

# TWENTY-NINTH ANNUAL REPORT

OF THE

## Board of Health of the State of New Jersey

1905

AND

ANNUAL REPORT OF THE BUREAU OF VITAL STATISTICS.



TRENTON, N. J.:

THE JOHN L. MURPHY PUBLISHING CO., PRINTERS

1906.

## Board of Health of the State of New Jersey.

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THE SECRETARY OF STATE, . . . .	} <i>Members ex-officio.</i>
THE ATTORNEY-GENERAL, . . . .	
THE STATE GEOLOGIST, . . . .	
WILLIAM H. MURRAY, M.D., . . . .	Plainfield.
GEORGE P. OLCOTT, C.E., . . . .	East Orange.
LABAN DENNIS, M.D., . . . .	Newark.
CYRUS F. BRACKETT, M.D., LL.D., . . . .	Princeton.
HENRY W. ELMER, M.D., . . . .	Bridgeton.
HENRY B. RUE, M.D., . . . .	Hoboken.
HENRY MITCHELL, M.D., . . . .	Asbury Park.

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<i>President,</i> . . . .	CYRUS F. BRACKETT.
<i>Secretary,</i> . . . .	HENRY MITCHELL.

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The Office of the Board is in the State House, Trenton.

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of New Jersey, 1905.

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TRENTON, N. J., October 31st, 1905.

*To His Excellency Edward C. Stokes, Governor of New Jersey:*

SIR—In compliance with the provisions of section 3 of chapter 68 of the laws of 1887, I have the honor to transmit herewith the twenty-ninth annual report of the Board of Health of the State of New Jersey and the report of the Bureau of Vital Statistics for the year ending December 31st, 1904.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*



## General Report.

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*To His Excellency Edward C. Stokes, Governor of New Jersey:*

SIR—For the purpose of eliminating repetitions in the published reports of local boards of health, and to condense as much as possible the material which is presented, some modifications have been introduced in the form of the twenty-ninth annual report of this board. The names of members, officers and employes of local boards of health have been grouped in one table, and the statements forwarded by local boards are presented only when matters of general interest are received, and by this arrangement it is believed that the number of pages in this report can be considerably reduced.

The work of the board during the year just closed has been conducted along the same general lines which have been followed during several years past, but especial attention has been given to the protection of the food-supply, particularly concerning milk, shellfish and meat. The three assistant inspectors of food devoted almost their entire time, from June 1st to September 15th, to the collection of samples of milk, and the analysis of these samples and giving evidence in suits instituted for the penalty in cases where the milk was found to be adulterated has occupied nearly all of the time of the analysts employed in the State laboratory of hygiene. During the year, 1,493 samples of milk and cream were sent to the laboratory by the State inspectors, and 366 samples, or 24 per cent., were found to be adulterated, either by skimming and the addition of water or by the addition of preservatives. A full statement relating to the action taken in each case where the milk was found to be sold in violation of the law will be found in the body of this report. The investigations of outbreaks of infectious diseases, inspection of creameries and dairies, inquiries concerning nuisances, prevention of the spread of infectious diseases of animals, prevention of the sale of contaminated milk, supervision of the State laboratory of hygiene, and the detection of the sale of

adulterated food and drugs have been continued, and the work has extended to every county in the State.

It will be observed, by reference to the mortality tables which are published in this volume, that the number of deaths among infants increased slightly during the year, notwithstanding the fact that the summer was comparatively cool, and this is believed to indicate that the boldness and cupidity of certain unscrupulous milk dealers has led them to return, in some degree, to the vicious practices to which they were accustomed previous to the crusade against impure milk which began in 1893, and which resulted in the immediate reduction of the mortality among infants in this State. Every milk dealer who has been caught violating the law has been prosecuted, except in a few cases where the evidence has been insufficient to secure convictions, but the legal procedure provided for is so hedged about with difficulties in securing convictions that many guilty persons have escaped, and additional legislation is required which will remove the obstacles which are now being continuously and successfully employed to prevent the imposition of penalties in cases where it is clearly shown that the milk has been adulterated.

The inspections of the sources of public water-supplies have resulted in the removal of numerous pollutions. Details of this work appear in this report. An additional enactment to more effectually prohibit swimming and bathing in streams from which waters for public supplies are taken is required to prevent these practices.

We desire to call attention to the very great advantage which we believe would attend the enactment of a law authorizing local boards of health to be represented annually in a conference concerning the practical application of the acts of the Legislature and the local ordinances which are designed to promote the public health. At present there is but little similarity in the measures which are employed by local sanitary officials in their procedures for preventing the spread of disease, and it not infrequently happens that in adjoining districts one of the local boards will adopt advanced and efficient methods in dealing with the problems which arise, while the other may be wasting its opportunities in aimless and useless efforts. To bring together the active and leading official sanitarians of the State, in order that there may be comparison of

views, and to establish cordial co-operation in the adoption of the most approved and enlightened measures for the protection of the public health, is, in the present stage of sanitary progress, extremely desirable.

The changes which have been introduced in the classification of deaths, and in the indexing of the certificates of births, marriages and deaths, have rendered the facts contained in these records much more readily accessible, and have effected a very considerable saving of time in making searches.

Respectfully submitted,

SAMUEL D. DICKINSON.  
ROBERT H. McCARTER.  
HENRY B. KUMMEL.  
WILLIAM H. MURRAY.  
GEORGE P. OLCOTT.  
LABAN DENNIS.  
CYRUS F. BRACKETT.  
HENRY W. ELMER.  
HENRY B. RUE.  
HENRY MITCHELL.

# Secretary's Report.

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

GENTLEMEN—The number of permanent residents in New Jersey for the year 1904 is estimated to be 2,058,909. By counties and by cities the estimated number of inhabitants is shown in the following table:

**TABLE 1.—POPULATION OF THE COUNTIES OF NEW JERSEY AND OF CITIES HAVING 5,000 INHABITANTS OR OVER FOR THE CENSUS YEARS 1880, 1885, 1890, 1895 AND 1900, WITH ESTIMATED POPULATION FOR 1904.**

	1880.	1885.	1890.	1895.	1900.	1904.
Atlantic County.....	18,704	22,856	28,836	34,750	46,402	55,724
Atlantic City.....	5,477	7,942	18,165	18,829	27,838	35,445
Bergen County.....	36,736	39,586	47,226	55,251	78,441	88,862
Englewood.....					6,258	6,909
Hackensack.....			6,004	7,282	9,448	11,172
Burlington County.....	55,403	57,558	58,928	59,117	58,241	58,241
Bordentown.....	5,334	5,357	5,380	5,476	4,110	4,110
Burlington.....	7,237	7,650	7,964	7,844	7,392	7,392
Camden County.....	62,942	76,685	87,687	100,104	107,648	118,674
Camden City.....	41,659	52,884	58,319	63,467	75,935	80,923
Gloucester City.....	5,547	5,966	6,564	6,225	6,840	7,382
Cape May County.....	9,765	10,714	11,238	12,353	13,201	13,478
Cumberland County.....	37,687	41,982	45,439	49,515	51,193	52,295
Bridgeton.....	8,722	10,065	11,224	13,292	13,918	
Milville.....	7,560	8,324	10,002	10,466	10,583	10,675
Essex County.....	183,929	215,761	256,098	312,000	359,556	395,698
Bloomfield.....				7,788	8,093	9,668
East Orange.....			18,282	17,927	21,506	24,370
Irvington.....				3,388	5,256	6,749
Montclair.....				7,753	11,753	15,730
Newark.....	136,508	152,988	181,830	215,826	246,979	270,278
Orange.....	13,207	15,231	18,844	22,792	24,141	26,221
West Orange.....			4,338	5,954	6,889	7,717
Gloucester County.....	25,866	27,608	28,643	31,191	31,906	32,476
Hudson County.....	137,344	240,342	275,136	328,030	386,048	432,222
Bayonne.....	9,372	13,050	19,083	19,856	32,721	43,014
Harrison.....	6,898	6,866	8,388	9,672	10,596	11,336
Hoboken.....	30,999	37,721	45,648	54,083	59,864	63,588
Jersey City.....	120,722	169,714	168,938	182,513	206,431	226,409
Kearny.....				10,487	10,896	11,228
Town of Union.....	6,849	8,398	10,613	13,836	15,187	16,667
West Hoboken.....			11,665	18,296	23,094	26,932
West New York.....					5,267	5,267
Hunterdon County.....	38,570	37,420	35,855	35,324	34,507	34,507
Mercer County.....	58,061	66,785	79,978	85,538	95,365	103,227
Chambersburg.....	5,437	5,542				
Trenton.....	29,910	34,838	37,456	42,518	78,807	81,939
Middlesex County.....	52,296	86,180	61,734	70,658	79,762	87,628
New Brunswick.....	17,166	18,268	19,603	19,910	20,006	20,082
Perth Amboy.....			9,512	18,030	17,699	20,435
South Amboy.....			4,330	6,571	6,949	6,793
Monmouth County.....	55,598	62,324	69,128	75,548	82,057	87,265
Long Branch.....			5,140	7,281	7,338	8,872
Red Bank.....		4,145	4,888	5,428	5,863	
Morris County.....	50,861	50,675	54,101	59,538	65,156	69,632
Dover.....				4,245	5,938	6,670
Morristown.....	6,837	8,760	8,156	10,290	11,267	12,047
Ocean County.....	14,455	15,586	16,974	18,739	19,747	20,583
Passaic County.....	68,860	83,374	105,046	133,217	155,202	172,362
Passaic City.....	6,532		13,028	17,894	37,777	55,685
Paterson.....	51,031		78,947	78,844	105,171	111,431
Salem County.....	24,579	25,373	25,151	26,084	26,890	25,580
Salem City.....	5,056	5,316	5,516	6,337	5,311	5,811
Somerset County.....	27,162	27,425	28,311	30,447	32,918	34,919
North Plainfield.....					4,245	5,830
Sussex County.....	25,589	22,401	22,259	22,586	24,134	25,372
Union County.....	55,571	61,839	73,467	85,404	99,353	110,512
Elizabeth.....	28,229	32,119	37,764	43,894	52,180	58,766
Plainfield.....	8,125	8,919	8,919	8,919	15,659	16,761
Rahway.....	6,456	6,861	7,106	7,945	7,985	7,985
Summit.....					4,450	5,934
Warren County.....	36,539	37,737	36,558	37,283	37,781	38,178
Phillipsburg.....	7,181	8,068	8,644	9,081	10,052	10,823

**Births.**—A slight improvement has occurred in the proportion of births reported during the past year, compared with the number reported during previous years, but the same degree of accuracy which has been reached in obtaining reports of marriages and deaths has not yet been accomplished in the collection of certificates of births. As stated in previous reports, the principal reliance in New Jersey for a satisfactory solution of this long-standing difficulty is in the change which is at present gradually occurring in the personnel of the local officers who have charge of the collection and transmission of certificates of births, marriages and deaths. Doubtless several years will elapse before all of the sanitary districts of the State will be provided with a qualified officer, but when that most desirable change shall be effected there will unquestionably be closer watch of delinquent physicians and midwives, and while it is improbable that the records of births will ever, under the American form of government, be so exact and complete as those in countries where police supervision is exercised in relation to every individual, whether resident or transient, we may expect far better results than those thus far prevailing.

Local registrars of vital statistics can detect a certain proportion of failures to report births if they will refer to the records in all cases where deaths occur in young children, say under one year of age, for if no certificate of birth has been filed, the responsibility for the neglect can be placed where it belongs. Systematic comparison of the records of deaths and births will soon indicate the physicians and midwives who frequently neglect to report births, and if appropriate measures are then adopted by the local board of health the enforcement of the law can be secured. If, after warning, the parties who fail to forward certificates of births continue to violate the law they should be prosecuted. If the registrar finds that the local board of health is unwilling to enforce the law, he should send a statement of the facts to the State board of health, and the matter will be placed in the hands of the State law department for such action as the statute provides.

TABLE 2.—SHOWING POPULATION, NUMBER OF BIRTHS REPORTED, NUMBER OF MARRIAGES AND NUMBER OF DEATHS IN NEW JERSEY, WITH BIRTH-RATES, MARRIAGE-RATES AND DEATH-RATES FOR THE TWENTY-SIX YEARS ENDING DECEMBER 31, 1904.

YEAR.	Population *	BIRTHS.		MARRIAGES.		DEATHS.	
		Number of births reported.	Birth-rate per 1,000 population.	Number of marriages.	Persons married per 1,000 population.	Number of deaths.	Death-rate per 1,000 population.
1879.....	1,020,584	23,116	22.65	7,096	13.91	20,440	20.03
1880.....	1,130,692	23,680	20.94	7,963	14.08	19,967	16.77
1881.....	1,160,275	23,484	20.24	8,109	13.98	20,812	17.94
1882.....	1,189,658	23,108	19.42	8,837	14.86	23,959	21.82
1883.....	1,209,048	24,430	20.21	9,166	15.16	23,310	19.28
1884.....	1,248,224	25,283	20.20	9,368	14.37	21,716	17.40
1885.....	1,278,083	24,077	18.84	8,899	14.07	23,807	18.63
1886.....	1,310,481	25,497	19.46	12,351	18.85	22,734	17.35
1887.....	1,342,829	27,340	20.36	15,416	22.96	24,831	18.12
1888.....	1,375,227	28,074	20.41	16,025	23.31	27,173	19.76
1889.....	1,407,625	29,059	20.67	15,726	22.84	28,543	18.85
1890.....	1,441,017	30,103	20.89	15,564	21.60	28,530	19.80
1891.....	1,478,784	28,882	19.58	15,305	20.70	28,840	19.50
1892.....	1,511,653	30,627	20.26	16,082	21.28	32,885	21.62
1893.....	1,538,799	32,255	20.98	17,178	22.33	30,596	19.88
1894.....	1,578,878	33,662	21.33	18,245	22.56	30,604	19.09
1895.....	1,672,942	31,742	18.97	18,878	18.98	30,634	18.31
1896.....	1,718,543	31,207	18.16	18,870	21.38	30,767	17.90
1897.....	1,764,144	31,596	17.91	18,171	20.60	29,822	16.90
1898.....	1,810,008	32,515	17.99	18,213	14.59	27,337	15.11
1899.....	1,855,872	29,419	15.84	18,336	14.37	30,999	16.70
1900.....	1,888,669	32,270	17.18	14,611	15.51	31,474	16.62
1901.....	1,925,781	34,812	18.09	16,539	17.18	31,789	16.48
1902.....	1,967,593	35,116	17.84	18,150	18.45	33,319	15.91
1903.....	2,016,797	37,242	18.47	19,512	19.35	31,820	15.87
1904.....	2,058,959	38,751	18.82	18,919	18.33	35,298	17.14

\* Estimated except for census years.

NOTE.—The reports of births are not as complete as are those for marriages and deaths, hence the above table does not represent with accuracy the relation between birth-rates and death-rates.

NOTE.—The large number of marriages reported during the years 1886-1897 was due to the unrestricted authority contained in the laws for the performance of the marriage ceremony in the case of non-residents, and the marked decrease in the number of marriages which occurred in 1898 was directly consequent upon the enactment of the law requiring a license in cases where both parties are non-residents of the State.

**Marriages.**—The number of marriages in New Jersey per 1,000 inhabitants has shown continued increase during the six years 1898-1903, but for the year 1904 the number was not quite so large as for the next preceding year. The difference is very slight, however, and it is doubtless merely the variation which may be expected when comparison with the normal average marriage-rate in other prosperous communities is considered. The following table shows the number of marriages and the number of individuals married per 1,000 inhabitants in New Jersey for twenty-six years:

TABLE 3.—SHOWING NUMBER OF MARRIAGES RECORDED IN NEW JERSEY FOR THE TWENTY-SIX YEARS ENDING DECEMBER 31, 1904.

YEAR.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.
Marriages in New Jersey.....	7,096	7,963	8,109	8,837	9,166	8,968	8,939	12,851	15,416
Persons married per 1,000 population.....	13.91	14.08	13.98	14.86	15.16	15.37	14.07	18.85	22.96

YEAR.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Marriages in New Jersey.....	16,025	15,726	15,564	15,305	16,082	17,178	16,245	15,873	18,370
Persons married per 1,000 population.....	23.31	21.84	21.60	20.70	21.23	22.38	20.59	18.98	21.38

YEAR.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Marriages in New Jersey.....	13,171	13,213	13,336	14,611	16,539	18,150	19,512	18,919
Persons married per 1,000 population.....	20.60	14.50	15.40	15.51	17.28	18.45	19.35	18.88

**Deaths.**—During the year ending December 31st, 1904, the total number of deaths which occurred in New Jersey was 35,298. The estimated population for the State is 2,038,909, and the death-rate per 1,000 inhabitants is therefore 17.14. These figures exceed those which have been recorded for the past seven years, and they are found, by reference to the following table, to be mainly due to the increased mortality which has been caused by diarrhoeal diseases of children. Reference to Table 9 will show that deaths from nearly all of the preventable diseases have increased when compared with the numbers for the preceding year.

TABLE 4.—DEATHS IN NEW JERSEY, BY AGE PERIODS, FOR THE YEAR ENDING DECEMBER 31, 1904.

	AGE PERIODS.													Total number of deaths.						
	Und. 1 mo.	Und. 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.		55 to 60.	60 to 70.	70 to 80.	80 to 90.	Over 90.	Not stated.
Deaths.	2269	5183	3455	1033	689	858	1299	1389	1493	1662	1663	1419	1789	1691	3902	3448	1696	256	37	35293

CHART SHOWING DEATH-RATES IN NEW JERSEY PER 1,000 INHABITANTS FOR TWENTY-SIX YEARS, 1879-1904.

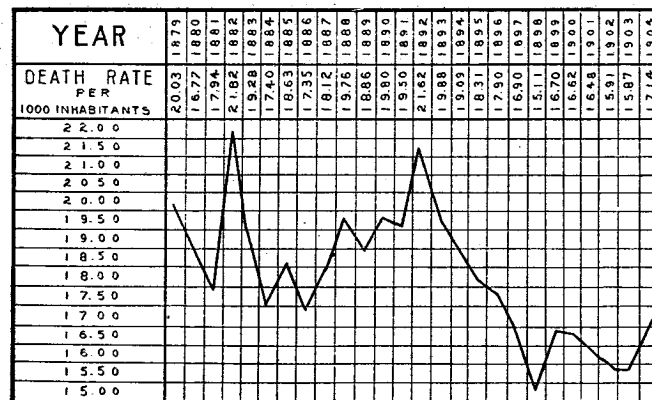






TABLE 8.—SHOWING NUMBER OF DEATHS IN NEW JERSEY FOR THE YEAR ENDING DECEMBER 31, 1904, FROM TEN SELECTED PREVENTABLE DISEASES, WITH PERCENTAGE OF TOTAL MORTALITY.

NAME OF DISEASE.	Deaths.	Percentage of total mortality.
Consumption.....	3,670	10.40
Pneumonia.....	3,486	9.88
Diarrhœal diseases of children.....	2,423	6.86
Diphtheria.....	918	2.60
Scarlet fever.....	416	1.18
Typhoid fever.....	384	1.09
Measles.....	180	.51
Whooping cough.....	124	.35
Malarial fevers.....	47	.13
Small-pox.....	24	.07

TABLE 9—SHOWING MORTALITY IN NEW JERSEY, FROM CERTAIN SELECTED CAUSES OF DEATH, FOR THE YEAR ENDING DECEMBER 31, 1904, COMPARED WITH DEATHS FOR THE PREVIOUS YEAR.

SELECTED DISEASES.	Deaths for year ending December 31st, 1903.	Deaths for year ending December 31st, 1904.	Comparative mortality.
Consumption.....	3,380	3,670	+290
Diseases of heart and circulation.....	3,166	3,301	+135
Renal and cystic diseases.....	2,160	2,361	+201
Digestive and intestinal diseases.....	2,060	2,271	+211
Diarrhœal diseases of children.....	1,603	2,423	+820
Cancer.....	1,132	1,125	-7
Diphtheria.....	748	918	+170
Typhoid fever.....	388	384	-4
Scarlet fever.....	299	416	+117
Puerperal diseases.....	279	221	-58
Whooping cough.....	245	124	-121
Erysipelas.....	86	113	+27
Acute rheumatism.....	71	68	-3
Measles.....	41	180	+39
Malarial fever.....	40	47	+7
Small-pox.....	16	24	+8

CHART SHOWING DEATHS IN NEW JERSEY, PER 10,000 INHABITANTS, FROM ADULT DISEASES OF THE BRAIN, THE HEART AND THE KIDNEYS COMBINED, FOR TWENTY-SIX YEARS, 1879-1904.

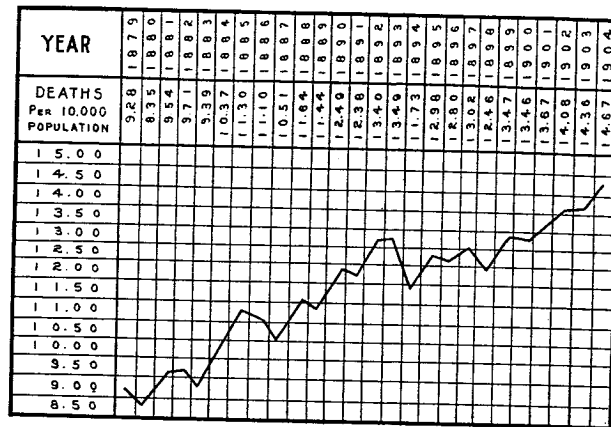
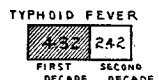




TABLE 10.—SHOWING TOTAL DEATHS, DEATHS UNDER FIVE YEARS, PERCENTAGE OF DEATHS UNDER FIVE YEARS TO TOTAL DEATHS, AND DEATHS UNDER FIVE YEARS PER 10,000 INHABITANTS, FOR THE CITIES OF NEW JERSEY HAVING OVER 5,000 POPULATION, FOR THE FOUR YEARS ENDING DECEMBER 31, 1904.

NAME OF PLACE.	1901.		1902.		1903.		1904.	
	Total deaths.	Deaths under five years.	Total deaths.	Deaths under five years.	Total deaths.	Deaths under five years.	Total deaths.	Deaths under five years.
Atlantic City..	849	148	26.96	49.76	515	161	31.26	50.88
Bayonne.....	974	299	44.81	73.38	580	246	42.41	61.96
Bloomfield.....	145	31	21.38	31.05	139	52	37.41	50.50
Bridgeton.....	187	38	17.65	23.51	195	46	23.59	32.46
Burlington.....	146	42	28.77	58.82	155	43	27.74	58.17
Camden.....	1877	323	17.26	56.68	1869	445	23.82	53.54
Dover.....	38	3	7.89	15.79	41	1	2.44	2.44
East Orange.....	216	67	30.99	25.65	251	55	21.91	22.96
Elizabeth.....	956	390	40.79	61.85	896	326	36.38	59.59
Englewood.....	101	27	26.73	42.08	105	26	24.76	39.51
Gloucester City..	183	39	21.31	21.85	149	49	32.89	69.14
Hackensack.....	173	38	22.17	38.48	189	67	35.45	56.80
Harrison.....	229	31	13.56	17.75	212	31	14.62	17.93
Hoboken.....	1128	381	33.80	59.75	1156	408	35.29	65.84
Irvington.....	15	1	6.67	6.67	88	26	29.55	43.92
Jersey City.....	4038	1426	35.31	67.53	4026	1448	36.00	68.33
Kearny.....	208	56	27.09	50.32	193	59	30.57	49.78
Long Branch.....	221	59	26.70	64.27	204	61	30.00	64.78
Millville.....	155	49	31.61	57.71	173	53	30.63	54.37
Montclair.....	247	49	19.83	27.78	215	110	51.16	74.00
Morrisstown.....	212	39	18.40	34.08	194	53	27.32	45.47
Newark.....	4824	1518	31.36	60.01	4881	1516	31.06	59.58
N. Brunswick.....	364	97	26.37	44.40	401	111	27.68	45.38
N. Plainfield.....	64	13	20.31	25.19	64	22	34.38	34.38
Orange.....	242	136	56.19	55.71	215	183	85.11	74.15
Passaic City.....	542	297	54.80	59.82	563	311	55.24	60.57
Paterson.....	1871	677	36.19	62.11	1773	634	35.76	63.84
Perth Amboy.....	308	158	51.30	52.28	256	127	49.61	50.00
Phillipsburg.....	182	39	21.43	24.16	157	36	22.93	24.48
Plainfield.....	257	58	22.57	36.90	266	62	23.31	38.59
Rahway.....	118	29	24.58	28.20	139	32	22.99	22.99
Red Bank.....	91	31	34.07	56.90	71	24	33.80	42.25
Salem City.....	82	19	23.31	28.14	98	23	23.47	23.47
South Amboy.....	105	38	36.19	58.42	130	41	31.54	61.55
Summit.....	80	29	36.25	53.00	67	23	34.33	40.48
T. of Union.....	275	96	34.55	61.07	281	89	31.67	56.58
Trenton.....	1224	440	35.95	65.05	1334	409	30.66	59.69
W. Hoboken.....	337	140	41.54	68.08	324	118	36.42	47.18
W. New York.....	77	29	37.66	64.71	79	35	44.30	60.66
West Orange.....	94	21	22.34	29.69	75	20	26.67	32.89

DIAGRAMS SHOWING AVERAGE DEATHS IN NEW JERSEY PER ANNUM, PER 10,000 INHABITANTS, FROM FIVE SELECTED DISEASES FOR THE TWO DECADES ENDING WITH THE YEAR 1904.



Consumption.—During the year ending December 31st, 1904, the deaths registered in New Jersey as having been caused by pulmonary tuberculosis numbered 3,670. This number is somewhat in excess of the deaths from this affection which occurred during the three preceding years, the proportion of deaths per 10,000 inhabitants having been as follows: 1901, 16.91; 1902, 15.32; 1903, 16.76; 1904, 17.83. Reference to the chart on page 22 will show that the improvement in the death-rate from consumption has been but slightly interrupted since 1887, and it appears to be probable

that seasonal changes and the unusual severity of the winters of 1902-1903 and 1903-1904 have influenced the mortality in this and certain other affections.

TABLE 11.—SHOWING NUMBER OF DEATHS AND DEATHS PER 10,000 POPULATION FROM CONSUMPTION IN NEW JERSEY, AND THE PROPORTION OF DEATHS FROM CONSUMPTION TO TOTAL DEATHS DURING TWENTY-SIX YEARS.

YEARS.	Population.*	Total deaths in New Jersey.	Deaths from consumption.	Proportion of deaths from consumption to total deaths.	Deaths from consumption per 10,000 population.
1879.....	1,020,584	20,444	2,788	13.64	27.32
1880.....	1,130,892	18,867	2,714	14.30	24.00
1881.....	1,160,275	20,810	2,989	14.36	25.76
1882.....	1,189,668	25,910	3,475	13.41	29.21
1883.....	1,209,048	23,310	3,121	13.39	25.81
1884.....	1,243,224	21,716	3,215	14.80	25.76
1885.....	1,278,033	23,307	3,320	13.94	25.19
1886.....	1,310,431	22,734	3,205	14.10	24.46
1887.....	1,342,829	24,331	3,658	15.01	27.20
1888.....	1,375,227	27,173	3,358	12.44	24.42
1889.....	1,407,625	26,543	3,449	12.99	24.50
1890.....	1,441,017	28,530	3,669	12.96	25.46
1891.....	1,478,784	28,840	3,456	11.98	23.37
1892.....	1,511,653	32,685	3,575	10.94	23.65
1893.....	1,538,799	30,596	3,429	11.21	22.28
1894.....	1,578,373	30,004	3,433	11.44	21.75
1895.....	1,672,942	30,634	3,542	11.56	21.17
1896.....	1,718,543	30,767	3,358	10.92	19.54
1897.....	1,764,144	29,822	3,237	10.85	18.35
1898.....	1,810,008	27,337	3,225	11.79	17.82
1899.....	1,855,872	30,999	3,584	11.56	19.31
1900.....	1,883,669	31,474	3,514	11.17	18.64
1901.....	1,925,781	31,739	3,257	10.26	16.91
1902.....	1,967,593	33,655	3,015	8.96	15.32
1903.....	2,016,797	31,820	3,380	10.62	16.76
1904.....	2,058,909	35,298	3,670	10.40	17.83

\* Estimated except for census years.

TABLE 12.—SHOWING DEATHS FROM CONSUMPTION IN NEW JERSEY, COMPARED WITH DEATHS FROM ALL CAUSES, BY COUNTIES.

COUNTIES.	AVERAGES PER YEAR.			
	FOR TWENTY-SIX YEARS.		YEAR ENDING DECEMBER 31, 1904.	
	Deaths from consumption.	Deaths from all causes.	Deaths from consumption.	Deaths from all causes.
Atlantic County.....	59	552	55	801
Bergen County.....	87	441	85	1,228
Burlington County.....	109	892	104	973
Camden County.....	210	1,714	224	2,064
Cape May County.....	19	169	13	215
Cumberland County.....	95	284	94	795
Essex County.....	758	5,477	854	7,229
Gloucester County.....	54	434	47	482
Hudson County.....	795	6,552	1,016	8,733
Hunterdon County.....	54	488	38	465
Mercer County.....	186	1,392	174	1,757
Middlesex County.....	118	1,071	103	1,393
Monmouth County.....	123	1,072	121	1,314
Morris County.....	122	506	97	1,069
Ocean County.....	36	250	27	274
Passaic County.....	266	2,185	302	2,974
Salem County.....	50	376	47	423
Somerset County.....	50	432	30	428
Sussex County.....	36	285	18	291
Union County.....	159	1,326	168	1,812
Warren County.....	58	555	53	578
The State.....	3,422	27,606	3,670	35,298



TABLE 15.—SHOWING DEATHS FROM PNEUMONIA IN CITIES OF OVER 5,000 INHABITANTS, IN NEW JERSEY, BY MONTHS, FOR THE YEAR ENDING DECEMBER 31, 1904.

