.—MEMBERS AND OFFICERS—Chas. O. Lyon, Short Hills; C. W. Cox, Millburn; R. Hopkins, Millburn; J. M. Drake, Secretary, Millburn; A. S. Magee, Inspector, Millburn.

Nine cases of diphtheria and 16 of scarlet fever were reported. Twelve nuisances were abated. Annual appropriation, \$135. Seven meetings were held.

Montclair City.—MEMBERS AND OFFICERS—David D. Duncan, Moses N. Baker, Chas. D. Thompson, Jas. S. Brown, M.D.; Richard P. Francis, M.D., Secretary; M. O. Leighton, Inspector; John O'Brien, Jr., Inspector.

The health officer writes:

Deaths.—The number of deaths reported in Montclair during the year ending June 30th, 1900, is 208. Of this number 92 were males and 116 females.

The population of Montclair, according to the June census, being 13,962, the crude death-rate is, therefore, 14.96 per thousand. This, however, is not strictly correct, as the rate should be reckoned with the estimated population at the middle of the

ESSEX COUNTY—Continued.

fiscal year under discussion. This, estimated according to the increase between the census years 1895 and 1900, amounts to 13,724, which makes the corrected death-rate 15.15 per thousand.

CLASSIFICATION OF DEATHS.

American born, 177; per cent. total, 85.09. Foreign born, 31; per cent. total, 14.91. Colored, 21; per cent. total, 10.09. Under one year, 55; per cent. total, 26.44. Under five years, 80; per cent. total, 38.42.

TEN MOST FATAL CAUSES.

Pneumonia, 37 deaths; consumption, 34 deaths; heart disease, 13 deaths; diarrhoeal diseases (children), 14 deaths; asthenia, 11 deaths; nephritis, 9 deaths; peritonitis, 8 deaths; diphtheria, 7 deaths; cerebral hemorrhage, 6 deaths; marasmus, 6 deaths.

The census returns for Montclair were found to be considerably below the estimated total, and it may therefore be advantageous to revise the death-rates given in reports during the past five years and make them more nearly correct.

Corrected death-rates for the years ending June 30th, 1896-1900, inclusive, the population in each case being estimated at the middle of the year:

1895-96—deaths, 195; males, 103; females, 92; rate, 16.31. 1896-97—deaths, 135; males, 63; females, 72; rate, 12.52. 1897-98—deaths, 192; males, 85; females, 107; rate, 14.65. 1898-99—deaths, 192; males, 87; females, 105; rate, 14.15. 1899-00—deaths, 208; males, 92; females, 106; rate, 15.15.

Births.—The total number of births reported during the year is 273, making a crude birth-rate of 19.55 per thousand and a corrected rate of 19.89.

CLASSIFICATION OF BIRTHS.

All births—males, 152; females, 121. Still births—males, 4; females, 9. Colored births—males, 21; females, 18.

NATIONALITY OF BIRTHS.

American, 142; Irish-American, 18; Anglo-American, 15; German-American, 3; Scottish-American, 2; Swedish-American, 1; Holland-American, 1; English, 5; Anglo-Scotch, 1; Anglo-German, 1; German, 4; Irish-German, 1; Irish, 28; Swiss-Irish, 1; Italian, 30; Scotch, 3; Swedish, 15; Danish, 1; Russian, 1.

Marriages—The number of marriages reported during the period designated above is 66.

Contagious Diseases.—It would have been quite remarkable had the extremely low contagious disease rate for the year 1898-1899 been continued during the year just passed, and, in fact, such a contingency was by no means expected. Not infrequently a season of low death-rate or light contagious disease morbidity is followed by one of the opposite character, and such a condition is here presented. The total number

ESSEX COUNTY—Continued.

of contagious diseases reported during the year is greater than during any similar interval since the organization of the board. In spite of the fact that there is a considerable decrease in the number of scarlet fever and typhoid fever cases, the marked increase in the occurrence of diphtheria and measles more than compensates for this improvement. The two latter diseases have been present during the year in epidemic form; diphtheria during the latter part of the year 1899, and measles during the spring just passed. These two outbreaks will be treated in the discussion of the two diseases later, but just here it may be proper to consider for a brief space the important conditions which contribute toward an increase morbidity in zymotic diseases.

Nothing is more striking in the consideration of records of incidence in ordinary contagious diseases than the clearly-indicated recurrent periods in which such diseases assume abnormal prevalence. Diagrammatic records which are used to express comparative relations for similar periods of time contain almost equidistant troughs and crests, which testify in a forceful manner to this fact. It is manifest in all of the different diseases, and is due to a variety of causes and conditions, two of which are the most important: The first is undoubtedly increased virulence of the specific germ, while the second is probably increased susceptibility on the part of the population affected. We may say increased virulence of the germ rather than return of it, for it is known that pathogenic bacteria may be present in a given place without possessing those characteristics which give to them a disease-producing ability. Under adverse conditions they change their character and at times become encysted and inert, remaining so until favorable elements awaken their vitality and produce new individuals which seem to be all the more energetic because of their previous continued inactivity. It appears likely, upon reflection, that the former condition was most important in the diphtheria outbreak, while the latter was responsible for the increased prevalence of measles.

Diphtheria.—From June 1st, 1899, to November of the same year, there had been reported only eight cases of diphtheria, but from the latter month on through the following March cases of the disease were constantly present, twenty-eight being reported during the month of November, followed in December by nine. During January, February and March there were not more than three cases in existence at any one time, and, as they were widely separated, and had no apparent relation one to another, were regarded as "sporadic cases," and gave no cause for apprehension. The principal interest during the year in the occurrence of diphtheria centres, therefore, about the month of November. Examination of the record of daily incidence shows that during the first part of the month, and, in fact, up to the tenth day, five cases only were discovered—two on the 4th and three on the 5th day of the month. After the 10th there began a series of cases of almost daily occurrence until the 22d, numbering eleven in all. From the 22d to the 27th, the crucial part of the outbreak, twelve cases were reported. After the 27th no further cases were seen until December 8th, when three more fell ill—two in one family in a part of the town separate from the general locality of the previous cases and the third in a family closely connected with one in which there were several convalescent cases. During the remainder of the month of December four more cases were reported, but these also were widely separated, and bore no relation one to the other. We had,

ESSEX COUNTY—*Continued.*

therefore, the important part of the outbreak, comprising twenty-three cases, between the 10th and 27th days of November, with the most serious portion at the latter part of this period or just at the close. It was clearly evident that this succession of cases in so short a time indicated some common source of infection or some means of inter-communication, and as the patients in all but five cases were children, it was natural to suspect that the infection might be transferred from one to another through school attendance.

A summary of the cases taken together, showing their relation to the different schools, gives the following:

Total cases, 28; school children—attending parochial school, 9; attending Maple avenue school, 2; attending Chestnut street school, 2; attending Central Primary school, 2; attending Cedar avenue school, 1; attending Mount Hebron school, 1; children under school age, 6; children with brothers or sisters in parochial school, 5; children with brothers or sisters in public schools, 2; children with brothers or sisters in both, 2. Adults—stricken while nursing, 2; stricken while at work, 2; stricken ill with other disease, 1. Total cases in families with children in parochial school, 20; total cases in families with children in public schools, 9; total cases in families with children in both, 3; suspected cases (convalescent when seen), 3; attending public schools, 1; attending parochial school, 2; total number of houses quarantined, 17.

A detailed account of the epidemic is as follows: On the 1st day of November a child in one of the lower grades of the parochial school was taken ill, and, as the disease was not immediately severe, a physician was not called, and croup had advanced to an acute stage before medical aid was summoned on November 4th. Previous to death, on the same day, a brother in the family took sick, followed by a sister on the 5th. Up to November 4th, however, these two children had attended the parochial school, and, as the first case was nursed in the living-room of the family, and abundant opportunities had been afforded for disseminating the infection before the nature of the disease had been recognized, it was expected that further cases would follow in the school grades attended by these children. On the 5th of November two more cases were reported, both patients being children and attending the parochial school in the lower grades, like the three previous cases. So far all the cases reported seemed to show that school attendance at this particular place was the means of spreading the disease, but from the 5th to the 11th of November no more cases occurred, and it was hoped that an extensive outbreak had been avoided. On the 11th, however, two children in a protestant family were stricken with the disease almost coincidentally, they having previously attended the Chestnut street public school. These cases were traced with tolerable accuracy to a severe case of so-called "sore throat," which had affected an elder brother in the family. It had required no medical attendance, but was seen by the physician during convalescence, and, at that time, gave good evidence of having previously been affected with diphtheria. The two cases above-mentioned may therefore be considered secondary cases, and had no connection whatever with the parochial school, nor with the cases reported on the 4th and 5th of the month. On the 14th, another case was reported in the same family, followed on the 16th by still another,

ESSEX COUNTY—*Continued.*

this latter patient being a cousin of the first three, who had visited her relatives frequently before, and at the beginning of their illness. On the 20th of the month the nurse in charge of these cases was taken ill. On the 22d, 26th and 27th, three cases were reported, in which the patients were pupils in the Central, Mount Hebron and Maple avenue schools respectively. This represents a total of eight cases, the patients in which were associated with pupils in the public schools, or were themselves in attendance previous to illness, and having no connection, as far as can be learned, with the parochial school or anyone there attending. In the meantime the disease occurred in families with children in the parochial school as follows: November 12th, 1; November 14th, 2; November 15th, 1; November 18th, 1; November 19th, 1; November 20th, 1; November 22d, 2; November 23d, 2; November 24th, 1; November 25th, 3. This presents, as stated in the summary, a total of 20 catholic cases, 12 of which were primary and 8 secondary. It will be seen from the foregoing statement of the incidence of the cases that the parochial school was most seriously involved, while in none of the public schools was there a sufficient number of cases to cause any uneasiness, if it were not for the fact that the disease was so generally prevalent. The trouble as a whole, however, had assumed so serious an aspect that it seemed wise to call a special meeting of the board to consider what action was advisable to check the spread of the disease. It was not at any time believed that the diphtheria infection was seated in the parochial school building, nor is there anything about the structure which the most acute observer could suspect as being responsible for any contagious disease. On the contrary, it would be difficult to find a building more thoroughly built and better adapted for school purposes than this one, and any suggestion that this disease could have arisen therein would be manifestly absurd. The public, I believe, generally understood that the action which resulted in the closing of the school was not intended as a reflection upon the sanitary condition of the building but it was realized that, the disease having become rampant among the pupils, their intimate association indoors would be responsible for a further dissemination, and, however excellent the condition of such a building might be, the pupils were in far less danger out of doors. Admitting that their association is as intimate when out of school as when in school (which, when the whole body of scholars is considered is quite improbable), there is still far less danger of intercommunication of infection, from the very fact that they are in the open air. The wisdom of the action in closing the schools was admirably borne out by the events which followed closely upon it. The last day of school attendance was November 26th. Previous to that time, as has been stated, cases from the schools were being reported at the rate of from one to three per day, but on the 26th day of November, three cases were reported, on the next day two, and on the third day but one, which proved to be the last. Eminent sanitarians are of the opinion that it is unwise to close schools under such circumstances, and they put forward statistics which do certainly show the strength of their contention. Here is an instance which indicates that the opposite conclusion is correct, and it is not the only one which has occurred during the history of this board's administration. From a purely theoretical standpoint it is difficult to believe that children out of doors are not better protected from the spread of incipient epidemics than they

ESSEX COUNTY—Continued.

would be within closed school apartments, however well ventilated, and it has not been observed that children congregate when out of school as closely nor as intimately as they are obliged to do when within school. In the three public schools which were closed there had not developed sufficient diphtheria to warrant such a step if they alone were considered, but it is supposed that the action was taken in anticipation of serious possibilities. The board of education was, however, very willing to comply with the advice from the board of health, and no trouble or loss of time was experienced. It would be interesting to note the effects of the use of anti-toxin in the treatment of diphtheria, but the number of cases which occur here is so small that any statistics upon it would be almost without value, and I will, therefore, simply state that most excellent results have been reached by the use of this serum, and the profession is making use of it in an increasing percentage of cases. The practice of this board to provide the anti-toxin free of charge to people who are not able to pay for it has been extremely beneficial in a number of instances. The use of bacteriological examinations in diagnosis of diphtheria has been continued; in fact, all the physicians practicing in Montclair, with one or two exceptions, are making use of this method. By means of it many cases which would otherwise have remained unrecognized until a later period have been detected and receive the benefit of an early treatment. I would, however, again point out one danger which lies in this method of diagnosis, and which now and then gives evidence of itself in a rather alarming manner—I refer to the tendency on the part of many physicians to give value to negative results. The difficulties in the way of a successful transference of bacilli from the throat to the culture tube are so wide that any single failure upon the part of the bacteriologist to discover the presence of the germ should be disregarded when unsupported by clinical evidence. The bacilli are often temporarily obscured by antiseptic sprays and gargles, or from one cause or another, due to poor manipulation upon the part of the operator, may be entirely missing in the culture when they are present in the throat in large numbers. There is also the constant danger that in case of a culture containing a mixed infection, the true bacillus may be overlooked by the bacteriologist, be he ever so faithful. It would be a good precaution to have such a statement printed upon the direction slips which accompany the culture tubes in transit.

Measles.—Inquiry at the offices of boards of health in many of the principal cities throughout the country discloses the fact that measles has been very prevalent during the past year. Some of the American cities have passed through the most extensive epidemic of this disease in their history. Such, also, has been the experience of Montclair. During every year since the organization of the board measles has been prevalent at different times in the separate school districts, practically emptying the lower grades for a time, and passing from one school to another in different years, so that its course could be anticipated with a fair degree of assurance. It cannot be said, however, that it has been confined to any single district during the past year, but has affected every ward, and that extensively. There were reported 262 families in which the disease occurred, and, as it is probable that more than one case occurred in the majority of families (in several known cases five and six were ill), it seems well within the limits of possibility to assume that the average number

ESSEX COUNTY—Continued.

of cases per family was at least two. We can, therefore, estimate that 500 or more cases occurred, and, as a large number of cases occurred where no physician was in attendance and were, therefore, not reported, the total number is probably much larger than the above. It is not known within any degree of definiteness why measles should have been so unusually prevalent during the past year. Opinions from the various health authorities to which inquiries have been addressed, are to the effect that certain unknown climatic influences are responsible. However this may be, there is no doubt whatever that the number of susceptible individuals in the population is largely responsible for the general prevalence of the disease. In Montclair this was especially true. The districts which had been visited by the disease in the lightest manner in previous years, and where, therefore, dwelt the largest number of susceptible children, were, during this season, the heaviest sufferers. The one death which has occurred from measles, the first for many years in Montclair, was not one of the general epidemic cases, but occurred in an Italian family, and apparently the death was due to the fact that the nature of the disease was not recognized and properly treated until too late.

Scarlet Fever.—The number of scarlet fever cases reported during the past year is 15, fatal in one case. This is a decrease from the record of the year previous of seven cases, and one less than what was considered the phenomenally low record, during the year of 1897-'98. The only series of cases which seems to have a common origin, were five in number, and occurred in Upper Montclair. It is probable, from the predominance of evidence, that the Sabbath school was the place in which the disease was communicated from the first patient to the others, although there is some reason for believing that the public school was responsible. The number of cases was so small and so little in the way of evidence could be gathered from statements concerning the origin of the outbreak, that no important deductions can be announced.

Typhoid Fever.—Another year has passed without a death from typhoid fever, and the number of cases, eighteen in all, is still in keeping with the general low average which has been established since the organization of the board. If we exclude army cases of typhoid fever, for which Montclair is surely not responsible, there have been no deaths from this disease since December, 1897. The total of the eighteen cases during the year is modified somewhat by the fact that the infection in six positively originated outside of Montclair, and the patients were brought here while sick or were taken sick very soon after arrival. The typhoid fever rate in a municipality is often used by sanitarians in making up comparative statistics with which to measure the healthfulness of communities, and it is also more often used in determining the character of a water-supply. It has been observed that cities supplied with grossly-polluted water stand high in the list of typhoid rates, while those with desirable supplies are generally untroubled by unusual incidence of this disease. In this connection it is interesting to note that although the water supplied to Montclair has been severely criticised by some of our citizens on account of its sediment, color, taste and odor, the general freedom from typhoid fever proves that such reflections are undeserved.

Small-pox.—On June 22d, 1899, a negro presented himself at the out-patient department of the Mountain Side Hospital to ascertain the nature of an eruption which

ESSEX COUNTY—Continued.

covered his body, and to receive treatment. It was immediately recognized by the physician on duty that the man was suffering from small-pox in an advanced stage, but, on account of his robust constitution and the mild nature of the disease at the beginning, had not, up to that time, felt the need of medical attendance. As far as could be found, the man had no legal settlement, but was a sort of a wandering laborer, living where he could find work, changing his place of residence when the demand for labor ceased, and was, in this part of the State at least, a stranger to everyone. During the week previous to his call at the hospital he had been at work for a farmer in the northern part of Montclair, but had slept in the barn and had had occasion to go into the house only at meal-time, when he ate alone in the kitchen. He had come to Montclair from the Great Notch, where he had been employed upon the reservoir, then in process of construction, and, previous to that time, had been engaged in Yonkers, N. Y. It was immediately recognized that the history of the case was most fortunate, for as the man had not been acquainted with any of his race here, and had, therefore, exposed none of them, proper isolation and adequate measures for the prevention of the spreading of the disease would make it easily possible to confine it to this one case. As small-pox had been prevalent throughout the North and nearly all the surrounding municipalities had been visited by the disease, we had made quite ready for any cases which might arise, and this one found us well prepared. It was the work of but a few hours to construct a small building upon a portion of the Poor-house property, which had been previously selected, and to establish quarantine on the "cottage plan." The watchmen who had been engaged to guard the property, were ready at a moment's notice, and the patient was transferred to this establishment three and one-half hours after the case was discovered. The nurse who had been engaged for service in such an emergency failed to appear, and some delay was experienced before one was discovered, during which time the writer took care of the patient. After two days, however, an immune was found, who proved to be an excellent man for the position. During four weeks quarantine was continued without incident of importance. The patient, although at times quite ill, was not in danger, and the disease was not further communicated. As soon as the nature of the trouble was discovered, vaccination was performed among the persons who had been exposed, and every precaution was taken concerning the disinfection of the patient's quarters and the rooms in the hospital through which he had passed, and in which he was confined previous to being transferred to the isolation hospital. At the end of four weeks, the patient was pronounced well, was discharged, and the building, furnishings and other accessories necessary to the quarantine were burned. Considering the fact that the people of Montclair are so sensitive to an outbreak of dangerous illness, it must be said that public alarm, which was brought about by the incident, was insignificant. The case, however, emphasized very strongly the need of a permanent isolation hospital. This need, I am sure, is thoroughly appreciated, not only in cases of small-pox, but in other dangerous communicable diseases. The necessity is emphasized, however, when we consider that small-pox is prevalent among the colored population all over the North, and Montclair may be visited by another case or series of cases. Our large colored population is, in a measure, somewhat transient, and it is not unreasonable to expect such an outbreak of the disease at any time. Should it come, we are

ESSEX COUNTY—Continued.

as well prepared as ever to meet it, but however thorough may be our preparations, nothing can compensate for the disadvantages under which we labor without a permanent isolation hospital at hand.

Disinfection.—Disinfection by means of formaldehyde was resumed during the early part of the year, an apparatus having been found which was well recommended by experts of note who had tested all the generators then upon the market. The one purchased was used throughout the diphtheria epidemic, and fulfilled all the requirements to which it was subjected. The use of formaldehyde as a disinfectant has extended considerably during the past year, in spite of the numerous attempts which have been made to throw it into disrepute. It may be said, however, that the requirements which are usually set up for a disinfectant are too severe, and the tendency of the profession is to expect more of gaseous disinfectant than is reasonable, and more than will, probably, ever be realized. Many reliable investigators admit that formaldehyde, when properly generated, is an excellent germicide if the bacteria are directly exposed to the action of the gas, but that it is "merely a surface disinfectant," and does not penetrate into the center of mattresses and entirely sterilize trunks full of clothing, and heaps of textiles piled about in a room. The discovery of such a disinfectant is the dream of a lazy person, and, if found, would be entirely impracticable. If formaldehyde is a surface disinfectant, it is simply necessary to expose all surfaces, and, in the ordinary furnishings of a room, this work can be done if a proper amount of energy is used. If it were possible to generate a gas which would penetrate into all the places mentioned in the requirements of certain well-known experts, it would be manifestly impossible in the use of such a gas to confine it in an ordinary room. If, therefore, we have at hand what is recognized to be a good surface disinfectant, we have, it seems to me, all that can reasonably be expected of any gas or vapor.

Nuisances.—Although the inspection and abatement of nuisances has not, in recent years, been the most important work carried on by the board, it still forms one of the most useful branches of the service, and is, of course, the basis upon which most of the other work of the board depends. During the past year a complete house-to-house inspection was made, and all the ordinary nuisances which were discovered upon the various premises were abated. A large part of the work done was, however, but a repetition of that done in former years. Two thousand and four houses were inspected, the number of nuisances reported being as follows: Foul privies, 220; stable nuisance, 13; overcrowding in tenements, 17; foul yards, 44; foul cesspools, 29; cellar nuisances, 4; unsanitary plumbing, 33; other nuisances, 7. The complaints which are made directly by citizens to the office of the inspector are, in a large majority of cases, directed toward foul privy vaults. A large amount of work has been done during the past year in abolishing these vaults upon the streets in which there is a public sewer. The property-owner has first been summoned to show cause why the vault on his property should not be declared a nuisance, so that all concerned should be given a fair hearing. If sufficient reasons were not forthcoming why such action should not be taken, the vault was then declared a nuisance by resolution and the owner given thirty days in which to remove and abolish it. In this way seventy-eight privy vaults have been abolished during the past year. During the early years of the board's work the inspection of brooks,

ESSEX COUNTY—Continued.

with the object of relieving them from the pollution of house drains, was a great feature. The work has, however, gradually assumed less and less importance as the system of sewerage has been extended, and the drains from the houses along the banks removed. At the present time the condition of the brooks seems to be as good as can be expected, without the expenditure of a large amount of money, which, under our present conditions, seems improvident. The work among the tenement-houses has been carried on in about the same manner as before. Good results have been accomplished in several notable cases. The improved condition of the Italian boarding-houses is remarkable. Their appearance, both at night and by day, is, as a rule, thoroughly acceptable to the most stringent observer. Although the progress made in all the departments of the board's work has been marked, nothing is quite as encouraging as the improved condition of these people, who, it will be remembered, were in such insufferable neglect a few years ago.

Disposal of Garbage.—In accordance with the resolution passed by the town council, after the appropriation of \$4,000 for the collection of garbage during the year 1899-1900 was ratified at the polls, the board has taken entire charge of the work, and special superintendence has been carried on by the sanitary inspector. The execution of the work has been more prompt, and there has been less complaint upon the part of the public than during the previous year. The collections which have been made seemed to fully satisfy the requirements except in the fall and spring, when the number required by the contract was hardly sufficient during the warm weather in the fall, and more than necessary during the cold weather in the spring. During the year 2,002 loads of garbage have been collected and deposited upon the dumps provided by the town. The number of loads per month are as follows: May, 1899, 191; June, 1899, 168; July, 1899, 165; August, 1899, 258; September, 1899, 216; October, 1899, 205; November, 1899, 160; December, 1899, 116; January, 1900, 136; February, 1900, 75; March, 1900, 120; April, 1900, 192. Although the collection of garbage during the year has, on the whole, proved fairly satisfactory, there are several improvements to be suggested which may be of use, if, after the present year, the people of the town again decide that it is advisable to re-establish the system of garbage collection. It has been shown, in the experience of the past two years, that the inflexible contract system for removing garbage is not the best method, and if another contract is made it should be arranged so as to enable the superintendent to make the number of garbage collections per week correspond to the temperature and climatic conditions. During the past year the contract required one collection per week between December and March. This, according to the experience of the year previous, was entirely sufficient, for the weather, during those three months, was sufficiently cold to keep the garbage from putrifying extensively during one week. During the past year, on the contrary, the month of December was warm, and the once-a-week collection was not sufficient. In the spring, when the twice-per-week collection was again resumed, the weather continued cold, and once per week would have been sufficient; at any rate the twice-per-week service was not needed as much as during the previous December. The great detriment to the service was, however, the divided responsibility which prevented, in a measure, the enforcement of the contract and also inhibited prompt service. It would be far better were the work actually done under the board of health or some other depart-

ESSEX COUNTY—Continued.

ment of the town government, preferably the street department, and if this could be done an officer could be appointed who would be responsible for the service, and could arrange the collection according to the needs of the different localities. The number of collections could be arranged according to the temperature at each particular time, and the control of the collector would be direct, instead of through a contractor. The feature of the garbage question which, in the past, has been most unsatisfactory is that of ultimate disposal. The present method of burying the garbage upon hired farms is, at best, only a makeshift, and, however carefully it may be conducted, will cause a nuisance at times. If it were possible to secure leases of land sufficiently isolated, the question would probably not become an issue for some years, but, with Montclair settled throughout its whole area, the establishment of a garbage dump in any part of it must necessarily give offence to that portion of the population who live in the vicinity of such areas, and rightly so. The efforts which your board has made to join with the neighboring municipalities in conference upon this question have met with little success because of the fact that there was, apparently, no enthusiasm and very little interest taken in the suggestion on the part of our neighbors. Beyond admitting that their present systems of garbage disposal were very bad, and that something must be done in the near future, they had very little to say. It seems, however, as though the agitation should be again taken up and the matter made a subject of popular interest throughout this section of the country. Personally, I cannot see any prospect of being able to dispose of our garbage under the present method for more than a year, as the land which we were once able to hire is now closed to us, and that which we have now in use is rapidly filling up. At the expiration of the contract for collection and disposal of town garbage on May 1st, it was necessary to return to the old system of collection by licensed scavengers. The contract being made between the householder and the scavenger, neither the board of health nor the town council have anything to do in the matter, except in case of the former, to enforce the necessary sanitary laws. The objections to this method of garbage collection have been set forth in reports made previous to the time that the municipal system of collection was inaugurated, so that it is unnecessary to recount them here. Many of the objections of this system have, however, been obviated by the enforcement of the rules that no garbage shall be hauled within the town limits unless iron or steel carts are used. In order to facilitate this, the town has rented the five garbage carts owned by it, while two more have been purchased by private scavengers. There have been many complaints from the householders that the contracts which they made with the different scavengers are not being carried out properly, and there seems to be considerable dissatisfaction with the system, far more, in fact, than was ever expressed during the experimental days of the municipal system.

Plumbing.—There has been little change in the manner of conducting plumbing tests and inspections during the past year over that of the years previous. Two tests, one of water upon the rough pipes when they are placed in position, and a second of smoke upon the work when finished, have been made in nearly every case, and, where both have not been necessary, either a smoke test or a water test alone has been made, according to the nature of the work performed. It has not been necessary during the year to prosecute any plumber for violation of the plumbing ordinance, the rules

ESSEX COUNTY—Continued.

having been enforced without opposition. One hundred and seventy-three permits have been granted to construct plumbing work, and these have necessitated 138 water tests and 145 smoke tests. Aside from actual tests upon plumbing, many inspections have been made of old work, in which it was suspected that there was some violation of the ordinance.

Dairies.—The inspection of dairies and the general sanitary control of the milk-supply continues to be one of the most valuable branches of the work. The system which has been worked out during past years remains unchanged and the character of the milk-supply continues to be unexcelled. It is to be regretted that the work of the board during the fall and a part of the winter of the past year was of such a nature that it required the suspension of the system of milk examination which has been so important a feature of the work. During this time, however, there was nothing to indicate that the supply had fallen below the standard which it had established during the previous years, and when the work was resumed in the spring of 1900, the same excellent results were procured. The report which I am able to make concerning the different dairies is drawn from personal inspection and analyses of the product of each, the latter work, however, being somewhat incomplete, as above stated. It may be that had these analyses extended over a longer period, so that more numerous examinations could have been made, the average results would have been changed sufficiently to alter the relative positions in the table below. In the light of past experience, however, there is no doubt the positions of the dairies presented in the table correspond very closely with their actual comparative relations.

COMPARATIVE TABLE SHOWING CHEMICAL AND BACTERIOLOGICAL EXAMINATIONS OF THE PRODUCT OF THE DAIRIES SUPPLYING MONTCLAIR WITH MILK.

	Total Solids.	Fat.	Solids not Fat.	Lacto-meter.	Bacteria per c. c.
Fairfield Dairy Co.....	13.94	3.79	10.15	120	1,513
Borden's Condensed.....	12.94	4.34	8.60	111	3,900
Geo. M. Canfield.....	14.54	5.49	9.05	118	6,984
Jas H. Cadmus.....	13.35	4.00	9.35	111	14,406
Wm. Hamilton.....	11.92	.....	.....	.....	13,081
Andrew Harris.....	13.84	4.68	9.16	110	23,183
Geo. E. Taylor.....	.....	.....	.....	.....	23,656
R. I. Jacobus.....	14.29	4.75	9.54	110	23,850
E. C. Wettyn.....	13.14	4.90	8.24	109	34,700
M. H. Canfield.....	13.04	4.51	8.53	110	37,600
F. P. Offhouse.....	13.37	.....	.....	.....	39,640
Puritan Dairy.....	13.60	4.28	9.32	113	41,700
Jas. H. Harkey.....	13.64	.....	.....	.....	67,032
P. S. Van Reyper.....	.....	.....	.....	.....	123,908
Chas. W. Haight.....	.....	.....	.....	.....	136,215
Clarence McClelland.....	.....	.....	.....	.....	194,000
E. N. Harrison.....	13.36	4.24	9.12	111	Uncountable.
Fred. Feerst.....	12.98	4.00	8.98	111	"

Milk from the dairies of C. D. Van Idestine and J. O'Mara has not been examined.

ESSEX COUNTY—Continued.

The dairy of James H. Cadmus has received many improvements during the past year, and stands among the first of the dairies delivering milk in Montclair. In the average bacterial examinations during the past four years it stands fifth. It is equipped with a steam boiler and all the appliances for sterilizing bottles and various milk utensils. The cattle are always found in a clean, healthful condition, and are regularly attended by a veterinarian. The stable itself is an old structure, but contains abundant light and ventilation, is kept very clean and is whitewashed at frequent intervals.

The dairy of George M. Canfield, together with the Fairfield dairy, forms a pair which cannot be equaled from every point of dairy excellence in this section of the country. The Canfield stable is a model one, with abundant light and ventilation, furnished with a stone floor, graded so as to be perfectly drained, and can at any time be washed thoroughly with the hose. The cattle are groomed carefully each day, and are attended at frequent intervals by a veterinarian. The food is of the best quality, and the milkers are carefully watched and kept clean during the milking period. As soon as the milking is completed, the cans are taken to the bottling-house by way of an overhead trolley, and the milk is cooled by allowing it to run in a thin film over a system of pipes through which cold water is allowed to pass. From thence the milk is conducted to a reservoir and is bottled immediately and placed in cold storage. "Night's" and "morning's" milk is delivered to the customer on the following day, so that at the hour of delivery the milk is from twelve to twenty-four hours old.

The dairy of M. H. Canfield is also conducted along the most improved lines, and is provided with all the appliances for producing a cleanly product. The stable is constructed much like the one above-described, and there have been installed sterilizing apparatus and various accessories which are needful in securing cleanliness as well as an economical handling of the product. The cattle are regularly attended by a veterinarian.

It has already been observed that the Fairfield dairy, all things considered, is one of the most complete and best equipped of any in the country, and it needs only a short inspection to reveal the thoroughly scientific and up-to-date character of the plant. Some of its advantages have been described above, but in addition to these there is the system of periodical examination of the cattle by a veterinarian and employes by a physician, the ice manufacturing plant by means of which pure ice is secured, and the very efficient cold-storage plant, by means of which the milk is kept at a uniformly low temperature. One of the most important features about a dairy of this character is the establishment of appliances and the arrangement of them in such a manner that it is actually easier to produce a clean product than a dirty one.

Although the dairy of Frederick Feerst, in years past, has not occupied an enviable position among the Montclair dairies, the improvements which have been made have raised its standard to a point thoroughly creditable to the owner.

For several years the firm of W. H. & R. S. Francisco has maintained a dairy of considerable merit in Caldwell, and recently it has been improved by the construction of a new model stable, and this will soon be followed by a reconstruction of the dairy-house. The milk from this dairy stood seventh in the list of averages for the

ESSEX COUNTY—*Continued.*

past three years. The last analyses indicate, however, that the milk is superior to that examined at first, which is due to improvements in methods of production. The proper criticism which can be made against this dairy is, that the proprietors have apparently failed to appreciate the value of the precautions which are necessary in order to secure the best results in milk production. The dairy is, however, admirably situated, and, at the present time, supervised in a careful manner, and the indications are that in the future the product from it will be even more satisfactory than in the past.

The method of conducting the dairy business, as carried on by the Borden Condensed Milk Company, is entirely different from that of any other company or individual in business in Montclair. The milk which is brought here by it is raised by farmers who are under contract with the company and obliged to carry out the code of rules laid down by the latter. This code of rules is far more severe than the ordinance of the board of health, and abundant inspection by an expert corps of inspectors insures the carrying out of the contract. The appearances of the stables, which have been visited by me on various occasions, testify to the efficient work carried on by the company, and the quality of the milk is such that, for the past three years, the general average has followed close upon the first two in the list. The milk is bottled at the Borden station, at Oxford, in Chenango county, New York State, as soon as it is received from the farmers, and is sent by express milk trains over the Delaware, Lackawanna and Western railroad to Newark, and thence to Montclair, so that it is from twenty-four to thirty-six hours old when delivered here. Yet such has been the cleanliness with which it is raised and so uniform has the low temperature of the milk been maintained, that the number of bacteria is very low. The supply for Montclair is taken from four farms, which have been approved by me, and which are the best of those in the Oxford district.

The milk which is delivered in Montclair by E. N. Harrison is raised on the farm of Zenas Harrison, in Caldwell. The stable is a fairly good one, the principal objections to it being its low ceilings and lack of adequate light. It is, however, as my inspections have shown, kept very clean, and the cattle are well treated and maintained in presentable condition. The product from this dairy has always averaged high in bacteria because of the fact, probably, that it does not have the advantage of being cooled and bottled immediately, but is allowed to remain in cans until the milking is completed and then carried for some distance and submerged in a spring. The morning's milk is allowed to remain there during the day, and is taken, together with the night's milking, to the Montclair station, where, on the following morning, it is bottled and delivered. Such a method of delivery, while it may be carried on with great care, cannot be as thoroughly clean as the method described above in other dairies.

The dairy of William Hamilton, located in Richfield, is an excellent one in every respect, and all the precautions described above are here carried out strictly. This dairy stands fourth in the average for three years. The milk does not run as high in butter-fat as that from some other dairies, but it is not due in a way to improper or scanty feeding of cattle, but is accounted for by the veterinarian as being due to the cattle themselves, which are of a hardy, sturdy stock, rather than of a fine butter-making breed.

ESSEX COUNTY—*Continued.*

The milk from the dairy of C. W. Haight has given good satisfaction in the past, and the cattle from which it is derived are always found in excellent condition. The stable, although not presenting to the eye the attractive appearance which is found in some others, is, nevertheless, a thoroughly wholesome one and maintained scrupulously clean. The bacteria in this milk have run rather high at times, and it is due to the same cause as that ascribed to the Harrison dairy, the milk being stored in cans for many hours, then transported before being bottled. At the bottling-house there are provided all the steam sterilizing equipments and bottling appliances which characterize all first-class dairies, and were the dairy-house and the stable upon the same property so that the milk could be handled more quickly from cow to bottle, there would be no reason why the product from this dairy should not rank with the best.

The milk distributed by J. H. Harkey has not in past years been free from objectionable features, yet during the latter part of this period there has been an undoubted improvement, so that the supply, as a whole, is fairly satisfactory. The milk is purchased from a Caldwell wholesaler, who has taken great pains to secure a good product, and who has accomplished much in the way of improving the dairies which supply him with milk; yet it cannot be said that the milk stands in the first class, nor is it within a short distance of it.

Andrew Harris, Upper Montclair, maintains a small dairy of fine cattle and produces a very rich and wholesome milk. It is not by any means as free from bacteria as could be wished, but, at the same time, the supply can be regarded as fairly safe and wholesome. As fast as the means of the owner permit, improvements are made in the dairy equipments, and there is every reason to believe that the dairy will in the future maintain a high standard.

R. I. Jacobus' dairy.—This is another small establishment, situated in Little Falls, just above the Great Notch. The place has been found to be a model of neatness, and during the past four years the milk has averaged sixth in the list. Cattle are well groomed and fed, receive medical attention at intervals, and the whole process of milk production is directly under the eye of the proprietor. The stable is well lighted and drained, kept very clean, and is whitewashed frequently.

The milk sold by Clarence McClelland, Roseland, has proven somewhat disappointing during the last few years, and has shown very little, if any, improvement. Similar to several others mentioned above, he buys his whole supply, and the persons from whom he has purchased it have not been thoroughly in sympathy with the idea of dairy cleanliness. This, in fact, is one of the few supplies which cannot be recommended by the board of health, and which merits some radical action in the near future.

Joseph O'Mara.—The remarks concerning the supply of James H. Harkey, apply to the product sold by Joseph O'Mara, as the two purchase the same milk under the same conditions.

Mr. Charles E. Speer succeeded A. M. Speer, and the change in the management of the business has been extremely beneficial to the supply.

The greatest part of the supply of Thomas J. Smith, Essex Fells, is delivered in Orange, and only a few customers dwell in Montclair. The stables at this place are

ESSEX COUNTY—Continued.

excellent, and the cleanliness with which the milk is produced is very praiseworthy. All the apparatus which has been noted in the foregoing dairies for the sterilization of bottles and milking utensils is here provided, and the cattle are carefully groomed and regularly attended by a veterinarian.

The milk which is delivered in Montclair by F. P. Offhouse is raised by John H. Pier at Clinton, and the conditions under which it is produced are very acceptable. The cattle and stables and food are in conformity with the rules and regulations of your board. It would be far better if arrangements could be made to have the milk bottled as soon as possible after milking. This is not the case at present, and, therefore, it runs higher in bacteria than it otherwise would.

The milk, raised at Cedar Grove, by George Taylor, has proved to be very acceptable, and the recent improvements made in the dairy and in the stables are very beneficial to the supply. No steam apparatus is provided for sterilization of vessels, but they are thoroughly boiled in a large cauldron before being used. The stable is provided with a chert floor, and can, therefore, be kept very clean. Improvements are being made which promise to make it one of the best.

The large part of the milk which is delivered by E. O. Wetteyn, Cedar Grove, is raised at Brookdale, by J. S. Hepburn. The stable at Brookdale is in fairly good condition, is cared for in a cleanly manner, and the cattle bear evidences of good usage. The most objectionable feature about the supply is that the cattle are fed upon brewers' grains.

The supply produced by F. N. Van Idestine, at West Livingston, is sold by C. D. Van Idestine, of Caldwell. The stable is a new one and is maintained in excellent condition, but the milk has ranged rather high in bacteria, because of the fact, as noted above in various other cases, it is stored in bulk and not bottled immediately after cooling. It has in the past been very satisfactory from a chemical and physical standpoint, and is a safe and wholesome supply.

Although the situation of the dairy of P. S. Van Reyper, Montclair Heights, which is one of the best in the surrounding country, should tend to produce an excellent quality of milk, the product has been only fairly satisfactory during the past three or four years. The cattle in this dairy are well cared for and the stable is fairly satisfactory, yet there have been times when the milk was very dirty, due, I think, to lack of attention on the part of the proprietor. Recently there has been a slight improvement.

NEWARK.—MEMBERS AND OFFICERS—Dr. H. C. H. Herold, President; M. Straus, J. A. Furman, M. T. Gay, Dr. C. M. Zeh, Dr. D. L. Wallace, Dr. F. W. Becker, Dr. W. S. Disbrow, H. Smith; David D. Chandler, Health Officer and Secretary.

EMPLOYES OF THE BOARD OF HEALTH—John J. Greene, Clerk Bureau Contagious Diseases; Eugene W. Bellar, Clerk Sanitary Division; Miss Marie Perier, Stenographer to Health Officer; Edward E. Worl, M.D., Superintendent Bureau Contagious Diseases; Herbert E. Baldwin, Chemist; George C. Sonn, Meteorologist. Bacteriological Division: Dr. R. N. Connolly, Bacteriologist; Dr. R. C. Ribbans, Assistant Bacteriologist; Ernst L. Skillman, Porter; Herman Volk, Culture Collec-

ESSEX COUNTY—Continued.

tor. City Dispensary: William A. Smith, Apothecary; Henry A. Oltman, Assistant Apothecary; William M. Gould, Dentist. District Physicians: William Schopfer, Herbert W. Long, William M. Goodwin, Matthew T. Gaffney, M. Louise Lefort, Welzmilller, Samuel H. Baldwin, Vincent Nager, William Gauch, Charles W. Titus, Hugh M. Hart, Fred Hagney. Sanitary Division—Meat Inspectors: Werner Runge, Charles Wolz. Plumbing Inspectors: John B. Sullivan, William H. Grier, Henry W. Schroeder. Sanitary Inspectors: Thomas E. Freeman, Louis H. Bridgem, William H. Young, Andrew J. Brady, John Wright, Thomas F. Newton, Morris Seidl, Forman J. Reynolds, Otto B. Schalk, Charles E. Burke, Bernard Cahill, Herbert O'Rourke, Michael Helmstaedter, Richard J. Corbley, John F. Neary, Joseph A. Smith, Antonio Panzera. Milk Inspector: William H. Lyle. Disinfecting Corps: Samuel Knott, Chief; John L. Ball, William Parker, Hiram R. Stewart, Leonard Gillen; Frank Petridge, Orderly at Isolation Hospital.

Communicable diseases were reported as follows: Diphtheria, 1,342; fatal cases, 144; scarlet fever, 773; fatal cases, 64; typhoid fever, 241; fatal cases, 34; small-pox, 17; fatal cases, 1. Water-mains were extended $10\frac{1}{4}$ miles during the year. Total length of water-mains in city, $257\frac{1}{2}$ miles. Premises connected with sewers during year, 1,442. Sewer extensions, 5 miles. Complaints investigated, 9,817. Nuisances abated, 7,778. Prosecutions for failure to abate nuisance, 83. Appropriation, \$50,000. Bi-monthly meetings were held.

Following is a copy of an ordinance of the city of Newark, prohibiting expectoration on the floors or any part of the interior of the street cars or other public conveyances, or any public building, and providing a penalty therefor.

WHEREAS, Expectoration in street railway cars or other public conveyances, or in any public building, is deemed by the board of health of the city of Newark to be prejudicial to the health of its citizens; therefore,

BE IT ORDAINED by the Board of Health of the City of Newark, as follows:

Section 1. No person shall expectorate upon the floor or any part of the interior of any street railway car or other public conveyance, or any public building, in the city of Newark.

Section 2. Any person who shall violate the provisions of this ordinance shall be fined for the first offense ten dollars (\$10), and for the second and any subsequent offense twenty-five dollars (\$25).

Section 3. Officials in charge and control of street railway cars or other public conveyances, or of any public buildings, shall post, and keep posted, in a conspicuous place one or more printed notices of the provisions of this ordinance prohibiting expectoration, and the conductor or conductors of any such cars or other public

ESSEX COUNTY—Continued.

conveyances, and the janitor or persons in charge of any such public buildings, shall call the attention of all violators of this ordinance to such notice and shall report any violations thereof, with a description of the persons offending against this ordinance, immediately to the board of health of the said city, and such person failing to post the notices required by this section, and to make the report herein provided for, for failure so to do shall forfeit and pay a fine of five dollars (\$5).

Section 4. This ordinance shall take effect immediately.

North Caldwell Borough.—No organized board of health. Fred L. Baldwin, Borough Clerk, Caldwell.

City of Orange.—MEMBERS AND OFFICERS—John T. Platt, G. H. Richards, M. D., A. Eichhorn, John Burke, P. J. Hannagan, J. H. Brown, Stephen Collins; D. A. Dugan, Registrar; Wm. Schluer, Health Officer and Secretary; John Ryan, Sanitary Inspector; S. D. Philpot, Plumbing Inspector.

Communicable diseases were reported as follows: Membranous croup, 1 fatal case; scarlet fever, 80; deaths, 9; typhoid fever, 24. Daily consumption of water, 1,500,000 gallons. Number of premises connected with the sewer during the year, 182. Nuisances investigated, 300; abated 297. Prosecutions for failure to abate nuisances, 4. Annual appropriation, \$3,000. Fourteen meetings were held.

The secretary of the board, Mr. William H. Schluer, writes as follows:

By far the greater number of cases of contagious diseases occurred during the first six months of the year, i. e., from October 1st, 1899, to April 1st, 1900, to wit: Scarlet fever, sixty-four cases as against sixteen cases in the last six months; diphtheria, forty-eight cases as against sixteen cases. Another noteworthy fact is, that, with the exception of two deaths from diphtheria, all deaths occurred during the first half of the year, when houses are shut up and ventilation is retarded. The scarlet fever cases (80) occurred on sixty-three premises; on eight of them subsequent cases appeared. Diphtheria (54 cases) infected thirty-eight premises and on four the disease spread beyond the original cases. The precautionary measures taken to prevent the spreading of disease were good on thirty premises; they were faulty on forty-four premises, and on twenty-seven premises it was impossible to separate the sick from the well. The sanitary condition of the infected premises were: Sewer connection for the discharge of all waste and filth on forty-five premises; on twenty-six premises sewer connection for the discharge of house-waste with privy pits still in use; no sewer connection on thirty premises. In October of last year there were reported, within five days, three cases of scarlet fever amongst the children attending one of our private schools. At our request the school was closed for a few days and thoroughly disinfected with a solution of bichloride of mercury (1 to 800) applied

ESSEX COUNTY—Continued.

with a force pump. Since then not a pupil of that school has been reported to be sick with a contagious disease. We had twenty-four cases of typhoid fever. From October 1st, 1899, to April 1st, 1900, eight cases were reported, and sixteen between April 1st and October 1st, 1900. The data, which probably establish the sources of infection, are: Eleven persons were taken sick within two weeks after returning from some summer resort; five were tramps who had been in this city a week or less; one contracted the disease in Canada and came home sick; a contaminated well was probably the cause of two cases (the well was afterward filled in); one case was due to direct infection from a previous case; the other four cases show nothing which gives a clue to the causes. There is in existence, and has been for several years, a committee (The Joint Committee on Isolation Hospital) composed of members of the various benevolent and civic societies of the Oranges and delegates from the several boards of health, which has for its object the establishment of an isolation hospital by private contribution. Pledges for donations amounting to several thousand dollars have already been secured, enough to warrant the purchasing of a site. Our real estate owners are loath to sell a tract of land for that purpose, but the energy and persistence of the committee is assurance that eventually a suitable place will be procured and a hospital will be built. Our public water-supply has been greatly improved within the last year, and, to show the value of this improvement, I will concisely describe the original plant: It consists of a reservoir, located between the two mountain ridges known as the first and second Orange mountains, and it collects the waters from an area of about four square miles of wood and farm land sparsely settled by dairy farmers. It has a capacity of about one hundred and forty million gallons; the bottom is of clay, with underlying strata of sand and gravel, and to this is attached the main supply-pipe (16 inches) which reaches the lateral pipes in the city, by way of Wyoming, Maplewood and South Orange. The supply has been, until lately, direct from this reservoir. The general objections to a supply of water which has been impounded for a long period were, at times, observable. It has been found that a large quantity of this water, estimated at over one million gallons per day, is lost by leakage. It percolates through the clay-soil, becomes filtered by passing through the strata of sand and gravel, and appears in numerous springs below the reservoir dam, then it flows in a brook, which passes through the South mountain reservation (a large tract of land owned by Essex county and under the exclusive control of the Essex County Park Commissioners) on towards Milburn. The city has now constructed, at the southerly terminus of the park property, a small reservoir, just sufficient for the immediate wants of the city. In this the naturally filtered water is collected and pumped into the main supply-pipe. The danger of polluting the waters falling on the park reservation is very remote. One hundred and eighty-two premises were connected with the public sewers during the year. Ashes mixed with the less-objectionable parts of garbage are used to fill in low land, and the more putricible part of the garbage is carted to a farm to be used as food for hogs and as a fertilizer. The board of health has repeatedly called the attention of the common council to this unsanitary method, and lately the committee on public health of the common council has given much attention to garbage crematories, with a view of building one for this city. If indications are not misleading,

ESSEX COUNTY—Continued.

we will have such a plant in the near future. Three hundred and thirty nuisances were investigated, of which two hundred and ninety-seven were abated. The more important of these were the removal and destruction of three dilapidated houses and the filling in of several low places where water collected and stagnated. Four suits were entered against delinquents, and in each case the board recovered the penalty. We have no regular medical inspection of school children. About seven per cent. of our school children are not vaccinated. We offered free vaccination to all who wished to avail themselves of our offer during May and June last; we purchased a quantity of vaccine and had a physician in attendance, but so few took advantage of our offer that we discontinued it. The benefit was not commensurate with the cost.

South Orange Township.—MEMBERS AND OFFICERS—J. M. Van Ness, Hilton; Abel Mooney, South Orange; Richard Kernan, South Orange; Joseph H. Osborn, Clerk, Hilton; Thomas C. Baker, Secretary, Maplewood; W. W. Heberton, M.D., Inspector, South Orange.

Two cases of diphtheria, 3 of scarlet fever and 1 of typhoid fever were reported. Five nuisances were abated. Two meetings were held.

Village of South Orange.—MEMBERS AND OFFICERS—Mefford Runyon, M.D., Ira A. Kip, H. A. Pulsford, M.D., Francis Speir, Jr., Graham H. Brewer; Richard D. Freeman, M.D., Secretary; W. W. Heberton, M.D., Inspector.

Communicable diseases were reported as follows: Diphtheria, 5; scarlet fever, 7; typhoid fever, 5. Daily quantity of water used, 151,000 gallons. Dwellings connected with water-mains during the year, 47. Nuisances abated, 41. Two meetings were held.

Vailsburg Borough.—MEMBERS AND OFFICERS—Edward A. Zusi, John F. Murphy, John V. Deifenthaler, Dr. H. Denhart, William Billington; Robert A. Glover, Secretary; Dr. P. Davenport, Andrew Lentz, Herman Rodamacher, Inspectors.

Five cases of diphtheria and 4 of scarlet fever occurred. Fifty houses were connected with public water-mains during the year. Nuisances abated, 34. Appropriation, \$200. Seventeen meetings were held.

Verona Township.—MEMBERS AND OFFICERS—Chas. W. Oughelton, Verona; J. E. De Camp, Verona; Chas. H. Jacobus, Cedar Grove; W. T. Scott, Verona; H. B. Whitehorne, M.D., Secretary, Verona.

Three cases of diphtheria, 3 of scarlet fever, and 2 of typhoid fever were reported. Three nuisances were abated. Appropriation, \$50. Two meetings were held.

ESSEX COUNTY—Continued.

West Orange Township.—MEMBERS AND OFFICERS—J. B. F. Grady, Orange Valley; Joseph Fleming, Orange; Benj. L. Williams, M.D., Registrar, West Orange; Albert J. Wensch, Secretary, West Orange; J. M. Maghee, M.D., Inspector, West Orange.

Communicable diseases were reported as follows: Diphtheria, 18; scarlet fever, 2; typhoid fever, 4; small-pox, 1. Average daily quantity of water used, 78,900 gallons. Number of dwellings connected with water-mains during the year, 47. Nuisances abated, 200. Annual appropriation, \$800, but in addition to this, \$800 was expended in the care of a case of small-pox. Seventeen meetings were held.

GLOUCESTER COUNTY.

Clayton Borough.—MEMBERS AND OFFICERS—C. C. Burroughs, Jos. Kille, Wm. Pierce; Geo. L. Duffield, Registrar; A. G. Silver, Secretary; C. Frank Fisler, Inspector.

Twenty-five cases of diphtheria, 2 terminating fatally, and 1 fatal case of membranous croup were reported. Average daily quantity of water used, 100,000 gallons. Dwellings connected with water-mains during year, 20. Sewer extensions, 300 feet. Two nuisances were abated. Three meetings were held.

Deptford Township.—MEMBERS AND OFFICERS—A. W. Muller, Almonesson; Jos. Noblit, Wenonah; B. F. Haines, Westville; Wm. C. Cattell, Secretary, Wenonah; H. A. Stout, M.D., Inspector, Wenonah.

Six cases of diphtheria, 3 of scarlet fever, and 7 of typhoid fever were reported. Fourteen nuisances were abated. Four meetings were held.

East Greenwich Township.—MEMBERS AND OFFICERS—Henry L. Haines, Clarksboro; John C. Heritage, Mickleton; Seth H. Warrington, Mickleton; Walter Heritage, Secretary, Mickleton; Dr. Chas. Haines, Inspector, Clarksboro.

Six cases of diphtheria were reported. One meeting was held.

Elk Township.—MEMBERS AND OFFICERS—Franklin Homan, Glassboro; Roulef Kinsell, Aura; H. G. Lacy, Evans; Kinsey Morgan, Hardingville.

GLOUCESTER COUNTY—*Continued.*

Franklin Township.—MEMBERS AND OFFICERS—A. B. Richman, Malaga; Charles Trunnell, Malaga; Samuel Louder, Newfield; W. S. Richman, Secretary, Malaga; A. A. Smith, Inspector, Malaga.

Two meetings were held.

Glassboro Township.—MEMBERS AND OFFICERS—C. S. Heritage, M.D., Josiah Shute, Simon S. Duffield; David Paulin, Secretary; Edward Munyuu, Inspector. All of Glassboro.

Thirty-seven cases of diphtheria and 2 of scarlet fever were reported. Nine cases of diphtheria resulted fatally. Average daily quantity of water furnished in the village of Glassboro was 39,300 gallons. Dwellings connected with mains during year, 15. No sewers. Complaints investigated, 35. Nuisances abated, 30. Seven meetings were held.

Greenwich Township.—MEMBERS AND OFFICERS—W. Scott Thomson, Charles Parker, W. Ambler Stetser; Jacob Ballinger, Secretary; Geo. C. Laws, M.D., Inspector. All of Paulsboro.

Communicable diseases were reported as follows: Diphtheria, 24; membranous croup, 4; scarlet fever, 50; typhoid fever, 6. Four cases of diphtheria, 2 of membranous croup and 1 of scarlet fever proved fatal. Twelve nuisances were abated. Appropriation, \$75. Two meetings were held.

Harrison Township.—MEMBERS AND OFFICERS—Samuel T. Stratton, Ewan; N. S. Lloyd, Mullica Hill; A. S. Murphy, Richwood; S. F. Ashcraft, M.D., Mullica Hill; Eli Heritage, Secretary, Richwood.

Two meetings were held.

Logan Township.—MEMBERS AND OFFICERS—Isaac Derrickson, Repaupo; Smith Shoemaker, Bridgeport; C. Fletcher Myers, Bridgeport; E. T. Oliphant, M.D., Bridgeport; S. B. Platt, Secretary, Bridgeport.

Appropriation, \$50. Two meetings were held.

Mantua Township.—MEMBERS AND OFFICERS—Robert G. Kincade, Pitman Grove; George Morey, Barnsboro; Harry Mullen, Mantua; Geo. B. Hurff, Registrar, Sewell; E. Z. Hillegass, M.D., Secretary, Mantua.

Four cases of diphtheria, 3 of scarlet fever, and 2 of typhoid fever were reported. Appropriation, \$75. Three meetings were held.

GLOUCESTER COUNTY—*Continued.*

OFFICE OF THE BOARD OF HEALTH
OF THE STATE OF NEW JERSEY,
TRENTON, October 16th, 1900. }

To the Board of Health of the Township of Mantua, Gloucester County, N. J. :

GENTLEMEN—At a meeting of the Board of Health of the State of New Jersey, held October 9th, 1900, the secretary was directed to bring to the attention of the board of health of the township of Mantua facts relating to the unsanitary conditions which exist in Pitman Grove. Inclosed is a copy of a report of an inspection of that locality.

Very respectfully,

HENRY MITCHELL,
Secretary.

INCLOSURE.

"To the Board of Health of the State of New Jersey :

GENTLEMEN—An inspection of Pitman Grove, made August 9th, 1900, shows that about 600 cottages have been erected upon the lands enclosed within the limits of the Camp Meeting Association grounds. The surface of the ground has a dip from the boundaries toward the center, and storm-water disappears very slowly. The streets radiate from the center of the grounds, and they are narrow, without curbing, being footways generally, few of them being intended for use as driveways. The cottages are generally small and inexpensive structures, and few of them have cellars. A short line of tile-pipe has been laid to carry off the storm-water of a small district, but no provisions have been made for the disposal of domestic waste fluids. Two large privy-pits are located on the northern border of the grounds, and these receptacles were found to be emitting offensive odors in great volume, the stench being noticeable at a distance of three hundred feet away. Refuse liquids from the dwellings are cast upon the surface of the ground, and pools of dish-water were found standing in the rear of many of the dwellings. Garbage is stored upon the ground in piles or in boxes. Numerous surface wells are in use for supplying water to the cottages, and one of these has been designated the 'Medical Well,' and its waters have been transported to Philadelphia and sold for drinking purposes. A shallow ditch carries sewage from adjacent houses to within ten feet of this well, and numerous surrounding cesspools and surface pollutions exist in this vicinity. Samples of the water of the well were taken for analysis.

"In view of the foregoing facts the following action is advised :

"1. All surface wells in Pitman Grove should be permanently closed, and water for drinking purposes should be introduced from a source of undoubted purity.

"2. The two offensive privy-pits should be excavated, filled with clean earth, and water carriage or other satisfactory disposal for excreta should be introduced.

"3. Garbage should not be placed upon the ground nor in leaky receptacles, but previous to removal it should be stored in water-tight vessels.

"4. Sewers should be provided for the disposal of waste liquids.

"5. Provision should be made for the quick removal of storm-water.

"Very respectfully,

"HENRY MITCHELL,
Secretary."

GLOUCESTER COUNTY—*Continued.*

The following letter was forwarded to the Secretary of the Pitman Grove Camp Meeting Association, September 1st, 1898:

Rev. H. G. Williams, Secretary, Pitman Grove:

“DEAR SIR—In response to a request from a resident of Pitman Grove, an officer of this board visited that locality August 17th, and investigated certain conditions relating to the public health.

“The report of that inspection shows:

“1. That a camp meeting has been annually conducted at this place for the past eighteen years, and that the population during the summer months is from five thousand to seven thousand, and that at times, during the camp meetings, the population is not less than fifteen thousand for short periods.

“2. That the soil upon which the camp is located is sandy and porous; that the streets are generally very narrow, and that the houses are placed near to each other.

“3. That there is no system of sewers for this locality, but that waste fluids from the dwellings flow upon or into the ground, or into open ditches or gutters in the streets.

“4. That the water supply is obtained from several sources, as follows: From a well one hundred and eighty feet deep, which has been provided by the governing body to serve as a source for a public supply. It was stated by the engineer in charge of this well that at the present time fifteen thousand gallons of water are pumped from this well daily, and it was learned that there are but thirty connections with this supply. Along the streets, at varying intervals, surface tube wells, from fifteen to eighteen feet in depth, are placed, and these and other similar shallow surface wells are depended upon mainly by the inhabitants for their supply of drinking water. The wells in the streets are beside the gutters which receive the waste fluids from the dwellings.

“There are two surface wells from twenty-six to twenty-eight feet in depth, from which water is daily shipped for use in restaurants in Philadelphia. Within twenty feet of one of these wells is a filthy pool of dish water.

“5. That the large public privy vaults are unsuitable and offensive, and that these structures are unfit to be erected in any built-up district.

“In view of the foregoing facts, we desire to point out the desirability of at once securing improvements as follows:

“1. The water obtained from all of the shallow wells in Pitman Grove, including those of twenty-six or twenty-eight feet in depth, is unsafe for potable uses, and every such well should be closed.

“2. The present method of disposal of waste fluids, by casting them upon the ground surface and by conducting them into ditches and street gutters, pollutes the soil, the air and the ground water, and constitutes a dangerous nuisance. To remedy this evil sewers should be provided.

“3. The large public privy vaults should be abolished. If some convenience to take the place of these structures is necessary, they might advantageously be replaced with earth closets, provided that accumulations were removed daily. When sewers shall have been introduced, water closets should then be substituted.

GLOUCESTER COUNTY—*Continued.*

“In conclusion, we wish to advise that the correction of sanitary defects herein referred to should proceed without delay.

“Very respectfully,

“HENRY MITCHELL,
“Secretary.

Following is a copy of a communication relating to the examination of a specimen of water recently sent to the Secretary of the Pitman Grove Association:

“September 25th, 1900.

Rev. H. G. Williams, Secretary, Pitman Grove, N. J.:

“DEAR SIR—A report received from the chemist of this board relating to the analysis of a specimen of water, taken from the so-called ‘medical well’ in Pitman Grove, shows that said specimen contains quantities of chlorine, free ammonia, and albuminoid ammonia, which indicate that the water of said well is polluted.

“Very respectfully,

“HENRY MITCHELL,
“Secretary.”

The board of health of Mantua township was further advised as follows:

1. That every surface well within the built-up district of Pitman Grove should be regarded as polluted, and that a supply of wholesome water should be provided for the residents.

2. That suitable ordinances relating to the storage, collection and removal of garbage shall be made by the board of health of Mantua township, and that said ordinances shall be enforced by said board.

3. That the large public privy-vaults in Pitman Grove shall be abandoned; that the said vaults shall be filled with clean earth, and that the board of health of the township of Mantua shall recommend the use of earth closets in Pitman Grove until sewers and a public water-supply shall be provided.

4. That ordinances shall be made by the Mantua township board of health prohibiting the casting of waste fluids upon the surface of the ground in Pitman Grove.

Monroe Township.—MEMBERS AND OFFICERS—J. G. Edwards, M.D., Williamstown; James M. Levered, Williamstown; H. B. Garwood, Williamstown; M. M. Chew, Cecil; Clayton B. Tice, Secretary, Williamstown.

Two cases of scarlet fever were reported. Six complaints were investigated and 4 nuisances were abated. Appropriation, \$25. Three meetings were held.

GLOUCESTER COUNTY—*Continued.*

South Harrison Township.—MEMBERS AND OFFICERS—George Conover, Alfred Lippincott, Frank Kirby; Dr. Samuel F. Stanger, Secretary. All of Harrisonville.

One case of diphtheria occurred. One meeting was held.

Washington Township.—MEMBERS AND OFFICERS—Chas. H. Doran, Hurffville; John Wilkins, Turnersville; Allen Hurff, Crosskeys; Dr. C. B. Phillips, Hurffville; Chas. Nicholson, Secretary, Turnersville.

Two cases of scarlet fever and 3 of typhoid fever were reported. Appropriation, \$25. Two meetings were held.

Wenonah Borough.—MEMBERS AND OFFICERS—Harry A. Stout, M.D., J. K. Schultz, Wm. B. Oat; Jesse W. English, Secretary.

Two cases of scarlet fever were reported. One meeting was held.

West Deptford Township.—MEMBERS AND OFFICERS—Joseph A. Moore, Woodbury; R. M. Plum, Westville; Elmer E. Clement, Thorofare; James Carter, Jr., Secretary, Thorofare.

Twelve cases of scarlet fever occurred. Five nuisances were abated. Appropriation, \$100. Seven meetings were held.

City of Woodbury.—MEMBERS AND OFFICERS—William M. Carter, W. C. Williams, Warner Underwood, Jos. J. Summerill, Charles Walton, Thos. E. Parker; Arthur Starr, Secretary; Joshua Dawson, Inspector.

Communicable diseases were reported as follows: Diphtheria, 8; scarlet fever, 23; typhoid fever, 4. During the year 800 dwellings were connected with water-mains. Fifteen nuisances were abated. Appropriation, \$125. Thirteen meetings were held.

Woolwich Township.—MEMBERS AND OFFICERS—Charles Batten, James Homer, Benjamin Shoemaker, Samuel Avis; Benj. F. Buzby, Secretary. All of Swedesboro.

Four cases of scarlet fever were reported. Annual appropriation, \$100. Three meetings were held.

HUDSON COUNTY.

MEMBERS AND OFFICERS.—John E. West, M.D., Charles B. Converse, M.D., John Connell, M.D.; C. J. Rooney, Clerk; John F. Nagle, Michael Nevin, Dr. C. C. Hendrick, Inspectors.

City of Bayonne.—MEMBERS AND OFFICERS—Egbert Seymour, Patrick Flanigan, Henry Meigs, Dr. G. O. Bradford, Vedder Vandyck, Dr. L. F. Donohue, Jas. Foerst; H. H. Mara, Secretary; Dr. A. C. Forman, H. S. Winterhalter, John H. Nevius, Inspectors.

Population by census of 1900, 30,722. Communicable diseases reported: Diphtheria, 59; scarlet fever, 52; typhoid fever, 6; small-pox, 1. No record of deaths is kept in Bayonne. Average daily quantity of water consumed is 3,120,000 gallons. Number of dwellings connected with water-mains during year, 175. Three thousand feet of new water-pipe was laid. New sewer connections, 133. Sewer extensions, 1½ miles. Nuisances reported, 613. Abated, 536. Two repositories for mailing-cases, for transmitting specimens of diseased tissue to the State bacteriological laboratory, have been established. Appropriation for board, \$800. Twelve meetings were held.

Town of Guttenberg.—Following is a list of the names of the borough council. No board of health has been organized. John Zeller, K. V. Lutz, John J. Daley, H. E. Lang, Mathias Hess; W. J. Mager, Secretary.

Town of Harrison.—MEMBERS AND OFFICERS—Dr. M. O. F. Dolphin, John F. Malone, John J. Scanwell, Patrick J. Cooney; Peter J. Goodman, Secretary; John T. McClure, Inspector.

Communicable diseases were reported as follows: Diphtheria, 26; with 8 deaths; scarlet fever, 21; 1 death; typhoid fever, 24; 2 deaths. Average daily quantity of water furnished to consumers, 457,262 gallons. Dwellings connected with water-mains during year, 45. Extension of water-mains, 1,500 feet. Premises connected with sewer, 41. Extension of sewer, 1,442 feet. Nuisances abated, 250. Total number of children attending schools, 1,421, of which number only 607 have been vaccinated. Twelve meetings were held.

City of Hoboken.—MEMBERS AND OFFICERS—Samuel A. Helfer, M.D., James Benson, John Podesta, G. M. Sinclair, E. T. Steadman, M.D.; James Havron, Secretary; Antonio Granelli, Samuel Stanton, John Beronio, Inspectors.

HUDSON COUNTY—*Continued.*

Communicable diseases were reported as follows: Diphtheria, 126; deaths, 14; membranous croup, 32; deaths, 17; scarlet fever, 209; deaths, 2; typhoid fever, 23; deaths, 14. Average daily water consumption, 7,000,000 gallons. Dwellings connected with water-mains, 73. Dwellings connected with sewers, 35. Sewer extensions, 400 feet. Complaints investigated, 1,352. Nuisances abated, 1,304. Prosecutions, 193. Appropriation, \$2,700. Twenty-seven meetings were held.

Jersey City.—MEMBERS AND OFFICERS—John T. McGill, Thos. W. Filder, Adolph Walters, Jr., Henry H. Brinkerhoff, Jr.; C. J. Rooney, Registrar; Gilbert Robinson, Secretary; Daniel W. Benjamin, E. P. Hart, M.D., J. Stout, M.D., Robert Stewart, M.D., John O'Donnall, Inspectors.

Communicable diseases were reported as follows, from September 1st, 1899, to October 1st, 1900: Diphtheria, 438; membranous croup, 57; scarlet fever, 552; typhoid fever, 31; small-pox, 2. Complaints investigated, 3,089. Nuisances abated, 2,178. Prosecutions, 10. Twelve meetings were held.

Town of Kearny.—MEMBERS AND OFFICERS—H. C. Pierce, C. W. Burroughs, P. Boyle, Thos. Adams, B. Burtis; W. W. Keyler, Secretary; John McElroy, Inspector; G. F. Lightfoot, M.D., Health Officer, Arlington.

Twenty-two cases of diphtheria, 1 of membranous croup, 31 of scarlet fever and 2 of typhoid fever were reported. The isolation hospital facilities on Snake Hill, provided by the county, are used by the town of Kearny whenever occasion requires. Average daily quantity of water consumed, 50,000 gallons. Dwellings connected during year, 107. Extensions of water-mains, 1,000 feet. Premises connected with sewers during the year, 145. Sewer extensions, 3 miles. Complaints investigated, 310. Prosecution, 1. Children vaccinated at public expense, 401. Appropriation, \$1,000. Monthly meetings were held.

North Bergen Township.—MEMBERS AND OFFICERS—Chas. Dietz, P. A. Brady, John B. Branagan, J. W. Culver; Joseph Kennell, Inspector; Emil J. Fouch, Secretary.

HUDSON COUNTY—*Continued.*

Complaints investigated, 27. Nuisances abated, 25. Prosecutions for failure to comply with ordinances, 3. Appropriation, \$1,628.28. Twenty-two meetings were held.

West Hoboken Township.—MEMBERS AND OFFICERS—Adolph Kieburg, A. O. Weisenberg, Frederick Cordes; W. Percival Fisk, Secretary. All of West Hoboken.

Communicable diseases were reported as follows: Diphtheria, 24; scarlet fever, 32; typhoid fever, 4. Fifty-two premises have been connected with the sewer during the year. Nuisances abated, 57. Appropriation, \$600. Twenty meetings were held.

West New York Borough.—MEMBERS AND OFFICERS—J. Clement Justin, John Hangley; William Meckbeck, Secretary; John Oetjen, George Rover, Inspectors.