DEATHS FROM PNEUMONIA IN CITIES OF OVER 5,000 INHABITANTS.	Estimated population.	MONTHS.											Total.	
		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.		Dec.
	1,870,719	401	350	394	315	241	134	42	51	72	108	197	289	2584

**Infant Mortality.**—The average number of deaths in New Jersey among children under five years of age, per 10,000 inhabitants, during the fifteen years 1879-1893, was 72.71, but during the eleven years 1894-1904 the average yearly deaths among this group was only 51.42 per 10,000 living. The number of deaths under five years for the year ending December 31st, 1904, from all causes, was 10,913, or 8.62 more per 10,000 inhabitants than during the previous year. Numerous opinions have been advanced to account for this increase, and examination of the accompanying table shows that measles, diphtheria and scarlet fever have each caused a larger proportion of deaths than during the preceding year, but it is found that the principal increase has been due to diarrhoeal diseases, there having been 3.82 more deaths from this cause, per 10,000 inhabitants, than during the previous year, and this fact is suggestive in view of the records of the State laboratory of hygiene, which show an increase in the use of preservatives in the samples of milk collected during the summer of 1905, compared with the previous year. This violation of the law is probably due to the short supply of milk, owing to the dry weather, and the consequent shipment of milk from more distant points than usual for sale during the hot months. The laboratory records also show that the adulteration of milk with water was more common during the past summer than it has been for several years previously, notwithstanding the prosecutions for the penalty (\$50) which are instituted in all cases where the evidence is sufficient to secure a conviction. Perhaps there has been some relaxation on the part of mothers and nurses in the care and preparation of the milk, and perhaps more reliance than was warranted has been placed by consumers upon the claims of milk dealers that their product is clean. The inspec-

tion of dairies, creameries and milk shops by the inspectors of this board during the past season has shown that a proper comprehension of the responsibilities which attach to the collection, handling and distribution of milk has thus far reached but a small number of the persons who are engaged in the milk business, and educational progress relating to the dangers which attend the feeding of infants upon unclean milk has made much greater advances among physicians, mothers and nurses than it has among milk producers and dealers. Elsewhere in this report the number of prosecutions instituted for the sale of adulterated milk during the months of June, July, August and September, 1905, is shown to be 127, and the employes of the food department of the State devoted almost all their time during that period to the detection of the sale of milk to which preservatives or water had been added, or which was collected, handled or stored under unclean conditions. This work will be continued next season.

TABLE 16.—SHOWING DEATHS AMONG CHILDREN UNDER FIVE YEARS OF AGE IN NEW JERSEY PER 10,000 POPULATION, FOR TWENTY-SIX YEARS.

YEARS.	Deaths under 1 year per 10,000 population.	Deaths from 1 to 5 years per 10,000 population.	YEARS.	Deaths under 1 year per 10,000 population.	Deaths from 1 to 5 years per 10,000 population.
1879 .....	45.58	33.97	1892 .....	52.74	29.08
1880 .....	40.38	25.12	1893 .....	49.22	24.26
1881 .....	39.90	25.75	1894 .....	49.75	22.97
1882 .....	49.88	38.48	1895 .....	45.67	21.79
1883 .....	44.48	28.22	1896 .....	43.99	24.43
1884 .....	41.04	22.32	1897 .....	40.16	20.00
1885 .....	44.69	26.67	1898 .....	35.91	15.83
1886 .....	41.31	23.83	1899 .....	33.22	17.04
1887 .....	43.56	25.29	1900 .....	37.05	18.44
1888 .....	47.51	28.90	1901 .....	36.11	13.48
1889 .....	48.61	24.95	1902 .....	36.18	13.63
1890 .....	49.38	25.38	1903 .....	37.08	15.38
1891 .....	46.90	25.36	1904 .....	36.18	16.82

TABLE 17.—SHOWING DEATHS IN NEW JERSEY FROM DIARRHEAL DISEASES OF CHILDREN, WITH AGES AT DEATH, COMPARED WITH DEATHS FROM ALL CAUSES AMONG CHILDREN UNDER FIVE YEARS OF AGE, FOR YEAR ENDING DECEMBER 31, 1904.

AGE PERIODS.	Deaths from diarrheal diseases.	Deaths from all causes among children under five years of age.
Under one month.....	152	2,295
Over one month and under one year.....	1,699	5,154
One to five.....	503	3,464
Total.....	2,354	10,913

TABLE 18.—SHOWING NUMBER OF DEATHS IN NEW JERSEY AMONG CHILDREN UNDER FIVE YEARS OF AGE IN MANUFACTURING DISTRICTS, AND ALSO IN COUNTIES OUTSIDE OF THE LARGER TOWNS, WITH COMPARATIVE MORTALITY.

NAMES OF MANUFACTURING TOWNS.	Estimated population, 1904.	Number of deaths occurring in children under five years of age.	Number of deaths of children under five years of age for each 1,000 of population.	Estimated population of counties outside of larger cities.	Number of deaths occurring in children under five years of age in counties outside of larger cities.	Number of deaths of children under five years of age for each 1,000 of population in counties outside of larger cities.
Bayonne (Hud. Co.).....	43,014	268	6.22	12,489	188	1.51
Beverly (Bur. Co.).....	1,364	26	1.82	46,750	149	3.19
Boonton (Mer. Co.).....	4,151	13	3.13	50,186	119	2.37
Bordentown (Bur. Co.).....	4,110	14	3.41	46,789	149	3.19
Bound Brook (Som. Co.).....	2,858	13	6.80	34,406	57	1.66
Bridgeton (Cumb. Co.).....	14,410	11	2.38	37,031	65	2.08
Burlington (Bur. Co.).....	7,892	39	6.36	46,749	149	3.19
Camden (Cam. Co.).....	89,928	446	5.41	24,868	90	3.62
Carlstadt (Ber. Co.).....	2,418	19	6.38	68,718	244	3.55
Elizabeth (U. Co.).....	58,766	398	5.58	20,459	66	3.23
Garfield (Ber. Co.).....	5,544	45	17.49	68,718	244	3.55
Gloucester City (Cam. Co.).....	7,232	44	6.00	24,868	90	3.62
Hoboken (Hud. Co.).....	63,588	456	7.17	12,489	188	1.51
Jersey City (Hud. Co.).....	285,469	1,188	5.14	12,489	188	1.51
Lambertville (Hunt. Co.).....	4,548	19	4.09	34,597	68	1.54
Lodi (Ber. Co.).....	2,123	11	5.13	68,718	244	3.55
Millburn (E. Co.).....	2,867	8	2.79	21,562	102	4.73
Milltown (Mdx. Co.).....	561	3	5.35	35,708	141	3.95
Millville (Cumb. Co.).....	10,676	59	5.58	37,031	55	2.08
Newark (E. Co.).....	270,229	1,669	6.12	21,562	102	4.73
New Brunswick (Mdx. Co.).....	20,682	168	8.12	85,708	141	3.95
Orange (E. Co.).....	25,221	163	6.46	21,562	102	4.73
Passaic City (Pas. Co.).....	35,685	362	1.01	24,813	119	4.80
Paterson (Pas. Co.).....	111,431	647	5.31	24,813	119	4.80
Perth Amboy (Mdx. Co.).....	20,453	134	6.07	35,708	141	3.95
Phillipsburg (W. Co.).....	10,828	47	4.84	27,729	85	3.07
Plainfield (U. Co.).....	16,761	75	4.47	20,459	66	3.23
Rahway (U. Co.).....	7,985	14	1.76	23,459	66	3.23
Raritan (Som. Co.).....	3,464	17	4.91	34,406	57	1.66
Riverton Ber. (Bur. Co.).....	2,849	2	0.07	46,789	149	3.19
Salem City (Salem Co.).....	5,811	27	4.65	19,719	81	4.10
South River (Mdx. Co.).....	2,792	15	5.37	35,708	141	3.95
Town of Union (Hud. Co.).....	16,667	91	5.46	12,489	188	1.51
Trenton (Mer. Co.).....	31,989	491	5.14	22,058	60	2.72
Vineland (Cumb. Co.).....	4,468	21	4.70	37,031	55	2.08
Wharton (Mer. Co.).....	2,069	7	3.38	50,186	119	2.37

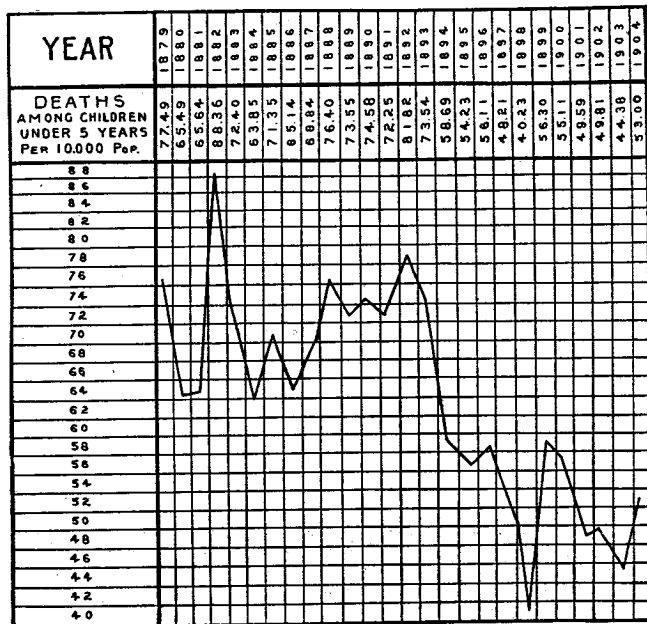
TABLE 19.—SHOWING DEATHS IN CERTAIN CITIES OF NEW JERSEY, ALSO DEATHS AMONG CHILDREN UNDER FIVE YEARS OF AGE; DEATHS UNDER FIVE YEARS FROM DIARRHEA, AND DEATHS UNDER FIVE YEARS PER 10,000 INHABITANTS.

DEATHS.	NEWARK.				JERSEY CITY.				PATERSON.			
	1901.	1902.	1903.	1904.	1901.	1902.	1903.	1904.	1901.	1902.	1903.	1904.
Total deaths.....	4618	4831	4901	5301	4038	4026	4130	4699	1816	1773	1780	1938
Deaths under five years.....	1489	1516	1386	1679	1426	1442	1325	1462	637	639	505	647
Deaths under five years from diarrhoea.....	481	216	199	324	213	270	242	315	246	112	91	152
Percentage of deaths under five years to total deaths.....	32.27	31.38	28.28	31.57	35.31	35.81	32.08	32.14	35.08	36.00	29.11	30.73
Deaths under five years per 10,000 population.....	69.06	58.72	52.22	62.12	67.53	66.73	60.37	64.35	69.36	59.00	44.60	58.96

DEATHS.	CAMDEN.				HOBOKEN.			
	1901.	1902.	1903.	1904.	1901.	1902.	1903.	1904.
Total deaths.....	1269	1368	1281	1547	1164	1156	1140	1420
Deaths under five years.....	522	436	448	539	375	408	349	456
Deaths under five years from diarrhoea.....	155	89	63	102	125	51	55	76
Percentage of deaths under five years to total deaths.....	38.13	31.87	34.97	28.70	32.22	34.86	30.61	31.14
Deaths under five years per 10,000 population.....	66.56	55.60	56.18	62.74	62.07	65.55	55.14	71.71

CHART SHOWING DEATHS IN NEW JERSEY AMONG CHILDREN UNDER FIVE YEARS OF AGE, PER 10,000 POPULATION, FOR TWENTY-SIX YEARS.



**Cancer.**—The number of deaths in New Jersey for the year ending December 31st, 1904, from cancer was 1,125, or 5.46 per 10,000 inhabitants. No new facts have been contributed during the year to more fully explain the increasing prevalence of this disease, but observations are still being diligently prosecuted, and it is reasonable to believe that the cause of this affection and the mode by which it is acquired will not much longer elude the unremitting search which is being made in many laboratories. The following tables show the progress of this disease as a cause of death in New Jersey for twenty-six years:

TABLE 20.—DEATHS FROM CANCER IN NEW JERSEY FOR THE YEAR ENDING DECEMBER 31, 1904, 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.....	6	2.96
Atlantic City.....	16	5.52
Bergen County.....	30	4.24
Englewood.....	6	6.68
Hackensack.....	5	4.45
Burlington County.....	30	6.32
Burlington City.....	6	8.12
Camden County.....	14	6.85
Camden City.....	54	6.29
Gloucester City.....	3	4.99
Cape May County.....	12	3.90
Cumberland County.....	10	3.68
Bridgeport.....	6	4.16
Millville.....	6	8.43
Essex County.....	21	5.20
Bloomfield.....	6	5.49
East Orange.....	8	3.28
Irvington.....	3	4.45
Montclair.....	14	3.90
Newark.....	174	6.44
Orange.....	26	19.81
West Orange.....	4	5.18
Gloucester County.....	23	7.08
Hudson County.....	14	4.83
Bayonne.....	18	4.18
Harrison.....	4	8.63
Hoboken.....	55	8.63
Jersey City.....	114	5.05
Kearny.....	8	7.13
Town of Union.....	7	4.20
West Hoboken.....	15	5.57
West New York.....	1	1.90
Hunterdon County.....	14	4.06
Mercer County.....	11	5.17
Trenton.....	39	4.78
Middlesex County.....	18	4.60
New Brunswick.....	8	3.38
Perth Amboy.....	11	5.28
South Amboy.....	1	1.43
Monmouth County.....	24	4.77
Long Branch.....	6	5.94
Red Bank.....	2	3.41
Morris County.....	22	3.70
Dover.....	8	4.50
Morristown.....	12	9.96
Ocean County.....	9	3.73
Passaic County.....	6	2.83
Passaic City.....	16	4.48
Paterson.....	71	6.37
Salem County.....	5	2.54
Salem City.....	5	3.38
Somerset County.....	19	6.45
North Plainfield.....	5	.89
Sussex County.....	11	4.84
Union County.....	3	3.30
Elizabeth.....	25	4.25
Plainfield.....	9	5.36
Rahway.....	5	6.80
Summit.....	4	6.68
Warren County.....	11	4.62
Phillipsburg.....	8	7.39
Total in cities of over 5,000 inhabitants.....	797	
Total for State.....	1,125	
Rate per 10,000 population (State).....		5.45

TABLE 21.—SHOWING DEATHS FROM CANCER IN NEW JERSEY FOR TWENTY-SIX YEARS.

YEARS.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1896.	1887.	1888.	1889.	1890.	1891.
Deaths from Cancer.....	378	425	451	402	461	484	493	546	574	612	579	640	642
Deaths from Cancer per } 10,000 population.....	3.70	3.75	3.88	3.37	3.81	3.57	3.89	4.15	4.21	4.45	4.11	4.41	4.34

YEARS.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.
Deaths from Cancer.....	688	728	781	770	811	857	852	946	921	1,042	1,081	1,132	1,125
Deaths from Cancer per } 10,000 population.....	4.55	4.69	4.68	4.60	4.71	4.33	4.70	5.10	4.34	5.43	5.24	5.61	5.46

CHART SHOWING DEATHS IN NEW JERSEY FROM CANCER, PER 10,000 POPULATION, FOR TWENTY-SIX YEARS, 1879-1904.

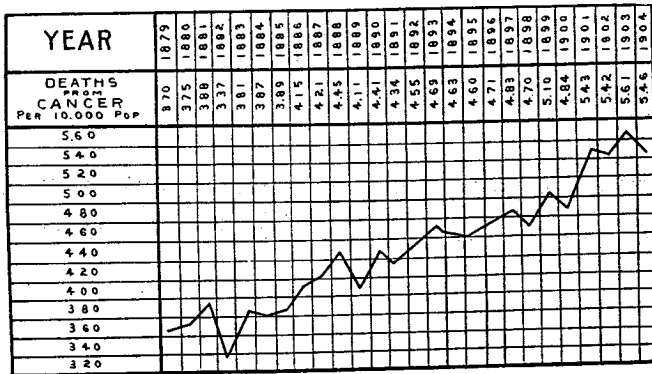


TABLE 22.—DEATHS FROM CANCER IN NEW JERSEY, SHOWING ORGANS AFFECTED AND AGE AT DEATH, FOR THE YEAR ENDING DECEMBER 31, 1904.

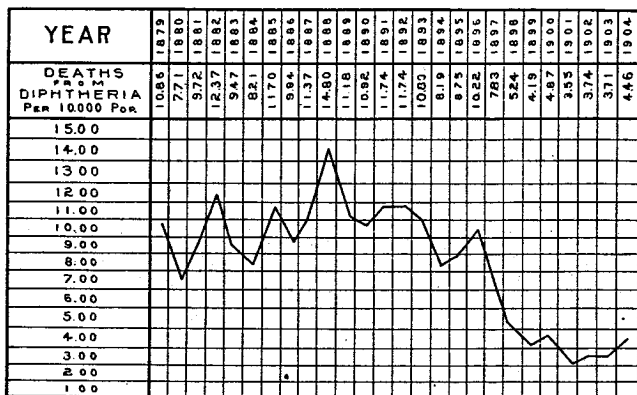
CANCER.	Under 1 mo.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 70.	70 to 80.	Over 80.	Age not stated.	Totals.
	Of the mouth.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Of the stomach and liver.....	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	448
Of the intestines and rectum.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	83
Of the female genital organs.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	184
Of the breast.....	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75
Of the skin.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8
Others.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	258
Totals.....	7	5	4	4	5	11	10	27	54	74	94	146	140	302	199	44	3	1125	

**Diphtheria.**—The number of deaths caused by diphtheria was 918, or 4.46 per 10,000 inhabitants. This is an increase of 170 deaths, compared with the previous year, but reference to the accompanying chart will show that the death-rate from this disease is low in comparison with the loss of life which it occasioned before the use of antitoxin was introduced. Antitoxin should be administered in every case of doubtful sore throat, and the beginning dose should not be less than 3,000 units. Delay in the administration of this remedy is unwarranted, and the doses should be repeated every eight hours if necessary. For severe cases larger doses are required than for mild cases. The health officer's duty upon receiving notice of a case of diphtheria is to secure the isolation of the patient, and to continue the isolation until two negative cultures show that the throat and nose are free from diphtheria bacilli. In some individuals virulent diphtheria bacilli remain in the throat for long periods after all signs of illness have disappeared, and some modification of the general rule seems to be essential in dealing with cases of this character. If the patient is an adult, and can be trusted, he may be informed of the modes by which the disease is transmitted and be given his liberty, but children and persons who are liable to disregard the safety of others should be held until the bacilli disappear or become non-virulent. Cultures taken from other members of the family frequently show the presence of the bacilli, and doubtless the disease is often spread by persons who are not sick.

TABLE 23.—SHOWING DEATHS IN NEW JERSEY FROM DIPHTHERIA, WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31, 1904.

AGE PERIODS.	Deaths from diphtheria.	AGE PERIODS.	Deaths from diphtheria.	AGE PERIODS.	Deaths from diphtheria.
Under 1 month....	5	25 to 30.....	6	60 to 70.....	3
Under 1 year.....	42	30 to 35.....	3	70 to 80.....	1
1 to 5.....	429	35 to 40.....	3	80 to 90.....	.....
5 to 10.....	290	40 to 45.....	2	Over 90.....	.....
10 to 15.....	95	45 to 50.....	1	Not stated..	1
15 to 20.....	27	50 to 55.....	1	Total.....	918
20 to 25.....	8	55 to 60.....	1		

CHART SHOWING DEATHS FROM DIPHTHERIA, PER 10,000 POPULATION, IN NEW JERSEY, FOR THE TWENTY-SIX YEARS ENDING DECEMBER 31, 1904.



**Typhoid Fever.**—This disease caused 384 deaths, or 1.87 per 10,000 inhabitants. These figures are well within the limits of the average number of deaths from typhoid fever in New Jersey during the past ten years, as the following tables show. Some additional facts have recently been brought to notice indicating that the spread of typhoid fever is probably sometimes due to infected dust, and evidence has also been offered to show that con-

tact of the hands with infected articles is often the avenue by which the typhoid bacillus reaches the mouth. The diminution in the number of deaths in this State from typhoid fever has now been steadily maintained for eleven years, and unquestionably this fact is due to a more general knowledge of the means which can be successfully employed to destroy the infectious agent, but sanitary officials, especially in rural districts, are slow in reaching a realizing sense of their responsibility for the existence of many smoldering foci of infection, and in almost every community flies are transporting, on their feet and legs, excreta from exposed masses of filth and depositing it upon articles of food; wells and other sources of domestic water-supply are receiving waste liquids; the milk-supply is received without investigation into the degree of cleanliness with which it is collected and handled; there is disregard of sources from which clams and oysters are obtained; there is carelessness in preventing contamination of those vegetables and fruits which are usually eaten without cooking, and in some localities there is gross neglect of disinfection of typhoid discharges. New Jersey is fortunate in having an exceptionally large proportion of her citizens already provided with drinking water from public supplies, for water from such sources can be depended upon to be much safer for drinking purposes than that from door-yard wells, and the monthly examinations which are now being made in the State laboratory of hygiene of the water of many of the public supplies of the State gives warning of dangerous pollutions. To prevent excremental contamination of food and water is service which is expected of sanitary officials, and the procedures to this end will vary under different circumstances, but they should include measures to prevent access of insects and animals to human excreta; to prevent the use of water from polluted sources; to secure screening of doors and windows of dwellings; to secure destruction of flies, and to exercise supervision over the food-supply. It should be remembered that the source of infection is the patient, and that if all discharges from the bowels and bladder were properly treated the disease would soon disappear. Clothing, bedding, carpets and other articles remain infected for long periods, and purification of infected dwellings and their contents is essential to prevent the spread of the disease. Concerning the relation of oysters to typhoid fever, an English observer says:



"Oysters readily take into their interior the bacillus typhosus which has been introduced into their shell or into the surrounding sea water. Oysters clean at starting rapidly clear themselves of the ingested typhoid bacilli if they are kept in clean water which is frequently changed. Oysters clean at starting clear themselves of the ingested bacilli to a less extent and at a slower rate if they are kept in a 'dry' state, i. e., out of the sea water. Oysters slower if they are kept in a 'dry' state, i. e., outside of the water. The process of 'clearing themselves' of the ingested typhoid bacilli cannot be owing to the oyster merely 'passing out' these bacilli, but must be due to a large extent to an inherent power of the oyster of directly devitalizing the microbe. Experiments with the 'dry' oysters prove this, and it is also evident from the rapid rate at which this microbe disappears from the oysters kept in clean water if compared with the very small number found at the same time in the surrounding sea water. Oysters which had been affected with typhoid bacilli, and were then kept in a 'dry' state until they had practically cleared themselves, when subjected to reinfection with some days out of the water do not possess the same degree of activity and vitality in their tissues as those which have been kept under normal conditions. Oysters from a polluted locality, containing a large number of the bacillus coli, very rapidly clear themselves of this microbe, whether kept in or out of the water. This shows that bacillus coli is foreign to the oyster and is rapidly destroyed by it. When, therefore, it is present in the oyster, it must have been derived from the surroundings. However largely infected with typhoid bacilli, the oysters at no time present to the eye any sign of such infection; they remain in all parts of normal aspect. This is the case not only with all infected oysters kept in sea water, but also with infected oysters kept in the 'dry' state. There was only one exception—an oyster derived from a polluted locality and which had been eleven days out of the water. During the time of the experiments (part of September, October and part of November) the oysters lived quite well in sterile sea water, frequently changed. There was no noticeable alteration in their aspect; they remained plump and juicy, and capable of promptly and tightly closing their shells. Cockles readily embody typhoid bacilli present in sea water. Although the number first appears to diminish in the body of the cockle, it soon increases to a considerable degree, for five days after cockles have been removed from polluted water to clean sand the number of typhoid bacilli in their bodies was threefold that originally present. Their subsequent diminution proceeds slowly, since a cockle examined ten days after removal from infected water still contained in its body 69,000 typhoid bacilli. Mussels also readily embody the typhoid bacillus; in fact, analysis seems to show that they do so to a greater extent than oysters or cockles. As regards the fate of the typhoid bacilli in mussels, these appear to stand between oysters and cockles, since in mussels the bacilli undergo gradual diminution, which occurs incomparably slower than in oysters, but somewhat quicker than in cockles."

TABLE 24.—SHOWING DEATHS FROM TYPHOID FEVER IN NEW JERSEY, FOR YEAR ENDING DECEMBER 31, 1904, AND SHOWING ALSO THE NUMBER OF DEATHS FROM THIS DISEASE IN URBAN AND RURAL DISTRICTS, TOGETHER WITH POPULATION AND DEATHS PER 10,000 INHABITANTS.

	Aggregate population.	Deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 population.
State.....	2,058,909	384	1.87
Cities.....	1,370,719	274	2.00
Rural Districts.....	688,190	110	1.60

TABLE 25.—SHOWING DEATHS PER 10,000 POPULATION FROM TYPHOID FEVER IN NEW JERSEY FOR TWENTY-SIX YEARS.

YEAR.	Population.*	Number of deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 inhabitants	YEAR.	Population.*	Number of deaths from typhoid fever.	Deaths from typhoid fever, per 10,000 inhabitants.
1879.....	1,020,584	324	3.17	1892.....	1,511,653	628	3.15
1880.....	1,180,992	373	3.29	1893.....	1,638,799	596	3.23
1881.....	1,160,275	574	4.94	1894.....	1,578,373	485	3.07
1882.....	1,189,653	884	7.43	1895.....	1,672,942	568	3.39
1883.....	1,209,048	564	4.66	1896.....	1,713,748	577	3.35
1884.....	1,248,224	640	5.12	1897.....	1,764,141	478	2.70
1885.....	1,278,038	642	5.02	1898.....	1,810,008	450	2.48
1886.....	1,310,431	545	4.15	1899.....	1,855,872	486	2.62
1887.....	1,342,829	522	3.88	1900.....	1,888,669	356	1.87
1888.....	1,376,271	620	4.50	1901.....	1,925,731	332	1.73
1889.....	1,407,626	724	5.14	1902.....	1,967,893	428	2.16
1890.....	1,441,017	782	5.42	1903.....	2,016,797	388	1.92
1891.....	1,478,734	636	4.69	1904.....	2,058,909	384	1.87

\* Population estimated except for census years.

TABLE 26.—SHOWING DEATHS IN NEW JERSEY, FROM TYPHOID FEVER, WITH AGE AT DEATH, FOR YEAR ENDING DECEMBER 31, 1904.

NUMBER OF DEATHS FROM TYPHOID FEVER.	AGE PERIODS.													Total.					
	Under 1 mo.	Under 1 year.	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.		55 to 60.	60 to 70.	70 to 80.	80 to 90.	Over 90.
2	10	14	41	88	71	57	43	40	28	23	17	18	16	9	7	8	1	1	584

CHART SHOWING DEATHS FROM TYPHOID FEVER IN NEW JERSEY, PER 10,000 POPULATION, FOR TWENTY-SIX YEARS.

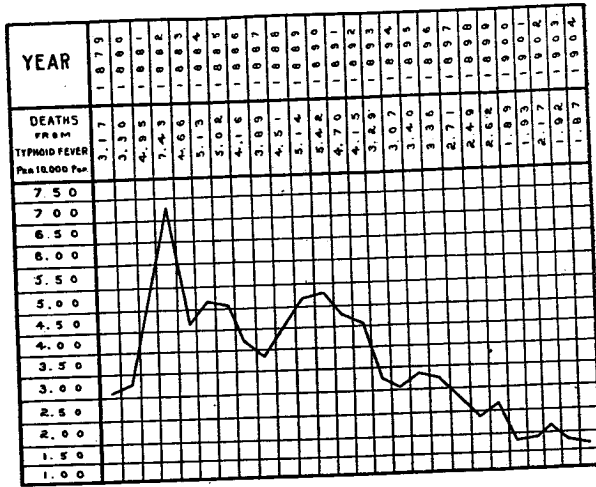


TABLE 27.—SHOWING DEATHS FROM TYPHOID FEVER IN NEW JERSEY, PER 10,000 POPULATION, BY COUNTIES, FOR THE YEAR ENDING DECEMBER 31, 1904.

NAME OF COUNTY.	Deaths per 10,000 population from typhoid fever.	NAME OF COUNTY.	Deaths per 10,000 population from typhoid fever.	NAME OF COUNTY.	Deaths per 10,000 population from typhoid fever.
Atlantic.....	1.97	Gloucester.....	1.51	Ocean.....	2.45
Bergen.....	1.24	Hudson.....	1.99	Passaic.....	.75
Burlington.....	2.89	Hunterdon.....	1.45	Salem.....	3.58
Camden.....	2.46	Mercer.....	3.87	Somerset.....	.86
Cape May.....	2.46	Middlesex.....	2.63	Sussex.....	1.97
Cumberland.....	2.29	Monmouth.....	1.95	Union.....	1.99
Essex.....	1.41	Morris.....	1.80	Warren.....	2.35

TABLE 28.—SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING DECEMBER 31, 1904, WITH POPULATION, NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY AND NATURE OF DRAINAGE.

NAME OF SANITARY DISTRICT.	Estimated population.	Number of deaths from typhoid fever.	Water supply.	Drainage.
Atlantic City.....	25,445	9	Public.....	Sewers.
Bayonne.....	43,014	12	".....	".....
Belmar borough.....	902	1	".....	".....
Belvidere.....	1,784	1	".....	".....
Bernards township.....	3,066	1	Domestic.....	No sewers.
Beverly City.....	1,950	3	Public.....	Sewers.
Bordentown.....	4,110	8	".....	".....
Bound Brook.....	2,622	1	".....	".....
Branchville.....	628	1	Domestic.....	No sewers.
Bridgeton.....	14,410	6	Public.....	Sewers.
Burlington.....	7,392	2	".....	".....
Camden.....	80,923	16	".....	".....
Centre township.....	2,192	1	".....	".....
Chester township.....	4,420	1	Domestic.....	No sewers.
Chesterfield township.....	1,143	1	".....	".....
Clementon township.....	2,200	3	".....	".....
Collingswood.....	1,633	1	".....	".....
Cranford township.....	2,534	1	".....	".....
Deptford township.....	2,114	1	".....	".....
Dover City.....	5,938	1	Public.....	Sewers.
Dover township.....	2,618	1	Domestic.....	No sewers.
East Newark.....	2,600	2	Public.....	Sewers.
East Orange.....	21,506	1	".....	".....
Eatontown township.....	3,021	1	Domestic.....	No sewers.
Egg Harbor City.....	1,908	1	Public.....	".....
Egg Harbor township.....	1,864	1	Domestic.....	".....
Elizabeth.....	65,766	9	Public.....	Sewers.
Elstisboro township.....	1,140	1	Domestic.....	No sewers.
Englewood.....	445	1	".....	".....
Fairwood township.....	6,238	2	Public.....	Sewers.
Freehold.....	1,200	1	Domestic.....	No sewers.
Garfield borough.....	2,384	1	Public.....	Sewers.
Garfield township.....	3,504	1	Domestic.....	No sewers.
Glassboro township.....	2,677	2	".....	".....
Glen Ridge borough.....	1,960	1	".....	".....
Gloucester City.....	7,831	5	Public.....	Sewers.
Guttenberg.....	4,825	1	".....	No sewers.
Hackensack.....	11,172	2	".....	Sewers.
Hamilton township (Mercer).....	4,164	1	Domestic.....	No sewers.
Hardyton township.....	3,425	1	".....	".....
Harrington township.....	3,224	1	".....	".....
Harrison.....	11,536	1	Public.....	Sewers.
Hillsdale township.....	891	1	Domestic.....	No sewers.
Hoboken.....	63,588	13	Public.....	Sewers.
Hohokus township.....	2,610	1	Domestic.....	No sewers.
Holland township.....	1,652	1	".....	".....
Hope township (Warren).....	1,144	1	".....	".....
Jersey City.....	225,409	46	Public.....	Sewers.
Keary.....	11,233	1	".....	".....
Knowlton township.....	1,210	1	Domestic.....	No sewers.
Lambertville.....	4,637	2	Public.....	Sewers.
Lawrence township (Cumberland).....	1,638	1	Domestic.....	No sewers.
Little Egg Harbor township.....	1,856	2	".....	".....
Long Branch.....	10,104	6	Public.....	Sewers.
Lower Alloways Creek township.....	1,242	1	Domestic.....	No sewers.
Lower Penns Neck township.....	1,424	1	".....	".....
Madison borough.....	3,754	1	".....	".....
Matawan borough.....	1,511	1	".....	".....
Medford township.....	1,600	1	".....	".....
Middletown township.....	5,479	1	".....	".....
Millville.....	19,675	2	Public.....	Sewers.
Montclair.....	15,730	7	".....	".....
Montville township.....	1,908	1	Domestic.....	No sewers.
Morristown.....	12,047	2	Public.....	".....

TABLE 28.—SANITARY DISTRICTS IN NEW JERSEY IN WHICH DEATHS FROM TYPHOID FEVER OCCURRED DURING THE YEAR ENDING DECEMBER 31, 1904, WITH POPULATION, NUMBER OF DEATHS, SOURCE OF WATER-SUPPLY AND NATURE OF DRAINAGE—Continued.

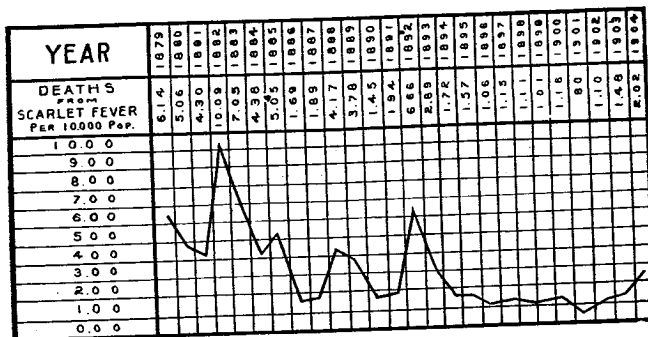
NAME OF SANITARY DISTRICT.	Estimated population.	Number of deaths from typhoid fever.	Water supply.	Drainage.
Mount Laurel township.....	1,644	3	Domestic	No sewers.
Neptune township.....	7,943	2	"	"
Nearco borough.....	941	1	Public	Sewers.
Newark.....	270,282	88	"	"
New Brunswick.....	20,082	8	Domestic	No sewers.
New Hanover township.....	1,827	2	"	"
Newton township.....	4,376	1	"	"
Northampton township.....	5,183	1	"	"
North Arlington borough.....	290	1	"	"
North Brunswick township.....	847	1	Public	Sewers.
North Plainfield.....	5,009	1	"	No sewers.
Nutley borough.....	4,360	2	"	Sewers.
Orange.....	28,221	5	Domestic	No sewers.
Overpeck township.....	1,987	1	Public	Sewers.
Passaic City.....	35,685	6	"	"
Paterson.....	111,481	7	Domestic	No sewers.
Pemberton township.....	1,498	1	"	"
Penns Grove borough.....	1,826	1	Public	Sewers.
Perth Amboy.....	20,435	7	"	"
Phillipsburg.....	17,828	2	Domestic	No sewers.
Plainfield.....	16,761	8	"	"
Plumsted township.....	1,204	1	"	"
Pohatcong town-hip.....	2,215	2	Public	Sewers.
Princeton borough.....	8,599	3	"	"
Rahway.....	7,935	2	Domestic	No sewers.
Raritan township (Middlesex).....	2,801	1	"	"
Readington township.....	2,670	1	"	"
Ridgewood township.....	3,338	1	Public	Sewers.
Salem City.....	5,811	1	Domestic	No sewers.
Sayreville township.....	4,155	3	"	"
Secaucus borough.....	1,626	1	"	"
Shrewsbury township.....	3,842	1	Public	Sewers.
South Orange village.....	4,638	2	Domestic	No sewers.
South River borough.....	2,792	2	"	"
Spring Lake borough.....	626	1	Public	Sewers.
Stamess borough.....	1,250	1	Domestic	No sewers.
Tewksbury township.....	1,883	1	"	"
Town of Union.....	16,667	2	Public	Sewers.
Trenton.....	81,869	85	"	"
Tuckerton borough.....	1,275	1	Domestic	No sewers.
Upper Freehold township.....	2,112	1	"	"
Vernon township.....	1,738	1	"	"
Vineland borough.....	4,370	1	"	"
Wall township.....	3,212	1	"	"
Washington borough (Warren).....	3,580	1	"	"
Waterford township.....	2,161	1	"	"
Weehawken township.....	5,325	1	"	"
West Deptford township.....	1,851	1	"	"
Westfield township.....	4,828	1	"	"
West Hoboken.....	26,582	4	Public	Sewers.
West New York.....	5,267	1	Domestic	No sewers.
Winslow township.....	1,392	1	"	"
Woodbridge township.....	7,681	1	"	"
Woodbury.....	4,087	1	"	"
Woodstown borough.....	1,871	3	"	"
Woolwich township.....	2,291	1	"	"

Scarlet Fever.—During the past three years the number of deaths from scarlet fever has been increasing, and a decided increase has occurred for the year ending December 31st, 1904, the number being 416, or 194 more than the average number for the preceding ten years.

TABLE 29.—DEATHS FROM SCARLET FEVER, DIPHTHERIA AND TYPHOID FEVER IN NEW JERSEY FOR THE TWENTY-SIX YEARS ENDING DECEMBER 31, 1904, COMPARED WITH TOTAL DEATHS.

YEARS.	Popula- tion.	Total deaths.	Death- rate per 1,000 population.	SCARLET FEVER.		DIPHTHERIA.		TYPHOID FEVER.	
				Number of deaths.	Death- rate per 1,000 population.	Number of deaths.	Death- rate per 1,000 population.	Number of deaths.	Death- rate per 1,000 population.
1879.....		20,440	18.07	627	.61	1,100	1.19	324	.32
1880.....	1,130,593	18,967	16.77	574	.51	873	.77	373	.33
1881.....		20,810	18.39	499	.48	1,128	.97	374	.49
1882.....		25,910	22.90	1,876	1.01	1,472	1.24	884	.74
1883.....		18,310	20.60	863	.71	1,146	.95	564	.47
1884.....		21,716	19.20	847	.44	1,027	.82	640	.51
1885.....	1,278,688	28,307	18.63	616	.51	1,496	1.17	642	.50
1886.....		22,784	17.80	522	.17	1,803	.99	545	.42
1887.....		24,381	19.04	265	.19	1,627	1.14	322	.33
1888.....		27,173	17.01	574	.42	2,086	1.48	620	.45
1889.....		25,848	18.99	538	.38	1,574	1.12	724	.51
1890.....	1,441,017	28,680	19.28	299	.15	1,875	1.19	782	.54
1891.....		28,640	19.40	288	.19	1,787	1.17	695	.47
1892.....		32,685	21.62	1,008	.67	1,776	1.17	628	.42
1893.....		30,696	19.88	445	.29	1,677	1.09	506	.33
1894.....		30,604	19.19	272	.17	1,294	.82	486	.31
1895.....	1,672,942	30,684	18.51	284	.16	1,464	.88	568	.34
1896.....		30,767	17.90	188	.11	1,738	1.02	577	.34
1897.....		29,822	16.90	208	.12	1,882	.78	478	.27
1898.....		27,887	15.11	201	.11	950	.82	450	.25
1899.....		30,999	16.70	187	.10	777	.42	486	.26
1900.....	1,883,669	31,474	16.62	220	.12	927	.49	356	.19
1901.....		31,789	16.48	179	.09	684	.36	332	.19
1902.....		31,819	16.91	217	.11	688	.35	478	.22
1903.....		31,620	16.78	299	.15	748	.37	383	.19
1904.....		35,298	17.14	416	.20	918	.45	384	.19

CHART SHOWING DEATHS FROM SCARLET FEVER IN NEW JERSEY, PER 10,000  
POPULATION, FOR TWENTY-SIX YEARS.



Following is a report, dated May 16th, 1905, by D. C. Bowen, one of the inspectors of this board, of an epidemic of scarlet fever which occurred in Manasquan, Monmouth county, during the past winter and spring:

"In compliance with instructions, I visited Manasquan on the 13th and 14th of April to investigate a reported outbreak of scarlet fever, and learned that said disease had been prevalent in Manasquan since January of the present year, and that it was still spreading at the time of said visit. I called upon a number of families in which, I was informed by Mr. Hoskins, scarlet fever had broken out. By aid of the information thus obtained, together with facts secured from Robert Marks, secretary of the local board of health, the cases shown in the following table were located and investigated. The outbreak dates back to December 21st, 1904, when George Longstreet, twenty-four years of age, died in Manasquan from scarlet fever. The source of his infection was not learned. He had been ill and confined to his house for more than six weeks, suffering from a complication of diseases; was reported to be suffering with scarlet fever on December 21st, and died on the 29th. Mr. Longstreet and his mother occupied a house in which no other persons resided, and if the disease spread from the Longstreet case the method by which it was communicated was not brought out during my investigation. The next cases to occur were among children attending the third grade in the Manasquan public school. Ten cases in as many families appeared from January 11th to the 15th. One of the pupils in this room left school on account of illness on January 10th; three on the 11th; three on the 12th, and three on the 13th. The 14th was Saturday, and the schools remained closed on account of this outbreak until

January 21st. This group of cases, occurring as they did at about the same time, shows a common source of infection, and as they appeared among school children attending the same classroom, it looks as if the infection took place in the school. The children had not all attended the same Sunday-school, nor was it shown that they had all assembled in a gathering elsewhere during the incubation period of scarlet fever preceding the dates of attack. It is true that eight of the ten families were supplied with milk by the same milkman, Mr. R. C. Conover, who purchased his supply from Mr. P. Hulshart's dairy, but no previous scarlet fever history was found in looking up this milk-supply. It was shown, however, that one of Mr. Hulshart's three children was among the group of ten cases which fell ill between January 11th and 15th, and that his other two children suffered from scarlet fever on the dairy farm at a later date. The first case in Mr. Hulshart's family, who reside in Wall township, had been reported by Dr. Herbert, the attending physician, to Mr. Marks, Secretary of the board of health of Manasquan, on January 13th and Mr. Marks had filed this report, together with other reported cases received up to the time of my visit on April 13th, failing to make weekly reports to the State Board of Health, as required by chapter 260, laws of 1895. The school remained closed from January 13th to January 23d, and no cases were reported from January 15th until March 11th, when reports again began to be received by the local board of health, and they were still coming in at the time of my visit on January 14th, at which time thirty-seven cases had occurred in twenty infected families. The case of M. Longstreet and Everitt Lavance occurred in Wall township, and were not reported to the board of health of Manasquan, but these two children attended the Manasquan school. The Lester Corwin case was verbally reported by the attending physician to the secretary of the board of health as measles, and no action was taken by the board. I was informed by Mrs. Corwin that the physician saw this case but once, and then on the day of attack; that the child was taken ill on March 11th with fever, accompanied by a rash, followed by peeling, and that her other son, Harry Corwin, suffered from the same disease, and was taken ill March 18th. The father of the two Corwin children is janitor of the Manasquan school. The Woodfield case was reported at the time of my visit, and I accompanied the secretary of the local board of health to the premises, where we learned that the patient was John Woodfield, age thirty years. Mrs. Woodfield informed us that her daughter was taken ill on March 28th with fever, accompanied by vomiting and a rash. The child was thought by her mother to be suffering from German measles, and no physician was called. The child's father was reported ill with scarlet fever on April 12th. I visited the Pettet family on April 14th, and Mrs. Pettet informed me that her child was taken ill on April 1st with scarletina. Shortly after my visit to the house the case was reported, for the first time, to the local board of health by Dr. A. C. Norris, the attending physician, as measles. The column in the following table of cases giving the length of quarantine shows that in the first group of ten cases, nine occurring in the borough of Manasquan, the duration of quarantine ranged from fifteen to forty-five days, averaging twenty-three and four-tenths days, and in the two cases which occurred in the township of Wall there is no record of quarantine, but the school register shows that one of these cases

was back in his class in twenty-nine days from the date of attack. To these short periods of isolation of patients may be due the second outbreak. In the sixteen cases reported from March 11th to April 14th, twelve were supplied with milk by Job M. Francis, two by R. C. Conover, one had his own cow and one used no fresh milk. Mr. Francis conducts a dairy in Manasquan and retails the milk produced thereon in the borough. There were three cases of scarlet fever on the Francis dairy at the time of my inspection, April 13th, the facts in this case having already been communicated in a special report. In so far as I could learn, the quarantine restrictions imposed by the local board of health on infected premises consisted of a verbal notice to the family at the time a case is reported and an placing a card on the infected dwelling, which is removed when the attending physician reports to the secretary that the patient has recovered. In some cases the local board has employed Mr. Harding, a local undertaker, to disinfect infected premises, and in other cases the disinfection has been performed by a private party employed by the occupants of the infected premises. On May 16th I visited the school in Manasquan and was given the dates from the school register, which appear in columns ten and eleven of the following tabulation of cases. In looking over the third grade register for information which might be helpful in locating the source of infection, if it occurred in the public school, it was shown that there were many absent scholars when school was opened after the Christmas holidays, and that they kept returning until January 9th. With no record of illness in any of the families from which these pupils came, it is doubtful that if further inquiry was made at this late date it would be successful in locating the source of infection."

An order was issued by the State board of health April 13th, 1905, under authority contained in the act approved April 21st, 1898, prohibiting the sale of milk which was collected or handled on the premises of Job M. Francis, in Manasquan, and arrangements were then immediately made by Mr. Francis to conduct his milk business on adjoining premises, where there was no risk of communicating to the milk the infection of scarlet fever from the sick children in the family of Mr. Francis.

## LIST OF CASES OF SCARLET FEVER IN MANASQUAN, NEW JERSEY, FROM DECEMBER 21, 1904, TO APRIL 12, 1905.

Number of infected families.	Number of cases occurring in each family.	NAMES OF PATIENTS.	Date of attack of first case in family.	Date reported to board of health.	Date of attack of last case in family.	Date of withdrawal of quarantine and disinfection.	Length of quarantine from date of last case.
1	1	Geo. Longstreet.....	1904. Dec. 21.	1904. Dec. 22.	.....	1904. Dec. 29.	.....
2	5	Pearce.....	Jan. 11.	Jan. 12.	.....	1905. Mar. 21.	16 days.
3	2	Mildrid Steine.....	" 11.	" 12.	.....	Feb. 21.	27 "
4	1	Annie Miller.....	" 11.	" 12.	.....	Jan. 25.	Feb. 21.
5	3	Sarah Hulshart.....	" 11.	" 12.	.....	" 11.	31 "
6	1	M. Longstreet.....	" 12.	Note a.	.....	Feb. 22.	15 "
7	1	Ethel Browne.....	" 12.	Note a.	.....	Feb. 15.	24 "
8	1	Lucy Jordan.....	" 12.	Jan. 13.	.....	" 7.	25 "
9	1	Irma Birdsall.....	" 12.	Jan. 13.	.....	Jan. 18.	Mar. 1.
10	1	Everet Lavance.....	" 12.	Jan. 13.	.....	" 18.	Jan. 28.
11	2	Helen Emmons.....	" 14.	Note a.	.....	Not known.	.....
12	2	Lester Corwin.....	" 15.	Jan. 16.	.....	Feb. 6.	Feb. 25.
13	1	Albert Wierman.....	Mar. 11.	Note b.	.....	Mar. 18.	Note d.
14	1	Ada Woodfield.....	" 22.	Note c.	.....	Note c.	Note d.
15	2	Sadilla Francis.....	" 28.	Note c.	.....	Apr. 2.	11 days.
16	3	Sadilla Francis.....	" 29.	Note c.	.....	Apr. 12.	May 3.
17	1	Fetset.....	Apr. 1.	Note b.	.....	" 10.	" 6.
18	1	Helen Marx.....	" 2.	Note b.	.....	Note d.	Note d.
19	1	Ethel Heyers.....	" 7.	" 10.	.....	Apr. 24.	22 days.
20	4	Vincent Mount.....	" 7.	" 8.	.....	Apr. 18.	May 18.
21	1	Edith Beckett.....	" 12.	Note c.	.....	" 10.	28 "
Total, 37						Apr. 24.	12 "

Number of infected families.	Number of cases occurring in each family.	NAMES OF PATIENTS.	Class in public school.	Last day in school before attack.	Date returned to school.	Sunday-school.	Milk supply.
1	1	Geo. Longstreet.....	None.	.....	.....	None.	Private.
2	5	Pearce.....	3d grade.	.....	.....	.....	.....
3	2	Mildrid Steine.....	3d "	Jan. 12.	May 1.	Episc.	1
4	1	Annie Miller.....	3d "	" 11.	Apr. 6.	Prsbt.	1
5	3	Sarah Hulshart.....	3d "	" 11.	" 8.	M. E.	1
6	1	M. Longstreet.....	3d "	" 11.	May 1.	.....	1
7	1	Ethel Browne.....	3d "	" 12.	Apr. 17.	Prsbt.	1
8	1	Lucy Jordan.....	3d "	" 13.	.....	M. E.	1
9	1	Irma Birdsall.....	3d "	" 10.	.....	.....	Not learned.
10	1	Everet Lavance.....	3d "	" 12.	Feb. 27.	M. E.	.....
11	2	Helen Emmons.....	3d "	" 12.	" 18.	.....	Own cow.
12	2	Lester Corwin.....	7th grade.	" 12.	Mar. 13.	.....	2
13	1	Albert Wierman.....	" 24.	Mar. 10.	.....	.....	Private.
14	2	Ada Woodfield.....	5th grade.	" 28.	.....	.....	2
15	3	Sadilla Francis.....	3d "	" 28.	.....	.....	2
16	1	Fetset.....	5th "	" 31.	.....	Prsbt.	2
17	1	Helen Marx.....	3d "	" 31.	.....	.....	2
18	1	Ethel Heyers.....	None.	" 31.	.....	M. E.	2
19	4	Vincent Mount.....	1st grade.	Apr. 5.	.....	.....	2
20	1	Edith Beckett.....	None.	.....	.....	.....	None.
Total, 37							

a. This case occurred in Wall township.

b. Cases reported as measles.

c. Reported as diphtheria.

d. No quarantine or disinfection.

e. First case in family not reported.

1. C. B. Conover.

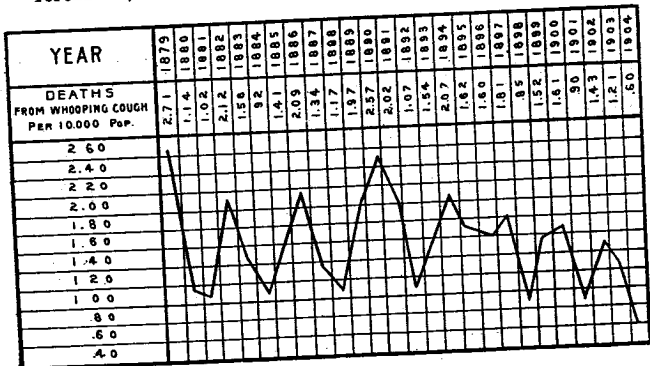
2. Job M. Francis.

**Whooping Cough.**—The number of deaths from whooping cough was only 124, this being a smaller number of deaths from this disease than that of any year since 1884.

TABLE 30.—SHOWING DEATHS IN NEW JERSEY FROM WHOOPING COUGH WITH AGES OF DECEDENTS, FOR YEAR ENDING DECEMBER 31, 1904.

AGE PERIODS.	Deaths from whooping cough.	AGE PERIODS.	Deaths from whooping cough	AGE PERIODS.	Deaths from whooping cough.
Under 1 month....	3	20 to 25.....	1	50 to 55.....	.....
Under 1 year....	59	25 to 30.....	.....	55 to 60.....	.....
1 to 5.....	53	30 to 35.....	.....	60 to 70.....	.....
5 to 10.....	4	35 to 40.....	.....	70 to 80.....	1
10 to 15.....	2	40 to 45.....	1	80 to 90.....	.....
15 to 20.....	.....	45 to 50.....	.....	Over 90.....	.....
Age not stated.....	.....	.....	.....	Total.....	124

CHART SHOWING DEATHS FROM WHOOPING COUGH IN NEW JERSEY, PER 10,000 POPULATION, FOR THE TWENTY-SIX YEARS ENDING DECEMBER 31, 1904.

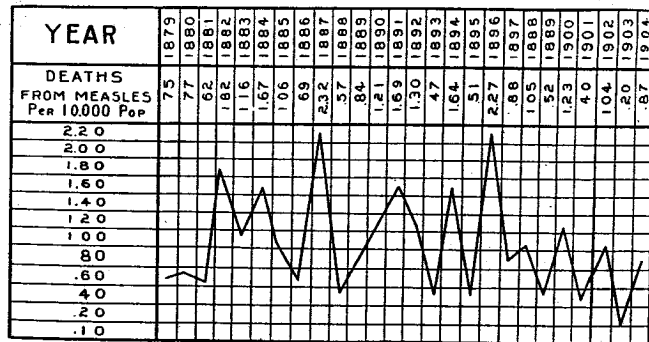


**Measles.**—The average number of deaths from measles in New Jersey during the past eight years, per 10,000 population, has been .82, while the average number for the previous eighteen years was 1.77. Reference to the accompanying chart shows that the mortality from measles has been less variable in recent years, and indicates that the epidemic outbreaks have been less widespread than formerly. The number of deaths for 1904 from this disease was 180, or .87 per 10,000 inhabitants.

TABLE 31.—SHOWING DEATHS IN NEW JERSEY FROM MEASLES, WITH AGE AT DEATH, FOR YEAR ENDING DECEMBER 31, 1904.

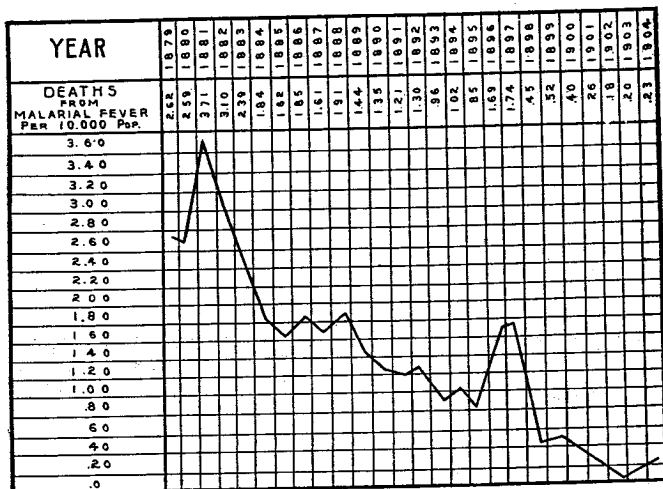
AGE PERIODS.	Deaths from measles.	AGE PERIODS.	Deaths from measles.	AGE PERIODS.	Deaths from measles.
Under 1 month....	3	25 to 30.....	.....	60 to 70.....	.....
Under 1 year....	42	30 to 35.....	1	70 to 80.....	.....
1 to 5.....	114	35 to 40.....	.....	80 to 90.....	.....
5 to 10.....	15	40 to 45.....	.....	Over 90.....	.....
10 to 15.....	3	45 to 50.....	.....	.....	.....
15 to 20.....	1	50 to 55.....	1	.....	.....
20 to 25.....	.....	55 to 60.....	.....	Total.....	180

CHART SHOWING DEATHS IN NEW JERSEY FROM MEASLES, PER 10,000 POPULATION, FOR TWENTY-SIX YEARS ENDING DECEMBER 31, 1904.



**Malarial Fever.**—Forty-seven deaths were recorded as having been caused by malarial diseases during the year. Circular 112\* calls the attention of local health officials to the sources of malarial infection, and points out the measures which are effectual for the destruction of the anopheles. The following diagram shows the decline in the mortality from malarial affections in New Jersey during the past twenty-six years:

CHART SHOWING DEATHS FROM MALARIAL AFFECTIONS, PER 10,000 INHABITANTS, IN NEW JERSEY, FOR TWENTY-SIX YEARS.



**Small-pox.**—Cases of small-pox occurred during the year 1904 as follows: Atlantic City, 5; Bordentown, 1; Camden, 31; Delaware township, Camden county, 4; Egg Harbor City, 1; Franklin township, Somerset county, 1; Hopewell township, Mercer county, 1; Jersey City, 5; Lawrence township, Cumberland county, 1; Long Branch, 1; Medford township, Burlington county, 1; Midland township, Bergen county, 1; Montclair, 2; Newark, 1; Pater-

\* This circular is printed on subsequent pages of this report.

son, 3; Plainfield, 1; Swedesboro, 1; Tuckerton, 2; Trenton, 45; Willingboro township, Burlington county, 1; Woodbine, 1; Wood Lynne, 4, and Woolwich township, Gloucester county, 1. Twenty-four deaths were recorded. These outbreaks were, in each locality, due to new importations of the infection, and they show that vaccination and revaccination have not been practiced in New Jersey as extensively as the warnings of the past few years demanded. Neglect in securing the protection afforded by vaccination was not surprising previous to the widespread prevalence of small-pox in 1901 and 1902, for the mortality caused by this disease had been extremely small for the preceding eighteen years, but after the occurrence of 432 deaths from small-pox in 1902, there was reason to expect that all well-informed persons would be reminded of the risk of contracting the disease to which the unvaccinated are liable to be exposed, and that every considerate individual would defend himself against this preventable malady. It appears, however, that whenever the disease is reintroduced it finds susceptible persons in whom it can develop, and notwithstanding the known preventive influence of vaccination, there is found in nearly every community more or less indifferent persons who cannot be aroused to a realization of the seriousness of the public nuisance which is produced by the appearance of small-pox in a community. Where the individual is unmoved by the personal danger which attends an attack of the disease, he might give some attention to the inconvenience which his sickness with this infectious ailment causes his neighbors, and he might be expected to be willing to take the trouble to be vaccinated often when by this precaution he can prevent the damage to business and the excessive expenditures for caring for the patient which this disease almost always involves. The vaccination of school children was sustained by the Court of Appeals of the State of New York in the following opinion:

"The appellant claims that vaccination does not tend to prevent small-pox, but tends to bring about other diseases, and that it does much harm with no good. It must be conceded that some laymen, both learned and unlearned, and some physicians of great skill and repute, do not believe that vaccination is a preventative of small-pox. The common belief, however, is that it has a decided tendency to prevent the spread of this fearful disease and to render it less dangerous to those who contract it. While not accepted by all, it is accepted by the mass of the people as well as by most members of the medical profession. It has been general in our State and in most civilized nations for generations. It is generally accepted in

theory and generally applied in practice, both by the voluntary action of the people and in obedience to the command of law. Nearly every State in the Union has statutes to encourage or directly or indirectly to require vaccination, and this is true of most nations in Europe. It is required in nearly all the armies and navies of the world. Vaccination has been compulsory in England since 1854, and the last act upon the subject, passed in 1898, requires every child born in England to be vaccinated within six months of its birth. It is compulsory, or is aided, encouraged, and to some extent compelled, in the other European nations. It is compulsory in but few States and cities in this country, but it is countenanced or promoted in substantially all, and statutes requiring children to be vaccinated in order to attend the public schools have generally been sustained by the courts. While we do not decide and cannot decide that vaccination is a preventative of small-pox, we take judicial notice that this is the common belief of the people of the State, and with this fact as a foundation we hold that the statute in question is a health law, enacted in a reasonable and proper exercise of the police power."

TABLE 32.—SHOWING DEATHS IN NEW JERSEY FROM SMALL-POX FOR TWENTY-SIX YEARS.

YEARS.	Deaths from small-pox.	YEARS.	Deaths from small-pox.	YEARS.	Deaths from small-pox.
1879.....		1887.....	5	1895.....	23
1880.....	15	1888.....	5	1896.....	2
1881.....	254	1889.....	3	1897.....	
1882.....	367	1890.....		1898.....	
1883.....	54	1891.....		1899.....	
1884.....	7	1892.....	33	1900.....	5
1885.....	2	1893.....	43	1901.....	142
1886.....	4	1894.....	11	1902.....	432
				1903.....	16
				1904.....	24

**Bright's Disease.**—The mortality caused by this disease varies somewhat from year to year, as the following table shows. The number of deaths from Bright's disease during the year ending December 31st, 1904, per 10,000 inhabitants, was 8.40.

TABLE 33.—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 FIVE YEARS.

NAMES OF COUNTIES AND CITIES.	DEATHS FROM BRIGHT'S DISEASE.				
	1900.	1901.	1902.	1903.	1904.
Atlantic County.....	17	13	14	15	11
Atlantic City.....	28	36	32	34	37
Bergen County.....	27	25	12	81	47
Englewood.....	5	2	3	5	8
Hackensack.....	11	8	7	7	5
Burlington County.....	26	40	28	39	47
Burlington.....					5
Camden County.....	10	9			10
Camden.....		12	17	29	20
Gloucester City.....	99	64	57	84	166
Cape May County.....	8	2			11
Cumberland County.....	8	2	7	10	12
Bridgeton.....	18	16	16	22	27
Millville.....	16	11	22	24	24
Essex County.....	6	7	5	3	8
Bloomfield.....	48	17	15	19	23
East Orange.....			6	1	5
Irvington.....	14	11	20	20	20
Montclair.....			4	9	6
Newark.....	10	11	5	9	14
Orange.....	289	219	255	368	287
West Orange.....	35	19	20	34	20
Gloucester County.....	20	17	2	7	5
Hudson County.....	20	12	12	32	23
Bayonne.....	69	39	13	32	29
Harrison.....	28	16	21	25	23
Hoboken.....	5	8	2	7	9
Jersey City.....	85	41	57	78	80
Kearny.....	188	140	158	179	194
Town of Union.....	7				7
West Hoboken.....	11	14	12	19	16
West New York.....			21	14	12
Hunterdon County.....			4	9	5
Mercer County.....	17	17	12	22	26
Trenton.....	15	6	13	9	9
Middlesex County.....	73	8	54	60	71
New Brunswick.....	20	22	18	20	18
Perth Amboy.....	23	18	19	26	19
South Amboy.....	18	9	11	8	5
Monmouth County.....	2	5	5	3	4
Long Branch.....	48	42	60	55	57
Red Bank.....	11	13	10	13	8
Morris County.....		4	2	4	3
Dover.....	34	4	26	44	35
Morristown.....	3	4	4	5	7
Ocean County.....	14	8	12	8	13
Passaic County.....	17	11	12	14	13
Passaic City.....	17	7	6	11	9
Paterson.....	10	11	15	10	7
Salem County.....	94	44	60	75	21
Salem City.....	7	14	11	16	14
Somerset County.....	7		4	5	7
North Plainfield.....	31	17	22	17	17
Sussex County.....		3		4	2
Union County.....	10	6		13	9
Elizabeth.....	10	10	9	15	11
Plainfield.....	60	48	28	45	50
Rahway.....	11	14	16	19	15
Summit.....	14	9	4	7	9
Warren County.....		1		7	5
Phillipburg.....	13	14	16	17	24
	6	5	4	4	8
Totals.....	1,620	1,246	1,371	1,686	1,722



**Suicide.**—The deaths from suicide in New Jersey during the year 1904 numbered 330. In 1901 there were 265 deaths recorded from this cause; in 1902, 271, and in 1903, 314.