Thirty-two nuisances were abated. Annual appropriation, \$200. Twenty-four meetings were held.

HUNTERDON COUNTY.

Alexandria Township.—MEMBERS AND OFFICERS—R. A. Williamson, Mount Pleasant; E. N. Bird, Little York; Robert Roseberry, Secretary, Little York.

One meeting was held during the year.

Bethlehem Township.—MEMBERS AND OFFICERS—J. Johnson, Norton; J. V. Williver, Bloomsbury; William Creveling, Bloomsbury; Samuel O. Myers, Secretary, Bloomsbury; E. L. Riegle, Inspector, Bloomsbury.

Fifty-nine cases of diphtheria and 6 cases of scarlet fever were reported. Diphtheria caused 2 deaths. Reports of communicable diseases by physicians are unsatisfactory. Three nuisances were abated. Four meetings were held.

Town of Clinton.—MEMBERS AND OFFICERS—F. A. Esty, Jr., W. H. Baker, Dr. M. D. Knight; E. C. Moke, Secretary; Stephen Yard, Inspector.

Amount expended for health purposes, \$25. Five meetings were held.

HUNTERDON COUNTY—*Continued.*

Clinton Township.—MEMBERS AND OFFICERS—George F. Case, Lebanon; Luther Bunn, Cokesburn; Garret S. Kinney, Annandale; Bergen B. Berkaw, Secretary, Annandale; Willard E. Berkaw, Inspector, Annandale.

Two cases of scarlet fever were reported. The village of Annandale is supplied with water by a private company, and the water is obtained from surface sources on adjoining hills. Three nuisances were abated. Amount expended during the year, \$37. Three meetings were held.

Delaware Township.—MEMBERS AND OFFICERS—Clark B. Johnson, Raven Rock; Wm. H. Brewer, Sergeantsville; Samuel H. Fauss, Sand Brook; F. W. Venable, Secretary, Sergeantsville; Geo. N. Best, M.D., Inspector.

Two meetings were held.

East Amwell Township.—MEMBERS AND OFFICERS—Charles Case, Reaville; Wm. N. Reed, Wertsville; James Q. Fisher, Ringoes; Wm. Clayhorne, Wertsville; Geo. W. Cherry, Secretary, Ringoes; P. A. Young, M.D., Inspector, Ringoes.

Three meetings were held.

Franklin Township.—MEMBERS AND OFFICERS—John E. Anderson, Pittstown; Hiram D. Young, Quakertown; W. A. C. Robinson, Quakertown; J. L. Agans, Secretary, Pittstown; Q. E. Snyder, M.D., Inspector, Quakertown.

One meeting was held.

Frenchtown Borough.—MEMBERS AND OFFICERS—Chas. H. Sigafos, Benj. Philhill, Geo. H. Steutsman, Wm. Hoffman; E. W. Bloom, Secretary.

One case of typhoid fever was reported. Two nuisances were abated. Five meetings were held.

High Bridge Borough.—MEMBERS AND OFFICERS—P. H. Murray, Samuel Tate, Percival Chrystie; C. F. Halsted, M.D., Inspector; John L. Phillips, Secretary.

Dwellings connected with water-mains during year, 44. Six nuisances were abated. Three meetings were held.

Holland Township.—MEMBERS AND OFFICERS—Walter Burgstresser, Holland; William H. Teets, Milford; Furman Bellis, Finesville; Godfrey Hawk, Secretary, Milford.

HUNTERDON COUNTY—*Continued.*

Junction Borough.—MEMBERS AND OFFICERS—Howard Servis, M.D.; T. M. A'Heron, M.D.; F. C. Low, M.D.; Robert Thompson; Edgar E. Riddle, Secretary and Borough Clerk.

The foregoing persons have been appointed to serve as members of a board of health, but no organization has been effected.

Kingwood Township.—MEMBERS AND OFFICERS—Thos. McAlone, Point Pleasant, Pa.; John Hoff, Huffdale; Newton Search, Baptisttown; Samuel J. Snyder, Locktown; F. S. Grim, M.D., Inspector, Baptisttown.

Five cases of scarlet fever occurred. One nuisance was abated. Appropriation, \$100. Three meetings were held.

Lambertville City.—MEMBERS AND OFFICERS—Albert D. Anderson, William A. Cole, William R. Bowne, Samuel Stockton; James H. Reynolds, Secretary; John L. Coryell, Frank W. Larison, Inspectors.

Four cases of diphtheria and 26 of scarlet fever were reported. Appropriation, \$200. Twelve meetings were held.

Lebanon Township.—MEMBERS AND OFFICERS—Wm. H. Anderson, Califon; Wm. J. Prall, Changewater; Jno. T. Lance, High Bridge; A. S. Banghart, Secretary, Glen Gardner.

Three cases of diphtheria and 1 death occurred. Appropriation, \$25. Two meetings were held.

Raritan Township.—MEMBERS AND OFFICERS—Joseph Sergeant, Wilson B. Moore, Asa Fisher; Charles Alpaugh, Secretary; John H. Etony, M.D., Inspector. All of Flemington.

Two cases of diphtheria were reported. Average daily quantity of water used, 175,000 gallons. Dwellings connected with water-mains during the year, 16. Premises connected with sewer, 60. Nuisances investigated, 27; of which number 26 were abated. Annual appropriation, \$250. Fifteen meetings of the board were held.

Readington Township.—MEMBERS AND OFFICERS—Wm. H. Reger, White House Station; Henry Miller, White House; Geo. W. Sheets, Pleasant Run; David Schomp, Secretary, Pleasant Run; F. L. Johnson, M.D., Inspector, Stanton.

Six cases of diphtheria and 2 of typhoid fever were reported. Two meetings were held.

HUNTERDON COUNTY—*Continued.*

Tewksbury Township.—MEMBERS AND OFFICERS—John L. Hoffman, Mountainville; Henry F. Craig, New Germantown; Elias Conover, Fairmount; Theodore Miller, Califon; Harvey S. Potter, Secretary, Pottersville; Dr. Theodore Miller, Inspector.

Three cases of diphtheria occurred. Seven meetings were held.

Union Township.—MEMBERS AND OFFICERS—Sylvester Taylor, Pittstown; Jonas Thorp, Pattenburg; J. H. Hawk, Clinton; John Little, Secretary, Jutland; N. B. Boileau, Inspector, Jutland.

One case of diphtheria and 2 of typhoid fever were reported. Two nuisances were abated. Two meetings were held.

West Anwell Township.—MEMBERS AND OFFICERS—William N. Holcombe, Mount Airy; R. H. Fisher, Lambertville; J. M. Smith, Lambertville; G. H. Carr, Secretary, Lambertville; Dr. Silvaria, Inspector, Ringoes.

Two meetings were held.

MERCER COUNTY.

Ewing Township.—MEMBERS AND OFFICERS—Lewis E. Anderson, Ewingville; Samuel S. De Cou, Trenton Junction; James F. Herbert, Trenton Junction; Dr. Edgar Hart, Pennington; James M. Matthews, Secretary, Box 676, Trenton.

Four cases of diphtheria, 3 of scarlet fever and 3 of typhoid fever were reported. Three meetings were held.

Hamilton Township.—MEMBERS AND OFFICERS—Dr. Geo. R. Robbins, Hamilton Square; Geo C. Cubberly, Hamilton Square; Wm. E. Ford, Crosswicks; Albert T. Tilton, Trenton; R. E. Haines, Hamilton Square; Azariah Cubberly, Secretary, Hamilton Square.

Six cases of typhoid fever were reported. Five nuisances were abated. Appropriation, \$50. Ten meetings were held.

Hopewell Borough.—MEMBERS AND OFFICERS—David L. Blackwell, S. V. Vanzandt, T. A. Pierson, Geo. E. Fetter; W. I. Phillips, Secretary; E. V. Savaige, Inspector.

One case of diphtheria and 4 of typhoid fever were reported. Eight nuisances were abated. Three meetings were held.

MERCER COUNTY—*Continued.*

Hopewell Township.—MEMBERS AND OFFICERS—John Fleming, Pennington; P. B. Hunt, Titusville; David Stout, Stoutsburg; W. D. Hunt, Secretary, Harborton; Dr. Wm. M. Radcliffe, Inspector, Pennington.

Two cases of diphtheria were reported. Appropriation, \$100. Five meetings were held.

Lawrence Township.—MEMBERS AND OFFICERS—James G. Phillips, Slackwood; Clark Flock, Lawrence Station; John Cranston, Lawrenceville; Frank Pierson, Secretary, Lawrenceville.

One case of scarlet fever occurred. Seven meetings were held.

Pennington Borough.—No organized board of health. J. C. Bunn, Borough Clerk.

Princeton Township.—MEMBERS AND OFFICERS—B. L. Gulick, Kingston; M. T. Pyne, Princeton; R. M. Terhune, Princeton; H. N. Van Dyke, Secretary, Princeton; Dr. E. H. Bergen, Inspector, Princeton.

Nuisances investigated during the year, 4. Nuisances abated, 4. The board held 7 meetings.

City of Trenton.—MEMBERS AND OFFICERS—G. D. W. Vroom, President; Chas. P. Britton, M.D., Thos. S. Chambers, Wm. McD. Struble, M.D., Adam Exton; Wm. H. Milburn, Treasurer; William Cloke, Secretary; A. S. Fell, M.D., Health Officer; Wm. C. Allen, Edw. L. Titus, Assistant Inspectors; Geo. W. Feaster, Plumbing Inspector.

Communicable diseases were reported as follows: Diphtheria, 57; 13 deaths; scarlet fever, 115; deaths, 6; typhoid fever, 80; deaths, 11; small-pox, 1. Average daily consumption of water, 9,000,000 gallons. Dwellings connected with water-mains during the year, 166. Premises connected with sewers during the year, 543. Nuisances investigated, 929, of which number 475 were abated. The board instituted legal proceedings in 43 cases because of failure of owners to abate nuisances. Annual appropriation, \$5,000. Ten meetings were held. During the year the board of water commissioners has employed a sanitary engineer to make a report in regard to the improvement of the public water-supply. This report has been received, and in the near future definite action will doubtless be taken.

MERCER COUNTY—Continued.

Washington Township.—MEMBERS AND OFFICERS—Forman Hutchinson, Windsor; J. H. Dey, Windsor; Chas. S. Hulse, Allentown; E. K. Cole, Secretary, Windsor; Geo. A. Silver, M.D., Inspector, Windsor.

Two meetings were held.

MIDDLESEX COUNTY.

Cranbury Township.—MEMBERS AND OFFICERS—Edward W. Clayton, Prospect Plains; David Wilson, Plainsboro; John Britton, Plainsboro; A. M. Davison, Secretary, Cranbury.

One meeting was held.

The following are reports of dairy inspections made in Cranbury township:

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

RECORD OF DAIRY INSPECTION.

January 5th, 1900.

NAME OF DAIRYMAN—H. N. Scott (Owner).
ADDRESS—Plainsboro
TOWNSHIP—Cranbury. COUNTY—Middlesex.

Stable.

Size of stable. 23 x 13 x 7 feet. Box stall adjoining. 8 x 12 x 7 feet.
Area of stable. 2,093 cubic feet. Cubic feet per cow. 299.
Stable well lighted? No.
Number and size of windows in stable. None.
Material, construction and drainage of floor. Earth; no drainage.
Method and frequency of cleaning. Once each day with fork.
Floor ever washed? No.
Are sidewalls, ceilings and ledges kept free from cobwebs and dust? No; ceiling formed of hay and straw on poles.
Ever limewashed? No.

Water-Supply.

Source of water-supply for watering stock. Brook near by and well at house.
Distance of well from stable. About 140 feet
Distance of well from manure pile. About 120 feet.
Distance of well from privy vault. About 100 feet.
Is well apparently liable to contamination? Yes.
Source of water supply for washing utensils and cans. Same as used for stock.

MIDDLESEX COUNTY—Continued.

If from well, describe surroundings. Surface well about 20 feet deep, under kitchen.
Waste water spilled on floor leaks through floor into well. Waste water thrown on ground near well. Well surrounded by brick, opening in side of well from cellar.
Was sample taken for analysis? Yes. Marks. H. N. S., No. 22.

Cattle.

Number of cows. Seven. Breed. Grade.
State of health. Apparently good.
Ever examined? No.
Cows groomed? No.
Amount, kind and quality of feed used. Cornmeal and bran, about 4 quarts to each cow; corn ears also fed at present.
Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
How frequently removed? Twice a year.
Quantity of manure at time of this inspection. About 6 loads.

Utensils.

How washed and dried? Washed in hot water; placed in open air to dry.
Where are the utensils washed? In kitchen.
Any appliance for sterilizing cans, pails and dippers? No.
Bottles—how washed and dried? There were bottles on yard fence, but Mr. Scott stated that he had used them some time ago to convey milk from the Walker-Gordon farm to a certain family in Princeton.
Quantity of milk produced daily? About 10 quarts.
Are milkers' hands washed before milking? No; not always.
Are clean garments put on? No.
Udders of cows cleaned? Sometimes. How? With cloth and water.
When pail is full of milk what is done with it? Poured in can.
Where does the can stand? Outside, near kitchen door.
Is can kept covered? Not tightly.
Is milk cooled? In summer. How? By setting in tubs of water from well.
How long after milking? Directly.
To what temperature? Not known.
Is milk bottled? No.
Where is milk stored? In kitchen.
How long is milk stored before being shipped? Over night.
Source of ice supply. None used.
If shipped, to whom, and where? Retail in Princeton, N. J.

MIDDLESEX COUNTY—Continued.

Distribution.

Temperature of milk when delivered to customers? Not known.

Quarts sold from cans? About 75.

Quarts sold in bottles? None.

Ever run short? Yes.

If so, where is supply obtained? Mr. Scott stated that he obtains about 12 quarts of milk each day from H. D. Gordon; 16 quarts from A. A. Duncan, and 28 quarts from D. J. Wilson, for his customers in Princeton. These men have dairy premises near by.

How many persons handle the milk? Two.

All in good health? Apparently.

Date of last sickness among persons on dairy premises? Mr. Scott positively stated that there had been no sickness on his premises for a long time; that the man who worked for him by the day was in good health, and that he had known this man's family, as well as families of men from whom he obtains his milk-supply, for a long time, and he did not think there had been any sickness on these premises for a number of years.

CHAS. J. MERRELL,
Inspector.

RECORD OF DAIRY INSPECTION.

January 11th, 1900.

NAME OF DAIRYMAN—D. J. Wilson (Owner).

ADDRESS—Plainsboro.

TOWNSHIP—Cranbury. COUNTY—Middlesex.

Stable.

Size of stable. 8 x 12 x 35 feet.

Area of stable. 2,880 cubic feet. Cubic feet per cow. About 411, if stable is full; place for seven cows.

Stable well lighted? No.

Number and size of windows in stable. One; 24 x 18 inches.

Material, construction and drainage of floor. Earth; level; no drainage.

Method and frequency of cleaning. Probably daily, with fork; floor covered with clean straw at time of inspection.

Are sidewalls, ceilings and ledges kept free from cobwebs and dust? No.

Ever limewashed? No.

Water-Supply.

Source of water-supply for watering stock. Hydrant under hovel; water from driven well.

Distance of well from stable. About 130 feet.

Distance of well from manure pile. About 115 feet.

Was sample taken for analysis? Yes. Marks. D. J. W., No. 26.

MIDDLESEX COUNTY—Continued.

Manure.

How and where stored? In yard adjoining stable.

Quantity of manure at time of this inspection. Not large.

Distribution.

Remarks. Mr. H. N. Scott stated that he bought Mr. Wilson's milk and retailed it in Princeton, N. J. He also stated that there had been no serious sickness on Mr. Wilson's premises for a long time.

CHAS. J. MERRELL,
Inspector.

NOTE.—No one on premises from whom to obtain information to properly fill out this blank.

RECORD OF DAIRY INSPECTION.

January 11th, 1900.

NAME OF DAIRYMAN—A. A. Duncan (Tenant).

ADDRESS—Cranbury.

TOWNSHIP, Cranbury. COUNTY—Middlesex.

Stable.

Size of stable. 9 x 15 x 20 feet. Has passage-way connecting it with horse stable.

Area of stable. 2,700 cubic feet. Cubic feet per cow. 675. Four cows kept in this stable.

Stable well lighted? No.

Number and size of windows in stable. None.

Material, construction and drainage of floor. Earth; level; no drainage.

Method and frequency of cleaning. Daily, with fork.

Floor ever washed? No.

Are sidewalls, ceilings and ledges kept free from cobwebs and dust? No.

Ever limewashed? No.

Water-Supply.

Source of water-supply for watering stock. Surface well at barn.

Distance of well from stable. About 7 yards.

Distance of well from manure pile. Three feet.

Distance of well from privy vault. About 46 yards.

Is well apparently liable to contamination? Yes.

Source of water-supply for washing utensils and cans. Well at house.

If from well, describe surroundings. Surface well, covered by wooden platform, located 4 feet from house; waste water on ground, about 12 feet away, privy about 33 yards distant.

Was sample taken for analysis? Yes. Marks. A. A. D., No. 24.

MIDDLESEX COUNTY—Continued.

Cattle.

Number of cows. Six. Breed. Grade.
 State of health. Apparently good.
 Ever examined? No.
 Cows groomed? No.
 Amount, kind and quality of feed used. Cob meal, 4 quarts to each cow; sometimes corn meal, bran and potatoes.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Twice a year.
 Quantity of manure at time of this inspection. Small quantity, mostly straw.

Utensils.

How washed and dried? Washed in hot water, placed in open air to dry.
 Where are the utensils washed? In kitchen.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

Collection of Milk.

Quantity of milk produced daily? About 25 quarts.
 Are milkers' hands washed before milking? No.
 Are clean garments put on? No.
 Udder of cows cleaned? No.
 When pail is full of milk what is done with it? Poured in can.
 Where does the can stand? Near house.
 Is can kept covered? Not tightly.
 Is milk cooled? In summer. How? By setting in tub of water from well.
 Is milk bottled? No.
 Where is milk stored? At present time delivered to Mr. Scott.
 How long is milk stored before being shipped? Directly after milking.
 Source of ice-supply. None used.
 If shipped, to whom, and where? Not shipped.

Distribution.

Quarts sold from can? About 25.
 Quarts sold in bottles? None.
 Ever run short? No; sells whatever amount he produces.
 How many persons handle the milk? Three.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Positively stated no sickness for number of years.
 Remarks. Mr. Duncan sells his milk to H. N. Scott, who retails it in Princeton, N. J.

CHAS. J. MERRELL,
Inspector.

MIDDLESEX COUNTY—Continued.

RECORD OF DAIRY INSPECTION.

January 11th, 1900.

NAME OF DAIRYMAN—H. D. Gordon (Tenant).
 ADDRESS—Princeton Junction.
 TOWNSHIP—Cranbury. COUNTY—Middlesex. Enoch Eldridge, owner, Cranbury, N. J.

Stable.

Size of stable. 8 x 15 x 24.
 Area of stable. 2,880 cubic feet. Cubic feet per cow. 576.
 Stable well lighted? Comparatively.
 Number and size of windows in stable. Two. 21 x 27 inches; 16 x 16 inches.
 Material, construction and drainage of floor. Earth; no drainage; floor covered with clean straw.
 Method and frequency of cleaning. Daily, with fork.
 Are sidewalls, ceilings and ledges kept free from cobwebs and dust? No.
 Ever limewashed? No.

Water-Supply.

Source of water-supply for watering stock. Well at house.
 Distance of well from stable. About 49 yards.
 Distance of well from manure pile. About 39 yards.
 Distance of well from privy vault. About 24 yards.
 Is well apparently liable to contamination? Yes.
 Source of water-supply for washing utensils and cans. Same as used for stock.
 If from well, describe surroundings. Surface well under porch adjoining house; waste fluids on ground near by.
 Was sample taken for analysis? Yes. Marks. H. D. G., No. 23.

Cattle.

Number of cows. Five. Breed. Grade.
 State of health. Apparently good.
 Ever examined? No.
 Cows groomed? No.
 Amount, kind and quality of feed used. Corn, bran, corn meal.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 Quantity of manure at time of this inspection. Probably 6 loads; large quantity of fresh straw in yard.

Utensils.

How washed and dried? Washed in hot water; placed in open air to dry.
 Where are the utensils washed? On kitchen porch.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? None used.

MIDDLESEX COUNTY—*Continued.**Collection of Milk.*

- Quantity of milk produced daily? About 13 quarts.
 Are milkers' hands washed before milking? No.
 Are clean garments put on? No.
 Udders of cows cleaned? No.
 When pail is full of milk what is done with it? Poured in can.
 Where does the can stand? Near house.
 Is milk cooled? Yes. How? By stirring in can; can placed in tub of water from well in summer.
 Is milk bottled? No.
 Where is milk stored? Outside when not too cold weather; in kitchen when weather is cold.
 How long is milk stored before being shipped? One night.
 Source of ice supply. None used.
 If shipped, to whom, and where? Not shipped.

Distribution.

- Quarts sold from cans? About 13.
 Quarts sold in bottles? None used.
 Ever run short? No; sells whatever quantity he has.
 How many persons handle the milk? Two.
 All in good health? Apparently.
 Date of last sickness among persons on dairy premises? Positively stated no sickness on place for long time.
 Remarks. Mr. Gordon sells his milk to H. N. Scott, who retails it in Princeton, N. J.

CHAS. J. MERRELL,

Inspector.

Dunellen Borough.—MEMBERS AND OFFICERS—C. D. Boice, Geo. W. Churchill, I. Stites; C. A. Coriell, Registrar; O. A. Douglass, Secretary; J. Peters, Inspector.

Two cases of diphtheria, 1 of membranous croup, 18 of scarlet fever, and 1 of typhoid fever were reported. Fifteen dwellings were connected with the water-mains during the past year. There are no sewers in the borough. Four nuisances were abated. One meeting was held.

Helmetta Borough.—No organized board of health. E. M. Clemon, Borough Clerk.

Madison Township.—MEMBERS AND OFFICERS—Cornelius Berlew, Brown-town; Ambrose Greene, Old Bridge; James Fountain, Old Bridge; I. C. Crandall, M.D., Old Bridge; D. H. Brown, Secretary, Browntown; Edward Barker, Inspector, Cliffwood.

MIDDLESEX COUNTY—*Continued.*

Two cases of diphtheria and 39 of small-pox occurred. Five meetings were held.

Metuchen Borough.—MEMBERS AND OFFICERS—E. B. Dana, M.D., A. C. Kelly, John Lehlein; A. C. Ayres, Secretary; Chas. Tausig, Inspector.

Average quantity of water supplied, 45,000 gallons. Dwellings connected with water-mains, 125. No sewers in the borough. Annual appropriation, \$50. The board of health for the borough was first organized September 18th, 1900, this being a new borough.

Milltown Borough.—MEMBERS AND OFFICERS—F. E. Riva, M.D., A. Wagner, C. Wagner, B. Christ; R. A. Harkins, Registrar; Geo. Lius, R. M. Hustes.

One case of typhoid fever occurred. No meetings were held.

New Brunswick City.—MEMBERS AND OFFICERS—H. R. Baldwin, M.D., H. G. Cook, M.D., P. A. Shannon, M.D., Prof. John B. Smith, F. B. Kelmer, Geo. Dunzer; S. V. D. Clark, M.D., Secretary and Inspector.

Communicable diseases were reported as follows: Diphtheria, 12; fatal cases, 2; scarlet fever, 110; fatal case, 1; typhoid fever, 7; fatal cases, 4. Complaints investigated, 108. Nuisances abated, 105. Prosecutions for failure to abate nuisances, 3. Appropriation, \$1,000. Nine meetings were held.

North Brunswick Township.—MEMBERS AND OFFICERS—Thos. H. Buck-alieu, Deans; S. S. Vananglen, New Brunswick; Peter Van Sickle, New Brunswick; A. E. Bowman, Secretary, New Brunswick; J. D. Teneyck, Inspector, Franklin Park.

Annual appropriation, \$50. One meeting was held.

Piscataway Township.—MEMBERS AND OFFICERS—Thomas H. Branning-hum, South Plainfield; B. Dewitt Giles, New Market; Nelson M. Giles, Bound Brook; M. J. Whitford, M.D., New Market; Charles E. Kelly, Secretary, New Market.

Four cases of diphtheria and 1 of small-pox were reported. Three nuisances were abated. Five meetings were held.

Raritan Township.—MEMBERS AND OFFICERS—E. K. Soper, Metuchen; Joseph T. Dunham, Highland Park; Alfred Mundy, Metuchen; Wm. V. McKenzie, M.D., Metuchen; Wm. T. Woerner, Secretary, New Brunswick.

Six meetings were held.

MIDDLESEX COUNTY—Continued.

Sayreville Township.—MEMBERS AND OFFICERS—August Rhodes, Sayreville; J. M. Blew, Sayreville; Chas. P. Rose, South Amboy; J. H. Beekman, M.D., Sayreville; Chas. Englehardt, Sayreville; B. F. Samsel, Secretary, Sayreville.

Five cases of diphtheria and 2 of scarlet fever occurred. Four meetings were held.

South Amboy Borough.—MEMBERS AND OFFICERS—Dr. J. Leon White, Bernard Roddy, John I. Taylor, J. H. McIlhinney; J. F. Fulton, Secretary; Thos. Baker, Inspector.

Eight cases of diphtheria and 5 of scarlet fever were reported. Dwellings connected with water-mains during the year, 39. Extensions of water-mains, 1,500 feet. Nuisances abated, 178. Appropriation, \$350. Ten meetings were held.

South Brunswick Township.—MEMBERS AND OFFICERS—Frank W. Stout, Monmouth Junction; John McDowell, Deans; Geo. W. McDowell, Dayton; Dr. Edgar Carroll, Dayton; H. E. Hathaway, Secretary, Monmouth Junction.

One meeting was held.

South River Borough.—MEMBERS AND OFFICERS—William H. Petersen, John H. Lott, Geo. Allgair, J. C. Bowne; R. Van Dyke Reid, Secretary; A. L. Woods, M.D., Inspector.

Communicable diseases were reported as follows: Diphtheria, 1; scarlet fever, 2; typhoid fever, 2; small-pox, 2. Annual appropriation, \$100. Additional appropriation for the care of small-pox patients, \$425. Twelve meetings were held.

Woodbridge Township.—MEMBERS AND OFFICERS—Clarence Liddle, Woodbridge; Henry Turner, Seward; John Leeson, Woodbridge; John Nevil, Carteret; T. E. Freeman, Inspector, Woodbridge.

Twelve cases of diphtheria, 3 of scarlet fever, 3 of typhoid fever and 4 of small-pox were reported. Thirteen meetings were held.

MONMOUTH COUNTY.

Alienhurst Borough.—Edward H. Ward, Jr., Borough Clerk.

No organized board of health. The public water-supply is obtained from artesian wells. Daily consumption of water, 50,000 gallons in winter, 300,000 gallons in summer. Number of dwellings connected with public water-mains, 143. Sewer connections, 143.

Asbury Park.—MEMBERS AND OFFICERS—Nelson E. Buchanon, President; David W. Sexton, Jesse Minot, Theodore H. Beringer, James A. Bradley, Alonzo R. Parsons; Randolph Ross, Treasurer; Samuel A. Patterson, Attorney; David C. Bowen, Secretary; Budd H. Obert, Inspector.

The secretary writes as follows:

Aside from the somewhat extended epidemic of measles, which made its appearance in this city in February and continued until about the first of July, during which time twenty cases were reported to the board of health, the city has been practically free from reportable cases of communicable diseases. Under the provisions of chapter 96 of the laws of 1900, the board of education has established a medical inspection system for the public schools which will doubtless result in restricting the spread of communicable diseases consequent upon assembling large numbers of children together, as well as lead to the betterment of the physical condition of the scholars. The total number of deaths for the year, fifty-eight, is one less than for the preceding year. There were thirty-six deaths among the resident population and twenty-two among the non-resident population. The house-to-house inspection work has been systematically continued, and sanitary records are made of all new buildings constructed, and the records of old buildings are frequently corrected. The following table, showing the number and classification of buildings in the city, is taken from the records on file in this office:

TABLE SHOWING NUMBER AND CLASSIFICATION OF BUILDINGS IN ASBURY PARK.

	With sewer connections.	Without sewer connections.	Total number of buildings.	Total number of sleeping-rooms.
Hotels and boarding-houses	199	.....	199	6,608
Hotels and business-houses combined	11	.....	11	739
Private dwellings.....	712	8	718	3,860
Dwelling and business-houses combined.....	95	7	102	486
*Tenement-houses.....	1	.....	1	42
Tenement and business-houses combined.....	16	.....	16	349
Business-houses.....	59	12	73	.....
Public assembly halls.....	2	.....	2	.....
Amusement-houses.....	4	1	5	.....
Club-houses.....	1	.....	1	.....
Public library building.....	1	.....	1	.....
Churches.....	8	3	11	.....
Public school buildings.....	2	.....	2	.....
City fire department buildings.....	2	1	3	3
Totals	1,113	32	1,145	12,087

* In which more than four families reside.

MONMOUTH COUNTY—*Continued.*

As a preliminary step toward securing the introduction of antiseptic precautions in barber shops in this city, the following resolution was adopted at the last meeting of the board of health, and all proprietors of barber shops in Asbury Park will be invited to be present when this subject is taken up for consideration:

WHEREAS, The necessity for cleanliness in the conduct of tonsorial operations in public barber shops is attracting general attention not only throughout the United States, but in every civilized country, and precautions are already being taken in many localities to prevent the dissemination of disease by means of infected brushes, sponges, towels, &c.

Resolved, That the proprietors of all barber shops in this city be invited to meet with the board of health for the purpose of conference relative to the introduction of methods for the sterilization of the hands and all implements which are brought in contact with the skin during the operation of shaving the beard and dressing the hair.

The two small-pox hospital buildings constructed and equipped six years ago at a cost to the city of \$554.35, together with the two smaller structures, occupying the same site and belonging to Neptune township, were entirely destroyed by fire on the night of April 6th, 1900, thereby leaving the city, temporarily, without means for the isolation of cases of the more dangerous communicable diseases. The building which is now being used as an isolation hospital for the reception and care of cases of scarlet fever, diphtheria and the milder forms of contagious diseases is owned by James A. Bradley, who has gratuitously furnished the same for isolation hospital purposes for the past fifteen years. The need of better facilities for the reception and care of cases of communicable diseases has long been felt in this community and efforts are now being made to secure a site, suitably located and of sufficient size, to permit the erection thereon of suitable buildings to be used for this purpose.

No changes have been made during the year in relation to the water-supply. Meters are now being introduced throughout the city with a view to prevent the unnecessary waste of water. But few surface wells are still used in Asbury Park, and there are only thirteen dwellings which are not supplied with water from the public water works. When a well exists on any premises in the city the fact is recorded on the sanitary records of the property, notwithstanding the fact that the well may not have been recently in use. The map on which the number and character of wells which still exist in this city are recorded shows: Surface (shallow) wells, 92; artesian (deep) wells, 5; wells on premises with no other water-supply, 13; wells in public grounds, 4; total, 114.

No change has been made in the sewer system during the year, except the extension of lateral sewers where necessary. The number of buildings in Asbury Park which are not sewer-connected is as follows: Dwellings, 8; business houses, 12; churches, 3; buildings not classified, 9; total, 32.

Ninety-one plans and specifications for plumbing and drainage work have been approved during the year. All new plumbing work which is constructed is inspected and tested with both air pressure and smoke. The number of privy vaults removed during the past year has not been as large as for each of the four preceding years. This is partly accounted for by the fact that during the past few years active efforts have been made on the part of the board of health to secure the removal of the most

MONMOUTH COUNTY—*Continued.*

objectionable of these structures. Frequent inspections made of every vault in the city keeps the board constantly informed concerning their condition, and when found to be defective or leaky, action is at once taken, under the ordinance, to secure their removal. When found, by reason of their construction and location, to be a source of offense to persons who reside in their vicinity, action is taken under the provisions of chapter 68, section 14, laws of 1887, to secure the abatement of the nuisance. There are but few privy vaults which are so cared for that they do not, at some time or other, constitute a nuisance to persons residing on the adjoining properties. The map showing the number of vaults existing in the city on October 1st, each year, for the past five years, 1896 to 1900, inclusive, is as follows: October 1st, 1896, 417; October 1st, 1897, 345; October 1st, 1898, 314; October 1st, 1899, 279; October 1st, 1900, 256. The 256 vaults remaining October 1st, 1900, are classified as follows: Privy vaults connected with sewer, 218; privy vaults not connected with sewer, 38; privy vaults known to be defective, 6; privy vaults with citizens' complaints against them, 57; privy vaults referred to the sanitary committee, 4. Number of catch-basins existing October 1st, 1900: Brick and cement, 791; wrought iron, 16; total, 807. The average size of the catch-basins in this city is 16 by 16 by 40 inches, giving a capacity of about 5.92 cubic feet. Inspections show that these receptacles rarely receive the attention which is required to keep them clean, and that the average amount of accumulation remaining in a catch-basin is about 2.5 cubic feet. It therefore follows that in the 807 catch-basins in the city there is continually stored about 2,017 cubic feet of filthy material. Add to this the approximate amount of accumulations contained in the 256 privy vaults in the city, about 7.24 cubic feet in each vault, or about 1,853 cubic feet in all, we have a total of about 3,870 cubic feet of fluid and semi-solid filth stored upon premises that should have been at once conveyed through the sewers to a place of safe disposal.

Frequent examinations which have been made during the year of the milk-supply furnished to consumers in this city have shown that the temptation, to some dealers, to add preservatives to their wares during the heated months of summer overbalanced their fear of having to pay the penalty, provided by law, which is intended to prohibit the adulteration and addition of preservatives to this important article of diet. There have been seventy-seven samples of milk taken for examination and analysis from dealers supplying milk in Asbury Park during the year, and of that number six samples have shown the presence of formaldehyde and six samples were found to be below the State standard in milk solids. Suits have been brought in each case, by the State Dairy Commissioner, against all dealers in this city who were found with milk in their possession which proved, upon analysis, to be below the standard required by law in milk solids, or in which preservatives were found.

There have been twenty-six cases of communicable diseases reported during the year. Twenty cases of measles, four cases of diphtheria, and two cases of typhoid fever. Measles prevailed in a mild epidemic form during the winter months, and the disease was more or less prevalent in this vicinity from February until the first of July. In the first case reported the infection was traced to a child who came with its parent, from an inland town, to visit relatives in this city. Upon their arrival the child developed measles, and, before the nature of the illness was discovered, the affected child was taken to its home, but not, however, until a number of children

MONMOUTH COUNTY—Continued.

had contracted the disease by exposure to the sick child. Four cases of diphtheria were reported during the year, attended by one death. One case occurred in December, one in February, one in May, and one in July. The source of contagion was not learned in either case. Three of the cases occurred among the resident-population, and isolation was established in the dwellings in which the cases occurred. One case occurred in a boarding-house and the patient was removed to the isolation hospital. The two cases of typhoid fever occurred in a family which arrived in Asbury Park on the 21st day of May from Philadelphia, Pa. One of the family, a female twenty-one years of age, was ill on her arrival at the hotel in this city. A physician was summoned who, being suspicious of the case, advised the patient's removal to a private cottage. The case proved to be typhoid fever, and the mother of the patient, acting in the capacity of nurse, developed the disease one month later. No case of scarlet fever occurred during the year. This is the first year in which no case of scarlet fever has occurred in this city since the adoption (1885) of an ordinance requiring reports of communicable diseases.

TABLE SHOWING THE NUMBER OF REPORTED CASES OF COMMUNICABLE DISEASES IN ASBURY PARK, AND DEATHS OCCURRING THEREFROM DURING THE PAST SIXTEEN YEARS.

YEARS.	Resident population (estimated except for census year).	NUMBER OF CASES REPORTED.					DEATHS.						
		Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.	Small-pox.
1885	2,000	14	3	1				2	1		2		
1886	2,125	4	2	9					4		5		
1887	2,250	82	7	7					7		3		
1888	2,375	20	2	1				1	1		4		
1889	2,500	10	3		1				1		3		
1890	2,625		16	6				1	2		4		
1891	2,750	1	6	2							5		
1892	2,875	36	4	7	1			1	3	1	4		
1893	3,000		7	6					1		3		
1894	3,380	7	7	2	4	1	8			1	5	1	
1895	3,761	6	5	5	7	1			3		2		
1896	3,838	39	3	2	1		1		1		7		
1897	3,916	5	14	15	2	1			2	1	2		
1898	3,993	5	3	1	1						1		
1899	4,071	4	6	2	3	2					3		
1900	4,148	20		4	2				1		5		
Totals		233	106	71	23	5	8	1	5	27	3	58	1

MONMOUTH COUNTY—Continued.

There has been no change during the past year in the methods pursued in cleansing infected goods and dwellings. In the absence of a steam disinfecting plant all infected articles, which cannot be boiled or successfully treated with bichloride of mercury or formaldehyde gas, are burned, and the owner is reimbursed for the value of the articles destroyed, by the city, in accordance with the provisions of an act of the legislature, approved March 17th, 1893. While under some circumstances satisfactory results have been attained by the use of formaldehyde gas, our experience has shown that in general practice it is only under exceptionally favorable conditions that this method of disinfection can be relied upon. Test cultures are used in proving disinfection work.

The census of 1900 gives Asbury Park a permanent population of 4,148, which is somewhat less than the estimated population from which the death-rate has been computed for the past four years, thereby making it necessary to revise the death-rate table from the year 1895.

TABLE SHOWING NUMBER OF DEATHS OCCURRING IN ASBURY PARK AMONG RESIDENT AND NON-RESIDENT INHABITANTS EACH YEAR, 1881 EXCEPTED, FOR THE PAST TWENTY-ONE YEARS.

YEARS.	Resident population.	DEATHS.			Resident death-rate.
		Resident.	Non-resident.	Total.	
1880	1,640	19	13	32	11.58
1881					
1882	1,784	30	18	48	16.81
1883	1,856	18	12	30	9.69
1884	1,928	24	15	39	12.44
1885	2,000	20	14	34	10.00
1886	2,125	21	23	34	9.88
1887	2,250	20	29	49	8.88
1888	2,375	16	18	34	6.73
1889	2,500	28	28	56	11.20
1890	2,625	32	39	71	12.19
1891	2,750	34	28	62	13.36
1892	2,875	35	24	59	12.17
1893	3,000	30	19	49	10.00
1894	3,380	40	21	61	11.86
1895	3,761	39	17	56	10.36
1896	3,838	34	25	59	8.85
1897	3,916	43	19	62	10.98
1898	3,993	28	13	41	7.01
1899	4,071	37	22	59	9.08
1900	4,148	36	22	58	8.67

Resident population estimated, except for the years 1880, 1895 and 1900.

MONMOUTH COUNTY—Continued.

TABLE SHOWING AGES AT DEATH FOR THE YEAR ENDING OCTOBER 1ST, 1900, IN ASBURY PARK.

	Males.	Females.	Total.
Under 1 year.....	6	1	7
From 1 to 2 years.....		3	3
“ 2 “ 5 “.....		2	2
“ 5 “ 10 “.....	1		1
“ 10 “ 20 “.....			
“ 20 “ 30 “.....		4	4
“ 30 “ 40 “.....	3	1	4
“ 40 “ 50 “.....	1	1	2
“ 50 “ 60 “.....	2	2	4
“ 60 “ 70 “.....	6	9	15
“ 70 “ 80 “.....	6	5	11
“ 80 “ 90 “.....	4		4
“ 90 “ 100 “.....		1	1
	29	29	58

TABLE SHOWING NUMBER OF DEATHS IN ASBURY PARK, BY MONTHS AND AGES, FOR TEN YEARS, ENDING OCTOBER 1ST, 1899.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Under 5 years.....	5	5	5	8	6	6	37	35	21	9	8	6	151
5 to 10.....	1	1	2	1	1		1	4		1	1		13
10 to 15.....	2			1		1	1		2	1			10
15 to 20.....				4	1	4	1	4					18
20 to 25.....	2	1	1	1	1	2	2	4					16
25 to 30.....	1	1	1		2		6		2	2	2		17
30 to 35.....	2	3		1	1		1	1	1	1	2	2	15
35 to 40.....	2	3	1	1	1	2	2	2	4	4	1		20
40 to 45.....	1		1	3	3	3	4	3	1	2		4	30
45 to 50.....	2	2	1	3	5	3	3	3	3	3	1	3	29
50 to 55.....	1	1	3	4	1	2	3	3	3	1	4	3	29
55 to 60.....		1	3	1	4	4	4	2	3	4	3	2	31
60 to 65.....	8	2	4	2	6	5	6	6	2	1	2	4	48
65 to 70.....	4		5	4	4	4	6	5	4	3	2	4	45
70 to 75.....	1	3	2	4	4	5	3	5	7	2	3	4	44
75 to 80.....	2	3	2	1	3		1	8	7	2	3	2	34
80 to 85.....	3	1	2	1	2		4	3	2	4	2	2	26
85 to 90.....	1	2	1		1		2			1	2		10
90 to 95.....	2												2
Total.....	40	29	34	40	42	41	92	93	58	41	39	39	588

MONMOUTH COUNTY—Continued.

There have been forty-five marriages, thirty-two births and two still-births reported during the year. These records, particularly the number of births, are believed to be incomplete.

The changing population of a pleasure resort necessitates frequent and repeated inspections of all premises in order to detect and to secure the abatement of nuisances which are ever occurring. Many cottages, hotels and boarding-houses in this city are occupied by new tenants or proprietors each succeeding year, some of whom are not familiar with the prevailing manner of storage and removal of household refuse nor with the manner of disposal of waste fluids. In fact, it is not uncommon to find proprietors of hotels and boarding-houses entirely indifferent to the sanitary conditions of the cellars, yards, drains, refrigerators and other important portions of their houses, to which their guests are supposed to have no access and never to see. It is far too common an occurrence for the finely carpeted floors and richly decorated walls of the office and public halls of a hostelry to be associated with unclean cellars and neglected back-yards, and for showy fixtures and nickle-plated pipes in toilet-rooms to be attached to unseen leaky and neglected drains. These are conditions which it is the duty of the sanitary inspector to detect and bring to light. The following report shows an example of some of the uncleanly practices which are found by inspections to exist on premises patronized by an unsuspecting public:

“To the Board of Health of the City of Asbury Park, N. J.:

“GENTLEMEN—During a sanitary inspection of the Hotel ———, No. ——— street, made during the afternoon of August 14th, 1900, my attention was attracted to the operation of scrubbing the kitchen floor, and I attentively watched the work as it proceeded, from beginning to end. From the vivid impression made upon my mind by this sight I am able to relate the following: The floor of said kitchen is constructed of boards. It is about twelve hundred square feet in superficial area and presents a wavy surface, due to uneven settling of the floor beams. The kitchen building is constructed on a brick foundation, raised about twelve inches above the ground surface. No opening to the outer air is provided for the space between the ground and the kitchen floor. The scrubbing was performed with brooms in the hands of four negroes. Hot water was thrown upon the floor in copious quantities by two helpers, while the scrubbers scoured its greasy surface with brooms. This manoeuvring was continued by the workers until the entire surface of the floor had been made wet and pools of filthy fluids stood in depressions on its uneven surface. Numerous small holes, evidently made in the floor for the purpose, permitted the thinner fluids to slowly escape upon the ground beneath the building, but these holes gradually became partly obstructed by bits of garbage and solid matter, gathered up as the scrubbing process proceeded, and the floor, now wet with greasy fluids, became exceedingly slippery. Three persons, in the space of a few minutes, in moving about the room on this slippery surface, were, by misstep, thrown heavily to the floor, and one of them received a wound in the hand from the breaking of a pitcher, which he carried, all three rising with badly soiled garments and ruffled tempers. The same scrubbing process, performed with the same brooms in the hands of the cooks, was applied to the tops of the kitchen tables. The table legs and braces, smeared with a thick coat of organic matter, received during this and former washings of the floor, were passed without cleansing.

MONMOUTH COUNTY—Continued.

My suspicion as to how the fluid and solid filth which had been loosened from the floor was to be disposed of was soon verified by the scrubbers dividing the room into two sections, two men taking charge of each section, they began to sweep the semi-fluid filth toward two central points, which proved upon inspection to be points at which holes, about three by six inches in superficial area, had been made in the kitchen floor. Through these holes the disgusting stuff was swept and added to the decomposing matter formerly deposited upon the ground beneath the building in the same manner. The larger bits of garbage which would not readily pass through the holes were occasionally gathered up by the hands of the scrubbers and thrown into the garbage pails. After the scrubbing followed a rinsing process. This was done by dashing pails of hot water upon the floor, which was swept to the holes above referred to, where it disappeared beneath the building. There was approximately sixty gallons of water used in this attempt at cleaning the kitchen floor, all of which, loaded with its decomposing organic matter, found its way upon the ground beneath the building, there to generate noxious odors.

“Respectfully submitted,

“D. C. BOWEN,
“Inspector.”

“August 14th, 1900.”

OFFICE AND INSPECTION WORK.

Number of violations of health ordinances reported by inspectors during the year, 1,173; number of re-inspections of premises after notices to abate nuisances had been sent, 336; number of citizens' complaints investigated, 277; number of written orders sent for abatement of nuisances, 423; number of cases in which notice to abate nuisances were known to have been complied with without further action, 192; number of cases referred to board with request for instructions, 43; number of written communications sent from office, 971; number of inspections made of plumbing work under construction, 266; number of air-pressure tests applied to plumbing work, 118; number of smoke tests applied to plumbing work, 78; number of notices for minor alterations and repairs in plumbing work, filed by plumbers, and inspections made of same, 57; number of plumbing plans filed, 91; number of plumbing plans approved, 87; number of plumbing plans disapproved, 4; number of drainage fixtures constructed and reported to water department, 400; number of specimens sent to State bacteriological laboratory, and replies received, through this office, for examination in suspected cases of diphtheria, tuberculosis, malaria and gonorrhoea, 143; number of disinfections of dwellings, 6; number of samples of milk examined, 77.

The following table shows the number and nature of citizens' complaints received and investigated during the year:

MONMOUTH COUNTY—Continued.

TABLE SHOWING NATURE OF COMPLAINTS RECEIVED.

DATE OF COMPLAINTS.	Damp cellars.	Offensive odors in dwellings due to causes unknown to occupants.	Overflowing or offensive privy vaults.	Overflowing catch-basins.	Placing cleanings from catch-basins upon the ground or in garbage or rubbish receptacles.	Obstructed drains and defective plumbing.	Offensive water-closet apartments.	Refuse accumulations in back yards.	Placing waste fluids upon ground.	Keeping fowls in back yards.	Complaints received against garbage collectors.	Leaky and offensive garbage receptacles.	Burning garbage and offensive substances.	Offensive fish markets.	Offensive butcher shops.	Offensive livery stables.	Offensive private stables.	Unclean streets and street gutters.	Dead animals in public streets.	Beating carpets in parks and on public grounds.	Miscellaneous.	Totals.	
1899.																							
October.....					1		2				3				1			1	1	1	3	13	
November.....		2	1						1		5								7			16	
December.....					2		1		6								1		1			12	
1900.																							
January.....				1		2													1		1	5	
February.....									3		1										1	5	
March.....						2	2		1		1							3				5	
April.....			4	1		2	2		2		2									1		16	
May.....			4			2	3		1		2								4			15	
June.....		2	2	1		2	2		6		7		1		1	1	2		4		5	37	
July.....		10	2		1	4	1	2	2		9		1	1	1	1	2		9	1		44	
August.....	2	3	18			9	1	11	9		6		3	1	1	2		2	3		3	84	
September.....		1	3	1		1		7	3		2		1			2			4			25	
Totals.....	2	8	42	8	1	23	6	35	26	3	41	8	1	4	3	2	13	1	34	3	13	277	

Of the forty-one complaints against the garbage contractor no just cause was found to exist in eighteen cases. Of the two hundred and thirty-six remaining complaints of nuisances just cause for the complaint was found to exist in all but twenty-four cases.

MONMOUTH COUNTY—Continued.

TABLE SHOWING NUMBER OF WRITTEN PERMITS ISSUED DURING THE YEAR, BY MONTHS.

MONTHS.	Certificate of approval of plumbing plans.	Certificate of final approval of plumbing work.	To lay sub-surface drains.	Scavengers' permits.	For construction of stable manure receptacles.	For collection of butchers' offal and fat.	Burial and transit permits.	Transit permits, local.	Totals.
1899.									
October.....	9	6	.....	6	.....	.....	4	.....	25
November.....	9	2	.....	10	.....	.....	2	.....	23
December.....	5	1	.....	7	.....	.....	5	.....	18
1900.									
January.....	4	3	.....	4	.....	.....	3	1	15
February.....	4	4	.....	2	.....	.....	1	.....	11
March.....	10	6	.....	3	.....	1	5	.....	25
April.....	15	1	.....	12	.....	.....	4	1	33
May.....	8	10	.....	15	.....	.....	6	1	40
June.....	7	8	1	8	1	2	5	.....	32
July.....	7	6	.....	9	.....	.....	11	.....	33
August.....	4	1	.....	23	1	2	3	1	35
September.....	5	3	.....	12	.....	.....	9	1	30
Totals.....	87	51	1	111	2	5	58	5	320

Twenty-one cases have been referred to the attorney of the board for prosecution during the year, for violation of the health ordinances, as follows:

NATURE OF VIOLATION.	Number of cases.	Judgments secured.	Certiorated by defendant.	Nuisance abated before case was tried.	Cases pending.	Amount of judgments rendered.
For removal and burial of dead body without a permit.....	1	1	.....	.....	.....	\$50 00
Defective and offensive privy vaults.....	4	2	1	.....	2	50 00
Violation of milk ordinance.....	1	.....	.....	.....	1	.....
Defective and leaky drains.....	1	1	.....	.....	.....	50 00
Storing stable manure on ground.....	1	1	.....	.....	.....	25 00
Pollution of ground by waste fluids.....	4	2	2	1	1	50 00
Nuisance created by refuse accumulations on premises.....	4	2	.....	2	.....	50 00
Transporting offal without a permit.....	3	2	.....	.....	1	50 00
Offensive fish markets.....	1	1	1	.....	.....	25 00
Violation of plumbing ordinance.....	1	.....	.....	.....	1	.....
	21	12	4	3	6	\$350 00

MONMOUTH COUNTY—Continued.

Daily information pertaining to the collection, removal and disposal of garbage and rubbish has been continuously gathered since October 15th, 1893, at which time supervision over the collection and removal of these waste products was placed in the hands of the board of health. The satisfactory progress of the work has been somewhat retarded for the past two summers because the ten garbage carts, now owned by the city, have proved to be inadequate for the daily removal of the garbage, thereby making it necessary for the contractor to use objectionable wooden-body garbage wagons, during the time the summer population was the greatest. This occurs at a time when the weather conditions are most unsuited for the use of vehicles having bodies made of absorbent material, because they cannot be maintained in a clean and inoffensive condition. Based on the experience of the past two summers, five more garbage carts are needed to successfully deal with the amount of garbage produced, unless a garbage disposal plant should be established nearer the city limits than the present dumping ground. Sooner or later the necessity for a refuse disposal works for this city will have to be met, for each year, as the population extends farther inland, the complaints against the unavoidable nuisance created by the present method of disposal, grow in number. The contractor has suffered much hindrance in the collection of garbage by householders and hotel proprietors who fail to provide a sufficient number of garbage receptacles, conforming in size and construction to the requirements of the ordinance, to hold all garbage which accumulates on their premises between the daily visits of the carts. In many instances a cottage, in which eight or ten persons reside, will be equipped with one of the prescribed galvanized iron receptacles, and, after the same has been filled to overflowing, the surplus is stored in baskets, boxes, &c. In these cases the collectors refuse to remove the accumulation, because of the manner in which it is stored, and complaint is made against the contractor at the health office. Proprietors of hotels and boarding-houses, in some cases, supply barely enough receptacles to hold the amount of garbage which is daily produced when the house is but comfortably filled with guests and make no provision against the time when the house is filled to its utmost capacity, or for the amount which accumulates over Sunday, when there is no removal. The result is that leaky barrels and miscellaneous receptacles, filled to overflowing, greet the contractor on Monday mornings. Still another class of hotels are supplied with garbage receptacles which hold from thirty-five to forty gallons each, which, when filled with garbage, are too heavy for the two collectors, who accompany each vehicle, to handle and dump the contents of the same into the garbage cart. The garbage contractor's reports during the year show the following number of violations, by householders, of the health ordinances in the manner of storing garbage and rubbish: Premises with leaky metal receptacles, 21; premises on which garbage was stored in wooden receptacles, 29; garbage receptacles containing an excessive amount of fluids, 3; ashes mixed with garbage, 1; foreign substances in rubbish receptacles, 14. The total amount of garbage and rubbish removed by the contractor during the past two years, ending October 1st, 1900, is shown in the following tables:

MONMOUTH COUNTY—Continued.

TABLE SHOWING THE NUMBER OF CUBIC YARDS OF GARBAGE REMOVED FROM ASBURY PARK EACH WEEK FROM OCTOBER 1ST, 1899, TO OCTOBER 1ST, 1900.

WEEK ENDING.	Cubic yards removed.	WEEK ENDING.	Cubic yards removed.	Showing comparative amounts, in cubic yards, for corresponding weeks in 1898 and 1899.
Oct. 8, 1898	40.82	Oct. 7, 1899	36.51	-4.31
" 15, "	21.45	" 14, "	32.76	+11.31
" 22, "	24.68	" 21, "	32.23	+7.55
" 29, "	24.67	" 28, "	31.15	+6.48
Nov. 5, "	21.45	Nov. 4, "	30.07	+8.62
" 12, "	23.60	" 11, "	23.99	+5.39
" 19, "	22.16	" 18, "	28.98	+6.83
" 26, "	22.53	" 25, "	26.85	+4.32
Dec. 3, "	16.09	Dec. 3, "	21.47	+5.38
" 10, "	20.39	" 9, "	22.55	+2.16
" 17, "	17.18	" 16, "	22.55	+5.37
" 24, "	19.33	" 23, "	19.87	+0.54
" 31, "	18.25	" 30, "	17.72	-0.53
Jan. 7, 1899	18.25	Jan. 6, 1900	19.34	+1.09
" 14, "	13.94	" 13, "	18.25	+4.31
" 21, "	16.09	" 20, "	19.33	+3.24
" 28, "	16.10	" 27, "	18.79	+2.69
Feb. 4, "	16.09	Feb. 3, "	16.65	+0.56
" 11, "	9.65	" 10, "	21.48	+11.83
" 18, "	11.79	" 17, "	19.32	+7.53
" 25, "	18.23	" 24, "	18.25	+0.02
Mar. 4, "	19.32	Mar. 3, "	17.19	-2.13
" 11, "	19.31	" 10, "	18.79	-0.52
" 18, "	20.38	" 17, "	20.40	+0.02
" 25, "	19.32	" 24, "	20.40	+1.08
Apr. 1, "	19.32	" 31, "	19.86	+0.54
" 8, "	21.46	Apr. 7, "	20.93	-0.53
" 15, "	21.46	" 14, "	20.94	-0.52
" 22, "	22.50	" 21, "	22.54	+0.04
" 29, "	21.46	" 28, "	21.47	+0.01
May 6, "	21.47	May 5, "	24.16	+2.69
" 13, "	22.03	" 12, "	25.78	+3.75
" 20, "	27.92	" 19, "	26.85	-1.07
" 27, "	27.92	" 26, "	29.53	+1.61
June 3, "	33.82	June 2, "	34.91	+1.09
" 10, "	40.25	" 9, "	43.49	+3.24
" 17, "	48.35	" 16, "	52.62	+4.27
" 24, "	58.53	" 23, "	63.91	+5.38
July 1, "	84.86	" 30, "	74.11	-10.75
" 8, "	162.35	July 7, "	122.44	-39.91
" 15, "	156.78	" 14, "	140.70	-16.08
" 22, "	208.03	" 21, "	165.67	-42.36
" 29, "	230.06	" 28, "	197.48	-32.58
Aug. 5, "	243.98	Aug. 4, "	253.69	+9.71
" 12, "	281.35	" 11, "	320.45	+39.10
" 19, "	318.29	" 18, "	356.23	+37.94
" 26, "	320.85	" 25, "	328.09	+7.24
Sept. 2, "	275.92	Sept. 1, "	276.56	+0.64
" 9, "	212.48	" 8, "	220.25	+7.77
" 16, "	141.78	" 15, "	124.18	-17.60
" 23, "	97.74	" 22, "	91.29	-6.45
" 30, "	67.65	" 29, "	74.10	+6.45
	3,679.68		3,732.13	+52.45

The cost, per cubic yard, for the removal and disposal of garbage for the past year has been 64.4 cents.

MONMOUTH COUNTY—Continued.

TABLE SHOWING THE NUMBER OF CUBIC YARDS OF RUBBISH REMOVED FROM ASBURY PARK EACH WEEK FROM OCTOBER 1ST, 1899, TO OCTOBER 1ST, 1900.

WEEK ENDING.	Amount removed in cubic yards.	WEEK ENDING.	Amount removed in cubic yards.	Showing comparative amounts, in cubic yards, for corresponding weeks in 1898 and 1899.
Oct. 8, 1898	150.6	Oct. 7, 1899	124.0	-26.6
" 15, "	100.2	" 14, "	116.0	+15.8
" 22, "	76.0	" 21, "	108.0	+32.0
" 29, "	68.0	" 28, "	108.0	+40.0
Nov. 5, "	80.0	Nov. 4, "	80.0	.....
" 12, "	58.0	" 11, "	100.0	+42.0
" 19, "	48.0	" 18, "	84.0	+36.0
" 26, "	70.1	" 25, "	74.0	+3.9
Dec. 3, "	28.0	Dec. 2, "	56.0	+28.0
" 10, "	78.0	" 9, "	66.0	-4.0
" 17, "	54.0	" 16, "	64.0	+10.0
" 24, "	54.0	" 23, "	66.0	+12.0
" 31, "	52.0	" 30, "	54.0	+2.0
Jan. 7, 1899	44.0	Jan. 6, 1900	56.0	+12.0
" 14, "	42.0	" 13, "	60.0	+18.0
" 21, "	48.0	" 20, "	64.0	+16.0
" 28, "	46.0	" 27, "	74.0	+28.0
Feb. 4, "	39.0	Feb. 3, "	60.0	+21.0
" 11, "	24.0	" 10, "	68.0	+44.0
" 18, "	20.0	" 17, "	60.0	+40.0
" 25, "	80.0	" 24, "	78.0	-2.0
Mar. 4, "	76.1	Mar. 3, "	60.0	-16.1
" 11, "	60.2	" 10, "	92.0	+31.8
" 18, "	74.1	" 17, "	72.0	-2.1
" 25, "	110.1	" 24, "	100.0	-10.1
Apr. 1, "	114.3	" 31, "	92.0	-22.3
" 8, "	114.2	Apr. 7, "	136.0	+21.8
" 15, "	118.3	" 14, "	116.0	-2.3
" 22, "	106.2	" 21, "	148.0	+41.8
" 29, "	108.2	" 28, "	144.0	+35.8
May 6, "	128.2	May 5, "	132.0	+3.8
" 13, "	148.4	" 12, "	136.0	-12.4
" 20, "	138.3	" 19, "	136.0	-2.3
" 27, "	152.3	" 26, "	188.0	+35.7
June 3, "	158.7	June 2, "	192.0	+33.3
" 10, "	154.3	" 9, "	208.0	+53.7
" 17, "	172.2	" 16, "	224.0	+51.8
" 24, "	200.2	" 23, "	226.0	+25.8
July 1, "	244.4	" 30, "	232.0	-12.4
" 8, "	206.3	July 7, "	196.0	-10.3
" 15, "	293.4	" 14, "	248.0	-45.4
" 22, "	252.2	" 21, "	276.0	+23.8
" 29, "	256.0	" 28, "	286.0	+30.0
Aug. 5, "	280.0	Aug. 4, "	272.0	-8.0
" 12, "	276.0	" 11, "	268.0	-8.0
" 19, "	288.0	" 18, "	292.0	+4.0
" 26, "	336.0	" 25, "	280.0	-56.0
Sept. 2, "	268.0	Sept. 1, "	276.0	+8.0
" 9, "	300.0	" 8, "	264.0	-36.0
" 16, "	264.0	" 15, "	222.0	-42.0
" 23, "	216.0	" 22, "	192.0	-24.0
" 30, "	172.0	" 29, "	168.0	-4.0
	7,038.5		7,494.0	+455.5

The cost, per cubic yard, for the removal and disposal of rubbish for the past year has been 26.6 cents.

MONMOUTH COUNTY—*Continued.*

The urgent sanitary necessities for Asbury Park are: 1st, the acquisition by the city of the sewers, and a change in the present method of sewage disposal; 2d, new isolation hospital grounds and buildings; 3d, garbage and rubbish disposal works; 4th, steam disinfecting plant.

Atlantic Township.—MEMBERS AND OFFICERS—L. Schanck, Holmdel; Daniel Shutts, Tinton Falls; H. Wyckoff Buck, Marlboro; Levi Scobey, Assessor, Scobeyville.

No meetings were held.

Avon Borough.—MEMBERS AND OFFICERS—Chas. P. White, Manson Newman, Charley Fielder; C. D. Snyder, Secretary.

Five nuisances were abated. Four meetings were held.

Belmar Borough.—MEMBERS AND OFFICERS—Charles J. Thompson, Wm. W. Bergen, F. S. Hutchinson, F. P. Philbrick, Joab Titus, Geo. W. Oswald; Neil H. Miller, Secretary; Samuel C. Hoppock, Inspector.

Population (census of 1900), 900. Three cases of diphtheria and 7 cases of typhoid fever were reported. About 100,000 gallons is the average daily quantity of water pumped for public use. Fifty dwellings are connected with the system. New sewer connections during the year, 39. Annual appropriation, \$200. Three meetings were held.

Eatontown Township.—MEMBERS AND OFFICERS—Wm. M. Golden, West Long Branch; Benj. Eldridge, Oceanport; R. F. Hopper Eatontown; A. L. Scobey, Eatontown; D. S. Morris, Secretary, Eatontown; E. W. Crater, Inspector, Oceanport.

One case of diphtheria, 1 of membranous croup and 4 of typhoid fever were reported. Amount appropriated, \$50. Nine meetings were held.

Englishtown Borough.—MEMBERS AND OFFICERS—W. E. Anderson, M.D., Daniel Laird, Dey Conover, Samuel G. Davison; J. L. Stratton, Secretary.

Three cases of diphtheria, 1 of membranous croup and 4 of typhoid fever were reported. Four meetings were held.

Town of Freehold.—MEMBERS AND OFFICERS—Dr. I. S. Long, Dr. O. R. Freeman, S. L. Bennet, Dr. Brown, W. H. Ingling; J. O. Burt, Secretary.

MONMOUTH COUNTY—*Continued.*

Fifteen cases of diphtheria, 2 of scarlet fever and 3 of typhoid fever were reported. Average daily consumption of water about 25,000 gallons. Premises connected with water-mains during past year, 14. New sewer connections, 13. Complaints investigated, 18. Nuisances abated, 18. Appropriation, \$150. Two meetings were held.

Freehold Township.—MEMBERS AND OFFICERS—Peter F. Conover, Millard F. Conover, John P. Walker, John B. Walker; Rulif V. Lawrence, Secretary; Dr. O. R. Freeman, Inspector. All of Freehold.

One case of diphtheria and 1 of typhoid fever were reported. Communicable diseases are not all reported by physicians. One nuisance was abated. Appropriation, \$50. One meeting was held.

Holmdel Township.—MEMBERS AND OFFICERS—Wesley Mason, Keyport; Jonathan Holmes, Holmdel; Jacob O. Lambertson, Keyport; Aaron Longstreet, Secretary, Keyport; Dr. Fred. V. Thompson, Inspector, Holmdel.

Two cases of typhoid fever were reported.

Howell Township.—MEMBERS AND OFFICERS—Charles Palmer, M.D., Farmingdale; Benjamin M. Cooper, Lakewood; Chas. E. Farry, Farmingdale; Robert H. Morris, Turkey; James H. Butcher, Secretary, Ardena.

Three cases of diphtheria were reported. Appropriation, \$75. Six meetings were held.

Town of Keyport.—MEMBERS AND OFFICERS—Gustave Maurer, Abraham Huyler, W. Conover Smith, Elgin E. Cline, S. Frank Mason; D. E. Roberts, M.D., Secretary; James M. Walling, Inspector.

Communicable diseases were reported as follows: Diphtheria, 7; deaths, 2; typhoid fever, 3; deaths, 1; small-pox, 2. Upon the appearance of small-pox a detention hospital was erected for the care of future cases, but fortunately its use was not necessary. Average daily quantity of water used, 50,000 gallons. Dwellings connected with water-mains, 51. Total dwellings connected with water-mains, 453. Extension of water-mains, 1,000 feet. There are no public sewers in Keyport. Monthly meetings were held.

Long Branch Commission.—MEMBERS AND OFFICERS—Paul F. Brazo, E. H. Clark, W. J. Smythe, John A. Eaton, L. Rothenberg, Howard Green; E. B. Blaisdell, Secretary; Theodore Howland, Inspector.

MONMOUTH COUNTY—*Continued.*

The following cases of communicable diseases were reported: Diphtheria, 117; deaths, 19; scarlet fever, 13; deaths, 1; typhoid fever, 14. Daily water consumption, 1,650,000 gallons. New water connections during year, 112. Extensions of water-mains, 14,600 feet. New sewer connections, 65. Sewer extension, 15,000 feet. Prosecutions for violation of ordinances, 5. Appropriation, \$800. Bi-monthly meetings were held.

Following is a record of the action of the board of health of Long Branch in relation to complaints concerning the discharge of crude sewage into the sea:

To the Long Branch Commissioners:

GENTLEMEN—You are hereby notified that the Long Branch Sewer Company are not keeping their sewer in a good and effective condition, and have been depositing solid matter in the Atlantic ocean, which is contrary to their contract, and that said contract, by the terms of said contract, is forfeited to the Long Branch Police and Sanitary Commission, the party of the first part in said contract.

Respectfully yours,

E. B. BLAISDELL,

Secretary Long Branch Board of Health.

At a regular meeting of the Long Branch Board of Health, held July 31st, 1899, the following motion was made, seconded and carried by unanimous vote: Moved, that a notice be served on the Long Branch Sewer Company, to appear before this board Monday, August 7th, 1899, at 7 o'clock P. M., to show cause and answer why the sewer, owned and controlled by the said sewer company, should not be declared a nuisance.

The following action was taken at a meeting of the Long Branch Board of Health August 17th, 1899: The Long Branch Sewer Company having been summoned to appear before this board, it was moved, seconded and carried, that we now proceed to take evidence in the case. The President and Secretary of the sewer company were present with their counsel and attorney, Messrs. J. W. Slocum and C. G. Vannote. Mr. Thomas P. Fay appeared as counsel for the board of health. The summons in the case of the Long Branch Board of Health *v.* Long Branch Sewer Company, was read by the Secretary of the board of health. The following witnesses were then examined, after which the hearing was adjourned to Tuesday, August 8th, at 8 P. M.: B. S. Van Hurl, G. H. Baker, M.D., James Seager, Isadore Woer, A. Pach, Wm. Budlong, J. V. Corlies, John Marrott, Wm. V. Allen, Julius Grannitt. August 8th, evidence was taken from H. E. Shaw, M.D., J. W. Bennett, M.D., W. T. Reed, M.D., Joseph H. Brown, Ellwood Bennett and S. J. Woolley, M.D. Several letters were read by Attorney C. G. Vannote for the sewer company.

MONMOUTH COUNTY—*Continued.*

At a meeting of the Long Branch Board of Health, held August 8th, 1899, the following order was entered upon the minutes: The Long Branch Board of Health, plaintiff, *v.* The Long Branch Sewer Company, body corporate, defendants. Upon complaint for allowing solid matter to go into the Atlantic ocean, and not keeping the sewer in a good, healthy and effective condition, and for maintaining a nuisance, summons having been duly served upon the Long Branch Sewer Company, said defendant, and said defendant sewer company on the return day appearing by Calving G. Vannote, its president, and William R. Warwick, its secretary, and being represented by John W. Slocum, Esq., counsel, and Clarence G. Vannote, Esq., attorney, and the said Long Branch Board of Health being represented by Thomas P. Fay, Esq. Testimony was taken, and on report of the sanitary committee of the said board of health of Long Branch, on report of the health inspector, and on testimony taken for this board, at its hearing, we do adjudge and decide:

First. That the said plant and outlet of said Long Branch Sewer Company is not conducted, operated and carried on in a good, healthy and effective manner; that the screens in the sewer-house are so damaged and out of repair that the solid matter flowed through the works to the ocean, without being intercepted. This fact appears by the testimony of Benjamin S. Van Huel, the sanitary inspector, and Joseph Brown, an employe of the sewer company. And it also appears from the testimony of other witnesses that solid matter has been found going from the opening of the outlet of the sewer.

Second. We do adjudge and decide that the said sewer company deposits its solid matter in the Atlantic ocean in violation of its contract with the Long Branch Sanitary and Police Commission.

Third. We do adjudge and decide that the said Long Branch Sewer Company does not operate and conduct its plant in a sanitary and healthy manner, and that the refuse which is deposited in the Atlantic ocean is dangerous to the public health. These facts are established by the testimony of H. E. Shaw, M.D., who was selected by the sewer company to make a report for them, and also by the testimony of Dr. J. W. Bennett and Mr. Walter S. Reed, whose testimony tends to show that the present operation of the sewer company's plant and its outlet are conducted in such a manner as to be dangerous to public health. Dr. S. J. Woolley's testimony showed conclusively that any infectious germs of disease which would be deposited in the sewage, coming in contact with the mucus membrane of a person, would infect them (if typhoid germs) with typhoid fever. The testimony of others shows the fact that bathers have come in contact with refuse from the sewer.