TABLE 34.—DEATHS IN NEW JERSEY FROM SUICIDE, SHOWING MODE OF DEATH AND AGE AT DEATH, FOR THE YEAR ENDING DECEMBER 31, 1904.

MODE OF DEATH.	AGE AT DEATH.											Total.						
	1 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.		55 to 60.	60 to 70.	70 to 80.	80 to 90.	Over 90.	Not stated.
By poison.....	1		1	12	18	10	13	17	15	21	9	14	5				1	152
By asphyxia.....						2	3	2	3	2	1	2					1	27
By strangulation.....			1		1												1	48
By firearms.....				2	10		7	10	9	10	4	7	6	3			1	79
By cutting instruments.....					1		1	1										5
By drowning.....																		1
By crushing.....																		1
By precipitation from height.....																		7
Others.....																		330
Totals.....																		330

TABLE 35.—SHOWING NUMBER OF DEATHS BY SUICIDE RECORDED IN NEW JERSEY, BY CITIES, AND BY COUNTIES, EXCLUSIVE OF CITIES, FOR THE YEAR ENDING DECEMBER 31, 1904.

NAME OF PLACE.	COUNTRY OF BIRTH.										Total.	
	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.		Not stated.
Atlantic County.....												1
Atlantic City.....	5											5
Bergen County.....												1
Hackensack.....	1											1
Burlington County.....												1
Burlington.....	1											1
Camden County.....												1
Camden City.....	5			2								7
Gloucester City.....		1										1
Cape May County.....												2
Cumberland County.....												1
Bridgeton.....												1
Millville.....		1										1
Essex County.....												1
Bloomfield.....	1											1
East Orange.....	1											1
Irvington.....												1
Montclair.....	3	1										4
Newark.....	25	4		19	4	4						68
Orange.....	4	2			1	1						9
West Orange.....		1										1
Gloucester County.....												1
Hudson County.....												5
Bayonne.....	2	1										3
Harrison.....	1											1
Hoboken.....	4	1		15	4							25
Jersey City.....	18	2		18								38
Kearny.....	1											1
Town of Union.....	3			5	1							11
West Hoboken.....	4			5		1						11
West New York.....	1											1
Hunterdon County.....												1
Mercer County.....												1
Trenton.....	5			1	1	1	1	1				11
Middlesex County.....												1
New Brunswick.....	1											6
Perth Amboy.....	2											2
Monmouth County.....												9
Long Branch.....	2			1								3
Red Bank.....	1											1
Morris County.....												2
Dover.....	1											1
Passaic County.....												5
Passaic City.....	1											1
Paterson.....	11	1										14
Salem County.....												1
Somerset County.....												5
Fussex County.....												6
Union County.....												5
Elizabeth.....		2										2
Plainfield.....	1											10
Warren County.....												5
Totals.....	118	18		67	18	8	1	3	1	18	11	330



TABLE 36.—INFECTIOUS DISEASES REPORTED FOR EACH QUARTER DURING THE YEAR ENDING JUNE 30, 1906—Continued.

NAME OF SANITARY DISTRICT.	DIPHTHERIA.				SCARLET FEVER.				TYPHOID FEVER.				SMALL POX.			
	1.	2.	3.	4.	1.	2.	3.	4.	1.	2.	3.	4.	1.	2.	3.	4.
Metuchen borough				1					1							
Midland township			5													
Millville city	1	15	5	2		5	1	1	5	8		1				
Montclair city	4	5	9	5	2	13	15	94	13	12	8	4				1
Montrville township		1														
Moorestown borough	4	1	5						1	2	2	2				
Morristown city	5	8	1	8					2	1	2					
Morris township					1											
Mount Laurel township						1			2	2						
Mountainside borough																1
Newark city	352	703	387	423	261	423	454	557	60	80	26	35				
New Brunswick city	3	17	2	1		13	3	1								
Northampton township																
North Plainfield borough	8	1			1				1	1		2				
Oakland borough	8	1			1				1							
Ocean Grove Association																
Oldmans township																
Orange city	18	41	24	36	25	10	22	18	5	8	2	1				
Park Ridge borough	4															
Paterson city	78	123	65	73	12	21	12	32	28	14	6	18				
Pequanock township					1	2	2	14	15	14	4	7				
Plainfield city	14	12	5	9					3	1	4	7				
Pleasantville borough					6	1	2	2	1	1	4					
Princeton borough																
Rahway city		6							4	1						
Randolph township		1														
Readington township	1															
Riverton borough	1	1			7	3										
Rockaway township																
Roselle Park borough	1															
Rutherford borough			3	4					3	4					2	
Salem city	1	8	5	1			1	10	5	1	2	2				
Somerville township			5	2				2								
South Brunswick township																
South Orange township	1			1			5	4	4							
South Orange village		5	4	8		1	15	3	5	5	2	2				
South River borough	2	9														
Sparta township									2							
Springfield township (Union)							1	3								
Summit city	2	5	2	1			5	1	3	3	2	1				
Sussex borough																
Tewksbury township		2														
Trenton city	71	173	59	28	19	96	41	25	2	22	10	17				
Union township (Union)									1	1						
Verona township					2				5	6						
Vineland borough			1	4		13	2	4			3	2				
Wall township	1															16
Washington borough	1	7					6									
Washington township (Bur.)																
Washington township (Glou.)								2	1							
Washington township (Warren)		2														
Waterford township		3					3									
Wenonah borough			1													
West Amwell township																
West Deptford township		1										4				
West Hoboken town			13	36				14	81			7				
West Orange town		13	4	1	4	5	5	5	1	2		1				
Wood Ridge borough			2					2	1							
Woolwich township	4	3														
Total cases reported by quarters	883	1934	960	965	602	912	963	1097	226	245	109	143	3	2	5	24
Total cases reported for year				4767			3474					723				24

**Inspection of Streams.**—A detailed statement of the inspections made for the purpose of detecting sources of pollution of the public water-supplies of the State is presented further on in this report. In each case which is discovered the facts relating to the pollution are brought to the attention of the responsible party by written notice, and if, upon reinspection, it is found that action has not been taken for removal of the source of the pollution, the matter is referred to the Attorney-General for such proceedings as the law provides. During the year suits have been instituted in the Court of Chancery against persons who have continued to maintain sources of pollution of public water-supplies after notice has been served as follows:

The State at the relation of the board of health of the State of New Jersey against Gustave Gnauch and Emma Gnauch.

The State at the relation of the board of health of the State of New Jersey against Samuel Card.

The State at the relation of the board of health of the State of New Jersey against Maria Davenport.

The State at the relation of the board of health of the State of New Jersey against John Forgeron.

The State at the relation of the board of health of the State of New Jersey against George Ihnken.

The State at the relation of the board of health of the State of New Jersey against James Leech.

The State at the relation of the board of health of the State of New Jersey against the borough of Vineland.

The reports of the inspections show that the water-shed of the Hackensack river has been almost entirely cleared of sources of direct contamination, more than two hundred and fifty-four pollutions having been located and removed during the past four years. The cases of the three parties who have failed to abate the nuisances found on their premises have been brought to the attention of the Chancellor, as above stated.

The Pequannock water-shed is singularly free from contaminations. Very thorough and painstaking examination of the main stream and all of its tributaries, including roadside ditches and other possible sources of pollution, has been made, and only five points of direct contamination were found. After the service of notices upon the persons responsible for these nuisances, three of them removed the objectionable conditions, but two took no action, and suits in Chancery were begun in these cases.

The Rahway river has continued to receive increasing quantities of polluting material, and the following letter has been transmitted to the local authorities of that city:

June 27th, 1905.

*Mr. Charles H. Lambert, Secretary Board of Health, Rahway, N. J.:*

DEAR SIR—The opinion stated in your letter of June 16th, 1905, in regard to the advisability of first chemically analyzing the water of a public supply before reaching a conclusion concerning its potability, is correct if no better evidence than analysis is obtainable to show the true quality and character of the water, but in the case of the supply which is delivered to consumers in Rahway, analysis of the water is altogether unnecessary, for chemical analysis is only needed when inspection of the sources of supply does not disclose any contamination, and, as the authorities of your city have already been informed, frequent inspections of the banks of the Rahway river and its tributaries show that the supply is grossly polluted at many points by street gutters and other irremovable sources. Under such conditions chemical and bacteriological analysis is superfluous. Laboratory analysis is not needed to decide whether a stream has been polluted by sewage when we can see the sewage flowing into it, and such examinations of the water are useless for the detection of impurities which the water contains if the pollution is visible and unmistakable.

The district through which the Rahway river and its branches flow is populated to an extent which renders the water-shed wholly unfit to furnish drinking water for use in your city, and the degree of pollution is increasing in proportion to the increase in population in the locality through which the stream and its tributaries flow. Numerous suits of law have been instituted to prevent direct contamination from factories, house sewers, &c., and others are now in preparation, but the most rigid enforcement of the law cannot prevent the discharge into the river of filthy washings from streets and door-yards, and the use of this water for drinking purposes is unquestionably attended with risk to the health of consumers.

As a matter of fact, analyses of the water of the Rahway river have been made and the water has been found to be polluted, but this fact is of far less value than the observations made by inspections on the banks of the stream.

The cost should not deter the citizens of Rahway from at once proceeding to secure a new and safe supply of pure and wholesome water for use in your city.

Very respectfully,

HENRY MITCHELL,  
*Secretary.*

Laboratory examinations of the water supplied by twenty-two towns are now being regularly made, the samples being forwarded to the laboratory by persons who have been selected for that service. These examinations are supplementary to inspections of the sources of supply, and they are designed to furnish information which will indicate any changes which may occur in the quality of the water, and in this manner assist in detecting new or temporary contaminations.

**Sanitary Inspection Service.**—The report of the examining commission appointed in accordance with the provisions of the act approved April 8th, 1903, shows that three examinations of applicants for license to serve as health officer and sanitary inspector have been held, and that sixty-seven persons took these examinations. Of this number eighteen were recommended for service as health officers, twenty-three to be sanitary inspectors of the first class, one to be sanitary inspector of the second class and one of the third class. In one case the recommendation was limited to house-to-house inspection only, and in one the recommendation was for plumbing inspection only. The work thus far accomplished under the authority contained in the act above referred to has been almost altogether preliminary in character, but the examinations have clearly demonstrated the urgent need which exists for the establishment of a course of instruction for those who desire to engage in the sanitary inspection service. The examinations have shown that applicants for license are unable to prepare themselves for the complex duties which fall to the lot of sanitary officials by reading only, and that observation and practice are essential to fit a man to enter upon this calling. With this fact in view the State board of health invited several gentlemen to a conference, in the State House, Trenton, June 27th, 1905, for the purpose of devising a plan whereby practical instruction might be offered to all applicants for examination who may desire to avail themselves of the advantages of such a training before presenting themselves to be tested for fitness. The names of those who were invited to the conference are as follows: Prof. E. H. Loomis, John L. Leal, M.D., B. van D. Hedges, M.D., Mr. R. B. Fitz-Randolph and Mr. Francis H. McGee. All of the gentlemen named were present, and a temporary organization was effected by the election of Dr. Leal to act as chairman and Mr. McGee to act as secretary. The feasibility of providing instruction in municipal hygiene was discussed,

but no recommendations were adopted. There was entire agreement concerning the necessity of special preparation for the examinations for the sanitary inspection service, but questions of detail relating to the establishment of a course of instruction caused delay in reaching a conclusion as to advisability of proceeding with the work.

The appointment of two unlicensed employes by the board of health of Bridgeton led to the beginning of *quo warranto* proceedings by the law department of the State. In compliance with the advice of the Bridgeton city attorney, the board rescinded its action in making the illegal appointments, and one of the appointees subsequently obtained a license in conformity with the requirements of the law, and was then legally appointed.

**Food and Drugs.**—To prevent the sale of unclean and adulterated milk has been the chief aim of the department of food and drugs during the past year. Co-operation with local boards of health for the prohibition of the sale of unwholesome milk has been continued, and the inspection of dairies and creameries has been extended to the limit of the board's facilities. Attention has elsewhere been called in this report to the increase in the mortality which occurred in New Jersey during the last statistical year from infantile diarrhœa, and it appears probable that this increase has been due in part to the backsliding of those having personal charge of infants, involving disregard of the injunctions which have in recent years been strenuously laid down by physicians and trained attendants concerning the preparation of the food, though to some extent the increased mortality has doubtless resulted from a return to the use of raw milk because of the prevailing opinion that the nutritive value of milk is diminished by heating. The popular demand for clean milk has been active, and every dealer is ready to give assurances that he sells no other, while in fact these parties have, with rare exceptions, no comprehension of the meaning of the term "clean," as applied to milk, and customers are liable to be informed, in all innocence, that "the dung has been strained out." This state of the milk trade shows that dealers in this article have not yet, as a class, risen to meet the requirements established by the teachings of bacteriology, and it also indicates that voluntary reforms in the methods employed in the cleansing of containers and in the handling of the milk will not be generally adopted by those who are at present engaged in the milk business.

Too much credit cannot be given to those dairymen and dealers who have responded to the demand for natural milk, free from dirt, and who are setting an example for others to follow. Reference to the accompanying chart shows that previous to the general acceptance of the view that infantile diarrhœa is almost invariably caused by unclean milk, the mortality among children varied from 63.85 per 10,000 inhabitants in 1884 to 88.36 per 10,000 inhabitants in 1892, while from 1902 until the end of the last statistical year the proportion of deaths did not exceed 56.30 per 10,000 in any year, and in 1898 it fell to 40.25. During the past four years the deaths recorded as having been caused by infantile diarrhœa have numbered as follows: 1901, 1,895; 1902, 1,878; 1903, 1,603; 1904, 2,423. The figures for 1904 show an increase of more than 60 per cent. over the average number of deaths from infantile diarrhœa during the preceding three years, and indicate unmistakably the introduction of some new and unfavorable influence upon the health of young children. Assuming that the return to the use of raw milk has been the principal cause of this sudden increase in the number of deaths from diarrhœal diseases among infants, the responsibility for the continuance of these fatalities clearly rests, to a considerable degree, upon the State and local health departments, as well as upon the milk producers and dealers, for while it is doubtless true that the present generation of dairymen cannot be brought to a full understanding of the importance of cleanliness in relation to the milk supply, the laws give to local boards of health authority to prohibit the sale of unwholesome milk, and the State board is authorized to inspect dairies and report to local boards the conditions under which the milk is collected and handled, thus supplying the information upon which action for the protection of consumers can be taken by the local authorities. This co-operation is essential because local boards cannot trace up the sources of the milk, and the State board cannot enforce local ordinances. For example, one creamery may send milk to twenty towns, and if the health board of each of these districts should send an inspector to judge of the sanitary conditions of the creamery and of the fifty or more dairy premises from which the milk is derived, the visits of such a large number of inspectors would be intolerable. Such visits would not only be a needless multiplication of expenditure, but the standard of cleanliness required by each inspector would differ more or less from that of his fellow-inspectors, and endless

confusion would ensue. On the other hand, if dairy and creamery inspections are conducted by the State inspectors the work can be uniformly performed, and the local officers can devote their undivided attention to the detection and punishment of milk dealers who violate ordinances made under authority contained in the act approved April 23d, 1897.

The distribution by local health officers of printed information concerning the care of milk after it is received has been found to be an exceedingly useful method of protecting the health of infants, and a suitable circular or letter placed in the hands of every family soon after the birth of a child is reported is likely to receive attention, for at that time the baby's interests are usually given first place in the domestic affairs.

The reports of the inspections of creameries show that 124 of these establishments have been visited during the past year, and many of these have been found to be grossly defective in their appointments and management. The owners have justly complained, in some instances, that between the demands for improvements which are made by inspectors from New York City, from the inspectors of numerous towns in New Jersey and from the State board of health, they are doubtful how to proceed. To remedy this state of affairs it seems to be advisable that all creameries should be licensed by the State, and that certain minimum requirements shall be complied with before a license is granted. By this arrangement good water, suitable drainage, efficient cooling appliances and other essential facilities for receiving and distributing milk could be secured without friction or misunderstanding.

The total number of specimens of food and drugs examined in the State laboratory of hygiene during the year has been as follows: Milk, 1,381; water, 199; other food, 1,381; drugs, 687; total, 3,648. Specimens found to be below the standard fixed by law: Milk, 345; other food, 415.

The number of suits instituted was 231, of which 176 were for the sale of impure milk and 55 were for the sale of other articles. The total amount of fines collected and transmitted to the State treasurer was \$6,462.48. In the bacteriological department the total number of specimens examined was 7,048, an increase of 318 over the number examined in 1904.

TABLE 37.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF ANALYSIS OF SAMPLE AND THE DISPOSITION OF THE CASE, FOR THE YEAR ENDING OCTOBER 31, 1905.

Date of analysis.	Number of sample.	Name of article.	Termination of each case.
Oct. 1, 1904.....	D-3084.....	Oleomargarine.....	Convicted, fine paid.
Oct. 17, 1904.....	D-3078.....	Oleomargarine.....	Suit discontinued.
Oct. 17, 1904.....	D-3092.....	Oleomargarine.....	Suit discontinued.
Oct. 17, 1904.....	D-3093.....	Oleomargarine.....	Suit discontinued.
Oct. 17, 1904.....	D-3095.....	Oleomargarine.....	Convicted, fine paid.
Oct. 19, 1904.....	D-3097.....	Oleomargarine.....	Suit discontinued.
Oct. 19, 1904.....	D-3098.....	Oleomargarine.....	Suit discontinued.
Oct. 19, 1904.....	D-3099.....	Oleomargarine.....	Suit discontinued.
Nov. 4, 1904.....	C-4508.....	Milk.....	Convicted, fine paid.
Nov. 8, 1904.....	C-4516.....	Milk.....	Convicted, fine paid.
Nov. 12, 1904.....	C-4524.....	Milk.....	Convicted, fine paid.
Nov. 13, 1904.....	C-4528.....	Milk.....	Convicted, fine paid.
Nov. 23, 1904.....	A-3639.....	Milk.....	Convicted, fine paid.
Nov. 23, 1904.....	A-3635.....	Milk.....	Execution issued.
Dec. 9, 1904.....	A-3692.....	Milk.....	Convicted, appealed.
Dec. 31, 1904.....	C-4790.....	Tr. Opium.....	Convicted, fine paid.
Dec. 6, 1904.....	C-4611.....	Molasses.....	Convicted, fine paid.
Jan. 7, 1905.....	D-3323.....	Tr. Iodine.....	Convicted, fine paid.
Jan. 12, 1905.....	D-3319.....	Cider vinegar.....	Convicted, fine paid.
Jan. 19, 1905.....	D-3329.....	Molasses.....	Convicted, fine paid.
Jan. 31, 1905.....	D-3383.....	Oleomargarine.....	Convicted, appealed.
Feb. 6, 1905.....	C-4990.....	Milk.....	Defendant acquitted.
Feb. 7, 1905.....	D-3388.....	Oleomargarine.....	Convicted, appealed.
Feb. 23, 1905.....	A-4035.....	Milk.....	Convicted, appealed.
Feb. 23, 1905.....	A-4034.....	Milk.....	Suit discontinued.
Feb. 23, 1905.....	A-4037.....	Milk.....	Defendant paying penalty.
Feb. 28, 1905.....	D-3469.....	Milk.....	Convicted, fine paid.
Feb. 28, 1905.....	D-3468.....	Milk.....	Judgment secured.
Feb. 28, 1905.....	D-3462.....	Milk.....	Convicted, fine paid.
Mar. 4, 1905.....	D-3471.....	Cider vinegar.....	Suit discontinued.
Mar. 4, 1905.....	C-5200.....	Cider vinegar.....	Convicted, fine paid.
Mar. 8, 1905.....	C-5231.....	Tr. Opium.....	Convicted, fine paid.
Mar. 14, 1905.....	C-5250.....	Tr. Opium.....	Appealed.
Mar. 15, 1905.....	C-5254.....	Tr. Iodine.....	Convicted, fine paid.
Mar. 18, 1905.....	C-5260.....	Milk.....	Convicted, fine paid.
Mar. 18, 1905.....	D-3528.....	Milk.....	Defendant paying penalty.
Mar. 20, 1905.....	C-5241.....	Cider vinegar.....	Convicted, fine paid.
Mar. 28, 1905.....	E-839.....	Milk.....	Convicted, fine paid.
Mar. 31, 1905.....	A-4183.....	Milk.....	Defendant acquitted.
Mar. 31, 1905.....	A-4182.....	Milk.....	Suit discontinued.
Mar. 31, 1905.....	A-4184.....	Milk.....	Convicted, appealed.
April 1, 1905.....	E-844.....	Milk.....	Pending.
April 7, 1905.....	C-5381.....	Milk.....	Convicted, fine paid.
April 8, 1905.....	A-4214.....	Oleomargarine.....	Suit discontinued.
April 8, 1905.....	A-4192.....	Oleomargarine.....	Suit discontinued.
April 8, 1905.....	A-4193.....	Oleomargarine.....	Suit discontinued.
April 8, 1905.....	A-4203.....	Oleomargarine.....	Suit discontinued.
April 8, 1905.....	A-4205.....	Oleomargarine.....	Suit discontinued.
April 18, 1905.....	C-5468.....	Milk.....	Convicted, fine paid.
April 19, 1905.....	D-3631.....	Milk.....	Convicted, fine paid.

TABLE 37.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF ANALYSIS OF SAMPLE AND THE DISPOSITION OF THE CASE, FOR THE YEAR ENDING OCTOBER 31, 1905.—Continued.

Date of analysis.	Number of sample.	Name of article.	Termination of each case.
April 19, 1905	D-3633	Milk	Convicted, fine paid.
April 19, 1905	D-3634	Milk	Convicted, fine paid.
April 19, 1905	D-3635	Milk	Convicted.
April 20, 1905	D-3637	Oleomargarine	Convicted, appealed.
April 22, 1905	C-5480	Milk	Convicted, fine paid.
April 22, 1905	C-5479	Milk	Defendant paying penalty.
April 26, 1905	C-5455	Tr. Opium	Convicted, fine paid.
April 26, 1905	C-5487	Milk	Defendant acquitted.
April 27, 1905	C-5396	Tr. Opium	Convicted, fine paid.
April 27, 1905	D-3643	Milk	Convicted, fine paid.
April 27, 1905	C-5438	Milk	Convicted, fine paid.
April 27, 1905	C-5498	Milk	Convicted, fine paid.
April 27, 1905	C-5490	Milk	Convicted, fine paid.
April 29, 1905	D-3648	Milk	Convicted, fine paid.
April 29, 1905	D-3647	Milk	Convicted, fine paid.
May 2, 1905	C-5495	Milk	Convicted, fine paid.
May 3, 1905	E-770	Milk	Fine paid.
May 3, 1905	E-769	Milk	Fine paid.
May 3, 1905	E-767	Milk	Suit discontinued.
May 3, 1905	E-768	Milk	Convicted, fine paid.
May 3, 1905	C-5236	Molasses	Defendant acquitted.
May 4, 1905	C-5500	Milk	Convicted, fine paid.
May 4, 1905	C-5501	Milk	Convicted, fine paid.
May 9, 1905	C-5511	Milk	Convicted, fine paid.
May 12, 1905	C-5519	Oleomargarine	Pending.
May 12, 1905	D-3657	Milk	Convicted, appealed.
May 12, 1905	D-3655	Milk	Convicted, appealed.
May 16, 1905	C-5522	Milk	Convicted, fine paid.
May 18, 1905	C-5532	Oleomargarine	Convicted, fine paid.
May 18, 1905	C-5533	Oleomargarine	Convicted, fine paid.
May 23, 1905	C-5545	Oleomargarine	Convicted, appealed.
May 23, 1905	D-3675	Milk	Convicted.
May 23, 1905	D-3674	Milk	Convicted, fine paid.
May 23, 1905	C-23, 778	Oleomargarine	Convicted, fine paid.
June 3, 1905	D-3706	Milk	Convicted, fine paid.
June 15, 1905	D-3706	Milk	Convicted, fine paid.
June 17, 1905	C-5641	Milk	Convicted, fine paid.
June 17, 1905	C-5643	Milk	Convicted, fine paid.
June 17, 1905	C-5645	Milk	Convicted, fine paid.
June 17, 1905	C-5650	Milk	Convicted, fine paid.
June 17, 1905	C-5649	Milk	Convicted, fine paid.
June 21, 1905	A-4280	Milk	Convicted, fine paid.
June 22, 1905	C-5657	Oleomargarine	Convicted, fine paid.
June 24, 1905	D-3735	Milk	Convicted, appealed.
June 24, 1905	D-3737	Milk	Convicted, fine paid.
June 27, 1905	D-3759	Milk	Convicted, fine paid.
June 27, 1905	C-5666	Milk	Convicted, fine paid.
June 27, 1905	D-3757	Cream	Convicted, fine paid.
June 30, 1905	D-3784	Milk	Convicted, fine paid.
June 30, 1905	C-5680	Milk	Execution issued.
July 1, 1905	D-3785	Cream	Convicted, fine paid.

TABLE 37.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF ANALYSIS OF SAMPLE AND THE DISPOSITION OF THE CASE, FOR THE YEAR ENDING OCTOBER 31, 1904.—Continued.

Date of analysis.	Number of sample.	Name of article.	Termination of each case.
July 3, 1905	D-3786	Cream	Convicted, fine paid.
July 7, 1905	C-5710	Milk	Convicted, fine paid.
July 7, 1905	A-4288	Milk	Convicted, fine paid.
July 7, 1905	A-4284	Milk	Convicted, fine paid.
July 7, 1905	A-4286	Milk	Convicted, fine paid.
July 10, 1905	E-900	Oleomargarine	Convicted, appealed.
July 10, 1905	E-901	Oleomargarine	Convicted, appealed.
July 11, 1905	C-5733	Milk	Convicted, fine paid.
July 12, 1905	A-4292	Milk	Convicted, fine paid.
July 12, 1905	A-4293	Milk	Convicted, fine paid.
July 12, 1905	A-4294	Milk	Convicted, fine paid.
July 12, 1905	A-4297	Milk	Convicted, fine paid.
July 12, 1905	A-4298	Milk	Convicted, fine paid.
July 15, 1905	D-3836	Milk	Convicted, fine paid.
July 15, 1905	C-5743	Milk	Convicted, fine paid.
July 15, 1905	D-3840	Milk	Suit discontinued.
July 15, 1905	D-3841	Cream	Convicted, fine paid.
July 17, 1905	E-1128	Milk	Convicted, fine paid.
July 17, 1905	A-4316	Milk	Convicted, fine paid.
July 17, 1905	A-4319	Milk	Convicted.
July 17, 1905	A-4326	Milk	Convicted, fine paid.
July 17, 1905	A-4321	Milk	Convicted, fine paid.
July 17, 1905	A-4327	Milk	Convicted, fine paid.
July 17, 1905	C-5529	Oleomargarine	Suit discontinued.
July 19, 1905	B-3240	Milk	Convicted, fine paid.
July 21, 1905	D-3863	Milk	Convicted, fine paid.
July 21, 1905	D-3860	Milk	Convicted, fine paid.
July 21, 1905	D-3866	Milk	Convicted, fine paid.
July 22, 1905	C-5775	Milk	Convicted, fine paid.
July 22, 1905	C-5782	Milk	Convicted, fine paid.
July 22, 1905	C-5784	Milk	Convicted, fine paid.
July 22, 1905	C-5788	Milk	Convicted, fine paid.
July 22, 1905	C-5790	Milk	Convicted, fine paid.
July 24, 1905	B-3251	Milk	Convicted, fine paid.
July 24, 1905	B-3252	Milk	Convicted.
July 24, 1905	B-3256	Milk	Convicted, fine paid.
July 24, 1905	A-4344	Milk	Convicted, fine paid.
July 25, 1905	D-3887	Milk	Convicted, appealed.
July 25, 1905	D-3890	Milk	Convicted, appealed.
July 25, 1905	D-3894	Milk	Convicted.
July 25, 1905	C-5797	Milk	Convicted, fine paid.
July 25, 1905	C-5801	Milk	Convicted, appealed.
July 27, 1905	A-4362	Milk	Convicted, fine paid.
July 28, 1905	C-3812	Milk	Decision reserved.
July 29, 1905	C-5813	Milk	Fine paid.
July 28, 1905	B-3260	Milk	Convicted, fine paid.
Aug. 1, 1905	A-4378	Milk	Convicted.
Aug. 1, 1905	A-4379	Milk	Convicted, fine paid.
Aug. 1, 1905	A-4383	Milk	Convicted, fine paid.
Aug. 1, 1905	A-4384	Milk	Acquitted, appealed.

TABLE 37.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF ANALYSIS OF SAMPLE AND THE DISPOSITION OF THE CASE, FOR THE YEAR ENDING OCTOBER 31, 1904.—Continued.

Date of analysis.	Number of sample.	Name of article.	Termination of each case.
Aug. 1, 1905	A-4385	Milk	Convicted, fine paid.
Aug. 1, 1905	A-4386	Milk	Convicted, fine paid.
Aug. 1, 1905	A-4388	Milk	Acquitted, appealed.
Aug. 1, 1905	A-4389	Milk	Convicted, fine paid.
Aug. 1, 1905	B-3271	Milk	Convicted, fine paid.
Aug. 1, 1905	B-3279	Milk	Suit discontinued.
Aug. 1, 1905	B-3280	Milk	Convicted, fine paid.
Aug. 1, 1905	B-3281	Milk	Convicted, fine paid.
Aug. 1, 1905	B-3283	Milk	Convicted, fine paid.
Aug. 2, 1905	A-4394	Milk	Pending.
Aug. 2, 1905	A-4395	Milk	Pending.
Aug. 2, 1905	A-4396	Milk	Convicted.
Aug. 2, 1905	A-4397	Milk	Convicted.
Aug. 2, 1905	D-3900	Milk	Convicted, fine paid.
Aug. 2, 1905	D-3902	Milk	Convicted.
Aug. 3, 1905	B-3290	Milk	Convicted, fine paid.
Aug. 3, 1905	B-3283	Milk	Convicted, fine paid.
Aug. 4, 1905	A-4409	Milk	Convicted, fine paid.
Aug. 4, 1905	A-4407	Milk	Convicted, fine paid.
Aug. 4, 1905	A-4406	Milk	Convicted, fine paid.
Aug. 4, 1905	A-4402	Milk	Convicted, fine paid.
Aug. 4, 1905	D-3914	Milk	Pending.
Aug. 4, 1905	B-3314	Milk	Convicted, fine paid.
Aug. 4, 1905	B-3313	Milk	Convicted.
Aug. 4, 1905	B-3305	Milk	Pending.
Aug. 4, 1905	B-3304	Milk	Convicted, fine paid.
Aug. 4, 1905	B-3303	Milk	Convicted, fine paid.
Aug. 8, 1905	A-4414	Milk	Convicted, fine paid.
Aug. 10, 1905	D-3936	Milk	Convicted, fine paid.
Aug. 15, 1905	A-4421	Milk	Defendant paying penalty.
Aug. 15, 1905	A-4431	Milk	Fine paid.
Aug. 15, 1905	A-4434	Milk	Fine paid.
Aug. 15, 1905	A-4438	Milk	Fine paid.
Aug. 15, 1905	A-4421	Milk	Fine paid.
Aug. 15, 1905	D-3931	Milk	Convicted, fine paid.
Aug. 15, 1905	D-3941	Milk	Convicted, fine paid.
Aug. 16, 1905	D-3973	Milk	Convicted, fine paid.
Aug. 16, 1905	D-3949	Milk	Convicted, fine paid.
Aug. 16, 1905	D-3944	Milk	Convicted, fine paid.
Aug. 16, 1905	D-3948	Milk	Convicted, fine paid.
Aug. 16, 1905	D-3970	Cream	Pending.
Aug. 17, 1905	D-4029	Milk	Convicted, fine paid.
Aug. 17, 1905	C-5901	Milk	Convicted.
Aug. 21, 1905	A-4448	Milk	Defendant paying penalty.
Aug. 21, 1905	D-3982	Oleomargarine	Convicted, appealed.
Aug. 22, 1905	D-3990	Milk	Acquitted, appealed.
Aug. 22, 1905	D-3993	Cream	Fine paid.
Aug. 24, 1905	D-6012	Cream	Convicted, fine paid.
Aug. 24, 1905	D-6023	Milk	Convicted, appealed.
Aug. 24, 1905	D-6017	Milk	Convicted, fine paid.

TABLE 37.—SHOWING THE NUMBER OF SUITS INSTITUTED FOR VIOLATION OF THE ACT TO PREVENT THE SALE OF ADULTERATED FOOD AND DRUGS, TOGETHER WITH THE DATE OF ANALYSIS OF SAMPLE AND THE DISPOSITION OF THE CASE, FOR THE YEAR ENDING OCTOBER 31, 1904.—Continued.

Date of analysis.	Number of sample.	Name of article.	Termination of each case.
Aug. 24, 1905	D-3999	Milk	Acquitted, appealed.
Aug. 24, 1905	A-4459	Milk	Suit discontinued.
Aug. 24, 1905	D-6020	Cream	Convicted.
Aug. 24, 1905	D-6016	Cream	Convicted.
Aug. 24, 1905	D-6014	Cream	Fine paid.
Aug. 25, 1905	C-5947	Milk	Convicted.
Aug. 25, 1905	C-4944	Milk	Acquitted, appealed.
Aug. 28, 1905	B-3318	Milk	Convicted, fine paid.
Aug. 29, 1905	D-6083	Milk	Convicted.
Aug. 29, 1905	D-6068	Milk	Pending.
Aug. 29, 1905	D-6075	Milk	Pending.
Aug. 29, 1905	D-6080	Milk	Pending.
Aug. 30, 1905	A-4472	Milk	Convicted, fine paid.
Aug. 31, 1905	D-6093	Milk	Defendant acquitted.
Aug. 31, 1905	D-6096	Cream	Pending.
Aug. 31, 1905	D-6102	Milk	Convicted, fine paid.
Sept. 1, 1905	D-6106	Oleomargarine	Pending.
Sept. 1, 1905	A-4474	Oleomargarine	Convicted.
Sept. 6, 1905	A-4476	Oleomargarine	Convicted, fine paid.
Sept. 9, 1905	A-4487	Milk	Convicted, fine paid.
Sept. 12, 1905	D-6111	Milk	Fine paid.
Sept. 13, 1905	C-5960	Milk	Convicted.
Sept. 23, 1905	A-4495	Milk	Pending.
Sept. 23, 1905	A-4500	Milk	Convicted, fine paid.
Sept. 23, 1905	A-4501	Milk	Convicted.
Sept. 29, 1905	A-4504	Milk	Pending.
Oct. 3, 1905	C-6481	Milk	Convicted.
Oct. 5, 1905	D-6485	Milk	Fine paid.
Oct. 11, 1905	A-4521	Milk	Pending.
Oct. 11, 1905	A-4519	Milk	Pending.
Oct. 28, 1905	D-6130	Oleomargarine	Pending.

**Infectious Diseases of Animals.**—Compared with previous years, but few cases of communicable diseases among animals occurred, only two cases of anthrax and sixty-nine cases of glanders having been reported. The outbreak of anthrax appeared on the farm of Isaac Justice, in Gloucester county. As soon as the disease was reported the infected carcasses were cremated, and eighty-five cattle and fifty-seven horses in the infected locality were immunized by inoculation with anti-anthrax serum. Before the nature of the disease was recognized by the owner of the two animals which died, the skin was removed from the carcasses by a son of Isaac Justice,



and the young man contracted the disease. He was removed to a hospital in Philadelphia and made a slow recovery. The distribution of glanders was as follows: Atlantic county, 1; Bergen county, 5; Burlington county, 1; Essex county, 21; Gloucester county, 1; Hudson county, 16; Morris county, 1; Passaic county, 23.

**Cemeteries.**—The act approved March 25th, 1885, provided that no cemetery or burying-ground should be established or enlarged until consent was first obtained from the local governing body, and also from the local board of health, and the action of the local authorities was subject to reversal by the State Board of Health, but under this act the State board of health was (see opinion of Judge Garretson, Annual Report State Board of Health for 1901, page 85) required to decide legal questions relating to property damages as well as to deal with questions affecting the public health. Chapter 249 of the laws of 1904 amended the previous act and conferred upon the board of freeholders of each county authority to decide, within their respective jurisdictions, applications for the reversal of the action of the local governing body and the local board of health. This act was repealed by chapter 64 of the laws of 1905, which reads as follows:

6. It shall not be lawful to locate any new cemetery or burying-ground, or to enlarge any cemetery or burying-ground in this state without the consent and approval of the governing board or body and board of health of the city, town, township, borough or other municipality in which it is proposed to locate or enlarge such cemetery or burying-ground, upon application in writing for that purpose made; and in case of the refusal of said municipal boards to grant such application, then the person or persons or corporation making such application as aforesaid may, within thirty days after such refusal, appeal to the state board of health, which said board shall have power to hear said appeal and to consider all sanitary questions involved in the location of such cemetery; and in case said state board of health shall decide that the location or enlargement of such cemetery or burying-ground shall be detrimental from a sanitary standpoint, their decision shall be final; in case said state board of health shall decide that said location or enlargement of said cemetery or burying-ground shall not be objectionable on sanitary grounds they shall have the power to grant to the person or persons or corporation appealing to said board under the provisions of this act a certificate under the seal of said board to the effect that said location or enlargement of such cemetery or burying-ground is not objectionable from a sanitary standpoint; and the person or persons or corporation obtaining such certificate from the state board of health shall have the right, within thirty days from the date of the issuing of said certificate, to the appeal to the supreme court, which court shall have power to hear said appeal and confirm or reverse the refusal of such

municipal boards in its discretion; and in case such governing board or body and board of health of any city, town, township, borough or municipality shall grant any application for the location or enlarging of any cemetery or burying-ground to be located or enlarged within such municipality, and such location or enlarging shall be deemed objectionable by the inhabitants of such municipality, then and in such case ten resident freeholders of said municipality may, within thirty days after the granting of such application, appeal to the state board of health, which said board shall have power to hear said appeal and consider all sanitary questions involved, and the proceedings taken under said appeal shall in all respects conform to the method provided for in this section in the case of a refusal by the local governing board or body or board of health to grant such application, and in case said state board of health shall decide that the location or enlargement of such cemetery or burying-ground shall be objectionable from a sanitary standpoint, their decision shall be final and no appeal from their decision shall be taken; in case said state board of health shall decide that said location or enlargement of said cemetery or burying-ground shall not be objectionable on sanitary grounds, they shall have the power to issue a certificate under the seal of said board to the effect that said location or enlargement of such cemetery or burying-ground is not objectionable from a sanitary standpoint, and in case said certificate shall be issued, either of the parties interested shall have the right, within thirty days from the date of the issuing of said certificate, to appeal to the supreme court, which court shall have power to hear said appeal and to confirm or reverse the granting of such application by such local municipal boards, in its discretion; all persons or corporations making any application provided for in this section for the location or enlargement of any cemetery shall accompany the same with a descriptive map of the land and premises proposed to be used and occupied for such cemetery or the enlargement thereof, a copy of which map shall be filed in the office of the clerk of the county wherein such cemetery is proposed to be located or enlarged, and in case an appeal shall be made, as provided for in this section, a copy of said map shall also be filed with the secretary of the state board of health and the clerk of the supreme court.

2. All acts and parts of acts inconsistent with this act are hereby repealed, and this act shall take effect immediately.

Approved March 28, 1905.

Since the knowledge of the bacterial causes of disease has been acquired there has been diminishing apprehension concerning the spread of infection from dead human bodies buried in properly-made graves in dry soil, for no evidence has been found to show that pathogenic organisms continue to exist in the soil after the dead bodies undergo decomposition.

"Cholera and pest bacteria are not demonstrable after from seven to thirty days at the outside after burial in cadavers of patients who have died from either of these diseases. Typhoid bacilli are not found in bodies of typhoid fever patients buried for three months. Tubercle bacilli may persist somewhat longer, and Schottellus claims to have demonstrated

virulent tubercle bacilli in bodies buried between one and two years. Diphtheria bacilli, pyogenic organisms, tetanus and anthrax bacilli all have been found to disappear in from a few days to two months or so. The remains of rabid animals lose their infectious powers in from two to five weeks after burial. The only organisms that possibly might infect the adjacent earth in case of improper burial are anthrax bacilli and tetanus bacilli, which then would assume the spore forms. As decomposition advances in cadavers, the pathogenic forms are crowded out by the saprophytes. Proper burial in ground suitable for the purpose, *i. e.*, not swampy and draining directly into water-supply, consequently cannot be regarded as a procedure that merits condemnation." \*

**Nuisances.**—Noise nuisances and nuisances caused by smoke, offensive odors and vapors have been brought to the attention of boards of health in many localities during the past year, and in some instances the local sanitary authorities have been undecided concerning the course to be pursued in dealing with these complaints, but the principle upon which the health laws are founded so clearly limits the operations of boards of health to the improvement of conditions which affect the public health unfavorably that before taking action for the abatement of any nuisance it is essential that the board shall be able to show that the nuisance is injurious to the public health, and thus far no evidence of a satisfactory character has been presented to show that offensive odors and noises do, in fact, cause sickness, and therefore it appears to be unwise to undertake the abatement of nuisances of this nature by procedures under the laws which have been made expressly for the prevention of disease. Mr. Charles L. Corbin has advised the State board of health concerning this subject as follows:

"For such a nuisance, anyone whose property is injured can bring suit at law for damages or procure an injunction from the Court of Chancery. Persons who are not injured in their property, but are annoyed by the nuisance, can apply to the grand jury for an indictment. This is the simplest and most efficient remedy. It covers not only nuisances injurious to health, but other nuisances."

In another letter of advice Mr. Corbin says:

"Anyone whose property is injured by the nuisance can bring suit at law for damages, and can renew such suit from time to time and recover such damages as he can show he has sustained. He may also, on establishing that the nuisance does injury to his property, procure an injunction from the court of chancery. Those who are not injured in their property, but are annoyed by the nuisance, have no personal action, but their remedy is to apply to the grand jury for an indictment. If a number of persons

annoyed by the nuisance would join, and collect proof and bring it to the attention of the grand jury, and thereby procure an indictment and conviction, it would abate the nuisance more quickly than any other remedy. Complaints could be renewed from time to time, and indictment after indictment found, and the acquittal of the parties on one indictment would not prevent their conviction on another, for a continuing nuisance. There remains the remedy through the action of the State board of health. This is a narrower remedy than those referred to, for the reason that it is not enough to show that there is a nuisance and that there are noisome smells. The board of health has no jurisdiction unless it can be shown that the nuisance is to a substantial extent injurious to public health. Should the parties complaining of this nuisance be able to collect and bring to the board satisfactory evidence that in a number of specified cases it can be established that the health of individuals named has suffered from the nuisance, and that it is likely to continue to cause injury to health, it would then be competent for the State board to take action by bill for injunction, on default of the local board. But it ought not to be overlooked that the proof in the enforcement of this remedy will be more difficult than that required for the other remedies referred to. A serious nuisance might be shown by reason of offensive odors, and this would be sufficient proof to warrant an indictment or a suit at law or in equity by a citizen especially injured. The State board must further prove danger to public health."

**Lines of Travel.**—Inspections of railroad passenger stations show that, as a rule, they are kept in a cleanly condition, and that the water for drinking purposes which is provided for the use of patrons is obtained from safe sources. Where neglect has been observed in the care of these premises the shortcoming has almost invariably been found to be due to the incompetence of the station agent. The collection of samples of drinking water from all stations where surface wells are depended upon to furnish the supply has been continued. The samples are forwarded to the State laboratory of hygiene for examination, and in all cases where the water has proved to be polluted a new and safe source of supply has been provided. The system of warming and ventilation of day coaches on the Pennsylvania lines, which has now been in use during the past four or five years, has given excellent results, and the adoption of this method for the introduction of fresh air into sleeping coaches would be a most welcome innovation. The use of an exhaust or vacuum system for removing dust from passenger cars has been on trial in the yards of the Central Railroad of New Jersey, and the following report by an inspector of this board gives an account of the observations made May 4th, 1905:

\* Jour. A. M. A., July 29th, 1905.

"In accordance with instructions to inspect the method of car cleaning in the yards of the Central Railroad of New Jersey, Jersey City, I visited the yards to-day and saw the Pullman sleeping car Dardonia cleaned by what is termed the 'vacuum sweeping system.' The Dardonia had been sent to the yards upon arrival from St. Louis, Mo., to be cleaned and made ready for the return trip in the evening of the same day. After the seat coverings had been removed and the carpets taken out to be cleaned, two men began the work of sweeping and dusting the interior of the car and berths. First, the window shades were drawn down and the accumulation of dust was removed by shaking and the use of a feather duster. The window sashes were partly raised, and, by striking sharp blows upon them, quantities of dust were dislodged and fell from the inaccessible pockets into which they slide when raised, back of the berths. The upper berths were next opened and the curtains, blankets and mattresses were removed. The blankets and curtains were placed upon the car seats and the mattresses passed through the car windows to a portable rack upon the platform beside the car, where the vacuum sweeper was used upon them. The apparatus consists in part of a flat metal nozzle attached to a long hose, coupled to a system of underground pipes in which a partial vacuum is created by exhausting the air by means of air pumps. The nozzle is fashioned somewhat like a scraper, six or eight inches wide, with a slot-like opening about one-eighth of an inch extending along its edge, into which dust is carried by the inrushing air. In cleaning the mattresses the nozzle was passed over both sides, but not along the edges. Six minutes' time was consumed by the operator in cleaning four mattresses, after which they were passed into the car, through the windows, to his working mate, who immediately placed them in the berths, adjusted the folded blankets and berth curtains and closed the berths. From the berths in this car the mattresses only were removed from the car. The blankets and curtains were not opened up for cleaning or exposed to the direct rays of sunlight, nor were they shaken out. Within forty-five minutes from the time the first one of the twelve upper berths in this car was lowered the contents of the twelve had been removed, the berths dusted out with a feather duster, the same bedding replaced and the berths closed. It was noted that in closing a berth the air forced out from the comparatively tight compartment dislodged and carried along a quantity of dust from the inaccessible pockets into which the window sash slides when raised. The car-seat cushions and movable portions of the backs were next removed from the car to the cleaning rack upon the platform, and also the pillows from their boxes beneath the seats. The bare floor, apparently constructed of a kind of cement, hard, smooth and without cracks, was swept up with a feather duster and the vacuum sweeper brought into the car by passing the hose, with the nozzle attached, through a raised window. The mattresses and seats in the sleeping compartments at the ends of the car were cleaned with the sweeper and replaced in position without removing from the car. This attempt at cleaning these compartments was superficially performed by an employe who informed me that he had arrived in this country from Ireland about five months ago. An attempt to remove the dust from the floor of the compartment with the sweeper was not entirely successful. With the nozzle attached to the hose, bits of cardboard, partly-burned matches and pieces of paper too large to pass through the slot were sucked against the opening and barred the entrance of the air and dust. With the nozzle disconnected from the hose, which is about one and

one-half inches in diameter, cinders and dust within several inches of the opening were gathered up and carried away by the inrushing air. Match-boxes, pieces of paper and similar articles, however, frequently lodged across the mouth of the hose and blocked the work; and I was given to understand that for removing dust from bare floors, behind pipes and many similar places difficult to reach, found in the modern-constructed sleeping-cars, the sweeper cannot be successfully used. In the cleaning of carpets, seats and surfaces with which the nozzle can be brought in close contact, the vacuum method appears to be ideal in that no dust is raised into the air by its use, but as the heavy, scraper-like nozzle is dragged across the surface, not only the loose dust is whisked away, but evidently adhering particles are loosened from the surface to which they cling, and are drawn into the pipes and carried to the receptacles in which the dust is gathered and afterwards disposed of. Carpets, car seats and cushions, after treatment, appear quite free from dust and had a bright, clear appearance. That the dust is not only removed from the outer surface of textile fabric is apparent from the fact that a sharp blow with a stick upon a cleaned carpet or plush car seat failed to raise any visible dust. In other sleeping cars being cleaned on the same track as the Dardonia the blankets were removed from the car to the cleaning rack, and I was informed by a workman that the blankets were put out to air; that they receive no mechanical cleaning, nor are they unfolded and hung up so that all surfaces are exposed to the sunlight and air. Whether they are removed from the car or not during the cleaning depends somewhat on the time the car is left in the yard for this purpose. I was informed by Mr. Richards, yardmaster, that all blankets used in the sleepers having the Central yards in Jersey City as one of their terminal points are sent to the company's shops in Wilmington, Del., once every six months to be washed. By this rule a car is furnished with fresh blankets once every six months."

Advantage has been taken by two lines of railroad, viz., the Pennsylvania and the Philadelphia and Reading, of the authority contained in the act approved April 14th, 1903, prohibiting spitting in passenger cars, and signs have been conspicuously placed in many of the cars of the company announcing that "spitting is prohibited."

Questions relating to the duty of supervising the sanitary conditions on ferry-boats which ply on the Hudson river between New Jersey and New York was brought to the attention of the Attorney-General, and his opinion in reference to this matter is stated in the following communication:

STATE OF NEW JERSEY,  
OFFICE OF THE ATTORNEY-GENERAL.

TRENTON, N. J., Nov. 4th, 1904.

*Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:*

MY DEAR SIR—I have before me your favor of the 1st with the three enclosures, as therein stated, and have considered the question therein submitted as to whether the sanitary authorities of this State possess the

power to enforce regulations to prevent the spread of infectious diseases on ferry-boats plying between the cities in New Jersey and points in adjoining States. My opinion upon this question is that the State may do so. Of course, by the federal constitution, Congress is given the supreme and sole power to regulate commerce between the States, but the Supreme Court of the United States has frequently held, especially in the absence of legislation by Congress, that this clause of the constitution does not prevent the States from passing suitable sanitary laws to preserve the health of their citizens. For this reason State quarantine laws have, time and again, been upheld by that high tribunal. I am unaware whether there is any legislation by Congress covering the matter to which your communication refers. Assuming there is not, however, my view is that the reasonable regulations of the proper sanitary authorities of this State may be enforced against ferry-boats or persons therein traveling, to preserve the health of the citizens of this State and to prevent the spread therein of infectious diseases. I return herewith the enclosures contained in your communication.

Yours very truly,

ROBERT H. McCARTER,  
*Attorney-General.*

**Local Sanitary Administration.**—The activity of local boards of health in New Jersey in the enforcement of laws and ordinances for the protection of the public health varies from zero to a high degree of efficiency, and but little uniformity exists in the measures which are employed in the different sanitary districts. This great contrast in the operations of the different health boards is partly due to the lack of opportunity for comparison of views concerning common problems with the officials of other districts. The act approved April 8th, 1903, which provides that future appointees of local boards of health shall be qualified for the duties which they are expected to perform, promises to effect valuable improvements in the service, and annual meetings between these officers for the discussion of questions relating to their work will prevent the repetition of errors and give to each individual the advantages which attend the experience of fellow-officials. The following bill was introduced during the legislative session of 1905, but, after passing the Senate unanimously, it was defeated in the House:

A Further Supplement to the act entitled "An act to establish in this State boards of health and a bureau of vital statistics and to define their respective powers and duties," approved March 31, 1887.

*Be it enacted by the Senate and General Assembly of the State of New Jersey:*

1. The board of health of the state of New Jersey is hereby authorized to appoint, once in each year, a time and place for a conference between the members of said board and delegates from the various local boards of health in this state for the consideration of questions relating to the pre-

vention of the spread of dangerous communicable diseases and the promotion of the public health.

2. Each local board of health is hereby authorized to appoint one of its members or officers or employes as a delegate from such board to attend every such annual conference, and the actual traveling and hotel expenses of the delegate so appointed shall be paid by the treasurer or other disbursing officer of the township or municipality within which such local board has jurisdiction upon presentation by the delegate of a certificate of his appointment and a bill of his expenses duly verified by affidavit.

3. This act shall take effect immediately.

The attention of local boards of health is directed to section 626 of the Postal Laws and Regulations (1902), as follows:

"Sec. 626. A postmaster should refuse to receive into his office mail matter brought to it by persons who are inmates of or messengers from houses containing cases of contagious diseases, such as small-pox, \* \* \* &c., when ordered to do so by a board of health or local authority having jurisdiction of matters affecting the public health. If there be no such organization or official, the postmaster should be governed by the advice of one or more reputable physicians.

"2. Mail matter arriving at an office addressed to the inmates of such houses may be sent to them by the hands of some responsible person known to the postmaster.

"3. When a board of health serves upon a postmaster a certified copy of a declaration or order duly made, that mail matter from any other post-office is liable to communicate a contagious disease prevailing at the time, he should refuse to receive such mail matter from any carrier or messenger, and will deliver to the carrier or messenger a copy of such order or declaration and will report the facts at once to the First Assistant Postmaster-General and the Division Superintendent of Railway Mail Service. If there be no board of health the same action may be taken by the postmaster upon the declaration of a regular county or city medical society, or, if there be none, upon the advice of a physician reputable in his profession. The mail so returned shall be held until the prohibition is removed, and shall, after being properly fumigated under the medical authorities, be dispatched to its destination.

"4. If a case of small-pox \* \* \* or other contagious disease occurs in the family of a postmaster occupying a building in which the post-office is kept, the postmaster should notify his sureties to take possession of the office and conduct it temporarily elsewhere until the danger of contagion is passed.

"5. When blanks, books and supplies of a post-office become infected, so as to render them liable to communicate small-pox or other contagious disease, permission will be given to burn them upon application being made to the First Assistant Postmaster-General, Division of Post-Office Supplies. The postage stamps must be carefully counted in the presence of two disinterested witnesses, a statement of their classification and amount sworn to and forwarded, together with the letter authorizing said destruction of supplies, to the Third Assistant Postmaster-General, Division of Redemption of Stamped Paper."

The following letter from the Attorney-General definitely settles a question which has often arisen in many localities in the State. It will be seen that registrars of vital statistics cannot lawfully accept certificates of deaths which are issued by persons who are not licensed as physicians, and where certificates are presented which are signed by unauthorized persons the burial permit should be refused, and the facts relating to the case should be sent to the coroner:

STATE OF NEW JERSEY,  
OFFICE OF THE ATTORNEY-GENERAL.

TRENTON, N. J., May 31st, 1905.

*Dr. Henry Mitchell, Secretary State Board of Health, Trenton, N. J.:*

MY DEAR SIR—I have your favor of the 23d, enclosing a letter from Dr. Edward Gulon, of Atlantic City, desiring a ruling as to the character of the person who can properly sign and file a death certificate pursuant to section 3 of chapter 39 of the Laws of 1888. In my opinion, it is the plain purpose of that law to require that no one but a duly-licensed physician shall make the necessary death certificate. Any other than such is, as you know, prohibited from practicing in the State, and I am satisfied that the Legislature intended that the "physician" who must, by the third section of the law, sign a proper death certificate, should be a duly-licensed physician in the State.

Very truly yours,

ROBERT H. McCARTER,  
*Attorney-General.*

**Sanitation in Resorts.**—Some of the responsibilities borne by health boards in localities where large numbers of persons reside temporarily are quite different from those which constitute the usual routine in all-the-year communities, and the protection afforded visitors does not only extend to ordinary preventive measures, but should include defense against the risk to which strangers are exposed in hotels and other public places. New Jersey has many towns which depend solely upon summer visitors for their business, and in some of these the sanitary and municipal authorities are showing that they are cognizant of the commercial interests of the locality, and are endeavoring to reach a sanitary standard consistent with the claim to healthiness which is invariably made for all such towns. In well managed resorts the food and water-supplies receive unremitting attention. House-to-house inspection is continued daily, and upon this department of the sanitary work rests the foundation for the action which is taken by the health board for securing prompt removal of refuse accumulations and for the radical improvement of defective constructions. Cleanliness in

barber shops, enforcement of anti-spitting regulations, purification of infected rooms in hotels and boarding-houses, isolation of infected persons, cleaning and sprinkling of streets, decent daily removal of refuse materials and the suitable disposal of waste substances must all have tireless and intelligent attention if the patronage of the travelers of this wide-awake age is to be retained and increased.