Fourth. We do adjudge and decide that the operation of the plant of the sewer company is a nuisance; that it has injured the bathing, both at the Brighton Hotel and at the Ocean Wave Hotel, and has driven bathers from these bath-houses, both by floating refuse and by vile and offensive odors. Other testimony tends to show that these vile and offensive odors may conduct germs of disease, and that business of the Florence Hotel has been injured by the vile and obnoxious odors from the sewer outlet, and that boarders have been driven from that hotel.

Fifth. We do adjudge and decide that the operation of the plant of the said sewer company and its outlet is dangerous to the public health.

MONMOUTH COUNTY—*Continued.*

Sixth. We do further report and adjudge that the said Long Branch Sewer Company is violating its contract with the Long Branch Police, Sanitary and Improvement Commission. The affidavits read by the attorney for the sewer company cannot be considered because the same were not filed, or the witnesses produced so they could be examined before the board.

(Signed)

PAUL F. BRAZO, *President,*
E. B. BLAISDELL, *Secretary,*
W. J. SMYTHE, JR.,
THEODORE HOWLAND,
E. H. CLARK,
JOHN A. EATON.

August 14th, 1899.

Manalapan Township.—MEMBERS AND OFFICERS—Edward Hendrickson, Manalapan; J. V. N. Du Bois, Tennent; D. S. Aumack, Englishtown; A. T. Applegate, M.D., Englishtown; S. C. Bowne, Registrar, Tennent; G. B. Conover, Secretary, Englishtown.

Two cases of diphtheria occurred. Two meetings were held.

Manasquan Borough.—MEMBERS AND OFFICERS—Chas. Trafford, Geo. Mount, L. E. Riddle, Howell Miller; M. R. Mulford, Secretary.

Appropriation, \$100. Ten meetings were held.

Marlboro Township.—MEMBERS AND OFFICERS—H. V. M. Dennis, Freehold; Dr. J. D. Ely, Marlboro; Geo. Quackenbush, Wickatunk; W. F. Nivison, Morganville; D. A. Baird, Secretary, Marlboro.

One meeting was held.

Matawan Borough.—MEMBERS AND OFFICERS—Isaac W. Biddle, Wm. Hardwick, John Horner, John F. Lisk, Dr. A. J. Jackson; Wm. A. Rodgers, Secretary; J. Wm. Maggs, Inspector.

Reports of communicable diseases are not furnished by physicians to the local board of health. One nuisance was abated. Appropriation, \$100. Five meetings were held.

Middletown Township.—MEMBERS AND OFFICERS—George E. Smith, Highlands; G. C. Morris, New Monmouth; Omar Sickles, Secretary, Navesink; D. W. Vannote, Dr. O. W. Budlong, Inspectors, Belford.

Physicians do not report cases of communicable diseases. Three nuisances were abated. Three meetings were held.

MONMOUTH COUNTY—*Continued.*

Millstone Township.—MEMBERS AND OFFICERS—John H. Ely, Perrineville; John B. Ely, Ely; Edward Martin, Clarksburg; George J. Ely, Secretary, Perrineville; W. T. MacMillan, M.D., Inspector, Perrineville.

Communicable diseases were reported as follows: Diphtheria, 13; membranous croup, 1; scarlet fever, 3; typhoid fever, 1. Communicable diseases are reported by physicians living in the township, but in cases where physicians dwelling outside of the township attend patients having contagious diseases no reports are received. Three meetings were held.

Neptune City Borough.—MEMBERS AND OFFICERS—James Estell, John Slocum, Chas. Southard, Mason Harry; Whitfield Smith, Secretary. All of Avon.

One nuisance was abated. Appropriation, \$50. Two meetings were held.

North Spring Lake Borough.—MEMBERS AND OFFICERS—Wm. J. Smith, Geo. M. Height, Chas. R. Brahn; F. M. Hunt, Borough Clerk, Spring Lake Beach.

Ocean Township.—MEMBERS AND OFFICERS—Thos. R. Woolley, Jos. N. Flannigan, James Conover; Howard Brinley, Secretary, Long Branch; S. J. Woolley, M.D., Inspector, Long Branch.

Bi-monthly meetings were held.

Ocean Grove.—MEMBERS AND OFFICERS—A. E. Ballard, D.D., Ocean Grove; Hon. Jas. L. Hays, Newark; J. R. Daniels, Ocean Grove; Hon. H. W. Murphy, Freehold; Geo. W. Evans, Ocean Grove; H. B. Alday, M.D., Secretary, Ocean Grove; J. H. Alday, M.D., Sanitary Officer, Ocean Grove.

Two cases of diphtheria, 4 of scarlet fever, and 4 of typhoid fever were reported. Nineteen dwellings were connected with water-mains and 9 with sewers during the year. Twenty-nine nuisances were investigated and all were abated. Appropriation, \$1,000. Ten meetings were held.

Town of Red Bank.—MEMBERS AND OFFICERS—C. D. Warner, Samuel Sabath, John Sheehan, Frank P. Stryker; Henry J. Child, Secretary; William H. Wilson, Inspector.

Three cases of diphtheria, 12 of scarlet fever, and 1 of typhoid fever were reported. Average daily consumption of water, 500,000

MONMOUTH COUNTY—*Continued.*

gallons. Dwellings connected with water-mains, 54. Nuisances investigated, 23. Annual appropriation, \$200. Four meetings were held.

Upper Freehold Township.—MEMBERS AND OFFICERS—Wm. Kirby, Cream Ridge; I. S. Dawes, Imlaystown; E. A. Hyers, Red Valley; Wm. Quicksell, Registrar, Hornerstown; F. C. Price, M.D., Secretary, Imlaystown.

Two cases of diphtheria and 2 of typhoid fever were reported. Appropriation, \$50. One meeting was held.

Wall Township.—MEMBERS AND OFFICERS—R. A. Allgor, Como; Chas. Gifford, Allenwood; Chas. White, Como; Geo. E. Rogers, Secretary, New Bedford.

Ten cases of diphtheria, 8 of scarlet fever and 12 of typhoid fever were reported. Six nuisances were abated. Appropriation, \$100. Seven meetings were held.

MORRIS COUNTY.

Town of Boonton.—MEMBERS AND OFFICERS—Wm. I. Powers, Rob't H. Wilson, Dr. A. E. Carpenter; Frank H. Pierce, Secretary; James Gilmartin, Inspector.

Two cases of diphtheria and 1 of scarlet fever were reported. Average daily quantity of water used, 50,000 gallons. Dwellings connected with water-mains during the year, 12. There are no public sewers in the city.

Chatham Borough.—MEMBERS AND OFFICERS—Geo. H. Kirkpatrick, William Hendershot, Joseph H. Conklin; M. K. Hopping, Registrar; D. H. Cranford, Secretary; Wesley R. Conklin, Inspector.

Average quantity of water supplied to consumers daily, 60,000 gallons. Thirty-six premises were connected with the water-mains during the year ending October 31st. There are no sewers. One nuisance was abated. Annual appropriation, \$100. Two meetings were held.

MORRIS COUNTY—*Continued.*

Chatham Township.—MEMBERS AND OFFICERS—Louis M. Noe, Madison; Charles L. Chovey, Madison; Charles A. Johnson, New Providence; Wm. J. Wolfe, M.D., Chatham; Nathaniel Clark, Secretary, Madison.

One meeting was held.

City of Dover.—MEMBERS AND OFFICERS—Eugene Buchanan, Harry S. Peters, Arthur W. Condict, M.D., R. W. Kirton; D. R. Hummer, Secretary; John G. Taylor, Inspector.

Sixteen cases of diphtheria, 2 of scarlet fever, and 3 of small-pox were reported. Number of nuisances abated, 40. Amount appropriated, \$750. Monthly meetings were held.

Hanover Township.—MEMBERS AND OFFICERS—Phineas Farrand, Boonton; Livingston Petry, Hanover; T. J. Davis, Morris Plains; D. A. Hopping, Afton; Jos. H. Bastedo, Assessor, Boonton.

One case of diphtheria was reported. Two nuisances were abated. Monthly meetings were held.

Jefferson Township.—MEMBERS AND OFFICERS—Charles Monks, New Foundland; Newton Weaver, Oak Ridge; John Tierney, Woodport; Charles Chamberlain, Secretary, Woodport; H. W. Kice, Inspector, Port Oram.

Four cases of scarlet fever were reported. Two meetings were held.

Montville Township.—MEMBERS AND OFFICERS—Joseph Starkey, Boonton; John Husk, Glen View; John H. Capstick, Montville; Asa T. Cook, Assessor, Montville; Henry C. Baldwin, Secretary, Montville.

Three cases of diphtheria were reported. Four complaints were investigated and 1 nuisance abated. Four meetings were held.

Morris Township.—MEMBERS AND OFFICERS—Chas. M. Phillips, Morristown; Chas. Y. Swan, Morristown; H. L. Prudden, Morristown; G. B. Parsons, Morris Plains; Wm. E. Collins, Secretary, Morristown.

One case of scarlet fever was reported. Five nuisances were abated. Appropriation, \$500. Ten meetings were held.

Mount Olive Township.—MEMBERS AND OFFICERS—M. K. Sharp, Flanders; J. W. Lindebury, Flanders; John E. Smith, Draketown; S. W. Salmon, Secretary, Mount Olive; W. S. Foster, M.D., Inspector, Flanders.

One case of diphtheria was reported. Two meetings were held.

MORRIS COUNTY—*Continued.*

Mount Tabor Township.—MEMBERS AND OFFICERS—Dr. H. L. Coit, Newark; C. L. Pitts, Newark; F. N. Barrett, Bayonne; Jos. Shaw, Newark; P. F. Cook, Secretary, Jersey City; James H. Cox, Inspector, Mount Tabor.

One case of typhoid fever was reported.

Netcong Borough.—MEMBERS AND OFFICERS—A. J. Drake, G. H. Lunger, Frank Lovely, J. R. Vanatta, Dr. John Miller; Frank King, Borough Clerk.

Passaic Township.—MEMBERS AND OFFICERS—Thomas Melee, Stirling; George Meeker, Long Hill; Henry Lindsley, New Vernon; J. A. Harvey, Secretary, Stirling; T. W. Bebout, Inspector, Stirling.

Four cases of diphtheria occurred. Appropriation, \$100. One meeting was held.

Pequannock Township.—MEMBERS AND OFFICERS—Giles M. Roome, Lincoln Park; Chas. Mandeville, Pompton Plains; Garret D. Smith, Butler; Chas. A. Decker, Secretary, Butler; G. F. Newcombe, M.D., Pompton Plains.

Five cases of diphtheria, 1 of membranous croup, and 8 of scarlet fever were reported. Appropriation, \$150. Five meetings were held.

Port Oram Borough.—MEMBERS AND OFFICERS—Henry W. Kice, R. F. Oram, J. J. Langdon; James Williams, Secretary; Joseph Mankee, Inspector.

The introduction of a public water-supply is under consideration. During the year 3 swamps have been drained. Ten meetings were held during the year. Annual appropriation, \$25.

Randolph Township.—MEMBERS AND OFFICERS—Jno. L. Connolly, Mine Hill; Jno. Blackwell, Mount Freedom; Geo. Poole, Mount Freedom; T. O. Bassett, Secretary, Dover.

Two cases of scarlet fever were reported.

Rockaway Borough.—MEMBERS AND OFFICERS—Mahlon Hoagland, Jr., M. B. Strait, E. H. Todd, G. S. Dearborn, M.D., Geo. H. Foster, M.D.; William May, Secretary; H. R. Dobbins, Inspector.

One case of small-pox occurred. Appropriation, \$200. Three meetings were held.

MORRIS COUNTY—*Continued.*

Rockaway Township.—MEMBERS AND OFFICERS—James Arthur, Port Oram; Daniel Dickerson, Denville; Thomas Grant, Hibernia; Dr. F. W. Flagge, Rockaway; David A. Wiggins, Secretary, Rockaway.

Two cases of diphtheria, 2 of scarlet fever, 5 of typhoid fever, and 4 of small-pox were reported. Three nuisances were abated. Seven meetings were held.

Washington Township.—MEMBERS AND OFFICERS—Mahlon Vannest, German Valley; John A. Parker, Schooley's Mountain; Mathias Fleming, Parker; Geo. H. Sliker, Secretary, Pleasant Grove; Dr. Ed. Sutton, Inspector, German Valley.

OCEAN COUNTY.

Beach Haven Borough.—MEMBERS AND OFFICERS—H. L. Rockhill, Thos. Cale, F. H. Potts, Thos. A. Gavin; W. F. Beer, Secretary.

The public water supply is from an artesian well and generally used by householders.

Berkley Township.—MEMBERS AND OFFICERS—Peter E. Runyon, Toms River; Thomas J. Harvey, Bayville; Wm. H. Potter, Bayville; Devine Butler, Secretary, Bayville.

One case of typhoid fever was reported. Ten meetings were held.

Brick Township.—MEMBERS AND OFFICERS—John L. Dorsett, West Point Pleasant; J. H. LeCample, Herbertsville; W. H. Middleton, M.D., Point Pleasant; J. H. Harvey, Secretary, Point Pleasant.

One meeting was held.

Dover Township.—MEMBERS AND OFFICERS—Edgar W. Polhemus, Silverton; R. B. Gowdy, Toms River; Monroe Irons, Toms River; Peter Tilton, Secretary, Toms River; R. L. Disbrow, M.D., Inspector.

Average daily quantity of water furnished to consumers in Toms River, 50,000 gallons. Six dwellings were connected with the water-mains during the past year. Nuisances abated, 1. Three meetings were held.

OCEAN COUNTY—Continued.

Eagleswood Township.—MEMBERS AND OFFICERS—A. J. Leigh, West Creek; P. R. Spragin, West Creek; Oscar Parker, West Creek; E. F. Cranmer, Secretary, West Creek; M. W. Reeves, M.D., Inspector, Tuckerton.

Three meetings were held.

Jackson Township.—MEMBERS AND OFFICERS—Clark Thompson, Van Hiseville; George Estell, Van Hiseville; Thomas Harker, Cassville; W. S. Hendrickson, Secretary, Jackson's Mill.

Lacey Township.—MEMBERS AND OFFICERS—Henry Stout, Lanoka; Geo. Frazee, Forked River; Wm. Penn, Forked River; B. F. Matthews, Secretary, Forked River; Dr. G. E. Wallace, Inspector.

One meeting was held.

Lakewood Township.—MEMBERS AND OFFICERS—James H. Todd, Peter V. Hoyt, Wilfred H. Jayne, Dr. H. H. Cate; Alexander M. Manolt, Secretary; R. B. Robbins, Inspector. All of Lakewood.

Eight cases of diphtheria and 4 of typhoid fever were reported. Dwellings connected with water-mains during past year, 25. Dwellings connected with sewer during past year, 15. No regular appropriation is made for the maintenance of the board. Two meetings were held.

Lavalette Borough.—No organized board of health. George Kerr, M.D.

Little Egg Harbor Township.—MEMBERS AND OFFICERS—Janus E. Otis, Tuckerton; George W. Mott, Tuckerton; Norwood Parker, Parkertown; J. S. Lane, M.D., Secretary, Tuckerton; Otis E. Jones, Tuckerton.

One case of membranous croup and 2 of scarlet fever were reported. Appropriation, \$10. One meeting was held.

Long Beach Township.—MEMBERS AND OFFICERS—James V. Jones, Barnegat City; Isaac P. Peckworth, Barnegat City; Chas. E. Sherbowne, Beach Haven; A. W. Brown, Secretary, Manahawkin.

Ocean Township.—MEMBERS AND OFFICERS—Chas. F. Jones, O. D. Brown; J. H. Wilkins, Secretary, Waretown; Elvin R. Penn, Inspector, Waretown.

OCEAN COUNTY—Continued.

Plumsted Township.—MEMBERS AND OFFICERS—Elmer Cowperthwait, New Egypt; John Headley, New Egypt; Dayton Hopkins, Hornerstown; Daniel W. Bussom, Secretary, New Egypt; C. E. Woodward, M.D., Inspector, New Egypt.

Two nuisances were abated. One meeting was held.

Sea Side Park Borough.—No board of health organized. J. B. Wood, Borough Clerk.

Stafford Township.—MEMBERS AND OFFICERS—Walter K. Barrett, M.D., Manahawkin; George A. Cranmer, Cedar Run; C. H. Cranmer, Manahawkin; E. E. Predmore, Manahawkin; J. B. Courtney, Secretary, Manahawkin.

One case of typhoid fever occurred. One meeting was held.

PASSAIC COUNTY.

Acquackanonk Township.—MEMBERS AND OFFICERS—S. Grant Thornburn, Clifton; John Prentiss, Albion Place; Henry Fredrick, Delavanna; Richard Berry, Secretary, Clifton.

Fourteen cases of diphtheria and 6 of scarlet fever were reported. Six meetings were held.

Hawthorne Borough.—MEMBERS AND OFFICERS—Irvey Myers, North Paterson; Edwin B. Ackerman, North Paterson; Wm. Gurnee, Hawthorne; J. Hammersmith, Hawthorne; S. E. Barnes, North Paterson; J. J. Grady, Secretary, Hawthorne; S. Utter, M.D., Inspector, North Paterson.

One case of diphtheria, 1 of scarlet fever and 3 of typhoid fever occurred. Five nuisances were abated. Twelve meetings were held.

Little Falls Township.—MEMBERS AND OFFICERS—S. P. Hanson, West Park; James C. Stanley, Little Falls; Chas. H. Newman, Little Falls; James De Month, Secretary, Little Falls; W. R. Smith, M.D., Inspector, Little Falls.

Two cases of diphtheria were reported. Monthly meetings were held.

Manchester Township.—MEMBERS AND OFFICERS—Joseph Graham, Gilbert McDaniels, Chas. Irving; Chas. H. Banta, Secretary; A. A. Lydecker, Inspector. All of Haledon

Three cases of diphtheria, 3 of scarlet fever and 3 of typhoid fever occurred. Monthly meetings were held.

PASSAIC COUNTY—*Continued.*

Pompton Township.—MEMBERS AND OFFICERS—James E. Sloat, Midvale; E. J. Brown, Erskine; Walter C. White, Bloomingdale; D. Reeve Sloan, Secretary, Bloomingdale; David N. Shipper, M.D., Inspector.

Three cases of diphtheria and 3 of scarlet fever were reported. Five nuisances were abated. Appropriation, \$100. Five meetings were held.

Pompton Lakes Borough.—MEMBERS AND OFFICERS—Jno. L. Porter, J. J. Henry, Jno. J. Black; H. J. Smith, Jr., Secretary; Dr. J. C. Morgan, Inspector.

Ten cases of diphtheria, attended by 6 deaths, occurred. Appropriation, \$200. Fifteen meetings were held.

West Milford Township.—MEMBERS AND OFFICERS—C. LaRoe, New Foundland; Wm. W. Eckhart, Newfoundland; M. J. Shippee, Echo Lake; Celestine Schulster, Echo Lake; W. C. Oliver, Secretary, Oak Ridge.

One meeting was held.

SALEM COUNTY.

Alloway Township.—MEMBERS AND OFFICERS—J. H. Vanleer, Freesburg; J. S. Watson, Aldine; Chas. Timberman, Alloway; William E. Simkins, Secretary, Aldine; Warren L. Ewen, Inspector, Alloway.

Population (census of 1900), 1,529. One nuisance was abated. Four meetings were held.

Elmer Borough.—MEMBERS AND OFFICERS—Jacob R. Edwards, J. G. Brooks, Oliver Hughes, Furman Wentzell; Eugene Bostwick, Secretary; Dr. A. B. Woodruff, Inspector.

One case of diphtheria and 1 of scarlet fever, both terminating fatally, were reported. One nuisance was abated. Three meetings were held.

Elsinboro Township.—MEMBERS AND OFFICERS—Isaac Harris, Salem; Able Harris, Salem; Lewis Harris, Salem; Chas. P. Farnhoff, Assessor, Elsinboro.

Lower Alloways Creek Township.—MEMBERS AND OFFICERS—Wm. H. H. Carll, Canton; Isaac Smick, Harmersville; John M. Pancoast, Hancock's Bridge; Richard Grier, Secretary, Salem.

SALEM COUNTY—*Continued.*

Lower Penns Neck Township.—MEMBERS AND OFFICERS—David Dixon, Albert Batten, Daniel Newcomb, Jr., J. G. Mitchell; Isaac Fowler, Secretary; W. H. James, M.D., Inspector. All of Pennsville.

One case of membranous croup was reported. Two meetings were held.

Oldmans Township.—MEMBERS AND OFFICERS—Henry Reymer, Pedricktown; Joseph Roberts, Auburn; Levi C. Justice, Secretary, Pedricktown; Dr. A. B. Black, Inspector.

One case of typhoid fever occurred. One meeting was held.

Pennsgrove Borough.—MEMBERS AND OFFICERS—Richard F. Shannon, Walter S. Springer, Warren English, John C. Simpkins; Henry M. Flanagan, Secretary.

One case of scarlet fever and 1 of typhoid fever were reported. Seven nuisances were investigated. Appropriation, \$50. Nine meetings were held.

Pllongrovo Township.—MEMBERS AND OFFICERS—S. A. Ridgeway, Woodstown; D. W. C. Hinchman, Sharpstown; Edgar C. Moore, Woodstown; D. F. Davis, Secretary, Woodstown.

Two cases of diphtheria and 2 of scarlet fever were reported. Three meetings were held.

Quinton Township.—MEMBERS AND OFFICERS—Josiah T. Harris, Quinton; Watson Davis, Andrew Harris; Chas. H. Fox, Secretary, Alloway; W. T. Good, M.D., Quinton.

Three cases of diphtheria were reported.

City of Salem.—MEMBERS AND OFFICERS—Louis Hoelzel, Thomas Hewes, Louis Pancoast, Clarence Sinnickson, Mrs. Ellen Smith, M.D.; Clinton Bowen, Secretary; Austin T. Walton, C. M. Sherron, M.D., Inspectors.

Four cases of diphtheria and 1 of scarlet fever were reported. Nuisances reported, 98; abated, 85. Ten meetings were held.

Upper Penns Neck.—MEMBERS AND OFFICERS—John M. Bevis, Joseph E. Clark, James Hutchinson; Geo. W. Hewitt, Secretary. All of Pennsgrove.

SALEM COUNTY—*Continued.*

Upper Pittsgrove.—MEMBERS AND OFFICERS—William Mayhew, Pittsgrove; Henry Coombs, Elmer; Nathaniel Wilkinson, Whig Lane; R. A. Robinson, Secretary, Monroeville; Dr. Fitch, Inspector, Daretown.

Woodstown Borough.—MEMBERS AND OFFICERS—Edwin W. Lippincott, I. B. Coles, Samuel Carney, Wm. Coleman, Dr. E. P. McGeorge, Chas. Groff; H. H. Stepler, Secretary; F. P. Vaulier, Inspector.

Communicable diseases were reported as follows: Diphtheria, 5; scarlet fever, 7; typhoid fever, 1. Average daily consumption of water, 40,000 gallons. Five dwellings were connected with water-mains during the year. Three nuisances were abated. Appropriation, \$50. Nine meetings were held.

SOMERSET COUNTY.

Branchburg Township.—MEMBERS AND OFFICERS—John C. Stryker, North Branch Depot; Wm. H. Dolliver, Neshanic; James Mingle, North Branch; Lester Shurts, Secretary, Neshanic Station.

Bedminster Township.—MEMBERS AND OFFICERS—J. M. Pickel, Peapack; R. B. Duyckinck, Lamington; W. P. Sutphen, Bedminster; W. D. Vanderbeek, Secretary, Gladstone; E. F. Farrow, M.D., Peapack; M. C. Smalley, M.D., Gladstone; J. B. Beekman, M.D., Pluckamin, Inspectors.

Two cases of typhoid fever were reported. Two meetings were held.

Bernards Township.—MEMBERS AND OFFICERS—R. C. Nichols, Bernardsville; Thos. Douglass, Mine Brook; Geo. Coddington, Millington; L. H. Bowers, Secretary, Basking Ridge.

Two cases of diphtheria and 4 of scarlet fever were reported, but reports of communicable diseases from physicians are not promptly made. Four nuisances were abated. Four meetings were held.

Bound Brook Borough.—MEMBERS AND OFFICERS—R. H. Brokaw, C. R. P. Fisher, M.D., Chas. H. Libby; W. L. Negus, Secretary; Chas. McNabb, Inspector.

Two cases of diphtheria and 3 of scarlet fever were reported. Nuisances reported, 6; abated, 6. Amount appropriated, \$150. Fourteen meetings were held.

SOMERSET COUNTY—*Continued.*

Bridgewater Township.—MEMBERS AND OFFICERS—John Bartles, Martinville; Jas. Q. Ten Eyck, Somerville; Oscar Dow, Raritan; C. L. Voorhees, Secretary, Somerville; L. M. Lanning, M.D., Inspector, Somerville.

Six cases of diphtheria, 5 of scarlet fever, and 1 of typhoid fever were reported. One nuisance was abated. Three meetings were held.

Franklin Township.—MEMBERS AND OFFICERS—Wm. A. Cortelyou, Franklin Park; Samuel Voorhees, Middlebush; C. W. Wilson, East Millstone; L. J. Suydam, Secretary, Franklin Park; Dr. Cooper, Inspector, Middlebush.

Six cases of diphtheria were reported. One meeting was held.

The following is a report of an inspection of the dairy premises managed by James D. Harris:

BOARD OF HEALTH OF THE STATE OF NEW JERSEY.

RECORD OF DAIRY INSPECTION.

January 15th, 1900.

NAME OF DAIRYMAN—Jas. D. Harris (Tenant).

ADDRESS—Kingston

TOWNSHIP—Franklin. COUNTY—Somerset.

Stable.

Size of stable. 7 x 18 x 44.

Area of stable. 5,544 cubic feet. Cubic feet per cow. About 426.

Stable well lighted? No.

Number and size of windows in stable. None.

Material, construction and drainage of floor. Planks; level; gutter behind cows containing filthy fluids.

Method and frequency of cleaning. Daily, with fork and shovel.

Floor ever washed? No.

Are sidewalls, ceilings and ledges kept free from cobwebs and dust? No.

Ever limewashed? No.

Water-Supply.

Source of water-supply for watering stock. Spring on mountain lot, one-quarter mile or more from buildings.

Source of water-supply for washing utensils and cans. Same as used for stock; water from spring conveyed by pipe to tank in top of house, and by pipe from tank to trough in front of barn for stock.

Was sample taken for analysis? Yes. Marks—J. D. H., No 26.

SOMERSET COUNTY—*Continued.**Cattle.*

Number of cows. Thirteen. Breed. Grade.
 State of health. Apparently good.
 Ever examined? Yes.
 Date of last examination. About a year ago.
 Cows groomed? No.
 Amount, kind and quality of feed used. Cob meal; 12 quarts to each cow.
 Cows pastured? Yes.

Manure.

How and where stored? In yard adjoining stable.
 How frequently removed? Twice a week.
 Quantity of manure at time of this inspection. About four loads.

Utensils.

How washed and dried? Washed with hot water, particular care being taken to thoroughly cleanse all corners and crevices in utensils.
 Where are the utensils washed? In kitchen; placed in open air to dry.
 Any appliance for sterilizing cans, pails and dippers? No.
 Bottles—how washed and dried? In same manner as utensils.

Collection of Milk.

Quantity of milk produced daily? About 100 quarts.
 Are milkers' hands washed before milking? No.
 Are clean garments put on? No.
 When pail is full of milk what is done with it? Poured in can.
 Where does the can stand? In stable.
 Is can kept covered? Yes.
 Is milk cooled? No.
 Is milk bottled? Yes, a small quantity.
 Where is milk bottled? In kitchen.
 Where is milk stored? Delivered directly after milking.
 Source of ice supply. None used.
 If shipped, to whom, and where? None shipped; all retailed in Princeton, N. J.

Distribution.

Quarts sold from cans? About 90.
 Quarts sold in bottles? About 8.
 Ever run short? Very seldom
 If so, where is supply obtained? Mr. Chas. Moore, neighbor.
 How many persons handle the milk? Three.
 All in good health? Apparently.
 Diseases? Scarlet fever, about four years ago. Positively stated, there had been no other sickness on premises for long time.

CHAS. J. MERRELL,
Inspector.

SOMERSET COUNTY—*Continued.*

Hillsborough Township.—MEMBERS AND OFFICERS—Wm. H. Merrell, M.D., South Branch; G. S. Van Cleef, Millstone; J. V. Opie, Somerville; J. V. M. Sutphin, Three Bridges; J. H. Saums, Secretary, Millstone.

One case of diphtheria was reported. One nuisance was abated. One meeting was held.

Millstone Borough.—MEMBERS AND OFFICERS—Wm. Esler, John P. Ditmars, S. O. B. Taylor, M.D.; E. T. Wright, Registrar; Wm. H. Polhemus, Secretary.

Two cases of typhoid fever occurred. One meeting was held by the board.

Montgomery Township.—MEMBERS AND OFFICERS—Garret Durling, Harlingen; Spencer W. Whitlock, Blawenburg; Nelson Y. Dungan, Assessor, Harlingen; William S. Terhune, Secretary, Harlingen.

Four meetings were held.

North Plainfield Borough.—MEMBERS AND OFFICERS—Andrew Love, L. E. Barkalew, D. C. Adams, M.D., B. J. Shreve; Rev. W. E. Honeyman, Secretary; Wm. H. Pangborn, Inspector.

Communicable diseases were reported as follows: Diphtheria, 7; membranous croup, 1; scarlet fever, 28; typhoid fever, 1. Complaints received during the year, 193. Four prosecutions were brought for violation of ordinances. Appropriation, \$550. Ten meetings were held.

North Plainfield Township.—MEMBERS AND OFFICERS—Chas. P. Sebring, Dunellen; Thos. H. Taylor, Plainfield; Benjamin Clark, Scotch Plains; Wm. H. Morris, Secretary, Dunellen; Geo. N. Steward, Inspector, Plainfield.

Two meetings were held.

Raritan Borough.—MEMBERS AND OFFICERS—Rev. Wm. H. De Hart, J. P. Hecht, M.D., Geo. A. Dilts; Wm. Killiger, Secretary; James Cooper, Inspector.

Communicable diseases were reported as follows: Diphtheria, 5; 2 deaths; typhoid fever, 5; 1 death. Premises connected with sewer, 107. Annual appropriation, \$134. Nine meetings were held.

Town of Somerville.—MEMBERS AND OFFICERS—Dr. Aaron L. Stillwell, Dr. Louis T. Reed, Dr. Thomas H. Flynn, George V. Van Derveer; William R. Sutphen, Secretary; George D. Totten, Inspector.

SOMERSET COUNTY—*Continued.*

One case of diphtheria, 1 of scarlet fever, and 21 of typhoid fever were reported. Houses connected with sewers during the year, 17. Thirty-five nuisances were abated. Eight meetings were held. An examination was made of the public water-supply, and the report made by the chemist showed that the water was satisfactory. Several sources of pollution which were found have been removed.

Warren Township.—MEMBERS AND OFFICERS—William H. Rogers, Plainfield; Henry P. Williams, Warrenville; Thomas C. Bird, Gallia; Peter Newmiller, Secretary, Warrenville.

Two nuisances were abated during the year. One meeting was held.

SUSSEX COUNTY.

Andover Township.—MEMBERS AND OFFICERS—Wm. M. Slater, Newton; B. K. Stiff, Andover; C. C. Cox, Warbasse; J. C. Clark, M.D., Andover; Wm. Iliff, Secretary, Newton.

Three nuisances were abated. One meeting was held.

Branchville Borough.—C. A. Dalrymple, Assessor.

Brooklyn Borough.—MEMBERS AND OFFICERS—Lewis S. Pilcher, M.D., Wm. A. K. Gessler, John Aldaed, T. C. Yawger, R. S. Baker; Charles F. Muller, Secretary; James T. Pilcher, Inspector. All of Landing.

Three nuisances were investigated and abated. Appropriation, \$75. Four meetings were held.

Byran Township.—MEMBERS AND OFFICERS—Peter D. Smith, Waterloo; Theodore Conn, Andover; Samuel Peterson, Stanhope; E. O. Valentine, Secretary, Stanhope; C. K. Davison, Inspector, Stanhope.

Ten cases of scarlet fever were reported. Seven nuisances were abated. Two meetings were held.

Deckertown Borough.—MEMBERS AND OFFICERS—L. H. Decker, Wm. Quick, John Kittle; John Waddington, Secretary; George Demarest, Inspector.

Three cases of diphtheria and three of scarlet fever were reported. Average daily quantity of water supplied to consumers, 60 gallons

SUSSEX COUNTY—*Continued.*

per capita. Dwellings connected with water-mains during past year, 27. Extensions of water-mains, 472 feet. Premises connected with sewer during past year, 20. Nuisances abated, 2. Amount expended, \$50. One meeting was held.

Frankford Township.—MEMBERS AND OFFICERS—Manning T. Lanty, Augusta; H. Bert Westbrook, Branchville; Lynch D. Wyker, Wykertown; John DeKay, Secretary, Papakating.

Green Township.—MEMBERS AND OFFICERS—Jerry Hendershot, Tranquility; Peter Martin, Tranquility; A. C. Snorth, Freedom; M. W. Northup, Secretary, Huntsville.

One case of typhoid fever was reported. Two meetings were held.

Hampton Township.—MEMBERS AND OFFICERS—John H. Williams, Baleville; John W. Thompson, Blair; Alonzo Emmans, Halsey; Frank Emmans, Secretary, Newton.

One meeting was held.

Hardyston Township.—MEMBERS AND OFFICERS—James S. Crane, Franklin Furnace; Harry Vanderhoof, Hamburg; Lewis R. Congleton, Secretary, Hamburg.

One nuisance was abated. One meeting was held.

Montague Township.—MEMBERS AND OFFICERS—Timothy Shay, Hainesville; James Dutton, Tri-State, N. Y.; Fred. Reinhardt, Tri-State, N. Y.; George N. Cole, Assessor, Montague.

Town of Newton.—MEMBERS AND OFFICERS—Dr. Chas. Hamilton, Charles Steel, Lewis J. Martin, David Amerman; Geo. B. Case, Secretary; Israel Hallock, Inspector.

Six cases of diphtheria and 1 of typhoid fever occurred. Ten nuisances were abated. Ten meetings were held.

Sandyston Township.—MEMBERS AND OFFICERS—John J. Van Sickle, Layton; M. D. Hughes, M.D., Secretary, Layton.

Two cases of typhoid fever occurred.

Sparta Township.—MEMBERS AND OFFICERS—L. C. Burd, Ogdensburg; W. H. Beatty, Sparta; D. F. Kinney, Sparta; John W. Maseker, Assessor, Sparta.

SUSSEX COUNTY—*Continued.*

Stillwater Township.—MEMBERS AND OFFICERS—Charles Lewis, Stillwater; Wm. E. Titman, Swartswood; Chas. Westbrook, Stillwater; Jos. Huff, Secretary, Newton; A. W. Cassady, M.D., Inspector, Stillwater.

One nuisance was abated. Three meetings were held.

Wantage Township.—MEMBERS AND OFFICERS—J. I. Brink, Ernest Wilson, Lebbeus Martin, Martin Coykandale; S. M. Parcell, Secretary, Deckertown.

UNION COUNTY.

Clark Township.—MEMBERS AND OFFICERS—Isaac Terhune, Rahway; Wm. Smith, Rahway; Chas. Cordes, Rahway; F. P. Bullman, Secretary, Rahway; Dr. W. E. Cladek, Rahway.

One meeting was held.

Cranford Township.—MEMBERS AND OFFICERS—John H. Cromwell, Dr. Jos. K. MacConnell; Edward S. Crane, Secretary; John H. Thompson, J. C. W. Rankin, Inspectors. All of Cranford.

Ten cases of diphtheria and 1 of scarlet fever were reported. Water for public use is supplied by the Union Water Company. Extension of water-mains, 500 feet. Six dwellings were connected with water-supply during the year. Seven dwellings were connected with the sewers. Sewer extensions, 1,200 feet. Three nuisances were abated. Amount expended, \$50. Two meetings were held.

City of Elizabeth.—MEMBERS AND OFFICERS—John W. Whelan, President; Norton L. Wilson, M.D., Victor Mravlag, M.D., Louis Quien, Edward R. O'Reilly, M.D., James S. Green, M.D., Arthur Stern, M.D.; James J. Manning, Secretary; Louis J. Richards, Health Officer; Patrick J. Connell, Inspector.

Communicable diseases were reported as follows: Diphtheria, 302; fatal cases, 33; scarlet fever, 162; fatal cases, 17; typhoid fever, 19; fatal cases, 5. Average daily quantity of water used, 7,000,000 gallons. Number of premises connected with sewers during year, 296. Complaints investigated, 481. Nuisances abated, 369. Prosecutions for violations of the ordinances of the board, 7. Appropriation, \$2,500. Twelve meetings were held.

UNION COUNTY—*Continued.*

Fanwood Borough.—MEMBERS AND OFFICERS—F. W. Westcott, M.D., F. D. Warren; Geo. F. Coates, Secretary.

Five complaints were investigated and 2 nuisances were abated. Two meetings were held.

Fanwood Township.—MEMBERS AND OFFICERS—Thomas J. Nicholl, Scotch Plains; Theo. Bruchmann, Scotch Plains; Wm. H. Terry, Plainfield; Charles H. French, Secretary, Fanwood; Dr. F. W. Westcott, Inspector, Fanwood; W. R. Coddington, Attorney, Plainfield.

Five nuisances were abated. Bills for moneys expended by the board are submitted to the governing board for payment and no appropriation is made. Eight meetings were held.

Linden Borough.—MEMBERS AND OFFICERS—F. B. Hardenberg, Wm. McDonagh, H. Garrison, Henry Browning, Ambrose Welsh, August E. Knopf, Wm. H. Hill; Edwin Lundy, Secretary; Milton C. Loudon, Inspector; Alexander R. Corbet, Assessor.

Appropriation, \$50. Monthly meetings were held.

Linden Township.—MEMBERS AND OFFICERS—J. Hampton Eddy, Tremly; J. M. Bachman, Linden; George McGillery, Linden; Asa E. Collins, Secretary, Linden; Dr. W. C. Winans, Inspector, Tremly.

Three cases of scarlet fever and 2 of typhoid fever were reported. Four meetings were held.

New Providence Borough.—MEMBERS AND OFFICERS—James G. Alden, West Summit; William Woodruff, New Providence; Thomas P. Crane, New Providence; Max Kipple, Murray Hill; A. G. Nason, Murray Hill; J. Thomas Scott, Secretary, New Providence; John W. Dickinson, Inspector, New Providence.

Three cases of diphtheria and 1 of typhoid fever occurred. Ten nuisances were abated. Appropriation, \$65. Twelve meetings were held.

New Providence Township.—MEMBERS AND OFFICERS—S. P. Debbie, Scotch Plains; Victor Mercier, Berkeley Heights; Frank Sohl, Berkeley Heights; W. C. Johnson, Secretary, New Providence; A. M. Cory, M.D., Inspector, New Providence.

Appropriation, \$50. Four meetings were held.

UNION COUNTY—*Continued.*

Plainfield City.—MEMBERS AND OFFICERS—Wm. H. Murray, M.D., Fred. W. Dunn, Charles J. Fisk, Herman A. Weber; L. C. Runyon, Registrar; B. van D. Hedges, M.D., Secretary; Wm. H. Addis, Inspector.

Communicable diseases were reported as follows: Diphtheria, 23; scarlet fever, 95, of which 3 were fatal; typhoid fever, 9 cases and 2 deaths. Average daily consumption of water, 700,000 gallons. Dwellings connected with water-mains during year, 200; extension of water-mains, 2 miles; sewer connections, 100. Nuisances abated, 118. Prosecutions, 3. Appropriation, \$1,000. Fourteen meetings were held.

Rahway City.—MEMBERS AND OFFICERS—C. B. Holmes, M.D., H. Page Hough, M.D., J. M. Randolph, M.D., W. E. Cladek, M.D., H. W. Gibbons; S. Rusling Ryno, Secretary; Fred. J. Mix, Inspector.

Communicable diseases were reported as follows: Diphtheria, 14; 2 deaths; membranous croup, 1; scarlet fever, 9; typhoid fever, 9; small-pox, 4. Extensions of water-mains during the year, 6,200 feet. Dwellings connected, 27. Extension of sewers, 1,650 feet. Premises connected with sewers, 24. Nuisances investigated, 70, all of which were abated. Annual appropriation, \$600. Seven meetings were held.

Springfield Township.—MEMBERS AND OFFICERS—J. L. Denman, L. H. Terry, J. Q. Van Nortrick; A. P. Stiles, Secretary; Dr. J. A. Stites, Inspector. All of Springfield.

One case of scarlet fever was reported. Fourteen meetings were held.

Summit City.—MEMBERS AND OFFICERS—Dr. W. H. Lawrence, Col. A. B. Wallace, Geo. H. Hodenpyl, Gustav Pollak, Francis E. Dana; Dr. J. Edw. Rowe, Jr., Secretary and Health Officer; T. J. Scott, Inspector.

Communicable diseases were reported as follows: Diphtheria, 35; scarlet fever, 27; typhoid fever, 5. Daily consumption of water, 700,000 gallons. Dwellings connected with water-mains during the year, 20. Extensions of water-mains, about 1 mile. Premises connected with sewers during the year, 25. Sewers extended, about 1 mile. Nuisances investigated, 46; of which number 41 were abated. Appropriation, \$650. Eighteen meetings were held.

UNION COUNTY—*Continued.*

Union Township.—MEMBERS AND OFFICERS—John H. Doremus, Lyons Farms; Wm. A. Bembridge, Roselle; Daniel H. Beach, Union; D. Hobart Sayre, Secretary, Union.

Seven cases of diphtheria, 2 of scarlet fever, and 1 of typhoid fever were reported. Five nuisances were abated. Eight meetings were held.

Westfield Township.—MEMBERS AND OFFICERS—Martin Wells, J. Allston Dennis, William W. Connoly; John M. C. Marsh, Secretary; Joseph B. Harrison, Edward Egat, Inspectors. All of Westfield.

Three cases of diphtheria, 4 of scarlet fever, and 3 of typhoid fever were reported. Appropriation, \$340. Fourteen meetings were held.

WARREN COUNTY.

Allamuchy Township.—MEMBERS AND OFFICERS—H. H. Miller, T. G. Dunlap; John A. Hobler, Assessor; Benj. A. Hendershot, Secretary, Allamuchy; P. G. Hawk, Inspector.

No meetings were held during the year.

City of Belvidere.—MEMBERS AND OFFICERS—James Belford, Thomas Hayes, Jacob Stone, U. S. G. Purcell, Registrar; G. W. Cummins, M.D., Secretary; John King, Inspector.

Twenty cases of diphtheria and 3 of typhoid fever were reported. The only fatal case of diphtheria was one in which anti-toxin was not used. Average daily quantity of water pumped for public use, 100,000 gallons. Several new sewer connections have been made during the year. Amount appropriated for use of the board, \$85. Four meetings were held.

Blairstown Township.—MEMBERS AND OFFICERS—Wm. C. Howell, Blairstown; Abram L. Smith, Walnut Valley; Wm. S. Perry, Secretary, Knowlton; Dr. Henry O. Carhart, Inspector, Blairstown.

Two cases of diphtheria, 3 of scarlet fever and 2 of typhoid fever were reported. Reports of communicable diseases from physicians are not satisfactorily made. Annual appropriation, \$100. Two meetings were held.

WARREN COUNTY—*Continued.*

Frelinghuysen Township.—MEMBERS AND OFFICERS—Lewis Savacool, Newton; George Hibler, Newton; Marshall Cook, Hope; F. Rorback, M.D., Johnsonburg; W. H. Ackerson, Assessor, Johnsonburg.

Greenwich Township.—MEMBERS AND OFFICERS—H. M. Vliet, Bloomsburg; A. P. Kinney, Stewartsville; C. W. Rush, Stewartsville; F. W. Curtis, Stewartsville; William Sherrer, Bloomsburg.

Town of Hackettstown.—MEMBERS AND OFFICERS—Jacob H. Beatty, Mayor; A. E. Martin, M.D., A. W. Cutler, T. S. White, Alfred Hoffman, R. G. Clark, Thos. Nolan; O. A. Mattison, Secretary; J. M. Everett, Inspector.

Seven nuisances were abated. Annual appropriation, \$300. Eleven meetings were held.

Hardwick Township.—MEMBERS AND OFFICERS—Henry Kise, Hardwick; Wm. C. Wildrick, Marksboro; Clark Teel, Blainstown; Marcus C. Hill, Secretary, Blainstown.

Harmony Township.—MEMBERS AND OFFICERS—Peter E. Cole, Montana; Irvin B. Smith, Rocksburg; George M. Amey, Harmony; Freeman Schuler, Secretary, Rocksburg; James D. DeWitt, M. D., Inspector, Harmony.

Two cases of diphtheria occurred. One meeting was held.

Hope Township.—MEMBERS AND OFFICERS—Walter Storm, Hope; P. S. Hartung, Hope; J. W. C. Fleming, Danville; J. N. Kostenbader, Hope; L. C. Fleming, Secretary, Townsbury.

One case of scarlet fever was reported. One complaint was investigated. Two meetings were held.

Independence Township.—MEMBERS AND OFFICERS—W. J. Barker, Vienna; Silas Cummins, Hackettstown; A. B. Leigh, Danville; Jas. Johnson, Hackettstown; F. W. Haggerty, M.D., Secretary, Vienna.

Two meetings were held.

Knowlton Township.—MEMBERS AND OFFICERS—Theodore A. Beck, Hainesburg; Marshal Pittenger, Knowlton; William Cook, Delaware; Wm. B. Moore, Columbia; Miller M. Bard, M.D., Delaware.

Two cases of diphtheria, 1 of membranous croup and 2 of scarlet fever and 6 of typhoid fever were reported. Appropriation, \$25. One meeting was held.

WARREN COUNTY—*Continued.*

Oxford Township.—MEMBERS AND OFFICERS—Depue Rosberry, Oxford; Jas. O'Brien, Oxford; Geo Wildrick, Butzville; Michael Mountain, Secretary, Oxford; G. O. Tunison, M.D., Inspector, Oxford.

Two cases of diphtheria, 4 of membranous croup and 1 of typhoid fever occurred. Two meetings were held.

Pahaquarry Township.—MEMBERS AND OFFICERS—Hiram Zimmerman, Millbrook; Mason Dickson, Millbrook; William Walter, Calno; Jason K. Hill, Assessor, Millbrook.

Phillipsburg City.—MEMBERS AND OFFICERS—E. C. Parker, C. J. Pfeiffer, Wm. Smith, Daniel Zeigler, John W. Greek, Dr. Creveling; Frank Kneedler, Secretary; Howard R. Carey, Inspector.

Eleven cases of diphtheria and 28 of scarlet fever were reported. Daily consumption of water, 1,500,000 gallons per day. Extension of sewers, $\frac{1}{2}$ mile, and 12 dwellings were connected. Complaints investigated, 200. Appropriation, \$250. One meeting was held.

Pohatcong Township.—MEMBERS AND OFFICERS—Jonas Youngkin, Springtown; I. M. Jacoby, Finesville; Chas. M. Snyder, Shimers; Jacob O. Boyer, Carpentersville; Wesley B. Laubach, Secretary, Finesville; Chas. H. Boyer, Inspector, Riegelsville.

Two meetings were held.

Washington Borough.—MEMBERS AND OFFICERS—H. M. Cox, M.D., Chas. Morgan Williams, M.D., Geo. C. Campbell, John Hombaker, Theo. B. Dawes; A. J. Craft, Secretary.

Six cases of diphtheria and 8 cases of scarlet fever were reported. Appropriation, \$100. Seven meetings were held.

Washington Township.—MEMBERS AND OFFICERS—Robert Q. Bowers, Washington; William Apgar, Port Colden; William Miller, New Hampton; C. B. Smith, M.D., Washington; Samuel Rinehart, Secretary, Washington.

One meeting was held.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Cities.</i>				
Asbury Park.....	Monmouth.....	3,761	D. C. Bowen.....	D. C. Bowen.
Atlantic City.....	Atlantic.....	18,329	Thos. D. McDevitt.....	A. T. Glenn.
Bayonne.....	Hudson.....	19,856	H. H. Mara.....	
Belvidere.....	Warren.....	1,884	Geo. W. Cummins, M.D.....	U. G. Purcel.
Beverly.....	Burlington.....	1,924	B. F. Soby, M.D.....	B. F. Soby, M.D.
Bordentown.....	Burlington.....	4,185	Wm. H. Shippis, M.D.....	C. D. Allen.
Bridgeton.....	Cumberland.....	13,292	Isaac T. Nichols.....	Frank L. Hewitt.
Burlington.....	Burlington.....	7,844	Franklin C. Woolman.....	J. F. Oline
Camden.....	Camden.....	63,467	Eugene B. Roberts.....	H. C. Kramer.
Cape May City.....	Cape May.....	2,451	L. T. Stevens.....	John W. Thompson.
Dover.....	Morris.....	5,021	D. E. Hummer.....	D. E. Hummer.
East Orange.....	Essex.....	17,927	Wm. T. Bowman, Inspector.....	S. M. Long.
Egg Harbor City.....	Atlantic.....	1,557	V. P. Hoffman.....	V. P. Hoffman.
Elizabeth.....	Union.....	43,834	Jas. J. Manning.....	J. J. Manning.
Englewood.....	Bergen.....	5,433	Arthur Gatfield.....	Robert Jamieson.
Gloucester City.....	Camden.....	6,225	D. Lane.....	Daniel F. Lane.
Hackensack.....	Bergen.....	7,282	A. E. Conklin.....	C. E. Eckerson.
Hoboken.....	Hudson.....	54,083	James Hayton.....	
Jersey City.....	Hudson.....	182,713	D. W. Benjamin.....	Jas. H. Reynolds.
Lambertville.....	Hunterdon.....	4,620	Jas. H. Reynolds.....	L. H. Hogate.
Millville.....	Cumberland.....	10,466	L. H. Hogate.....	Marshall O. Leighton.
Montclair.....	Essex.....	11,753	Richard P. Francis, M.D.....	Thos. Martin
Morristown.....	Morris.....	10,290	Thos. D. Chandler.....	Jas. F. Connelly.
Newark.....	Essex.....	215,806	D. D. Clark.....	Geo. H. Denizer.
New Brunswick.....	Middlesex.....	19,910	S. V. D. Clark.....	Daniel A. Dugan.
Orange.....	Essex.....	22,792	Wm. Schluter.....	Geo. F. Grear.
Passaic City.....	Passaic.....	13,894	C. E. Denholm.....	John T. Pollitt.
Paterson.....	Passaic.....	97,334	Jas. P. McNair.....	John F. Reilly.
Perth Amboy.....	Middlesex.....	13,030	W. E. Ramsey, M.D.....	Frank Kneedler.
Phillipsburg.....	Warren.....	9,081	Frank Kneedler.....	

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Cities—Con.</i>				
Plainfield.....	Union.....	13,629	B. Van D. Hedges, M.D.....	Miss L. E. Ruynon.
Rahway.....	Union.....	7,915	S. R. Ryno.....	S. Rusling Ryno.
Salem City.....	Salem.....	6,337	Clinton Bowen.....	Clinton Bowen.
Summit.....	Union.....	62,518	Dr. J. E. Rowe, Jr.....	Dr. J. E. Rowe, Jr.
Trenton.....	Mercer.....	3,853	William Cloke.....	C. Edward Murray.
Woodbury.....	Gloucester.....		Arthur Starr.....	D. T. Mathers.
<i>Boroughs.</i>				
Allendale.....	Bergen.....	539		G. G. Smith.
Allenhurst.....	Monmouth.....			Edward H. Ward, Jr.
Allentown.....	Monmouth.....	656		David M. Bunting.
Angelsea.....	Cape May.....	247	Geo. W. Dougherty.....	E. M. Shivers.
Atlantic Highlands.....	Monmouth.....	1,715		Thos. J. Emery.
Avalon.....	Cape May.....	105		Walter A. Smith, Borough Clerk.
Avon.....	Monmouth.....			C. D. Snyder.
Bay Head.....	Ocean.....	201		Julius Foster.
Beach Haven.....	Ocean.....	230	W. F. Beer.....	Thos. A. Gavin.
Belmar.....	Monmouth.....		C. O. Hudnit.....	Neil H. Miller.
Bergen Fields.....	Bergen.....	544	Howard Demarest.....	Howard Demarest.
Bogota.....	Bergen.....			H. M. Brinkerhoff.
Bound Brook.....	Somerset.....	2,030	W. L. Negus.....	Chas. McNabb.
Bradley Beach.....	Monmouth.....	707		Henry C. Pratt.
Branchville.....	Sussex.....			C. A. Dalrymple.
Brigantine.....	Atlantic.....			Jas. R. Bissex.
Brooklyn.....	Sussex.....			Chas. F. Muller.
Butler.....	Morris.....			
Caldwell.....	Essex.....	984	Thos. W. Biggs.....	J. J. Van Arden.
Cape May Point.....	Cape May.....	136		Lafayette Miller.
Carlstadt.....	Bergen.....	1,965	Herman Foth.....	Herman Foth.
Chatham.....	Morris.....		D. H. Cranford.....	M. K. Hopping.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1896.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Chesterhurst	Camden	271	A. G. Silver.....	Albert Ladynski, Borough Clerk.
Clayton.....	Gloucester	2,130	E. H. Nutt, Cliffside.....	Geo. W. Duffield.
Cliffside Park.....	Bergen	592	E. C. Moke.....	Jean Henri Raas.
Clinton.....	Hunterdon	895	Robt. S. Duff.....	Edward C. Moke.
Collingswood.....	Bergen	450	John Waddington.....	Robt S. Duff.
Cresskill.....	Monmouth	1,090	G. F. Moore.....	E. B. Westervelt.
Deal.....	Sussex	594	J. E. Pratt, M.D., Inspector.....	F. H. Parsells.
Deekertown.....	Bergen	572	J. Peters, Inspector.....	F. B. Whittle.
Delford.....	Middlesex	1,215	P. B. S. Hodges, Inspector.....	H. A. Bingham.
Dumont.....	Bergen	2,250	Edward Fischer.....	Wm. P. Cox.
Dunellen.....	Bergen	1,145	Eugene Bostwick.....	Chas. A. Cortell.
East Rutherford.....	Salem	.....	J. L. Stratton.....	Wm. E. Novo.
Edgewater.....	Monmouth	.....	Geo. A. Storms.....	Edward Fischer.
Elmer.....	Bergen	.....	Geo. F. Coates.....	E. T. Reid.
Englewood Cliffs.....	Bergen	.....	Wm. Leatherbury.....	John G. Ropes.
Fairview.....	Union	.....	E. W. Bloom.....	John C. Bush.
Fanwood.....	Burlington	.....	P. J. Scanlon.....	Ernest C. Kieb.
Fieldsboro.....	Morris	.....	H. K. Benson.....	C. H. Fenimore.
Floham Park.....	Hunterdon	1,052	Wm. H. Harrison.....	Henry W. Young.
Frenchtown.....	Bergen	1,644	John G. Martin.....	Wm. E. Shurtz.
Garfield.....	Essex	2,580	J. J. Grady.....	P. J. Scanlon.
Glen Ridge.....	Bergen	842	J. L. Phillips.....	Nathan Russell.
Glen Rock.....	Camden	.....	Chas. A. Hauser.....	Wm. H. Berry.
Haddonfield.....	Passaic	.....	.....	Wm. H. Harrison.
Hasbrouck Heights.....	Middlesex	.....	.....	John G. Martin.
Hawthorne.....	Hunterdon	1,032	.....	S. E. Barnes.
Helmetta.....	Monmouth	.....	.....	E. M. Clemens.
High Bridge.....	.....	.....	.....	C. F. Halsted.
Highlands.....	.....	.....	.....	.....

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1896.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
Hightstown.....	Mercer	300	A. C. Pentland.....	Fred. B. Applegate.
Holly Beach.....	Cape May	246	W. I. Phillips.....	Robert Bright.
Hopewell.....	Mercer	975	Edgar E. Riddle.....	E. V. Savidge.
Island Heights.....	Ocean	.....	.....	W. T. McKaig.
Junction.....	Hunterdon	.....	.....	E. E. Riddle.
Lavalette.....	Ocean	.....	.....	Geo. E. Willits.
Leesburgh.....	Cumberland	.....	.....	H. M. Thompson.
Leonia.....	Bergen	.....	.....	Alexander F. Corbett.
Linden.....	Union	.....	.....	James Farish, Borough Clerk.
Linwood.....	Atlantic	1,113	A. Woods.....	A. Woods.
Little Ferry.....	Bergen	1,403	Jacob Van Hook.....	Jacob Van Hook.
Lodi.....	Bergen	7,333	E. B. Blaisdell.....	E. B. Blaisdell.
Long Branch Con.....	Monmouth	3,250	Ernest Koch.....	C. E. Cook.
Longport.....	Atlantic	1,427	Wm. A. Rogers.....	M. R. Mulford.
Madison.....	Morris	283	F. T. May.....	Wm. A. Rogers.
Manasquan.....	Monmouth	1,339	W. B. Stewart.....	F. T. May.
Matawan.....	Bergen	1,254	A. C. Ayres.....	Wm. B. Stewart.
Maywood.....	Bergen	.....	Jacob Leenas.....	A. C. Ayres.
Merchantville.....	Camden	.....	Wm. H. Polhemus.....	Thos. Hol.
Metuchen.....	Middlesex	.....	.....	E. T. Wright.
Midland Park.....	Bergen	.....	.....	Robert A. Harkins.
Millstone.....	Somerset	.....	.....	John B. Haring, Clerk.
Milltown.....	Middlesex	354	.....	Cyrus E. Cook.
Montvale.....	Bergen	348	.....	C. G. McMurray.
Mount Arlington.....	Morris	.....	.....	Whitfield Smith.
Mountain Side.....	Union	.....	.....	Frank King, Borough Clerk.
Mount Tabor.....	Union	.....	.....	.....
Nepumee City.....	Monmouth	.....	.....	.....
Netcong.....	Morris	877	.....	.....
New Market.....	Middlesex	.....	.....	.....

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1885.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con.</i>				
New Providence...	Union		J. Thomas Scott	J. Thomas Scott.
North Caldwell	Essex			Fred. L. Baldwin, Borough Clerk.
North Haledon	Passaic	4,245	Rev. W. E. Honeyman	Rev. W. E. Honeyman.
North Plainfield	Somerset	262	F. M. Hunt, Borough Clerk	F. M. Hunt, Spring Lake Beach.
North Spring Lake	Monmouth	921	Luther L. Wallace	Wilton H. Willels.
Ocean City	Cape May		H. B. Alday, M. D.	
Ocean Grove Association.	Bergen	261	R. B. Haring	R. B. Haring, Tappan, N. Y.
Old Tappan	Bergen	753	Wm. T. Miller, M.D.	Wm. T. Miller.
Palisades Park	Bergen	816	Henry Stroschall	Henry Stroschall, Park Ridge.
Park Ridge	Bergen		John H. Antrim	John H. Antrim.
Pemberton	Burlington		Henry M. Flanagan	Dr. H. M. Flanagan, Borough Clerk.
Pennington	Mercer	1,497	John Sanders	John Sanders.
Pennsgrove	Salem	1,543	John Sanders	James T. Havens.
Pleasantville	Atlantic	660	H. J. Smith, Jr.	D. C. Leav.
Point Pleasant	Ocean	675	James Williams	H. J. Smith.
Point Pleasant Beach	Passaic	923		Wm. J. Downs.
Pompton Lakes	Morris			M. W. Hubbard.
Port Oram	Mercer	2,693	Wm. Killiger	William Killiger.
Princeton	Passaic	518	B. F. Underwood	B. F. Underwood.
Raritan	Somerset	569	Wm. W. Herrick, River Edge	J. H. Weston.
Ridgefield	Bergen	1,250	Alex. Marcy, Jr.	Jacob G. Cottrell.
Riverside	Bergen	1,334	William May	William May.
Riverton	Burlington	1,367		G. A. Rawlins.
Rockaway	Morris	3,972		Chas. Van Winkle.
Roselle	Morris			T. Nelson Woodruff.
Roselle	Union			D. C. Reed.
Rutherford	Union			Henry A. De Roche.
Saddle River	Bergen			
Seabright	Bergen			
Sea Isle City	Monmouth.	824	Henry A. De Roche	Henry A. De Roche.
	Cape May.			