# List of Sanitary Districts.

## List of Sanitary Districts, with Names and Addresses of Officers and Members.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>CITIES.</b>				
Asbury Park.....	Monmouth....	4,526	Theo. H. Beringer, Pres..... David W. Sexton..... Jesse Minot..... Geo. H. Wilbur, M.D..... Asher S. Burton, D.D.S..... Harry C. Miller, V.M.D..... Randolph Ross, Treas..... Samuel A. Patterson, Atty..... B. H. Oberl, Sec. and Reg.....	Asbury Park. " " " " " " " " " " " " " "
Atlantic City....	Atlantic.....	87,598	John R. Fleming, M.D., Pres. Wm. F. Brode..... J. Harper Carver..... Wm. S. Cuthbert..... Elwood S. Johnson..... John J. Mahoney..... M. L. Somers, M.D..... Edward Guion, M.D., Health Officer..... Harry C. Beck, Health Inspector..... Curtis Frambes, Plumbing Inspector..... Thos. W. Clement, Food Inspector..... Wm. H. Rice, Ass't Health Inspector..... H. Schneider, Ass't Health Inspector..... B. H. Sooy, Ass't Health Inspector..... Alfred T. Glenn, Reg.....	Atlantic City. "
Bayonne.....	Hudson.....	42,262	Thos. Brady, Pres..... L. F. Donohue, M.D..... G. L. Post..... Thos. B. Mottam..... Robert J. Farrell..... J. H. Mahuken..... James Foerst..... E. F. Carbin, Sec..... A. C. Forman, M.D., Health Inspector..... J. H. Nevins, Deputy Health Inspector..... H. S. Winterhalter, Sanitary Inspector.....	Bayonne. "
Belvidere.....	Warren.....	1,869	F. P. Lefferts, M.D., Sec..... U. S. Pursell, Registrar.....	Belvidere. " "
Beverly.....	Burlington...	2,258	R. F. Haines, Pres..... J. J. Currie..... J. Smith..... Chas. Parsons, Jr..... B. Kiple..... B. F. Soby, M.D., Sec. and Reg..... J. Tracy, M.D., Inspector.....	Beverly. " " " " " " " " " " " "
Bordentown.....	Burlington...	4,073	Wm. H. Shippis, M.D., Sec..... H. W. Kunzi, Reg.....	Bordentown. " "



## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>CITIES—Con.</b>				
Jersey City.....	Hudson.....	232,699	Henry Smellie, Health Officer Thos. N. Giblin, Reg.....	Jersey City. " "
Lambertville.....	Hunterdon.....	5,016	Wm. R. Bowne, Pres..... Albert D. Anderson..... Edward W. Closson, M.D..... Henry K. Kramer..... Wm. Leary..... Geo. L. Romine, M.D..... Jas. H. Reynolds, Sec. and Reg..... John L. Coryell, Inspector.....	Lambertville. " " " " " " " " " " " " " "
Long Branch.....	Monmouth.....	12,133	E. B. Blaisdell, Sec. and Reg.	Long Branch.
Millville.....	Cumberland.....	11,884	L. H. Hogate, Sec. and Reg.	Millville.
Montclair.....	Essex.....	16,370	M. N. Baker, C.E., Pres..... Levi W. Halsey, M.D..... Richard P. Francis, M.D..... Herbert Lloyd..... John N. Holton, Sec..... Chester H. Wells, Health Officer..... John O'Brien, Jr., Reg. and Ass't Inspector..... Jay Kilpatrick, Ass't Insp..... Edwin B. Goodall, Att'y.....	Montclair. " " " " " " " " " " " " " "
Morristown.....	Morris.....	12,146	David H. Wilday, Sec. and Reg.	Morristown.
Newark.....	Essex.....	283,289	H. C. H. Herold, M.D., Pres. C. M. Zeh, M.D..... Wm. T. Disbrow, M.D..... J. T. Wrightson, M.D..... C. F. Zimmerman..... J. W. Dobbins..... H. C. Ross..... L. L. Davenport..... L. R. Hollister, M.D..... J. R. Eitan..... David D. Chandler, Health Officer..... James F. Connelly, Reg.....	Newark. "
New Brunswick.....	Middlesex.....	23,133	Prof. John B. Smith, Pres..... Prof. F. C. Van Dyke..... A. L. Smith, M.D..... Geo. K. Parsels..... S. V. D. Clark, M.D., Sec..... James Morrison, Reg.....	New Brunswick. " " " " " " " " " "
Orange.....	Essex.....	26,101	C. H. Richards, M.D., Pres..... D. W. Foor, M.D..... O. S. Williams..... Thos. C. Colt..... John T. Davis..... James Kane..... James H. Brown..... William Schnler, Sec. and Health Officer..... W. B. Gano, Registrar..... S. D. Philpot, Plumbing Inspector..... R. Savage, Sanitary Insp.....	Orange. "

## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>CITIES—Con.</b>				
Passaic City.....	Passaic.....	37,837	W. B. Davidson, Sec..... Geo. F. Grear, Reg.....	Passaic. " "
Paterson.....	Passaic.....	111,529	And. F. McBride, M.D., Pres. Frank J. Van Noort, M.D..... John R. Hurley..... John H. Banta, M.D..... Franklin Van Winkle..... Jas. F. McNair, Sec..... John T. Pollitt, Reg..... J. Alex. Browne, M.D., H'th Inspector..... W. S. Green, M.D., Food Inspector..... Jos. Fitzpatrick, Sanitary Inspector..... Wm. J. Macdonald, Plumbing Inspector..... Wm. H. Lowe, D.V.S.....	Paterson. "
Perth Amboy.....	Middlesex.....	25,895	Chas. M. MacWilliams, Sec. and Reg.	Perth Amboy.
Phillipsburg.....	Warren.....	13,325	Jos. Pfeiffer, Pres..... P. Frank Hagerty..... Michael Lynch..... Francis Coyne..... Daniel Ziegler..... Frank Kneedler, Sec. and Reg..... Howard R. Carey, Inspector..... Francis J. Drake, M.D.....	Phillipsburg. " " " " " " " " " " " "
Plainfield.....	Union.....	16,468	Chas. J. Fisk, Pres..... Fred. W. Dunn..... Thos. S. Davis, M.D..... Chas. H. Dunham..... B. van D. Hedges, M.D., Sec..... Miss H. O. Mattison, Reg..... L. K. Thurlow, Health Officer..... Wm. Addis, Sr., Inspector..... R. W. Meeker, Inspector.....	Plainfield. " " " " " " " " " " " " " "
Rahway.....	Union.....	8,619	James H. Terrill, Pres..... Geo. R. Van Sant..... Elihu B. Silvers, M.D..... Chas. B. Holmes, M.D..... Walter E. Cladek, M.D..... Chas. E. Lambert, Sec. and Reg..... Fred. J. Mix, Inspector.....	Rahway. " " " " " " " " " " " "
Salem.....	Salem.....	6,442	H. Chavanne, M.D., Pres..... Ellen B. Smith, M.D..... Thos. Waddington..... Clinton Bowen, Sec. and Reg. Austin T. Walton, Inspector. N. S. Hires, M.D., Medical Inspector.....	Salem. " " " " " " " " " "



List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>CITIES—Con.</b>				
Summit.....	Union.....	6,845	William H. Lawrence, M.D., Pres. A. B. Wallace W. D. Gibby H. Atterbury E. B. Twombly T. J. Scott, Sec. and Reg. Wm. McMane, Inspector.....	Summit. " " " " " "
Trenton.....	Mercer.....	84,147	Thos. Holmes, Sec. Harry B. Salter, Reg. A. S. Fell, M.D., Health Officer.....	Trenton. " "
Woodbury.....	Gloucester.....	4,560	Arthur Starr, Sec. J. E. Estell, Reg.....	Woodbury. "
<b>BOROUGHES.</b>				
Allendale.....	Bergen.....	762	Wm. E. Carver, Pres. John A. Carshaw W. C. Hisey John W. Steele, Sec. J. M. Christopher, Reg.....	Allendale. " " " "
Allenhurst.....	Monmouth.....	247	R. W. Steele, Pres. T. G. Cottrell O. E. Estew C. E. Schanck A. Lyon Wm. H. Conover, Sec. and Reg. Thos. J. Griffin, Inspector.....	Allenhurst. " " " " " " "
Allentown.....	Monmouth.....	653	H. H. Emley, M.D., Pres. C. Spaulding E. P. Johnson, M.D. J. S. Robbins, Sec. W. Forsythe, Reg.....	Allentown. " " " "
Alpine.....	Bergen.....	448	Wm. S. Opdyke, Pres. Douglass Green Chas. Hauser John H. Conklin L. H. Tavernier, Sec. and Reg.....	Alpine. " " " "
Andover.....	Sussex.....	427	J. C. Clark, M.D., Pres. S. S. Wills Thomas Decker W. E. Willson, Sec. S. H. Willson, Reg.....	Andover. " " " "
Anglesea.....	Cape May.....	400	Geo. W. Dougherty, Sec. E. M. Shivers, Reg.....	Anglesea. "
Atlantic Highlands.....	Monmouth.....	1,480	W. N. Snedeker, Sec. and Reg.....	Atlantic Highlands.
Audubon.....	Camden.....	525	Fred. Wiechard, Pres. Daniel W. Ott Wm. A. Osborn James Mackintosh Howard Callingham, Sec. and Reg.....	Audubon. " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—Con.</b>				
Avalon.....	Cape May.....	86	Chas. B. Kates, Reg.....	Avalon.
Avon.....	Monmouth.....	328	James Brighton Alexander May H. M. Dolan, Sec. and Reg. Monroe Neuman, Inspector.....	Avon. " " "
Barnegat City.....	Ocean.....	78	James V. Jones, Reg.....	Barnegat City.
Bay Head.....	Ocean.....	278	Julius Foster, Sec. and Reg.	Bay Head.
Beach Haven.....	Ocean.....	301	John T. Fox, Pres. Thomas Cale Thos. E. Gifford W. F. Beer, Sec. Thos. A. Gavin, Reg.....	Beach Haven. " " " "
Belmar.....	Monmouth.....	1,089	Harry E. Snow, Pres. Cyrus B. Honce Frank B. Philbrick Wm. M. Bergen Geo. G. Titus Paul C. Taylor Fred. M. Davison Chas. O. Hudnut, Sec. and Reg. Lawrence McCormick, Insp.....	Belmar. " " " " " " " "
Bergen Fields.....	Bergen.....	1,095	John J. Huyler, Sec. and Reg.....	Bergen Fields.
Bogota.....	Bergen.....	522	John McNaughton, Pres. Henry Wernmaker R. B. Lord Peter Bogart, Jr. F. W. Cane John F. Hill, Sec. Harlan P. Ross, Reg. M. S. Theurit, Inspector. Robert Ballagh, Inspector.....	Bogota. " " " " " " "
Bound Brook.....	Somerset.....	3,389	R. H. Brokaw, Pres. C. R. P. Fisher, M.D. M. W. Baxter W. B. Negus, Sec. Chas. McNabb, Reg.....	Bound Brook. " " " "
Bradley Beach.....	Monmouth.....	1,037	Wm. K. Bradner, Sec. and Reg.....	Bradley Beach.
Branchville.....	Sussex.....	591	E. S. Dairymple, M.D., Sec. C. A. Canfield, Reg.....	Branchville.
Brigantine.....	Atlantic.....	95	J. A. Price, Reg.....	Brigantine.
Butler.....	Morris.....	2,188	G. C. Coates, M.D., Pres. E. P. Smithyman Randolph Greenter Dr. Samuel K. Owen, Sec. Allen Looker, Jr., Reg.....	Butler. " " " "
Bloomingdale.....	Bloomingdale.....			

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—Con.</b>				
Caldwell	Essex	1,670	David M. Gardner, M.D., Pres. W. W. Wright Lambert Speer Edward Peck, M.D. Issac E. Baldwin, Sec. John J. Van Orden, Reg.	Caldwell.
Cape May Point	Cape May		Lafayette Miller, Reg.	Cape May Point.
Carlstadt	Bergen	8,100	Frank R. Hoffman, Pres. E. F. Sickenberger Chas. Lang Herman Foth, Sec. and Reg. Chas. Schmidt, Inspector.	Carlstadt.
Chatham	Morris	1,564	Jos. H. Conklin, Pres. Jos. E. Pollard, M.D. J. Thomas Scott Walter V. Sayre D. H. Crawford, Sec. and Reg. John J. McCormick, Insp.	Chatham.
Chesilhurst	Camden	258	Jacob T. Humphries, Reg.	Chesilhurst.
Clayton	Gloucester	1,864	A. G. Silver, Sec.	Clayton.
Cliffside Park	Bergen	2,128	John E. Ferdinand, M.D., Pres. Albert E. Wicka Leonard P. Winkler Daniel P. Woods Robert H. Nutt, Sec. Jean H. Raas, Reg.	Grantwood. Cliffside. Grantwood.
Clinton	Hunterdon	830	A. S. Leatherman, M.D., Pres. Wm. Knight, M.D. Geo. A. Hall, Sec. and Reg. Jas. Mulligan, Inspector. W. H. Carpenter, Inspector.	Clinton.
Closter	Bergen	1,272	Alfred Anderson, Reg.	Closter.
Collingswood	Camden	2,588	A. Hart Jr., Pres. C. S. Fletcher Geo. Rudderon W. L. Patterson H. W. Dilkes Ross G. Pidgeon, Sec. and Reg. E. S. Sheldon, M.D., Insp.	West Collingswood. Collingswood.
Cresskill	Bergen	505	John Demarest, Pres. Christie Westervelt John W. Flecke Paul Ethel C. A. Lewis Henry V. Westervelt, Sec. Geo. Y. Allaire, Reg. J. B. W. Lausing, M.D., Insp.	Cresskill.
				Tenafly.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—Con.</b>				
Deal	Monmouth	164	Geo. W. Weart, Pres. Frank E. Mesick Wm. Hogenkamp Geo. K. Thompson S. W. Hendrickson H. D. Harris, Sec. and Reg. Lewis Havens, Inspector.	Deal Beach.
Delford	Bergen	841	R. W. Cooper, Pres. J. D. Van Wagoner G. F. Moore, Sec. H. A. Bingham, Reg. F. O. Blenkinsstone, M.D., Inspector.	New Milford. Oradell.
Demarest	Bergen	480	M. J. Bogert, Pres. Chas. E. Hutchison Geo. G. Looker Anton M. Scheurman Wm. Begg, Sec. and Reg.	Demarest.
Dumont	Bergen	918	W. H. Niehoff, Pres. E. B. Root H. M. Green, Sec. Frank Hill, Reg. J. E. Pratt, M.D., Inspector.	Dumont.
Dunellen	Middlesex	1,517	John R. Campbell, Pres. F. W. Brakeley, M.D. Geo. W. Churchill C. Wesley Blaine W. S. Frederick, Sec. Chas. A. Coriell, Reg.	Dunellen.
East Newark	Hudson	2,828		
East Rutherford	Bergen	3,168	N. Kipp, Pres. A. Noble W. E. Ogden, M.D. W. E. Novo, Sec. and Reg. F. E. S. Hodges, Inspector.	East Rutherford.
Edgewater	Bergen	1,892	Geo. W. Allison, Pres. H. B. Kerry James Greenwood Geo. A. Carleton, Sec. and Reg.	Fort Lee. Edgewater. Hudson Heights. Edgewater.
Elmer	Salem	1,219	Hiram Van Meter, Sec. and Reg.	Elmer.
Englewood Cliffs	Bergen	266	John G. Ropes, Reg.	Fort Lee.
Englishtown	Monmouth	416	E. T. Reid, Reg.	Englishtown.
Essex Fells	Essex	393	Walter Brown, Pres. W. S. Scott Chas. E. Leach James A. Speer F. B. Ivy, Sec. and Reg. Benj. C. Kent, Inspector.	Essex Fells.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—</b>				
<b>Con.</b>				
Etna.....	Bergen.....	681	Jay W. Watkins, Pres..... Richard Domenice..... Harry I. Angell, Sec. and Reg.....	Etna. " "
Fairview.....	Bergen.....	1,693	Fred. Schneider, Pres..... Wm. Wingsath..... Chas. Sedore..... C. M. Driggs, Sec..... John Bush, Reg.....	Fairview. " " " "
Fanwood.....	Union.....	445	F. W. Westcott, M.D., Pres..... F. D. Warren..... F. Palmer..... Wm. E. Gibbs.....	Fanwood. " " "
Farmingdale.....	Monmouth.....	399	Wm. R. Kinmouth, M.D..... Edward Imlay..... Chas. H. Bond..... Levi W. Fany..... Frank P. Van Note, Sec. and Reg.....	Farmingdale. " " " "
Fieldsboro.....	Burlington.....	451	Wm. I. Leonard, Pres..... Wm. N. Erickson..... Walker Griffith..... Wm. Leatherbury, Sec..... C. H. Fennimore, Reg..... Samuel Church, Inspector.....	Fieldsboro. " " " " "
Florham Park.....	Morris.....	803	Wm. A. Hopping, Pres..... Frank M. Budd..... Chas. H. Genuing..... W. A. Hehn, Sec..... Henry C. Youngs, Reg..... N. A. Felch, Inspector.....	Florham Park. Chatham. Madison. Chatham. Florham Park. "
Fort Lee.....	Bergen.....	3,438	Max Wyler, M.D., Pres..... Wm. E. Wood..... Chas. Goebel..... Benj. L. Willan..... Gerome Sardi..... R. H. Morrow, Sec. and Reg..... Ferd. Knorrey, Treas.....	Fort Lee. Coytesville. Fort Lee. Coytesville. Fort Lee. Coytesville. Fort Lee.
Frenchtown.....	Hunterdon.....	975	E. L. Poore, Pres..... Wm. S. Dalrymple..... Marin F. Bells..... F. H. Decker, M.D..... E. W. Moore, Sec..... Wm. R. Shurts, Reg.....	Frenchtown. " " " " "
Garfield.....	Bergen.....	5,092	John Karl, Pres..... Jos. Whitehead..... Jos. W. Dwyer, M.D..... P. J. Scanlon, Sec. and Reg..... Jacob Brown, Sanitary Insp..... Martin D. Karl, Plumbing Inspector..... Dr. R. O. Hasbrouck, Veterinarian.....	Garfield. " " " " " "

List of Sanitary Districts with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—</b>				
<b>Con.</b>				
Garwood.....	Union.....	564	Wm. Darroch, Pres..... Chas. D. Costleigh, Reg.....	Garwood.
Glen Ridge.....	Essex.....	2,062	H. K. Benson, Sec..... Clarence Place, Reg.....	Glen Ridge. "
Glen Rock.....	Bergen.....	778	John A. Marinus, Pres..... John J. Storms..... Harry Smith..... Barney Vandenberg..... Peter Van Winkle, Sec. and Reg.....	Ridgewood. " " " "
Haddonfield.....	Camden.....	3,466	Wm. J. Boning, Pres..... Chas. H. Hillman..... Chas. C. Reeves..... Stanley Rusk..... Wm. H. Harrison, Sec. and Reg..... Edward Magill, Inspector.....	Haddonfield. " " " " "
Haddon Heights.....	Camden.....	654	Geo. W. Waters, M.D., Pres..... Edward Jenks..... A. M. Young..... W. M. Pollock, Sec..... Robert Glens, Reg.....	Haddon Heights. " " " "
Harrington Park.....	Bergen.....	283	John N. Farrar..... Edward C. Striffler..... Hiram D. Augustine..... Wm. Tompkins, Sec. and Reg.....	Harrington Park. " " "
Hasbrouck Heights.....	Bergen.....	1,650	Geo. J. Elwood, Pres..... John J. Martin..... H. B. Vannote..... W. F. De Vay, Sec. and Reg..... S. V. Morris, M.D., Health Inspector.....	Hasbrouck Heights. " " " "
Haworth.....	Bergen.....	400	H. K. Crocker, Pres..... A. C. Lobeck..... M. Dieck..... C. A. Park..... W. T. McCulloch..... E. H. Schuyler, Sec. and Reg.....	Haworth. " " " " "
Hawthorne.....	Passaic.....	2,570	Frank Garrison, Pres..... James Beaton, Sr..... David Clark..... Mr. Nicol..... Chas. H. Hodges, Sec..... Wm. E. Thompson, Reg..... A. Vanderbeck, M.D., Insp.....	Hawthorne. North Paterson. Hawthorne. " " Paterson.
Helmetts.....	Middlesex.....	575	A. H. Clemons, Pres..... Rev. J. A. Trimmer..... C. M. Thorne..... John A. Johnson..... Robt. J. Franklin, Sec..... E. D. Clemons, Reg..... J. G. Denelsbeck, M.D., Insp.....	Helmetts. " " " " " Spotswood.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—</b>				
<b>Con.</b>				
High Bridge.....	Hunterdon.....	1,382	P. H. Murray, Pres. and Reg. Samuel Tall..... John L. Phillips..... Marshall F. Apgar, Sec..... Wm. C. Alpaugh, M.D., Insp.	High Bridge. " " " " " " " "
Highlands.....	Monmouth.....	1,275	G. Hooser, Pres..... Samuel Berge..... S. Liming, Sec. and Reg.....	Highlands. " " " "
Highland Park.....	Middlesex.....	714	Wm. E. Burns, Sec..... Frank A. Metzrath, Reg.....	New Brunswick.
Hightstown.....	Mercer.....	2,093	J. M. Smith, Jr., Reg.....	Hightstown.
Holly Beach.....	Cape May.....	1,827	E. H. Randolph, Sec..... H. B. Hewitt, Reg.....	Holly Beach. " "
Hopatscong.....	Sussex.....	126	T. A. K. Gessler, Sec. and Reg.....	Landing.
Hopewell.....	Mercer.....	984	Harry E. Sutphen, Reg.....	Hopewell.
Junction.....	Hunterdon.....	974	E. E. Riddle, Sec. and Reg.....	Junction.
Lavalette.....	Ocean.....	22	A. G. Fischer, Reg.....	Lavalette.
Leonia.....	Bergen.....	1,041	Henry R. Gresser, Pres..... A. P. Hurd..... J. T. Wyckoff M.D..... H. M. Thompson, Sec. and Reg..... Arthur D. Bogert, Inspector. John Boyd, Inspector.	Leonia. " " " " " " " " " "
Linden.....	Union.....	403	Jos. B. McDonagh, Reg.....	Linden.
Linwood.....	Atlantic.....	503	Jas. Farish, Reg.....	Linwood.
Little Ferry.....	Bergen.....	1,772	Fred Werneking, Pres..... Chas. Heuer..... Richard Van Sader..... Jacob Lawrence..... A. W. Woods, Sec. and Reg.....	Little Ferry. " " " " " " " "
Lodi.....	Bergen.....	2,793	Jacob Van Hook, Sec. and Reg.....	Lodi.
Longport.....	Atlantic.....	133	R. M. Elliott, Mayor.....	Longport.
Madison.....	Morris.....	4,115	Calvin Anderson..... I. N. Van De Water..... Samuel Brant..... Chas. B. Gee..... C. E. Cook, Sec. and Reg..... Fred. Burnett, Inspector.	Madison. " " " " " " " " " "
Manasquan.....	Monmouth.....	1,636	A. H. Miller, Pres..... John H. Chapman..... Geo. Mount..... Samuel Garrison..... Robert M. Marks, Sec. and Reg.....	Manasquan. " " " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—</b>				
<b>Con.</b>				
Matawan.....	Monmouth.....	1,479	Wm. A. Rogers, Sec. and Reg.....	Matawan.
Maywood.....	Bergen.....	687	C. E. Breckenridge, Pres..... J. R. Davies..... H. Heck..... C. Kraeger..... G. M. Fitzer, Sec. and Reg..... J. Peterman, Inspector.	Maywood. " " " " " " " " " "
Merchantville.....	Camden.....	1,682	F. W. Kleinz, Pres..... A. H. Moses..... J. W. Marcy, M.D..... S. D. Ingham, M.D..... Jos. E. Van Kirk..... W. B. Stewart, Sec. and Reg. Wm. Linderman, Inspector.	Merchantville. " " " " " " " " " " " "
Metuchen.....	Middlesex.....	1,907	A. C. Kelly, Pres..... F. M. Orton..... H. Gross, M.D..... A. L. Ellis, M.D., Sec..... W. V. McKenzie, M.D., Reg.....	Metuchen. " " " " " " " "
Midland Park.....	Bergen.....	1,617	Thos. Holt, Pres. and Reg..... John Klopman..... Jacob Leenas, Sec..... Jos. Payne, Inspector.	Midland Park. Wortendyke. " " Midland Park.
Millstone.....	Somerset.....	156	Wm. H. Polhemus, Sec..... Elias H. Hall, Reg.....	Millstone. " "
Milltown.....	Middlesex.....	1,210	Conrad Wagner, Pres..... R. M. Huistes..... Adam Wagner..... Geo. Luis..... Berthold Christ..... J. C. W. Kuehban, Sec..... Robert A. Harkins, Reg..... F. E. Riva, M.D., Inspector.	Milltown. " " " " " " " " " " " "
Montvale.....	Bergen.....	502	E. C. Jackson..... J. H. Haase..... Paul Pratt, Sec. and Reg..... J. M. Onderdack, Inspector. A. F. Haring, Inspector. Albert Grassley, Inspector.	Montvale. " " " " " " " " " "
Mount Arlington.....	Morris.....	250	R. J. Chaplin, Pres..... F. H. Tappen..... H. C. Upchurch, M.D., Sec..... C. E. Cook, Reg..... F. L. Shafer, Inspector.	Mount Arlington. " " " " " " " "
Mountainside.....	Union.....	314	A. W. Moffet, Pres..... C. Fritz..... J. M. Badgley..... J. O'Connors, Sec..... Geo. M. Smith, Reg..... Geo. Boynton, Inspector.	Mountainside. " " " " " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b> Con.				
Mount Tabor.....	Morris.....		N. B. Killmer, Pres..... Jas. Shaw..... Rev. R. K. Boyd..... Frank S. Waller, Sec..... Jas. H. Cox, Inspector.....	Mount Tabor. " " " " " " " "
National Park.....	Gloucester.....	160	Wm. P. Abdill, Reg.....	National Park.
Neptune City.....	Monmouth.....	808	S. H. Hendricks, Pres..... Wm. Watson..... Howard Van Brunt..... Hubbard Morris..... Whitfield Smith, Sec. and Reg.....	Avon. " " " "
Netcong.....	Morris.....	1,024	Chas. W. Eaton, Reg.....	Netcong.
New Providence.....	Union.....	754	A. G. Mason, Pres..... F. Schwartzwaelder..... J. T. Hickson..... L. B. Coddington..... Wm Woodruff, Sec. and Reg..... John H. Dickinson, Insp.....	Murray Hill. New Providence. " " " " " " " "
North Caldwell.....	Essex.....	483	Chas. B. Gould, Pres..... Ralph C. Buck..... Lewis Kussmaul..... Wm. Little..... Sherman Paddock, Sec..... Fred. L. Baldwin, Reg. and Inspector.....	Caldwell. Little Falls. Singac. Caldwell. " "
Northfield City.....	Atlantic.....	688	Walter Heckman, Pres..... T. W. McConel..... Christoph Prigge..... Alfred Ireland..... Elisha C. Duberson, Sec. and Reg.....	Bakersville. " " " "
North Haledon.....	Passaic.....	697	Wm. H. Robinson, Pres..... Ed. Watson..... Ralph S. Torbet..... James Jackson..... Chas. Schmitz..... August Stultz..... John Urweider..... Geo. Courter, Sec. and Reg..... A. A. Lydecker, M.D., Insp.....	Haledon. " " " " " " " "
North Plainfield.....	Somerset.....	5,616	Andrew Love, Pres..... J. G. McLaughlin..... J. O. Osgood..... D. C. Adams, M.D..... A. H. Dundon, M.D., Sec. and Reg..... Frank Denckian, Act. Insp.....	Plainfield. " " " " "
North Spring Lake.....	Monmouth.....		F. M. Hunt, Reg.....	Spring Lake Beach.
Norwood.....	Bergen.....	432	M. F. Martin, Pres..... Henry Kiling..... Andrew Portz..... Wm. F. Harris..... Paul Luebker, Sec. and Reg..... Adam Demler, Inspector.....	Norwood. Demarest. Closter. West Norwood. " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b> Con.				
Nutley.....	Essex.....	4,556	E. Lebel, Pres..... G. B. Philhower, M.D..... Lewis Day..... M. Van Winkle..... F. Clements, Sec..... Henry M. Whitfield, Reg..... E. E. Faith, Inspector.....	Arondale. Nutley. " " " " "
Oakland.....	Bergen.....	585	D. J. Fox, Pres..... Chas. H. Sheffield..... Wm. J. Stout..... W. B. Romaine, Sec..... E. W. Hamilton, M.D., Insp.....	Oakland. " " " "
Oaklyn.....	Camden.....	454	J. Frank Johnson, Pres..... Otto Doeman..... Frank Ashdale..... Edward Bartells..... Wm. Anthony..... Emil C. Hesser, Sec. and Reg..... Henry Sworie, Inspector.....	Oaklyn. " " " " " "
Ocean City.....	Cape May.....	1,835	T. C. Hutchinson, M.D., Pres..... Chas. E. Edwards, M.D..... I. N. Griscom, M.D..... Chas. B. Rider, M.D., Sec. and Reg..... N. H. Burr, M.D., Inspector..... J. W. Smith, Nuisance Insp.....	Ocean City. " " " " " " " " " "
Ocean Grove.....	Monmouth.....		A. E. Ballard, Pres..... E. N. Cole..... W. H. Wallell..... H. B. Alday, M.D..... J. H. Alday, M.D., Sanitary Officer..... Wm. E. O'Brien, Reg.....	Ocean Grove. " " " " " " " " Asbury Park.
Old Tappan.....	Bergen.....	280	Chas. De Wolf, Pres..... Jos. Flate..... Wm. Blauvelt..... Jacob Z. Bogert..... R. B. Haring, Sec. and Reg.....	Westwood. " " Tappan, N. Y. "
Orvil.....	Bergen.....	443	R. Kinniburgh, Reg.....	Hobokus.
Palisades Park.....	Bergen.....	911	Otto Schultz, Jr..... A. Jordan..... Martin Brunings, Sec. and Reg.....	Palisade Park. " " " "
Park Ridge.....	Bergen.....	1,189	H. C. Moer, M.D., Pres..... J. A. Moenig, M.D..... Chas. E. Terhune..... J. H. Stark, Sec. and Reg..... H. Schesch, Inspector.....	Park Ridge. " " " " " " "
Paulaboro.....	Gloucester.....	2,269	M. J. Doolittle, Pres..... W. H. Lamson..... Chas. Schanley..... Jacob Ballinger, Sec. and Reg..... Geo. C. Laws, M.D., Insp.....	Paulsboro. " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b>				
<b>Con.</b>				
Femberton	Burlington	821	A. J. Morris, Pres. J. G. Montgomery Wm. H. Smith Harry Ridgeway J. N. Clevenger J. J. Brander, Sec. and Reg.	Pemberton.
Pennington	Mercer	768	T. D. Durling, Pres. J. R. Bergen Oliver B. Gray Archibald Updike Samuel H. Chatlin Nelson M. Lewis J. C. Bunn, Sec. and Reg. Edgar Hart, M.D.	Pennington.
Pennsgrove	Salem	2,062	C. P. Lummls, M.D., Reg.	Pennsgrove.
Pitman Grove	Gloucester	1,016	C. B. Phillips, M.D., Reg.	Pitman Grove.
Pleasantville	Atlantic	2,824	Wilbur Reed, Sec. and Reg.	Pleasantville.
Point Pleasant	Ocean	977	Abraham Lower, Reg.	Point Pleasant.
Pompton Lakes	Passaic	1,013	Wickes Washburn, M.D., Pres. John L. Porter John Crawford Ripley Nitrower Horace L. Wells, Sec. and Reg.	Pompton Lakes.
Port Republic City	Atlantic	451	Mark Doneland, Pres. John W. Barton Chas Johnson G. H. Fielder W. C. Van Sant, Sec. and Reg.	Port Republic.
Princeton	Mercer	6,029	Prof. E. H. Loomis, Pres. A. A. Woodhull, M.D. L. H. Anderson Howard Wright, M.D. Richard Rowland Joseph Hoff Thornton Conover, Sec. and Reg. V. D. Bayles, Inspector.	Princeton.
Prospect Park	Passaic	1,911	Andrew Hopper, Pres. Garret Planter Geo. Bell Harry W. Street Jacob Doele, Sec. and Reg. A. A. Lydecker, M.D., Insp.	Prospect Park.
Raritan	Somerset	3,944	Wm. Green, Sec. Michael J. Enwright, Reg.	Raritan.
Ridgefield	Bergen	745	H. G. Henwood, Pres. E. Robinson John C. Banta J. G. McGill B. F. Underwood, M.D., Sec. and Reg.	Ridgefield.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b>				
<b>Con.</b>				
Riverside	Bergen	670	John H. Jenkins, Pres. B. G. Pratt Samuel Phillips B. Bruapes Wm. W. Herrick, Sec. Jos Weston, Reg. G. H. McFadden, M.D., Insp. Robert Ballagh, Plumbing Inspector Chas. Blankinhorn, Fumigator.	Cherry Hill. River Edge. " " Cherry Hill. River Edge. " " Hackensack. " " River Edge.
Riverton	Burlington	1,557	J. C. S. Davis, Pres. C. C. Reinhard C. S. Flanagan H. P. Hyman Alex. Marcy, Jr., M.D., Sec. J. Cottrell, Reg.	Riverton. " " " " " " " "
Rockaway	Morris	1,585	Wm. A. Parلمان, Reg.	Rockaway.
Rocky Hill	Somerset	478	Theo. Stryker, Pres. Malvin Reeve, M.D. W. N. Stults G. P. Teeple E. E. Logan, Sec. A. C. Skirm, Reg.	Rocky Hill. " " " " " " " "
Roselle	Union	2,142	Henry C. Pierson, M.D., Pres. Minor W. Sewall James W. Hope Wm. B. Hadley Wm. J. D. Chandler, Sec. Geo. A. Rawlins, Reg. John H. Kinney, Inspector.	Roselle. " " " " " " " " " "
Roselle Park	Union	2,238	Wm. S. Kingsland, Pres. Patrick Cooley Arthur Cox Fred. Englehardt Arthur Churchill, Sec. and Reg. Simon Bermingham, Insp.	Roselle. " " " " " " " "
Rutherford	Bergen	5,218	F. M. Buckler, Pres. J. C. Saur Chas. Calhoun, M.D. A. E. Tucker Geo. F. Schermhorst Geo. W. Lawton, Sec. and Reg. John A. Croker, Inspector.	Rutherford. " " " " " " " " " "
Saddle River	Bergen	474	Jacob O. Ackerman, Pres. A. C. Ackerman T. N. Woodruff, Sec. and Reg.	Saddle River. " " " "
Seabright	Monmouth	1,166	John H. Forsmark, Reg.	Seabright.
Sea Isle City	Cape May	432	A. L. Miller, Sec. A. S. Steelman, Reg.	Sea Isle City. " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b>				
<b>Con.</b>				
Seaside Park.....	Ocean.....	92	Chas. Harker, M.D., Pres..... Chas. B. Coles..... Henry E. Clayton..... G. H. Thatcher, Sec. and Reg..... L. J. Stone, Inspector.....	Seaside Park. " " " " " " " "
Secaucus.....	Hudson.....	3,191	Chas. Maier, Sec.....	Secaucus.
Somers Point.....	Atlantic.....	431	B. F. Pauling, Sec..... Winfield R. Fox, Reg.....	Somers Point. " "
South Amboy.....	Middlesex.....	6,258	J. L. White, M.D., Pres..... E. E. Haines, M.D..... Chas. S. Buckelew..... F. E. De Graw, Sec. and Reg..... Joe A. Sexton, Inspector.....	South Amboy. " " " " " " " "
South Atlantic City.....	Atlantic.....	118	Chas. Boggs, Pres..... P. J. Gilligan..... Josiah Norcross..... H. F. West..... Chas. Hart, Sec. and Reg.....	South Atlantic City. " " " " " " " "
South Cape May.....	Cape May.....	5	James Ritchie, Mayor.....	South Cape May.
South River.....	Middlesex.....	3,588	F. W. Bissett, M.D., Pres..... Joseph Miller, Jr..... John Van Norden..... Jesse Selover, Sec..... J. Conover Bowne, Reg.....	South River. " " " " " " " "
Spring Lake.....	Monmouth.....	1,039	S. R. Knight, M.D., Pres..... J. S. Neuman..... W. D. Robinson..... D. H. Hills, Sec. and Reg..... Edward Reinsen, Inspector.....	Spring Lake. " " " " " " " "
Stanhope.....	Sussex.....	867	A. S. Van Arsdale, Sec. and Reg.....	Stanhope.
Stockton.....	Hunterdon.....	588	H. P. Cullen, Pres..... Wm. V. Reed..... Harry F. Hoff..... John B. Winters..... John S. Wilson, Sec. and Reg.....	Stockton. " " " " " " " "
Sussex.....	Sussex.....	1,318	E. F. Decker, Sec..... F. B. Whittle, Reg.....	Sussex. " "
Swedesboro.....	Gloucester.....	1,484	Harry Mayhew, Pres..... Jerome M. Young..... Fred. Weber..... W. H. Rieger, Sec. and Reg..... W. G. Simmons, M.D., Insp.....	Swedesboro. " " " " " " " "
Tenafly.....	Bergen.....	2,142	Fred. L. Colver, Sec..... J. E. W. Lansing, M.D., Reg.....	Tenafly. " "
Totowa.....	Passaic.....	738	Wilbur De Mott, Sec. and Reg.....	Paterson.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHS—</b>				
<b>Con.</b>				
Tuckerton.....	Ocean.....	1,332	J. F. Mathis, Sec..... T. Wilmer Speck, Reg.....	Tuckerton. " "
Upper Saddle River.....	Bergen.....	324	Herman T. Hopper, Pres..... John Swartz..... Geo. Goetschius..... Henry Snyder..... Jacob Snyder..... Wallace S. De Baum, Sec..... Albert Zabriske, Reg.....	Allendale. " " " " " " " " " " " "
Ventnor City.....	Atlantic.....	116	Geo. W. Carson, Pres..... Frank Scull..... Gilbert Harris..... Wm. Kuhl, Sec. and Reg..... Benj. F. Hilliard, Inspector.....	Ventnor. " " " " " " " "
Vineland.....	Cumberland.....	4,593	J. H. Dowler, Jr., Pres..... A. Laricks..... J. C. Schramm..... E. A. Pierce..... S. C. Slade, Sec. and Reg..... N. F. Marvel, Inspector.....	Vineland. " " " " " " " " " "
Wallington.....	Bergen.....	2,475	James Brennan, Sec. and Reg.....	Wallington.
Washington.....	Warren.....	3,431	C. M. Williams, Pres..... R. M. Petty..... A. J. Eiger..... F. P. McKinstry..... D. V. Wyckoff..... Harry Christine, Sec. and Reg.....	Washington. " " " " " " " " " "
Wenonah.....	Gloucester.....	569	Wm. J. Dawson..... Wm. C. Cattell..... Chas. H. Lorence..... A. D. Harlan..... Jesse W. English, Sec. and Reg..... Joe. S. Chew, Inspector..... Harry A. Stout, M.D., Medical Inspector.....	Wenonah. " " " " " " " " " " " "
West Caldwell.....	Essex.....	490	Clifton C. Francisco, Sec. and Reg.....	Caldwell.
West Cape May.....	Cape May.....	902	Thos. Hughes, Pres..... John Hughes..... Samuel Taylor..... Jacob Smallwood..... A. G. Stevens, M.D., Sec..... Theo. Reeves, Reg.....	Eldredge. " " " " " " " " " "
Westwood.....	Bergen.....	1,044	S. J. Zabriske, M.D., Pres..... Isaac Onderdonk..... James K. Ackerman..... Henry Waterbury..... Nicholas Cleveland, Sec. and Reg..... J. B. Speth, Jr..... Aaron Tuers.....	Westwood. " " " " " " " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>BOROUGHES—Con.</b>				
Wharton.....	Morris.....	2,285	Henry W. Kice, M.D., Pres. Robert F. Oram..... Miller P. Casner..... James Williams, Sec..... Wm. H. Force, Reg..... Daniel J. Kitterick, Insp.....	Wharton. " " " "
Wildwood.....	Cape May.....	500	John N. Reeve, Sec. Wm. R. Cilla, Reg.....	Wildwood. "
Woodbine.....	Cape May.....	1,850	J. S. Levin, Pres..... W. Robinson..... S. Kellerson..... M. Subber, Sec. and Reg..... E. J. Annis, Inspector.....	Woodbine. " " " "
Woodcliff.....	Bergen.....	477	S. B. Reed, Pres..... Wm. English..... David H. Tice..... Peter E. Van Riper..... John H. Wortendyke..... G. J. Wortendyke, Sec. and Reg.....	Woodcliff. " Allendale. " Woodcliff. Allendale.
Wood Lynne.....	Camden.....	858	Wm. Amesley, Pres..... R. A. Rockhill..... C. Randolph..... Frank G. Mugglesworth, Sec. and Reg.....	Wood Lynne. " " "
Wood Ridge.....	Bergen.....	721	J. H. Schmitt, Pres..... F. C. Ball..... H. H. Hofener..... F. W. Lehmann, Sec. and Reg..... C. R. Ruegger, Inspector.....	Wood Ridge. " " " "
Woodstown.....	Salem.....	1,500	Amos Peterson, Pres..... E. P. McGeorge, M.D..... Issac B. Coles..... Wm. Coleman..... Chalkey Haines..... Wm. B. Foster, Sec..... H. H. Stepler, Reg..... F. P. Vanlier, Inspector.....	Woodstown. " " " " " " "
<b>TOWNS.</b>				
Absecon.....	Atlantic.....	616	E. H. Madden, M.D., Pres..... Henry Alexander..... Jesse S. Showell..... Samuel Johnson, Sec. and Reg..... C. C. Allen, M.D., Inspector.....	Absecon. " " " "
Bloomfield.....	Essex.....	11,668	Wm. L. Johnson, Sec.....	Bloomfield.
Boonton.....	Morris.....	3,985	N. A. Myers, Sec..... G. E. Fisher, Reg.....	Boonton. "
Freehold.....	Monmouth.....	3,064	Harvey S. Brown, M.D., Pres. S. D. Bennett..... I. S. Long, M.D..... E. D. Clayton..... Harry Ingham..... Alonzo White..... Alonzo Brower, Sec. and Reg.....	Freehold. " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNS—Con.</b>				
Guttenburg.....	Hudson.....	4,563		
Hackettstown.....	Warren.....	2,594	F. M. Cook, Pres..... Alden E. Martin, M.D..... Richard G. Clark..... Augustus W. Cutler..... Alfred Hoffman..... Thos. S. White..... Jas. Tamblin..... Frank P. Titus, Clerk and Reg..... Richard G. Clark, Inspector.....	Hackettstown. " " " " " " "
Hammonton.....	Atlantic.....	4,834	J. L. O'Donnell, Clerk and Reg.....	Hammonton.
Harrison.....	Hudson.....	12,824	John I. Malone, Pres..... John J. Daly..... Henry Allers, M.D..... Nathaniel Comey..... John J. Scannell, Sec..... John T. McClure, Inspector.....	Harrison. " " " " "
Irvington.....	Essex.....	7,180	Jos Clickenger, Pres..... Jonah Hardgrove..... Herman Fisher..... Chas. Bonga..... Hugo Winkler..... Edwin Berry, Sec..... Mahlon Stockman, Reg..... Ira Meeker, Inspector.....	Irvington. " " " " " "
Kearny.....	Hudson.....	13,601	H. W. Schmale, Pres..... Nevin Kennedy..... Jos. Smith..... M. W. Clouse, M.D..... Geo. F. Lightfoot, M.D..... J. B. Thompson, Sec..... David W. Reid, Reg..... A. E. Geissler, Inspector.....	Kearny. " " " " " "
Keyport.....	Monmouth.....	3,886	Gustave Maurer, Pres..... S. Frank Mason..... Abram Huyler..... Chas. F. Tuthill..... Rufus O. Walling, Sec..... Wm. C. Smith, Reg..... Jas. M. Walling, Inspector.....	Keyport. " " " " "
Red Bank.....	Monmouth.....	6,263	C. D. Warner, Pres..... B. H. Garrison, M.D..... John Sheehan..... F. P. Stryker..... Jas. H. Suckles, Sec. and Reg. Elwood Menough, Inspector.....	Red Bank. " " " " "
Somerville.....	Somerset.....	4,792	Wm. E. Sutphin, Sec. and Reg.....	Somerville.
Town of Union.....	Hudson.....	17,006	Wm. Menger, M.D., Insp.....	Town of Union.



List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNS—Con.</b>				
Westfield .....	Union .....	5,265	Jos. B. Harrison, M.D., Pres. Geo. L. Delatur, Sherman Cooper, M.D., Homer H. Butler, V.S., C. W. Harden, Sec. and Reg.	Westfield. " " " " " " " "
West Hoboken .....	Hudson .....	29,082	A. J. Stanton, Sec.	West Hoboken.
West New York .....	Hudson .....	7,196	J. J. Benson, M.D., Pres. J. D. Bover, Sr., Geo. Theobald, Rudolph Kunze, John H. Everly, Sec.	West New York. " " " " " " " "
West Orange .....	Essex .....	7,872	Jos. B. F. Grady, Pres. Jos. Fleming, Ditlow Schroll, Jr., Sec. Benj. L. Williams, Reg. J. M. Maghee, M.D., Insp.	West Orange. " " " " " " " "
<b>VILLAGES.</b>				
Ridgefield Park .....	Bergen .....		H. J. Innes, Pres. J. W. De Groot, F. W. Johnson, D. S. Servoss, Louis Weiss, Sec. C. A. Knox, M.D., Health Inspector. L. A. Olsen, Plumbing Insp.	Ridgefield Park. " " " " " " " " " " " "
Ridgewood .....	Bergen .....	3,980	M. T. Richardson, Pres. C. P. Crouter, W. L. Vroom, M.D., W. L. Fullerton, G. H. Stevens, Sec. Thos. Terhune, Reg. J. T. De Mund, M.D., Insp. E. E. Pullis, Asst. Inspector. J. B. Hopper, Asst. Sec.	Ridgewood. " " " " " " " " " " " " " "
South Orange Village .....	Essex .....	4,932	Mefford Runyon, M.D., Pres. E. D. Freeman, M.D., H. A. Pulsford, M.D., Francis Spelt, Graham H. Brewer, J. P. Kernan, E. S. Allen, Sec. W. W. Hiberton, M.D., Reg. and Inspector.	South Orange. " " " " " " " " " " " " " "
<b>TOWNSHIPS.</b>				
Acquackanonk .....	Passaic .....	7,187	Fred. W. Wrieterbarth, Pres. Henry Fredrick, Eugene F. Piaget, Chas. H. Weller, Wm. Lemke, Richard Berry, Sec. and Reg. James F. Sutton, Inspector.	Lake View. Delawanna. Richfield. Clifton. " " " " Lake View.
Alexander .....	Hunterdon .....	1,007	Thos. Cronce, Pres. Robt. Roseberry, Sec. and Reg. D. M. Carpenter, Inspector.	Everettstown. Bloomsbury. Millford.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Allamuchy .....	Warren .....	571	C. W. Puffer, Pres. Geo. Guest, Benj. A. Hendershot, Sec. Richard Martin, Reg. L. C. Osmun, M.D., Insp.	Allamuchy. " " " " Hackettstown.
Alloway .....	Salem .....	1,562	Chas. Timberman, Pres. Joseph Garton, Jeremiah S. Watson, Wm. E. Simkins, Sec. and Reg. Warren L. Ewen, M.D., Insp.	Alloway. Cohansey. Yorktown. Aldine. Alloway.
Andover .....	Sussex .....	478	C. C. Fox, Pres. Geo. Ackerson, Joseph Longcor, Sheppard Voorhees, M.D., Wm. Iliff, Sec. and Reg.	Lafayette. Newton. Andover. Newton. Lafayette.
Atlantic .....	Monmouth .....	1,355	H. W. Buck, Pres. J. H. Polhemus, S. T. Smock, Chas. V. Scobey, Sec. and Reg.	Bradvelt. Phalanx. Colt's Neck. Scobeyville.
Bass River .....	Burlington .....	728	Samuel B. Allen, Pres. John Bower, B. F. Henaly, Dr. Ackerman, Jos. B. Lamson, Sec. and Reg.	New Greta. " " " " " " " "
Bedminster .....	Somerset .....	2,246	Chas. Hoffman, Pres. J. M. Pickell, R. B. Duckyck, E. F. Farrow, M.D., J. B. Beekman, M.D., W. D. Vanderbeek, Sec. M. S. Smalley, M.D., Insp.	Pottersville. Lamington. Peapack. Bedminster. Gladstone. " "
Belleville .....	Essex .....	7,632	Wm. Connolly, Reg.	Belleville.
Berkley .....	Ocean .....	558	Devine Butler, Reg.	Bayville.
Bernards .....	Somerset .....	4,514	J. D. Cross, Pres. Thos. Douglass, Van Cleve Meeker, S. S. Baldwin, Sec. and Reg. J. B. Dunster, Inspector.	Lyons. Bernardsville. " " Liberty Corner. Bernardsville.
Bethlehem .....	Hunterdon .....	1,594	Wm. Creveling, Pres. Watson A. Wene, John C. Dalrymple, Chas. R. Burwell, Sec. and Reg. J. S. Lindabury, M.D., Insp.	Pattenburg. Asbury. Valley. " " Bloomsbury.
Beverly .....	Burlington .....	2,181	Wm. T. Baggs, Pres. Frank H. Story, H. N. Perkins, H. K. Weller, M.D., Jos. B. Carter, Sec. and Reg.	Beverly. Delanco. Beverly. Delanco. " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Blairstown .....	Warren .....	1,587	H. P. Heldemore, Pres. .... H. P. Linaberry .....	Blairstown. Vall
			W. C. Howell .....	Blairstown.
			W. S. Ferry, Sec. and Reg. ....	Delaware.
			H. O. Carhart, M.D., Insp. ....	Blairstown.
Boonton .....	Morris .....	243	Geo. W. Blanchard, Sec. .... Jos. Stevenson, Reg. ....	Boonton.
Bordentown .....	Burlington .....	534	C. Mendenhall, M.D., Pres. .... C. C. Hance .....	Bordentown. "
			C. F. Neese .....	"
			Geo. Holloway .....	"
			Hugh Le Jambre, Sec. and Reg. ....	"
Branchburg .....	Somerset .....	979	Alex. B. Brokaw, Pres. .... Jas. Mingle .....	Neshanic Station. North Branch.
			John C. Stryker .....	Readington.
			Peter Q. Brokaw, Sec. and Reg. ....	Centreville.
			Henry V. Davis, M.D., Insp. ....	North Branch.
Brick .....	Ocean .....	2,112	J. H. Harvey, Sec. and Reg. ....	Point Pleasant.
Bridgewater .....	Somerset .....	962	Bernhardt Meyer, Pres. .... Jas. Q. Ten Eyck .....	Finderne. Somerville.
			Wm. Harris .....	"
			Christopher Ehn .....	Raritan.
			Oscar Dow .....	"
			F. T. Ross, Sec. and Reg. ....	Somerville.
			L. M. Lanning, M.D., Insp. ....	"
Buena Vista .....	Atlantic .....	2,624	Alfred Pennoek, Sr., Pres. and Reg. .... Thos. H. Hulst .....	Vineland. "
			Edward J. Smith .....	Richland.
			Harry Brown .....	Newtownville.
			Douglas Reed, Sec. ....	Newfield.
Burlington .....	Burlington .....	1,012	Wm. B. Shedaker, Pres. .... Edward B. Deacon .....	Burlington. "
			Wm. J. Terrill .....	"
			J. B. Cassidy, M.D. ....	"
			Thos. B. Gandy, Sec. and Reg. ....	"
Byram .....	Sussex .....	426	E. O. Valentine, Reg. ....	Stanhope.
Caldwell .....	Essex .....	644	Theo. Vincent, Reg. ....	Caldwell.
Centre .....	Camden .....	2,851	Harry B. Wolohn, Pres. .... Howard M. Haines .....	Magnolia. Mt. Ephraim.
			Wm. F. Miller .....	"
			John H. Jackson, Sec. and Reg. ....	Magnolia.
			L. C. Lyon, M.D., Inspector. ....	"
Chatham .....	Morris .....	629	J. H. Bebout, Reg. ....	New Providence.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Chester .....	Burlington .....	4,819	Jos. Stokes, M.D., Pres. .... Arthur J. Collins .....	Moorestown. "
			Geo. Brock .....	"
			Geo. W. Heaton, Sec. and Reg. ....	"
			Frank G. Stroud, M.D., Insp. ....	"
Chester .....	Morris .....	1,378	Stephen H. De Camp, Pres. .... Elwood C. Hall .....	Chester. "
			E. M. Rarick, Sec. and Reg. ....	"
			Elias Wack, Inspector. ....	"
Chesterfield .....	Burlington .....	1,141	Chas. E. Wallace .....	Chesterfield.
			Edward M. Ridgway .....	"
			C. W. Miller .....	"
			Newton H. Chaffee, M.D. ....	"
			Chas. B. Holloway, Sec. and Reg. ....	"
Cinnaminson .....	Burlington .....	1,064	Clayton Conrow, Pres. .... T. E. Steele, Sec. and Reg. ....	Cinnaminson. Palmyra.
			J. D. Janney, M.D., Insp. ....	Cinnaminson.
Clark .....	Union .....	387	Wm. J. Thompson, Pres. .... Benj. King .....	Rahway. "
			Edwin Mays .....	"
			F. F. Bullman, Sec. and Reg. ....	"
Clementon .....	Camden .....	2,257	Jacob C. Lippincott, Pres. .... Fred. Tomlinson .....	Kirkwood. Laurel Mills.
			Geo. Summerfield .....	Clementon.
			Geo. W. Evans, Sec. and Reg. ....	Lindenwold.
			Edgar B. Sharp, Inspector. ....	Berlin.
Clinton .....	Hunterdon .....	2,026	Willard E. Berkaw, Pres. .... John Shurts .....	Annandale. Stanton.
			Geo. M. Rinehart .....	Cokesbury.
			Matthias J. Wiggins .....	Annandale.
			Bergen B. Berkaw, Sec. and Reg. ....	"
Commerctal .....	Cumberland .....	2,476	C. W. Hand, Pres. .... Clarence M. Robbins .....	Port Norris. Haleyville.
			Reuben Sharp .....	"
			E. B. Bradford, M.D. ....	Port Norris.
			John McConnell, Sr., Sec. and Reg. ....	"
Cranbury .....	Middlesex .....	1,465	Jos. C. Chamberlin, Pres. .... John A. Wyckoff .....	Cranbury. "
			W. I. Stults .....	"
			A. M. Davison, Sec. and Reg. ....	"
Cranford .....	Union .....	3,600	Edmond B. Horton, Pres. .... Edwin G. Woodling .....	Cranford. "
			Jas. C. W. Rankin .....	"
			Jos. K. McConnel, M.D. ....	"
			Edward S. Crane, Sec. and Reg. ....	"

## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Deerfield.....	Cumberland.	8,212	Elijah R. Parven, Pres. and Reg. James McNab..... Henry M. Dare..... John Loper..... Chas. C. Phillips, M.D., Sec.	Deerfield Street. Bridgeton. Roshayn. Bridgeton. Deerfield Street.
Delaware.....	Camden.....	1,470	Wm. Graff, Pres. and Reg..... Jos. Hinchman..... J. W. Matlack..... E. C. Kaighn..... W. B. Jennings, M.D., Sec.	Haddonfield. " " " " " " " "
Delaware.....	Hunterdon.....	1,926	Clark B. Johnson, Pres..... Nelson Lambert..... Alton Lake..... J. M. Hoppock, Sec. and Reg. Geo. N. Best, M.D., Insp.	Raven Rock. Sergeantsville. " " Rosemont.
Delran.....	Burlington.....	1,840	Chas. W. Beatty, Pres..... Alex. Bright..... Jos. E. Denneler..... Wm. H. Anderson, Sec. and Reg. J. D. Richardson, Inspector.	Bridgeboro. " " Riverside. " " Bridgeboro. Riverside.
Dennis.....	Cape May.....	1,777	Chas. E. Foster, Pres..... James G. Stiles..... Samuel Bishop..... I. S. Townsend, Sec. and Reg. Eugene Way, M.D., Insp.	South Seaville. Dennisville. Eldora. Clermont. Dennisville.
Deptford.....	Gloucester.....	2,233	Wm. Allen, Pres..... Benj. F. Hains..... Jos. Noblit..... Carroll C. Headley, Sec. and Reg. H. H. Clark, M.D., Inspector.	Westville. " " Wenonah. " " Westville. Woodbury.
Dover.....	Ocean.....	2,869	W. S. Jackson, Pres..... A. A. Dunham..... Bartine Clayton..... Frank Brouwer, M.D..... U. S. Grant, Sec..... Thos. B. Irons, Reg.	Toms River. " " Silverton. Toms River. " " " "
Downe.....	Cumberland.	1,664	John Gaskell, Pres..... Nathaniel Lore..... Luther Bateman..... Sheppard Campbell, Sec. and Reg. S. M. Robinson, M.D., Insp.	Newport. Dividing Creek. Newport. " " " "
Eagleswood.....	Ocean.....	534	H. G. Shinn, Pres..... J. W. Halman..... Jonathan Cox..... C. H. Conover, M.D..... E. F. Cramer, Sec. and Reg.	West Creek. " " " " Tuckerton. West Creek.

## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Eastampton.....	Burlington.....	587	Samuel H. Austin, Pres..... Thos. L. Shinn..... S. J. McFarland..... Chas. H. Dennis, Jr., Sec. and Reg. Samuel Vandever, M.D., Inspector.	Smithville. " " Mount Holly. Smithville. Mount Holly.
East Amwell.....	Hunterdon.....	1,256	Geo. Strimple, Pres..... Geo. W. Bateman..... Edward H. Wilson..... Edgar Higgins, Sec. and Reg. Peter C. Young, M.D., Insp.	Ringoes. Clover Hill. Ringoes. " " " "
East Brunswick.....	Middlesex.....	2,025	Henry Warnsdorfer, Sec. and Reg.	W. New Brunswick, R. F. D. No. 3.
East Greenwich.....	Gloucester.....	1,299	Wm. Borden, Pres..... Daniel Pecker..... J. C. Heritage..... J. C. Dauson, Sec. and Reg.	Swedesboro. Clarksboro. Michleton. " "
East Windsor.....	Mercer.....	861	S. L. Mount, Sec. and Reg.	Etra.
Eatontown.....	Monmouth.....	2,574	Benj. Eldridge, Pres..... Solomon Stout..... Wm. Slocum..... Daniel Morris, Sec..... A. L. Scobey, Reg..... Thos. Dickerson, Inspector.	Oceanport. Eatontown. West Long Branch. Eatontown, " "
Egg Harbor.....	Atlantic.....	1,468	John Blackman, Pres..... Geo. W. Adams..... Allan Tushman..... A. R. Vickers, Sec. and Reg.	Steelmanville. Idlewood. Eculville. Bakersville.
Elk.....	Gloucester.....	938	Rulof Knissell, Pres..... Frank Homan..... Thomas Hann..... Samuel L. Evers, Sec. and Reg.	Aura. Glassboro. Ewan. Aura.
Elsinboro.....	Salem.....	398	Chas. P. Farnhoff, Reg.	Salem.
Evesham.....	Burlington.....	1,356	W. J. Evans, Pres..... A. W. Lofand..... H. D. Lippincott..... B. K. Erick, M.D., Sec..... S. D. Farrow, Reg.	Marlton. " " " " " " " "
Ewing.....	Mercer.....	1,560	James F. Herbert, Pres..... Samuel S. DeCout..... Lewis E. Anderson..... W. H. Cadwallader, Sec. and Reg. E. E. Allen, M.D., Inspector.	Trenton Junction. " " Trenton. " " Trenton Junction.
Fairfield.....	Cumberland.	1,625	Wm. H. C. Taylor, Pres..... Edward Trenchard..... Edward Bowe..... Ephraim Whitaker..... Wm. H. Thompson, Sec. and Reg. Irvin W. Kirk, M.D., Insp.	Fairton. " " " " " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Fanwood.....	Union.....	1,841	Thos. J. Nicholl, Pres..... E. V. Goodman..... Theo. R. Bruchmann..... Chas. H. French, Sec. and Reg..... F. W. Westcott, M.D., Insp..... W. R. Coddington, Counsel.....	Scotch Plains. Ashbrook. Scotch Plains. Westfield. Fairwood. Plainfield.
Florence.....	Burlington.....	1,967	Geo. Beatty, Pres..... Oscar Donnelly..... Harry Atkins..... Byron Carty, Sec. and Reg..... David Baird, Jr., M.D., Insp.....	Florence. " " " "
Frankford.....	Sussex.....	998	Daniel Dalrymple, Reg.....	Papakating.
Franklin.....	Bergen.....	1,666	Andrew E. Voorhis, Pres..... Wm. J. Packer..... John W. Courter..... Dan'l Snyder, Sec. and Reg..... E. W. Hamilton, M.D., Insp.....	Wyckoff. Midland Park. Campan. Midland Park. Oakland.
Franklin.....	Gloucester.....	2,197	A. B. Richman, Pres..... Samuel Lowder..... Chas. Trimnell..... A. A. Smith, M.D..... Harry C. Richman, Sec. and Reg.....	Malaga. Newfield. Plainville. Malaga. "
Franklin.....	Hunterdon.....	1,105	Hiram D. Young, M.D..... John E. Anderson..... Wm. A. C. Roberson..... J. L. Agans, Sec. and Reg..... Q. E. Snyder, M.D., Insp.....	Quakertown. Pittstown. " " Quakertown.
Franklin.....	Somerset.....	3,577	Nathaniel Wilson, Pres..... Wm. A. Cortelyou..... Elias Baker..... L. J. Snydam, Sec. and Reg..... J. H. Cooper, M.D., Insp.....	Weston. { Princeton, R. F. D. No. 1 New Brunswick, R. F. D. No. 6. New Brunswick, R. F. D. No. 6. Middlebush.
Franklin.....	Warren.....	1,809	P. B. Butterwick, Reg.....	Asbury.
Fredon.....	Sussex.....	462	David E. Warbasse, Pres..... Geo. Van Horn..... Benj. Fritty..... Joseph E. Huff, Sec. and Reg..... E. W. Landes, M.D., Insp.....	Newton. " " " Stillwater.
Freehold.....	Monmouth.....	2,474	Peter F. Conover, Pres..... Millard F. Conover..... John P. Walker..... Henry Campbell..... Grandin L. Clayton..... E. V. Lawrence, Sec. and Reg..... Henry Neafie, M.D., Insp.....	Freehold. " " " Adelphia. Freehold. "
Frelinghuysen.....	Warren.....	728	Walter H. Ackerson, Reg.....	{ Blairstown, R. F. D. No. 1.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Galloway.....	Atlantic.....	1,876	Edward Ertell, Pres..... Wm. Krebs..... Jos. C. Bowen..... Jos. Nehr, Sec. and Reg..... C. C. Allen, M.D., Inspector.....	Pomerania. Port Republic. " Egg Harbor City. Absecon.
Glassboro.....	Gloucester.....	2,607	Chas. Heritige, M.D., Pres..... Josiah H. Shute..... W. H. Yenney..... J. T. Abbot, Sec. and Reg.....	Glassboro. " " "
Gloucester.....	Camden.....	2,800	John M. Stetser, Pres..... S. S. Batten..... Collins A. Norcross..... J. Frank Brewer, Sec. and Reg.....	Blackwood. Erial. " Blackwood.
Green.....	Sussex.....	500	C. F. Ayres, Pres..... C. L. Cook..... A. Hull..... I. L. Labar, Sec. and Reg..... J. C. Clark, M.D., Inspector.....	Huntsville. " " Tranquility. Andover.
Greenwich.....	Cumberland.....	1,122	Geo. L. Watson, Pres..... Wm. H. Glaspay..... J. W. Butler, Sec. and Reg..... S. M. Snyder, M.D., Insp.....	Othello. Greenwich. Othello. Greenwich.
Greenwich.....	Gloucester.....	754	Joseph Bramell, Reg.....	Faulsboro.
Greenwich.....	Warren.....	854	Geo. C. Hamlen, Pres..... B. F. Strader..... Thos. Hyndshaw..... Wm. Sherrer, Sec. and Reg.....	Stewartsville. " " Bloomsbury.
Haddon.....	Camden.....	1,009	Wm. J. McDewitt, Pres..... Richard Griffith..... Wm. Bettie..... Jas. Macaulay, Sec. and Reg.....	Westmont. " Oaklyn. Haddonfield.
Hamilton.....	Atlantic.....	2,021	Howard Shoemaker, Reg.....	Mays Landing.
Hamilton.....	Mercer.....	5,150	Edward B. Woodward, M.D., Pres..... Joel A. Cramer..... Isaac Robbins..... Wm. E. Ford..... Wm. T. Robbins, Sec..... Azariah Cubberly, Reg..... Jas. N. Reed, Inspector.....	Yardville. Trenton. " Crosswicks. Hamilton Square. " Trenton.
Hampton.....	Sussex.....	628	A. J. Williams, Pres..... M. H. Northrup..... J. Martin Couse..... J. W. Thompson, Sec. and Reg.....	Baleville. " Halsey. Blair.
Hanover.....	Morris.....	5,294	Phineas Tarrand, Pres..... Alex. Webb..... T. J. Davis..... Chas. Dennis..... Jos. H. Bastedo, Sec. and Reg.....	Boonton. Hanover. Morris Plains. Troy Hills. Boonton.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