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1885.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Boroughs—Con</i>				
Senside Park	Ocean		J. B. Wood, Borough Clerk.	W. E. Fox.
South Amboy	Atlantic	5,571	J. F. Fulton	J. F. Fulton.
South Atlantic City	Middlesex			Charles Hart
South Bound Brook	Atlantic	833		
South Cape May	Somerset	66		
Spring Lake Beach	Cumberland		R. Van Dyke Reid	R. Van Dyke Reid.
Spring Lake	Middlesex			John Middleton.
Stockton	Monmouth	331		Wm. V. Reed.
Tenafly	Monmouth		Frederick L. Colver	J. B. W. Lansing, M.D.
Totowa	Bergen	1,532		John L. Ochs.
Tuckerton	Passaic			
Upper Saddle River	Ocean		Henry Zabriskie, Saddle River	A. A. Zabriskie.
Vailsburg	Bergen	1,563	Robert A. Glover	Wm. Billington.
Vineland	Essex	4,126	Wm. M. Ruhl	Wm. M. Ruhl.
Wallington	Cumberland	1,063		James Brennan, Carlton Hill.
Wenonah	Bergen	3,538	A. J. Craft	A. J. Craft.
West Cape May	Warren	473	Jesse W. English	Jesse W. English.
Westwood	Gloucester	209	A. G. Stevens, M.D.	Wm. G. Blatner.
Wildwood	Cape May	646		John E. Haring.
Woodliffe	Bergen	109	Nelson S. Hays	Robert Bright.
Wood Lynne	Cape May	421	G. J. Wortendyke	G. J. Wortendyke.
Wood Ridge	Bergen			
Woodstown	Camden	526	Wm. H. White	W. H. White.
	Bergen	1,470	H. H. Stepler	H. H. Stepler.
	Salem.			
<i>Towns.</i>				
Absecon	Atlantic.	522	G. B. Lutts	Geo. B. Lutts.
Bloomfield	Essex.	8,093	W. L. Johnson	Wm. L. Johnson.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Towns—Con.</i>				
Boonton.....	Morris.....	3,276	Frank H. Pierce.....	Frank H. Pierce.
Freehold.....	Monmouth.....	3,157	J. O. Burt.....	R. V. Lawrence.
Guttenberg.....	Hudson.....	3,626	W. J. Mager.....	O. A. Mattison.
Hackettstown.....	Warren.....	2,594	O. A. Mattison.....	J. Lewis O'Donnell.
Hammononton.....	Atlantic.....	3,428	J. L. O'Donnell.....	Mahlon Stockman.
Harrison.....	Hudson.....	9,574	Peter J. Goodman.....	H. J. Child.
Irington.....	Essex.....	3,388	Edwin Berry.....	W. R. Surphen.
Keyport.....	Monmouth.....	3,886	D. E. Roberts, M.D.....	
Red Bank.....	Monmouth.....	4,888	Henry J. Child.....	
Somerville.....	Somerset.....	4,514	Wm. R. Surphen.....	
Town of Union.....	Hudson.....	13,336	Wm. Mechbeck.....	
West New York.....	Hudson.....			
<i>Villages.</i>				
Ridgefield Park.....	Bergen.....		Edgar T. Bonds.....	Thos. Terhune, Hohokus.
Ridgewood.....	Bergen.....		J. Blauvelt Hopper.....	Dr. W. W. Heberton.
South Orange.....	Essex.....		Richard D. Freeman, M.D.....	
<i>Townships.</i>				
Acquackanonk.....	Passaic.....	3,598	Richard Berry.....	Richard Berry, Clifton.
Alexandria.....	Hunterdon.....	1,202	Robert Roseberry.....	Robert, Roseberry, Little York.
Allamuchy.....	Warren.....	653	Benj. A. Hendershot, Allamuchy.....	E. J. Harden, Allamuchy.
Alloway.....	Salem.....	1,628	Wm. E. Simpkins, Aldine.....	Wm. E. Simpkins.
Andover.....	Sussex.....	1,072	Wm. Iliff.....	Wm. Iliff, Newton.
Atlantic.....	Monmouth.....	1,455	Levi Scooby.....	Levi Scooby, Scoobyville.
Bass River.....	Burlington.....	853	W. D. Vanderbeck.....	A. E. Mathis, New Gretna.
Bedminster.....	Somerset.....	1,789	J. J. Hannan.....	W. D. Vanderbeck, Gladstone.
Belleville.....	Essex.....	4,568	Daniel Saviello.....	Wm. Connolly, Belleville.
Bergen.....	Bergen.....	499	Daniel Saviello.....	Daniel Saviello, Wood Ridge.
Berkley.....	Ocean.....	737	Devine Butler.....	Devine Butler, Bayville.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Bernards.....	Somerset.....	2,558	S. S. Baldwin, Liberty Corner.....	L. H. Powers, Basking Ridge.
Bethlehem.....	Hunterdon.....	1,761	Samuel O. Meyers.....	S. O. Myers, Bloomsbury.
Beverly.....	Burlington.....		Jos. B. Carter.....	Joseph B. Carter, Delanco.
Blairstown.....	Warren.....	1,601	Wm. S. Perry.....	Wm. S. Perry, Knowlton.
Boonton.....	Morris.....	691		Joseph Steventon, Boonton.
Bordentown.....	Burlington.....	991	Milton R. Cox, Bordentown.....	H. E. Ford, Bordentown.
Branchburg.....	Burlington.....	1,062	Lester Shurts.....	Ellsworth Mount, Burlington.
Brick.....	Ocean.....	2,118	J. H. Harvey.....	Lester Shurts, Neshanic Station.
Bridgewater.....	Somerset.....	1,700	C. L. Voorhees.....	J. H. Harvey, Point Pleasant.
Byram Vista.....	Sussex.....	1,218	E. O. Valentine.....	C. L. Voorhees, Somerville.
Buena Vista.....	Atlantic.....	1,424	Douglass Reed, Buena.....	E. O. Valentine, Stanhope.
Caldwell.....	Essex.....	1,658		Alfred Pennock, Buena.
Centre.....	Camden.....	2,047	J. H. Jackson, Magnolia.....	Theodore Vincent, Caldwell.
Chatham.....	Morris.....	2,647	W. J. Wolfe, M.D, Chatham.....	F. H. Jackson, Magnolia.
Chester.....	Burlington.....	4,227	Benj. Rogers.....	J. H. Bebout, New Providence.
Chesterfield.....	Morris.....	1,562		Benjamin Rogers, Moorestown.
Cinnaminson.....	Burlington.....	1,298	Chas. B. Holloway.....	John Frost, Chester.
Clark.....	Union.....	1,202	Timothy Morton.....	C. B. Holloway, Chesterfield.
Clinton.....	Gloucester.....	384	F. P. Bullman.....	Timothy Morton, Parry.
Clinton.....	Essex.....	38		F. P. Bullman, Picton.
Clinton.....	Hunterdon.....	2,082	Wm. H. Goldsmith.....	Wm. H. Goldsmith, Lyons Farms.
Commercial.....	Cumberland.....	1,941	Bergen B. Berkaw.....	Bergen B. Berkaw, Annandale.
Cranbury.....	Middlesex.....	1,456	A. M. Davison.....	E. J. Cook, Port Norris.
Cranford.....	Union.....	3,145	Edward S. Crane.....	Ancil M. Davison, Cranbury.
Deerfield.....	Cumberland.....	2,115	Chas. C. Phillips, M.D., Deerfield St.....	Edward S. Crane, Cranford.
Delaware.....	Camden.....	1,611	W. B. Jennings, M.D, Haddonfield.....	Elijah R. Parvin, Deerfield St.
Delaware.....	Hunterdon.....	2,819	F. W. Venable, Sergeantville.....	Wm. Graff, Haddonfield.
Delran.....	Burlington.....	938	Daniel A. Kendall, Riverton.....	F. W. Venable, Sergeantville.
				Daniel A. Kendall, Riverton.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Dennis	Cape May.....	2,370	Leaming M. Rice, Jr.....	Leaming M. Rice, Jr., Dennisville.
Deptford.....	Gloucester.....	1,883	Wm. C. Cattell, Wenonah.....	Wm. C. Cattell, Wenonah.
Downe.....	Ocean.....	2,680	Peter Tilton.....	Peter Tilton, Toms River.
Eagleswood.....	Cumberland.....	1,808	Geo. E. Butcher, Dividing Creek.....	John P. Jeslin, Newport.
Eastampton.....	Ocean.....	589	E. F. Cranmer.....	Eugene F. Cranmer, West Creek.
East Amwell.....	Burlington.....	654	Chas. H. Dennis, Jr.....	Chas. H. Dennis, Jr., Smithville.
East Brunswick.....	Hunterdon.....	1,273	Geo. W. Cherry, Ringoes.....	Wm. Clayhanner, Wertsville.
East Greenwich.....	Middlesex.....	4,928	Walter Heritage.....	Henry Warnsdorfer, Milltown.
East Windsor.....	Gloucester.....	1,363	Walter Heritage.....	Walter Heritage, Mickleton.
Eatontown.....	Mercer.....	2,671	D. S. Morris, Eatontown.....	S. L. Mount, Etra.
Egg Harbor.....	Monmouth.....	2,661	D. S. Morris, Eatontown.....	A. L. Scooby, Eatontown.
Elk.....	Atlantic.....	935	Chas. P. Farkoff.....	A. R. Vickers, Bakersville.
Elsinboro.....	Gloucester.....	498	P. V. B. Stroud, M.D., Marlton.....	Kinsey Morgan, Hardingville.
Evesham.....	Burlington.....	1,413	James M. Matthews.....	Chas. P. Farkoff, Salem.
Ewing.....	Mercer.....	3,569	E. H. Whitecar, Fairton.....	Samuel D. Farrow, Marlton.
Fairfield.....	Cumberland.....	1,802	Chas. H. French.....	James M. Matthews, Trenton, Box 676.
Fanwood.....	Union.....	1,600	John De Kay.....	J. B. Mulford, Fairton.
Florence.....	Burlington.....	1,762	John De Kay.....	C. H. French, Westfield.
Frankford.....	Sussex.....	1,430	John De Kay.....	Walter Scully, Florence.
Franklin.....	Bergen.....	1,825	John W. Ackerman.....	John De Kay, Papakating.
Franklin.....	Essex.....	3,076	John W. Ackerman.....	John W. Ackerman, Wyckoff.
Franklin.....	Gloucester.....	2,256	W. S. Richman.....	Henry M. Whitfield, Nutley.
Franklin.....	Hunterdon.....	1,278	J. L. Agans.....	W. S. Richman, Malaga.
Franklin.....	Somerset.....	2,854	L. J. Suydam.....	J. L. Agans, Pittstown.
Franklin.....	Warren.....	1,338	Rulif V. Lawrence, Freehold.....	L. J. Suydam, Franklin Park.
Freehold.....	Monmouth.....	2,356	Anthony Krenzle.....	Michael B. Bowers, Broadway.
Freehinghuysen.....	Warren.....	864	David Paulin.....	John B. Parker, Smithburg.
Galloway.....	Atlantic.....	2,375	David Paulin.....	Walter H. Akerson, Johnsonburg.
Glassboro.....	Gloucester.....	2,664	David Paulin.....	Anthony Krenzle, Egg Harbor City.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Gloucester.....	Camden.....	3,479	Willard T. Gibbs.....	Willard T. Gibbs, Clementon.
Green.....	Sussex.....	588	M. W. Northup.....	M. W. Northup, Huntsville.
Greenwich.....	Cumberland.....	1,323	J. W. Butler, Greenwich.....	J. W. Butler, Othello.
Greenwich.....	Gloucester.....	2,157	Jacob Ballenger.....	Jacob Ballenger, Paulsboro.
Greenwich.....	Warren.....	886	Warren.....	Wm. Sherrer, Bloomsbury.
Haddon.....	Camden.....	1,266	Chas. E. Cain, Mays Landing.....	J. Macaulay, Westmountain.
Hamilton.....	Atlantic.....	3,860	Azariah Cuddeyer, Hamilton Square.....	Joseph Hamill, Mays Landing.
Hamilton.....	Mercer.....	859	Frank Emmans.....	R. E. Haines, Hamilton Square.
Hampton.....	Sussex.....	4,524	Frank Emmans.....	Frank Emmans, Newton.
Hanover.....	Morris.....	470	Marcus C. Hill.....	Jos. H. Bastedo, Boonton.
Hardwick.....	Warren.....	2,531	Lewis B. Congleton.....	Marcus C. Hill, Blairstown.
Hardyston.....	Sussex.....	2,989	Freman Schuler.....	Lewis B. Congleton, Hamburg.
Harrison.....	Warren.....	1,100	Freman Schuler.....	Freman Schuler, Rockburg.
Hillsborough.....	Bergen.....	1,508	Eli Heritage.....	Wm. J. Demarest, Norwood.
Hohokus.....	Somerset.....	2,847	John H. Sams.....	Eli Heritage, Richwood.
Holland.....	Bergen.....	2,377	John Ackerman.....	John H. Sams, Millstone.
Holmdel.....	Hunterdon.....	1,706	Godfrey Hawk.....	John Ackerman, Wyckoff.
Hope.....	Monmouth.....	1,429	Aaron Longstreet.....	Godfrey Hawk, Milford.
Hopewell.....	Warren.....	1,321	L. C. Fleming.....	Aaron Longstreet, Keyport.
Hopewell.....	Cumberland.....	1,849	Walter L. Minch.....	L. C. Fleming, Townsbury.
Howell.....	Mercer.....	4,418	Arthur T. Blackwell, Harborton.....	Walter L. Minch, Shiloh.
Hudson County.....	Monmouth.....	3,246	James H. Butcher.....	Wilson D. Hunt, Harborton.
Independence.....	Hudson.....	960	C. J. Rooney, Clerk.....	James I. Butcher, Ardena.
Jackson.....	Warren.....	1,650	F. W. Haggerty, M.D., Vienna.....	Wm. J. Barker, Vienna.
Jefferson.....	Ocean.....	1,590	Chas. Chamberlain.....	Walter S. Hendrickson, Jackson's Mill.
Kearny.....	Morris.....	10,487	W. W. Keyler.....	Chas. Chamberlain, Woodport.
Kingwood.....	Hudson.....	1,375	F. S. Grim, M.D., Inspector.....	W. W. Keyler, Arlington.
Knowlton.....	Hunterdon.....	1,294		Samuel J. Snyder, Locktown.
	Warren.....			Wm. B. Moore, Columbia.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Lacey.....	Ocean.....	759	B. F. Matthews.....	B. F. Matthews, Forked River.
Lafayette.....	Sussex.....	703		E. L. Kinney, Warhasse.
Lakewood.....	Ocean.....	2,201	Alexander M. Manolt, Lakewood.....	R. B. Robbins, Lakewood.
Landis.....	Cumberland.....	4,660	Howard M. Dolbey.....	Howard M. Dolbey, Vineland.
Lawrence.....	Cumberland.....	1,729	Henry S. Long, Cedarville.....	Frank B. Sheppard, Cedarville.
Lawrence.....	Mercer.....	1,705	Frank Pierson.....	Frank Pierson, Lawrenceville.
Lebanon.....	Hunterdon.....	1,794	A. S. Banghart.....	A. S. Banghart, Glen Gardner.
Linden.....	Union.....	1,061	Asa E. Collins.....	Asa Collins, Linden.
Little Egg Harbor.....	Ocean.....	1,821	J. S. Lane, M.D., Tuckerton.....	Otis Jones, Tuckerton.
Little Falls.....	Passaic.....	2,410	Jas. De Mouth.....	James Demouth, Little Falls.
Livingstone.....	Essex.....	1,311	Geo. R. De Camp.....	George R. De Camp, Roseland.
Logan.....	Bergen.....	638	Julius Pries.....	Julius Pries, Wood Ridge.
Lopatcong.....	Gloucester.....	1,526	S. B. Platt.....	S. B. Platt, Bridgeport.
Lopatcong.....	Ocean.....	1,781	A. W. Brown.....	A. W. Brown, Manahawkin.
Lower Alloways Creek.....	Warren.....	1,300	Richard Grier.....	E. Frank Clime, Shimers.
Lower.....	Salem.....	1,063	W. C. Rutherford, Cold Spring.....	Richard Grier, Salem.
Lower Penns Neck.....	Cape May.....	1,350	Isaac Fowler, Pennsville.....	A. B. Walter, Cape May.
Lumberton.....	Salem.....	1,715	D. H. Brown.....	John G. Mitchell, Pennsville.
Madison.....	Middlesex.....	1,557	G. B. Conover, Englishtown.....	H. D. Culin, Hainesport.
Manalapan.....	Monmouth.....	979	Chas. H. Banta.....	Samuel C. Bowne, Tenny.
Manchester.....	Passaic.....	4,993	Elwood Erhart, Columbus.....	W. A. Larrabee, Lakehurst.
Manchester.....	Salem.....	1,931	L. N. Slaughter, M.D., Haddonfield.....	Jonathan B. Grier, Salem.
Mansfield.....	Burlington.....	1,612	D. A. Baird, Marlboro.....	E. D. Erhart, Columbus.
Mansfield.....	Warren.....	1,368	Henry Reeves, Jr.....	James Beatty, Port Murray.
Manua.....	Gloucester.....	2,012		W. F. Nivison, Morganville.
Marlboro.....	Monmouth.....	1,851		Chris. Winters, Cliffwood.
Matawan.....	Monmouth.....	2,874		Henry Reeves, Jr, Leesburg.
Maurice River.....	Cumberland.....	2,116		

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Medford.....	Burlington.....	1,989		Wm. M. Potts, Medford.
Mendham.....	Morris.....	1,452		John D. Lindley, Mendham.
Middle.....	Cape May.....	2,500	Stowell H. Townsend.....	Stowell H. Townsend, Cape May C. H.
Middletown.....	Monmouth.....	6,380	Omar Sickles.....	Omar Sickles, Navesink.
Midland.....	Bergen.....	1,829	John D. Bogert.....	John D. Bogert, Ridgewood.
Millburn.....	Essex.....	2,762	J. M. Drake.....	John M. Drake, Millburn.
Millstone.....	Monmouth.....	1,723	Geo. J. Ely.....	George J. Ely, Perrineville.
Monroe.....	Gloucester.....	2,542	Clayton B. Tice.....	Clayton B. Tice, Williamstown.
Monroe.....	Middlesex.....	3,042		Rob't R. Vandenberg, Prospect Plains.
Montague.....	Sussex.....	858	Geo. N. Cole.....	George N. Cole, Montague.
Montgomery.....	Somerset.....	1,644	Wm. S. Terhune, Harlingen.....	Nelson Y. Dungan, Belle Mead.
Montville.....	Morris.....	1,870	Henry C. Baldwin, Montville.....	Asa T. Cook, Montville.
Morris.....	Morris.....	2,525	Wm. E. Collins, Morristown.....	C. M. Phillips, Morristown.
Mount Laurel.....	Burlington.....	1,653	W. P. Lippincott.....	Wm. P. Lippincott, Hartford.
Mount Olive.....	Morris.....	1,273	S. W. Salmon.....	S. W. Salmon, Mount Olive.
Mullica.....	Atlantic.....	825	John T. Irving, Elwood.....	W. W. Phillips, Elwood.
Neptune.....	Monmouth.....	7,253		Wm. R. O'Brien, Asbury Park, Box 965.
New Barbadoes.....	Bergen.....	1,896		
New Hanover.....	Burlington.....	934	W. C. Johnson.....	Benj Romaine, Wrightstown.
New Providence.....	Union.....	3,426	Geo. B. Case.....	W. C. Johnson, New Providence.
Newton.....	Sussex.....	5,750	M. H. Girvin.....	George B. Case, Newton.
Northampton.....	Burlington.....	8,427	Emil J. Fouch.....	M. H. Girvin, Mount Holly.
North Bergen.....	Hudson.....	1,394	A. E. Bowman.....	A. E. Bowman, New Brunswick.
North Brunswick.....	Middlesex.....	626	Wm. H. Morris.....	W. H. Morris, Dunellen.
North Plainfield.....	Somerset.....	534	J. H. Wilkins.....	Jonathan H. Wilkins, Waretown.
Ocean.....	Ocean.....	3,600	Howard Brinley.....	Howard A. Brinley, Long Branch.
Ocean.....	Monmouth.....	1,428	Levi C Justice.....	Levi C Justice, Pedricktown.
Oldmans.....	Salem.....	993	J. B. Ver Nooy.....	J. B. Ver Nooy, Waldwick.
Orvil.....	Bergen.....			Wm. H. Hunter, Ridgefield Park.
Overpeck.....	Bergen.....			

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
Oxford.....	Warren.....	3,436	Michael Mountain.....	Michael Mountain, Oxford.
Pahsiquarry.....	Warren.....	304	Jason K. Hill.....	Jason K. Hill, Millbrook.
Palisade.....	Bergen.....	689	Wm. Ely.....	Wm. Ely, New Bridge.
Palmyra.....	Burlington.....	2,310	J. A. Harvey.....	F. Blackburn, Palmyra.
Passaic.....	Morris.....	1,843	H. E. Horner.....	J. A. Harvey, Stirling.
Pemberton.....	Burlington.....	1,704	Chas. E. Kelly.....	Barclay Seeds, Pemberton.
Pensauken.....	Camden.....	3,966	H. E. Horner.....	H. E. Horner, Merchantville.
Pequanook.....	Morris.....	8,166	Chas. A. Decker.....	Charles A. Decker, Butler.
Pilesgrove.....	Salem.....	1,779	D. F. Davis.....	David F. Davis, Woodstown.
Piscataway.....	Middlesex.....	382	Chas. E. Kelly.....	Chas. E. Kelly, New Market.
Pittsgrove.....	Salem.....	1,865	Wesley B. Louback.....	George Schalick, Centerton.
Polatcong.....	Warren.....	1,648	David W. Bussom.....	Jacob O. Boyer, Carpentersville.
Plumstead.....	Ocean.....	1,288	D. Reeve Sloan.....	David W. Bussom, New Egypt.
Pompton.....	Passaic.....	2,045	H. N. Van Dyke.....	D. Reeve Sloan, Bloomingdale.
Princeton.....	Mercer.....	3,488	Chas. H. Fox.....	H. N. Van Dyke, Princeton.
Quinton.....	Salem.....	1,317	F. O. Bassett.....	Josiah T. Harris, Quinton.
Randolph.....	Morris.....	3,669	Chas. Alpaugh.....	F. O. Bassett, Dover.
Raritan.....	Hunterdon.....	3,924	Wm. T. Woerner.....	Chas. Alpaugh, Flemington.
Raritan.....	Monmouth.....	3,914	David Schomp.....	Wm. T. Woerner, New Brunswick.
Readington.....	Hunterdon.....	2,776	Thos. F. Mallon.....	W. C. Smith, Keyport.
Ridgefield.....	Bergen.....	4,081	F. W. Flagg, M.D., Rockaway.....	David Schomp, Pleasant Run.
Rockaway.....	Morris.....	4,461	Isaac A. Hopper.....	Thomas F. Mallon, Fort Lee.
Roxbury.....	Morris.....	2,189	M. D. Hughes, M.D., Layton.....	Edward Wiggins, Rockaway.
Saddle River.....	Bergen.....	3,662	John J. Van Sickle, Layton.....	Edgar N. Corwin, Succasunna.
Sandyton.....	Sussex.....	1,006	F. F. Samsel.....	Isaac A. Hopper, Fair Lawn.
Sayreville.....	Middlesex.....	3,420	E. E. Bowker, Tabernacle.....	John J. Van Sickle, Layton.
Shamong.....	Burlington.....	965	Lewis S. Brown.....	B. F. Samsel, Sayreville.
Shrewsbury.....	Monmouth.....	3,649	Reuben A. Fogg.....	S. L. Dougherty, Oriental.
Southampton.....	Burlington.....	2,089	Jonathan Hawkins.....	A. L. Ivins, Red Bank.
			Harvey S. Potter.....	Lewis S. Brown, Vincentown.

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

SANITARY DISTRICT.	COUNTY.	Population by Census of 1895.	NAME AND ADDRESS OF SECRETARY.	NAME AND ADDRESS OF REGISTRAR OF VITAL STATISTICS.
<i>Townships—Con.</i>				
South Brunswick.....	Middlesex.....	2,467	H. E. Hathaway.....	H. E. Hathaway, Monmouth Junction.
South Harrison.....	Gloucester.....	704	Dr. Samuel F. Stanger, Harrisonville.....	D. C. Lippincott, Harrisonville.
South Orange.....	Essex.....	5,108	John W. Maseker.....	Theo. C. Baker, Maplewood.
Sparta.....	Sussex.....	1,970	Theo. F. Wright.....	John W. Maseker, Sparta.
Springfield.....	Burlington.....	1,623	F. C. Price, M.D., Imlaystown.....	Theo. F. Wright, Jobstown.
Springfield.....	Union.....	930	Geo. W. Hewitt.....	Abner P. Stiles, Springfield.
Stafford.....	Ocean.....	1,099	J. B. Courtney.....	John B. Courtney, Manahawkin.
Stillwater.....	Sussex.....	1,225	Jos. Huff.....	Joseph E. Huff, Newton.
Stoe Creek.....	Cumberland.....	966	Reuben A. Fogg.....	R. A. Fogg, Shiloh.
Tabernacle.....	Burlington.....	811	Jonathan Hawkins.....	Jonathan Hawkins, Teaneck.
Teaneck.....	Bergen.....	1,942	Harvey S. Potter.....	H. S. Potter, Pottersville.
Tewksbury.....	Hunterdon.....	1,852	Dr. Trautwein, Inspector.....	Thomas E. Buckley, Lyndhurst.
Union.....	Bergen.....	5,005	John Little.....	John Little, Jutland.
Union.....	Hudson.....	1,073	D. Hobart Sayre.....	Wm. A. Jones, Barnegat.
Union.....	Ocean.....	1,055	F. C. Price, M.D., Imlaystown.....	D. Hobart Sayre, Union.
Union.....	Monmouth.....	3,412	Geo. W. Hewitt.....	Wm. Quicksell, Horners-town
Upper Freehold.....	Salem.....	2,247	R. A. Robinson.....	Geo. W. Hewitt, Pennsgrove.
Upper Penns Neck.....	Salem.....	803	Jesse T. Young, Beesley's Point.....	R. A. Robinson, Monroeville.
Upper Pittsgrove.....	Salem.....	1,741	Alb. G. Conson, Paleramo.....	Alb. G. Conson, Paleramo.
Upper.....	Cape May.....	1,837	H. B. Whitehorne, M.D., Verona.....	A. E. Rutherford, Vernon.
Vernon.....	Sussex.....	1,631	S. H. Gardiner.....	Wm. L. Scott, Verona.
Verona.....	Essex.....	3,853	Geo. E. Rogers.....	S. H. Gardiner, Ashland.
Voorhees.....	Camden.....	2,362	Peter Newmiller.....	George E. Rogers, New Bedford.
Wall.....	Monmouth.....	1,086	Nicholas Cleveland.....	Cornelius D. Gunn, Walpack Centre.
Walpack.....	Sussex.....	1,259	W. S. Sooy.....	S. M. Purcell, Deckertown.
Wantage.....	Sussex.....	310		Peter Newmiller, Warrenville.
Warren.....	Somerset.....			N. Cleveland, Westwood.
Washington.....	Bergen.....			Walter S. Sooy, Green Bank.
Washington.....	Burlington.....			

List of Sanitary Districts, Showing Population and Names and Addresses of Officers—Continued.

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<i>Townships—Con.</i>				
Washington.....	Gloucester.....	1,206	Chas. Nicholson.....	Chas. D. Nicholson, Turnersville.
Washington.....	Mercer.....	1,142	E. J. Cole.....	E. J. Cole, Windsor.
Washington.....	Morris.....	2,278	Geo. H. Sliker.....	George H. Sliker, Pleasant Grove.
Washington.....	Warren.....	1,287	Samuel Rhinehart.....	Samuel Rhinehart, Washington.
Waterford.....	Camden.....	2,789	H. N. Gillon, Berlin.....	C. D. Heath, Berlin.
Wayne.....	Passaic.....	2,099	.....	Andrew F. Hopper, Paterson.
Weehawken.....	Hudson.....	2,577	.....	.....
Westampton.....	Burlington.....	598	.....	.....
West Amwell.....	Hunterdon.....	896	G. H. Carr.....	Hudson B. Haines, Rancocas.
West Deptford.....	Gloucester.....	1,717	James Carter, Jr.....	George H. Carr, Lambertville.
Westfield.....	Union.....	3,753	John M. C. Marsh.....	James Carter, Jr., Thorofare.
West Hoboken.....	Hudson.....	18,296	W. Percival Fisk, West Hoboken.....	John M. C. Marsh, Westfield.
West Milford.....	Passaic.....	2,169	W. C. Oliver, Oak Ridge.....	.....
West Orange.....	Essex.....	5,854	Albert J. Wrensch, West Orange.....	Celestine Schunster, Echo Lake.
West Windsor.....	Mercer.....	1,244	.....	Frank A. O'Connor, West Orange.
Weymouth.....	Atlantic.....	576	.....	Chas. H. Mather, Lawrence Station.
Willingboro.....	Burlington.....	704	.....	Providence W. Flanagan, Truckahoe.
Winslow.....	Camden.....	2,034	Michael G. Burdall.....	James M. Stokes, Rancocas.
Woodbridge.....	Middlesex.....	5,802	T. E. Freeman, Inspector, Woodbridge.....	Michael G. Burdall, Tansboro.
Woodland.....	Burlington.....	387	W. J. Buzby.....	John H. Leiser, Woodbridge.
Woolwich.....	Gloucester.....	2,224	Benj. F. Buzby, Swedesboro.....	Willis J. Buzby, Chatsworth.
				Samuel Avis, Swedesboro.

Epidemic Outbreaks.

BY A. C. HUNT, M.D., STATE MEDICAL INSPECTOR.

SMALL-POX.

The only disease which has prevailed to an unusual extent during the year closing December 31st, 1900, has been small-pox, and, with few exceptions, the cases of this disease have been traced to colored persons coming from Virginia. The number of cases reported during the year ending December 31st, 1900, is 95. Of this number 39 occurred in persons working in a brickyard, conducted by Mr. Avery, at Cliffwood, Middlesex county, New Jersey. The type of the disease was exceedingly mild. Following is a detailed statement relating to the cases of small-pox which occurred during the year:

ASBURY PARK.—A case of small-pox was reported in December. The patient had come from New York City, and was there exposed to the infection. Strict quarantine and general vaccination were practiced. No other cases occurred.

BAYONNE.—A case of small-pox in the person of a colored man was discovered in this city during the month of February, 1900. The person affected had come from the South, where he was exposed to the disease. The case was removed to the small-pox hospital at Snake Hill, the premises were disinfected, and no other cases followed.

CAPE MAY CITY.—A communication was received from the health department of Philadelphia, stating that a man by the name of Lee Bailey had come from Rio Grande and had applied at the city hospital for admission. He was suffering from small-pox. A communication was at once addressed to Dr. William Lake, who is the health officer of the township in which Rio Grande is situated, and he informed us that the man was only in Rio Grande for a short time

and took a train for Philadelphia. On June 18th, 1900, a visit was made to Cape May for the purpose of ascertaining the facts in regard to this case. The history obtained from the person with whom the man lived and from Drs. Leach and Mecray is as follows:

Mrs. J. L. Powell is the manager of what is known as the Sea Breeze Hotel, which is owned by the Pennsylvania Railroad Company. It is a summer excursion house. On the 23d of May she sent for Lee Bailey, a colored man who had worked for her for four years previously. He came to her from Hunting Terrace, Nicetown, Pa., where he had been working as coachman for a family the members of which had gone to the mountains for the season. He occupied a room in an extension to the hotel, and the only persons in the hotel during the time he was there were Mrs. Powell and her two sons. He assisted them in getting ready for the opening of the hotel, but on the 4th of June complained of feeling badly, and for four or five days did no work, and laid around his room. On the 11th of June he went to Dr. Mecray and said he was not feeling well. The physician noticed an eruption on his face and sent him home at once. That evening Dr. Leach visited him and made a diagnosis of small-pox, and ordered the man quarantined. He left him after seeing him at eight o'clock in the evening. Some time in the night Mrs. Powell gave him \$1 and told him to go to a house where colored people lived, in Cape May. Instead of doing this he started out, and nothing further was known of him until he was found on the train, after leaving Rio Grande the next morning, and was taken to Philadelphia. On the train he kept his face covered with a handkerchief, and the conductor was fearful he might have some infectious disease. The next morning, when Dr. Leach found that he had escaped, he made every effort to find him, and, communicating with the Philadelphia authorities, learned that the patient had reached that place. No history could be found to show that he had visited any other place after leaving his room. The people in the house—Mrs. Powell and her two sons—showed good vaccination marks and were not vaccinated. The room in which the patient was ill was thoroughly whitewashed. All washable materials were treated with formalin solution and formaldehyde gas was generated in the room. The only thing left in the room was a trunk containing the patient's clothing, which has not been opened. Dr. Leach was directed to take it out on the meadows

somewhere and destroy whatever was necessary after an inventory had been made of the value of the goods. As fifteen days had elapsed since the disease showed itself in the colored man, it did not seem necessary to begin extensive vaccination for fear it might unnecessarily alarm those coming to the place for the summer. No other cases occurred.

HOBOKEN.—One case of small-pox was reported December 3d, 1900, and the infection traced to exposure in New York City.

JERSEY CITY.—On February 7th, Edward Howe, a colored man, who acts as porter on the Pennsylvania railroad, came from New Orleans and went to his home at 462 Monmouth street. On the 14th of February a colored physician was called upon to attend him, and was in attendance from that time until the 26th, when Dr. Rector, the city physician, was called in consultation and pronounced the case one of small-pox. The patient was immediately removed to the hospital at Snake Hill, and all the colored people who resided in the house were vaccinated. In looking up the history of the case Mr. D. W. Benjamin, the health officer, found that but one person had been exposed aside from those living in the house with him. Four families live in the house.

KEYPORT.—On the 6th day of July, 1900, notice was received that there was a suspected case of small-pox at Keyport. Dr. Mitchell saw the case and confirmed the diagnosis. The case was in the person of a boy who was a relative of the Winters family of Cliffwood, and the history obtained was that he had played with the Winters girl at Cliffwood some two weeks before, and undoubtedly contracted the disease from her. He had been working in the family of Christopher Winters, living near Keyport. Mr. Winters conducts a dairy. The patient had slept at the Winters house about four days before he was taken with the disease, and for two days, and while the eruption was on his face, he was around stores in Keyport, and also attended a 4th of July celebration. The case was isolated in the rear of his father's house, and Dr. Roberts of the local board of health asked that immediate steps be taken for the erection of a hospital. The site was chosen and the building was erected. On the 9th day of July another case was discovered in the person of a servant who had come from Ireland within a month, and had gone to reside in the house of a man named Mr. O'Hoohlihan, who works in Avery's

brickyard, where small-pox had existed for the last two months, and who was accustomed to go back and forth each day. She went as a servant, and worked before she was taken ill, in the house of Mr. A. J. Young, in Keyport. Dr. Roberts, who saw the case, was in some doubt as to the character of the affection, and Dr. E. R. Field of Red Bank made an examination and confirmed the diagnosis of small-pox. On the night of July 10th this girl ran away from Mr. Young's house, and went to Mr. Tobin's house in Oak Shade, Matawan township. The Matawan township authorities were immediately notified, and she was isolated on the Tobin premises. Another girl who had been with her and was exposed to the disease was also detained as a suspect. No other cases occurred in Keyport.

MADISON TOWNSHIP, MONMOUTH COUNTY.—During the last week in May a case of small-pox, in Woodbridge, came under the professional care of Dr. Sell, of Rahway. After he had been in attendance several days the patient informed him that he had been in Cliffwood, Madison township, Middlesex county, and that there were cases called the Cuban itch among the employes in one of the brickyards there. Dr. Sell communicated these facts to the State Board of Health, and on June 30th Dr. Mitchell went to the brickyard in company with Drs. Knecht and Jackson, of Matawan, and, after examining three cases, these physicians were satisfied that the disease was small-pox. There are two brickyards about one-half mile east of Cliffwood, located along the Central railroad tracks, which are controlled by the Cliffwood Brick Company, of which Mr. Avery is superintendent. The yards on the west side of the track are owned by Mr. Gaston. On the 14th of April 32 colored men, known as the "Mosely gang," came to work for Mr. Avery in his yard. There are some 210 men employed in the yard, of whom 125 live near the works. These men had all come from Clover, Virginia, and its vicinity, and soon after their arrival an eruption was noticed appearing upon some of them, and one after another was attacked until 30 men had contracted the disease. During all this time they were under the care of a local physician. He did not recognize the disease as small-pox, but gave it the name of Cuban itch. Three of the men who had been ill went to Stockport, New York, to work for a man by the name of Walsh, who has a brickyard at that place, and they were quarantined by the New York authorities. Another one of the

cases (R. Brown) went to the St. Francis Hospital, in Trenton, where a diagnosis of measles or chicken-pox was made. This case was afterward recognized as small-pox, and the patient occupying the next bed to him contracted the disease and was removed to the contagious disease hospital, where he suffered a somewhat severe attack of small-pox. The following is the list of the employes in Avery's brickyard who were affected with the disease as far as their names could be obtained:

Wm. Brown, recovered, whereabouts unknown; R. Brown, St. Francis Hospital, Trenton; M. Jackson, recovered and at work; J. Mosely, recovered and at work; W. Mosely, recovered and at work; H. Mosely, recovered and at work; Chas. Clark, recovered and at work; Wm. Jefferis, recovered and at work; Frank Smith, recovered and at work; E. Elliott, recovered and at work; Albert Haskins, went to Stockport, N. Y.; Henry Brooks, recovered and at work; Buck Clark, recovered and at work; Geo. Gregory, recovered and at work; John Clark, recovered and at work; John Moden, recovered and at work; Paul Lee, recovered and at work; Max Skipper, recovered and at work; Gus Clark, recovered and at work; J. Bruce, recovered and at work; Rob't Ferrell, went to Stockport, N. Y.; Clarence Merrell, still sick; Dan. Jackson, still sick; Wm. Elam, recovered and at work; E. Mosely, recovered and at work; Isaac Allen, recovered and at work; Otto People, still sick; Wm. Martin, recovered and at work; James Cougar, still sick.

The local board of health of Madison township was notified, and convened on the evening of July 4th, and authorized Dr. Crandall, the township physician, to make the necessary expenditures to protect the public from an extension of the disease. All the employes in the brickyard were at once vaccinated, their clothing removed and immersed in a solution of bichloride of mercury, 1 to 1,000, and after a sponge bath in a bichloride solution each man was provided with an entirely new suit of clothes. The men had been housed in eight shanties on different parts of the property, and the disease had existed in five of the eight buildings. Each one of these small houses was thoroughly drenched inside with the bichloride solution, and one of them was set aside as a detention hospital. On July 2d, 1900, there were but three cases which it was necessary to keep in the hospital, all the rest having recovered, and being up and about their work. The total number of cases reported was 39. Dr. Crandall supervised the vaccination and the disinfection of the premises. The local boards of health of Atlantic Highlands and Matawan were visited, and explicit directions given to them in reference to general vaccination and watchfulness lest the disease should exist, without discovery, in these places.

A number of men who live in Matawan and work at the Cliffwood brickyard stayed away from work for fear they might be quarantined within the yard, but upon learning that no quarantine was established they all returned and were vaccinated. In some instances the negroes showed good scars upon their arms, the result of previous vaccination, and a number of the other employes had vaccination certificates which they had brought from the South. In these cases it was not deemed necessary to revaccinate, but in all other cases vaccination was performed.

MATAWAN TOWNSHIP, MONMOUTH COUNTY.—In response to the request of Dr. Knecht, of Matawan, and in company with Dr. Hoagland, of Keyport, and Dr. Jackson, of Matawan, an examination was made, July 6th, 1900, of a case of small-pox in the person of a Miss Winters, who is the postmistress at Cliffwood, and who resides about one-quarter of a mile west of the Cliffwood station. A well-developed case of discrete small-pox was found, and the history obtained from Dr. Knecht showed that a younger sister, some fifteen years of age, had previously been ill, and that she had some pustules on her body. No action whatever was taken at that time, and the young girl went daily to the post-office. The sister who was examined July 6th distributed the mail at the post-office after she was broken out with the eruption. Quarantine was immediately placed upon the premises, and Dr. Knecht was directed to have the post-office disinfected. Miss Maggie Winters, a sister of the two persons suffering from the disease, was allowed to tend the post-office. Although there had been a number of exposures, but one other case was traced directly to infection from this family. This case was in the person of a boy living at Keyport. In Matawan township one other case of small-pox was reported at a place called Oak Shade. This case had been sent from Keyport to Oak Shade, and the Matawan township authorities isolated the patient.

MIDDLETOWN TOWNSHIP, MONMOUTH COUNTY.—On Saturday, November 3d, 1900, Dr. Edwin Field, of Red Bank, was called to attend a colored man, living at the house of Joseph Field, Jr., in Middletown township. The patient had fever and headache and other indefinite symptoms, and was sent to the Monmouth Memorial Hospital at Long Branch. On the following morning a diagnosis of variola was made, and the patient was removed to the Long Branch

small-pox hospital. A man who slept with him, and who lived at Joseph Field's house, was also removed to the small-pox hospital. One other person who was exposed was sent to the hospital for observation. The two colored men were employed by two farmers living next to each other in Middletown township. They came from a New York employment agency, and stated that they had come from Roberson county, North Carolina. They reached Middletown township October 8th, one of them going to live with Mr. Joseph Field and the other with Mr. McLean. The man living at McLean's came from time to time to Mr. Field's place, and sometimes slept with the colored man there. The one living at McLean's was taken sick while at Mr. Field's house. Another suspicious case was reported in the family of a colored woman who did washing for these two men, and an examination was made at once to ascertain if the disease had extended to others. The local board of health took charge of the cases, and as soon as they were in the hospital caused the premises to be thoroughly disinfected. Three cases occurred before the outbreak was controlled.

MORRISTOWN.—In the annual report of the State Board of Health for 1899 the statement was made that six cases of small-pox had occurred in Morristown up to December 31st, 1899. The epidemic which had started at that time gradually spread over the town, one case occurring in the depot and another in a hotel. This resulted in most strenuous measures being taken to limit the spread of the epidemic. Seventeen cases occurred from December 31st, 1899, to December 31st, 1900, making a total of 23 cases.

NEWARK.—Cases of small-pox have occurred in Newark since the 1st day of January, 1900, as follows: May 3d, one case; May 7th, two cases; May 22d, one case. Two of these cases were in a family named Mullins, and the source of infection was traced to exposure at Morristown, where they had been living and where the disease existed. One of the Mullins children died. June 10th two cases were reported. June 12th, one case; June 14th, seven cases. Six of the patients were white and eight colored. All of the foregoing cases occurred in the ninth and tenth wards.

PISCATAWAY TOWNSHIP.—Early in January a case of small-pox was reported in the person of George Blackford. Dr. Nelson, of New Market, was authorized by the local authorities to take charge

of the case. From the history which was obtained it was shown that Blackford had met Mr. Wm. Clarkson late in December, and at that time the disease existed at Mr. Clarkson's home, near Iselin. The patient recovered, and no other cases developed.

RAHWAY.—On February 28th notice was received that a case of variola had been found in Rahway, and on March 1st, a conference was held with several members of the local board of health in reference to the care of the case. The history is as follows: On the 18th of February Carrie Crowl, living on Grand street, was taken with a chill, and on the Wednesday following a slight rash appeared. On Saturday, February 24th, a pustular eruption appeared, and the diagnosis of small-pox was made. At that time Dr. Gallaway was in attendance, but when the nature of the disease was ascertained Dr. Wherry, of Newark, was employed to attend the case. The patient was 13 years of age, and had attended the Washington School up to within a few days of her attack. The family consists of five children, in addition to the one who is ill, and the father and mother, seven in all. The school-rooms were disinfected under the orders of the local board of health, and the house in which the child was ill, and which is one of a row of houses, was placed under quarantine. All persons exposed to the disease were vaccinated, and the local board of health offered free vaccination to those desiring it. No history showing the source of infection was obtained, but the attending physician ascertained that just two weeks before the child was attacked new clothing was brought to the house, and it is suspected that infection was conveyed in this way. Four cases developed in this family and all recovered. No other cases were reported in Rahway.

SOUTH RIVER.—On June 24th an immigrant arrived in South River from a French line of steamers, and went to the house of a friend living outside of the village. On July 1st Dr. A. L. Woods made a diagnosis of small-pox. It was evident from the history that the disease was contracted on shipboard. The patient was at once quarantined, a hospital was secured, and after the patient had been removed to the hospital the premises from which he was taken were thoroughly disinfected. Two weeks afterward a child in the family where the patient had resided was taken with the disease. This case was also removed to the hospital. Although there had been a number of exposures to the infection, no other cases occurred in this locality.

TRENTON.—Before it had been discovered that small-pox existed in Cliffwood, Madison township, one of the colored employes at the Avery brickyard, who had suffered from a mild attack of the disease, came to the Trenton city hospital for the purpose of having an operation performed. As soon as the cases were discovered at Cliffwood the hospital authorities in Trenton were notified of the facts, and the patient was isolated, and the room which he had occupied was thoroughly disinfected. Two weeks subsequently a patient in the same ward, and occupying the next bed to the colored man, showed signs of an eruption, and a diagnosis of small-pox was made. The patient was removed to the small-pox hospital and no other cases occurred.

WEST ORANGE.—A colored man by the name of Peoples worked for Mr. Eugene Delano, who lives on Ridge road, Mountain Ridge. Peoples had been employed by Mr. Delano for a long time, and gave no history of having been away from the premises, except that two weeks before he was taken with small-pox he visited Newark for the purpose of getting a wagon from the freight-house. He stated that he had not visited any other places on that day, and had gone straight to the railroad freight-station. He was taken ill on July 11th, and treated until Tuesday, July 17th, by Dr. Bradshaw. On July 18th a diagnosis of small-pox was made. The patient said he had noticed the eruption on the 15th. The following action was taken in this case: The walls and floors of the dining-room where he ate, and the kitchen and cellar where he sometimes worked, were drenched with a solution of bichloride of mercury and afterward scrubbed. The clothing belonging to the patient was destroyed. The room which he had occupied in the barn, the path leading to the barn, the stairway, manger, and, in fact, everything which he might have touched, was wetted with a solution of bichloride of mercury. The patient was removed to a tent in a grove back of a large twenty-acre field, well away from all residences, and placed in charge of a trained nurse. All the persons who were exposed to the disease were at once vaccinated.

WOODBIDGE.—Notice was received that there was a case of small-pox at Woodbridge, and on May 28th an investigation was made. On May 26th Dr. Spencer noticed a man on the opposite side of the street who had the appearance of being affected with small-pox, and crossing the street for a nearer examination, the physician was satisfied

as to the character of the disease. The name of the man was James Williams, and he was employed by J. Liddle & Sons, ice dealers, and resided about one mile from Woodbridge. He was immediately sent to Mr. Liddle's farm, and placed in a small building in the rear of the house, a nurse being placed there to guard him and care for him. The local board of health ordered the vaccination of twelve persons who had been exposed to the disease, and appointed Dr. Sell, of Rahway, as medical attendant of the cases. The only history that could be obtained was that the man came from the South six weeks before and had not been away from Woodbridge but once, and that ten days before his illness he visited Avery's brickyard, at Cliffwood, where, as it was afterwards learned, the disease was epidemic. Two other cases developed in persons who had been exposed.

Résumé of cases of small-pox occurring in New Jersey from December 31st, 1899, to December 31st, 1900 :

Asbury Park	1	Newark	15
Bayonne.....	1	Piscataway township.....	1
Cape May City.....	1	Rahway	4
Hoboken	1	South River	2
Jersey City.....	1	Trenton	1
Keyport.....	2	West Orange	1
Cliffwood.....	39	Woodbridge.....	3
Matawan township	2		
Middletown township.....	3	Total	95
Morristown	17		

DIPHTHERIA.

EGG HARBOR CITY.—For two months previous to October 10th, 1900, an epidemic of diphtheria existed in Egg Harbor City. Up to that date 25 cases occurred, 4 of the number were fatal. At the beginning of the epidemic a public funeral was held, and a number of people viewed the body. As a result of the continuance of the epidemic the public schools and Sabbath schools were closed, and at the time of the investigation were still closed. The board of health took measures to stop the spread of the disease, but the isolation, quarantine and disinfection were not satisfactory. A conference was held with the board of education and local board of health, and the details connected with the care and supervision of contagious

diseases were brought to their attention. The board of health was urged to make the isolation of cases absolute, so that there should be no communication whatever between the sick and the outside community. The board was advised that if this was done that there was no reason why the schools should not be opened ; but if the schools were to be opened the school-houses should be thoroughly cleansed every night after school, and the following methods were recommended in such cleansing :

1. That the woodwork, walls, floors and desks should be wetted with a solution of bichloride of mercury.
2. That pencils and similar articles used by the children should be placed in a formalin solution.
3. That the school-building should be thoroughly aired, and that individual drinking-cups should be used by the children.

HOPEWELL.—A report was received at the office of the State Board of Health stating that there had been deaths from diphtheria in Hopewell, Mercer county, and asking for advice and co-operation. In accordance with this request, on June 12th, 1900, an interview was had with the members of the board of health. It was ascertained that a child had died of membranous croup in a family named McLoughlin, and that the mother had gone with her three children to St. Francis Hospital, in Trenton. A telephonic communication was sent to the hospital authorities, and information was received that another case of diphtheria had developed in the person of one of the children. These were the only cases which occurred in Hopewell borough. Dr. Pierson, member of the board of health, stated that the room where the child was ill had been thoroughly disinfected. In reference to the school-house it was suggested that the walls, desks, seats, &c., should be washed down with a solution of bichloride of mercury. One other case of diphtheria was reported in a family living one and one-half miles from Hopewell, in Hopewell township. The health authorities of Hopewell township examined the premises where the child was ill, and authorized Dr. Pierson, of Hopewell, to take whatever steps were necessary to limit the spread of the disease.

MANALAPAN TOWNSHIP.—The following report shows the tendency of diphtheria to reappear in the same family in cases where isolation of the patient and disinfection of apartments is not practiced :

Board of Health of the State of New Jersey:

GENTLEMEN—In compliance with your directions, I have this day visited the Rev. Frank R. Symmes, at his residence, Tennent, N. J., and have learned the following facts pertaining to the prevalence of diphtheria among the members of Mr. Symmes' family: Mr. Symmes' residence is located on the brow of a hill, well isolated from other dwellings, and stands several hundred feet back from the road. The house is a two-story frame structure, with abundant light and ventilation. The site of the house is on dry, well-drained, gravelly soil. The cellar beneath the house is well ventilated, dry and scrupulously clean. Mr. Symmes' family consists of Mr. and Mrs. Symmes, Dorothy Symmes, age five years; Marion Symmes, age four years, and Rennie Reed (male), age about fourteen years. On July 30th, 1899, Dorothy Symmes sickened with diphtheria, having contracted the disease from an exposure to another person in Tennent who was ill with diphtheria. The child received medical attention from Dr. A. T. Applegate, Englishtown, N. J., and was nursed by Mr and Mrs. Symmes, Mrs. Symmes at the same time attending to her household duties and Mr. Symmes performing his pastoral work. No isolation was established for the patient, and after a brief illness of about ten days the child again resumed her place in the family circle, without any effort being made to learn by bacteriological examinations if diphtheria bacilli were still present in her throat. On September 1st, 1899, Rennie Reed was taken ill with diphtheria, and on September 5th Dorothy Symmes was again attacked by the disease, and on September 6th Marion Symmes developed diphtheria. During the illness of these children Mr. and Mrs. Symmes, in addition to their other duties, took care of the sick. Owing to the lack of isolation of the sick and to failure to employ effectual methods of disinfection for infected apartments and articles during the prevalence of diphtheria in the Symmes family, the infection was undoubtedly extended to every room and article in the dwelling. After the recovery of the patients, the family resumed their daily routine of life, and the house and its contents remained without disinfection. On January 29th, 1900, Dorothy Symmes was attacked with diphtheria, for the third time during a period of six months, and on February 23d, 1900, Marion Symmes had a second attack. Marion is still ill at this time, and the service of a trained nurse has recently been secured. The following table shows the names and ages of the patients, together with the dates of their several attacks:

Name.	Age.	Date of attack.
Dorothy Symmes.....	5 years.....	July 30th, 1899.
Rennie Reed.....	About 14 years.....	Sept. 1st, 1899.
Dorothy Symmes (second attack).....	.....	Sept. 5th, 1899.
Marion Symmes.....	4 years.....	Sept. 6th, 1899.
Dorothy Symmes (third attack).....	.....	Jan. 29th, 1900.
Marion Symmes (second attack).....	.....	Feb. 23d, 1900.

From the facts obtained from Mr. and Mrs. Symmes it is evident that every room and nearly every article in the Symmes residence has been exposed to the infection of diphtheria, and they were advised accordingly. In reply to Mr. Symmes' inquiry as to how he could render his home and its contents free from infection, he was advised as follows:

First. To establish isolation on the top floor of the building for the patient now sick with diphtheria, together with a nurse, and continue this isolation until repeated

bacteriological examinations show that diphtheria bacilli are no longer present in the throat and nasal passages of the patient.

Second. To disinfect all dishes, spoons and other utensils used in the sick-room by placing the same in a metallic vessel, containing sufficient water to cover them, and to immediately boil the same, upon their removal from the sick-room, for thirty minutes. All sheets, towels, pillow cases and washable dress goods were to be placed in a wash boiler, partly filled with water, at the door of the sick-room, the boiler and its contents to be placed over the fire and boiled for thirty minutes. The use of soft cloths was advised for receiving discharges from the mouth and nose of the patient, the cloths to be burned in the sick-room.

Third. Disinfection and cleansing of each room and every article of clothing and furniture in the house was then advised to be carried out as follows:

A small room, about 8 by 8 by 7 feet in size, on the second floor of the dwelling was suggested as a suitable room for the treatment by formaldehyde for all articles of clothing and wearing apparel which could not be subject to boiling or saturating with the bichloride solution. The room was first to be made as tight as possible by pasting strips of paper over all cracks and openings, and the clothing to be suspended upon lines stretched in such a way as to permit the gas to act freely upon all parts of each article. When the goods to be treated in the room shall have been prepared, forty ounces of a twenty per cent. solution of formalin was to be sprayed over the contents of the room, the door of the room to be sealed and the articles left exposed to the action of the gas for at least twenty-four hours. It was advised that the house then be cleansed, commencing in a room on the top floor of the building, by removing each article in the room, placing all boilable articles in one pile, which were afterward to be boiled for thirty minutes, and others which were to be subjected to formaldehyde gas in another pile, and all solid articles of furniture, which could be wiped off with a solution of bichloride of mercury, in a third group. The entire surface of the interior of the room was then to be sprayed with a solution of bichloride of mercury, one to a thousand, the carpets on the floor thoroughly wet with the same solution and placed on a line in the open air to dry. The room was then to be scrubbed with soap and water and made clean, and each article of furniture, after being wiped with bichloride solution, to be placed back in the room. No article was then to be placed in this room until it had been rendered free from infection by one of the methods above described. This treatment was to be extended to each room in the dwelling. After cleansing a room and its contents it was not to be again used by any member of the family until they were first provided with garments free from infection. It was also advised that all books and papers handled by the infected persons, together with all infected bedding, be burned.

Respectfully submitted,

D. C. BOWEN,
Sanitary Inspector.

March 13th, 1900.

MANSFIELD TOWNSHIP—On January 12th, 1900, the premises of Mr. Israel Kirby, a dairyman, located near Georgetown, in Mansfield township, Burlington county, New Jersey, were visited for the purpose of ascertaining whether cases of diphtheria existed in his family. It was learned that Mr. Kirby shipped 100 quarts of milk a day to

Philadelphia, and that diphtheria existed on the premises where this milk was produced. Dr. A. H. Patterson, of Georgetown, stated that on November 17th, 1899, a young man, a son of Mr. Israel Kirby, called at his office. The doctor, upon examining him, found that he had a very sore throat and some fever, but would not state that he did or did not have diphtheria. Dr. Patterson was called December 3d, 1899, to attend a daughter of Mr. Kirby's, and found her suffering from diphtheria of a severe type. Three of Mr. Kirby's daughters afterward contracted the disease, making four cases in all. One daughter was married and lived in Palmyra, New Jersey, and as soon as she recovered returned to her home at that place. Mr. Kirby had one other son beside the children above mentioned, but he did not live at his father's place. Mr. Kirby nursed the patients during their illness. Those suffering from the disease were isolated in one part of the house, and those who were in good health were not allowed to go into the rooms where the patients were. It was stated that when they recovered they took a bath in a solution of carbolic acid, changed their clothing, went out-of-doors and thence into the other part of the house; that the clothing which they had worn during their illness was disinfected but not destroyed, and also that the discharges from the patients were buried. Mr. Kirby stated that he had nothing to do with the milk during the time he had been taking care of his daughters, and that great care had been taken to prevent the contamination of the milk. The origin of the disease was not directly traced, but it was stated that Mr. Kirby's son, previous to the time of his visit to the doctor, had spent considerable time with a young man living near by, and that this young man was suffering from diphtheria in a mild form. A notice was given to Mr. Kirby prohibiting the sale or transportation of milk from his premises until danger of infection from diphtheria had passed. Under advice from the secretary Dr. Patterson sent every other day to the laboratory at Princeton a specimen from the throat of the child suffering from diphtheria; a report was received from the laboratory, under date of January 24th, stating that the Klebs-Loeffler bacilli were still present. Under the circumstances no action was taken, and the doctor was requested to carefully isolate the patient and make such arrangements as would make it safe to sell milk from the premises. Under date of January 29th a communication was received from Dr. Patterson stating that certain precautions had been taken on the premises, and

requesting that an inspector should be sent with a view of ascertaining whether the prohibition against the sale of milk might not be removed. In accordance with this request, January 31st a representative of this board went to Georgetown, and in company with Dr. Patterson, examined the premises. Finding that the case had been carefully isolated, and that special arrangement had been made for caring for the milk-supply, the quarantine was raised, and permission given to Mr. Israel Kirby to commence the sale of milk.

MILLBURN, ESSEX COUNTY.—A communication was received from Dr. Campbell, health officer of Millburn township, requesting that an officer of this board should meet with him and assist him, if possible, in ascertaining the cause of an outbreak of scarlet fever. In compliance with this request, February 14th, 1900, an appointment was made to meet him at his residence in Short Hills. Following is a history of the outbreak.

December 15th, 1899, Dr. Campbell was called to attend a case of illness in the Kane family. The family consisted of a mother and seven children. The boy that was ill had a high temperature and some symptoms of meningeal complications. He went into coma and died within forty-one hours from the onset of the attack. There was no suspicion whatever of contagious disease, and a wake was held at the house, and also a public funeral was allowed. Within a short time the other children in the family were attacked, and developed well-marked cases of scarlet fever. January 2d, a child ten years of age, in the Goodrich family, was attacked with scarlet fever, and the only history that could be obtained was that the child had been in Summit at the public library. The 8 cases mentioned above seem to be entirely separate from the cases which follow. February 3d, in the family of Mr. Morgan, 4 cases of scarlet fever developed. February 3d, 2 cases were reported in the family of Mr. Cubby. February 3d, one adult in the family of Mr. Wood was reported, and two servants had sore throats, but no eruption was discoverable. February 5th, Miss De Ronge was reported. February 5th, 1 case occurred in the family of Mr. Irving. February 5th, a cook employed in the family of Mr. Carty was reported. February 4th, an adult, Mr. H. M. Lawrence, was attacked. February 6th, 3 cases were reported in the Neil family, 2 of them being children of the family and 1 a maid. February 3d, 1 case was reported in the Kingsford family. February 3d, a maid in the employ of Dr. Campbell

went to Newark, and the physician is satisfied that she afterward developed the disease.

It will be seen from the above report that, excluding the first 8 cases reported in December, 15 positive cases of scarlet fever have been reported, and there were 5 where sore throat has occurred, which may possibly have been mild attacks of the disease, but which were excluded on account of the uncertainty of the diagnosis. Including the 8 cases which occurred in December, there have been 23 cases of the disease. It will be noticed that all of the cases occurred between February 2d and February 6th, and therefore it seemed that all the persons attacked must have had an exposure at almost the same time. An effort was therefore made to ascertain whether there had been any public gathering attended by the majority of the cases, and whether there had been any intercommunication in any way that would account for this outbreak within such a definite period of time. We found that there had been a sewing-class formed, at which four or five of the adults had been present, but the meeting of the society occurred only two days before the patients were taken ill, and it did not seem possible that this would account for the outbreak. In addition to this fact, a large number of children from Millburn had attended this meeting and no cases were reported in Millburn proper, the cases given above all occurring in what is known as Short Hills and vicinity. In the course of the investigation it was found that some calico had been purchased in New York and had been cut up for use in the sewing-class, and sent to four or five of the different families where the disease appeared, but the disease appeared in other houses where the goods had not been sent. It is therefore fair to exclude this as the origin. The history of a meeting of a dancing-class, one week before, was carefully investigated, and it was found that a child was present which was ill during the meeting of the class, but the child afterwards developed an acute attack of measles. It was found that not a sufficient number of the persons suffering from the disease had attended this function to account for the outbreak which occurred between February 2d and 6th. No other history being obtainable in Short Hills, which would account for the outbreak, the next subject of investigation was the milk-supply. It is an interesting coincidence that every one of the families in which the disease exists had obtained milk from one man, John Kerrigg by name. Investigation was therefore made of his premises,

and the following facts were ascertained: Mr. Kerrigg has a small dairy located in Springfield township, adjacent to the Baltusrol golf links. He has only been in the business for himself since November, but prior to that had delivered milk for a number of years for another party. His farm consists of about 34 acres, and he has at present 10 cows from which the milk is obtained. A new barn and cow-stable have been erected on the premises, and it was in fairly good sanitary condition. The water-supply, which is used for cleansing the cans, &c., is obtained from a cistern, which is located at the north-west corner of his house. By the cistern runs an open ditch which carries water from the springs above on the mountains, and the only probable contamination of this brook is from seepage from a manure pile along its banks. There is probably no way by which the water from the brook can reach the cistern, as the cistern is tight, and at the time of my visit no water was running in the brook. Mr. Kerrigg supplies in all about 13 customers, and it will be seen that 8 families out of the 13 have scarlet fever. Mr. Kerrigg's family consists of himself, his wife and 5 children; 1 of the children is away from home, 2 attend school, and the others are residing with him. The younger boy assists him in delivering milk, and, in fact, has delivered most of it. The cans and other utensils were examined and found in a fairly cleanly condition. They are taken into the kitchen and washed thoroughly and scoured, and then placed to dry on a table out-of-doors. The children were all carefully examined the day before my visit by Dr. Campbell and Dr. Harris, and I personally examined 3 of them and found them in a healthy condition, and no history whatever was given of sore throat or illness of any kind within the last two months. No other persons aside from this family were engaged in the collection and distribution of the milk. Milk tickets are used in some instances, but most of the people pay at the end of a given time and do not use tickets. It was suggested to Mr. Kerrigg that it would be wise to stop the use of tickets entirely. The history of the cases, and the fact that they all obtained milk from Mr. Kerrigg, pointed so strongly to infection from his premises that, under the circumstances, it was deemed wise to have an employe of this board disinfect the utensils and the rooms, so as to be absolutely upon the safe side in regard to the matter. Following out this view, an officer of this board visited Millburn, February 10th, and thoroughly disinfected the premises, sterilizing all milk cans, pails,

dippers and utensils used in connection with the business, disinfecting the rooms, blankets, clothing, &c. The theory is that probably Mr. Kerrigg's boy in some way became infected, and he may have had a very mild attack of the disease without its having been discovered, and in the delivery of the milk the contents of some can had become infected. No bottles are used whatever, and therefore it is possible that in handling the milk the whole can become infected, and in this way the disease was transmitted.

PLAINFIELD.—April 26th, 1900, telephonic communication was received from Dr. Murray, of Plainfield, requesting that an investigation should be made of an outbreak of scarlet fever in that city. Upon examination the following facts were ascertained :

On April 22d several cases of scarlet fever were reported to the local health authorities, and on April 24th 17 new cases were reported. From that time until April 29th 41 cases of scarlet fever were reported in Plainfield in 31 houses, and 7 cases in North Plainfield in 4 houses, making in all a total of 48 cases in 35 houses. Every one of the cases occurring in Plainfield and 5 of the cases occurring in North Plainfield obtained milk from Mr. S. B. Wheeler, a retail milk dealer, residing in Plainfield. Mr. Wheeler, on Tuesday, was notified by the city authorities to discontinue the sale of milk in the city of Plainfield, and complied with the order. Upon investigation, it was found that within a short time Mr. Wheeler had moved nearly all of his cows, 26 in number, from his farm near Plainfield to a farm within a mile of Raritan, owned by Mr. Stephen Garretson, of Somerville. Only six animals were kept at a barn near Plainfield. Mr. Wheeler's family was examined carefully to ascertain if any of them had suffered from an irruptive disease, and the result of the investigation was negative. The man who distributes the milk for Mr. Wheeler is married and has a wife and eight children. This family was likewise examined, and no traces of the disease were found. The man who milked for him, an Italian, is without family, but his place of residence was ascertained, and it was found that the outbreak could not be traced to him. An investigation was then made of the farm at Raritan, and all those employed and living upon the premises were examined and no history of any cases of scarlet fever was obtained. The milk from the farm near Raritan is carried by wagon to Somerville, and there shipped to Plainfield. The names of the persons working on the train were obtained, and the history of Mr. Ten

Broeck, the baggagemaster, who resides in Roselle, was looked up, and no case of scarlet fever was found. Two men who had recently come to the farm of Mr. Garretson, at Raritan, were traced with negative results. Mr. Wheeler had obtained some milk from the Watchung Dairy Company, which sells milk wholesale in the city of Plainfield, and it was thought that possibly the origin of the disease might be traced to this source. With this in view, a list of names of all those from whom the Watchung Dairy Company obtained milk was secured, but on the second day of the investigation it was ascertained that the baggagemaster living in Plainfield was accustomed to assist Mr. Wheeler in taking the cans off the train, and Mr. Wheeler had given him permission to take a bottle of milk home with him whenever he desired, and it was his custom to take the milk from time to time at night to his home. A child of his, which had been in the house for over six weeks, suffering with whooping-cough and measles, made use of the milk brought home, and was taken with scarlet fever. This would indicate clearly that the Watchung Dairy Company could not have been responsible for the outbreak, and in all probability the supply obtained from Mr. Wheeler had become infected. Under the circumstances, a notice, under authority of the State Board of Health, was served upon Mr. Wheeler, April 30th, prohibiting the sale or transportation of milk from the premises owned and occupied by him, and a like notice was served upon Mr. Stephen Garretson, of Somerville. The outbreak at once subsided.

TYPHOID FEVER.

BELMAR.—Information having been received, about 11 A. M., September 8th, 1900, showing that several cases of typhoid fever in Belmar had occurred among persons who were regularly supplied with milk by one milk dealer, an investigation was made in the afternoon of the same day, and the following facts were obtained :

Since July 1st 15 cases of typhoid fever have occurred in Belmar.

In tracing the cause of the disease it was found that since early in July the ice sold in Belmar has been from two sources: (1) Natural ice from Maine; (2) artificial ice from the factory in Asbury Park. In addition to these supplies of ice a few persons used ice from Silver lake, a small body of water located near the central portion of Belmar.

The ice from this pond is cut under permits for use for cold-storage purposes only, and none of it has been sold for domestic uses. The ice from Maine and the artificial ice were used throughout the borough, and the same supply was also sold in adjoining towns where no typhoid fever occurred during the summer.

The water-supply of the persons affected with the disease was taken from the public water works, except in one case (Hufnagle), and as this water is taken from deep artesian wells of known purity, there seems to be no reason to believe that the typhoid bacteria were conveyed by the water.

The milk-supply was next inquired into, and it was learned that every one of the persons affected with typhoid fever obtained milk from S. E. Hall. Following is a list of the parties from whom Mr. Hall stated that he obtained milk :

M. C. Denton (30 to 40 quarts), Farmingdale, New Jersey.
 Howard Buckalew (40 to 60 quarts), Cream Ridge, New Jersey.
 The Montgomery Smith Co., Pemberton, New Jersey.
 T. S. Chamberlain (40 quarts), Cream Ridge, New Jersey.
 Adam Spence (40 quarts), Shrewsbury Road, New Jersey.
 George Hunt (70 to 100 quarts), Davis Station, New Jersey.
 H. Campbell (80 quarts), New Bedford, New Jersey.
 G. E. Hall (35 quarts), New Bedford, New Jersey.
 Ben. Algor (40 quarts), New Bedford, New Jersey.
 James Bagget (40 quarts), New Bedford, New Jersey.

An order was issued September 8th prohibiting the sale of milk from Hall's premises, and an inspection was made September 9th of the premises of Ben. Algor, Sr., G. E. Hall, James Bagget and H. Campbell. No trace of typhoid fever was found on any of these farms, and Mr. Hall was verbally advised that he could safely proceed to sell the milk from said farms, he agreeing to use none of the infected cans and utensils now on the premises occupied as a milk depot, corner of Eighth avenue and F street, and to hereafter store his milk and conduct his business in another place.

Following are several letters, and reports from Mr. Geo. W. McGuire and Dr. A. C. Hunt :

TRENTON, September 11th, 1900.

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J. :

DEAR SIR—Pursuant to your letter of September 8th, instructing me to make inspections at certain dairy premises in Monmouth county, I herewith inclose you my

reports of the same. In explanation of the reports, I desire to say that the first place visited was the farm of George E. Hunt, whom I found to be a thrifty farmer and a painstaking man about his work. The whole premises had the appearance of neatness, and I could see little about his place to criticise unfavorably. He complained that the cans returned to him from Belmar came in a very filthy condition, and every day contained maggots and required a great deal of time and care to get them in a fit condition to ship milk. He scrubs his cans with "gold dust" and soap. His well is under an outkitchen, and is cemented from the ground to the floor, about two feet. The well is about eighteen feet deep. The drainage from the kitchen is conducted through an elevated wooden drain to the swill barrel, about fifty feet away from the house, and is removed as often as is necessary. There is an occasional leakage from this drain alongside of the kitchen, which I informed him might possibly contaminate his well. The water-supply for watering the stock is on the edge of the barnyard, the water from which is used exclusively for watering his animals, washing the cans, &c. There has been no sickness in his family for three years, nor, to his knowledge, had any person been on his premises recently who was recovering from any sickness.

I next visited the farm of Howard Buckalew, Davis Station. I learned that no one was sick in his family, nor had there been since they lived there, a period of over two years. There are two sources of water-supply at this place—one a cistern about four feet in diameter alongside of the kitchen, and one about six feet away. When the supply was plentiful they used the water from the cistern to wash the cans. The well which now furnishes water for the place is a dug well, thirty-seven feet deep, and is probably a safe distance from the house and outbuildings. The top of the well is high enough to prevent surface drainage from getting into it. The cans are washed by Buckalew's wife and himself, and the work seems to have been well done, and I could discover nothing that would lead me to believe that the milk from this place was infected.

I next visited the farm of Thomas S. Chamberlain, Cream Ridge. He produces about forty quarts of milk from eight cows. The cans are washed by a colored boy, whom I judge to be about ten years old. The milk is cooled by means of a Star Cooler in what they call a milk-house, in which is a pump. The water from this pump is used only for cooling the milk and watering the stock, and is located at least 150 feet from outbuildings and probably 100 feet from the house. The water used for washing the cans is located under the kitchen, and the rinsings from the cans and all the drainage from the kitchen is thrown into an open drain, which leads to the garden about ten feet from the house, running around some buildings which hide it from view for about fifty feet. When the drainage reaches the ground it lays in the drain and is most foul-smelling and filthy. To add to the foulness a privy is located alongside of it, and the refuse lays on the ground, which, together with the foulness of the kitchen waste, makes a sickening sight and smell. Neither Mr. Chamberlain nor his wife were not at home while I was there, but young ladies of the family informed me that no sickness of any description had occurred in any way about the premises for a long time.

The next place I visited was that of Adam Spence, of Allentown. He has fourteen cows, and produces sixty quarts of milk. His well was in about the center of a large space of ground between the house and buildings, and I could find nothing objectionable about this place, except that the well and pump were not covered, but exposed to the weather, and when the men were at work pumping water, standing

upon the platform with their boots often covered with manure, there would be great liability of the dirt of that character entering the well. Mrs. Spence had been sojourning at Spring Lake during the summer and returned home on September 6th, with a sick child, who is now being attended by Dr. Johnson, of Allentown. The child was treated by Dr. Snow, of Spring Lake, who pronounced the trouble to be malaria. I was invited in to look at the patient, and to my lay mind I thought she was a very sick child. I was informed by the Spences that the milking and caring for the milk was done by Mr. Spence, his son and daughter, and that no one who had anything to do with caring for the child cared for the milk, washing of the cans or anything else, but that all was done outside of the house near the well. They also informed me that while at Spring Lake another daughter had been sick with the same disease, and that they had kept a shop for the sale of milk, butter and eggs, but that none of the milk received by them at their shop was furnished to Mr. Hall. It may be well to look further into this. While talking with Mr. Buckalew, and later with Mr. Chamberlain, incidentally each of them informed me that they had heard a report that a Mr. Meyers was affected with typhoid fever, but the report had been contradicted. Mr. Meyers lives in Cream Ridge, and had not been on either of these premises. I could not learn whether he had been around the depot handling the milk shipped on the train. I suspected a case of walking typhoid in Meyers.

I was unable to visit the place of Montgomery Smith, at Pemberton, but instructed Mr. Vandegrift to make that inspection to-day, and hope to have his report in your hands this afternoon or to-morrow.

Respectfully yours,

GEORGE W. MCGUIRE,
State Dairy Commissioner.

TRENTON, September 11th, 1900.

Mr. Thomas S. Chamberlain, Cream Ridge, N. J.:

DEAR SIR—Please inform us if you are still shipping milk to Belmar, and to what other towns your milk is sent.

Very truly yours,

HENRY MITCHELL,
Secretary.

I am not sending milk at present, but expect to ship to Philadelphia. If my milk is not up to standard, please inform me. My family this summer has consisted of about thirty persons, all using milk. There has not been any typhoid or any symptoms of it.

Respectfully, &c.,

T. S. CHAMBERLAIN.

TRENTON, September 12th, 1900.

W. W. Trout, M.D., Spring Lake, N. J.:

DEAR DOCTOR—We are trying to trace up the case of one of the children of Adam Spence, of Allentown, and we learn that the child was under the care of Dr. Snow, of Spring Lake, recently, suffering from typhoid fever. Will you kindly learn from Dr. Snow if he attended the child, and if the disease was typhoid fever?

Very truly yours,

HENRY MITCHELL,
Secretary.

SPRING LAKE, 12 M., Thursday.

Henry Mitchell, M.D., Secretary State Board of Health, Trenton, N. J.:

DEAR DOCTOR—I saw Dr. Snow, and he said he attended two children of Adam Spence for malarial fever. One yielded to treatment promptly, and the other did not. One day he called to see the child and found that the mother had taken it home.

Very truly yours,

WM. W. TROUT, M.D.

ALLENTOWN, N. J., September 12th, 1900.

Henry Mitchell, M.D., Secretary State Board of Health, Trenton, N. J.:

DEAR DOCTOR—In relation to yours of yesterday, I would say that the Spence child has well-defined typhoid fever, and she was brought home from Spring Lake about one week ago. I understood her mother to say that she had been with her through the summer. I will find out more definitely and inform you later. Relation to Meyers, I have no knowledge of such a one on Cream Ridge, and think there must be some mistake.

Respectfully,

H. P. JOHNSON.

A telegram was sent to S. E. Hall, September 11th, informing him that no danger will follow sale of milk from Hunt and Buckalew.

The following letter was sent to Mr. Hall September 12th, 1900:

OFFICE OF THE BOARD OF HEALTH
OF THE STATE OF NEW JERSEY,
TRENTON, September 12th, 1900.

Mr. S. E. Hall, Belmar, N. J.:

DEAR SIR—Information has just been received which seems to indicate that we have traced the origin of the typhoid fever infection which has been spread in Belmar by milk received and sold by you, and which has caused the sickness of at least fifteen persons in that borough. No more of said milk will be shipped to you, and therefore we will remove the prohibition against the sale of milk from the premises occupied by you, corner of Eighth avenue and F street, Belmar, as soon as we can have from you assurance (1) that no illness of a typhoid character still remains in the case of your son; and (2) that you have sterilized all cans and utensils and other articles used by you in your milk business, and which utensils, &c., are now on said premises; and (3) that you have caused the ice-boxes and the stable and outbuildings in which said ice-boxes, used for storing milk, are placed, to be disinfected; and (4) that the dwelling on said premises has also been disinfected.

The cleansing and disinfection above referred to should be conducted under the supervision of the local sanitary inspector.

We advise that all milk tickets on said premises shall be destroyed, and that none be used by you in future.

Very truly yours,

HENRY MITCHELL,
Secretary.

The following instructions were delivered to Mr. D. C. Bowen, Special Sanitary Inspector :

We have notified Mr. S. E. Hall, of Belmar, that prohibition of the use of his premises as a milk depot will be removed as soon as the cans and utensils which may have been left on the place, and the ice-boxes, stable, outbuilding used for storing milk and washing cans, and the dwelling have been disinfected.

We have asked him to have this work done under your supervision, and advise that you employ a solution (twenty per cent.) of formaldehyde as the disinfecting agent for all articles except the utensils and cans. These latter should be well washed and scalded. This proposed release of Hall's premises is based on the fact that the shipment of the milk which is suspected to have originally brought the infection to Hall's premises has now been stopped, and the additional fact that no further symptoms of typhoid fever have appeared in the case of Mr. Hall's son and that no other member of Hall's household has been attacked with the disease. If there is any return of the symptoms of the disease in the boy's case please notify me by wire.

Following is a letter from Mr. Bowen :

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J. :

DEAR SIR—In compliance with your directions, I this day visited the milk depot premises of S. E. Hall, Belmar, N. J., for the purpose of advising Mr. Hall that the prohibition against the sale of milk on said premises, believed to be infected by typhoid fever, would be removed as soon as the ice-boxes, milk cans and utensils and the premises had been satisfactorily disinfected.

I found upon my arrival on the premises that Mr Hall is conducting the milk business upon his premises, and I was advised by Hall's son that the business had been resumed, and that the sale of milk had been conducted on said premises by Hall since Monday last. At the time of this inspection I saw six cans of milk in an ice-box in Hall's stable building, and saw Mr. Hall's son deliver to a customer a bottle of milk.

I was also advised by Hall's son that his father was temporarily out of town.

Respectfully submitted,

D. C. BOWEN,
Sanitary Inspector.

Prosecution was ordered in this case by the State Board of Health, but has not yet been instituted because the party upon whom the notice was served is a minor, and because further developments in this case are still awaited.

MANTUA TOWNSHIP, GLOUCESTER COUNTY.—Upon receipt of information that typhoid fever had existed on the premises of a milk dealer named W. R. Shoemaker, in Pitman, Mantua township, Gloucester county, New Jersey, an inspection was made of said premises, August 9th, 1900, and the following facts were learned :

Shoemaker rents a house and lot, situated on the corner of Holly avenue and Broadway. The house is used as a dwelling and also as a restaurant. In the rear of the lot, about forty feet from the house, is the stable, in one corner of which the milk is stored in two ice-boxes. Mr. Shoemaker sells at present from 350 to 600 quarts of milk daily, and he has the exclusive right to deliver milk in Pitman Grove. The water-supply of the Shoemaker premises is taken from a surface well beneath the kitchen, and waste fluids, including dish water and laundry water, are cast into a wooden sink beneath the pump spout, the sink-box being connected with a drain which discharges into the street gutter about ten feet from the house. Slops are also cast upon the surface of the ground in the door-yard, and garbage is fed to chickens in a pen in one corner of said yard. The entire yard is about forty feet square, and the soil of the locality is light and sandy. Following is a list of the names of persons affected with typhoid fever up to the present date :

1. About the middle of June Mr. Simpson came to Pitman Grove from Philadelphia, and was sick when he arrived. Diagnosis was made of typhoid fever.
2. July 18th Mrs. Wm. Massey was reported to be suffering from typhoid fever. She had been in Pitman Grove since the 10th of June.
3. Henry Poole came to Pitman Grove early in July, and was sick when he arrived.
4. Frank Shoemaker, son of the milk dealer, was first seen by a physician July 29th, but he had been ill for at least a week before that date. His disease was typhoid fever, and he died August 6th.
5. Aaron Joslin was attacked with typhoid fever July 28th. He had been in Pitman Grove for a month or more.

All of these persons were supplied with milk by Mr. Shoemaker. Mr. Shoemaker obtained milk, until a week or two before his son was attacked, from a farmer named Harry Miller, who resides about a mile south of Pitman Grove. Investigation showed that Charles Miller, a brother of Harry Miller, suffered from typhoid fever early in June. He was under the medical care of Dr. Heritage, of Glassboro, and recovered.

Mr. Shoemaker was advised to at once discontinue the use of water from the well above described, for washing utensils and cans, and to provide a new and safe supply of water without delay. This advice was promptly complied with. No new cases of typhoid fever were reported.

RARITAN TOWNSHIP.—Information was received on May 14th, 1900, that a case of scarlet fever existed on dairy premises located in Raritan township. An investigation was made, and the following facts were ascertained :

Mr. William Borwegan lives in Raritan township, near the hamlet of Piscataway. He is engaged in the dairy business, and takes about twenty-five quarts of milk to New Brunswick every morning. He employs no help, and all the work in connection with the collection of the milk is carried on by himself. The cans are washed in the house by his wife. At the time of inspection one of his children was suffering from scarlet fever and another had just recovered from the measles. Under the circumstances the possibility of the contamination of the milk was so imminent that a notice to discontinue the sale of milk was served upon him, bearing date of May 14th, 1900. A conference was held with Dr. Moore, of New Brunswick, who had the case in charge, and he expressed a desire to have Mr. Borwegan sleep away from the house and go on with the business, but this was not deemed advisable, and May 15th he was notified that if the business was to be continued an outside party must be employed to wash the cans and collect and distribute the milk. On July 7th an appointment was made with Dr. Moore, of New Brunswick, who stated that the patients had all recovered and that the house was ready for disinfection. Directions were given as to the disinfection of the premises, and on Saturday afternoon, July 7th, the house was thoroughly cleansed. On Sunday, July 8th, Mr. Borwegan presented a note from Dr. Moore stating that the house where the disease had existed had been properly disinfected, and the restriction which had been placed against the sale of milk from the premises was removed.

RIVERSIDE, BURLINGTON COUNTY.—Twenty cases of diphtheria were reported in Riverside as occurring within the six weeks ending October 11th, 1900. Of this number six of the persons attacked died. The board of health was not thoroughly acquainted with the methods in use in caring for contagious diseases, and at a meeting of the board such supervision was outlined by an officer of the State Board of Health. In future the local board of health will isolate all cases of diphtheria, and take active measures to limit the spread of the disease.

FANWOOD TOWNSHIP, UNION COUNTY.—At the request of Dr.

Cladek, of Rahway, an investigation was made of cases of fever, which had occurred in Fanwood township, along the line of the Lehigh Valley railroad, between the Ashbrook and Picton stations. The history of the cases is as follows :

In a house owned by the Lehigh Valley Railroad Company, and located near the track, reside some ten Hungarians, who are employed as laborers on the railroad. From this house, Saturday, the 22d of September, one of the Hungarians went to Rahway, and was taken sick there. He had a history of chills extending over a period of ten days. On Tuesday morning, the 25th, a physician was called and found him comatose. The following morning, Wednesday, the 26th, he died without having regained consciousness. Another man, having a similar history, living in the same house, died on Tuesday. Upon examining the inmates of the house, it was found that, without exception, each one of them was suffering from some form of malarial infection. Across the track from the tenement is a farm owned by Mr. Goodwin. Three persons in this family have suffered from chills and fever, and are constantly under treatment. One-quarter of a mile from this place, to the north, is the farm owned by Mr. Long. Mr. Long was taken sick, and died within three or four days. Two children, who lived with him, were taken to the Muhlenberg Hospital, at Plainfield. The history obtained from those who were present during the illness of the children leads to the conclusion that the type of disease is malarial. The report from the hospital stated that the Widal test would be applied, and that a more certain diagnosis would be made. This concludes the history of the cases in this section. The water-supply in each instance was taken from a well. The well at the tenement-house, along the railroad, is a deep, driven well, situated away from causes of contamination. On the Goodwin premises is a well some thirty-five feet deep, the water of which has always been considered satisfactory. A sample of water was taken from the well on the Long property, and chemical examination showed that the water was fit for domestic purposes. Just below the three houses where these persons were ill is a low strip of meadow, through which Ash brook formerly had its course, but in the construction of the Lehigh Valley railroad, as the brook crossed and recrossed the line of the railroad, instead of building two bridges the course of the stream was diverted so that the bed of the stream remained on the south side of the track. This left that portion of the brook on the north side

of the railroad track filled with stagnant water, and at the present time the old bed of the brook is filled with water which is stagnant and covered by a green scum. In addition to this, northwest of these properties and within one-half mile, is what is known as Ash swamp, which includes a very large territory of swampy ground which at times is flooded, but during the present season has been almost entirely dry. The deduction is, from the consideration of the surroundings and the history of the cases, that all the parties were suffering from malarial infection, and the result of examinations made at the Plainfield hospital confirmed the deduction. It was suggested that the Hungarians living along the railroad should be removed to some hospital, as one or two of the cases were in such condition as to require constant care and attention. Dr. Westcott, of the Fanwood township board of health, was present while the examination was being made, and assumed the responsibility of caring for the cases.

Contagious Diseases of Animals.

Following is a statement of cases of contagious diseases of animals brought to the attention of the State Board of Health during the year ending November 30th, 1900:

Under date of November 7th, 1899, a communication was received from Wm. Herbert Lowe, D.V.S., of Paterson, stating that a case of glanders had been found in that city. The owner was John Van Der Weide. The animal was a gelding, nine years of age. The destruction of the animal was ordered.

November 8th, 1899, a telegram was received from Dr. E. R. Voorhees, of Somerville, stating that there were several cases of glanders in horses owned by John A. Doremus, of Gladstone, New Jersey. An investigation was ordered and two horses were destroyed, and three suspects were kept under surveillance. The premises were quarantined November 12th, and as H. N. Miller, of Peapack, had a team of horses which had been exposed to the disease, a quarantine notice was issued, bearing date of November 12th. November 28th, 1899, Dr. Voorhees reported that there was no further development as to Miller's team, and November 28th, 1899, quarantine was terminated. November 18th another horse belonging to Mr. Doremus was destroyed, and it was reported that another animal was showing suspicious symptoms. December 18th, 1899, Dr. Voorhees reported that there were no more cases, and December 30th the farm was released from quarantine.

In the original report of these cases on the Doremus farm, Dr. Voorhees stated that Mr. Doremus had bought a brown horse from O. E. & W. E. Condit, of East Orange, and as a safeguard against any possible spread of the disease, Dr. Runge, of Newark, was requested to examine the stables in East Orange and found no diseased animals, but as a precautionary measure the stables were disinfected.

December 21st, 1899, an examination was ordered of horses at the State Epileptic Village, and Dr. E. R. Voorhees reported as follows:

SOMERVILLE, N. J., December 21st, 1899.

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—In accordance with instructions received from Dr. Hunt, I visited Skillman Station yesterday for the purpose of consulting Dr. Hurly in reference to a disease that exists among the horses at the Epileptic Village (a State institution).

I do not think there is any glanders on the place, but as Dr. Weeks (the surgeon in charge) desired it, I advised a mallein test in the case of the worst affected animal; for what is true of one animal applies to the entire seven head quartered on the farm.

Six of them are discharging a muco-purulent material from the nose; this at times is of a watery consistency; it excoriates the surrounding skin, and even the lower lips show the effects of the irritation; the sub-maxillary lymphatics are tumefied, but not adherent to the periosteum; the discharge is bilateral, and the nasal membranes highly inflamed and dark red in color; there are no evidences of any erosions or ulcers of the pituitary membranes.

Pending the test to be conducted by Dr. Hurly with mallein, I would say that the trouble was caused by something connected with the food-supply, and while it is enzootic as far as that particular village is concerned, yet I do not consider the horses in that vicinity in any immediate danger.

Very respectfully,

E. R. VOORHEES.

The result of the examination was negative.

November 20th, 1899, a horse owned by Joe Wolely, Norfolk street, Newark, was examined and a diagnosis of glanders was made. The animal was destroyed and the premises disinfected by the city board of health.

December 21st, 1899, an investigation was made of an outbreak of disease among swine owned by Frank White, of Ocean township, Ocean county. Vernon B. Height, D.V.S., of Asbury Park, made the examination, and reported that during the autumn the owner had lost \$250 worth of hogs. When the examination was made two animals had recently died, and a post-mortem examination was performed. The cause of death was found to be hog cholera. The following communication was addressed to the owner:

OFFICE OF THE BOARD OF HEALTH
OF THE STATE OF NEW JERSEY,
TRENTON, December 29th, 1899.

Mr. Frank White, Asbury Park, N. J.:

DEAR SIR—We are in receipt of a report from Dr. V. B. Height, which shows that hog cholera has appeared among the swine on your premises in Ocean township Monmouth county, and we are informed that a number of the animals affected with this disease have recently died. You are advised that the strictest isolation of the sick animals from those that are unaffected should be practiced, and that none of the animals affected with this disease should be removed from the premises. We send to you a copy of Circular 94 (see page 32).

Very truly yours,

HENRY MITCHELL,
Secretary.

January 9th, a case of glanders was discovered at 53 Boyden street, Newark. The animal was destroyed and the premises disinfected.

January 11th, R. B. Smith, D.V.S., of Montclair, reported that a horse in the stable of John Alworth was suffering from farcy. The animal was immediately destroyed and the stable disinfected. Two horses in the stable were tested with mallein, but the result was negative.

January 1st to 30th, 7 cases of glanders were reported in Jersey City.

February 14th, 1900, Dr. Runge, of Newark, reported a case of glanders at the stable of Frank Gibhardt, William and Mill streets, Belleville. The animal was destroyed and the premises were disinfected.

February 1st to 28th, 5 cases of glanders were reported in Jersey City.

March 2d, 1900, D. D. Chandler, Health Officer of Newark, reported a case of glanders at 29 Jones street, Newark, and the animal was destroyed under the supervision of the city board of health.

March 23d, 1900, a communication was received from Dr. J. E. Pratt, of Dumont, in which he stated that a cow had been bitten by a dog. It was believed that the dog was affected with rabies, and it was, therefore, immediately destroyed. The local board of health desired to be advised what disposition should be made of the cow. The following communication was forwarded:

OFFICE OF THE BOARD OF HEALTH
OF THE STATE OF NEW JERSEY,
TRENTON, March 24th, 1900.

Dr. J. E. Pratt, Dumont, Bergen County, N. J.:

The animal bitten by the rabid dog should be isolated and held in quarantine until an officer of this board can investigate the case.

HENRY MITCHELL,
Secretary.

Herbert Lowe, D.V.S., of Paterson, was requested to examine the case and report. He reported as follows:

PATERSON, N. J., April 2d, 1900.

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—In response to telegram, I visited Dumont, in Bergen county, on Friday, and made investigation.

I found that a dog, alleged to have been rabid, was shot after he had bitten a cow belonging to a Mrs. David Durie, of that place. Dr. Pratt, to whom you referred me, very kindly drove me around Dumont, and we interviewed a number of persons

who had seen the dog as to his symptoms, and several of them, including Mr. R. D. Van Buskirk, the mayor of the borough, considered that the dog was rabid. I made a careful examination of the cow in question, but failed to discover any developments or symptoms of rabies. We then drove to see the local veterinarian who had treated the cow for the owner, but were unable to learn anything further than that he had cauterized the abrasions and physicked the cow. He was not inclined to think that there was any danger, but inasmuch as several citizens, including the mayor of the borough, who is a man of good judgment, believed that the dog was rabid, I decided to quarantine the cow, as it would not do to take any chances in a case of this kind. The cow is quarantined until further orders.

Perhaps, under the circumstances, it would answer the purpose and give the citizens of Dumont the necessary protection to hold the cow in quarantine until the period of incubation has passed; but as the period of incubation is long and uncertain, it might be better to condemn and destroy the cow if there is any provision made under the law to indemnify the woman who owns the animal. It would not be right to work any hardship upon her.

Awaiting further instructions, I have the honor to remain

Very truly yours,

WM. HERBERT LOWE, D.V.S.

After the above had been received the following communication was sent to the owner of the animal:

OFFICE OF THE BOARD OF HEALTH
OF THE STATE OF NEW JERSEY,
TRENTON, April 10th, 1900.

Mrs. David Durie, Dumont, Bergen County, N. J.:

DEAR MADAM—Upon review of the facts before this board, relating to the supposed infection by rabies of the cow owned by you, we find that the evidence showing that the dog in question was affected by rabies is insufficient to justify enforced isolation of said cow. You are therefore hereby notified that no formal order quarantining said cow will be issued by this board, unless additional facts shall be presented to us.

Very truly yours,

HENRY MITCHELL,
Secretary.

March 30th, 1900, D. D. Chandler, Health Officer of Newark, reported a case of glanders at 495 Fifth street, Newark, and a communication was addressed to him with instructions.

April 17th, 1900, cases of tuberculosis in the herd owned by Lewis Willis, of Cumberland county, were reported and referred to the Tuberculosis Commission.

April 17th, 1900, D. D. Chandler, Health Officer of Newark, reported a case of glanders at Mangels & Schmidts, Fifteenth avenue and Hunterdon street, city. The animal was destroyed.

May 2d, 1900, a case of glanders was reported at the Necastro stables, Baldwin street, Glen Ridge. The animal was destroyed.

May 24th, 1900, S. Lockwood, V.S., of Woodbridge, reported a case of glanders in the stable of William Armstrong, of Westfield. The animal was destroyed and stables were disinfected.

May 25th, 1900, M. Broadwell, D.V.S., of Morristown, reported a case of glanders in the stables of S. C. Van Riper, of Madison township. The case was examined by E. R. Voorhees, D.V.S., of Somerville, and the following is his report:

SOMERVILLE, N. J., May 30th, 1900

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:

DEAR DOCTOR—At your request, as per your telegram of the 28th inst., I visited Morristown yesterday for the purpose of inspecting the reported case of glanders at the stable of Mr. S. C. Van Riper, four and one-half miles north from the town.

I visited the home of Mr. T. J. Davis, at Morris Plains, and he accompanied me to the Van Riper place.

We found the subject to be a bay mare, fifteen and one-half hands in height, and about twenty years old. She had a muco-purulent discharge from the left nostril of a decidedly offensive odor. The schneiderian membrane was considerably thickened, but showed no erosions or ulcers of any description. The submaxillary lymphatics were only slightly enlarged, and showed no tendency to adhere to the periosteum. Her temperature was normal and her condition fair. My opinion is that she is not affected with glanders, but has what I would call chronic nasal catarrh. The discharge shows no tendency to adhere to the nostrils, as a glanderous discharge usually does. I have many such cases brought to my office every year, and they usually yield to treatment.

Hoping this explanation will be satisfactory, I am,

Very respectfully,

E. R. VOORHEES.

One case of glanders was reported in Jersey City during July.

August 1st, 1900, James C. Griscom, of Woodbury, reported a contagious disease of the eyes among the herds of cattle in his neighborhood, and T. B. Rogers, D.V.S., of Woodbury, was requested to make an investigation. The following is his report:

August 11th, 1900.

DEAR SIR—In obedience to your instructions I have investigated the outbreak of "sore eyes" referred to by Mr. Jas. Griscom, and subjoin the result thereof.

As the three men referred to are all willing to make affidavit that they brought the disease from the stables at Mount Ephraim, where Thos. M. Tice sells cattle, and as the stables are evidently infected, I recommend that you quarantine these stables until they are disinfected, and this done, I do not think there will be any further extension of the disease.

Report of outbreak of contagious panophthalmia of cattle in West Deptford township, Gloucester county, N. J.:

Name.	Number cattle in herd.	Number infected.	Source.
Budd Bros.....	32	15	Thos. M. Tice.
Wm. Patterson.....	12	6	Thos. M. Tice.
A. M. Woodoth.....	1	1	Thos. M. Tice.

Damage sustained.—Budd Bros., \$50; Wm. Patterson, \$50.

Deaths.—Budd Bros., none; Wm. Patterson, 1; A. M. Woodoth, none.

Date of infection.—Budd Bros, cow bought from Tice June 9th, 1900; Wm. Patterson, cow bought from Tice, June 9th, 1900; A. M. Woodoth, cow bought from Tice, July 21st, 1900.

Nature of disease.—Commences as conjunctivitis, this later becoming purulent; there is great increase of intraocular tension, and in some cases hernia of aqueous humor and even of the lens; these cases result in loss of eye. Total blindness may result from deposits in anterior chamber or from true cataract. Three had sore feet, ulcers round coronary band, and purulent accumulations in the hoof. One had ropy milk; this last may have been due to infection of the udder, or may have been accidental. None had any symptoms of rhinitis, and in this respect the disease seems to differ from the malignant catarrhal fever of the continental writers. Treatment appears to be useless.

Very respectfully,

T. B. ROGERS, D.V.S.

August 29th, 1900, T. B. Rogers, D.V.S., reported that Mr. William J. Irwin, living near Centreton, Gloucester county, had lost four head of cattle out of a herd of twelve, and that all the symptoms of acute anthrax were present. As soon as this communication was received, Dr. Rogers was requested to make an investigation and report. The following communication was received from him:

WOODBURY, N. J., August 31st, 1900.

Henry Mitchell, M.D., Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—The Centreton outbreak is acute anthrax. There has been another death since I wrote you. Have ordered cattle off infected pasture. The outbreak can be held where it is. I should recommend vaccination of the remainder of this herd, but should not recommend further vaccination, as I think it unnecessary. Awaiting your orders,

Respectfully,

T. B. ROGERS.

Upon receipt of the above communication, Dr. Rogers was requested to vaccinate the animals with anthrax vaccine, and to take the necessary steps to prevent the spread of the disease. The following is the report in reference to this outbreak:

WOODBURY, N. J., September 20th, 1900.

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—Herewith find report of an outbreak of anthrax at Olivet, near Elmer.

There has been no trouble since vaccination was commenced, and as the cattle are fenced off from the infected pasture, I do not think there will be any new cases.

Wm. J. Irwin has lost 5 out of a herd of 10; the original herd consisted of 4 cows, 1 bull, 5 two-year-old heifers. He has lost all the heifers on dates as follows: July 20th, one death; July 29th, one death; August 7th, one death; August 14th, one death; August 18th, one death.

I may add that Mr. Irwin expressed much gratitude at the prompt attention given him by your board.

Very respectfully,

THOS. B. ROGERS, D.V.S.

September 10th, 1900, Dr. Van C. Dull, of Montclair, reported a case of glanders in Verona, Essex county. The owner of the animal was Harry Parkhurst. The horse was destroyed and the premises disinfected.

September 10th, 1900, Dr. J. Payne Lowe, D.V.S., of Passaic, reported a case of glanders in a horse belonging to Alexander Vuch, of 24 Aspin street, Passaic. The animal was destroyed and the premises disinfected.

September 28th, 1900, a communication was received from A. W. Harrison, D.V.S., of Bloomfield, stating that there was a case of glanders in the stable owned by Mr. Day. Dr. J. Payne Lowe, of Passaic, was requested to investigate the matter, and his report is as follows:

PASSAIC, N. J., September 29th, 1900.

Henry Mitchell, M.D., Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—In response to your telegram to-day, I visited the premises of A. Day, 574 Bloomfield avenue, Bloomfield, N. J. (Bloomfield Centre), and found in his stable two horses—a sorrel gelding, affected with glanders and farcy (a well-marked case); the other animal, in my judgment, was also glandered, although not a fully-developed case, having only a discharge from one nostril. I explained to Mr. Day the nature of the disease and the law concerning the same, and he was very willing to have me destroy both horses, which I did myself. I gave Mr. Day instructions as to disinfecting the stable, and told him to tear down stall partitions, mangers, &c., and burn them, and told him not to use the stable until he heard from me. Mr. Day shows a disposition to carry out all my instructions, and realizes that it is to his own interest to do so. If you so wish, I will make another visit in a week to be sure that he has done so. I have also to report a case of glanders in a grey mare on the farm of Mr. Garret Kenter, Allwood, Passaic county. This mare came from Pater-son several weeks ago. She was not doing well, and was sent to the farm to recuperate. Upon my telling them that the animal was glandered, they had her destroyed. I told him to disinfect, &c., and shall see that it is properly carried out, if you so direct.

Very respectfully,

J. PAYNE LOWE.

September 30th, 1900, a horse owned by Mr. Anderson, of Beaver street, Newark, was destroyed under the supervision of Dr. Runge. The post-mortem showed that the animal was suffering from glanders. This animal had been pastured on the farm of Mr. Hartenstein, at Millburn.

October 9th, 1900, W. F. Harrison, D.V.S., of Bloomfield, reported that he had destroyed four cases of glanders in the stables of Slayback Bros., ice dealers, Verona, New Jersey.

October 11th, 1900, the following report was received of cases occurring in Montclair:

MONTCLAIR, N. J., October 11th, 1900.

Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:

DEAR SIR—There is a slight outbreak of glanders in Montclair and vicinity. The first case occurred about one month ago, in the stable of the Osborne, Marcellus Company, Upper Montclair. About one week ago a second case occurred in the stable of the Herrison Milling Company, Montclair; while yesterday and to-day four cases have been reported in the stable of Slayback Bros., ice dealers, of Verona and Caldwell.

All possible sanitary precautions have been taken in all of these cases. In addition to this, we have closed the drinking-troughs, and notice has been sent to all the large stable owners informing them of the state of affairs, and warning them to watch their stock carefully and call in assistance at the first sign of indisposition in any animal they possess. * * *

Yours very truly,

MARSHALL O. LEIGHTON,
Health Inspector.

October 18th, 1900, D. D. Chandler, Health Officer of Newark, reported a case of glanders in the stable of A. R. Sharf, 254 South Eighth street, Newark. The animal was destroyed and the premises disinfected.

October 22d, 1900, a glandered horse belonging to James Frater, 44 Lake street, Bloomfield, was destroyed, under the supervision of Dr. W. F. Harrison.

October 23d, 1900, Robert Ballagh, inspector of the board of health of Hackensack, reported that a horse affected with glanders was destroyed. The horse belonged to Nicholas Clark. The shed in which it was kept was torn down.

October 29th, 1900, two horses in the stables of the Knickerbocker Ice Company were destroyed on account of having glanders.

During the month of October three cases of glanders were reported in Jersey City.

November 2d, two animals having glanders, and in the stables of James McMickle, Newark, were destroyed and the premises disinfected.

November 6th, 1900, T. E. Smith, D.V.S., of Jersey City, reported that he had destroyed three animals suffering from glanders.

November 7th, 1900, Dr. Smith, of Montclair, reported a case of glanders in an animal owned by Max Maass, living near Livingston. This animal was purchased from Mr. Rubinson, 20 Bedford street, Newark, New Jersey. The animal was destroyed and the premises disinfected, and the Newark board of health notified in reference to the matter.

November 13th, 1900, J. G. Richardson, D.V.S., of Elizabeth, reported a case of farcy in that city, and was authorized to have the animal destroyed and the premises disinfected.

November 13th, 1900, Dr. Runge reported that there had been three cases of glanders and farcy at the Fairfield dairy in Caldwell. The animals were destroyed and the stables disinfected. A mallein test, of all the other horses in the stable, was made.

November 22d, 1900, M. O. Leighton, Health Officer of Montclair, reported a case of glanders in a horse owned by David Howell, No. 21 St. Luke's Place, Montclair. Dr. Smith also sent a communication stating that the animal had been destroyed and the premises disinfected. A quarantine notice was served upon the owner of the premises, as another horse was found there with suspicious symptoms of glanders.

November 30th, the health officer of Jersey City reported four cases of glanders in the stables of the Windsor Trucking Company, located on First street, and that five other cases had been destroyed during November.

The following is a summary of cases of contagious diseases of animals coming under the supervision of the State Board of Health during the year ending November 30th, 1900: Glanders, 69; rabies, 1; tuberculosis, 3; panophthalmia, 22; anthrax, 5.

Public Water-Supplies.

The inspection of public water-supplies has been continued during the past year, and a record of the work performed is herewith presented :

A circular letter was mailed to all localities in the State requesting information as to public water-supplies. In some instances there was no response, and the statements made are based upon previous reports.

As it is desirable to obtain complete and exact information in regard to water-supplies, corrections and additions to the present report are solicited, so that a perfected report may be presented in the future.

ASBURY PARK.—The public water-supply was introduced in 1884. Pumping capacity, 3,000,000 gallons per day. A stand-pipe is in use, having a capacity of 205,000 gallons. Water is delivered at a pressure of 53 pounds. Number of taps, 1,140. Water rates, \$2 per thousand cubic feet. Metres are used. The cost of the plant was \$247,500, and it is owned by the city. The source from which the supply is obtained is artesian wells. The following is a copy of a mineral analysis of the water :

	Parts per 100,000.	East well 1,020 feet.	West well 1,045 feet.
Silica		1.223	1.236
Oxide of iron.....		1.218	1.128
Lime		1.650	1.500
Magnesia.....		0.467	0.440
Sulphuric acid (SO ₃).....		1.020	0.940
Chlorine		0.120	0.120
Alkalies and other substances.....		Undetermined.	Undetermined.
Metallic iron, average of both wells, 0.9121.			

The city is sewered throughout, and sewage is discharged directly into the ocean.

ATLANTIC CITY.—The present water-supply was purchased by the city in 1895. In 1882 what is known as the Wood system was introduced, and a consumers' system in 1888. The supply is obtained, in part, from artesian wells located on the meadows, and from surface waters located on the mainland. The water is pumped to a steel tank, having a capacity of 96,000 gallons. Average pressure, 40 pounds. Number of taps, 4,249. Water is furnished both by metres and by schedule. Three thousand three hundred metres are in use. The cost of the plant to the city in 1895 was \$771,782. The city has a complete sewer system, and the sewage is discharged into the thoroughfare, in the rear of the island. The sewer plant is owned by a private company.

ATLANTIC HIGHLANDS BOROUGH.—The public water-supply for this borough was introduced by the borough authorities in 1892. Pumping capacity, 2,000,000 gallons per day. Capacity of stand-pipe, 200,000 gallons. Pressure, 120 pounds. Original cost of plant, \$60,000. The water which is furnished to the borough is obtained from artesian wells. The water is filtered to remove iron. The borough has a sewer system, and the sewage is discharged into tidal water.

BAYONNE CITY.—The water for use in this city is supplied by the East Jersey Water Company, and was introduced in 1881. Average pressure, 60 pounds. Number of taps, 4,263. The supply is obtained from the Passaic river. The city has a complete sewer system, and sewage is discharged into Newark bay.

BEACH HAVEN BOROUGH.—The water-supply for this borough was introduced in 1893, and is under the control of the municipal government. Pumping capacity, 1,800,000 gallons a day. Water is pumped into a stand-pipe, having a capacity of 22,000 gallons. The average pressure is 48 pounds per square inch. Number of taps, 110. Metres are used. The source from which the supply of water is obtained is an artesian well. The sewage is discharged into the tidal waters of Tuckerton bay.

BELLEVILLE.—The public water-supply was introduced in 1871. Water was furnished originally by the East Jersey Water Company, but at the present time the water is furnished to the town by the city of Newark.

BELMAR.—The public water-supply was introduced in 1897. Pumping capacity, 300,000 gallons a day. Water is pumped to a tower and tank, having a capacity of 80,000 gallons. Average pressure, 43 pounds. Number of taps, 308. Metres are used where a large amount of water is supplied. The city owns the plant, and the original cost was \$36,000. The supply of water is obtained from artesian wells. The sewage of the city is discharged into the Atlantic ocean.

BELVIDERE CITY.—The water-plant is owned by a private company. The supply was introduced in 1878. The stand-pipe has a capacity of 32,000 gallons. Pressure varies from 50 to 80 pounds. Number of taps, 200. Number of metres in use, 40. Original cost of plant, \$23,500. The supply is obtained from the Delaware river. The sewers of the city discharge into the Delaware river.

BERGENFIELD.—The public water-supply was introduced in 1886. Water is delivered at a pressure of from 75 to 90 pounds. Number of taps, 38. Water is furnished by the Hackensack Water Company, and is obtained from the Hackensack river.

BEVERLY CITY.—The public water-supply was introduced in 1886. Maximum pumping capacity, 1,500,000 gallons. The stand-pipe has a capacity of 150,000 gallons. Pressure varies from 25 to 40 pounds. Number of taps, 400. Cost of plant about \$50,000. A private company is in control of the supply. Water is obtained from the Delaware river.

BLOOMFIELD.—The public water-supply for Bloomfield is furnished by the East Jersey Water Company.

BOONTON.—The supply for the town was introduced by a private company in 1895. The water is delivered to the town by gravity. Capacity of reservoir, 161,000,000 gallons. Number of taps, 270. Original cost of plant, \$132,000. There is no sewer system in the town.

BOUND BROOK.—The public water-supply was introduced in 1888. Water is obtained from Middle brook, and also from springs on the mountain. Number of taps, 600. Number of hydrants, 60. Average pressure, 43 pounds.

BLAIRSTOWN.—The water-supply for this town was introduced in 1889, and until 1895 the stand-pipe was supplied by a well located in a meadow near the school grounds. In 1897 an artesian well was bored at Paulina, a small village one mile east of Blairstown. At a

depth of 300 feet water was found. The stand-pipe has a capacity of 120,000 gallons. Pressure varies from 50 to 75 pounds. Number of taps, 50. Number of hydrants, 25. The plant is owned by the Blairstown Presbyterian Academy. The town has no sewer system. Following is a copy of an analysis of the water :

REPORT OF THE ANALYSIS OF THE WATER FROM THE PAULINA ARTESIAN WELL,
AS MADE AT PRINCETON UNIVERSITY, IN OCTOBER, 1899.

	Parts per 100,000.	Or grains per gallon.
Potash	0.09	0.05
Soda	1.60	0.98
Sodium (as sodium chloride).....	0.27	0.16
Lime	6.47	3.77
Magnesia	3.44	2.01
Alumina and oxide of iron.....	0.04	0.02
Sulphuric acid (combined with potash, soda and lime).....	3.03	1.77
Chlorine (in sodium chloride)	0.41	0.24
Silica.....	1.68	0.98
Carbonic acid (combined with lime and magnesia)	8.36	4.87
	25.39	or 14.80

The gallon is taken equal to 59.318 grains.

Per 100,000—Free ammonia, 0.0006; albuminoid ammonia, 0.0007; oxygen consumed, 0.008; nitrogen in nitrates and nitrites, trace; chlorine, 0.41; hardness, 20; permanent hardness, 6. Total solids, 25.39.

The water from the artesian well is organically an exceedingly pure water, and the small amount of chlorine, with the almost total absence of nitrates, proves it to be free from any sewage or drainage contamination.

H. B. CORNWALL,
Princeton, N. J.

BORDENTOWN CITY.—The public water-supply was introduced in 1855, and is controlled by a private company. Pumping capacity, 1,000,000 gallons a day. The supply is filtered before it is delivered to consumers. Average pressure, 30 pounds. Original cost of plant, \$41,500. The supply is obtained from Crosswicks creek. No sewer system has been introduced in the city.

BRESLIN PARK.—The public water-supply was introduced in 1890. Water is obtained for domestic purposes from Lake Hopatcong. Storage capacity, 25,000 gallons. Average pressure, 30 pounds.

BRIDGETON.—The public water-supply for this city was introduced in 1877. Pumping capacity, 3,000,000 gallons per day. The reservoir has a capacity of 2,000,000 gallons. Average pressure, 40 pounds. Number of taps, 2,000. A few metres are in use. Original cost of

plant, \$70,000. The supply is obtained from open wells located below the dam. The plant is owned by the city. The sewage of the town is discharged into Cohansey creek.

BURLINGTON CITY.—The public water-supply for this city was introduced in 1804, and the works were rebuilt by the city in 1877. The pumping capacity is 2,000,000 gallons per day. The water-tower which has been erected has a capacity of 282,000 gallons. Average pressure, 50 pounds. Number of taps, 1,750. The original cost of the plant to the city was \$25,000. The source of supply is the Delaware river. The city is not supplied with a sewer system.

CAMDEN.—The system at present employed for supplying water to the inhabitants of the city of Camden was introduced in 1897. The plant is owned by the city. Pumping capacity, 20,000,000 gallons a day. Capacity of reservoir, 6,000,000 gallons. Average pressure, 25 pounds. Number of taps, 14,500. Metres are used in some instances. The original cost of the plant was \$525,000. The water supplied to the city is pumped from 102 artesian wells. Analyses have been made which show that the water is of a high degree of purity, and suitable for all domestic purposes. Camden has a sewer system.

CAPE MAY CITY.—The public water-supply was introduced in 1874. Source of supply, open well. Storage capacity, 130,000 gallons.

CAPE MAY C. H.—The public water-supply was introduced in 1895, and the plant is owned by a private company.

CARLSTADT.—The public water-supply was introduced in 1891. Water is delivered from a reservoir having a capacity of 3,000,000 gallons. The pressure varies from 40 to 50 pounds. Number of taps, 193. The Hackensack Water Company furnishes the supply, and the water is obtained from the Hackensack river. Metres are used.

CARTERET.—For source of supply, &c., see Metuchen.

CLAYTON.—The public water-supply was introduced in 1895. The water is obtained from driven wells. Storage capacity, 91,800 gallons. Average pressure, 60 pounds.

CLIFFSIDE.—The public water-supply for this borough is furnished by the Hackensack Water Company, and was introduced in 1886. The water is delivered at a pressure of from 25 to 35 pounds. Number of taps, 90. The water supplied to consumers passes through

metres. The source of supply is the Hackensack river at New Milford.

CLINTON, HUNTERDON COUNTY.—The public water-supply was introduced in 1897. The reservoir has a capacity of 600,000 gallons. Water is delivered at a pressure of 131 pounds. Number of taps, 140. The plant is owned by a private company. The supply is obtained from a brook and springs. There is no sewer system in the town.

COLLINGSWOOD.—The public water-supply was introduced in 1891. The plant is owned by a private corporation. The water which is furnished to the borough is obtained from springs. Storage capacity, 587,600 gallons.

COLUMBIA HEIGHTS.—The public water-supply was introduced in 1893. Average pressure, 55 pounds. Number of taps, 110. Original cost of plant, \$14,500. A private corporation controls the supply. The water is obtained from the Pequannock water-shed, and is purchased from the Newark Water Company. There is no public system of sewers in this locality.

COYTESVILLE.—The public water-supply was introduced in 1900. Water is furnished by the Hackensack Water Company, and the source of supply is the Hackensack river. Pressure varies from 50 to 70 pounds. Number of taps, 61. (This includes taps in Ridgefield and Fort Lee.) All water furnished to consumers passes through metres.

CRANFORD TOWNSHIP.—The supply for the thickly settled portion of Cranford is obtained from the Union Water Company. The wells from which water is taken are located at Netherwood. Water was introduced in 1892. Average pressure, 65 pounds. Number of taps, 365. The supply is owned by a private corporation. There is a sewer system in the town, and sewage is discharged into the Rahway river.

DEAL.—The public water-supply was introduced in 1895, and the plant is owned by a private corporation. The source of supply is artesian wells. Storage capacity, 60,000 gallons. Average pressure, 24 pounds.

DECKERTOWN.—The public water-supply was introduced in 1897. The plant is owned by the borough. The source of supply is Lake Rutherford. The intake reservoir covers 900 acres, and from it enough water may be collected to furnish 1,000,000 gallons a day.

The pressure of water, were it not for the action of a pressure-reducing valve, would be 200 pounds per square inch. Cost of plant, about \$55,000. Number of taps, 223.

DELFORD.—The public water-supply was introduced in 1882. Pumping capacity, 39,000,000 gallons daily. This represents the pumping capacity of the entire plant of the Hackensack Water Company, which furnishes many of the communities lying between the Hackensack and the Hudson rivers. Water is delivered at a pressure of from 90 to 110 pounds. Number of taps, 90. The water is supplied by the Hackensack Water Company, and the source of supply is the Hackensack river. Metres are used in all cases where water is furnished to consumers.

DOVER.—The water-supply for this city, owned by a private company, was introduced in 1887. There are two reservoirs, having a capacity of 3,000,000 gallons each. The average pressure is 80 pounds. Number of taps, 500. Metres are used, and metre rates are twenty cents per 100 cubic feet. The supply is obtained from springs located on the mountain. The supply is furnished by gravity. The city has no public sewer system.

EAST ORANGE.—The public water-supply was introduced in 1882 by a private corporation. The source from which the supply is obtained is a number of wells. Average pressure, 45 pounds.

EAST RUTHERFORD.—See Hoboken.

EDGEWATER PARK BOROUGH.—For facts in reference to the water-supply of this borough, see Beverly City.

EGG HARBOR CITY.—The public water-supply was introduced in 1896, and the plant is owned by a private corporation. The source from which the supply of water is obtained is an artesian well. Storage capacity, 587,000 gallons.

ELIZABETH.—The public water-supply was introduced in 1854, and the plant is owned by a private corporation. The source from which water is obtained is artesian wells and the Elizabeth river. Average pressure, 35 pounds.

ENGLEWOOD.—The public water-supply was introduced in 1886. Average pressure, 70 to 90 pounds. Number of taps, 696. Metres are used in cases where water is furnished to consumers. The Hackensack Water Company furnishes the supply.

ENGLEWOOD CLIFFS.—The public water-supply was introduced in

1893. Pumping capacity, 3,000,000 gallons daily. Average pressure from stand-pipe, 50 to 60 pounds. Number of taps, 48. Water is supplied by the Hackensack Water Company.

ENGLISHTOWN.—At a recent special election, held in Englishtown, it was decided to issue bonds and introduce a public water-supply.

ESSEX FIELDS, ESSEX COUNTY.—The water-supply was introduced by a private company in 1896. Pumping capacity, 400,000 gallons per day. Capacity of tank, 100,000 gallons. Pressure, 15 to 80 pounds. Number of taps, 25. Water-rates, 25 cents per thousand gallons. Metres are used. Original cost of plant, \$7,500. The source from which the supply is obtained is artesian wells. The analysis shows that the water is of a high degree of purity, free from contamination, and adapted to all domestic purposes. Essex Fells has a sewer system. Sewage is discharged upon filter beds.

FAIRVIEW.—The public water-supply was introduced in 1882. Average pressure, 70 to 80 pounds. Number of taps, 92. Water is furnished to the borough by the Hackensack Water Company. Metres are used. The source of supply is the Hackensack river.

FANWOOD.—The public water-supply was introduced in 1892. Water is obtained from the Plainfield Water Company. The pressure varies from 50 to 100 pounds. Number of taps (including Westfield, Cranford and Roselle), 1,144. The plant is owned by a private company. The water which is supplied is obtained from wells located near Plainfield.

FLEMINGTON.—The water-supply, which is controlled by a private company, was introduced in 1860. Pumping capacity, 360,000 gallons. There are two reservoirs, having a combined capacity of 650,000 gallons. Pressure, 35 pounds. Number of taps, 270. Water-rates, \$10 for a single faucet. A few metres are in use. The water which is furnished to consumers is obtained from springs and a well, and also from a branch of the Raritan river. A sewer system is in operation in Flemington.

FORT LEE.—Water is supplied by the Hackensack Water Company, and was introduced in 1900. Pressure, 35 to 75 pounds. Number of taps, 75. The water which is furnished to consumers is obtained from the Hackensack river at New Milford.

FRANKLIN TOWNSHIP, ESSEX COUNTY.—The public water-supply was introduced in 1894. Water is delivered at a pressure of 95

pounds. The plant is owned by the township. Number of taps, 315. Metres are used. Original cost of plant, \$47,000. The water is furnished to the township by the East Jersey Water Company. There is no public sewer system in the township.

FREEHOLD.—The public water-supply is owned by the town. It was introduced in 1891. Pumping capacity, 250,000 gallons a day. Stand-pipe capacity, 235,000 gallons. Average pressure, 40 pounds. Number of taps, 399. Metres are used in a few instances. Original cost of plant, \$36,000. The source from which the supply is obtained is 12 artesian wells. Two additional wells are about to be connected with the supply. The city has a sewer system.

FRENCHTOWN.—A private company is introducing a supply for the borough. The capacity of the reservoir is 200,000 gallons. Average pressure, 67 pounds. Estimated cost of plant, \$20,000. The water is obtained from a creek, and will be filtered before it is delivered to consumers. Sewers have not been constructed in the borough.

GARFIELD.—A private company supplies water to the borough. Water was introduced in 1895. Capacity of reservoirs, 45,000 gallons, 60,000 gallons and 23,000 gallons. Average pressure, 52 pounds. Number of taps, 225. Metre rates, 30 cents per 1,000 gallons. The water-supply is obtained from artesian wells. There is no sewer system in the borough.

GLEN GARDNER.—The water-supply, which is owned by a private company, was introduced in 1894. Average pressure, 100 pounds. Number of taps, 50. Water-rates, \$6 per year for family. Original cost of plant, \$1,300. Source of supply, a spring on the mountain-side. There are no sewers in the village.

GLASSBORO.—The public water-supply was introduced in 1896. For other facts see Clayton.

GLEN RIDGE.—The water-supply is furnished to the borough by the East Jersey Water Company.

GLOUCESTER CITY.—The public water-supply was introduced in 1884, and the plant is owned by the city. The water supplied to consumers is obtained from springs and a creek. Storage capacity, 2,000,000 gallons.

GUTTENBERG.—The public water-supply was introduced in 1886.

The water is received from the high-pressure service at Weehawken, and is delivered at a pressure of from 25 to 40 pounds. Number of taps, 426. All water furnished to consumers passes through metres. The ownership of the plant is private. The source of supply is the Hackensack river at New Milford.

HACKENSACK.—The public water-supply was introduced in 1870. Water is furnished by the Hackensack Water Company. There is one reservoir located in the city, having a capacity of 2,766,000 gallons. Domestic pressure, 35 pounds; fire pressure, 80 pounds. Number of taps, 1,210. Metres are used.

HACKETTSTOWN.—The public water-supply is obtained from springs, some of which are located in Morris county and some in Warren county. Water is furnished to the town by gravity.

HADDONFIELD.—The public water-supply was introduced in 1887. Pumping capacity, 500,000 gallons per day. The stand-pipe is 110 feet in height and 15 feet in diameter. Pressure, 35 to 45 pounds. Number of taps, 700. Original cost of plant, about \$40,000. A private company owns the plant. The source of water-supply is springs. No sewer system has been introduced in the borough.

HARRISON.—The public water-supply was introduced in 1886. Average pressure, 80 pounds. Number of taps, 935. Water-rates, \$1.15 per 1,000 cubic feet. Original cost of plant, \$40,000. The municipality controls the supply within the city. The water is purchased from Jersey City. There is a sewer system in Harrison, and the outlet is into the Passaic river.

HASBROUCK HEIGHTS.—The water-supply for the borough is supplied by the Hackensack Water Company, and was introduced in 1878. Number of taps, 300. The source from which the supply is obtained is the Hackensack river, at New Milford.

HELMETTA.—The water supplied to the borough of Helmetta, for domestic purposes, was introduced in 1883. The capacity of the reservoir is 40,000 gallons. Average pressure, 40 pounds. Number of taps, 40. The ownership of the plant is private. The source from which the water-supply is obtained consists of wells. In addition to the supply for domestic purposes water for fire protection is obtained from a pond. There are no sewers in the borough.

HIGHLANDS OF NAVESINK.—The public water-supply was introduced in 1886. It is owned by a private company. The water is obtained from springs and wells.

HIGHTSTOWN.—The water-supply furnished to Hightstown is owned by the city, and was introduced in 1895. Pumping capacity, 288,000 gallons a day. Capacity of stand-pipe, 85,000 gallons. Filters are used for removing the iron with which the water is impregnated. The average pressure is 58 pounds. Number of taps, 150. Water-rates, house, with all fixtures, average about \$14 per year. Metres are used only in case of factories. Original cost of plant, \$20,000. The source from which the supply is obtained is an artesian well. There is no sewer system in the borough.

HOBOKEN.—The public water-supply for the city of Hoboken was introduced in 1882. Pumping capacity, 34,000,000 gallons. There are two reservoirs. Water is delivered at a pressure of 40 pounds. Number of taps, 4,500. Number of metres in use, 2,700. The water is supplied to the city by the Hackensack Water Company, and the city sells to consumers. The source from which the water-supply is obtained is the Hackensack river. The city has a sewer system, discharging into the Hudson river.

HOLLY BEACH.—The public water-supply for this borough is obtained from the Wildwood Water Company. Ninety-two houses are connected with the public supply. For further facts, see Wildwood borough.

HOPEWELL.—The supply for this borough was introduced by a private company in 1890. Pumping capacity, 300,000 gallons a day. Capacity of reservoir, 1,000,000 gallons. Average pressure, 45 pounds. Number of taps, 59. Original cost of plant, \$7,600. The supply is obtained from springs. There is no sewer system in the borough.

IRVINGTON.—The public water-supply was introduced in 1894. Water is furnished to the town by the Essex Union Water and Light Company, of Summit. Water is delivered at a pressure of from 80 to 100 pounds. Number of taps, 400. Water-rates, 30 cents per 1,000 gallons. Sixty per cent. of the consumers are furnished with water through metres. The source of supply is an artesian well at Canoe brook. Analyses have been made of the supply, showing that it is satisfactory. There are no sewers in Irvington, but a vote has been taken authorizing commissioners to join with other towns in a joint outlet sewer.

JERSEY CITY.—The public water-supply for Jersey City was in-

roduced in 1854, and the supply was at that time obtained from the Passaic river. There are two reservoirs, having a capacity of about 140,000,000 gallons. Water is delivered at a pressure of from 25 to 50 pounds. Number of taps, about 24,500. Number of metres in use, 526. The plant is owned by the city, and the original cost was \$5,000,000. At present the water-supply is obtained from the upper Passaic and the Pequannock watershed, but new water works are under construction. The city has a system of sewers.

KEARNY.—The public water-supply was introduced in 1887, and the water is from the same source as that supplied to Jersey City.

KEYPORT.—The public water-supply was introduced in 1893, and the plant is owned by the town. Water is pumped to a stand-pipe, having a capacity of 293,760 gallons. All water supplied to consumers passes through filters. Average pressure, 64 pounds. Number of taps, 450. Metres are used. Original cost of plant, \$60,000. The supply of water is obtained from artesian wells. There are no sewers in the town.

LAKEWOOD.—Up to the present year the public water-supply for Lakewood was obtained from a lake, which is located in the centre of the town. Three artesian wells have been sunk, which are some 600 feet in depth, and the intention of the water company is to obtain all the water for public use from artesian wells in future. The public supply was introduced in 1887. The pumping capacity is 2,000,000 gallons a day. Water is pumped to a stand-pipe, 35 x 60 feet. Average pressure, 40 to 60 pounds. Number of taps, 250. The town has a sewer system, which at the present time is being extended.

LAMBERTVILLE.—The water-supply for the city was introduced by a private company in 1878. Capacity of reservoir, 26,000,000 gallons. Water is supplied to the city by gravity, after passing through two sand filters. Average pressure, 72 pounds. Number of taps, 143. Original cost of plant, \$50,000. The supply is obtained from what is known as Swan creek.

LEONIA.—The public water-supply was introduced in 1886. Average pressure, 70 to 80 pounds. Number of taps, 146. The Hackensack Water Company supplies the borough with water, and the source of supply is the Hackensack river.

LITTLE FERRY.—The public water-supply was introduced in 1882.

Water is delivered at a pressure of from 80 to 100 pounds. Number of taps, 7. The water for use in this borough is furnished by the Hackensack Water Company.

LITTLE YORK, HUNTERDON COUNTY.—A private company supplies water to 8 dwellings. The source from which the supply is obtained is a spring.

LODI.—The public water-supply was introduced in 1882. The pressure varies from 50 to 80 pounds. Number of taps, 14. The supply is furnished by the Hackensack Water Company, and the source of supply is the Hackensack river. Metres are used.

LONG BRANCH COMMISSION.—The water-supply was introduced in 1878. The pumping capacity is 10,000,000 gallons per day. The reservoir has a capacity of five or six million gallons. The water is filtered before it is delivered to consumers. The average pressure is 40 pounds. Number of taps, 1,600. Few metres are in use. Private ownership. The source from which the supply of water is obtained is a brook. The city has a sewer system which discharges into the ocean. The Tintern Manor Company has already obtained control of the Long Branch Water Company plant and the plant of Deal borough, and in a communication received from this company it is stated that by May 1st, 1901, 18,000,000 gallons will be delivered daily at Long Branch. The reservoir will be constructed for a capacity of 3,500,000,000 gallons. United States Filter Company standard filters will be used. Eighteen filter tanks, of 1,000,000 capacity each, will be constructed. At Red Bank, the pressure will be 100 pounds; at Long Branch, 90 pounds, and at Deal, 70 pounds. The average rate will be 35 cents per 1,000 gallons. The cost of the plant when finished will be \$2,500,000. The sources of supply are Hop brook and Yellow brook, which, after their junction, form Swimming river, which is the head of the Navesink river. The filter company guarantee to remove 95½ per cent. of deleterious matter from the water. The following towns will be supplied with water by this company: Little Silver, Fair Haven, Oceanic, Seabright, West Long Branch, Oceanport, Eatontown, Shrewsbury, Deal, Long Branch.

LONGPORT.—The supply furnished to the borough was introduced in 1895, and is controlled by a private corporation. Capacity of reservoir, 30,000 gallons. Average pressure, 40 pounds. Number

of taps, 50. The water which is furnished is obtained from an artesian well, 800 feet in depth.

LORRAINE.—The public water-supply was introduced in 1894, and is furnished by the Plainfield Water Company.

MADISON.—The public water-supply was introduced by the borough in 1890. The pumping capacity is 2,000,000 gallons per day. The stand-pipe is 75 feet in height and 25 feet in diameter. Pressure varies from 60 to 100 pounds. Number of taps, 574. Metres are used in part. Original cost of plant, \$80,000. The water supplied to the borough is obtained from 4 eight-inch wells from 100 to 140 feet in depth. The wells are what is known as flowing wells. Sewers have not yet been introduced in the borough. The following is a copy of an analysis of the water furnished:

CERTIFICATE OF ANALYSIS.

The sample of water submitted to us for examination contains, in one U. S. gallon of 231 cubic inches:

Appearance, clear and colorless.....	None.
Odor.....	None.
Taste.....	0.5248
Chlorine in chlorides.....	0.8642
Equiv. to sodium chloride.....	Trace.
Phosphates.....	None.
Nitrates.....	0.0946
Nitrogen in nitrates.....	0.0017
Free ammonia.....	0.0029
Albuminoid ammonia.....	5.7518
Hardness equiv to carbonate of lime, before boiling.....	2.6483
Hardness equiv. to carbonate of lime, after boiling.....	1.4579
Organic and volatile matter.....	7.6979
Mineral matter.....	9.1558
Total solids at 240 F.....	

These results are very satisfactory.

C. F. CHANDLER, Ph.D.

MAPLE SHADE, BURLINGTON COUNTY.—The water-supply of Maple Shade was introduced by a private company in 1896. Capacity of reservoir, 20,000 gallons. Number of taps, 50. Original cost of plant, \$3,500. The source from which the supply is obtained is an artesian well.

MAYWOOD.—The public water-supply was introduced in 1890. Pressure at which water is delivered varies from 50 to 90 pounds.

Number of taps, 87. Metres are used in all instances where water is supplied to consumers. The supply for the borough is furnished by the Hackensack Water Company, and the source of supply is the Hackensack river.

MEDFORD.—The public water-supply was introduced in 1895. The source from which the supply is obtained is Haines creek. Storage capacity, 80,000 gallons. Average pressure, 45 pounds. The plant is owned by a private corporation.

MERCHANTVILLE.—The water-supply, which is controlled by a private company, was introduced in 1887. The pumping capacity is 1,500,000 gallons a day. The reservoir has a capacity of 40,000 gallons. Average pressure, 30 pounds. Number of taps, 675. Water-rates, 30 cents per 1,000 gallons by metre. Original cost of plant, \$80,000. Artesian wells furnish the supply. The borough of Merchantville has no public sewer system.

METUCHEN.—The public water-supply was introduced in 1897, and is owned by a private company. Pumping capacity, 1,500,000 gallons per day. Water is obtained from five wells, 200 feet deep, located at South Plainfield. The stand-pipe has a capacity of 440,000 gallons. Pressure varies from 35 to 105 pounds. Following is a copy of an analysis of the water supplied by the Middlesex Water Company:

	Parts 100,000.	Grains per U. S. gallon of 231 cubic inches.
Appearance.....	Clear	.....
Color.....	Colorless	.....
Odor at 100 degrees Fahrenheit.....	None	.....
Chlorine.....	0.59	0.34
Phosphates.....	None	.....
Nitrogen in nitrites.....	None	.....
Nitrogen in nitrates.....	0.129	.....
Free ammonia.....	0.002	.....
Albuminoid ammonia.....	0.006	.....
Hardness equiv. to carbonate of lime, before boiling.....	9.000	5.2
Hardness equiv. to carbonate of lime, after boiling.....	.....	.....
Organic and volatile (loss on ignition).....	0.80	.....
Mineral matter (non-volatile).....	14.00	.....
Total solids (by evaporation).....	14.80	8.58

MIDLAND.—The public water-supply was introduced in 1882. Water is delivered at a pressure of from 70 to 90 pounds. Number of taps, 18. The supply is furnished by the Hackensack Water

Company, and the source of supply is the Hackensack river. The water which is furnished to consumers passes through metres.

MILLBURN.—The water-supply of Millburn is obtained from wells located at Green brook.

MILLVILLE.—The public water-supply was introduced in 1878. The pumping capacity is 2,000,000 gallons daily. The water is pumped to a stand-pipe, having a capacity of 100,000 gallons. Average pressure, 40 pounds. Number of taps, 800. Twenty metres are in use in the city. Total cost of plant, \$77,314.69. The works are owned by a private company. The source of supply is from an artesian well and from the Maurice river. Chemical analyses, which were made in 1898, showed that the water was wholesome and well adapted for household and drinking purposes. The sources of contamination which have been investigated on Maurice river, from which a portion of the supply is obtained, are located at Vineland. One of the contaminations consisted in dye-stuff which came from a rug factory. A sewer system is being introduced in Vineland for the purpose of lessening the contamination of Parvin's brook, which is a branch of the Maurice river.

MONMOUTH BEACH.—For statistics in regard to this locality, see Long Branch.

MONTCLAIR.—The public water-supply was introduced in 1888, and is furnished by the East Jersey Company. Pumping capacity, 3,000,000 gallons. The pressure must not be less than 50 pounds nor more than 100 pounds. Number of taps, 1,983. Water-rates are 30 cents per 1,000 gallons. Metres are used in all instances. Cost of plant at present date, \$350,000. The water-supply is obtained from the Pequannock water-shed and from a well. The city sewers are connected with the Orange trunk-sewer, and sewage is discharged into the Passaic river.

MOORESTOWN.—The public water-supply was introduced in 1888. Pumping capacity, 1,000,000 gallons a day. The water is pumped to a stand-pipe, having a capacity of 1,000,000 gallons. Average pressure, 45 pounds. Number of taps, 410. Original cost of plant, \$40,000. A private corporation owns the water-supply. The source from which the water is obtained is a pond fed by springs, and the north branch of Pensauken creek. There is no sewer system in Moorestown.

MORRISTOWN.—The public water-supply, which is owned by a private corporation, was introduced in 1899. The daily pumping capacity is 1,500,000 gallons. The combined capacity of the several reservoirs in use is 22,500,000 gallons. Water is delivered at a pressure of from 30 to 60 pounds. Number of taps, 2,000. Water is supplied to consumers chiefly through metres. The supply of water is obtained from springs.

MOUNT HOLLY.—The public supply of water for Mount Holly was introduced in 1846. The water is pumped to 2 reservoirs, having a combined capacity of 1,500,000 gallons. Average pressure, 40 pounds. Number of taps, 16. Fire hydrants, 65. Metres are used in only a few instances. Total cost of construction of plant, \$92,885.58. Ownership private. The water which is furnished to the city is obtained from the north branch of the Rancocas creek. The town has a sewer system which discharges into Rancocas creek. A recent examination of this stream showed that there were contaminations existing at Smithville, and a notice was sent by the State Board of Health to the owner of the machine works at that point to discontinue the contamination of the stream.

NEWARK.—The present water-supply was introduced in 1892. There are four storage reservoirs, having a capacity of 9,100,000 gallons each. The three distributing reservoirs have a capacity of 38,000,000 gallons. The water is delivered at a pressure of from 25 to 75 pounds. Number of taps, 33,000. About 900 metres are already in use. The plant is owned by the city, and its cost has been as follows: Distribution system, \$3,000,000; pumping plant, \$500,000; new supply, \$6,000,000; total cost, \$9,500,000. The city owns the supply. Water is obtained from the Pequannock river. The city is supplied with sewers, discharging into the Passaic river. The following schedule is printed for the purpose of comparison with rates in other cities:

DEPARTMENT OF WATER,
128 HALSEY STREET, NEWARK, N. J.,
January 1st, 1899.

Water Rates for Tenements.

	Per annum.
One family, supplied from hydrant or faucet.....	\$6 25
Two families, " " " " "	10 00
Three " " " " "	14 00
Each additional family using from same building	3 00

Fixtures in Tenements.

One kitchen boiler—For one family.....	\$1 25
" two families.....	2 00
" each additional family.....	75
One hot and cold bath—For one family.....	5 00
" two families.....	8 00
" each additional family.....	3 00
One cold bath—For one family.....	2 50
" two families.....	4 00
" each additional family.....	1 50
One water-closet—For one family.....	2 50
" two families.....	4 00
" each additional family.....	1 50

Rates for Private Dwellings and Flats.

Each family.....	6 25
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Baths.

One hot and cold, for one family.....	5 00
Two " " " " " ".....	7 75
Each additional, " " " ".....	2 75
One, cold only, " " " ".....	2 50
Two, " " " " " ".....	3 75
Each additional, " " " ".....	1 25

Kitchen Boilers.

Hot water for each family.....	1 25
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Water-closets.

One, for one family.....	2 50
Two, " " " ".....	3 75
Each additional one.....	1 25

Miscellaneous.

Saloons.....	\$3 00 to 10 00
Water-closets for saloons and public halls.....	5 00
Water-closet for store (each 10 persons or less).....	2 50
Urinal " " " " " " " ".....	2 50
Stores.....	1 50 to 3 00
Each clerk, additional.....	25
Drug store.....	5 00
Wholesale liquor store.....	5 00
Soda fountain.....	5 00
Bakeries (each barrel flour per day).....	3 00
Minimum for bakery.....	3 00
Stables, per stall.....	2 50
Horses only, no wagon washing.....	2 00
Cows.....	1 50
Restaurants.....	5 00 to 50 00
Aquariums.....	(special rate)
Greenhouses.....	(special rate)

Baths for public use, barber shops, hotels, &c.....	\$10 00
Barbers, per chair.....	2 50
Water closet.....	2 50
Urinal, self-closing.....	2 50
Dentist.....	5 00
Cuspidor and fixtures.....	3 00
Boarders and lodgers, each.....	50
Photograph galleries.....	7 50 to 15 00
Laundries (Chinese), 1 hand.....	7 50
Each additional hand.....	2 00
Church.....	6 00
Parochial schools, each scholar.....	05
Private schools, " ".....	25
Fire connection in building.....	15 00
Fire hydrants in yard, each.....	15 00
Use of water from fire hydrant, per hour.....	4 00
Pavement laid on concrete base, per lineal foot.....	01
Construction of sewers, per lineal foot.....	½c.

Hose Use.

Lot 25 x 100.....	\$3 00
Lot 50 x 100.....	5 00
Corner lot 25 x 100.....	5 00
Use of hose is restricted to 3 hours per day. Automatic lawn sprinklers must be metred.	

Building Purposes.

Brick, per thousand.....	10 cents.
Plastering, per hundred yards.....	35 "
Lime (extra), per bbl.....	10 "
Stone and concrete, per cubic yard.....	2½ "

Metre Rates.

Per thousand cubic feet (equal to 7,500 gallons).....	\$1 12½
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Water furnished for the following purposes must be metred: Factory supplies, fountain and automatic lawn sprinklers, all water used for power (such as motors, injectors, supplies for steam boilers, to furnish power, &c.), all constantly running streams, all hose used for more than three (3) hours per day, all supplies, except for one family-house or exclusively for fire service, furnished through a larger pipe than ½ inch.

Two per cent. discount will be made for each hundred dollars of annual charge, i. e., when the yearly charge amounts to \$100, two per cent. discount will be made; \$200 per annum, four per cent. discount; and so on until \$2,000 or the maximum discount of forty per cent is attained. Approximations of the discount will be made on each quarterly bill and the whole amount adjusted in the February quarter of each year.

Any consumer by metre may have the same tested by applying at this office, and agreeing to pay the expense of such test if the metre be found to register correctly. If not correct, the bill will be adjusted on the best information attainable, and no charge will be made for testing or resetting the same.

New Service.

½-inch service.....	\$14 00
1 " "	20 00

Connections of greater capacity than 1 inch will be made on application, at cost.

Application to have water introduced to the curb must be made at the office of the Water Department, by the owner of the property or by some person authorized to sign for the owner.

NEW BARBADOES TOWNSHIP.—See Hackensack.

NEW BRUNSWICK.—The water works at present in use were constructed in 1868. Since 1873 they have been owned by the city. Water is obtained from Weston's pond, which receives its supply from Lawrence brook. Capacity of reservoir, 14,000 gallons. Average pressure, 35 pounds.

NEWTON.—The public water-supply was introduced in 1895. The water is delivered at a pressure of from 74 to 149 pounds. Number of taps, 628. About 60 metres are in use. Original cost of plant, \$106,000. The municipality owns the plant. The source from which the supply is obtained is Morris lake, near Sparta, and the water comes to the town by gravity. The town has no sewer system.

NORTH BERGEN TOWNSHIP.—The water which is furnished to the inhabitants of North Bergen township is obtained from the Hackensack Water Company.

NORTH PLAINFIELD.—The water-supply for the borough of North Plainfield is furnished by the Plainfield Water Company, and the data relating to source, &c., will be found under Plainfield.

NUTLEY.—See Franklin township, Essex county.

OCEAN CITY.—The public water-supply was introduced by a private company in 1893. Pumping capacity, 2,000,000 gallons daily. The water is pumped to a stand-pipe, having a capacity of 190,000 gallons. Average pressure, 55 pounds. Number of taps, between 700 and 800. Metres are used. Average minimum rate, \$10 per year for 25,000 gallons. Original cost of plant, \$125,000. The supply is obtained from artesian wells. A sewer system has been introduced in Ocean City by a private company, and the sewage is discharged into Great Egg Harbor bay.

OCEAN GROVE.—The water works were constructed in 1882. Water is obtained from artesian wells. A stand-pipe is used for storage purposes. Average pressure, 40 pounds. Some metres are in use.

OCEAN TOWNSHIP.—A number of houses in the township are supplied with water from the Long Branch Water Company. For facts in regard to the source of supply, &c., see Long Branch.

ORANGE.—The city water works were constructed in 1882. The source of supply is the west branch of the Rahway river. The capacity of the reservoir is 274,000,000 gallons. An additional reservoir has been constructed within the past year for fire purposes. The water is supplied to the city by gravity. During the past year the attention of the State Board of Health was drawn to several contaminations of the Rahway river above the reservoir, and notice was served in each instance upon the offending parties. The sources of pollution were all removed.

PALISADES PARK.—The public water-supply was introduced in 1888. Water is furnished by the Hackensack Water Company from the pumping works at the borough of Delford. Water is delivered at a pressure of from 70 to 80 pounds. Number of taps, 51. Metres are used.

PALMYRA.—The water-supply for this borough was introduced in 1889. The pumping capacity is 2,000,000 gallons. Water is delivered at a pressure of from 40 to 55 pounds. For rates, see Riverton. Cost of plant, see Riverton. Water is obtained from a filtering well located near the Delaware river.

PASSAIC.—The public water-supply was introduced by the Passaic Water Company in 1872. The source of supply is the Passaic river above Paterson. Average pressure, 60 pounds. Number of taps, 2,700. The city has a sewer system, and sewage is discharged into the Passaic river.

PATERSON.—The public water-supply was introduced in 1851. Pumping capacity, 30,000,000 gallons per day. Number of reservoirs, 4. Capacity, about 40,000,000 gallons each. Filters are being introduced for use in future. Average pressure, 35 pounds. Number of taps, 11,000. Twenty per cent. of the consumers are supplied with water through metres. The water which is furnished to consumers is obtained from the Passaic river at Little Falls. The city has a system of sewers, discharging into the Passaic river four miles below the intake of the water-supply.

PEMBERTON.—The public water-supply was introduced in 1894. Pumping capacity, 300,000 gallons a day. The stand-pipe has a capacity of 93,000 gallons. Water is delivered at a pressure of 45

pounds. Number of taps, 125. Original cost of plant, \$8,500. A private company owns the plant. The supply is obtained from Ran-cocas creek.

PENNINGTON.—The water-supply for the borough was introduced in 1887. Pressure, 15 to 20 pounds. Number of taps, 100. Original cost of plant, \$8,500. A private company owns the supply. The water furnished to consumers is obtained from mountain springs. There is no sewer system in the borough.

PENSAUKEN TOWNSHIP.—A number of dwellings in Pensauken township obtain water from the Merchantville Water Company. For further facts, see Merchantville.

PERTH AMBOY.—The public water-supply is owned by the city, and was introduced in 1893. Pumping capacity, 7,000,000 gallons a day. Average pressure, 50 pounds. Number of taps, 1,600. Metre rates, from 7 cents to 25 cents per 1,000 gallons. Original cost of plant, \$350,000. The supply is obtained from springs and artesian wells, located on the south side of the Raritan river. The city has a sewer system, and sewage is discharged into the Raritan river and Staten Island sound.

PHILLIPSBURG.—The public water-supply for this city was introduced in 1886. The pumping capacity is 2,000,000 gallons per day. The capacity of the reservoir is 2,000,000 gallons. Water is delivered at a pressure of from 45 to 110 pounds. Number of taps, 1,200. Metres are used. The plant is owned by a private company. Water is obtained from the Delaware river and a spring. The city has a sewer system, and the sewage is discharged into the Delaware river below the city.

PLAINFIELD.—The public water-supply was introduced in 1891. The reservoir and stand-pipe have a combined capacity of 6,300,000 gallons. Water is delivered at a pressure of 70 pounds. Number of taps, 2,200 (including North Plainfield). Metres are used where the consumption of water is large. The water is supplied by a private company, and the source from which the water-supply is obtained is driven wells, located at Netherwood. The city of Plainfield has a system of sewers.

POINT PLEASANT.—The public water-supply was introduced in 1882. The pumping capacity is 750,000 gallons a day. The reservoir has a capacity of 21,000 gallons. Water is delivered at a pressure of 15 pounds. Number of taps, 50. A private company owns

the plant. The water-supply is obtained from driven wells. There is no sewer system in the borough.

PRINCETON.—The water-supply for the borough was introduced by a private company in 1883. Pumping capacity, 1,800,000 gallons a day. Capacity of stand-pipe, 142,000 gallons. Pressure varies from 45 to 75 pounds. Number of taps, 537. Metres are used wherever water is supplied. Original cost of plant, \$70,000. Water is obtained from wells. The borough of Princeton has a sewer system.

RAHWAY.—The public water-supply was introduced in 1871. Pumping capacity, 4,000,000 gallons per day. Water is pumped directly into the mains. Average pressure, 55 pounds. Number of taps, 1,000. Original cost of plant, \$185,000. The plant is owned by the city. The water for the public supply is obtained from the Rahway river. The city is supplied with sewers, discharging into the Rahway river.

Under the act approved March 17th, 1899, the State Board of Health was given power to examine into the pollution of streams, the waters of which are used for potable purposes, and to take legal action to stop contaminations of such streams. The examination of the Rahway river was begun September 23d, 1899, and the following pollutions were noted: A mile and one-half from Rahway are located what was formerly known as Bloodgood's mills, but at present the firm is known as the American Felt Company, Picton. The company manufactures several varieties of felt goods, and employs about 135 hands in carrying on the various operations. The water of the river, used in washing the raw material and in the manufacturing processes, becomes contaminated, and is also discolored by aniline dyes. Originally all the waste-water from the mills was allowed to flow directly into the river, but a sewer has been built by the company to carry the sewage to the river at a point below the intake of the Rahway water works. Before being discharged into the sewer waste liquids are conducted into three large settling basins, which have embankments separating the contents from the river, but, at the time of inspection, three places were noted where water, which was discolored with dyeing material, had overflowed the retaining banks and gone directly into the river. Two privies, for the use of operatives, were placed on the bank of one of the basins. Above Bloodgood's mills is Vreeland's mill, which is located on the Raritan road. At this point there was found a hog-pen, so located on the bank of the stream that

the foul liquids from the pen find their way into the river in times of heavy rain. From Vreeland's mill to Cranford no contaminations were noted. In the borough of Cranford no direct house-drain connections were found. There was one pipe found which discharged into a shallow ditch along the railroad track, but the ditch was dry for a considerable distance from the point where it connects with the river. April 25th, 1900, the Rahway river was inspected from the Central railroad tracks at Cranford to the road leading from Springfield to Elizabeth. Above Cranford the course of the river is through a swampy country and there are no houses located near it. A branch, known as the Normahiggin brook, joins the river about one mile above Cranford. Into this stream, at Garwood, there is discharged the waste liquids from twelve houses. One and one-half miles above Cranford there is a settlement known as New Orange. A number of new houses have been erected and new streets have been laid out. This locality was inspected for the purpose of ascertaining the relation of the houses to branches of the Rahway river. One brook, which discharges water into the river, has its source in New Orange. At present there is no direct pollution of its waters, but several houses are located quite near the brook. April 27th, 1900, an examination was made of the river within the limits of Millburn and Springfield. At Springfield and Hilton road the river is divided into two branches, one branch coming from Maplewood and South Orange and the other branch from Millburn, and a little further up the river an additional branch joins the main stream from the west, having its origin near Short Hills. At the Fandango Paper Mills it was found that about four tons of what are known as boards are made each day from waste paper of all descriptions. The washings from this mill, amounting to a large quantity, are allowed to flow directly into a ditch which discharges into the river at a point further down. The discharge of soiled water from the factory is of a gray color, and at times dye-stuffs are used which make the water black. Above the Fandango mill and along the main street leading from Millburn to Springfield three premises were examined. These premises are located just below the old dam. There are two tenement houses situated along the river bank, and behind each house a water-closet is placed within five feet of the stream. Slops and household refuse of all kinds are emptied directly into the brook. Beyond these houses is a property which is used as a plumbing store, with a dwelling above and also a library. A privy in the

rear of this store is placed directly over the waters of the river, and a six-inch sewer discharges household waste at a point near where the privy is located. At a point on South Orange avenue, and east of Millburn avenue, the following contaminations were found: On the hotel premises, belonging to Charles and Julius Wittkoppe, two privy-vaults were placed and a house-drain so located as to discharge directly into the brook. Garbage is also thrown on the bank of the stream. On the westerly side of the stream, from South Orange avenue to the railroad, four houses were found which had house-drains discharging directly into the brook. Above the Delaware, Lackawanna and Western railroad, in Millburn, is located the Diamond Paper Mill. The waste liquids from this mill are discharged directly into the river. The branch of the stream which has its origin in Short Hills was examined, and it was ascertained that sewage from houses in Short Hills is discharged upon a field which is along the branch stream, but there is a bank between the sewage-disposal works and the brook. No direct contamination of the stream was found at this point. The branch of the river which has its origin in Short Hills was then examined, starting at a point in Millburn. On the road leading to South Orange is located a mill operated by Louis Pierson. The privy vault on these premises is located within three feet of the raceway. The vault, however, is walled up, so that the contamination, if any, is indirect. At South Orange avenue, west of the Delaware, Lackawanna and Western tracks, there is a stable located on the premises owned by Peter Bierne, and a pile of manure was so placed that in times of rain the washings from it would find their way into the brook. The water-closet is also located within ten feet of the brook. Beyond South Orange avenue a tributary joins the main stream from the east side. This tributary has its course in the rear of houses and streets on the north side of South Orange avenue. No direct contaminations were found on this branch within the more thickly-settled portion of South Orange, but at a point somewhat further east a small rivulet runs into the brook from the south side of South Orange avenue. There is a culvert under South Orange avenue at this point, and four houses, owned by Mr. Polhemus, located on South Orange avenue, discharge liquid waste from sinks and bathtubs into the culvert. The portion of the east branch of the river extending from Orange to South Orange was then examined. A short distance above South Orange it is noticed that the color of the water of the stream becomes

darker, and that dye-stuffs are undoubtedly discharged into the stream within the limits of Orange. Beyond the Orange city line there discharges into the stream what is known as a storm sewer, which is, in reality, a continuation of the original east branch of the river. The storm sewer is, for the most part, covered, and drains are laid into it from various directions, but throughout the whole district, on either side of the storm sewer, the city of Orange has provided a sanitary sewer, so that it is possible for mill-owners and others to drain into the sanitary sewer, but, instead of this, they continue to make use of the storm sewer. The following is the list of factories which discharge directly into the storm sewer: Frederick Berg & Co., hat factory, located on South Jefferson street. The refuse from this factory runs into the sewer on Nassau street. Austin & Drew, hat factory. Refuse and dye-stuff from this factory discharge into the brook on Nassau street, and thence to the storm sewer on South Jefferson street. E. G. Connett & Co., located on South Jefferson street, hat factory. From the point where the storm sewer joins the east branch of the Rahway river the examination of the main stream showed that there were sixteen points at which house-drains discharged into the brook. The action taken in the above-described cases is as follows: Thirty-three notices have been sent to owners of properties upon which there was evidence of contamination of the river by either the improper location of privy vaults, or by the discharge of waste liquids into the river, or of factory waste. The contamination at Bloodgood's mills was immediately stopped. Eight sources of contamination were removed in Millburn. In South Orange legal action has been started for the purpose of disconnecting house-drains from four houses. In Orange two of the factories, namely, the factory operated by Frederick Berg & Co. and also the one operated by Austin & Drew, have disconnected from the storm sewer and connected with the sanitary sewer. A bill has been filed in Chancery against the Diamond Paper Mill, and it is the intention of the board to take up the prosecution of all persons contaminating the river with as much rapidity as circumstances will permit.

RARITAN.—The water-supply for this borough is furnished by the Somerville and Raritan Water Company. For a statement as to the source of supply and other data, see Somerville.

RED BANK.—The water plant was installed in 1885, and is owned by the city. Pumping capacity, 600,000 gallons a day. The reser-

voir has a capacity of 850,000 gallons. Average pressure, 42 pounds. Number of taps, 600. Metres are used throughout the town. Original cost of plant, \$85,000. The source from which the supply is obtained is artesian wells. The town has a sewer system which discharges into a tidal stream.

RIDGEFIELD.—The public water-supply was introduced in 1900. Water is delivered at a pressure of from 50 to 70 pounds. A stand-pipe is in use. Number of taps, 61. (This includes Fort Lee and Coytesville.) The public supply is furnished by the Hackensack Water Company.

RIDGEFIELD PARK.—The public water-supply was introduced in 1891. Water is furnished by the Hackensack Water Company, and the source of supply is the Hackensack river. Water is delivered at a pressure of from 70 to 90 pounds. Number of taps, 284. Metres are used.

RIDGEWOOD.—A supply is being introduced into this village by the Bergen Aqueduct Company. The capacity of the stand-pipe will be 440,000 gallons. Pressure will vary from 40 to 110 pounds. The source of supply is from wells 200 feet in depth. There are no sewers in the village.

RIVERSIDE.—The public water-supply was introduced in 1882. Water is furnished to the borough by the Hackensack Water Company, and the source of supply is the Hackensack river. Water is delivered at a pressure of from 80 to 100 pounds. Number of taps, 42. Metres are used.

RIVERTON AND PALMYRA were originally a part of Cinnaminson township. The water-supply for Riverton borough was introduced in 1889. Two pumps have been installed, having a pumping capacity of 1,000,000 gallons each a day. The capacity of the stand-pipe is 400,000 gallons. The water is delivered to consumers at a pressure varying from 40 to 55 pounds. There are 761 taps. Water-rates: Kitchen tap, \$6; bath, \$4; closet, \$3; washstand, \$1. Metres are used only in exceptional cases. Eighty thousand dollars has been expended on the plant. It is owned by private parties. The water is obtained from a well located near the bank of the Delaware river, and filtration occurs through a gravelly soil. There is a sewer line reaching down the main street of the borough of Riverton, which discharges into the Delaware river.

ROCKAWAY.—The public supply, which is owned by the borough,

was introduced in 1897. Water is furnished by gravity. Capacity of reservoir, 1,125,000 gallons. Pressure, 110 pounds. Number of taps, 59. Original cost of plant, \$25,000. The water supplied to consumers is obtained from White Meadow brook. There are no sewers in the borough.

ROSELLE.—See Westfield.

RUTHERFORD.—The public water-supply was introduced in 1890. Water is delivered at a pressure of from 35 to 55 pounds. Number of taps, 861. Metres are used in supplying consumers. The water is supplied by the Hackensack Water Company, and the source of supply is the Hackensack river.

SALEM.—The public water-supply was introduced in 1882. Pumping capacity, 1,500,000 gallons per day. Average pressure, 30 pounds. Number of taps, 500. Cost of plant, \$75,000. The plant is owned by the city. The water-supply is obtained from artesian wells and a small stream, but the water taken from the stream is filtered before it is delivered to consumers. The city has a sewer system, and the sewage is discharged into Salem creek.

SEA ISLE CITY.—The public water-supply was introduced in 1896. Pumping capacity, 432,000 gallons per day. The stand-pipe has a capacity of 60,000 gallons. Average pressure, 40 pounds. Number of taps, 216. Metres are used. The plant is owned by a private company. The water is obtained from an artesian well. A sewer is just being constructed, and the discharge will be into the thoroughfare back of the borough.

SEWAREN.—For source of supply, &c., see Metuchen.

SHORT HILLS.—The water-supply for Short Hills is furnished by the Short Hills water works, and the plant was constructed in 1878. The pumping capacity is 2,500,000 gallons. Water is pumped to a stand-pipe, having a capacity of 100,000 gallons. There is ample storage capacity for large quantities of water, but not more than one or two days' supply is kept in storage. The water is pumped from artesian wells directly into the surface pipes and reservoir. Pressure varies from 40 to 120 pounds. Metres are employed where large quantities of water are used. Sewage is carried to a disposal field, and is there cared for by downward filtration. A small part of Springfield and of Millburn is supplied with water by the Short Hills Water Company.

SOMERVILLE.—The public water-supply for Somerville was introduced by a private company in 1881. Pumping capacity, 2,000,000 gallons per day. The water is pumped to a stand-pipe, having a capacity of 850,000 gallons. Average pressure, 50 pounds. Number of taps, 800. A few metres are used. The water is filtered before it is delivered to consumers. Original cost of plant, \$50,000. The water which is furnished to Somerville by the company is taken from the Raritan river, at Raritan. There is a system of sewers in Somerville.

At the request of the boards of health of Somerville and Raritan an investigation was made, by the State Board of Health, of supposed contaminations of the Raritan river above the point from which the water-supply was taken by the Somerville and Raritan Water Company. A short distance above the water works a small stream discharged into the water power, and this stream was so located as to receive the drainage from a quite thickly populated section. It was deemed advisable therefore to deflect this water, and the water company carried it by pipes under the water power and so on directly into the river. In two other instances where house-drains were found to discharge into the water power notice was sent to the owner and the contamination ceased. A chemical analysis was made of the water supplied to consumers in Raritan and Somerville, and the result of the examination showed that although the water before filtration carried large quantities of organic matter, that after filtration it was safe for domestic use.

SOUTH AMBOY.—The water-supply for South Amboy is furnished by the city of Perth Amboy, and was introduced in 1894. Water is supplied by gravity. Average pressure, 50 pounds. Number of taps, 75. Original cost of plant, \$30,000. The plant is owned by the borough.

SOUTH PLAINFIELD.—For source of supply, &c., see Metuchen.

SOUTH ORANGE TOWNSHIP.—The water-supply of South Orange township is obtained from wells located at Green Brook.

SOUTH ORANGE.—The public water-supply was introduced in 1890. The supply is furnished to the village by the Essex Union Water and Light Company, of Summit. Average pressure, 90 pounds. Number of taps, 630. Water-rates, 15, 16, 20 and 24 cents per 1,000 gallons. Metres are used. Original cost of plant, \$48,000. The source from which the water-supply is obtained is

artesian wells, located on Canoe brook. No sewer system has been introduced in South Orange.

SPRINGFIELD.—See Short Hills.

SPRING LAKE.—The water-supply was introduced July 1st, 1899. The pumping capacity is 1,500,000 gallons a day. The reservoir has a capacity of 74,000 gallons. Average pressure, 30 pounds. Number of taps, 98. Metres are used in hotels and livery stables. Cost of plant, \$28,000. The plant is owned by the borough. The source of supply is artesian wells. A sewer system has been introduced in the borough, which has its outfall into the ocean.

SUMMIT.—The water-supply for the city of Summit is obtained from wells near Greenbrook. One of the wells is 187 feet in depth, and there are two open wells 30 feet in depth and 30 feet in diameter, also a tunnel and filter gallery. There are about 1,000 connections in the town. The Essex Union Water and Light Company, having its offices located at Summit, also supplies the following places: Millburn, South Orange township, South Orange village, Vailsburg, Irvington and West Orange.

TENAFLY.—The public water-supply for this borough was introduced in 1886. Average pressure, 70 pounds. Number of taps, 191. The water for the use of the borough is furnished by the Hackensack Water Company, and the source of supply is the Hackensack river.

TOMS RIVER.—The public water-supply was introduced in 1898. Pumping capacity, 750,000 gallons per day. Capacity of stand-pipe, 60,000 gallons. Average pressure, 60 pounds. Number of taps, 180. Cost of plant, \$20,000. A private corporation controls the supply. The water which is furnished to the town is obtained from three six-inch tube wells having a depth of thirty-nine feet. The wells are located within 100 feet of a stream, and the filtration is rapid enough to make the supply ample.

TRENTON.—The public water-supply for the city of Trenton was introduced in 1802, but large additions have been made since that time. The pumping capacity is 16,000,000 gallons a day. The water is pumped into two reservoirs, one having a capacity of 27,000,000 and the other 110,000,000 gallons. Water is delivered at a pressure of 34 pounds. Number of taps, 12,065. Metres are used in the cases of large consumers. The original cost of the plant was \$100,000. The source from which the supply is obtained is the Delaware river. The sewage of the city is discharged into the Delaware river below the intake. During the past year, on account of an

increased number of cases of typhoid fever in the city of Trenton, the attention of the city authorities was directed towards ascertaining, if possible, whether the public water-supply was the cause of the outbreak. The matter was referred to the Secretary of the State Board of Health, and his report is as follows:

To the Board of Health of the State of New Jersey:

GENTLEMEN—Inspections of the Delaware river, between Trenton and Phillipsburg, have been made from time to time during the past five years. On the 14th of June, 1899, an inspection was made in the vicinity of Phillipsburg and Easton and the record shows that in Phillipsburg it is the practice to dump refuse on the bank of the river in a manner which permits more or less of the refuse material to fall into the water. At Easton it was found that garbage is collected, placed in barrels, transferred to the middle of the stream by boat, and there emptied into the water. At numerous points the river receives more or less polluting material. An examination of a specimen of the water of the Delaware river at the Water Gap, made under the direction of Professor J. C. Smock, State Geologist, shows that in one million parts there are of total solids, 48.00; of chlorine, 6.60; of free ammonia, 0.04; albuminoid ammonia, 0.07. The examination, made May 23d, also under the direction of Professor Smock, of specimens of water of the Delaware river, taken at Lambertville and at the Calhoun street bridge in Trenton, shows the following results:

	PARTS PER MILLION.	
	Lambertville.	Calhoun St. bridge, Trenton.
Total solids.....	78.00	80.00
Chlorine in chlorides.....	6.60	6.60
Free ammonia.....	0.11	0.12
Albuminoid ammonia.....	0.05	0.08
Nitrogen in nitrates.....	0.005	0.01
Nitrogen in nitrites.....	0.005	0.01

It will be seen by examining the results of the analyses above stated that the water of the river deteriorates as it passes down stream. The quantity of free ammonia is materially increased between the Water Gap and Lambertville, and still further increased between Lambertville and Trenton. The quantity of total solids is also very materially increased, suspended matter being carried by the river in larger quantities as it proceeds along its course.

Examinations of the water of the Delaware river during the week ending January 27th, 1900, show the following result:

	PARTS PER MILLION.	
	Intake at Trenton water works.	Faucet in State House.
Total solids in filtered water.....	60.00	68.00
Total organic and volatile matter.....	40.00	28.00
Total salts, mineral matter.....	20.00	40.00
Chlorine.....	7.73	2.66
Free ammonia.....	0.10	0.10
Albuminoid ammonia.....	0.14	0.08
Nitrogen in nitrates.....	1.00	1.50

These later analyses show increased proportions of chlorine and albuminoid ammonia at the intake of the water works, near Calhoun street bridge. The specimen taken from a faucet in the State House shows a smaller proportion of chlorine and albuminoid ammonia. It appears from a study of the foregoing statements of results of examinations of the water of the Delaware river that the quantities of chlorine, free ammonia, albuminoid ammonia and nitrates present indicate continuous and gross pollution, and while it is not demonstrated that the water is carrying typhoid bacteria, there can be little doubt in regard to this question, and it appears highly probable that outbreaks of typhoid fever will continue to reappear in the city of Trenton until provision is made for the purification of that portion of the river water which is used for drinking purposes. It is beyond the province of this board to recommend the particular methods which shall be chosen by the city authorities for the exclusion of the dangerous materials carried by the water, this being an engineering problem which should be settled by submitting the questions involved to a sanitary engineer.

Very respectfully,

HENRY MITCHELL,
Secretary.

TRENTON, N. J., January 30th, 1900.

To the Board of Health of the State of New Jersey:

GENTLEMEN—Accompanied by Dr. A. C. Hunt, I inspected the overflow from the feeder of the Delaware and Raritan canal, at the point where it discharges into the water-power in the city of Trenton, north of the Calhoun street bridge, with the object of learning whether the waters flowing from the feeder pass into the overflow from the water-power into the Delaware river. It was found (1) that a large quantity of water was flowing from the feeder into the water-power, and (2) that the water-power was filled to overflowing, and that a large volume of water was discharged from the water-power over the spillway into the river. At a point in the waste-weir, from the feeder into the water-power, about fifty feet from the water-power, a quantity of fluorescin was placed in the water flowing from the feeder, and the discoloration caused by the fluorescin was observed to enter the water-power, flow about one-third of the way across the water-power, and then pass down with the current in the water-power, and none of the discolored water from the feeder flowed across the water-power, nor did any of it reach the spillway from the water-power into the river. The experiment above described was repeated by the use of a float, and it was found that the force of the current carried the float from the feeder waste-weir down stream in the water-power, and that the water from the feeder did not flow across the water-power into the spillway from the water-power into the river. Opportunity has been, for many months, sought to make the foregoing experiments, it being necessary that a time should be selected when the water-power was running full and overflowing through the spillway into the river, and when, at the same time, a discharge of water was occurring from the feeder into the water-power. At the time of this observation these conditions were found to exist exactly as required for making a convincing demonstration.

From the foregoing facts it may be conclusively stated that, under ordinary conditions, the waters discharged from the feeder at the point above described do not pass across the water-power and flow over the spillway into the Delaware river.

Very respectfully,

HENRY MITCHELL,
Secretary.

TRENTON, N. J., February 13th, 1900.

Allen D. Hazen, C.E., has been employed by the water commissioners of the city of Trenton to advise what measures shall be taken to purify the water supplied to consumers.

TUCKERTON.—The water-supply for Tuckerton is controlled by a private company, and was introduced in 1898. Pumping capacity, 25,000 gallons. The water is pumped to a tank, which has a capacity of 45,600 gallons. Average pressure, 35 pounds. Number of taps, 92. The supply is obtained from a mill-pond, located in the village. There are no sewers in the village.

UNION.—The public water-supply was introduced in 1883 by the Hackensack Water Company. The water is taken from the Weehawken high service reservoir, and is delivered at a pressure of from 25 to 45 pounds. Number of taps, 1,653. Metres are used in all cases where water is supplied to consumers. The ownership of the plant is private. The source of supply is the Hackensack river at New Milford.

VALLSBURG.—The public water-supply was introduced in 1889. Average pressure, 80 pounds. Number of taps, 146. Water rates, 30 cents per 1,000 gallons. Metres are used where the consumption is large. Original cost of plant, \$43,000. The municipality purchases the water from the Summit Water Company. Source of supply, driven wells, located on Canoe brook.

VINCENTOWN.—The public water-supply of Vincentown was introduced in 1896. The pumping capacity is 900,000 gallons per day. A stand-pipe, having a capacity of 86,000 gallons, is used for storage purposes. Water is delivered at a pressure of 50 pounds. Number of taps, 118. Original cost of plant, \$10,300. A private company controls the supply, which is obtained from the south branch of the Rancocas creek. There are no sewers in the town.

VINELAND.—The water-supply of the borough was introduced by a private company in 1886. Pumping capacity, 1,000,000 gallons a day. Capacity of tank to which water is pumped, 105,000 gallons. Average pressure, 40 pounds. Number of taps, 1,500. The water which is furnished to the city is obtained from driven wells. A sewer system is at the present time under construction in the borough.

WALLINGTON.—The public water-supply was introduced in 1893. The pressure at which water is delivered varies from 50 to 70 pounds. Number of taps, 62. The Hackensack Water Company furnishes the supply, and water is obtained from the Hackensack river. Metres are used.

WASHINGTON.—The public water-supply was introduced by a private company in 1882. Capacity of reservoir, 1,000,000 gallons. Water is delivered at a pressure of 78 pounds. Number of taps, 450. Twelve metres are in use. Original cost of plant, \$40,000. The water which is furnished to consumers is obtained from a mountain stream. There is no public sewer system in the borough.

WEEHAWKEN.—The public water-supply for Weehawken was introduced in 1882, by the Hackensack Water Company. The pumping capacity is 8,000,000 gallons a day, and a high service tower is in use. There are two reservoirs having a combined capacity of 45,000,000 gallons. No filters are used. Pressure varies from 35 to 60 pounds, and in the low service mains it is as high as 75 pounds. Number of taps, 707. All the public supply is furnished through metres. The ownership of the plant is private. The source of supply is the Hackensack river at New Milford. Analyses have been made and they are satisfactory.

WENONAH.—The water-supply for the borough was introduced by a private company in 1885. Capacity of stand-pipe, 132,000 gallons. Average pressure, 65 pounds. Number of taps, 102. Original cost of plant, \$25,000. The water which is furnished to the borough is obtained from six artesian wells, which are 200 feet in depth. The borough has introduced sewers.

WESTFIELD.—The public water-supply was introduced in 1892. The pressure varies from 50 to 100 pounds. Number of taps, 1,144 (including those in Cranford, Fanwood and Roselle). The plant is owned by a private corporation. The supply of water is obtained from wells located near Plainfield.

WEST HOBOKEN.—The public water-supply is furnished by the Hackensack Water Company, and was introduced in 1883. Average pressure, 25 to 40 pounds. Number of taps, 2,059. All water supplied to consumers passes through metres. The source of supply is the Hackensack river at New Milford.

WEST ORANGE.—The water-supply of West Orange is obtained from the Montclair Water Company.

WESTWOOD.—The water-supply for the borough was introduced in 1894. Pumping capacity, 500,000 gallons per day. The reservoir has a capacity of 1,000,000 gallons. Average pressure, 40 to 45 pounds. Number of taps, 100. Average rate per dwelling, \$12. Metres are used. The supply is furnished by a private company. The water is taken from springs. There is no public sewer system in the borough.

WILDWOOD.—The public water-supply was introduced in 1896. Pumping capacity, 360 gallons per minute. Capacity of stand-pipe, 60,000 gallons. The pressure varies from 40 to 46 pounds. Number of taps, 126. Metres are used. Original cost of plant, \$40,000. A private company owns the works. The source from which the water-supply is obtained is two artesian wells between 800 and 900 feet deep. The borough of Wildwood has a partial sewer system, and sewage is discharged into a vault on the edge of the meadows.

WOODBIDGE.—The water-supply is obtained from the Middlesex Water Company. For source of supply, &c., see Metuchen.

WOODBURY.—The public water-supply for the city of Woodbury was introduced in 1886, and the plant is owned by the city. Pumping capacity, 1,250,000 gallons per day. The reservoir has a capacity of 1,250,000 gallons. Water is delivered at a pressure of 45 pounds. Number of taps, 800. Original cost of plant, \$72,000. The supply of water which is furnished to the city is obtained from the upper portion of Mantua creek. There are no sewers in the town.

WOODSTOWN.—The public water-supply, which is owned by the borough, was introduced in 1892. Pumping capacity, 750,000 gallons per day. The stand-pipe has a capacity of 87,000 gallons. Water is delivered at a pressure of 55 pounds. Number of taps, 150. Water-rates, hydrant, \$5; bath, \$3; closet, \$2. Original cost of plant, \$30,000. Artesian wells furnish the supply. There is no public sewer system in the borough.

Report of Bacteriologist.

LABORATORY OF HYGIENE
OF THE STATE OF NEW JERSEY,
PRINCETON, October 22d, 1900. }

To the Board of Health of the State of New Jersey :

GENTLEMEN—I have the honor to submit the following report on the work done in this laboratory during the year ending October 1st, 1900. The character and amount of the work, with its geographical and chronological distribution, are shown in the following paragraphs and tables.

The management of the laboratory and the conduct of the work have been as in previous years. The work of the laboratory has consisted in bacteriological and microscopical examination for diagnostic purposes of specimens sent to the laboratory by the physicians and health officers of the State. We have also assisted in experiments on the power and practical application of chemical agents of disinfection.

The clinical reports received, with the specimens to be examined for each disease separately, are numbered in the order in which they are received, and kept on file as a record. Secondary and subsequent examinations from the same cases are given the same numbers as the original examinations, with an additional number to indicate the repetition. The same numbers appear on the reports of the examinations returned to the senders of the specimens. Carbon copies of the reports of examinations are kept on file in alphabetical order, according to the names of the patients, for each disease separately. Copies have been made in tabular form of the data in the clinical reports of every case examined, together with the laboratory number of the case, the result of the examination and the county from which the specimen was received. These tabular copies are kept as a more concise record of the work of the year.

Specimens are frequently received without the proper reports. In

some instances the physician writes his name and omits to write his address, or gives his street number without the name of his city. When this occurs, an attempt, usually successful, is made to locate the sender by means of our list of physicians, or in some other way. Occasionally, no report whatever accompanies the specimen. Some such cases have been located and reported by means of correspondence with the board of health or druggist in charge of the repository in the town where the package was post-marked. A few specimens have been received with no report whatever, and no post-mark, and hence could not be reported until complaint or inquiry was made, and where no complaint or inquiry was made, were never reported.

Specimens are received mainly through the mails. Regulation mailing packages are furnished with printed blanks and directions for sending specimens, in suspected cases of diphtheria and tuberculosis. Specimens received in these packages are very satisfactory, when the directions are accurately followed. It seldom occurs that a satisfactory examination cannot be made when specimens are collected and sent according to directions given. The method adopted for sending blood dried on paper for typhoid fever examinations by Widal's reaction test has not proved so satisfactory, and a new method has been adopted. The principal difficulties, however, have arisen from careless preparation of the specimens rather than from the use of paper in itself. Glass slides will therefore be furnished in future. These are enclosed in wooden boxes to prevent breakage in transportation.

The laboratory is not so generally made use of in cases of suspected gonorrhœa and malaria as in the above-mentioned diseases, and the adoption of a regular package for these specimens has not yet been effected. We expect to institute some system in these cases as soon as the demands seem to require it.

Specimens are occasionally examined from cases suspected of having other diseases than those above mentioned. These cases are, however, too varied in character and few in number to be well classified or included in the tables which follow.

At best more or less unsatisfactory specimens must be expected occasionally, even when physicians give careful attention to the preparation and sending of the specimens. This difficulty is increased by careless preparation and neglect to follow directions. In many instances evidence is seen in the specimens and the reports which accompany them, that physicians have neglected to give any personal atten-

tion to collecting and forwarding the specimens, and have entrusted the matter not to skilled nurses, but to the patients themselves or some other persons who have no knowledge in the matter, and some of whom neglect to use common sense. In several instances physicians have frankly stated or directly admitted that they had not prepared or forwarded the specimens which bore their names but had entrusted the matter to others. On account of badly prepared specimens due to the above-stated causes and for various accidental reasons, it occasionally occurs that no satisfactory examination can be made of the specimens received and they are reported unsatisfactory or doubtful.

Regulation mailing packages are furnished to physicians and health officers through the medium of repositories at drug stores and offices of boards of health. Where no such repositories are established and where there are no suitable places for them, the packages are sent directly from the laboratory to the physicians requiring them. New stations are established from time to time as the demands appear. A considerable number have thus been added during the year. Supplies have been provided to furnish one hundred new stations, most of which we expect to establish within the next few weeks, and the others as they may be called for. It is expected thus to extend the conveniences of the laboratory to every considerable village in the State and place its facilities within the reach of all physicians and health officers.

As mentioned above, the diagnostic work has consisted chiefly in the examination of specimens from suspected cases of the following diseases: Diphtheria, tuberculosis, typhoid fever, gonorrhœa and malaria. During the year 2,380 such specimens have been examined. There has been comparative uniformity in the number of specimens examined during the different months of the year, the smallest number being 149 in July, and the largest being 233 in November. The dates used in this count, and in the following tables, are the dates of sending the specimens, as given in the clinical report, rather than the dates of returning the reports of examinations. The number of specimens received from the different counties differ widely. This is, perhaps, due in part to the differences in the population and the prevalence of these diseases in the different counties, but is probably much more largely due to the difference in the use made of the laboratory by the physicians in the various localities. The smallest number of specimens received from any one county during the year

was 6 from Cape May county, and the largest was 408 from Union county. The other numbers range between these figures, as shown in the following table (Table I.)

Certain specimens which were never reported, for reasons stated above, are included in the table under "County unknown." A more complete description of the work in general will be found in the following table.

DIAGNOSTIC WORK.

This table shows the number of specimens examined for each disease and the total for all diseases, and their distribution by counties throughout the State and by months throughout the year.

TABLE I.
Diagnostic Work.

COUNTY.	Diseases.	MONTHS.										Entire year.		
		October.	November.	December.	January.	February.	March.	April.	May.	June.	July.		August.	September.
Atlantic.....	Diphtheria....	1	1	0	5	2	2	0	0	5	0	1	0	17
	Tuberculosis..	1	0	0	3	2	3	0	3	1	0	1	0	14
	Typhoid.....	2	0	0	1	0	2	0	0	0	7	10	9	33
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	4	1	0	9	4	7	0	5	6	7	12	9	64
Bergen.....	Diphtheria....	1	1	8	3	9	3	7	9	2	2	5	16	67
	Tuberculosis..	1	3	2	5	7	9	5	5	4	4	4	2	51
	Typhoid.....	1	1	2	3	1	3	0	0	2	2	2	13	30
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	1	0	0	0	0	0	0	0	0	0	0	0	1
	Total.....	4	5	12	11	17	15	12	14	9	8	11	31	149
Burlington.....	Diphtheria....	3	4	6	12	16	18	1	0	0	0	0	0	60
	Tuberculosis..	2	7	3	1	5	3	4	2	4	2	2	3	38
	Typhoid.....	3	1	0	3	4	3	3	3	7	5	8	3	43
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	8	12	9	16	25	24	8	5	11	7	10	6	141
Camden.....	Diphtheria....	7	3	7	5	6	2	5	2	1	7	4	3	52
	Tuberculosis..	6	6	5	7	4	7	8	7	5	3	8	4	70
	Typhoid.....	0	3	0	0	1	0	0	3	3	2	4	2	18
	Gonorrhoea....	1	1	0	0	0	0	0	0	0	1	0	0	3
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	14	13	12	12	11	9	13	12	9	13	16	9	143
Cape May.....	Diphtheria....	0	0	1	1	0	0	0	0	0	1	0	0	3
	Tuberculosis..	0	0	0	1	2	0	0	0	0	0	0	0	3
	Typhoid.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	0	0	1	2	2	0	0	0	0	1	0	0	6
Cumberland.....	Diphtheria....	1	0	1	9	1	5	0	0	1	0	0	0	18
	Tuberculosis..	2	4	2	2	4	7	9	10	1	2	12	4	59
	Typhoid.....	1	3	1	2	2	2	2	0	1	2	2	7	25
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	4	7	4	13	7	14	11	10	3	4	14	11	102
Essex.....	Diphtheria....	2	3	4	2	5	4	5	9	5	0	2	0	41
	Tuberculosis..	7	8	19	9	7	9	10	13	11	10	7	5	115
	Typhoid.....	5	2	4	9	5	8	5	5	5	6	9	13	81
	Gonorrhoea....	0	1	0	0	0	0	0	0	0	0	1	0	2
	Malaria.....	0	2	0	0	0	0	1	6	2	2	1	4	18
	Total.....	14	16	27	20	17	21	21	33	23	18	20	27	257
Gloucester.....	Diphtheria....	0	0	0	1	0	2	0	0	0	0	0	0	3
	Tuberculosis..	1	1	1	0	1	1	3	2	2	0	3	1	16
	Typhoid.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Gonorrhoea....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria.....	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total.....	1	1	1	1	1	3	3	2	2	0	3	1	19

DIPHTHERIA.

The following paragraphs and tables give more in detail the descriptions of the cases examined for the different diseases, and the results of the examinations. As will be seen in the next table (Table II., Diphtheria), seven hundred and ninety-four specimens have been examined for the diphtheria bacillus. Excluding repetitions from the same case, specimens have been examined from 654 cases, of which 271 showed the presence of diphtheria bacilli. Some other cases were doubtless true diphtheria, for in many instances physicians have relied upon the clinical diagnosis for the treatment of the disease, and have sent specimens to the laboratory only to determine when the case ceased to be infectious. This is often so stated in the clinical report, but might be inferred from the number of primary examinations made after from one to six weeks' duration of the disease. In the portion of the table (Table II.) relating to duration, it will be seen that the greater number of examinations are made during the first day of the disease. The duration "one day or less" in the table includes many cases of from only two to six hours' duration and many others where no evidence of disease is seen, but the patient has simply been exposed to danger, real or supposed.

Under clinical diagnosis it appears that many cases diagnosed diphtheria fail to reveal the presence of the diphtheria bacillus. Many such results are due to the fact mentioned above, that the case had recovered before the first bacteriological examination was made. Other cases were due to deceiving clinical appearances at the early stages of the disease. Many cases which were diagnosed tonsilitis, or some other disease, did reveal the presence of diphtheria bacilli. A few cases, as shown in the table, gave positive results on second examination which were negative or doubtful when first examined. Some of these cases may be due to the unavoidable accidents or chance. Most of them may be accounted for by the fact that the first specimen proved unsatisfactory and no diagnosis was made, and by the further fact that in some instances the first examination was made as soon as the patient was exposed to danger, before the disease had started.

The following table shows the number of examinations for diphtheria bacilli during the year; how many of these were primary and how many secondary or subsequent; of the primary examinations, the number of

positive, negative and doubtful results; of the secondary examinations, the number of positive and negative results, and the number that were positive on the second examination after being negative or doubtful at the first examination; the total number of cases showing positive results, excluding repetitions from the same case; and shows in cross-table the approximate age of patients, duration of disease, and clinical diagnosis for each case.

TABLE II.
Diphtheria.

Results.....	PRIMARY EXAMINATIONS.				SECONDARY AND SUBSEQUENT EXAMINATIONS.				ALL EXAMINATIONS.	
	Positive.	Negative.	Diagnosis not made.	All primaries.	Positive.	Negative.	Positive after negative or doubtful primary.	All secondaries.	Total positives, exclusive of repetitions.	Total examinations.
All cases examined.....	262	332	10	654	170	150	9	320	271	974
Age.....										
1st decade.....	153	137	5	295	107	65	4	172	157	467
2d decade.....	66	107	3	176	39	31	2	70	68	246
3d decade.....	16	58	0	74	11	13	0	24	16	98
4th and 5th decade.....	12	38	0	50	8	16	1	18	13	68
6th decade and above.....	1	8	0	9	0	0	0	0	1	9
Not stated.....	14	84	2	50	5	31	2	36	16	86
Duration.....										
1 day or less.....	80	90	1	171	0	0	0	0	80	171
2 days.....	47	90	0	137	0	0	0	0	47	137
3-7 days.....	71	97	6	174	15	12	2	27	73	201
2d week.....	24	21	0	45	58	36	3	94	27	139
3d and 4th week.....	18	19	1	38	62	58	1	120	19	158
5th and 6th week.....	0	1	0	1	12	5	0	17	0	18
7th week and above.....	0	2	0	2	6	4	0	10	0	12
Not stated.....	22	62	2	86	17	35	3	52	25	133
Clinical diagnosis.....										
Diphtheria.....	155	104	5	264	123	91	6	214	161	478
Probable diphtheria.....	19	27	2	48	2	0	0	2	19	50
Other diseases.....	39	127	0	166	2	2	0	4	39	170
Not stated.....	49	124	3	176	43	57	3	100	52	276

TUBERCULOSIS.

A detailed account of the cases examined for tuberculosis, with the results of the examinations, is given in the next following table (Table III.) In the majority of cases, the specimens examined for tubercle bacilli have been bronchial sputa. A few other specimens have been examined, including urine, fæces, and pus from local lesions, and in two or three instances milk from supposed tuberculous cows.

In the portion of the table relating to duration "0, 1 mo.," includes many cases of only a few days' standing or incipient. "Over

two years" includes cases ranging all the way from two and a half years to thirty years' standing, according to clinical report. Under negative results are included a few cases in which no satisfactory result could be obtained.

This table show the number of primary, secondary, and all examinations of specimens for tubercle bacilli, with the results of examination, and shows in cross table the sex, color and age of the patient, and the duration of the disease at the time of the examination.

TABLE III.
Tuberculosis.

Results.....	PRIMARY EXAMINATIONS			SECONDARY AND SUBSEQUENT EXAMINATIONS			ALL EXAMINATIONS		
	Positive.	Negative.	All primaries.	Positive.	Negative.	All secondaries.	Positive.	Negative.	Total.
All cases examined.....	854	465	822	36	34	70	890	502	892
Sex.....									
Male.....	187	198	885	28	10	38	215	208	423
Female.....	140	224	864	5	21	26	145	245	390
Not stated.....	27	46	73	3	3	6	30	49	79
Color.....									
White.....	297	379	676	33	29	62	330	408	738
Colored.....	10	11	21	0	1	1	10	12	22
Not stated.....	47	78	125	3	4	7	50	82	132
Age.....									
1st decade.....	1	20	21	0	0	0	1	20	21
2d decade.....	27	51	78	1	3	4	28	54	82
3d decade.....	111	119	220	11	11	12	122	110	232
4th decade.....	101	97	198	11	13	24	112	110	222
5th decade.....	89	59	98	7	5	12	46	64	110
6th decade.....	28	37	65	4	5	5	32	38	70
7th decade and over.....	14	42	56	0	5	5	14	47	61
Not stated.....	33	58	86	2	6	8	35	59	94
Duration.....									
0 to 1 month.....	16	55	71	0	2	2	16	57	73
1 month to 2 months.....	39	47	86	1	5	6	40	52	92
2 months to 3 months.....	32	43	75	2	3	5	34	46	80
3 months to 6 months.....	70	59	129	6	7	13	76	66	142
6 months to 1 year.....	66	54	120	11	2	13	77	56	133
1 year to 2 years.....	26	24	50	8	1	9	34	25	59
Over 2 years.....	31	32	63	1	0	1	32	32	64
Not stated.....	74	154	228	7	14	21	81	168	249

TYPHOID FEVER.

A detailed account of the cases examined for typhoid fever, according to Widal's test, together with the results of examinations, will be found in the following table (Table IV.)

A number of cases were found to give the typhoid reaction on second examination, which failed to react when first tested. In some such instances the first examinations were unsatisfactory on account of badly-prepared specimens, and were so reported. In other cases, the first examination was made too early in the development of the disease, and hence later examination proved more satisfactory.

This table shows the number of primary examinations for the typhoid reaction, with results positive, negative, doubtful and all told; the number of secondary examinations, with results positive, negative, positive that were negative or doubtful on first examination, and all told; the total number of cases giving positive results, and the total number of examinations, and shows in cross table the sex, color and age of the patient, and the duration of the disease at the time of the examination in each case.

TABLE IV.
Typhoid Fever.

Results.....	PRIMARY EXAMINATIONS.				SECONDARY AND SUBSEQUENT EXAMINATIONS.				ALL EXAMINATIONS.	
	Positive.	Negative.	Diagnosis not made.	All primaries.	Positive.	Negative.	Positives which were negative or doubtful.	All secondaries.	Total positives excluding repetitions.	Total examinations.
All cases examined.....	182	205	7	394	25	12	21	37	203	431
Sex.....										
Male.....	102	114	2	218	11	7	10	18	112	236
Female.....	70	71	3	144	14	5	11	19	81	163
Not stated.....	10	20	2	32	0	0	0	0	10	32
Color.....										
White.....	123	116	5	244	16	9	13	25	136	269
Colored.....	8	6	0	14	0	1	0	1	8	15
Not stated.....	51	83	2	136	9	2	8	11	59	147
Age.....										
1st decade.....	8	14	1	23	2	1	1	3	9	26
2d decade.....	31	37	2	70	7	5	7	12	33	82
3d decade.....	62	49	0	111	4	2	8	6	65	117
4th decade.....	36	31	1	68	2	4	2	6	38	74
5th decade.....	9	18	1	28	2	0	2	2	11	30
6th decade and over.....	8	12	0	20	3	0	2	3	10	23
Not stated.....	23	44	2	74	5	0	4	5	32	79
Duration.....										
1 to 4 days.....	6	18	0	24	0	0	0	0	6	24
5 to 7 days.....	56	44	1	101	0	1	0	1	56	102
2d week.....	59	56	3	118	8	2	6	10	65	128
3d week.....	14	7	1	22	4	7	4	11	18	33
4th week and above.....	3	8	0	11	2	2	2	4	5	15
Not stated.....	45	71	2	118	11	0	9	11	54	129

GONORRHEA.

There have been thirty specimens examined from suspected cases of gonorrhœa. Gonococci were found in fourteen of these specimens, but were not found in the remaining sixteen specimens.

MALARIA.

There have been fifty-three specimens of blood examined for malaria. The malarial organisms were found in twenty-two of these specimens, but the remaining thirty-one cases did not reveal their presence.

Respectfully submitted,
HARMON O. BALDWIN.

Report of the Health Officer of Perth Amboy.

To the Board of Health of the State of New Jersey :

GENTLEMEN—I have the honor to submit herewith the first annual report of this office. Under an act of the Legislature, approved March 21st, 1900, this office was established. Under the same act the health officer was appointed May 15th, 1900. My report, therefore, will include only that portion of the year between May 15th and October 1st, 1900. In compliance with the quarantine law the following vessels have been inspected: Total number of vessels inspected, 36. Passengers were found on 5 vessels. Total number of crew and passengers inspected, 585. Total number of permits issued, 36.

The following is a list of the vessels which arrived at this port, with amount of fees collected from each:

1 sailing vessel, coast-wise, fee.....	\$1 00
1 " " "	1 00
1 steam vessel, foreign, "	5 00
1 " coast-wise, "	3 00
1 sailing vessel, foreign, "	5 00
1 " coast-wise, "	1 00
1 " " "	1 00
1 " " "	1 00
1 " foreign (via N. Y.), fee.....	25
1 steam vessel, coast-wise, fee.....	3 00
1 sailing vessel, " "	1 00
1 " " "	1 00
1 steam vessel, " "	3 00
1 sailing vessel, foreign (via N. Y.), fee.....	25
1 " coast-wise, fee.....	1 00
1 " " "	1 00
1 steam vessel, foreign, "	5 00
1 sailing vessel, coast-wise, "	1 00
1 " " "	1 00
1 " foreign, "	5 00

1 sailing vessel, foreign (via N. Y.), fee.....	\$0 25
1 " coast-wise, fee.....	1 25
1 steam vessel, " ".....	3 25
1 " foreign, ".....	5 25
1 sailing vessel, coast-wise, ".....	1 25
1 " foreign, ".....	5 25
1 steam vessel, coast-wise, ".....	3 25
1 sailing vessel, " ".....	1 00
(No permit issued—violation of law.)	
1 steam vessel, coast-wise, fee.....	3 25
1 sailing vessel, foreign, ".....	5 25
1 steam vessel, coast-wise, ".....	25
1 sailing vessel, foreign, ".....	5 25
1 " coast-wise, ".....	1 25
1 " " ".....	1 25
1 " " ".....	1 25
1 steam vessel, " ".....	3 25
Total amount of fees collected..... \$82 25	

This office has been somewhat hampered owing to the fact that in many respects the law was entirely new. The more thorough equipment of this office is deemed advisable in order that the provisions of the law may be faithfully carried out.

The law provides for the selection of a suitable place for the anchorage of vessels, but on consulting Captain W. C. DeHart, R.C.S., we were informed that the place first selected (which was deemed the nearest and most suitable) would conflict with the regulations established by the United States Treasury Department, under the revenue service, in relation to anchorage grounds. After an inspection of the waters of Raritan bay and Sandy Hook bay, and availing ourselves of the information furnished by Captain DeHart, a place was finally selected, as the following order shows :

OFFICE OF THE HEALTH OFFICER OF THE
PORT OF PERTH AMBOY, N. J., October 22d, 1900.

DESIGNATION OF ANCHORAGE FOR QUARANTINABLE VESSELS.

In accordance with the provisions of section 4, of chapter 69, of the laws of 1900, I hereby designate the anchorage place for every vessel which, between the 1st day of March and the 1st day of December in any year, or within any other time in any year designated by resolution of the board of health of the State of New Jersey, shall come from any port in the United States south of Cape Henlopen, or from any West India, Bahama or Bermuda island port, or from any port or place where any dangerous or infectious disease exists, into that portion of the waters of this State known as Raritan bay or Sandy Hook bay south of a straight line extending from Ward's Point to the northerly extremity of Sandy Hook, and every vessel at any time com-

ing into said waters on board of which any person shall have died while at any port in the United States south of Cape Henlopen, or at any foreign port, or while between any such port and said Raritan bay or Sandy Hook bay, or on board of which there are contained any baggage, merchandise or materials by which any communicable disease may be introduced into this State, or on board of which the health officer of the port of Perth Amboy shall have reason to believe that any person or persons may be sick with any communicable disease, or on board of which such health officer shall have reason to believe there may be any baggage, merchandise or materials by which any communicable disease may be introduced into this State.

Said anchorage place shall be to the southward and westward of Buoy No. 1 of the dredged channel off Seguin's Point, and within a radius of one mile from the said Buoy No. 1.

Said vessels shall remain at this anchorage until visited by the health officer of Perth Amboy.

E. A. HULTS,
Health Officer of the Port of Perth Amboy.

On July 20th, 1900, a vessel, the "Blanche H. King," entered this port, failing to anchor and also refusing to recognize the deputy quarantine officer when signaled to stop, and, consequently, the officer was unable to board the vessel for inspection. This being the first violation of the new law, the fact was immediately communicated to Dr. Henry Mitchell, Secretary of the State Board of Health.

The next morning the vessel was visited and the following information obtained: The vessel was found in charge of Mate James G. Cook, who was acting as master of the vessel. The excuse he rendered was that he did not think he was required to stop at this port, as he had just come from New York and passed quarantine there. He failed to deposit at this office the permit granted by the Department of Health of New York City. The law provides that said permit shall be deposited here in exchange for another to be issued by the health officer. It was subsequently ascertained that a permit had been issued by the New York authorities.

A complaint was made out against Jas. G. Cook as master of the "Blanche H. King," and he was brought before a justice of the peace for a hearing. At the hearing he admitted the violation of the law as above stated, and was held under bail for the grand jury. He also stated at above hearing that he had been coming into this port for the past two years, and had never been required to stop.

The above instance shows the necessity of keeping a close watch on all vessels. If the anchorage clause of the law is not duly enforced it is possible for a vessel to enter this port and discharge her crew and cargo without inspection. It matters not that they afterward pay all fees prescribed by law.

The danger to public health lies in the fact that one or all of the crew may have come from an infected port. This vessel came from Pascagoula, Mississippi, and at the time of leaving the port, small-pox was epidemic in one county and a number of cases existed in other counties of that State. This shows us the value of careful vigilance lest we incur the penalty of a great responsibility in thus exposing the people of New Jersey and neighboring States to the danger attending the admission of infected persons. A complaint was also made out against the captain of the tugboat that brought the "Blanche H. King" into port. He was amenable under the law, as an accomplice, but up to the present writing he has not been apprehended.

On August 16th the schooner "Gladys," Captain J. P. Butman, entered this port without anchoring, and landed at a pier here without first obtaining a permit. A charge of violation of the law was made against the captain, but before the papers could be served he had left for New York City. When the vessel was inspected the captain was not found aboard and the crew had been discharged.

With the anchorage ground as designated in this report, off Seguin's Point, a staunch motor-launch will be needed to reach the anchorage. There will also be needed at this spot a quarantine buoy, to be placed where designated by the health officer. With these facilities provided, there will be no opportunity for masters of vessels to evade the law.

In the examination of crews and passengers none were found to be affected by any communicable disease.

In view of the certainty that dangerous communicable diseases will, sooner or later, be found to exist among the passengers or crew of incoming vessels, the following arrangement has been made with Dr. A. H. Doty, Health Officer of the port of New York. He has very kindly agreed to take charge of any infected vessel, passengers and crew, and provide the necessary cleansing, disinfection and detention. This agreement is very much appreciated, as we are not at present sufficiently provided with apparatus suitable for disinfecting and cleansing infected vessels, and purifying the passengers, crew and baggage of the same.

Respectfully,

E. A. HULTS,

Health Officer, Port of Perth Amboy, N. J.

PERTH AMBOY, N. J., October 22d, 1900.

New Jersey Sanitary Association.

The twenty-fifth annual meeting of the New Jersey Sanitary Association was held in the Brighton Casino, Atlantic City, and the members were recipients of many hospitalities, which were provided by the citizens. Among the papers presented was the following:

What Action Shall be Taken by Boards of Health to Prevent the Spread of Tuberculosis?

BY RICHARD P. FRANCIS, M.D., MONTCLAIR.

The question of the prevention of the spread of tuberculosis is one the importance of which can hardly be exaggerated. The duties of boards of health make it incumbent on them to use every effort to control and, if it is possible, to suppress diseases. With some this is a comparatively simple matter—particularly in those communities that, either by the work of the health board, or in other ways, have been educated to the point where they realize that health ordinances and regulations are not the arbitrary work of a few unpractical, scientific cranks, but that they are the result of long and arduous work by men who have the best interests of humanity at heart, who know that certain stringent restrictions placed on the few will accrue in manifold abundance for the benefit of the many. There is no difficulty in keeping cases of small-pox in quarantine. The virulent and highly infectious nature of the disease is so generally recognized that there is often more trouble in having a single case properly attended than there is in having it properly isolated. So, too, where the other more common infectious diseases are found—scarlet fever, diphtheria, measles—the people, as a rule, accept the quarantining, the placarding of the house the disinfections, as part of the necessary discomfort attendant upon the trouble. The experience of others has taught them that the means employed are the ones that are the most efficient in preventing the spread of contagion.

But before this fact was learned, the other important condition had to be understood—the communicability of diseases. The fact that people afflicted with certain sicknesses could communicate them to others by either mediate or immediate contact was early recognized, and in the whole history of medicine there is nothing more striking than the isolation and quarantining practiced in the epidemics of small-pox, plague and like troubles. It is only in comparatively recent years, however, that the people have fully understood that all communicable diseases can be prevented from spreading if only proper measures are taken and, hence, as already mentioned, the ease with which quarantine regulations can be enforced. For if public

opinion did not approve these regulations it would be an impossibility to make them of any practical use, as it is impossible to enforce prohibition regulations in communities that are not heartily in favor of them.

This, then, is the keynote of the whole matter of the efficiency of ordinances passed by health boards or by other municipal bodies. Let the majority of the public feel that they have confidence in the health board and let them be educated up to the point of recognizing the necessity of certain actions, and there will be but comparatively little trouble for the board in carrying out its policy.

On the other hand, if the board of health does not convince the public that it is competent to perform the duties entrusted to it, or if reforms are attempted, the advisability of which cannot be quickly made apparent to the community at large, however wise they may seem to those who have initiated them, but little headway will be made and, sooner or later, the attempted reform will be abandoned.

"Although the researches of many workers, particularly those of Villemin, in the field of tuberculosis, has left no doubt of the infective nature of the disease, it was not until the discovery of the bacillus by Koch in 1882 that the true nature of the parasite was known. In the years that have elapsed much work has been done on the bacillus tuberculosis in its various relations and from varying standpoints, but the original work of Koch was so thorough and so far-reaching that our increase of knowledge has consisted in the elaboration of fine details, the essential facts remaining unchanged." (Osler in *Am. Syst. Pract. Med.*, Vol. 1, p. 733.)

The ineffectiveness or communicability of the disease being generally recognized, it is but natural that medical men and others specially interested in sanitary science should have made this fact one of the most important when considering the best means of controlling and ultimately destroying what has always been one of the most powerful enemies of the human race. And the fact that recent investigations have shown that, in spite of the enormous mortality still credited to tuberculosis, the prevalence of the disease is slowly but surely declining in many places is additional proof, if any were needed, that the theory of communicability is a true one. "J. B. Russell, of Glasgow, in his *Sanitary History* of that city, states that 'between the five years 1870-1874, and the five years 1890-1894, there was a decrease of 41 per cent. in the death rate. If we start from the maximum period of fatality (1860-64) the decrease amounts to 44 per cent. The acceptance of the doctrine that every case of phthisis is the result of a specific infection—that, consequently, no one is foredoomed to have phthisis or any other form of tuberculous disease—gives great precision to our idea of prevention.' Another writer, E. F. Wells, states that there is very positive evidence of decline in this disease; 'while the last decennial census of the United States does not show any decrease, yet in many large cities there has been a striking diminution.'" (Loc. cit.)

Russell considers one important cause of the decrease to be the fact that the infective nature of the tuberculous bacilli is becoming more generally recognized, and, consequently, more care is taken to destroy it. Other important factors are improved methods of living, better food, more sunlight, more ventilation, more exercise, &c. In other words, the same measures used to control other contagious diseases have proved effectual in controlling the spread of tuberculosis.

The question then confronts us, What is our duty as sanitarians in dealing with tuberculosis? It is obvious that a disease so well nigh universal, and whose duration is counted by months and years rather than by days and weeks, cannot be dealt with in the same manner as are scarlet fever, diphtheria and similar troubles which appear

only as local epidemics, and which cause illness for not more than a month or two at most. It is still a matter of grave discussion whether, even with the more exact knowledge at hand of the infective nature of the trouble, cases of phthisis should be reported to the board of health as are other contagious diseases. To isolate a patient with incipient lung trouble, who undoubtedly is a source of contamination to the community, but who, nevertheless, may live for years, and who, in those years, might be a wage-earner rather than a burden on the community, is a thing that could never be tolerated, and is mentioned only that it may be dismissed.

On the other hand, to allow a tuberculous patient to pursue his daily avocation without restraint, to mingle with other people and to expose them to the danger of infection, cannot but be considered a gross dereliction of duty on the part of some one.

The problem that is presented, how to adopt a course judiciously intermediate between these two extremes, is a difficult one to solve.

It would seem to be not assuming too much to say that the first step to be taken is to educate the public to a realizing sense of the communicability of tuberculosis, and to show them some of the simple, practical means by which it may, to a certain extent, be controlled. Even among educated people, the ignorance that exists of the simplest necessities in guarding against the spread of tuberculosis is surprising, while among the more ignorant classes this lack of knowledge is still more marked. It is only by constantly calling attention to certain well-known facts over and over again that the guardians of the public health can feel any assurance that the public will be taught to aid them in an intelligent and effectual way.

Within the last two or three years important measures of this kind have been taken by municipal bodies in various parts of the country. The ordinances against spitting in public places, which are now a common sight in many cities and towns, are of use from an educational standpoint, even though they may fail to accomplish the end for which they were originally intended. Like the advertisements in the street cars, they are read many times by the careless public, and undoubtedly, through constant reiteration, do a certain amount of good. Regarding this, a prominent Boston physician recently said "the people seem to be willing to do anything which is going to diminish the mortality of this disease. For instance, how quickly everybody obeyed the order in regard to spitting in the cars. I was astonished to see how quickly the cars, from being very filthy, became clean. People obeyed the admonition of the board of health." (*Boston Med. & Surg. Journ.*, Sept. 2d, 1899, p. 292.)

In connection with this same question of spitting in public places, the proper disposal of the infective sputum should be impressed upon everyone. Let people understand that fire, "the great cleanser," will effectively destroy all germs of any disease, and let them realize that any germs not destroyed by fire, or by some other effectual means, may retain their vitality for an almost indefinite period and be a source of contamination years after they have been cast into the world by their original victim.

The "sanitary sputum cups," now so generally used in hospitals and sanitariums, the wooden "pocket sputum cups" devised for the use of ambulatory cases, the "old cloth" recommended by some, in all of which the sputum may be collected and then burned, all have this same object in view. Unfortunately, the use of these articles is all too strictly limited to the inmates of sanitary institutions and to bedridden cases in the last stages of tuberculosis. The incipient cases, which though not seriously ill, are sources of great danger to their immediate families and to the general public, are often too careless or too ignorant to take the proper measures.

308 REPORT OF THE BOARD OF HEALTH.

If tuberculosis is to be classed as one of the communicable diseases, one other detail in its management should not be lost sight of—and that is, the proper disinfection of apartments that have been occupied by tuberculous patients. It would be in keeping with the policy pursued with scarlet fever, small-pox and diseases of that ilk, if boards of health were notified whenever a case of tuberculosis is found within its jurisdiction, and, if after the premises occupied have been vacated, thorough disinfection were practiced. On more mature reflection it seems as if this were even more necessary with tuberculous patients than with others. For, under existing health laws, tuberculous patients are at liberty to travel from one end of the country to another, occupying berths in steamboats, in sleeping-cars, or rooms in hotels or boarding-houses, and little, if any, attention is paid to the multitudinous spots of infection they leave behind on the bedding, on the carpets, on the towels and on the countless other articles with which they come in contact. Recently the writer was told of a young girl who, twenty years ago, was taken sick with scarlet fever while at boarding school some two hundred miles from her home. She was kept in her room for three weeks, and, as soon as she was able to travel, while still in the active stage of desquamation, she was sent to her home, undoubtedly spreading infection all the way. In the light of our present day knowledge it seems hardly possible that such a thing would be allowed now. Either the patient would be kept in quarantine until the danger from infection had passed or, if circumstances made a change imperative, the journey would have been so conducted that the risk of infection would have been reduced to a minimum. We “point with pride” to the care we take that small-pox and diphtheria are not spread abroad. We show our ordinances, our system of quarantining, our disinfecting apparatus, our bacteriological tests for disease, &c., &c. We wage a mighty war on the typhoid bacillus, the Klebs-Löfser bacillus of diphtheria, and the unknown bacillus of scarlet fever, but to the bacillus of tuberculosis, which, in 1898, caused in Boston “79 more (deaths) than all the deaths from measles, scarlatina, diphtheria, croup, typhoid fever, cerebro-spinal meningitis, cancer and appendicitis combined” (Bost. M. & S. Journal, September 21st, 1899, p. 282), which is more generally scattered on the globe than any other known causes of disease, which we know is a constant menace to the health and well being of all and which we know as well can be effectively destroyed,—to this, one of the most potent causes of the ills to which man is heir, we offer but a slight resistance and are content with here and there isolating a patient in the last stage of consumption. Is it too much to hope that, twenty years from now, it will be as impossible for a phthisical patient to travel in a public conveyance without taking proper means to protect those with whom he may come in contact or who may follow after him, as it would now for the scarlet fever patient of twenty years ago to take the journey that she did?

The supervision of the food-supply with reference to the spread of tuberculosis is of great importance. While it is known that infection may occasionally be carried by means of meat taken from tuberculous cattle, it is an acknowledged fact that the most probable channel through which the disease may come is cows' milk. Careful supervision of the milk-supply of every community is, then, necessary, and in doing this care should be taken that the attendants on the cattle, as well as the cattle themselves, are free from tuberculous taint.

It is a generally accepted fact that the milk of cows with well-marked tuberculosis is very apt to contain tubercle bacilli and should not be used without sterilization. Whether milk from cattle with slight infection, particularly where such infection is

not on or near the udder, may be tuberculous is still an open question. But as long as the matter is in doubt it would seem to be the wisest policy to consider such milk dangerous and prohibit its use unless sterilized.

The use of tuberculin for detecting the presence of tuberculosis in cattle has now become a well recognized procedure, endorsed by the leading veterinarians of this country and Europe. “Dr. Bang, of Copenhagen, the most renowned veterinarian in the world, declares that tuberculin is of great value as an aid to diagnosis, although it is not infallible, sometimes failing altogether and furnishing no guide to the extent of the disease” (Medical Record, December 2d, 1899). In its issue of October 28th, 1899, the *Lancet* says: “Mr. M. Lauchlan Young and Dr. S. H. Walker have recently tested some two hundred and forty cattle with tuberculin, the results being followed out by a careful post-mortem examination in each case. The conclusions arrived at were as follows: (1) Our experience confirms the generally accepted opinion that tuberculin loses its virulence when kept for any length of time; (2) when used with care and under proper conditions tuberculin, although not infallible, is a reliable diagnostic of tuberculosis in cattle except (a) when the tuberculous lesion is minute (b) when the disease has become generalized, especially in the case of aged and emaciated animals. (3) Tuberculous udder occurs more frequently than is generally believed to be the case. The instances where tuberculosis is present in cattle and the tuberculin does not react are probably when the fluid is not in good condition from some cause, or by reason of the lowered vitality of the animal experimented upon. That tuberculin possesses valuable diagnostic qualities has been amply demonstrated and that its more general use would have a beneficial effect in checking the inroads of consumption cannot be a matter for doubt.”

And all this brings us to the conclusion of the whole matter. Granted that the education of the people is all important, granted that notification of cases, disinfections, supervision of food supplies are matters of necessity, the question still remains, what is to be done with the great mass of tuberculous people, who swarm in all communities? What effective measures can be taken to prevent the spread of the disease from them?

The solution of the problem has been made more difficult by the action that has been taken by many hospitals, where the consumptive poor would naturally go to be treated, in not allowing cases of laryngeal or pulmonary tuberculosis to be received in their wards or private rooms. Taking the perfectly justifiable ground that any good that might be done these patients is more than offset by the risk of infecting the other occupants of the hospital.

This fact coupled with the argument that the best results from phthisical cases are when the patients are kept in the open air and not indoors, make it impossible for the consumptive to obtain practical assistance with the same facility that a person sick with almost any other disease may.

This is the more to be deplored because tuberculosis is eminently a disease that if properly cared for in the early stages yields most gratifying results, while if neglected until well pronounced, it is almost invariably fatal.

During the last two years medical journals all over the world have been full of papers written by many eminent authorities, and of discussions of these papers, on the subject of what should be done with the consumptive poor. Almost without exception all writers and speakers agree that certain facts are too well authenticated to admit of discussion and reasoning from these facts certain conditions are inevitable. The facts are (1) that tuberculosis is a readily communicable disease; (2) that if

tuberculous patients were properly quarantined the spread of the disease would be much diminished; (3) that such quarantining, together with the proper treatment of the patient, is absolutely impracticable in private houses or in crowded communities.

The conclusions deduced from the above facts are that it is the duty of the State to erect and maintain properly-constituted sanitariums where the consumptive poor can not only be properly cared for, so that they will have the best chances for regaining health, but, a matter of equally vital importance, where they will be removed from the possibility of contaminating others.

In other words, where the welfare of the community demands it, it is the duty of the State to assume responsibility and afford protection to, and from, the tuberculous as if now does in the case of the insane and the epileptic. This has for some years been successfully done in many places in Europe, where are found many sanitariums of this description. In this country efforts in this direction have already resulted in establishing a State sanitarium in Massachusetts, and an effort is to be made in New York to have the next legislature pass an appropriation for that State.

The hospital at Rutland, Mass., was opened on the first day of October, 1898, and the first patient was received on October 3d. The fear was expressed by some that it would be difficult to persuade the patients, for whom this institution was especially provided, to leave their homes and take advantage of the hospital accommodation; particularly as, from the nature of the case, the stay there must probably be a long one. That this fear was groundless is shown by the fact that in April, 1899, "the institution was full, and contained 175 patients, male and female."

Dr. Vincent Y. Bowditch, of Boston, one of the visiting physicians to this hospital, made some interesting statements regarding it at a meeting in Boston, March 15th, 1899. He said: "I confess when it was first opened I had some doubt as to how far it would be successful in getting the kind of cases we wished: not the dirty poor, but the respectable poor, and I felt it was questionable whether they would be content to go together in the open wards. I have been perfectly astonished to see the philosophy with which all these patients came under the treatment, and the cheerfulness, and even pleasure, with which they seemed to undertake whatever was mapped out for them in the way of treatment.

"Undoubtedly there is a moral influence from the mere fact that they are in an institution or sanitarium where a certain amount of military discipline exists, which I cannot (and I think that is the experience of most physicians) accomplish in private families. You cannot get the open-air treatment in a private house, except in occasional cases, as you can in an institution of that sort. I regard the establishment of this hospital as an immense benefit to the community, not only to the individual himself who is treated, but to his family and friends. The patients go home and tell and write of the method of treatment, of the value and importance of fresh air and good food; they see the effect of it upon themselves. In short, they act as missionaries" (Boston Medical and Surgical Journal, September 21st, 1899.)

Following is the program of the twenty-sixth annual meeting of the Association, which will be held in the Laurel House, Lakewood, December 7th and 8th, 1900:

FIRST SESSION.

Friday, December 7th, 1900, at 3 P. M.

1. Announcements.
2. Reports of Committees.
3. Higher Education in Hygiene. J. L. Leal, M.D., Paterson.
Discussion opened by Dr. Austin L. Scott, President of Rutgers College, New Brunswick.
4. Improvement of the Sanitary Inspection Service. Louis J. Richards, Sanitary Inspector, Elizabeth.
Discussion opened by E. C. Osborn, Princeton.
5. Round Table: Clean Milk.
 - a. What are the Prime Requisites for Producing Clean Milk?
 - b. Are the Laws of New Jersey Adequate for the Protection of Consumers against the Sale of Unclean Milk?
 - c. Can the Milk Laws be Enforced?
 - d. What Reforms in the Prevailing Methods of Collecting Milk are most Urgently Needed?
 - e. Would the Delivery of Milk from Wagons be more Cleanly if the Covers of the Cans were Sealed, and if the Cans were Provided with Faucets?
6. Disinfection of Apartments. (A Demonstration.) D. C. Bowen, Sanitary Inspector, Asbury Park.

SECOND SESSION.

Friday, December 7th, at 8 P. M.

7. Prayer. Rev. R. H. McClellan, Lakewood
8. Presidential Address: Our Association as a Factor in Sanitary Progress during the Last Quarter-Century. G. W. Howell, C.E., President of the Association, Morristown.
9. Shall Regulations Relating to the Construction of Buildings be Extended to Include Piping for Gas and Water-Supplies? S. H. Durgin, M.D., Health Officer, Boston, Mass.
Discussion opened by William Kent, Passaic.
10. The Practical Use of Vital Statistics. F. L. Hoffman, F.S.S., Newark.
Discussion opened by E. J. Marsh, M.D., Paterson.

THIRD SESSION.

Saturday, December 8th, at 9 A. M.

11. Ventilation of Buildings. W. J. Baldwin, M. Am. So. C. E., New York City.
Discussion opened by C. J. Baxter, Ph.D., State Superintendent of Schools, Trenton.
12. Improvement of Methods for Securing Returns of Births in New Jersey. A. C. Hunt, M.D., Trenton.
Discussion opened by James F. Connelly, City Clerk, Newark.
13. Medical Inspection of Schools. John Taylor, M.D., Medical Inspector Public Schools, Asbury Park
Discussion opened by William S. Disbrow, M.D., Newark.
14. Co-operation between Adjacent Sanitary Districts. H. C. H. Herold, M.D., President of the Board of Health, Newark.
15. Miscellaneous Business.
16. Report of Chairman of Executive Council.
17. Election of Officers.

Circulars and Laws.

The following circulars are now in print and ready for distribution :

- No. 7.—Protection to Bathers.
- “ 60.—Laws relating to Public Health, 1893.
- “ 66.—Marriage, Birth and Death Returns.
- “ 72.—Vital Statistics.
- “ 79.—Laws Concerning Marriage.
- “ 83.—Tuberculosis.
- “ 86.—Bacteriological Diagnosis No. 1.
- “ 89.—Bulletins Nos. 3 and 4—(Reprint).
- “ 90.—Ice.
- “ 93.—Bacteriological Diagnosis No. 2.
- “ 94.—Contagious Diseases of Animals.
- “ 95.—Small-pox.
- “ 96.—Public Health Laws, 1899.
- “ 97.—Illuminating Oils.
- “ 98.—Restriction of the Spread of Communicable Diseases.
- “ 99.—Maritime Quarantine.
- “ 100.—Transportation of the Dead.

NEW CIRCULARS.

Four circulars have been issued during the past year : Circular 97, replacing Circular 42, relating to kerosene oil ; Circular 98, relating to the prevention of the spread of the dangerous communicable diseases ; Circular 99, containing the act of 1900 relating to maritime quarantine ; Circular 100, relating to the transportation of dead human bodies.

CIRCULAR 97, DECEMBER, 1899.

Illuminating Oils.

The law of New Jersey concerning the sale of illuminating oils has done much to exclude from the markets of the State inferior grades of oil. The amended act reads as follows :

AN ACT to regulate the sale of petroleum and its products.

Approved March 31st, 1832.

1. That hereafter petroleum or any of the products thereof may only be sold for use within this state under the following regulations and restrictions, namely, (a) benzole, gasoline, naphtha and benzine must be sold under their true names, respectively, and such names must be plainly shown upon the barrel, can or vessel in which the same are sold or offered or exposed for sale, respectively, or upon a label securely fastened thereto; (b) petroleum or kerosene which will flash at a less temperature than one hundred degrees Fahrenheit, flash test, must have plainly designated upon the barrel, can or vessel in which the same is sold or offered or exposed for sale, or on a label securely fastened thereto, the number of degrees Fahrenheit, flash test, below which the same will not flash; (c) only such product of petroleum as will not flash at a less temperature or flash test than one hundred degrees Fahrenheit, may be sold for lighting or illuminating purposes, except where the same is to be used in street lamps or open-air receptacles, or in gas machines, in which case (as in petroleum or kerosene) there shall be plainly marked on the barrel, can or vessel in which the same is sold, or offered or exposed for sale or on a label securely fastened thereto, the words "not for inside light;" *provided*, that this act shall not apply to petroleum or its products sold in tanks used for transportation.

2. That if any person shall sell, or offer or expose for sale, for use within this state, except in the manner permitted by this act, any petroleum or product thereof, he shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding five hundred dollars, or imprisonment at hard labor or otherwise for a term not exceeding one year, or both, and any sale in quantity less than one barrel shall be presumed to be for use within this state.

3. That the state board of health of this state shall determine and declare what shall be the means of ascertaining whether or not petroleum or kerosene to be sold for lighting or illuminating purposes is of the character required by this act, and shall notify each local board of health of the same, and publish notices thereof in at least one leading newspaper in each county of the state, and distribute circulars as to the same for common information.

4. That it shall be lawful at any time during business hours for any member of the state board of health, or any analyst or inspector authorized by said board, or for any member of a county, city or township board of health, to visit any place where kerosene or other product of petroleum is on sale, and to secure such quantity thereof as shall be sufficient for testing, at the rate of the usual retail price of said article, and if the same is found to be of such a character as is by the act prohibited from sale for lighting or illuminating purposes generally, the person having the same for sale may be enjoined and prohibited by written notice, signed by such member of a board of health, analyst or inspector, and served upon such person, or upon any agent, servant or employe in charge of said article, from the sale of the same for use within this state for such purposes; and if, thereafter, any of the same shall be so sold, or offered or exposed for sale, for lighting or illuminating purposes, except as permitted by this act, the person thus selling, or offering or exposing for sale the same, shall be liable to the penalties hereinbefore provided.

In accordance with the requirements of the foregoing act the State Board of Health has selected the "closed tester" as the apparatus to

be employed in ascertaining the flashing point of kerosene oil, and the following rules have been adopted to govern the use of this instrument:

DIRECTIONS FOR ASCERTAINING THE FLASHING POINT OF KEROSENE OIL BY USE OF THE CLOSED TESTER.

Remove the oil cup and fill the water-bath with cold water up to the mark on the inside. Replace the oil cup, and pour in enough oil to fill it to within one-eighth of an inch of the flange joining the cup and the vapor-chamber above. Care must be taken that the oil does not flow over the flange. Remove all air bubbles with a piece of dry paper. Place the glass cover on the oil cup, and so adjust the thermometer that its bulb shall be just covered by the oil.

If an alcohol lamp is employed for heating the water-bath, the wick should be carefully trimmed and adjusted to a small flame. A small Bunsen burner may be used in place of the lamp. The rate of heating should be about two degrees per minute, and in no case exceed three degrees.

As a flash torch, a small gas jet one-quarter inch in length, should be employed. When gas is not at hand, employ a piece of waxed linen twine. The flame in this case, however, should be small.

When the temperature of the oil has reached 85° F., the testing should commence. To this end insert the torch into the opening in the cover, passing it in at such an angle as to well clear the cover, and to a distance about half way between the oil and the cover. The motion should be steady and uniform, rapid and without any pause. This should be repeated at every two degrees rise of the thermometer until the temperature has reached 95°, when the lamp should be removed and the testing should be made for each degree of temperature until 100° is reached. After this the lamp may be replaced if necessary, and the testings continued for each two degrees.

The appearance of a slight bluish flame shows that the flashing point has been reached.

In every case note the temperature of the oil before introducing the torch. The flame of the torch must not come in contact with the oil.

The water-bath should be filled with cold water for each separate test, and the oil from a previous test carefully wiped from the oil cup.

Local boards of health are advised to collect specimens of the kerosene oil sold in their respective districts from time to time, and to send them to the State Board of Health for examination. Not less than one pint of the oil to be tested should be sent, and it should be accompanied by the name of the person by whom it was collected and forwarded, and also by the name of the person or firm from whom it was purchased. Express charges must be prepaid. Specimens of kerosene oil forwarded by local boards of health will be examined without charge. They should be addressed "State Board of Health, Trenton."

In the Second Annual Report of the State Board of Health (1878), pages 16-22, and in the Fourth Annual Report (1880), pages 25-28, and in the Fifth Annual Report (1881), pages 22 and 106, the need of legislation for the prevention of the sale of dangerous kerosene oil was presented, and it is highly gratifying to note that a vigorous enforcement of the law of 1882 has resulted in the co-operation of manufacturers and dealers, and that the market is now generally supplied with kerosene oil which is properly prepared and which is entirely safe for use for illuminating purposes. But local boards of health should not relax their watchfulness of the sale of this article, and periodical collections of specimens of the oil sold by the dealers in each sanitary district should continue.

All dealers and venders are held responsible by the law for the safety of the oil which they sell for illuminating purposes, and if, after warning, any person shall sell kerosene oil which will not bear the test above described, said person is liable to punishment by a fine not exceeding \$500 or imprisonment not exceeding one year.

Purchasers of oils to be sold in this State should be assured that the oils purchased will bear the test herein described, and should not, when buying from parties outside the State, rely upon the brand or label, but should require the written guaranty of the dealer.

In case of the explosion of any lamp or can containing kerosene oil, the local board of health should at once procure a specimen of the oil, and forward it to the State Board of Health for examination, and obtain evidence to show from whom it was purchased. Even where accident results from the improper use of kerosene oil, as in lighting fires, the explosion may be due to the use of oil having a flashing point below the required standard, and specimens should in these cases be sent for examination.

All correspondence should be addressed to the State Board of Health, Trenton, N. J.

HENRY MITCHELL,
Secretary.

CIRCULAR 98, DECEMBER, 1899.

Restriction of the Spread of Communicable Diseases.

CONTENTS.

Mortality from Preventable Diseases.	Measles.
Isolation of the Sick.	Mumps.
Disinfection of Discharges.	German Measles.
Disinfection of Utensils.	Influenza.
Disinfection of Undergarments.	Whooping-Cough.
Nurses	Small-pox.
Precautions During Convalescence.	Chicken-pox.
Disinfection of the Sick-room.	Typhoid Fever.
Disinfection of Refuse.	Typhus Fever.
Attendance at School.	Vacher's Table.
Precautions in Case of Death.	Whitelegge's Table.
Cleansing School Buildings.	Bacteriological Diagnosis.
Duration of Infectiousness of Communicable Diseases:	Vaccination.
Diphtheria.	Notification of Infectious Diseases.
Scarlet Fever,	An Act for the Protection of the Public Health.

1. Mortality from the Ten Chief Preventable Diseases in New Jersey.

	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Consumption.....	3,449	3,669	3,456	3,575	3,429	3,433	3,542	3,758	3,237	3,225	3,584
Diarrhœal Diseases of											
Children.....	2,862	3,527	3,191	4,043	3,981	3,893	3,776	3,807	3,450	2,938	3,568
Diphtheria and Croup....	1,574	1,575	1,737	1,776	1,677	1,294	1,464	1,758	1,382	950	777
Enteric Fever.....	724	782	695	628	506	485	568	577	478	450	486
Scarlet Fever.....	533	209	288	1,008	445	272	264	183	203	201	187
Whooping-Cough.....	278	371	299	163	237	328	272	275	321	155	232
Erysipelas.....	114	81	85	94	74	97	74	69	68	58	88
Measles.....	118	174	250	197	73	257	95	390	156	195	96
Small-pox.....	3	0	0	38	43	11	23	2	0	0	0
Malarial Fever.....	203	195	180	196	148	162	144	119	132	82	96
Total.....	9,858	10,583	10,181	10,720	10,613	10,232	10,192	10,938	9,427	8,274	9,164

During the past twenty-two years, 1878-1899, these diseases have caused 200,506 deaths in New Jersey, or an annual average of 9,114.

GENERAL INSTRUCTIONS FOR PREVENTING THE SPREAD OF
DIPHTHERIA, SCARLET FEVER, TYPHOID
FEVER AND SMALL-POX.

2. Isolation of the Sick.—Promptly separate the sick person from the other occupants of the house, placing him, if possible, on the upper floor of the building and removing all hangings, carpets and

other unnecessary articles of furniture and clothing from the room. In cases where the dwelling does not permit absolute separation of the patient from other members of the household, he should be removed to an isolation hospital. No article whatever should be carried from the sick-room until it has been treated as described in paragraphs 4, 5 and 8.

3. Disinfection of Discharges.—All excreta from the sick person should be received in a porcelain vessel containing half a pint of a solution of corrosive sublimate. The solution should be made as follows: Corrosive sublimate, one-half ounce; muriatic acid, one ounce; aniline blue, five grains; water, four gallons. *This solution is poisonous.* Another half-pint of the solution should be added to the discharges before they are emptied into the water-closet.

4. Disinfection of Utensils.—Dishes, spoons and other utensils, used by the sick person, should be placed in a metallic vessel holding not less than one gallon of water. This vessel should be placed outside of the door of the sick-room, and twice in each twenty-four hours it should be removed to the kitchen range and its contents should be boiled for at least thirty minutes.

5. Disinfection of Sheets, Undergarments, &c.—Towels, undergarments, sheets and pillow-cases should be immersed in water in a metallic wash-boiler and boiled for not less than one hour. Soft paper and small pieces of cotton cloth should be used instead of handkerchiefs, for receiving discharges from the mouth and nose, and when soiled these should be immediately burned in the sick-room.

6. Nurses.—Persons attending on the sick should remain within the isolated apartments. Dresses of washable material should be worn.

7. Precautions During Convalescence.—The scales and dust from the skin in scarlet fever, small-pox and measles are highly infectious, and all portions of the surface should be rubbed with vaseline every day to prevent the dry particles from being carried about by air currents. When sufficiently recovered, the patient should have a warm bath every day until the skin has ceased to peel off. When the patient leaves the isolated apartments or premises, he should first be bathed, including thorough washing of the hair and scalp, and be clothed in uninfected garments, and no article whatever should be removed from the infected premises until after the final disinfection of the sick-room.

8. Final Disinfection of the Sick-room.—Articles which are of little value should be burned in the sick-room. When practicable, remove all remaining clothing, bedding and other articles which can be transported, and expose them for thirty minutes to a temperature of 240° in a steam sterilizing chamber.

In localities where no such disinfecting chamber is provided, all of the contents of the room should be treated by the free application of a solution of corrosive sublimate (see paragraph 3). This can be done effectually by (a) immersing all clothing, garments, sheets, blankets, &c., in wooden tubs containing the solution, and by thoroughly saturating with the solution all of the articles in the room, including the mattresses, pillows and carpet, and also the side walls, woodwork and floors, by the use of a garden pump and hose with a large rose or spray-producing nozzle. The woodwork and furniture should afterward be scrubbed with soap and water. Disinfection of garments can also be effected by (b) placing them, one by one, with as little folding as possible, in trunks, or in boxes, and applying to each layer of the goods, by the use of a small sprinkling pot, a 40 per cent. solution of formaldehyde gas (formalin). The receptacle containing the articles thus treated should be closely covered. After twenty-four hours the wash-goods should be boiled and then washed with soap and water.

9. Disinfection of Refuse.—All masses of infected filth, in privy pits or in heaps or piles, should be covered liberally with dry chloride of lime.

10. Precautions in Case of Death.—In case of death the body should be enveloped in sheets saturated with the solution of corrosive sublimate (1 to 1,000) and be placed in a coffin as soon as possible. The burial should take place without delay and the funeral should be strictly private.

11. Attendance of Children at School.—Children should not be allowed to attend day-school nor Sunday-school from a house in which there is an infectious disease. No child should be allowed to return to school until a certificate from the medical attendant shows that there is no longer any danger that other children will be infected.

12. Cleansing School Buildings.—Each day, during the prevalence of infectious disease, after the school is dismissed, the janitor is to scrub, with warm water, soap and a stiff scrubbing-brush, all parts of doors, casings and other woodwork of the infected apart-

ment which can be touched by the hands of the children, including seats and desks.

The floor should be in good repair and without open cracks or crevices. It should be sprinkled with clean water daily before being swept.

The difficulty attending the cleansing of books should cause great care to be taken by teachers to prevent books from being passed from hand to hand, or touched by anyone except the child to whom they belong or to whom they may be assigned. Books which have been used by a pupil who is suffering from any one of the communicable diseases, should be destroyed by fire, or they may be treated by exposure to formaldehyde gas in a small airtight space. A large box may be conveniently employed for this purpose, and the gas can be liberated by exposing formalin upon a shallow dish inside of the box. The liberation of the gas will be more rapid if a small lamp is placed beneath the dish in which the formalin is exposed. Books should be so placed that the leaves will fall apart. Pencils and other articles in daily use by the pupils may also be disinfected by placing them in this box. The box should remain closed for at least twelve hours.

During each vacation the walls and woodwork, including doors, desks and floors, should be wetted with a solution of bichloride of mercury (see paragraph 3), and the windows should be kept open to admit great floods of sunlight and pure air. Finally scrub with clean water.

Water coolers are unclean and unnecessary. They should not be allowed in school buildings. When practicable, drinking fountains, consisting of a jet of water rising from the center of a piece of marble, requiring no cups, should be supplied.

Individual seats and desks should be provided in every school.

Light and airy cloak-rooms should always be provided, and hooks should be so separated that the garments of different pupils will not come into contact.

It has been shown that diphtheria is less prevalent during vacation periods than during school terms, and that it is spread through short distances only, and by contact between infectious particles and the mucous membranes.

When children are massed together in large numbers in school buildings, the danger is great that some one of them may be carrying the bacilli of diphtheria in throat and nose, and that the infectious

material may be smeared upon door-knobs, hand-rails, slates, books, lead pencils, desks and floors.

Assuming that no child will contract the disease unless the bacilli are actually planted directly upon the lips or tongue, it is not difficult to believe that such transfer from door-knob, slate, desk, &c., does in each case occur. The fingers and the mouth are in very intimate relation in the case of nearly every school child.

It is probable that typhoid fever never occurs until excreta from an infected individual has first been swallowed by the new victim of the disease, and the world-wide prevalence of this affection shows to what an extent the most revolting of substances finds its way into our mouths.

Can we expect less frequent and extensive contamination in the case of diphtheritic discharges? The best and safest protection against the spread of this disease seems to lie in the following measures:

Bacteriological examinations in the case of convalescents, and in the cases of persons known to have been exposed to the infection, to learn when the bacilli have ceased to be present.

Isolation of all affected persons during the infective period.

The immediate destruction or efficient disinfection of all discharges from the nose and throat of infected persons and the thorough disinfection of infected articles and premises.

Until the first and second of these measures shall have been more effectually applied than yet is possible, school boards can do something toward staying the spread of this disease by applying the third of the above-enumerated methods, as far as it is practicable, in the care of school buildings.

13. Incubation Periods and Duration of Infectiousness of Communicable Diseases.*

DIPHTHERIA.

Incubation period.†—Least, unknown; average, two days; greatest, seven days.

Period of observation of exposed persons.—Seven days from last exposure to infection.

* Compiled mainly from "Infectious Diseases," by Louis C. Parkes, M.D., London, 1884.

† The incubation period is the period between the exposure to infection and the first appearance of symptoms of illness.

Infective period.—From the commencement of symptoms during the whole period of the illness and convalescence, and until repeated bacteriological examinations show that the specific bacillus has disappeared. The bacillus persists in the mouth and throat for a considerable time after the false membrane has vanished. It is not safe, therefore, to permit patients who have recovered, even although their tonsils appear healthy, to mingle with other persons until at least fourteen days shall have elapsed since the disappearance of the membrane.

Sources of infection—

1. From a previous case of diphtheria.
2. From a case of apparently simple tonsillitis or sore throat.
3. From a case of apparently simple nasal ulceration.
4. From domestic animals (cats, pigeons, fowls) suffering from a throat affection.
5. From infected cow's milk.
6. From infected bedding, clothes, carpets, curtains, books, toys, drinking cups, spoons, forks, lead pencils, &c.
7. From a person who has been in contact with a diphtheria patient, but who has not himself contracted the disease.

SCARLET FEVER.

Incubation period.—Least, less than twenty-four hours; average, one to three days; greatest, seven days.

Period of observation of exposed persons.—Seven days from last exposure to infection.

Infective period.—From the earliest appearance of symptoms (usually sore throat) until all desquamation has ceased.

Sources of infection.—

1. From a previous case of scarlet fever.
2. From a case of sore throat without discoverable rash, but really a mild form of the disease.
3. From infected milk.
4. From infected books, toys, dishes, garments, &c.

MEASLES.

Incubation period.—Least, four days; average, nine to ten days; greatest, fourteen days.

Period of observation of exposed persons.—Fifteen days from last exposure to the infection.

Infective period.—From the earliest appearance of symptoms until convalescence is well established. The catarrhal stage preceding the eruption is very infectious.

Sources of infection—

1. From a previous case of measles.
2. From infected bedding, clothes, carpets, curtains, books, toys, &c.

MUMPS.

Incubation period.—Least, fourteen days; average, twenty-one days; greatest, twenty-five days.

Period of observation of exposed persons.—Twenty-five days from last exposure to infection.

Infective period.—From the onset of the prodromal stage (which may last three or four days) and for two or three weeks subsequent to the appearance of the parotitis. The chance of the infection being propagated diminishes progressively from the onset of the parotitis.

Sources of infection—

1. From a previous case of mumps.
2. From infected articles.

GERMAN MEASLES.

Incubation period.—Least, five days; average, eighteen days; greatest, twenty-one days.

Period of observation of exposed persons.—Twenty-one days from last exposure to infection.

Infective period.—From the onset of the prodromal or pre-eruptive stage until the cessation of desquamation.

Sources of infection—

1. From a previous case of German measles.
2. From infected articles.

INFLUENZA.

Incubation period.—Least, less than twenty-four hours; average, three to four days; greatest, five days.

Period of observation of exposed persons.—Five days from last exposure to infection.

Infective period.—From the earliest onset of the symptoms until convalescence is well established.

Sources of infection—

1. From a previous case of influenza.
2. From infected articles.

WHOOPIING COUGH.

Incubation period.—Least, seven days; average, not determined; greatest, twenty-one days.

Period of observation of exposed persons.—Twenty-one days from last exposure to the infection.

Infective period.—During the whole of the illness from the onset of the earliest catarrhal symptoms.

Sources of infection—

1. From a previous case of whooping-cough.
2. From infected articles.

SMALL POX.

Incubation period.—Least, nine days;* average, twelve days; greatest, fifteen days.

Period of observation of exposed persons.—Fifteen days from date of last exposure to infection.

Infective period.—From the onset of initial symptoms until all scabs have been removed. The period of greatest infectivity is during

* In hemorrhagic small-pox there is some evidence that the incubation period is shortened to seven days.

the acute stage (vesicular and pustular). During the initial illness, and until the appearance of the rash, the liability to impart infection is not great; therefore, isolation of a case very shortly after the appearance of the eruption, when associated with measures of vaccination, re-vaccination and disinfection, is very commonly effective in preventing further spread of the disease.

Sources of infection—

1. From a previous case of the disease.
2. From infected articles.

CHICKEN-POX.

Incubation period.—Least, thirteen days; average, fourteen days; greatest, nineteen days.

Period of observation of exposed persons.—Nineteen days from date of last exposure to infection.

Infective period.—From the appearance of the eruption until this has entirely disappeared.

Sources of infection—

1. From a previous case of the disease.
2. From infected articles.

TYPHOID FEVER.

Incubation period.—Least, eight days; average, twelve to fourteen days; greatest, twenty-three days.

Period of observation of exposed persons.—Twenty-three days from last exposure to infection.

Infective period.—The excreta are infectious throughout the whole course of the disease and until convalescence has been established for at least a fortnight.

Sources of infection.—Water, food or air contaminated by the specific virus contained in the excretions of an enteric fever patient.

Polluted well-waters may remain infective or retain the infection latent for long and unknown periods after the original mode of infection has ceased to operate.

The food most often implicated in the production of enteric fever is cows' milk which has acquired its infectiveness by the addition to it of water polluted by excreta, or by contact with cans and utensils which have been infected by polluted water, or by contact with unclean hands. Outbreaks of enteric fever have been traced to ice cream, herb beer and other drinks manufactured on premises where enteric fever has existed.

Oysters, mussels and other shell-fish grown in waters receiving sewage have also appeared to cause enteric fever.

The attendants upon enteric fever patients may become infected by taking meals with unwashed hands.

The air of privies, cesspools, drains and sewers which have become the receptacles for the discharges from typhoid patients, is capable of imparting infection to persons who are exposed to concentrated emanations from these sources.

The air of the sick-room occupied by an enteric fever patient may possibly be the means of transmitting the illness to persons long present in the room, but not where the cleanliness and ventilation of the room are daily attended to. Enteric fever very rarely spreads in the wards of clean and well-regulated hospitals.

Instances are known where washerwomen have contracted the disease from handling infected clothing or bedding of enteric fever patients. The infection may persist for several weeks in infected clothing and bedding shielded from contact with light and air.

TYPHUS FEVER.

Incubation period.—Average, seven days.

Period of observation of exposed persons.—Fourteen days from date of last exposure to infection.

Infective period.—From the commencement of illness until convalescence.

Sources of infection.—From a previous case of the disease. The virulence of the contagion is rapidly destroyed by fresh air and free ventilation combined with cleanliness, so that the spread of the infection is generally observed only in the overcrowded and insanitary quarters of the poorest class of the population in industrial towns.

14. Vacher's Table.

DISEASES.	Time from inception to beginning of eruption.	Time from first precursory symptom to beginning of eruption.	Time from beginning of eruption to cessation of pyrexia.	Time from beginning of eruption till patient ceases to be infective.
Small-Pox.....	13 days..... (range, 7 to 21 days)	2 days..... (range, a few hours to 7 days)	14 days.....	56 days.
Modified Small-Pox.....	13 days..... (range, 7 to 21 days.)	2 days..... (range, a few hours to 7 days.)	14 days.....	35 days.
Chicken-Pox.....	19 days..... (range, 4 to 17 days)	2 days..... (range, a few hours to 3 days.)	5 days..... (range, 3 to 7 days)	17 days.
Measles.....	14 days..... (range, 7 to 21 days.)	4 days..... (range, 1 day to 9 days.)	6 days.....	27 days.
German Measles.....	14 days..... (range, 10 to 20 days.)	1 day..... (range, nil to 3 days.)	7 days.....	14 days.
Scarlatina.....	4 days..... (range, a few hours to 14 days.)	1 day.....	7 days.....	49 days.
Diphtheria.....	5 days..... (range, 1 day to 14 days.)	2 days..... (range, a few hours to 4 days.)	14 days.....	28 days.
Idiopathic Erysipelas.....	5 days..... (range, 2 to 14 days.)	1 day.....	14 days.....	35 days.
Typhus Fever.....	19 days..... (range, a few hours to 28 days.)	7 days..... (range, 8 to 7 days.)	7 days..... (range, 7 to 14 days.)	21 days.
Typhoid Fever.....	21 days..... (range, 1 day to 28 days.)	7 days..... (range, 7 to 12 days.)	21 days..... (range, 14 to 23 days.)	28 days.
Mumps.....	18 days..... (range, 8 to 25 days.)	4 days.....	7 days.....	21 days.

15. Whitelegge's Table.

	Quarantine to be required after exposure to infection.	EARLIEST DATE OF RETURN TO SCHOOL AFTER AN ATTACK.
Small-Pox.....	18 days.....	When all scabs have fallen off.
Chicken-Pox.....	18 days.....	When all scabs have fallen off.
Scarlet Fever.....	14 days.....	Six weeks, and then only if no desquamation or sore throat.
Diphtheria.....	12 days.....	Three weeks, if convalescence is complete, and no bacilli remain.
Measles.....	16 days.....	Three weeks if all desquamation and cough have ceased.
Whooping-Cough.....	21 days.....	Six weeks from the commencement of the whooping, if the characteristic spasmodic cough and whooping have ceased. Earlier, if all cough be gone.
Rötheln, or Rubella.....	16 days.....	Two to three weeks, according to the nature of the case.
Mumps.....	24 days.....	Four weeks, if all swelling has subsided.

16. Bacteriological Diagnosis.—The State Board of Health supplies facilities for the examination of specimens in cases of suspected diphtheria and tuberculosis. The State laboratory is located in Princeton, and the service rendered free of charge, is prompt and satisfactory. By an order of the postal department, dated December 27th, 1897, the transportation of diseased tissues through the mails is permitted under certain restrictions, when said tissues are enclosed in specified mailing-cases. These mailing-cases are supplied, without charge, upon request, to physicians, health officers and school officers, and depositories have been established in many parts of the State where the mailing-cases may at all times be obtained. Reports showing the result of the examination will be sent out from the laboratory within twenty-four hours. Reports will be sent by telegraph if a request is sent with the specimen.

In cases where diphtheria is found to exist, specimens should subsequently be sent, at intervals of a few days, for the purpose of learning when the diphtheria bacilli have ceased to exist in the throat, and to guide in the removal of the isolation restrictions.

No specimen will be examined if it is sent through the mails otherwise than in one of the packages furnished by the laboratory.

17. Vaccination.—Local boards of health should prevent the occurrence of small-pox by securing general vaccination and re-vaccination.

Every parent should cause each child to be vaccinated before one year of age.

School boards should require that all children and teachers who attend the public schools shall first be vaccinated.

Local boards of health should offer, once each year, free vaccination to all who are unable to pay for this service.

In factories, the superintendent should advise or direct all employes to be vaccinated.

Re-vaccination should be practiced as often as once every five years, and if a case of small-pox appears in the neighborhood, all persons in the vicinity should be re-vaccinated.

Small-pox would forever cease if the preventive methods now well understood—vaccination, isolation and disinfection—were thoroughly enforced.

18. Notification of Cases of Infectious Diseases.—Section 1 of the following act requires that physicians shall report certain communicable diseases to the clerk or other designated officer of the local board of health. In addition to the diseases named in this section, local boards of health may by ordinance specify such other communicable diseases as they may deem necessary, and require reports of the same. Section 2 provides that the clerk or secretary or other officer of the local board of health shall transmit, at least once in each week, by mail, to the office of the State Board of Health, Trenton, upon blanks furnished by the State Board, a statement of the number of cases of preventable diseases which have been reported to the local board.

19. AN ACT FOR THE PROTECTION OF THE PUBLIC HEALTH.

(Approved March 22d, 1895—Gen. Stat., p. 1677.)

1. That every physician shall, within twelve hours after his first professional attendance upon any person who is suffering from cholera, yellow fever, typhus fever, leprosy, plague, trichinosis, small-pox, varioloid, enteric (or typhoid) fever, diphtheria, membranous croup, scarlet fever, or any other contagious, infectious or communicable disease which hereafter may be publicly declared by the state board of health to be preventable and specially dangerous to the public health, report such sickness to the clerk of the local board of health having jurisdiction over the territory within which such sickness may be, or if such local board of health shall have designated some other officer thereof to receive such reports, then to such officer, which report shall be in writing, signed by such physician, and shall set forth the name, age and precise

location of the person suffering from such disease; and every houseowner or householder who knows that any person living, dwelling or being in any building under his control is affected by any of the contagious, infectious or communicable diseases hereinabove specified or referred to shall, when no physician has professionally attended such sick person, within twelve hours after discovering the same, report the fact in writing to the same person and in the same manner as any physician attending such sick person would be required to do as hereinabove set forth; and on the thirtieth day of June and the thirty-first day of December in each and every year, every physician, houseowner and householder making any report or reports as in this section required, shall be entitled to receive from the officer to whom such report or reports shall have been made during the preceding six months, a certificate in writing under the hand of such officer, setting forth the number of names of persons reported to have been affected with any of the diseases hereinabove specifically named or referred to, which certificate when presented by such physician, houseowner or householder to the proper disbursing officer of the city, borough, town or other local municipal government or township within which such affected person may have been, shall entitle such physician, houseowner or householder to receive from such disbursing officer the sum of ten cents for each and every name by such certificate certified to have been reported, unless such notification shall be found to have been erroneous; and any physician, houseowner or householder who shall refuse or neglect to perform the duty hereinbefore required of him shall be liable to a penalty of fifty dollars.

2. That the facts contained in every report filed with the clerk or other officer of any local board of health, pursuant to the provisions of the first section of this act, shall be entered by the officer to whom the same shall be delivered in a book kept exclusively for that purpose, which book shall be subject to the inspection of the local board of health and its proper officers, and to the state board of health and its officers only; the officer of the local board of health to whom such report shall be delivered, and whose duty it is to make record of the same, as in this section above set forth, shall also, at least once in each week, and daily when required by the state board of health, transmit the facts stated therein by mail to the board of health of the state of New Jersey, at Trenton, and shall further keep the said state board of health constantly informed concerning the measures which are employed by the local board of health to prevent the spread of the diseases in such reports mentioned, which facts and information shall be conveyed to the said state board of health in writing, and upon such blank forms as may be furnished by the said state board of health; any officer whose duty it is to make any report to said state board of health, as in this section above provided, and who neglects or fails to perform such duty, shall be liable to a penalty of fifty dollars for each and every such neglect or failure of duty.

3 That it shall be unlawful for any common carrier to accept for transportation, or to transport or carry, within this state, any person affected with any of the contagious, infectious or communicable diseases named or referred to in the first section of this act, or any infected article or articles of clothing, bedding, or other property whatsoever, or the body of any person who shall have died of said contagious, infectious or communicable diseases, except the same be inclosed in an hermetically-sealed casket, and except a license for such transport be first obtained in writing from the local board of health of the municipality or township in which the said infected person, infected articles or dead body may be located; and any common carrier knowingly violating any of the provisions of this section shall be liable to a penalty of one hundred dollars.

4. That if the board of health of the state of New Jersey shall ascertain any vaccine virus, antitoxin or other animal product sold, or offered for sale, or held for sale or use within this state for prophylactic or remedial purposes, to be dangerous to human health, or so impure or inert as to be ineffacious in rendering immune or less susceptible to disease any person in whom such product may be used, it shall be lawful for the said board of health of the state of New Jersey to prohibit the further sale or use within this state of any vaccine virus, antitoxin or other animal product, as aforesaid, manufactured or produced by the party who shall have manufactured or produced such dangerous, inert, impure or ineffacious product; any person who shall, after such prohibition, and with knowledge thereof, sell, or offer for sale, or use, or offer for use within this state any such prohibited product shall be liable to a penalty of one hundred dollars.

5. [As amended.] Any penalty incurred under any of the provisions of this act may be recovered, with costs, in a summary proceeding, either in the name of the board of health of the state of New Jersey or in the name of the local board of health of the township, city, borough, town or other local municipal government within whose jurisdiction the penalty may have been incurred; it shall be the duty of any health inspector, registrar of vital statistics or member of any local board of health, who shall know or be informed of any violation of this act, whereby any penalty may have been incurred, to make, and any other person having such knowledge may make, under oath or affirmation, a complaint against the person incurring such penalty, setting forth the facts of such violation, which complaint shall be filed with the clerk of the district court or any justice of the peace of the county within which the offense may have been committed, or with any police justice or recorder of the township, city or municipality within which any local board bringing suit shall have jurisdiction, and the clerk of the district court, the justice of the peace, police justice or recorder with whom any complaint shall be filed as aforesaid, setting forth facts sufficient to show that any penalty prescribed by this act has been incurred, is hereby authorized and required to issue process, either in the nature of a summons or warrant, which process, when in the nature of a warrant, shall be returnable forthwith, and, when in the nature of a summons, shall be returnable in not less than five nor more than fifteen days; on the return of such process, or at any time to which the trial shall have been adjourned, the said court, justice of the peace, police justice or recorder shall proceed to hear the testimony and to determine and give judgment in the matter without the filing of any pleadings, and, if judgment shall be given in favor of the plaintiff, execution shall be forthwith issued against the goods and chattels of the defendant for the amount of the penalty, with costs; the officers to serve and execute any process or execution issued as aforesaid shall be the constables of the county, which service and execution, in the case of any execution issued out of a district court, shall be made in the same manner and under the same liabilities as other executions issued out of said court are served and executed; the officers to serve and execute any process or execution issued by a justice of the peace, police justice or recorder shall be the constables of the county, which service and execution shall be made in the same manner and under the same liabilities as prescribed in cases of the service and execution of process and executions by the act entitled "An act constituting courts for the trial of small causes," and the supplements thereto; all moneys recovered in any such proceeding shall be paid to the plaintiff therein and applied by such plaintiff to any purpose for which it may be legally authorized to expend money.

SUPPLEMENT TO CIRCULAR No. 98.

Post in a Conspicuous Place in the Sick-Room.

BOARD OF HEALTH OF THE
STATE OF NEW JERSEY. }

TO PREVENT THE SPREAD OF DIPHTHERIA AND SCARLET FEVER.

No person should enter or leave the infected apartments except the attending physician.

Nurses attending the sick should remain within the isolated apartments. Dresses of washable material should be worn.

Dishes, spoons and other utensils, used by the sick person, should be placed in a metallic vessel holding not less than one gallon of water. This vessel should be placed outside of the door of the sick-room, and twice in each twenty-four hours it should be removed to the kitchen range and its contents should be boiled for at least thirty minutes.

Towels, undergarments, sheets and pillow-cases should be immersed in water in a metallic washboiler and boiled for not less than one hour. Soft paper and small pieces of cotton cloth should be used instead of handkerchiefs, and when soiled these should be immediately burned in the sick-room.

All discharges from the sick person should be received in a porcelain vessel containing half a pint of a solution of corrosive sublimate—1 to 1,000. *This solution is poisonous.* Another half pint of the solution should be added to the discharges before they are emptied into the water-closet.

CIRCULAR 99, APRIL, 1900.

Maritime Quarantine.

SYNOPSIS OF CHAPTER 69 OF THE LAWS OF 1900 (AN ACT TO PREVENT THE INTRODUCTION INTO THE STATE OF NEW JERSEY OF COMMUNICABLE DISEASES BY MARITIME VESSELS OR MARITIME TRAFFIC).

Section 1 provides that no infected vessel, person, baggage or merchandise, shall land or be landed in New Jersey until a permit therefor shall have been issued by the authorized sanitary officer. No such

permit shall be granted until the vessel, person, baggage and merchandise shall have been examined and purified in accordance with regulations made by the Board of Health of the State of New Jersey.

Section 2 provides that no infected vessel, passenger, crew, baggage or merchandise shall be brought to any wharf in New Jersey, a permit therefor having been issued by a quarantine officer of the city of New York, until such permit from the New York officer shall have been deposited in the office of the local board of health of the place of destination named in the said permit, nor until an additional permit to land said passengers, crew, baggage, merchandise and other materials shall have been granted by the said local board of health, and no such permit to land shall be granted by the said local board of health, except subject to regulations prescribed by the Board of Health of the State of New Jersey. This section does not apply to any port or place for which a health officer is appointed by the Board of Health of the State of New Jersey under the provisions of Section 3.

Section 3 provides that the Governor shall appoint a health officer for the port of Perth Amboy, and that in time of threatened epidemic the State Board of Health may appoint a health officer for any port or maritime place excepting the port of Perth Amboy. Section 3 also authorizes the State Board of Health to adopt, alter and amend regulations for the guidance of local boards of health and local officers in the performance of the duties required by this act.

Section 4 provides that any infected vessel, and certain other vessels, entering the port of Perth Amboy shall come to anchor at some place designated by the officer of said port.

Section 5 authorizes the health officer of the port of Perth Amboy to detain and purify all infected vessels, persons, baggage and merchandise, which may enter said port.

Section 6 specifies the fees which are to be charged by local boards of health and health officers for the duties performed in accordance with the requirements of this act.

Section 7 authorizes the health officer of the port of Perth Amboy to appoint one or more deputies, subject to the approval of the secretary of the State Board of Health, and provides for the compensation of said deputies from the fees allowed to said health officer.

Section 8 provides that local boards of health, in ports or places in which no health officer has been appointed under the provisions of Section 3 of this act, may detain vessels, persons, baggage and merchandise.

Section 9 provides for the collection of moneys due on account of any expenses incurred by any health officer or local board of health in enforcing the provisions of this act.

Section 10 repeals certain acts.

The penalty provided for the violation of the provisions of this act is a fine not exceeding \$3,000 or imprisonment not exceeding one year, or both.

CHAPTER 69.

AN ACT to prevent the introduction into the state of New Jersey of communicable diseases by maritime vessels or maritime traffic.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. No vessel infected with any communicable disease, and no vessel on board of which there may be any person, baggage, merchandise or materials infected with any communicable disease, shall be brought to any wharf in the state of New Jersey, and no person, baggage, merchandise or materials being so infected, or being on any vessel so infected, shall land or be landed at any place in this state until a permit therefor shall have been granted in the manner required by the local board of health of the sanitary district within which it may be intended to bring such vessel to wharf, or within which it may be intended to land therefrom any such person, baggage, merchandise or materials; such permit shall not be granted until after such vessel, and the persons, baggage, merchandise and other materials thereon, shall have been examined, cleansed, ventilated and purified, and such quarantine period shall have been observed, as the regulations or special order or orders of the board of health of the state of New Jersey may require, which regulations and special orders said state board is hereby authorized to make and prescribe; any master or commander of any vessel who shall violate any of the provisions of this section, and every person who shall violate any of said provisions or aid in the violation thereof, shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine not exceeding three thousand dollars, or by imprisonment not exceeding the term of one year, or both, in the discretion of the court before whom the conviction may be had; *provided, however*, that this section shall not apply to any vessel, or any person, baggage, merchandise or materials on board of any vessel, whose master or commander shall obtain a permit to land persons, baggage, merchandise and other materials, from any local board of health in this state under the provisions of the second section of this act, nor to any vessel, or any person, baggage, merchandise or materials on board of any vessel, coming into any port or place in the state of New Jersey where a health officer appointed by the board of health of the state of New Jersey under the provisions of the third section of this act may then be holding office.

2. No vessel coming from any foreign or domestic port, which shall pass any quarantine station, located at City Island or elsewhere in Long Island sound, or at Fort Wadsworth or elsewhere in New York bay, whose master or commander shall have obtained a written permit from the proper officer at any of said quarantine stations to proceed with his vessel to any place in the state of New Jersey, shall be brought to any wharf in this state, and no passenger, baggage, merchandise or other materials on board of any such vessel shall land or be landed at any place in this

state, until such master or commander shall have deposited such permit at the office of the local board of health of the place of destination named in the permit, which deposit shall be made within twenty-four hours after receiving such permit, nor until said master or commander shall have received a permit to land said passengers, crew, baggage, merchandise and other materials, which permit shall be granted in the manner required by said local board of health; if said local board, or the officer acting for it, shall have no reason to believe that said vessel, or any of the persons, baggage, merchandise or materials thereon, is or are infected with any communicable disease, a permit to land said persons, baggage, merchandise and materials shall be granted forthwith upon the deposit of the permit issued by any quarantine officer as aforesaid, but if said local board, or the officer acting for it, shall have reason to believe that said vessel, or any person, baggage, merchandise or materials thereon, is or are infected with any communicable disease, then no permit to land shall be granted except subject to such regulations and special orders as may be prescribed or given by the board of health of the state of New Jersey; any master or commander of any vessel who shall violate any of the provisions of this section, and every person who shall violate any of said provisions or aid in the violation thereof, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding three thousand dollars, or by imprisonment not exceeding the term of one year, or both, in the discretion of the court before whom the conviction may be had; *provided, however*, that this section shall not apply to any vessel, or any person, baggage, merchandise or materials on board of any vessel, coming into any port or place in the state of New Jersey where a health officer appointed by the board of health of the state of New Jersey under the provisions of the third section of this act may then be holding office.

3. The governor of this state shall from time to time appoint a physician in good and regular standing as "health officer of the port of Perth Amboy," who shall hold office for the term of five years from the date of his appointment and have the powers, perform the duties and be entitled to demand and receive the fees in this act prescribed; and whenever, in any time of threatened epidemic or injury to the public health of this state, the board of health of this state shall consider that a health officer should be temporarily appointed for any other port or maritime place in this state, said state board may appoint a competent person as such health officer, who shall hold office during the pleasure of said state board, shall exercise all the powers conferred upon, and perform all the duties required of local boards of health by the first and second sections of this act, shall wholly supersede the local board of health having jurisdiction of the place for which he may be appointed in the exercise of such powers and the performance of such duties, and shall be entitled to demand and receive the fees prescribed by this act; said state board shall also have the power from time to time to adopt, alter and amend regulations prescribing the manner and form in which local boards and health officers appointed as aforesaid shall exercise the powers conferred upon and perform the duties required of them by this act, to require from said local boards and health officers such reports from time to time as it may deem expedient, and to revoke, modify, supplement or supersede any order given or act done under the provisions of this act by any local board of health or health officer by such other order or orders as the said state board may deem the necessities of any particular case to require.

4. Every vessel which, between the first day of March and the first day of December in any year, or within any other time in any year designated by resolution of the

board of health of the state of New Jersey, shall come from any port in the United States south of Cape Henlopen, or from any West India, Bahama or Bermuda island port, or from any port or place where any communicable disease exists, into that portion of the waters of this state known as Raritan bay or Sandy Hook bay south of a straight line extending from Ward's point to the northerly extremity of Sandy Hook, and every vessel at any time coming into said waters on board of which any person shall have died while at any port in the United States south of Cape Henlopen or at any foreign port, or while between any such port and said Raritan bay or Sandy Hook bay, or on board of which there are contained any baggage, merchandise or materials by which any communicable disease may be introduced into this state, or on board of which the health officer of the port of Perth Amboy shall have reason to believe that any person or persons may be sick with any communicable disease, or on board of which such health officer shall have reason to believe there may be any baggage, merchandise or materials by which any communicable disease may be introduced into this state, shall come to anchor at some place designated by said health officer of the port of Perth Amboy, which anchorage place shall be southward of a straight line extending from the south ferry wharf in Perth Amboy to the house on Staten island formerly of Caleb Ward, as well as southward and eastward of a straight line extending from the said south ferry wharf to the most easterly wharf of South Amboy; and any master or commander who shall refuse, neglect or fail to bring to anchor at the place designated as aforesaid any such vessel as aforesaid, of which he may be master or commander, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding three thousand dollars, or by imprisonment for a term not exceeding one year, or both, in the discretion of the court before whom the conviction may be had.

5. Whenever any vessel subject to the provisions of the next preceding section of this act shall arrive at any anchorage place designated as aforesaid, it shall be the duty of the health officer of the port of Perth Amboy and he shall have the power, subject to such regulations and special orders as the board of health of the state of New Jersey may from time to time make or prescribe, to visit said vessel and examine into the sanitary conditions thereof, and of all persons, baggage, merchandise and materials on board thereof; to order such vessel, and all baggage, merchandise and materials on board thereof, to be cleansed, ventilated and purified under his supervision and direction, and to that end to require such vessel to be unloaded; to order such vessel to be detained at quarantine for such period after the vessel, and the baggage, merchandise and materials on board thereof shall have been so cleansed, ventilated and purified, as the regulations or any special instruction of the board of health of the state of New Jersey may require; to prescribe quarantine stations for vessels; to prohibit and prevent communication with infected vessels; to detain and isolate all infected persons; to grant permits to land passengers, crews, baggage, merchandise and other materials; to grant permits to discharge cargoes into lighters or otherwise; to release vessels from quarantine; and to give such other orders as he may deem necessary for the prevention of the introduction into this state of any communicable disease; it shall be the duty of the master or commander, or any other person in charge of any vessel concerning which, or concerning the persons, baggage, merchandise or other materials on board of which any such order may be given by said health officer, or by the board of health of the state of New Jersey, to cause the order to be forthwith obeyed; and any master or commander, or other person in charge of any such vessel, who shall refuse, neglect or fail to perform such duty, and

any master, commander or other person who shall violate any order or permit given as aforesaid, and every person who shall aid in any such violation shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding three thousand dollars, or by imprisonment for a term not exceeding one year, or both, in the discretion of the court before whom the conviction may be had.

6. Every health officer appointed as aforesaid is hereby authorized to ask, demand and receive, from the master or commander of any vessel in respect of which any of the duties prescribed by this act shall be performed, the following fees: For examination of every vessel from a foreign port, five dollars; for examination of every vessel from any port in the United States south of Cape Henlopen, if a steamer, three dollars, and if other than a steamer, one dollar; for medical examination of every one hundred, or fraction of one hundred, steerage passengers upon transatlantic vessels, two dollars; for each permit granted for the landing of persons, baggage, merchandise and other materials, or discharging cargoes, and every release of a vessel from quarantine, twenty-five cents; for sanitary inspection of every vessel after the discharge of cargo or ballast, ten dollars; for disinfection of every vessel from an infected port, and of every vessel that shall require disinfection by reason of exposure to infection or contagion, fifty dollars; and for vaccination of persons on board of any vessel on which small-pox has developed during the voyage, each twenty-five cents; each health officer appointed as aforesaid shall keep a record of all fees received by him under the provisions of this act, and if in any calendar year the total amount of fees so received by the health officer of the port of Perth Amboy shall be less than one thousand two hundred and fifty dollars, he shall, on presenting to the board of health of the state of New Jersey an itemized statement of the fees received by him for such year, duly verified by his affidavit, be entitled to receive out of the moneys appropriated to said board for payment to said health officer (if any such appropriation for such payment be made) a sum sufficient to raise his compensation for services during such year to the sum of one thousand dollars, and to pay to one deputy health officer of said port the sum of two hundred and fifty dollars.

7. The said health officer of the port of Perth Amboy is hereby authorized to appoint one or more deputies, who, in the absence of such health officer, shall exercise the powers and perform the duties of the health officer; but before the appointment of any such deputy shall become effective, such appointment shall be approved by the secretary of the state board of health; every such deputy shall hold office during the pleasure of the health officer, subject, however, to the revocation of his appointment at any time by the state board of health or by its secretary; said health officer shall compensate every such deputy for his services out of the fees allowed by this act.

8. The local board of health of any place in this state, excepting the local board of health of any place for which a health officer may be holding office under the provisions of the third section of this act, shall have power, whenever in its judgment the protection of the public health requires such action, to order the master or commander of any vessel within its jurisdiction to remove such vessel to some quarantine station or other place of safety to be designated by the said board, and to order all persons, baggage, merchandise and materials which have been landed from such vessel to be seized and returned to said vessel or taken to some other place of safety to be designated by said board; if such master or commander cannot be found, or if he shall refuse or neglect forthwith to obey any such order, said local board may employ such assistance as may be necessary to effect such removal; and said master

or commander shall not thereafter bring such vessel to any landing place within the limits of the jurisdiction of said local board, or land any person, baggage, merchandise or materials from such vessel at any place within said jurisdiction, until a permit therefor shall have been granted by said local board; any master or commander who shall violate any of the provisions of this section shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding three thousand dollars, or by imprisonment not exceeding the term of one year, or both, in the discretion of the court before whom the conviction may be had.

9. All expenses incurred by, and all fees becoming due to any health officer or any local board of health, or any of their employes, for services rendered or duties performed under the provisions of this act, or under any regulations prescribed by the state board of health, shall be paid by the master, commander or owner of the vessel in relation to which such duties shall be performed or services rendered; and every health officer, local board of health and employe to whom any moneys shall be due on account of any such expenses or fees shall have a lien for the amount thereof, and for all costs of suit and such counsel fee for the plaintiff as the court in its discretion may allow, upon such vessel, its tackle, apparel and furniture, and if payment be not forthwith made on demand therefor, such lien may be enforced by a suit in admiralty, or other proper suit, in any court of competent jurisdiction.

10. The following acts are hereby repealed: "An act to provide for the security of the citizens of this state against the introduction of contagious diseases," passed November nineteenth, seventeen hundred and ninety-nine; "An act to prevent the introduction of malignant and other infectious diseases into this state," approved April fourth, eighteen hundred and seventy-one, and all acts supplementary thereto; and "An act to prevent the introduction of dangerous, infectious, epidemic and pestilential diseases into the state of New Jersey, and to improve the present system of maritime quarantine," approved April ninth, eighteen hundred and ninety-seven.

11. This act shall take effect immediately.

Approved March 21, 1900.

REGULATIONS

To Prevent the Introduction of Infectious Diseases into the State of New Jersey.

1. Every vessel which may arrive in any port or harbor in the State of New Jersey shall be subject to visitation and inspection by the health officer of the port, if there be such officer, and if there be no such officer then by an officer designated by the local board of health having jurisdiction in said port or harbor, and no person shall land from nor go on board of any vessel arriving from any foreign port, or from any infected place, or from any port south of Cape Henlopen from May 1st to November 1st, nor shall any baggage, cargo or other article be landed from any such vessel until the permit required by section 2 of these regulations shall have been issued.

2. A permit to land passengers, crew, baggage and cargo shall be issued (subject to the provisions of section 5 of these regulations) to the master of every vessel arriving in any of the ports or harbors of this State by the health officer of the port, if there be such officer, and if there be no such officer then by the clerk or other officer designated by the local board of health; *provided*, that such vessel shall have been subjected to sanitary inspection by the proper officer at one of the quarantine stations of the port of New York; *and provided*, that a written permit, issued by said quarantine officer of the port of New York, shall have been deposited in the office of the officer of the port, if there be such officer, and if there be no such officer then in the office of the clerk of the local board of health having jurisdiction in the port or harbor in which said vessel shall have arrived; *and provided*, that said vessel, her passengers, crew, baggage and cargo shall have been found (see section 3 of these regulations) by said officer of the port or by said local board of health to be free from the infection of yellow fever, cholera, typhus fever, bubonic plague, small-pox, diphtheria, scarlet fever, measles or other disease of a contagious, infectious or pestilential nature. Said permit shall be in form as follows:

NEW JERSEY QUARANTINE SERVICE.

No.....

GENERAL PERMIT TO LAND PASSENGERS, CREW, BAGGAGE AND CARGO.

..... [Name of place.] [Date.]
 Permission is hereby given to [Name of consignee or master of vessel.]
 to land the passengers, crew, baggage and cargo, *except rags, hides, straw and bedding*,
 from the....., arrived.....
 [Name of vessel.] [Date.]
 from....., at.....
 [Port of departure.] [Name of pier.]
 Signed.....
 Official title.....

And it is further provided, that no permit to land passengers, crew, baggage or cargo shall be issued to the master of any vessel from any foreign port until it shall be shown that the requirements of the act of Congress approved February 15th, 1893, shall have been conformed to in the case of said vessel.

3. No fee shall be charged or collected for the inspection of any vessel, passengers, crew, baggage or cargo in cases where the said vessel has within twenty-four hours been inspected and allowed to proceed by the proper officer of one of the quarantine stations of the port of New York, and when said vessel has already been charged with the fee for sanitary inspection which is prescribed by the laws of the State of New York.

4. No straw or bedding shall be landed from any vessel from any foreign port or from any infected place until said straw and bedding shall have been disinfected under the supervision of the health officer of the port, if there be such officer, and if there be no such officer then by the officer designated by the local board of health; said disinfection shall consist in exposure, in a closed chamber, to steam at a temperature not less than 240° Fahrenheit for a period not less than thirty minutes.

5. No rags, hides, straw or bedding shall be landed under the authority contained in the permit provided for in section 2 of these regulations, but all of said articles which may arrive in any infected vessel, or in any vessel from a foreign port, or from any infected place, or from any port south of Cape Henlopen, between May 1st and November 1st, shall be landed, stored and transported only in accordance with the terms of a special permit, which special permit shall be in form as follows:

NEW JERSEY QUARANTINE SERVICE. No.....

SPECIAL PERMIT TO LAND RAGS, HIDES, STRAW AND BEDDING.

..... [Name of place.] [Date.]

Permission is hereby given to.....
 of.....
 to land....., and to.....
 the same.....

[Name of vessel.] [Port of departure.]
 [Rags, hides, straw or bedding.] [Store or transport.]
 [State location or destination.]

Provided, that said removal of said.....shall be performed....., in the presence of and subject to the approval of an officer of this department.

Signed.....
 Official title.....

6. A record shall be kept by the health officer of the port, if there be such officer, and if there be no such officer then by the clerk or secretary of the local board of health, showing (1) the name of every vessel which has been inspected and also the following facts concerning every such vessel: (2) the port of departure; (3) the name of the master; (4) the number of the crew; (5) the number of the passengers; (6) the number of cases of sickness during the voyage; (7) the character of the sickness; (8) the number and causes of death during the voyage; (9) the number of persons sick and the nature of the diseases with which they are affected upon arrival and during detention; (10) duration of detention of vessel, passengers and crew; (11) the measures employed in disinfection; (12) the nature of the cargo.

7. In all cases where it shall be found that any person or persons arriving in any of the ports or harbors of this State shall have been exposed to the infection of small-pox, said person or persons shall be vaccinated by the health officer of the port, if there be such officer, and if there be no such officer then by an officer appointed by the local board of health, or the said person or persons shall be subjected to detention and isolation, not exceeding the incubation period of the disease.

8. If any infected vessel or any vessel having on board any person suffering from yellow fever, cholera, typhus fever, bubonic plague, small-pox, scarlet fever, diphtheria, measles, relapsing fever or any other dangerous disease of an infectious nature, shall arrive in any port or harbor in this State, notice by telegraph of the arrival of said vessel shall be immediately sent to the Board of Health of the State of New Jersey, Trenton, by the health officer of the port, if there be such officer, and if there be no such officer then by the clerk or secretary of the local board of health; and said vessel shall, together with the passengers, crew, baggage and cargo, be required by the health officer of the port, if there be such officer, and if there be no such officer then by the local board of health or by some authorized officer of said board, to at once proceed to a place of anchorage to be designated by said health officer of the port, if there be such officer, and if there be no such officer then by the local board of health or its authorized representative, and the commander of said vessel shall at once cause said vessel to be taken to said anchorage for such detention and disinfection as may in each case be deemed necessary.

9. No person shall cast overboard from any infected vessel or from any vessel undergoing quarantine detention any straw, bedding, clothing, nor any infected article or substance. If any such straw, bedding, clothing, or article or substance shall be discovered afloat in any of the waters of this State, or shall be found on the shore of any harbor, bay or any portion of the coast of this State, said materials shall at once be seized and destroyed by the health officer of the port, if there be such officer, and if there be no such officer then by an officer designated by the local board of health.

By order of the Board of Health of the State of New Jersey, April 12th, 1900.

C. F. BRACKETT,
President.

HENRY MITCHELL,
Secretary.

Laws.

Following is a list of titles of bills having relation to the public health, introduced during the legislative session of 1900 :

SENATE BILLS—1900.

* No. 8, Mr. McCarter. The State Sewerage Commission bill. Provides that the Governor, with the consent of the Senate, shall appoint five members—term, three years; salary, \$1,500. Commission shall appoint a secretary and fix his salary. The commission is clothed with full power in the matter of investigation and abatement of the pollution of streams through the State. It may compel any person, corporation or municipality to cease polluting any stream within five years. Provision is made for formation of sewer districts, including several cities. Experts, engineers, &c., may be employed. (Public Health.)

* No. 18, Mr. Cross. Amends the act providing for the certification of marriages, births and deaths, approved February 15th, 1888. (Revision of Laws.)

No. 26, Mr. Reed (by request). Gives local boards of health power to adopt or alter ordinances prohibiting the sale of, or having in possession for sale, milk containing any unhealthy ingredient or substance, or which has been transported or stored in an unclean manner or place, or which is produced from diseased cows. (Public Health.)

* No. 37, Mr. Stokes. Provides for the erection of two brick cottages, for water-supply and sewerage, and for the payment for the purchase of additional land for the State Village of Epileptics. Calls for an appropriation of \$35,000. (Appropriations.)

No. 41, Mr. Stokes. To secure the purity of foods, beverages, condiments, drugs and medicines, and to prevent deception in the sale

* These bills became laws.

thereof. The bill first defines the general nature of impure drugs and foods. Milk must contain twelve per cent. of solids. Imitations of all sorts must be sold as imitations. The State Board of Health is given power to make analyses and to employ the necessary help. Any person obstructing or interfering with analyst, inspector, &c., shall be liable to a fine of \$100. Other penalties for granting false warranties, &c., are prescribed. The State Board of Health may expend \$12,000 annually under this act. The office of State Dairy Commissioner is abolished and his duties shall be performed by the chief inspector under this act. Several other statutes are repealed, this bill to take their place. (Public Health.)

No. 79, Mr. Francis. Enables lawfully-qualified physicians and surgeons practicing in other States, and applicants who have matriculated and received the degree of M.D. from a registered medical college, to receive, upon payment of \$15, an indorsement of the license or diploma conferring the same rights and privileges as a State board license. Applies particularly to those who have served as physicians and surgeons in Civil or Spanish war, commissioned as medical officers by the Governors of their respective States. (Public Health.)

* No. 83, Mr. Cross. Supplement to the township sewer act. (Boroughs and Townships.)

No. 117, Mr. Reed. Makes it unlawful for any person or corporation in this State to manufacture, sell or offer to sell any article, compound or preparation in which there is any arsenic, calomel, bismuth, ammonia or alum. Provides a fine of not less than \$100. (Public Health.)

* No. 152, Mr. Stokes. Concerning the transportation of dead human bodies across or within this State. Requires that bodies dead of contagious disease must be hermetically sealed in a casket, and the undertaker must have a license or permit for such transportation from officer of State Board of Health. Violation of this act punishable with a fine of \$100. (Public Health.)

* No. 202, Mr. Francis. Authorizes Long Branch to award a contract for a garbage crematory. (Municipal Corporations.)

* These bills became laws.

ASSEMBLY BILLS.

No. 34, Mr. Kirkbride. Gives to local boards of health additional powers. (Public Health.)

No. 126, Mr. Wood. Authorizes the Governor to appoint four barbers, who shall be selected from the Barbers' Association of New Jersey, to be known as the State Board of Barbers' Examiners. Their terms shall be for four years, after first appointments, which shall be for one, two, three and four years respectively. The member having one year to serve shall be president; three years, the treasurer, and four years, the secretary. They shall examine and license all barbers, who shall not act as such unless so licensed, the act not to apply to any practicing barber when act becomes a law. Members of the board shall receive a five-dollar per diem and two cents mileage. Fee for license to each barber shall be five dollars. Licenses shall be revoked for conviction of crime; habitual drunkenness for six months; gross incompetency; use of towels or utensils liable to spread contagious diseases; unsanitary shops to be declared nuisances. (Revision of Laws.)

* No. 185, Mr. Lyon. Prevents the introduction into the State of communicable diseases by maritime vessels or traffic. (Public Health.)

No. 198, Mr. Lewis. Gives local boards of health power to pass ordinances to create plumbing boards. (Public Health.)

No. 204, Mr. Klein. Amends the act regulating the practice of pharmacy. (Public Health.)

No. 216, Mr. Steelman. Regulates the enlargement of cemeteries in cities, which can only be done by consent of the governing body and the board of health. (Public Health.)

* No. 238, Mr. Dexheimer. Provides for ropes and other protection for bathers at seaside resorts. (Public Health.)

No. 248, Mr. Benny. Provides for the registry of dogs by city boards of health. (Public Health.)

No. 276, Mr. Tennant (by request). Authorizes Jersey City to purchase lands and erect a building thereon for the city board of health, cost not to exceed \$15,000. (Public Health.)

* No. 309, Mr. Bacheller. Provides that when the board of health of any city shall declare by resolution that it is necessary to establish and maintain a hospital for contagious and infectious diseases, with

* These bills became laws.

the estimated cost thereof, the finance board of such city shall make an appropriation for the erection of such hospital, &c., and same shall be erected. (Public Health.)

* No. 311, Mr. Kirkbride. Relates to government of cities of less than 1,200 inhabitants. Gives any city bordering upon the Atlantic ocean power to purchase or acquire any beach front for public park purposes. Matter to be submitted to the voters. (Municipal Corporations.)

No. 334, Mr. Kirkbride. Gives local boards of health in cities under 12,000 population power to pass, alter and amend ordinances to regulate and control the storage and disposal of waste liquids, filthy fluids, excreta, and house and kitchen waste. (Public Health.)

* No. 338, Mr. Kirkbride. Authorizes any city to purchase a sewage system already built and to issue bonds for same. (Public Health.)

* These bills became laws.

REPORT
OF THE
BUREAU OF VITAL STATISTICS
OF THE
STATE OF NEW JERSEY
FOR THE
STATISTICAL YEAR ENDING JUNE 30,
1900.

Number of Marriages, Births and Deaths,

By Counties, Cities, Boroughs and Townships, and Totals for
the State, for the Year Ending June 30th, 1900.

ATLANTIC COUNTY.

	M.	B.	D.
Absecon.....	8	7	15
Atlantic City.....	279	460	497
Buena Vista.....	16	41	13
Brigantine Borough.....	0	1	0
Egg Harbor City.....	22	54	26
Egg Harbor Township.....	14	31	35
Galloway.....	8	37	43
Hamilton.....	12	38	22
Hammonton.....	40	70	61
Linwood Borough.....	4	5	8
Mullica.....	2	16	10
Pleasantville Borough.....	21	42	32
Somers Point Borough.....	1	7	2
South Atlantic City.....	0	0	0
Weymouth.....	5	15	7
	*2		
	434	824	771

*Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

BERGEN COUNTY.

	M.	B.	D.
Allendale Borough.....	2	6	9
Bergen.....	1	6	7
Bergenfield Borough.....	3	9	4
Bogota Borough.....	0	2	1
Carlstadt Borough.....	21	73	28
Cliffside Park Borough.....	1	10	19
Cresskill Borough.....	1	16	7
Delford Borough.....	1	21	7
Dumont Borough.....	2	9	8
East Rutherford Borough.....	20	56	36
Edgewater Borough.....	2	0	9
Englewood City.....	39	106	111
Englewood Cliffs Borough.....	1	1	2
Fairview Borough.....	1	16	17
Franklin.....	10	26	44
Garfield Borough.....	15	71	42
Glen Rock Borough.....	2	7	0
Hackensack City.....	92	157	129
Harrington.....	15	49	37
Hasbrouck Heights Borough.....	2	25	14
Hillsdale.....	2	20	12
Hobokus.....	15	89	30
Leonia Borough.....	4	10	15
Little Ferry Borough.....	17	43	17
Lodi Borough.....	12	53	39
Lodi Township.....	0	2	5
Maywood Borough.....	1	11	3
Midland.....	3	33	39
Midland Park Borough.....	9	21	11
Montvale.....	4	4	5
North Arlington Borough.....	0	2	5
Old Tappan Borough.....	0	5	8
Orvil.....	8	16	11
Overpeck.....	3	4	23
Palisade.....	2	12	13
Palisade Park Borough.....	2	20	0
Park Ridge Borough.....	6	22	13
Ridgefield Borough.....	2	4	6
Ridgefield Township.....	17	32	52
Ridgewood.....	3	57	32
Riverside Borough.....	8	11	7
Rutherford Borough.....	26	64	43
Saddle River Borough.....	7	3	11
Saddle River Township.....	8	30	24
Teaneck.....	0	9	5
Tenafly Borough.....	2	31	18
Undercliff Borough.....	2	7	3
Union.....	6	12	19
Upper Saddle River Borough.....	1	0	5
Wallington Borough.....	0	3	3
Washington.....	1	16	12
Westwood Borough.....	3	20	19
Woodcliff Borough.....	2	4	6
Wood Ridge Borough.....	3	13	12
	*1		
	414	1,309	1,667

* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

BURLINGTON COUNTY.

	M.	B.	D.
Bass River.....	2	10	10
Beverly.....	30	41	73
Bordentown City.....	37	53	80
Burlington City.....	64	61	183
Chester.....	32	66	60
Chesterfield.....	1	19	15
Cinnaminson.....	4	18	9
Delran.....	2	18	14
Eastampton.....	0	2	6
Evesham.....	2	16	29
Fieldsboro.....	5	9	8
Florence.....	3	50	28
Lumberton.....	14	9	22
Mansfield.....	10	9	20
Medford.....	11	12	22
Mount Laurel.....	4	42	22
New Hanover.....	26	17	17
Northampton.....	53	89	93
Palmyra.....	17	32	35
Pemberton Borough.....	9	4	14
Pemberton Township.....	5	9	34
Riverside.....	15	65	49
Riverton Borough.....	8	17	12
Shamong.....	3	3	5
Southampton.....	3	7	3
Springfield.....	5	11	16
Washington.....	1	12	6
Westampton.....	1	3	4
Willingboro.....	3	3	7
Woodland.....	2	11	4
	377	718	910

CAMDEN COUNTY.

	M.	B.	D.
Camden City.....	1,161	1,177	1,299
Centre.....	2	34	23
Chesilhurst Borough.....	2	5	4
Collingswood Borough.....	10	35	16
Delaware.....	2	12	14
Gloucester City.....	47	141	136
Gloucester Township.....	31	69	101
Haddon Township.....	6	39	22
Haddonfield Borough.....	29	32	35
Merchantville Borough.....	17	19	31
Pensauken.....	3	18	39
Stockton.....	0	1	1
Voorhees.....	1	19	16
Waterford.....	25	43	37
Winslow.....	4	39	23
	*2		
	1,347	1,633	1,802

* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

CAPE MAY COUNTY.

	M.	B.	D.
Anglesea Borough.....	0	3	0
Avalon Borough.....	0	0	0
Cape May City.....	26	35	50
Cape May Point Borough.....	0	1	1
Dennis.....	12	37	19
Holly Beach Borough.....	4	11	7
Lower.....	12	16	15
Middle.....	12	19	27
Ocean City Borough.....	9	15	22
Upper.....	10	22	15
Sea Isle City Borough.....	3	7	9
West Cape May Borough.....	0	5	9
Wildwood Borough.....	0	3	0
	88	184	174

CUMBERLAND COUNTY.

	M.	B.	D.
Bridgeton City.....	142	255	200
Commercial.....	21	35	24
Deerfield.....	20	52	22
Downs.....	18	12	9
Fairfield.....	14	14	3
Greenwich.....	6	25	19
Hopewell.....	17	22	26
Landis.....	7	46	57
Lawrence.....	8	25	16
Maurice River.....	18	22	10
Millville City.....	97	235	167
Vineland Borough.....	79	100	77
Stow Creek.....	2	13	5
	*1		
	445	856	662

* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

ESSEX COUNTY.

	M.	B.	D.
Belleville.....	27	80	105
Bloomfield.....	64	192	125
Caldwell Borough.....	7	28	26
Caldwell Township.....	7	15	11
Clinton.....	30	99	72
East Orange City.....	136	296	236
Franklin.....	12	60	33
Glenn Ridge Borough.....	4	22	17
Livingston.....	3	9	22
Millburn.....	8	55	41
Montclair City.....	80	232	213
Newark City.....	2,207	5,668	4,824
North Caldwell Borough.....	0	0	3
Orange City.....	151	583	498
South Orange Borough.....	20	77	58
South Orange Township.....	6	22	18
Vailsburg Borough.....	5	44	28
Verona.....	5	18	17
West Orange.....	20	86	88
	*5		
	2,797	7,636	6,433

* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

GLOUCESTER COUNTY.

	M.	B.	D.
Clayton Borough.....	14	39	42
Deptford.....	14	27	16
East Greenwich.....	9	16	14
Elk.....	0	9	13
Franklin.....	7	38	21
Glassboro.....	24	59	49
Greenwich.....	8	21	30
Harrison.....	14	30	17
Logan.....	7	20	16
Mantua.....	15	40	26
Monroe.....	24	26	37
South Harrison.....	2	14	7
Washington.....	0	16	15
Wenonah Borough.....	3	8	2
West Deptford.....	10	32	18
Woodbury.....	38	64	69
Woolwich.....	22	38	20
	211	497	413

HUDSON COUNTY.

	M.	B.	D.
Bayonne City.....	185	777	569
East Newark Borough.....	8	11	52
Guttenberg.....	12	92	56
Harrison City.....	73	144	237
Hoboken City.....	720	1,509	1,366
Jersey City.....	1,453	3,416	4,198
Kearny.....	44	141	223
North Bergen.....	45	190	305
Town of Union.....	151	271	215
Weehawken.....	22	68	84
West Hoboken.....	190	541	350
West New York Borough.....	18	140	87
	2,916	7,300	7,742

HUNTERDON COUNTY.

	M.	B.	D.
Alexandria.....	0	12	12
Bethlehem.....	10	23	22
Clinton Borough.....	7	7	15
Clinton Township.....	8	40	18
Delaware.....	13	16	19
East Amwell.....	8	13	13
Franklin.....	9	16	19
Frenchtown Borough.....	11	14	21
High Bridge.....	11	34	12
Holland.....	7	16	33
Junction Borough.....	12	3	20
Kingwood.....	3	26	8
Lambertville.....	32	86	60
Lebanon.....	23	32	17
Raritan.....	25	67	46
Readington.....	23	34	38
Stockton Borough.....	7	17	6
Tewksbury.....	28	16	23
Union.....	4	9	21
West Amwell.....	1	10	10
	242	496	433

MERCER COUNTY.

	M.	B.	D.
East Windsor.....	0	12	8
Ewing.....	5	14	113
Hamilton.....	22	25	60
Hightstown Borough.....	20	31	31
Hopewell Borough.....	81	14	26
Hopewell Township.....	6	34	23
Lawrence.....	6	14	12
Pennington Borough.....	3	3	7
Princeton Borough.....	25	79	43
Princeton Township.....	1	19	9
Trenton City.....	593	685	1,204
Washington.....	3	8	19
West Windsor.....	3	7	4
	718	940	1,559

MIDDLESEX COUNTY.

	M.	B.	D.
Cranbury.....	8	26	23
Dunellen Borough.....	12	20	19
East Brunswick.....	13	22	29
Helmetta Borough.....	3	0	0
Jamesburg Borough.....	9	1	0
Madison.....	1	18	17
Metuchen Borough.....	0	3	3
Milltown Borough.....	1	10	4
Monroe.....	3	15	10
New Brunswick City.....	171	324	425
North Brunswick.....	4	10	12
Perth Amboy City.....	202	388	256
Piscataway.....	5	16	39
Raritan.....	23	41	61
Sayreville.....	10	125	39
South Amboy City.....	41	154	88
South Brunswick.....	7	19	34
South River Borough.....	21	80	51
Woodbridge.....	30	168	110
	564	1,440	1,220

MONMOUTH COUNTY.

	M.	B.	D.
Allenhurst Borough.....	0	3	1
Allentown Borough.....	8	0	5
Atlantic.....	6	3	18
Atlantic Highlands Borough.....	1	0	0
Asbury Park.....	44	34	66
Avon Borough.....	0	0	0
Belmar Borough.....	19	13	17
Bradley Beach Borough.....	0	7	2
Eatontown.....	19	41	40
Englishtown Borough.....	7	4	3
Freehold.....	45	102	89
Holmdel.....	6	10	14
Howell.....	33	45	41
Long Branch City.....	77	94	161
Manalapan.....	7	19	22
Manasquan Borough.....	14	21	23
Marlboro.....	5	14	20
Matawan Borough.....	18	30	24
Matawan Township.....	4	16	13
Middletown.....	89	78	75
Millstone.....	9	14	18
Neptune City Borough.....	11	10	18
Neptune Township.....	57	105	167
North Spring Lake Borough.....	3	3	3
Ocean.....	2	33	39
Raritan.....	37	66	71
Red Bank Borough.....	85	66	85
Seabright Borough.....	0	6	11
Shrewsbury.....	19	55	91
Spring Lake Borough.....	2	11	1
Upper Freehold.....	10	31	22
Wall.....	17	52	28
	554	1,010	1,189

MORRIS COUNTY.

	M.	B.	D.
Boonton City.....	43	19	65
Boonton Township.....	0	20	0
Chatham Borough.....	0	12	13
Chatham Township.....	2	7	11
Chester.....	11	23	13
Dover City.....	45	103	74
Florham Park Borough.....	2	0	6
Hanover.....	20	41	155
Jefferson.....	7	5	3
Madison Borough.....	15	7	52
Mendham.....	9	31	29
Montville.....	4	4	25
Morristown.....	83	221	184
Morris Township.....	2	14	10
Mount Arlington Borough.....	0	2	6
Mount Olive.....	14	19	9
Netcong Borough.....	0	5	7
Passaic.....	8	14	28
Pequannock.....	10	43	32
Port Oram Borough.....	8	35	26
Randolph.....	8	10	34
Rockaway Borough.....	26	29	15
Rockaway Township.....	20	63	63
Roxbury.....	21	43	35
Washington.....	20	34	26
	378	794	921

OCEAN COUNTY.

	M.	B.	D.
Bay Head Borough.....	0	5	9
Beach Haven Borough.....	2	0	9
Berkley.....	0	11	10
Brick.....	11	21	15
Dover.....	18	41	30
Eagleswood.....	4	3	4
Island Heights Borough.....	2	4	3
Jackson.....	2	15	17
Lacey.....	3	11	5
Lakewood.....	35	64	55
Lavalette Borough.....	0	0	0
Little Egg Harbor.....	13	33	19
Long Beach.....	0	1	1
Manchester.....	5	3	9
Ocean.....	5	8	3
Plumsted.....	13	11	18
Point Pleasant Borough.....	3	22	18
Stafford.....	3	17	16
Union.....	9	19	17
	123	289	256

PASSAIC COUNTY.

	M.	B.	D.
Acquackanonk.....	6	56	61
Hawthorne Borough.....	5	24	20
Little Falls.....	13	51	42
Manchester.....	14	75	55
Passaic City.....	480	895	583
Paterson.....	893	1,975	1,967
Pompton.....	19	24	35
Pompton Lakes Borough.....	9	11	22
Totowa Borough.....	0	2	2
Wayne.....	5	23	11
West Milford.....	15	6	26
	1,459	3,142	2,824

SALEM COUNTY.

	M.	B.	D.
Alloway.....	14	24	27
Elmer Borough.....	7	24	12
Elsinboro.....	0	5	5
Lower Alloways Creek.....	3	26	18
Lower Penns Neck.....	4	29	17
Mannington.....	3	8	17
Oldmans.....	16	13	11
Penns Grove Borough.....	33	39	29
Pilesgrove.....	6	28	28
Pittsgrove.....	1	26	11
Quinton.....	4	16	18
Salem City.....	72	62	117
Upper Penns Neck.....	0	16	6
Upper Pittsgrove.....	9	28	26
Woodstown Borough.....	13	7	22
	185	346	364

SOMERSET COUNTY.

	M.	B.	D.
Bedminster.....			
Bernards.....	10	38	25
Bound Brook Borough.....	15	23	31
Branchburg.....	84	61	34
Bridgewater.....	7	12	12
Franklin.....	58	110	88
Hillsborough.....	24	40	31
Millstone Borough.....	11	12	33
Montgomery.....	0	1	1
North Plainfield Borough.....	6	8	17
North Plainfield Township.....	33	93	80
Raritan Borough.....	2	3	9
Warren.....	22	26	47
	3	13	17
	225	440	425

SUSSEX COUNTY.

	M.	B.	D.
Andover.....	7	9	12
Branchville Borough.....	6	5	8
Byram.....	8	11	12
Deckertown Borough.....	12	7	16
Frankford.....	0	5	18
Green.....	2	0	2
Hampton.....	11	6	11
Hardyston.....	19	17	31
Lafayette.....	15	9	17
Montague.....	1	2	1
Newton.....	35	48	8
Sandyston.....	1	6	42
Sparta.....	13	26	19
Stillwater.....	10	13	24
Vernon.....	7	10	15
Walpack.....	0	5	1
Wantage.....	15	15	21
	162	189	272

UNION COUNTY.

	M.	B.	D.
Clark.....	2	4	5
Cranford.....	12	35	36
Elizabeth.....	382	982	922
Fanwood Borough.....	0	11	9
Fanwood Township.....	4	3	6
Linden Borough.....	1	3	6
Linden Township.....	0	3	8
Mountainside Borough.....	0	1	0
New Providence Borough.....	2	7	15
New Providence Township.....	0	5	0
Plainfield.....	113	323	246
Rahway.....	74	64	123
Roselle Borough.....	8	18	20
Springfield.....	11	24	16
Summit.....	38	118	77
Union.....	6	32	40
Westfield.....	26	76	51
	679	1,709	1,580

WARREN COUNTY.

	M.	B.	D.
Allamuchy	0	2	0
Belvidere	13	16	18
Blairstown	13	17	24
Franklin	8	13	9
Frelinghuysen	11	4	10
Greenwich	12	11	9
Hackettstown	21	34	37
Hardwick	0	0	8
Harmony	7	26	21
Hope	1	2	6
Independence	4	17	6
Knowlton	19	16	15
Lopatcong	1	31	16
Mansfield	13	7	15
Oxford	23	39	46
Pahaquarry	0	4	
Phillipsburg	94	121	122
Pohatcong	10	27	26
Washington Borough	29	63	
Washington Township	9	13	13
	288	463	457

SUMMARY.

	M.	B.	D.
Atlantic	484	824	771
Bergen	414	1,809	1,067
Burlington	377	718	910
Camden	1,347	1,638	1,802
Cape May	88	184	174
Cumberland	445	856	662
Essex	2,797	7,636	6,433
Gloucester	211	497	413
Hudson	2,916	7,300	7,742
Hunterdon	242	496	433
Mercer	718	940	1,559
Middlesex	564	1,440	1,220
Monmouth	554	1,010	1,189
Morris	378	794	921
Ocean	128	289	256
Passaic	1,459	3,142	2,824
Salem	185	346	364
Somerset	225	440	425
Sussex	162	189	272
Union	679	1,709	1,580
Warren	288	463	457
	14,611	32,270	31,474

SUPPLEMENTARY BIRTHS.

REGISTERED 1899-1900.

	1878.	1892-98.	1897-99.
Monmouth County	1	Newark	13
		Town of Union	1
	1879-80.	1893-94.	
Newark	1	Newark	4
Hudson County	1	Orange City	2
Jersey City	2	Hoboken	2
Trenton	1	Paterson	1
	1880-81.	1894-95.	
Jersey City	1	Bergen County	1
Middlesex County	1	Burlington City	1
	1881-82.	Essex County	1
Jersey City	1	Newark	19
	1882-84.	Orange City	1
Hoboken	1	Middlesex County	1
Paterson	1	Ocean	1
Union County	1	Passaic City	1
		Paterson	2
	1884-85.	1895-96.	
Newark	2	Atlantic County	1
Jersey City	8	Bergen County	4
Town of Union	2	Camden County	1
Ocean County	1	Camden City	1
	1885-86.	Essex County	2
Camden County	1	Newark	56
Newark	2	Harrison	5
Hudson County	1	Jersey City	1
Jersey City	3	Town of Union	5
	1886-87.	Mercer County	5
Camden County	1	Middlesex County	1
Newark	1	Monmouth County	1
		Paterson	1
		Salem County	1
		Rahway	1
	1887-88.	1896-97.	
Bergen County	1	Bergen County	12
Newark	2	Burlington City	18
		Cumberland County	2
		Essex County	7
		Newark	189
		Orange City	1
		Gloucester County	3
		Hudson County	10
		Harrison	39
		Jersey City	7
		Town of Union	1
		Monmouth County	1
		Long Branch	1
		Paterson	11
		Salem County	18
		Elizabeth	1
		Rahway	5
	1888-89.	1897-98.	
Newark	2	Atlantic County	8
Jersey City	1	Bergen County	13
		Englewood	1
		Hackensack	1
		Burlington City	2
		Camden County	4
		Cumberland County	4
		Morris County	2
		Essex County	10
		Montclair	4
		Newark	15
		Gloucester County	8
		Hudson County	17
	1889-90.	1897-99.	
Camden City	1	Atlantic County	24
Newark	2	Atlantic City	12
Jersey City	2	Bergen County	147
Paterson	1	Englewood	5
Elizabeth	2	Hackensack	15
		Burlington County	73
		Burlington City	1
		Camden County	74
		Camden City	81
		Gloucester City	13
		Cape May County	18
		Cumberland County	37
		Bridgeton	4
		Millville	7
		Essex County	131
		Montclair	16
		Newark	993
		Orange City	17
		Gloucester County	89
		Hudson County	135
		Bayonne	71
		Harrison	40
		Hoboken	191
		Jersey City	535
		Town of Union	31
		Hunterdon County	68
		Mercer County	52
		Trenton	80
		Middlesex County	35
		New Brunswick	24
		Perth Amboy	9
		South Amboy	4
		Monmouth County	83
		Long Branch	10
		Morris County	62
		Morristown	14
		Ocean County	4
		Passaic County	69
		Passaic City	25
		Paterson	146
		Salem County	59
		Salem City	4
		Somerset County	42
		Sussex County	15
		Union County	51
		Elizabeth	64
		Plainfield	20
		Rahway	19
		Warren County	23
		Phillipsburg	31
	1890-91.	Total	4,567
Newark	1		
Hudson County	1		
Jersey City	1		
Mercer County	1		
Long Branch	1		
Morris County	1		
	1891-92.		
Newark	5		
Jersey City	3		

SUPPLEMENTARY MARRIAGES.

REGISTERED 1899-1900.

1879-80.		1895-96.		1898-99.	
Jersey City.....	1	Newark.....	5	Essex County.....	7
Jersey City.....	1	Burlington County.....	5	Montclair.....	6
Jersey City.....	1	Newark.....	17	Orange City.....	4
Camden City.....	1	Orange City.....	4	Gloucester County.....	11
Montclair.....	1	Jersey City.....	7	Newark.....	319
Montclair.....	1	Burlington County.....	2	Hudson County.....	50
1889-90.		Newark.....	21	Bayonne.....	16
Mercer County.....	1	Hudson County.....	2	Harrison.....	5
Ocean County.....	1	Jersey City.....	5	Hoboken.....	50
Ocean County.....	1	Middlesex County.....	1	Jersey City.....	122
Atlantic County.....	1	South Amboy.....	2	Town of Union.....	14
Essex County.....	1	Monmouth County.....	3	Hunterdon County.....	9
Trenton.....	1	Passaic City.....	5	Mercer County.....	8
Passaic City.....	1	Paterson.....	2	Trenton.....	39
Salem City.....	1	Atlantic County.....	1	Middlesex County.....	8
Hoboken.....	1	Atlantic City.....	7	New Brunswick.....	14
Hoboken.....	1	Bergen County.....	21	Perth Amboy.....	5
Orange City.....	1	Englewood.....	2	South Amboy.....	14
Orange City.....	1	Hackensack.....	10	Monmouth County.....	2
Camden City.....	1	Burlington County.....	18	Passaic City.....	5
Orange City.....	1	Burlington City.....	1	Monmouth County.....	2
Camden City.....	1	Camden County.....	8	Long Branch.....	2
Newark.....	1	Camden City.....	127	Morris County.....	23
		Gloucester City.....	3	Ocean County.....	6
		Cape May County.....	11	Passaic County.....	7
		Cumberland County.....	7	Passaic City.....	46
		Bridgeton.....	7	Paterson.....	45
		Millville.....	2	Salem County.....	9
				Somerset County.....	18
				Sussex County.....	7
				Union County.....	17
				Elizabeth.....	1
				Plainfield.....	17
				Rahway.....	1
				Warren County.....	9
				Phillipsburg.....	8
				Total.....	1,264

SUPPLEMENTARY DEATHS AND TRANSITS.

REGISTERED 1899-1900.

	Deaths.	Transits.		Deaths.	Transits.
Bergen County.....	2		Salem County.....	4	
Burlington County.....	1		Somerset County.....	1	
Burlington County.....	4		Sussex County.....	5	
Bergen County.....	2				
Newark.....	1		Atlantic County.....	4	
Passaic County.....	1		Bergen County.....	37	9
Newark.....	1		Hackensack.....	3	
Monmouth County.....	1		Burlington County.....	36	
Newark.....	11		Bordentown.....	1	
Salem County.....	1		Camden County.....	12	
Somerset County.....	2		Camden City.....	8	
Bergen County.....	1	10	Cape May County.....	10	
Cumberland County.....	1		Cumberland County.....	24	1
Newark.....	6		Bridgeton.....	1	
Monmouth County.....	1		Essex.....	21	
Passaic County.....	1		Newark.....	34	
Somerset County.....	2		Gloucester County.....	15	
Sussex County.....	2		Hoboken.....		9
Bergen County.....	2	10	Jersey City.....	13	
Burlington County.....	1		Town of Union.....	1	
Essex County.....	1		Hunterdon County.....	37	
Hunterdon County.....	4		Mercer County.....	21	
Monmouth County.....	2		Trenton.....	1	
Passaic County.....	6		Middlesex County.....	24	
			New Brunswick.....	1	
			Perth Amboy.....	1	
			Monmouth County.....	105	
			Long Branch.....	9	3
			Morris County.....	47	1
			Morristown.....	2	
			Ocean County.....	15	
			Passaic County.....	14	1
			Paterson.....	1	
			Salem County.....	23	3
			Salem City.....	5	
			Somerset County.....	19	9
			Sussex County.....	57	2
			Union County.....	24	
			Plainfield.....	1	
			Rahway.....	4	
			Warren County.....	19	
			Phillipsburg.....	22	
			Total.....	730	67

Number of Duplicate Certificates of Marriage Licenses Received from County Clerks During the Year Ending June 30th, 1900.

	Copies of Licenses.	Duplicate Certificates.
Atlantic.....	16	15
Bergen.....	1	2
Burlington.....	0	0
Camden.....	2	2
Cape May.....	0	0
Cumberland.....	1	1
Essex.....	14	14
Gloucester.....	2	1
Hudson.....	1	0
Hunterdon.....	0	0
Mercer.....	9	9
Middlesex.....	0	0
Monmouth.....	6	2
Morris.....	0	0
Ocean.....	1	1
Passaic.....	3	3
Salem.....	0	0
Somerset.....	0	0
Sussex.....	0	0
Union.....	0	0
Warren.....	0	0
	56	50

Statement of Returns of Marriages, Births and Deaths Received Too Late for Tabulation in the Annual Report for Year Ending June 30th, 1900.

	M.	B.	D.		M.	B.	D.
Atlantic County.				Cape May County.			
Atlantic City.....	4	4	4	Avalon Borough.....	1	.....	.....
Buena Vista Township.....	.....	1	1	Cape May City.....	.....	1	.....
Hammonton.....	2	5	1	Dennis Township.....	5	7	4
Bergen County.				Cumberland County.			
Bergen Township.....	.....	2	.....	Bridgeton.....	2	.....	.....
Bergenfield Borough.....	.....	3	2	Commercial Township.....	2	.....	1
Carlstadt Borough.....	.....	3	.....	Downe Township.....	.....	1	2
Cliffside Park Borough.....	.....	1	.....	Fairfield Township.....	.....	1	1
Englewood.....	.....	3	.....	Greenwich Township.....	1	3	1
Fairview Borough.....	.....	2	.....	Landis Township.....	.....	1	1
Franklin Township.....	.....	.....	1	Lawrence Township.....	1	10	3
Garfield Borough.....	1	.....	.....	Maurice River Township.....	.....	1	1
Glen Rock Borough.....	.....	6	.....	Millville.....	5	4	.....
Hackensack.....	.....	4	.....	Stow Creek Township.....	.....	.....	2
Hillsdale Township.....	1	2	.....	Vineland Borough.....	1	.....	.....
Hohokus Township.....	.....	2	.....	Essex County.			
Lodi Borough.....	1	.....	.....	Belleville Township.....	.....	9	9
Midland Township.....	1	2	.....	Bloomfield Township.....	1	.....	.....
Midland Park Borough.....	.....	1	.....	Caldwell Borough.....	1	.....	.....
Palisade Park Borough.....	.....	8	.....	Caldwell Township.....	.....	.....	2
Park Ridge Borough.....	1	.....	.....	Clinton Township.....	1	2	1
Ridgefield Township.....	.....	17	4	East Orange City.....	.....	2	.....
Ridgewood Township.....	1	.....	1	Franklin Township.....	2	2	.....
Rutherford Borough.....	1	5	1	Livingston Township.....	.....	.....	1
Saddle River Township.....	.....	1	4	Montclair City.....	5	16	.....
Upper Saddle River Borough.....	1	.....	.....	Newark City.....	.....	1	87
Westwood Borough.....	.....	.....	.....	Orange City.....	1	7	.....
Burlington County.				South Orange Borough.....	.....	7	.....
Bass River Township.....	2	2	2	West Orange Borough.....	.....	.....	1
Bordentown.....	1	4	.....	Gloucester County.			
Burlington City.....	1	.....	.....	Clayton Borough.....	.....	1	1
Chester Township.....	1	2	.....	East Greenwich Township.....	.....	1	.....
Cinnaminson.....	2	.....	.....	Franklin Township.....	.....	1	.....
Evesham.....	4	.....	.....	Glassboro Township.....	.....	2	.....
Fieldsborough Borough.....	1	.....	.....	Greenwich Township.....	.....	6	5
Lumberton Township.....	.....	9	1	Logan Township.....	.....	9	1
Medford Township.....	7	10	2	Mantua Township.....	.....	1	1
Mount Laurel Township.....	.....	4	.....	Monroe Township.....	2	.....	.....
Palmira Township.....	7	1	.....	South Harrison Township.....	.....	1	.....
Pemberton Borough.....	4	.....	.....	West Deptford Township.....	.....	4	.....
Pemberton Township.....	7	3	.....	Woolwich Township.....	2	2	.....
Shamong Township.....	1	1	.....	Hudson County.			
Southampton Township.....	7	4	.....	Bayonne City.....	1	41	.....
Springfield Township.....	1	4	.....	Guttenberg.....	.....	12	.....
Washington Township.....	1	.....	.....	Harrison City.....	4	12	.....
Westampton Township.....	8	1	.....	Hoboken City.....	4	108	.....
Camden County.				Jersey City.....	29	378	.....
Camden City.....	.....	37	14	Kearny Township.....	.....	10	.....
Centre Township.....	.....	.....	3				
Delaware Township.....	1	.....	.....		
Gloucester City.....	1	.....	.....		
Gloucester Township.....	.....	.....	2				
Merchantville Borough.....	16	6	.....			
Pensauken.....	4	1	.....			
Waterford Township.....	.....	1	.....			
Winslow.....	.....	1	.....			

Statement of Returns of Marriages, Births and Deaths Received Too Late for Tabulation in the Annual Report for the Year Ending June 30th, 1900—Continued.

	M.	B.	D.		M.	B.	D.
Hudson County—Con.				Monmouth County—Con.			
North Bergen Township.....	22			Millstone Township.....			4
Town of Union.....	3	24	2	Neptune Township.....	1		
Weehawken Township.....		6		Ocean Township.....		2	
West Hoboken Township.....	1	41		Raritan Township.....	1		2
West New York Borough.....		14		Red Bank Borough.....	2	1	2
Hunterdon County.				Shrewsbury Township.....	23	4	
Alexandria Township.....		3		Upper Freehold Township.....	2		
Bethlehem Township.....		3		Wall Township.....	2	11	
Clinton Township.....		5		Morris County.			
Delaware Township.....	9			Boonton City.....	2		
Franklin Township.....		2		Chatham Borough.....		5	
High Bridge Borough.....		2		Chatham Township.....		3	
Kingwood Township.....		1		Chester Township.....			2
Lebanon Township.....		2		Floram Park Borough.....		2	
Readington Township.....	1	2		Hanover Township.....			2
Stockton Borough.....	1			Jefferson Township.....	1	1	14
Tewksbury Township.....	8	6		Madison Borough.....	2	37	3
Union Township.....		1		Montville Township.....			1
Mercer County.				Morristown.....		4	
East Windsor Township.....		2		Morris Township.....		1	
Ewing Township.....		2		Mount Olive Township.....		2	3
Hamilton Township.....	1	3		Passaic Township.....		4	
Hopewell Borough.....	1	2		Pequanock Township.....		2	3
Hopewell Township.....	1		3	Port Oram Borough.....		1	1
Princeton Borough.....			38	Randolph Township.....	1		
Trenton.....	17	70	5	Rockaway Borough.....		1	2
Washington Township.....		4		Roxbury Township.....			2
West Windsor Township.....		1		Washington Township.....		3	3
Middlesex County.				Ocean County.			
East Brunswick Township.....	1	2		Bay Head Borough.....		1	
Jamesburg Borough.....		1		Berkeley Township.....		1	2
Madison Township.....		1		Brick Township.....			1
Metuchen Borough.....	1	1		Lacey Township.....			1
Monroe Township.....		2		Manchester Township.....		1	3
New Brunswick.....	1	35		Point Pleasant Borough.....			6
North Brunswick Township.....		2	4	Passaic County.			
Piscataway Township.....		2		Acquackanonk Township.....	3	12	2
Perth Amboy City.....	3	31		Hawthorne Borough.....	1	6	7
Raritan Township.....		1		Little Falls Township.....	1	1	
South Brunswick Township.....		1		Manchester Township.....		6	2
Woodbridge Township.....	4	14		Passaic City.....	36	6	1
Monmouth County.				Paterson.....	15	74	2
Atlantic Highlands Borough.....		2		Pompton Township.....	15	5	1
Bradley Beach Borough.....	1	6		Salem County.			
Eatonstown Township.....		1		Alloway Township.....			1
Howell Township.....		2	2	Lower Alloway Creek Township.....		1	1
Long Branch City.....	1	14	2	Lower Penns Neck Township.....		1	
Manalapan Township.....		1	2	Oldmans Township.....			1
Manasquan Borough.....		1		Pilesgrove Township.....		2	2
Marlboro Township.....		1		Pittsgrove Township.....		6	1
Matawan Borough.....		1		Quinton Township.....	2	3	
Middletown Township.....	3	10		Woodstown Borough.....			2

Statement of Returns of Marriages, Births and Deaths Received Too Late for Tabulation in the Annual Report for the Year Ending June 30th, 1900—Continued.

	M.	B.	D.		M.	B.	D.
Somerset County.				Union County.			
Bedminster Township.....		2		Elizabeth City.....		1	
Bernards Township.....	1		5	Fanwood Township.....		12	
Bound Brook Borough.....			2	Linden Borough.....		1	
Bridgewater Township.....		5	3	Plainfield.....	1	6	
Franklin Township.....		4	4	Roselle Borough.....		2	
Hillsborough Township.....		2	1	Summit.....		3	
North Plainfield Borough.....		1		Westfield Township.....		4	
North Plainfield Township.....			2	Warren County.			
Raritan Borough.....		3	2	Belvidere.....		2	
Sussex County.				Greenwich Township.....		1	2
Andover Township.....	1			Hackettstown.....		1	
Byram Township.....			2	Harmony Township.....		1	
Deckertown Borough.....	1			Independence.....		1	
Green Township.....	4	2	5	Knowlton.....		2	
Hampton Township.....		1		Lopatcong Township.....		2	12
Lafayette Township.....			1	Mansfield Township.....	1		3
Newton Township.....		1	4	Oxford Township.....		6	7
Stillwater Township.....		1		Pohatcong Township.....			1
				Phillipsburg.....	3	6	7
				Total.....	230	1462	505

REPORT OF VITAL STATISTICS.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

COUNTY. Statistical Division.	DEATHS AT ALL AGES.										Population, census of 1900.	Death-rate per 1,000, without cities of over 5,000.	Deaths under 5, in each 100, or comparison of these with total deaths.	Number of deaths from chief preventable diseases.	Comparative number of deaths in each 100 from chief preventable diseases.
	Under one month.	Under one year.	One to five.	Five to twenty.	Twenty to sixty.	Over sixty.	Undefined.	Total, including undefined.							
Atlantic.....	64	189	71	47	241	219	.....	771	46,402	16.62	14.76	84.24	198	25.68
Bergen.....	92	156	82	63	288	323	.....	1,070	79,441	13.60	13.18	81.02	274	25.68
Burlington.....	39	90	58	66	204	306	.....	910	58,241	15.62	13.84	23.97	203	22.31
Camden.....	149	282	210	180	553	461	7	1,802	107,043	16.74	14.76	34.46	511	28.36	
Cape May.....	6	19	11	15	52	70	1	174	13,201	13.18	13.19	20.69	39	22.41	
Cumberland.....	46	88	43	67	184	239	1	682	51,193	12.93	8.04	28.83	182	27.49	
Essex.....	416	993	874	482	2,317	1,383	8	6,483	389,083	17.82	12.44	38.23	1,911	28.71	
Gloucester.....	29	66	33	39	106	148	2	413	31,906	12.94	12.91	28.57	123	29.78	
Hudson.....	521	1,238	1,021	495	3,005	1,896	60	7,742	386,048	20.06	18.74	38.91	2,473	28.36	
Hunterdon.....	24	66	19	23	123	208	2	433	84,507	12.85	12.85	18.24	84	19.40	
Mercer.....	116	208	120	86	344	483	19	1,569	98,305	16.35	16.69	28.09	408	26.85	
Middlesex.....	118	174	116	86	374	354	5	1,220	79,782	18.30	12.63	33.36	303	24.84	
Monmouth.....	68	208	98	88	315	408	9	1,189	82,057	14.40	14.00	31.03	370	31.12	
Morris.....	59	99	68	66	289	346	4	921	66,166	13.71	13.71	24.64	215	28.34	
Northampton.....	18	23	22	10	72	107	4	250	19,747	12.90	12.86	24.61	49	19.14	
Ocean.....	272	600	379	240	921	504	8	2,824	152,202	18.20	12.31	40.76	847	30.00	
Passaic.....	20	52	26	23	90	149	4	364	26,880	14.26	12.63	28.92	102	28.02	
Salem.....	22	56	35	25	133	153	1	425	32,948	12.90	12.90	24.21	113	26.59	
Somerset.....	22	56	35	25	133	153	1	425	32,948	12.90	12.90	24.21	113	26.59	
Sussex.....	9	25	15	12	95	116	.....	272	24,124	11.27	11.27	18.01	49	17.01
Union.....	183	269	154	90	499	432	2	1,890	99,353	12.10	12.68	33.10	431	27.28	
Warren.....	28	46	27	37	128	188	2	467	37,781	12.10	12.08	22.10	84	18.38	
Total.....	2,252	4,727	3,474	2,184	10,650	8,028	189	31,474	1,683,669	16.62	13.61	33.21	8,704	27.85	

5

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900—Continued.

COUNTY. Statistical Division.	DEATHS FROM THE MORE COMMON CAUSES.																				
	Remittent fever, &c.	Epidemic typhoid fever.	Small-pox.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria and croup.	Erysipelas.	Diarrhœal diseases of children.	Consumption—males.	Consumption—females.	Acute lung disease.	Brain and nervous diseases of children.	Diseases of heart and circulation.	Renal and cystic diseases.	Adult brain and spinal diseases.	Digestive and infectious diseases.	Cancer.	Acute rheumatism.	Pneumeral.	Violent deaths.
Atlantic.....	2	9	.....	.....	.....	5	22	1	86	37	29	114	42	69	51	76	55	21	4	6	28
Bergen.....	4	12	3	3	6	10	30	4	99	57	188	112	50	109	57	32	3	10	60	30	60
Burlington.....	3	14	.....	.....	.....	3	11	4	74	52	39	127	38	109	67	116	56	38	4	6	60
Camden.....	8	14	6	168	88	90	241	106	105	130	195	87	52	3	11	90
Cape May.....
Cumberland.....
Essex.....
Gloucester.....
Hudson.....
Hunterdon.....
Mercer.....
Middlesex.....
Monmouth.....
Morris.....
Ocean.....
Passaic.....
Salem.....
Somerset.....
Sussex.....
Union.....
Warren.....
Total.....	84	354	61	220	231	306	927	111	3,010	1,787	1,727	4,795	1,787	2,882	2,936	1,700	921	73	288	1,712	1,331

Under the heading "Number of deaths from chief preventable diseases," the first ten diseases are classified, including consumption (male and female). Of those dying under one year, 2,252 died under one month, of which 1,653 died in the large cities. Of the 10,463 that died under five years, 7,748 died in the large cities. Total death rate for consumption for the State as compared with total deaths, 11.16, the deaths being in the cities 2,510—988 outside. Rates for short periods, or which deal with small numbers, do not eliminate or balance errors which practically disappear in large aggregates. The number of deaths before twenty, in proportion to the remainder, is much more informative concerning local causes affecting health than total deaths. The death rate for the present year is based upon the National census of 1900.

REPORT OF VITAL STATISTICS.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

CITIES HAVING OVER 5,000 POPULATION. Statistical Division.	DEATHS AT ALL AGES.										Population, census of 1900.	Death-rate per 1,000.	Deaths under 5, in each 100, or comparison of these with total deaths.	Number of deaths from chief preventable diseases.	Comparative number of deaths in each 100 from chief preventable diseases.	
	Under one month.	Under one year.	One to five.	Five to twenty.	Twenty to sixty.	Over sixty.	Undeclared.	Total, including undeclared.								
Atlantic County—																
Atlantic City.....	33	93	45	29	181	116	497	27,886	17.85	34.41	130	26.16				
Bergen County—																
Englewood.....	3	14	8	8	42	34	111	6,253	17.75	23.52	30	27.03				
Hackensack.....	8	10	8	10	52	40	129	9,443	13.66	20.16	31	24.03				
Burlington County—																
Bordentown.....	4	6	4	4	24	37	111	4,110	19.46	17.50	19	23.75				
Burlington.....	16	17	13	13	67	56	183	7,392	24.76	25.13	44	24.04				
Camden County—																
Camden.....	112	191	167	131	410	284	1,299	75,635	17.11	36.18	331	25.33				
Gloucester City.....	15	20	13	8	43	37	136	6,840	19.88	35.29	34	26.00				
Cumberland County—																
Bridgeton.....	12	33	12	15	64	64	220	13,913	14.38	23.50	52	26.00				
Millsville.....	14	16	15	24	50	46	107	10,583	15.78	26.95	60	35.93				
Essex County—																
East Orange.....	17	37	19	16	77	70	236	21,506	10.97	30.93	56	26.71				
Montclair.....	15	39	28	15	67	47	211	13,962	15.11	38.86	62	29.55				
Newark.....	320	746	682	323	1,781	969	4,824	246,070	19.60	33.24	1,431	29.46				
Orange.....	31	79	75	42	179	90	498	24,141	20.63	37.15	177	35.54				
Hudson County—																
Irvington.....	48	123	85	46	195	72	589	32,722	17.39	45.00	152	26.71				
Lyons.....	23	31	30	17	105	31	237	10,595	22.37	35.44	79	33.33				
Hoboken.....	74	222	179	87	559	201	1,366	59,364	23.01	34.78	377	27.60				
Jersey City.....	36	119	119	82	448	769	4,198	206,433	20.34	35.90	1,238	29.49				
Town of Union.....	12	35	33	21	76	38	215	15,187	14.16	37.21	64	29.77				
Mercer County—																
Trenton.....	95	181	108	75	417	311	1,294	73,807	16.42	31.89	320	26.58				
Middlesex County—																
New Brunswick.....	35	55	25	28	130	151	425	20,006	21.29	27.06	101	33.76				
Perth Amboy.....	35	53	42	21	62	43	256	17,699	14.46	50.73	70	27.34				
South Amboy.....	8	16	12	7	28	17	88	6,349	13.86	40.90	28	31.82				
Monmouth County—																
Long Branch.....	10	14	12	29	65	29	161	8,872	18.15	22.36	54	33.54				

MORTALITY TABLES.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900—Continued.

CITIES HAVING OVER 5,000 POPULATION. Statistical Divisions.	DEATHS AT ALL AGES.										Population, census of 1900.	Death-rate per 1,000.	Deaths under 5, in each 100, or comparison of these with total deaths.	Number of deaths from chief preventable diseases.	Comparative number of deaths in each 100 from chief preventable diseases.	
	Under one month.	Under one year.	One to five.	Five to twenty.	Twenty to sixty.	Over sixty.	Undeclared.	Total, including undeclared.								
Morris County—																
Dover.....	10	8	8	6	19	21	74	5,938	12.46	35.15	18	24.32				
Morris town.....	10	22	15	10	66	59	184	11,267	16.33	25.54	50	27.17				
Passaic County—																
Passaic.....	96	132	97	41	163	50	533	27,777	20.09	55.75	184	31.56				
Salem County—																
Salem City.....	100	316	248	165	696	380	1,997	106,171	19.70	36.81	574	29.18				
Union County—																
Elizabeth.....	8	18	6	10	31	43	117	5,811	20.13	27.35	36	30.77				
Plainfield.....	86	182	105	57	284	206	922	52,130	17.69	40.46	274	29.72				
Plainfield.....	23	52	22	12	87	74	243	15,369	16.01	29.27	55	23.86				
Rahway.....	6	12	4	6	40	35	123	7,935	16.50	17.87	28	22.76				
Warren County—																
Phillipsburg.....	7	19	8	7	43	38	122	10,052	12.13	27.87	21	17.21				
Total.....	1,653	3,413	2,462	1,535	7,751	4,490	21,628	1,159,971	18.66	35.82	6,230	28.81				

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900—Continued.

REPORT OF VITAL STATISTICS.

DEATHS FROM THE MORE COMMON CAUSES.

CITIES HAVING OVER 5,000 POPULATION. Statistical Divisions.

	Remittent fever, &c.	Enteric or typhoid fever.	Small-pox.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria and croup.	Erysipelas.	Diarrheal diseases of children.	Consumption—males.	Consumption—females.	Acute lung diseases.	Brain and nervous diseases of children.	Diseases of heart and circulation.	Renal and cystic diseases.	Adult brain and spinal diseases.	Digestive and intestinal diseases.	Cancer.	Acute rheumatism.	Puerperal.	Violent deaths.		
Atlantic County—Atlantic City.....	6			2	3	3	15	1	57	21	22	71	32	41	31	50	34	12	3	5	24	31	
Bergen County—Englewood.....	2				1	1	2	1	8	11	3	18	5	13	6	11	7				6	8	
Hickensack.....	2								9	8	10	16	5	13	8	7				3	7	10	
Burlington County—Burlington.....	1								7	2	6	14	2	9	8	10	4	4	2	2	3	1	
Roseton.....	6								14	13	10	34	9	21	13	16	9	6	1	1	7	6	
Camden County—Camden.....	16			1	10	3	104	3	117	65	62	173	83	115	110	116	60	85	1	2	64	41	
Gloucester City.....	1								14	14	14	21	10	24	23	25	9	9	1	1	8	6	
Cumberland County—Bridgeton.....	2				4	1	14	1	16	13	14	21	10	24	23	25	9	9	1	1	8	6	
Milville.....	4								16	6	19	13	9	18	7	11	5	5	3	3	5	8	
Essex County—East Orange.....	1			3	1	2	1	1	17	14	16	38	15	20	17	20	16	6			10	12	
Montclair.....	1				2	1	5	1	17	11	11	24	11	14	16	17	14	5			7	11	
Newark.....	12	25	1	63	62	37	142	20	447	872	250	685	279	853	400	285	189	6	28	7	219	165	
Orange.....	5			12	4	10	11		54	45	36	66	33	35	42	28	18	4	4		13	18	
Hudson County—Bayonne.....	1			4	6	27	15	4	50	25	20	109	42	82	41	20	12	3	9		42	21	
Harrison.....	5			2	4	3	11		21	16	15	38	18	18	9	17	12	4	1	1	14	3	
Hoboken.....	1			1	1	10	13	33	9	126	113	43	226	96	107	70	72	89	30	2	10	189	44
Jersey City.....	18	44		43	26	33	119	17	409	295	234	701	282	868	242	289	240	85	11	53	239	143	
Town of Union.....	1			2	4		8		24	16	9	44	13	19	13	16	8	10	2	2	8	4	
Mercer County—Trenton.....	1			5	10	25	19	5	90	73	66	186	61	103	87	118	58	41	3	15	62	45	
Middlesex County—New Brunswick.....	1			1	2	3	3	1	38	20	31	51	25	52	31	51	23	6	2	5	21	22	
North Amboy.....	2				2	2	9	1	43	8	5	40	19	17	21	14	10	2		3	13	12	
South Amboy.....	1				1	1	5		11	5	3	7	6	13	9	9	5	2		1	6	3	
Monmouth County—Long Branch.....	1			2	3	3	15		13	13	4	16	2	22	14	9	10	7		1	7	9	

MORTALITY TABLES.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900—Continued.

DEATHS FROM THE MORE COMMON CAUSES.

CITIES HAVING OVER 5,000 POPULATION. Statistical Divisions.

	Remittent fever, &c.	Enteric or typhoid fever.	Small-pox.	Scarlet fever.	Measles.	Whooping cough.	Diphtheria and croup.	Erysipelas.	Diarrheal diseases of children.	Consumption—males.	Consumption—females.	Acute lung diseases.	Brain and nervous diseases of children.	Diseases of heart and circulation.	Renal and cystic diseases.	Adult brain and spinal diseases.	Digestive and intestinal diseases.	Cancer.	Acute rheumatism.	Puerperal.	Violent deaths.	
Morris County—Dover.....	1	2			2		1		5	4	6	10	4	8	4	5	5		2		4	8
Morrisstown.....				1		4			18	10	14	18	10	19	16	26	13				4	10
Passaic County—Passaic.....	10	29		15	3	7	101	9	91	25	25	102	40	23	11	23	24	12	1	6	30	22
Paterson.....	2								208	114	86	287	138	141	125	151	111	51	2	22	124	81
Salisbury County—Salisbury.....	1								10	8	8	14	8	11	10	11	6	2			3	5
Elizabeth.....	1			15	5	12	21		17	53	45	163	55	56	57	68	40	25	2	7	51	39
Plainfield.....	2			8	4	2	2		15	12	14	44	8	33	13	18	11	14		3	7	8
Railway.....	4				1	3			7	7	6	11	8	11	12	8	6			3	10	6
Warren County—Phillipsburg.....	2					1	1		10	4	8	18	14	11	9	16	13	3	1		2	7
Total.....	47	233	2	177	185	210	681	771	2,102	1,400	1,107	3,472	1,655	1,771	1,433	1,709	1,128	896	47	208	1,216	810

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table for CUMBERLAND COUNTY showing deaths at all ages and from more common causes. Columns include age groups (Under one month to Over sixty), population, death rate per 1,000, and various disease categories like Remittent fever, Enteric or typhoid fever, Small-pox, Measles, Whooping cough, etc.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table for ESSEX COUNTY showing deaths at all ages and from more common causes. Columns include age groups, population, death rate per 1,000, and various disease categories like Remittent fever, Enteric or typhoid fever, Small-pox, Measles, Whooping cough, etc.

REPORT OF VITAL STATISTICS.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table with columns for HUNTERDON COUNTY, Statistical Divisions, and various causes of death. Includes sub-headers for 'DEATHS AT ALL AGES' and 'DEATHS FROM THE MORE COMMON CAUSES'. Lists causes such as Small-pox, Measles, Whooping cough, etc.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

MORTALITY TABLES.

Table with columns for MERCER COUNTY, Statistical Divisions, and various causes of death. Includes sub-headers for 'DEATHS AT ALL AGES' and 'DEATHS FROM THE MORE COMMON CAUSES'. Lists causes such as Small-pox, Measles, Whooping cough, etc.

Handwritten numbers: 1875, 1876

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table with columns: MORRIS COUNTY, Statistical Divisions, DEATHS AT ALL AGES (Under one month to Under one year), DEATHS FROM THE MORE COMMON CAUSES (Remittent fever, Enteric or typhoid fever, Small-pox, Measles, Whooping cough, etc.), and Violent deaths.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table with columns: OCEAN COUNTY, Statistical Divisions, DEATHS AT ALL AGES (Under one month to Under one year), DEATHS FROM THE MORE COMMON CAUSES (Remittent fever, Enteric or typhoid fever, Small-pox, Measles, Whooping cough, etc.), and Violent deaths.

REPORT OF VITAL STATISTICS.

MORTALITY TABLES.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table with columns for DEATHS AT ALL AGES and DEATHS FROM THE MORE COMMON CAUSES. Rows include various townships in Somerset County and a Totals row.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

Table with columns for DEATHS AT ALL AGES and DEATHS FROM THE MORE COMMON CAUSES. Rows include various townships in Sussex County and a Totals row.

REPORT OF VITAL STATISTICS.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

UNION COUNTY. Statistical Divisions.	DEATHS AT ALL AGES.										Population, census of 1900.	Death-rate per 1,000.																		
	DEATHS FROM THE MORE COMMON CAUSES.																													
	Under one month.	Under one year.	One to five.	Five to twenty.	Twenty to sixty.	Over sixty.	Undefined.	Total, including undefined.																						
Clark Township.....	2	7	1	3	2	10	11	2	30	5	190	17.09																		
Cranford Township.....	86	182	108	57	24	206	2	922	52,180	17.09																				
Elizabeth City.....	2	1	1	4	3	2	9	6	6																					
Fanwood Borough.....	1	1	1	2	2	2	8																							
Fanwood Township.....	1	1	1	2	2	2	8																							
Linden Borough.....	1	1	1	2	2	2	8																							
Linden Township.....	3	3	3	4	7	15	16																							
Mountain Side Borough.....	23	27	22	12	87	74	1	246	15,889	18.01																				
New Providence Borough.....	6	12	1	3	40	58	3	207	7,985	18.90																				
Plainfield City.....	6	12	1	2	6	3	20																							
Plainfield Township.....	2	18	3	1	4	16	16																							
Springfield Township.....	6	18	9	2	22	20	77																							
Summit City.....	3	9	1	5	10	12	40																							
Union Township.....	1	7	3	1	15	24	51																							
Westfield Township.....	133	269	154	90	499	432	3,150	99,353	15.90																					
Totals.....	133	269	154	90	499	432	3,150	99,353	15.90	2	13	19	11	18	33	1	170	84	80	201	70	132	103	154	81	57	2	18	87	65

MORTALITY TABLES.

Return of Deaths from all Causes and Certain Specified Diseases, in the Statistical Divisions of the State of New Jersey, for the Year Ending June 30th, 1900.

WARREN COUNTY. Statistical Divisions.	DEATHS AT ALL AGES.										Population, census of 1900.	Death-rate per 1,000.																	
	DEATHS FROM THE MORE COMMON CAUSES.																												
	Under one month.	Under one year.	One to five.	Five to twenty.	Twenty to sixty.	Over sixty.	Undefined.	Total, including undefined.																					
Allamuchy Township.....	1	2	1	7	9	13	24	18																					
Belvidere Township.....	1	1	1	3	1	6	9																						
Blairstown Township.....	1	1	1	1	2	4	9																						
Franklin Township.....	2	4	1	3	9	18	37																						
Fredriehuyser Township.....	2	2	1	1	2	13	21																						
Greenwich Township.....	1	1	2	1	1	3	6																						
Hacketts town, Town of.....	1	1	2	1	1	3	6																						
Hackett Township.....	1	1	1	1	1	3	6																						
Harmony Township.....	1	1	1	1	1	3	6																						
Hope Township.....	1	1	1	1	1	3	6																						
Independence Township.....	1	1	1	1	1	3	6																						
Knowlton Township.....	8	8	2	3	3	8	16																						
Lopatcong Township.....	3	3	2	5	1	9	15																						
Mansfield Township.....	3	3	2	3	10	21	40																						
Oxford Township.....	7	19	6	7	43	38	122	10,052	12.14																				
Pohatcong Township.....	3	5	3	5	5	10	26																						
Pohatcong City.....	3	3	3	3	5	10	26																						
Pohatcong Township.....	3	3	3	3	5	10	26																						
Washington Borough.....	46	27	37	129	188	2	457	37,781	12.10																				
Washington Township.....	25	46	27	37	129	188	2	457	37,781	12.10																			
Totals.....	25	46	27	37	129	188	2	457	37,781	12.10	8	1	6	1	7	12	2	25	11	18	49	57	32	67	42	21	4	21	21

INDEX.

(395)

INDEX.

	Page
Absecon, Report of.....	84
Acquackanonk Township, Report of.....	185
Alexandria Township, Report of.....	147
Allamuchy Township, Report of.....	197
Allendale, Report of.....	85
Allenhurst, Report of.....	161
Alloway Township, Report of.....	186
Andover Township, Report of.....	192
Anglesea, Report of.....	114
Animals, Contagious Diseases of.....	243
Annual Reports of State Board of Health, Back Numbers of.....	69
Anthrax.....	248
Asbury Park, Report of.....	161
Assembly Bills Relating to Public Health.....	345
Association, Sanitary.....	305
Atlantic County, Deaths in.....	372
Atlantic Township, Report of.....	174
Avalon, Report of.....	114
Avon, Report of.....	174
Bacteriological Diagnosis.....	328
Bacteriological Laboratory.....	44
Bacteriologist, Report of.....	289
Bayonne, Report of.....	145
Beach Haven, Report of.....	183
Bedminister Township, Report of.....	188
Belleville Township, Report of.....	118
Belmar, Report of.....	174
Belvidere, Report of.....	197
Bergen County, Deaths in.....	373
Bergen Township, Report of.....	85
Bergenfield, Report of.....	85
Berkley Township, Report of.....	183
Bernards Township, Report of.....	183
Beverly, Report of.....	93
Beverly Township, Report of.....	93
Bethlehem Township, Report of.....	147
Births.....	3

	Page
Births, by Counties.....	349-358
Blairstown Township, Report of.....	197
Bloomfield, Report of.....	118
Boards of Health, Local.....	49
Boonton, Report of.....	180
Bordentown, Report of.....	93
Bordentown Township, Report of.....	94
Bordentown Township, Dairy Inspections in.....	94
Boroughs, List of.....	201
Bound Brook, Report of.....	188
Branchburg Township, Report of.....	188
Branchville, Report of.....	192
Brick Township, Report of.....	183
Bridgeton, Report of.....	115
Bridgewater Township, Report of.....	189
Bright's Disease.....	28
Brooklyn, Report of.....	192
Buena Vista Township, Report of.....	84
Burlington County, Deaths in.....	375
Burlington, Report of.....	102
Byran Township, Report of.....	192
Caldwell, Report of.....	118
Camden County, Deaths in.....	376
Camden, Report of.....	111
Cancer.....	30
Cape May City, Report of.....	114
Cape May County, Deaths in.....	377
Cape May Point, Report of.....	114
Carlstadt, Report of.....	86
Cemeteries.....	57
Centre Township, Report of.....	112
Chatham, Report of.....	180
Chatham Township, Report of.....	181
Chemical Works in Maywood, Inspection of.....	89
Chesilhurst, Report of.....	112
Chester Township, Report of.....	103
Chester Township, Report of Inspection of Nuisance in.....	103
Chesterfield Township, Report of.....	104
Chesterfield Township, Dairy Inspection in.....	104
Chicken-pox.....	325
Cinnaminson Township, Report of.....	108
Circulars and Laws.....	313
Cities, List of.....	200
Cities of Over Five Thousand Population, Typhoid Fever in.....	25
Clark Township, Report of.....	194
Clayton, Report of.....	139
Cliffside Park, Report of.....	86

	Page
Clinton, Report of.....	147
Clinton Township, Report of.....	118
Clinton Township, Report of.....	148
Closing Public Schools.....	76
Collingswood, Report of.....	112
Commercial Township, Report of.....	116
Communicable Diseases, Notification of.....	37
Communicable Diseases, Placarding for.....	43
Communicable Diseases, Restriction of the Spread of.....	317
Consumption, Deaths from (Chart).....	14
Consumption, Deaths from per Ten Thousand Population for Twenty-two years (Table).....	17
Consumption, Death-rates by Counties and Cities.....	15
Contagious Diseases of Animals.....	243
Cranbury Township, Report of.....	152
Cranbury Township, Dairy Inspection in.....	152
Cranford Township, Report of.....	194
Cresskill, Report of.....	86
Cumberland County, Deaths in.....	378
Dairy Inspection in Bordentown Township.....	94
Dairy Inspection in Chesterfield Township.....	104
Dairy Inspection in Cranbury Township.....	152
Dairy Inspection in Franklin Township, Somerset County.....	189
Dead, Transportation of the.....	48
Death-rate among Children.....	11
Death-rate of State.....	3
Deaths.....	3
Deaths by Counties.....	349-358
Deaths from all Ages (Chart).....	5
Deaths from all Causes, by Counties.....	366
Deaths from all Causes in Cities of over 5,000.....	368
Deaths from Diarrhoeal Diseases of Children (Chart).....	12
Deaths from Diseases Arranged in Order of Frequency.....	6
Deaths from Preventable Diseases (Chart).....	7
Deaths from the Classified Causes.....	8
Deaths in Atlantic County.....	372
Deaths in Bergen County.....	373
Deaths in Burlington County.....	375
Deaths in Camden County.....	376
Deaths in Cape May County.....	377
Deaths in Cumberland County.....	378
Deaths in Essex County.....	379
Deaths in Gloucester County.....	380
Deaths in Hudson County.....	381
Deaths in Hunterdon County.....	382
Deaths in Mercer County.....	383
Deaths in Middlesex County.....	384

	Page
Deaths in Monmouth County.....	385
Deaths in Morris County.....	386
Deaths in Ocean County.....	387
Deaths in Passaic County.....	388
Deaths in Salem County.....	389
Deaths in Somerset County.....	390
Deaths in Sussex County.....	391
Deaths in Union County.....	393
Deaths in Warren County.....	393
Deaths per Ten Thousand Population from Classified Causes.....	10
Deaths, Records of.....	52
Deckertown, Report of.....	192
Deerfield Township, Report of.....	116
Delaware Township, Report of.....	112
Delaware Township, Report of.....	148
Delford, Report of.....	86
Delran Township, Report of.....	108
Dennis Township, Report of.....	114
Deptford Township, Report of.....	139
Diagnosis, Bacteriological.....	328
Diagnostic Work.....	232
Diarrhoeal Diseases of Children, Deaths from (Chart).....	12
Diphtheria.....	17, 296
Diphtheria, Incubation and Infective Period of.....	321
Diphtheria, Outbreaks of.....	224
Diseases, Notification of.....	37
Disinfecting School Books.....	47
Disinfection.....	318
Dover, Report of.....	181
Dover Township, Report of.....	183
Downe Township, Report of.....	116
Drainage Construction.....	50
Dumont, Report of.....	86
Dunellen, Report of.....	158
Eagleswood Township, Report of.....	184
Eastampton Township, Report of.....	108
East Amwell Township, Report of.....	148
East Greenwich Township, Report of.....	139
East Orange, Report of.....	118
East Rutherford, Report of.....	86
Eatontown Township, Report of.....	174
Edgewater, Report of.....	87
Egg Harbor City, Report of.....	84
Egg Harbor Township, Report of.....	84
Elizabeth, Report of.....	194
Elk Township, Report of.....	139
Elmer, Report of.....	186

	Page
Elsinboro Township, Report of.....	186
Englewood, Report of.....	87
Englewood Cliffs, Report of.....	87
Englishtown, Report of.....	174
Epidemic Outbreaks.....	215
Evesham Township, Report of.....	109
Essex County, Deaths in.....	379
Ewing Township, Report of.....	150
Fairfield Township, Report of.....	116
Fairview, Report of.....	87
Fanwood, Report of.....	195
Fanwood Township, Report of.....	195
Fees, Legality of.....	50
Fieldsborough, Report of.....	109
Florence Township, Report of.....	109
Flower Hill Cemetery, Report in Relation to.....	60
Frankford Township, Report of.....	193
Franklin Township, Report of.....	87
Franklin Township, Report of.....	140
Franklin Township, Report of.....	148
Franklin Township, Report of.....	189
Freehold, Report of.....	174
Freehold Township, Report of.....	175
Frelinghuysen Township, Report of.....	198
Frenchtown, Report of.....	148
Galloway Township, Report of.....	84
Garfield, Report of.....	87
German Measles.....	323
Glanders.....	243
Glassboro Township, Report of.....	140
Glen Ridge, Report of.....	119
Gloucester County, Deaths in.....	380
Gloucester Township, Report of.....	112
Gonorrhoea.....	300
Green Township, Report of.....	193
Greenwich Township, Report of.....	116
Greenwich Township, Report of.....	140
Greenwich Township, Report of.....	198
Guttenberg, Report of.....	145
Hackensack, Report of.....	88
Hackettstown, Report of.....	198
Haddon Township, Report of.....	113
Haddonfield, Report of.....	113
Hamilton Township, Report of.....	84
Hamilton Township, Report of.....	150

	Page
Hammonton, Report of.....	84
Hampton Township, Report of.....	193
Hanover Township, Report of.....	181
Hardwick Township, Report of.....	198
Hardyston Township, Report of.....	193
Harmony Township, Report of.....	198
Harrington Township, Report of.....	88
Harrison, Report of.....	145
Harrison Township, Report of.....	140
Hasbrouck Heights, Report of.....	88
Hawthorne, Report of.....	185
Health, Act for the Protection of Public.....	329
Helmetta, Report of.....	158
High Bridge, Report of.....	148
Hillsborough Township, Report of.....	191
Hoboken, Report of.....	145
Hohokus Township, Report of.....	88
Holland Township, Report of.....	148
Holly Beach, Report of.....	114
Holmdel Township, Report of.....	175
Hope Township, Report of.....	198
Hopewell, Report of.....	150
Hopewell Township, Report of.....	116
Hopewell Township, Report of.....	151
Hospitals, Isolation.....	79
Houses, Placarding of.....	43
Howell Township, Report of.....	175
Hudson County, Deaths in.....	381
Hudson County, Report of.....	145
Hunterdon County, Deaths in.....	382
Hygiene, Laboratory of.....	289
Illuminating Oils.....	313
Independence Township, Report of.....	198
Infant Mortality.....	11
Infectious Diseases, Notification of.....	329
Influenza.....	324
Inspection of School Buildings.....	77
Inspectors, Sanitary.....	49
Irvington, Report of.....	119
Isolation Hospitals.....	79
Isolation of the Sick.....	317
Jackson Township, Report of.....	184
Jefferson Township, Report of.....	181
Jersey City, Report of.....	146
Junction, Report of.....	149
Junk, Ordinance Governing Traffic in.....	111

	Page
Kearny, Inspection of School Building in.....	77
Kearny, Report of.....	146
Kerosene Oil.....	313
Keyport, Report of.....	175
Kingwood Township, Report of.....	149
Knowlton Township, Report of.....	198
Laboratory of Hygiene.....	45
Laboratory of Hygiene, Report on.....	289
Lacey Township, Report of.....	184
Lakewood Township, Report of.....	184
Lambertville, Report of.....	149
Landis Township, Report of.....	117
Laundries, Public.....	69
Lavalette, Report of.....	184
Lawrence Township, Report of.....	117
Lawrence Township, Report of.....	151
Laws and Circulars.....	313
Lebanon Township, Report of.....	149
Legal Decisions.....	50
Legality of Permits and Licenses.....	50
Leonia, Report of.....	88
Libraries to which Annual Reports are Sent.....	70
Licenses, Legality of.....	50
Linden, Report of.....	195
Linden Township, Report of.....	195
Linwood, Report of.....	85
Little Egg Harbor Township, Report of.....	184
Little Falls Township, Report of.....	185
Little Ferry, Report of.....	89
Livingston Township, Report of.....	119
Local Boards of Health.....	49
Local Boards of Health, Reports of.....	81-199
Lodi, Report of.....	89
Lodi Township, Report of.....	89
Logan Township, Report of.....	140
Long Beach Township, Report of.....	184
Long Branch, Report of.....	175
Long Branch, Report of Prosecution in.....	176
Lower Township, Report of.....	114
Lower Alloways Creek Township, Report of.....	186
Lower Penns Neck Township, Report of.....	187
Madison Township, Report of.....	158
Malaria.....	300
Malarial Fever.....	34
Malarial Fever, Outbreaks of.....	241
Manalapan Township, Report of.....	178

	Page
Manasquan, Report of.....	178
Manchester Township, Report of.....	185
Mansfield Township, Report of.....	109
Mantua Township, Report of.....	140
Mantua Township, Report of Inspection of Nuisance in.....	141
Maritime Quarantine.....	54, 301, 332
Maritime Quarantine, Act Governing.....	332
Maritime Quarantine, Regulations Relating to.....	338
Marlboro Township, Report of.....	178
Marriages.....	3
Marriages by Counties.....	349-358
Matawan, Report of.....	178
Maurice River Township, Report of.....	117
Maywood, Inspection of Chemical Works in.....	89
Maywood, Report of.....	89
Measles.....	27
Measles, Incubation and Infective Period of.....	323
Medical Inspection of Schools.....	72
Mercer County, Deaths in.....	383
Merchantville, Report of.....	113
Metuchen, Report of.....	159
Middle Township, Report of.....	114
Middlesex County, Deaths in.....	384
Middletown Township, Report of.....	178
Midland Township, Report of.....	90
Midland Park, Report of.....	90
Millburn Township, Report of.....	119
Millstone, Report of.....	191
Millstone Township, Report of.....	179
Milltown, Report of.....	159
Millville, Report of.....	117
Monmouth County, Deaths in.....	385
Monroe Township, Report of.....	143
Montague Township, Report of.....	193
Montclair, Report of.....	119
Montgomery Township, Report of.....	191
Montvale, Report of.....	90
Montville Township, Report of.....	181
Moorestown, Report of Inspection of Nuisance in.....	103
Morris County, Deaths in.....	386
Morris Township, Report of.....	181
Mount Laurel Township, Report of.....	109
Mount Olive Township, Report of.....	181
Mount Tabor Township, Report of.....	182
Mullica Township, Report of.....	85
Mumps.....	323

	Page
Neptune City, Report of.....	179
Netcong, Report of.....	182
Newark, Report of.....	134
New Brunswick, Report of.....	159
New Providence, Report of.....	195
New Providence Township, Report of.....	195
Newton, Report of.....	193
Northampton Township, Report of.....	109
North Bergen Township, Report of.....	146
North Brunswick Township, Report of.....	159
North Caldwell, Report of.....	136
North Plainfield, Report of.....	191
North Plainfield Township, Report of.....	191
North Spring Lake, Report of.....	179
Notification of Communicable Diseases.....	37
Notification of Infectious Diseases.....	329
Nuisance Caused by Discharging Sewage into the Sea.....	176
Nuisance in Moorestown, Report of Inspection of.....	103
Ocean County, Deaths in.....	387
Ocean Township, Report of.....	179
Ocean Township, Report of.....	184
Ocean City, Report of.....	115
Ocean Grove, Report of.....	179
Oil, Kerosene.....	313
Oldmans Township, Report of.....	187
Old Tappan, Report of.....	90
Ophthalmia in Cattle.....	247
Orange, Report of.....	136
Ordinance, Regulating Traffic in Rags, &c.....	111
Orvil Township, Report of.....	90
Oxford Township, Report of.....	199
Pahaquarry Township, Report of.....	199
Palisade Township, Report of.....	90
Palisades Park, Report of.....	91
Park Ridge, Report of.....	91
Passaic County, Deaths in.....	388
Passaic Township, Report of.....	182
Pemberton, Report of.....	109
Pennington, Report of.....	151
Pennsgrove, Report of.....	187
Pensaukin Township, Report of.....	113
Pequannock Township, Report of.....	182
Permits, Legality of.....	50
Perth Amboy, Inspection of Harbor of.....	56
Perth Amboy, Report of the Health Officer of the Port of.....	301
Phillipsburg, Report of.....	199

	Page
Physicians, Notification of Diseases by.....	40
Pilesgrove Township, Report of.....	187
Piscataway Township, Report of.....	159
Pitman Grove, Report of Inspection of.....	141
Placarding Houses.....	43
Plainfield, Report of.....	196
Pleasantville, Report of.....	85
Plumbing, Supervision of.....	50
Plumsted Township, Report of.....	185
Pohatcong Township, Report of.....	199
Pompton Lakes, Report of.....	186
Pompton Township, Report of.....	186
Port Oram, Report of.....	182
Preventable Diseases, Deaths from.....	7
Prevention of the Spread of Tuberculosis.....	305
Princeton Sanitary Record Blank.....	52
Princeton Township, Report of.....	151
Public Health, Act for the Protection of.....	329
Public Laundries.....	69
Public Water Supplies.....	44
Public Water Supplies.....	253-287
Quarantinable Vessels, Anchorage for.....	302
Quarantine, Maritime.....	54, 301
Quarantine, Maritime, Circular Relating to.....	332
Quarantine, Maritime, Regulations Relating to.....	338
Quinton Township, Report of.....	187
Rags, Ordinance Governing Traffic in.....	111
Rahway, Report of.....	196
Rahway Cemetery, Report in Relation to.....	58
Randolph Township, Report of.....	182
Raritan, Report of.....	191
Raritan Township, Report of.....	149
Raritan Township, Report of.....	159
Readington Township, Report of.....	149
Record Blank.....	52
Records of Reports of Communicable Diseases.....	40
Red Bank, Report of.....	179
Report of Bureau of Vital Statistics.....	347-393
Report of Bacteriologist.....	289
Report of Standing Committee on Cemeteries.....	58
Reports from Local Boards of Health.....	81-199
Reports of State Board of Health, Back Numbers of.....	69
Ridgefield, Report of.....	91
Ridgefield Park, Report of.....	91
Ridgefield Township, Report of.....	91
Ridgewood, Report of.....	91

	Page
Riverside, Report of.....	92
Riverside Township, Report of.....	110
Riverton, Report of.....	110
Rockaway, Report of.....	182
Rockaway Township, Report of.....	183
Saddle River, Report of.....	92
Saddle River Township, Report of.....	92
Salem County, Deaths in.....	389
Salem, Report of.....	187
Sandyston Township, Report of.....	193
Sanitary Association of New Jersey.....	305
Sanitary Association, Programme of Meeting of.....	310
Sanitary Districts, List of.....	200-214
Sanitary Districts, Notification of Diseases in.....	37
Sanitary Districts, Small-pox in.....	36
Sanitary Districts, Small-pox in.....	22
Sanitary Districts, Typhoid Fever in.....	52
Sanitary Inspection Blank.....	49
Sanitary Inspectors.....	160
Sayreville Township, Report of.....	20
Scarlet Fever.....	322
Scarlet Fever, Incubation and Infective Period of.....	229
Scarlet Fever, Outbreaks of.....	47
School Books, Disinfection of.....	319
School Buildings, Cleansing of.....	77
School Buildings, Inspection of.....	319
School Children, Attendance of.....	37
School Children, Proportion Unvaccinated.....	76
Schools, Closing Public.....	72
Schools, Medical Inspection of.....	176
Sea, Discharge of Sewage into.....	115
Sea Isle City, Report of.....	185
Sea Side Park, Report of.....	343
Senate Bills Relating to Public Health, 1900.....	22
Sewerage in Relation to Typhoid Fever.....	110
Shamong, Report of.....	36, 324
Small-pox.....	215
Small-pox, Outbreaks of.....	390
Somerset County, Deaths in.....	191
Somerville, Report of.....	160
South Amboy, Report of.....	110
Southampton Township, Report of.....	160
South Brunswick Township, Report of.....	144
South Harrison Township, Report of.....	138
South Orange Township, Report of.....	138
South Orange Village, Report of.....	160
South River, Report of.....	193
Sparta Township, Report of.....	193

	Page
Springfield Township, Report of.....	110
Springfield Township, Report of.....	196
Stafford Township, Report of.....	185
State Laboratory of Hygiene.....	45
Stillwater Township, Report of.....	194
Stow Creek Township, Report of.....	117
Summit, Report of.....	196
Sussex County, Deaths in.....	391
Teaneck Township, Report of.....	92
Tenafly, Report of.....	92
Tewksbury Township, Report of.....	150
Towns, List of.....	205
Townships, List of.....	206
Transportation of the Dead.....	48
Trenton, Report of.....	151
Tuberculosis.....	297
Tuberculosis, Deaths from (Chart).....	14
Tuberculosis, Paper on Prevention of Spread of.....	305
Typhoid Fever.....	21
Typhoid Fever.....	298, 325
Typhoid Fever, Outbreaks of.....	233
Typhus Fever.....	326
Union County, Deaths in.....	392
Union Township, Report of.....	92
Union Township, Report of.....	150
Union Township, Report of.....	197
Unvaccinated School Children.....	37
Upper Township, Report of.....	115
Upper Freehold Township, Report of.....	180
Upper Penns Neck, Report of.....	187
Upper Pittsgrove, Report of.....	188
Upper Saddle River, Report of.....	92
Vaccination.....	37, 329
Vailsburg, Report of.....	138
Verona Township, Report of.....	138
Villages, List of.....	206
Vineland, Report of.....	117
Vital Statistics, Report of Bureau of.....	347-393
Voorhees Township, Report of.....	113
Wall Township, Report of.....	180
Wantage Township, Report of.....	194
Warren County, Deaths in.....	393
Warren Township, Report of.....	192
Washington, Report of.....	199

	Page
Washington Township, Report of.....	93
Washington Township, Report of.....	110
Washington Township, Report of.....	144
Washington Township, Report of.....	152
Washington Township, Report of.....	183
Washington Township, Report of.....	199
Waterford Township, Report of.....	113
Water-Supplies.....	44
Water-Supplies, Public.....	253-287
Water-Supply in Relation to Typhoid Fever.....	22
Wenonah, Report of.....	144
West Amwell Township, Report of.....	150
West Cape May, Report of.....	115
West Deptford Township, Report of.....	144
Westfield Township, Report of.....	197
West Hoboken Township, Report of.....	147
West Milford Township, Report of.....	186
West New York, Report of.....	147
West Orange Township, Report of.....	139
Whooping-Cough.....	28, 324
Wildwood, Report of.....	115
Winslow Township, Report of.....	113
Woodbridge Township, Report of.....	160
Woodbury, Report of.....	144
Woodcliff, Report of.....	93
Woodland Township, Report of.....	110
Wood Ridge, Report of.....	93
Woodstown, Report of.....	188
Woolwich, Report of.....	144