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<b>TOWNSHIPS—Con.</b>				
Hardwick	Warren	37	Marcus C. Hill, Reg.	Blairstown.
Hardyston	Sussex	3,484	Lewis R. Congleton, Reg.	Hamburg.
Harmony	Warren	1,086	Irvin B. Smith, Pres. J. Manning Rush. Geo. M. Aney. Freman Schuler, Sec. and Reg. H. B. Bossard, M.D., Insp.	Rocksburg. Stewartsville. Phillipsburg. Phillipsburg.
Harrington	Bergen	521	Alfred Anderson, Reg.	Closter.
Harrison	Gloucester	1,624	Eli Heritage, Sec. and Reg.	Richwood.
Hillsboro	Somerset	2,247	J. H. Saums, Sec. and Reg.	Fomerville.
Hillsdale	Bergen	945	C. H. De Voe, Reg.	Westwood.
Hohokus	Bergen	3,167	Chas. E. May, Pres. Peter Z. May. Jas. H. Carlough. John Ackerman, Sec. and Reg. James W. Collins, M.D., Insp.	Ramsey. Mahwah. Ramsey. "
Holland	Hunterdon	1,528	Herbert Quick, Pres. Walter Burgstreser. Chas. R. Stull. S. S. Snyder, Sec. Godfrey Hawk, Reg. A. A. Heil, Inspector.	Milford. " " Bloomsbury. Milford.
Holmdel	Monmouth	1,221	V. D. Kenney, Sec. and Reg.	Holmdel.
Hope	Warren	1,025	John C. Flumerfelt, Pres. Geo. A. Henry. James P. Drake. Lewis C. Fleming, Sec. and Reg. Walter Elorm, M.D., Insp.	Delaware. Hope. " Townsbur. Hope.
Hopewell	Cumberland	1,840	E. G. Ayars, Pres. D. D. Davis. E. D. Ferry. Walter L. Minch, Sec. and Reg.	Bridgeton. Shiloh. Bridgeton. Shiloh.
Hopewell	Mercer	3,279	Jos. R. Burroughs, Pres. Pierson B. Hunt. David Stout. A. T. Blackwell, Sec. and Reg. Wm. Radcliffe, M.D., Insp.	Pennington. Tinsville. Stoutsburg. Harbourton. Pennington.
Howell	Monmouth	2,585	Walter Havens, M.D., Pres. Benj. M. Cooper. Robert H. Morris. Chas. E. Feury. Jas. E. Butcher, Sec. and Reg.	Lakewood. Adelphia. Farmingdale. Ardena.
Hudson County	Hudson	449,879	C. J. Rooney, Clerk	Jersey City.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Independence	Warren	835	W. H. McCormick, Pres. A. B. Leigh. J. T. Lomerson. F. W. Haggerty, M.D., Sec. Wm. K. Teel, Reg.	Hacketstown. Great Meadows. Vienna. "
Jackson	Ocean	1,534	Thos. H. Harker, Pres. Dr. Geo. Bell. A. C. Emley. Albert Pearce. Geo. C. Hankins. W. S. Hendrickson, Sec. and Reg.	Cassville. " " Jackson's Mill. Vanhsieville. Jackson's Mill.
Jefferson	Morris	1,259	Wm. Smith, Pres. Cyrus Weaver. John Tierney. Chas. Chamberlain, Sec. John Walters, M.D., Insp.	Newfoundland. Oakridge. Woodport. Wharton.
Kingwood	Hunterdon	1,188	John W. Hoff, Pres. Thos. McAlone. Jos. Hann. Samuel J. Snyder, Sec. and Reg. Frank S. Grim, Inspector.	Pittstown. Point Pleasant. Barbertown. Locktown. Baptistown.
Knowlton	Warren	1,222	Theo. Beck, Pres. Erven Snyder. F. Eynen. C. E. Beck, M.D. Wm. B. Moore, Sec. and Reg.	Hainesburg. Delaware. " Portland, Pa. Columbia.
Lacey	Ocean	658	G. E. Wallace, M.D., Pres. John B. Wilbert. B. F. Holmes. Reuben Tilton. B. F. Matthews, Sec. and Reg.	Forked River. " " Lanoka. Forked River.
Lafayette	Sussex	619	F. M. Pellet, Pres. John A. Ackerson. Richard D. Snook. Frank Demorest, Sec. and Reg. J. C. Strader, M.D., Insp.	Lafayette. " " " "
Lakewood	Ocean	4,265	John L. Reid, Pres. John Sherman. Jacob Skidmore. Geo. W. MacMillan. Ernest K. LeCompte, Sec. R. B. Robbins, Reg.	Lakewood. " " " " "
Landis	Cumberland	5,851	Dr. Waldo F. Sawyer, Pres. Henry Taylor. Wallace I. Frost. Edwin Kye. Geo. W. Ozias. John F. Van Dyke. H. M. Dolbey, Sec. and Reg.	Vineland. " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Lawrence.....	Cumberland.	1,730	E. L. Mulford, Pres..... Peter Johnson..... David W. Sheppard..... Frank M. Bateman, M.D..... Henry S. Long, Sec..... Furman B. Sheppard, Reg.....	Cedarville. Fairton. Cedarville. " " " " " "
Lawrence.....	Mercer.....	2,043	Thos. B. Decou, Pres..... John C. Applegate..... John E. Gorden..... E. Dewitt, M. D..... Frank Pierson, Sec. and Reg.....	Lawrenceville. Princeton. Port Mercer. Lawrenceville. " "
Lebanon.....	Hunterdon ..	1,983	E. C. Apgar, Pres..... J. W. Banghart..... Wm. V. Prall..... A. S. Banghart, Sec. and Reg.....	Califon. Anthony. Changewater. Glen Gardner.
Linden.....	Union.....	1,036	Frank B. Stinson, Reg.....	Linden.
Little Egg Harbor.....	Ocean.....	517	Wm. Speck, Reg.....	Tuckerton.
Little Falls.....	Passaic.....	3,679	W. W. Wilson, Reg.....	Little Falls.
Livingston.....	Essex.....	1,407	Burn W. Dickerson, Pres..... John H. Parkhurst..... Wm. H. Harrison..... Geo. E. De Camp, Sec. and Reg..... E. E. Peck, M.D.....	Chatham. Livingston. Roseland. " " Caldwell.
Lodi.....	Bergen.....	1,061	Chas. Foose, Pres..... Peter Strunck..... Frank Switz..... Julius Pries, Sec. and Reg.....	Wood Ridge. Little Ferry. Wood Ridge.
Logan.....	Gloucester.....	1,528	Isaac Derrickson, Pres..... Hugh McGlency, Sr..... Wm. J. Justice..... S. E. Platt, Sec. and Reg..... P. E. Stillwagon, M.D.....	Repaupo. Bridgeport. " " " "
Long Beach.....	Ocean.....	73	A. W. Brown, Reg.....	Manahawkin.
Lopatcong.....	Warren.....	695	E. Frank Cline, Reg.....	Shimers.
Lower.....	Cape May.....	1,386	Geo. Dickinson, Pres..... Daniel Schellenger..... Aron Woolson..... W. A. Lake, M.D..... J. P. Mackissic, Sec. and Reg.....	Erma. Fishing Creek. Erma. Cape May City.
Lower Alloways Creek.....	Salem.....	1,223	Henry Elwell, Reg.....	Hancock's Bridge.
Lower Penns Neck.....	Salem.....	1,327	Elsworth L. Irelan, Sec. and Reg.....	Pennsville.
Lumberton.....	Burlington ..	1,683	H. D. Culin, Reg.....	Hainesport.
Madison.....	Middlesex.....	1,582	Cornelius Berlin, Pres..... James Fountain..... Ambrose Green..... Ira C. Crandall, M.D..... D. H. Brown, Sec. and Reg..... Edward Barker, Inspector.....	Matawan. Old Bridge. " " " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Manalapan.....	Monmouth ..	1,392	Edward Hendrickson, Pres..... J. C. Sutphin..... W. C. Hartsome..... A. T. Applegate, M.D..... Garret B. Conover, Sec..... S. C. Bowne, Reg.....	Englishtown. Tennent. Milhurst. Englishtown. " " Tennent.
Manchester.....	Ocean.....	785	A. B. Phillips, Pres..... Edward Crawford..... Wm Stults..... Harold Pittis, M.D., Sec..... Amos Bozarth, Reg.....	Lakehurst. " " " " " " " "
Manchester.....	Passaic.....	2,277	Samuel Rogers, Pres..... Chas. Erving..... Andrew Van Riper..... Geo. V. Spangnmacher, Sec. and Reg..... A. A. Lydecker, M.D., Insp.....	Haledon. " " " " " " " "
Mannington.....	Salem.....	1,652	J. B. Grier, Reg.....	Salem.
Mansfield.....	Burlington ..	1,493	A. N. Dobbins, Pres..... C. G. Kinsley..... C. G. Bryan..... Jos. H. Armstrong, Sec. and Reg..... A. H. Patterson, M.D., Insp.....	Columbus. " " Georgetown. Columbus. Georgetown.
Mansfield.....	Warren.....	1,234	J. V. Leigh, Pres..... John Vagata..... John E. Burimple..... Jacob Beaty, Sec. and Reg..... H. S. Funk, M.D., Inspector.....	Port Murray. " " " " " " " "
Mantua.....	Gloucester ..	1,471	Harry Denn, Pres..... Benj. Sharp..... Robert Shoemaker..... Jos Lodge, Sec. and Reg..... L. N. Slaughter, M.D., Insp.....	Mantua. Barnesboro. Pitman Grove. " " " "
Marlboro.....	Monmouth ..	1,664	W. C. McElwaine, Sec. and Reg.....	Englishtown.
Matawan.....	Monmouth ..	1,365	Chris. Winters, Reg.....	Cliffwood.
Maurice River.....	Cumberland.	2,133	Chas. Grassman, Pres..... Chas. Williams..... Chas. Champion..... Henry Reeves, Jr., Sec. and Reg.....	Port Elizabet. Helsieridge. Dorchester. Leesburg.
Medford.....	Burlington ..	2,030	Wm. M. Potts, Reg.....	Medford.
Mendham.....	Morris.....	1,724	Geo. W. Savage, Pres..... M. M. Connett..... John Quimby..... J. Smith Gunther, Sec..... John B. Dolan, Reg.....	Brookside. " " Mendham. " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

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<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Middle.....	Cape May.....	2,584	Luther T. Garrison, Pres..... V. N. Ericsson..... Luther W. Swain..... J. Morgan Dix, M.D..... Stillwell H. Townsend, Sec and Reg.....	Cape May C. H. Dias Creek. Swalnton. Cape May C. H. " " "
Middletown.....	Monmouth.....	5,600	Chas. F. Grossinger, Pres..... D. W. Van Note..... Geo. C. Henry..... Wm. B. Conover..... Henry D. Smith, Sec..... Omar Sickles, Reg..... O. W. Budlong, M.D., Insp.....	Leonardville. Belford. Middletown. Navestak. Belford.
Midland.....	Bergen.....	1,465	John G. Zabriskie, Pres..... Jacob H. Blauvelt..... Otto Weisgerber..... John D. Bogert, Sec. and Reg..... Frank Freeland, M.D., Insp. Clarence Mabie, Counsel.....	Rochelle Park. Ridgewood. Rochelle Park. Ridgewood. Maywood. Hackensack.
Millburn.....	Essex.....	3,182	John M. Drake, Reg.....	Millburn.
Millstone.....	Monmouth.....	1,482	John H. Ely, Pres..... Stephen P. Dey..... Winfield S. Chambers..... Geo. J. Ely, Sec. and Reg..... Wm. T. McMullen, M.D., Inspector.....	Ferrinville. " " Cranbury. Ferrinville.
Monroe.....	Gloucester.....	2,519	D. C. Champion, Pres..... Jas. M. Tweed..... Harry White..... L. M. Halsey, M.D..... Clayton B. Tice, Sec. and Reg.....	Williamstown. " " " " " "
Monroe.....	Middlesex.....	2,023	Chas. A. Morse, Pres..... Willard Forman..... T. Mount Applegate..... Robt. E. Vandenbergh, Sec. and Reg.....	Prospect Plains. Jamesburg. Cranbury. Prospect Plains.
Montague.....	Sussex.....	661	Geo. McCarty, Reg.....	Port Jervis, N. Y.
Montgomery.....	Somerset.....	1,504	Geo. W. Campbell, Pres..... Henry A. Duryea..... Wm. I. Robinson, Sec..... C. B. Allhouse, Reg.....	Griggstown. Blawenburg. Belle Mead. " "
Montville.....	Morris.....	1,650	Henry C. Baldwin, Reg.....	Montville.
Morris.....	Morris.....	2,660	Alfred M. Armstrong, Pres. and Reg..... Phenix Miller..... Lewis E. Clark..... Watson A. Barton..... J. Paul Jamieson, Sec.....	Morristown. " " Morris Plains. Morristown.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

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<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Mount Laurel.....	Burlington.....	1,671	Richard D. Dudley, Pres..... Budd M. Horner..... Chas. H. Wilkins..... Benj. M. Haines, Sec. and Reg..... J. B. Winterstein, M.D., Insp. " "	Moorestown. Masonville. Mount Laurel. Moorestown. " "
Mount Olive.....	Morris.....	1,099	Whitfield Sharp, Pres..... Wm. B. McPeak..... John G. Budd..... S. W. Salmon, Sec. and Reg. Dr. Lancelot Ely, Inspector.....	Flanders. Mount Olive. Budd Lake. Mount Olive. Flanders.
Mullica.....	Atlantic.....	794	W. W. Phillips, Pres. and Reg..... A. J. McKeone..... Chas. Saumann..... John Mick..... John T. Irving, Sec.....	Elwood. Pleasant Mills. Egg Harbor City. Elwood. " "
Neptune.....	Monmouth.....	9,357	T. Nelson Lillagore, Pres..... D. E. Havens..... T. B. Hancock..... R. L. Kuder..... Leonard B. Romaine..... Wm. E. O'Brien, Sec. and Reg..... J. T. Rose, M.D., Inspector.....	Ocean Grove. Asbury Park. " " Ocean Grove. Asbury Park. " " " "
New Hanover.....	Burlington.....	960	Chas. Remine, Reg.....	Wrightstown.
New Providence.....	Union.....	456	H. S. Fullerton, Pres..... Victor Mercier..... Geo. Wahl..... P. G. Johnson, Sec. and Reg. Frank W. Westcott, Insp.....	Scotch Plains. Berkeley Heights. " " New Providence. Scotch Plains.
Newton.....	Sussex.....	4,422	Geo. N. Harris, Pres..... Lewis J. Martin..... John N. Calbin..... W. H. Smith, M.D..... Geo. B. Case, Sec. and Reg. J. L. Hallock, Inspector.....	Newton. " " " " " " " " " "
Northampton.....	Burlington.....	5,509	Jos. E. Elbertson, Pres..... Jos. Shreve..... T. Lacy Akins..... Franklin B. Dill..... Franklin Hunter..... M. H. Girven, Sec. and Reg. R. H. Parsons, M.D., Insp.....	Mount Holly. " " " " " " " " " " " "
North Bergen.....	Hudson.....	11,184	Emil J. Foerch, Sec.....	New Durham.
North Brunswick.....	Middlesex.....	929	A. A. Voorhees, Pres..... Wm. Voores..... Peter R. Vansickle..... I. D. Cozens, Sec. and Reg. J. D. Ten Eyck, M.D., Insp.....	New Brunswick. " " " " Franklin Park. " "
North Hanover.....	Burlington.....	747	Joseph Forman, Pres..... Richard Bahilly..... I. E. Harrison..... Pearson Taylor, Sec. and Reg.....	Wrightstown. " " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
North Plainfield.....	Somerset .....	699	Wm. Titus, Pres..... Bert Clark..... Albert Brokaw..... A. P. Voorhies, Sec. and Reg..... Emile Clementz, Inspector.....	Watchung. Scotch Plains. Bound Brook. Plainfield. Watchung.
Ocean.....	Monmouth .....	1,574	Jesse P. Manahan, Pres..... James W. Conover..... John F. Woolley..... Richard West, Sec. and Reg..... W. S. Reed, M.D., Inspector.....	Long Branch. Oakhurst. " " North Long Branch.
Ocean.....	Ocean .....	409	J. R. Stokes, Pres..... Wm. B. Wilkins..... Oscar Brown, Sec. and Reg..... Chas. F. Jones, Inspector.....	Waretown. " " " " " "
Oldmans.....	Salem.....	1,374	R. Lee Sailor, Pres..... Frank J. Gaventa..... Jacob J. Hunt..... L. C. Justice, Sec. and Reg..... Harry T. Johnson, M.D., Inspector.....	Pedricktown. " " " " " " " "
Orvil.....	Bergen.....	762	Edmund P. Jaeger, Reg.....	Waldwick.
Overpeck.....	Bergen.....	2,850	S. A. Wilcox, Reg.....	Ridgefield Park.
Oxford.....	Warren.....	2,964	L. B. Hoegland, M.D., Pres..... John Hildebrandt..... Hanson Gardner..... Isaac Snyder..... Michael Mountain, Sec. and Reg.....	Oxford. Belvidere. Oxford. Belvidere. Oxford.
Pahaquarry.....	Warren.....	257	Jason K. Hill, Reg.....	Millbrook.
Palisade.....	Bergen.....	1,042	Wm. Ely, Reg.....	New Bridge.
Palmyra.....	Burlington .....	2,643	F. Blackburn, Reg.....	Palmyra.
Passaic.....	Morris.....	2,163	Geo. B. Meeker, Pres..... Henry Lindsley..... Thos. Meale..... J. A. Harvey, Sec. and Reg..... T. W. Bebout, M.D., Insp.....	Long Hill. Millington. Stirling. " " " "
Pemberton.....	Burlington .....	1,706	Isaac W. Rogers, Pres..... Chas. Kinsley..... Victor Rusch..... Barclay Seeds, Sec. and Reg.....	Pemberton. Brown's Mills. Pemberton. Pemberton.
Pensauken.....	Camden.....	3,957	Harry E. Horner, Reg.....	Merchantville.
Pequannock.....	Morris.....	1,674	A. J. Slingerland, Pres..... Thos. Dodd..... Fred. Bicker..... Wm. H. Beam, Sec. and Reg..... C. D. V. Bonard, M.D., Inspector.....	Fompton Plains. Lincoln Park. Butler. Fompton Plains. " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
<b>Con.</b>				
Pilesgrove.....	Salem.....	1,726	S. A. Ridgway, Pres..... Edgar C. Moore..... Clement McAllister..... D. F. Davis, Sec. and Reg.....	Woodstown. " " Sharptown. Woodstown.
Piscataway.....	Middlesex.....	2,767	Nelson M. Giles, Pres..... E. D. Giles..... T. H. Brantingham..... W. J. Whitford, M.D..... Geo. S. Bunting, Sec. and Reg.....	Bound Brook. New Market. Plainfield. New Market. New Brunswick.
Pittsgrove.....	Salem.....	2,154	Frank Parvin, Pres..... John Miller..... John Dillmore..... Geo. Schallck, Sec. and Reg.....	Vineland. Palatine. Monroeville. Centreton.
Plumsted.....	Ocean.....	1,241	Geo. F. Compton, Reg.....	New Egypt.
Pohatcong.....	Warren.....	3,408	Jacob M. Seyler, Pres..... Johnson Humme..... Peter W. Winter..... Chas. H. Boyer, M.D..... Jacob O. Boyer, Sec. and Reg.....	Finesville. Alpha. Plainfield. Riegelsville. Carpentersville.
Pompton.....	Passaic.....	2,981	Jas. E. Sloat, Pres..... E. J. Brown..... W. C. White..... David Beam, Sec. and Reg..... David N. Shippe, M.D., Insp.....	Midvale. Eskine. Butler. Midvale. Wanaque.
Princeton.....	Mercer.....	1,141	Chas. P. Gullick, Reg.....	Princeton.
Quinton.....	Salem.....	1,183	F. B. Husted, Pres..... Andrew Harris..... Wm. Hood..... Levi Horner..... Josiah T. Harris, Sec. and Reg.....	Quinton. " " " " Cohansey. Quinton.
Randolph.....	Morris.....	2,327	John L. Connelly, Pres..... J. F. C. Bryant..... Jas. O. Wright Jr..... D. H. Dalrymple, Sec. and Reg.....	Dover. Ironia. Mount Freedom. Dover.
Raritan.....	Hunterdon.....	3,861	Wm. S. Buchanan, Reg.....	Flemington.
Raritan.....	Middlesex.....	2,612	Wm. T. Woerner, Reg.....	New Brunswick.
Raritan.....	Monmouth.....	1,473	W. C. Smith, Reg.....	Keyport.
Readington.....	Hunterdon.....	2,423	G. G. Conover, Pres..... Davis Reed..... Geo. E. Probasco..... F. L. Johnson, M.D..... Jacob C. Voorhees, Sec. and Reg.....	White House Station. White House. Three Bridges. Stanton. White House Station.
Ridgefield.....	Bergen.....	745	Thos. F. Mallon, Reg.....	Coytesville.



## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
Riverside.....	Burlington ...	3,301	Ernest Rine, Pres..... Wm. Mathias..... Elias Kemmerley..... Chas. Heiss, Sec. and Reg. John C. Cassidy, M.D., Insp.	Riverside. " " " "
Rockaway.....	Morris.....	5,158	Thos. Grant, Reg.....	Hibernia.
Roxbury.....	Morris.....	2,323	David B. Jardine, Pres..... Theo. F. King..... Jonas W. Hulse..... Thos. K. Wilkinson, Sec. and Reg.	Kenvil. Ledgewood. Port Morris. Ledgewood.
Saddle River.....	Bergen.....	2,048	Isaac A. Hopper, Reg.....	Fair Lawn.
Sandyston.....	Sussex.....	872	Adam Van Sickle, Pres..... F. Rosenkranz..... Edward Snook..... M. D. Hughes, M.D., Sec..... W. Van Sickle, Reg.....	Layton. " " " "
Sayreville.....	Middlesex.....	4,779	August Rohdes, Pres..... Wm. Burke..... Henry Arleth..... J. H. Beckman, M.D..... B. F. Sammel, Sec. and Reg..... Patrick Farley, Inspector.....	Sayreville. " " " " "
Shamong.....	Burlington ...	508	Mahlon Prickett, Reg.....	Indian Mills.
Shrewsbury.....	Monmouth.....	5,502	A. L. Ivins, Pres. and Reg..... Wm. T. Parker..... Wm. H. Houston..... Wm. A. Van Schoick..... Forman B. Smith..... Victor A. Lighter..... A. C. Harrison, Sec..... Wm. Curchin, Inspector.....	Red Bank. Little Silver. Red Bank. " Fair Haven. Oceanic. Red Bank. Fair Haven.
Southampton.....	Burlington ...	1,860	Lewis S. Brown, Reg.....	Vincetown.
South Brunswick.....	Middlesex.....	2,489	John H. Stullis, Pres..... Wm. H. Gulick..... John B. Rowland..... Edgar Carroll, M.D..... Wm. Perkins, Sec. and Reg.	Cranbury. Kingston. Monmouth Junction. Dayton. Princeton.
South Harrison.....	Gloucester....	680	Geo. F. Wilkinson, Pres..... Wm. Hudson..... Richard D. Ridgway..... D. C. Lippincott, Sec. and Reg. Samuel F. Stanger, M.D., Inspector.	Basset. Harrisonville. Mullica Hill. Harrisonville. "
South Orange.....	Essex.....	1,946	H. Stacy Smith, Pres..... Wm. H. Kemp..... C. A. Cross..... T. C. Baker, Sec. and Reg. W. W. Heberton, M.D., Insp.	Maplewood. " " " South Orange.

## List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
Sparta.....	Sussex.....	1,613	Whitfield H. Beatty, Pres..... R. H. Earl..... L. C. Burd, M.D..... J. W. Maseker, Sec. and Reg.	Sparta. " Ogdensburg. Sparta.
Springfield.....	Burlington ...	1,823	John B. Tilton, Reg.....	Wrightstown.
Springfield.....	Union.....	1,123	Richard Trivett, Pres..... John L. Denman..... Fred. Kenley..... L. T. Terry, Sec. and Reg. J. A. Stites, M.D., Inspector.	Springfield. " " " "
Stafford.....	Ocean.....	994	Joshua Hilliard, M.D., Pres..... Edward E. Predmore..... Benj. Oliphant..... James H. A. Ker..... John B. Courtney, Sec. and Reg.	Manahawkin. " " Mayetta. Manahawkin.
Stillwater.....	Sussex.....	815	John E. Kaice, Pres..... Chas. A. Lewis..... Wm. E. Littman..... R. W. Landes, M.D..... O. Van Horn, Sec. and Reg.	Stillwater. " Swartswood. Stillwater. "
Stow Creek.....	Cumberland..	855	Chas. D. Fogg, Pres..... J. B. Seagraves..... Lewis Willis..... R. A. Fogg, Sec. and Reg.	Bridgeton. " " Shiloh.
Tabernacle.....	Burlington ...	462	J. Cooper Haines..... A. C. Taylor..... Wesley Taylor..... Geo. H. Wisham, Sec. and Reg.	Vincetown. " " "
Teaneck.....	Bergen.....	1,272	Wm. Bennett, Pres..... C. J. Terhune..... Robert Stevenson..... Peter I. Ackerman, Sec. and Reg.	Englewood. Hackensack. Englewood. Hackensack.
Tewksbury.....	Hunterdon...	1,815	E. B. Conover..... J. J. Neff..... F. L. Appar..... Hezekiah Philhower, Sec. and Reg. Theo. Miller, Inspector.	Fairmount. New Germantown. Mountainville. Califon. "
Union.....	Bergen.....	2,138	Thos. E. Buckley, Reg.....	Lyndhurst.
Union.....	Hunterdon ...	923	Geo. B. Smith, Pres..... J. J. Thorp..... G. E. Emery..... John Little, Sec. and Reg. Edgar Allen, M.D., Insp.	Clinton. Fatenburg. Jutland. Fatenburg. "
Union.....	Ocean.....	913	Wm. A. Jones, Reg.....	Barnegat.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Union.....	Union.....	2,614	Walter A. Miller, Pres..... John H. Doremus..... D. E. Wade..... D. Hobart Sayre, Sec. and Reg.....	Hilton Lyons Farms. Union. "
Upper.....	Cape May.....	1,850	Harry Young, Pres..... Washington Van Gilder..... James G. Stelle..... Jesse T. Young, Sec..... R. Fendall Smith, Reg.....	Beesley's Point. Petersburg Tuckahoe. Beesley's Point. Marmora.
Upper Freehold.....	Monmouth ..	2,002	Isaac S. Dawes, Pres..... Elmer E. Polhemus..... Thos. I. Smith..... F. C. Price, M. D., Sec..... Wm. Quicksell, Reg.....	Imlaystown. Cream Ridge. Imlaystown. Hornestown.
Upper Penns Neck.....	Salem.....	793	Jos. E. Clark, Pres..... Wilbert F. Sailor..... Wilmer Layton..... George W. Hewitt, Sec. and Reg..... J. M. Summerill, Inspector.....	Pennsgrove. " " " "
Upper Pittsgrove.....	Salem.....	1,722	Wm. F. Mayhew, Pres..... Henry Coombs..... John Hitchner..... Geo. W. Fitch, M. D..... R. A. Robinson, Sec. and Reg.....	Elmer. " Daretown. " Monroeville.
Vernon.....	Sussex.....	1,649	Gilbert D. Martin..... Frank E. Card..... Chas. L. Giveans..... A. P. Shaw, Sec. and Reg.....	Glenwood. Campe Vernon. "
Verona.....	Essex.....	2,576	Chas. N. Orgheltree, Pres..... Chas. H. Jacobus..... Carl Man..... H. B. Whitehorn, M. D., Sec. C. S. Simonson, Reg.....	Verona Cedar Grove. Verona. " "
Voorhees.....	Camden.....	1,009	Edw. C. Gardner, Pres..... John H. McUlley..... Chas. H. Hammil..... W. A. Wescott, M. D..... S. H. Gardiner, Sec. and Reg.....	Kirkwood. " Marlton. Berlin Ashland.
Wall.....	Monmouth ..	3,518	S. B. Pearce, Pres..... Chas. Gifford..... E. C. White..... W. W. Froot, M. D..... Geo. E. Rogers, Sec. and Reg.....	Brielle. Allenwood. Glendola. Spring Lake. Belmar.
Walpack.....	Sussex.....	325	Samuel S. Cole..... Nicholas Tillman..... Benj. R. Hull..... J. W. Bunnell, Sec. and Reg.....	Walpack Centre. Flatrockville. Bevans.

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—Con.</b>				
Wantage.....	Sussex.....	2,080	Lebens Martin, Pres..... Frank Coe..... J. I. Burk..... W. T. Wright..... S. M. Parcell, Sec. and Reg..... H. D. Vangaasbeck, M. D., Inspector.....	Sussex. " " " " "
Warren.....	Somerset.....	974	H. P. Williams, Pres..... John Gunten..... Frank Allette..... Edmund E. Sege, Sec. and Reg.....	Warrenville. Martinsville. Warrenville. Gillette.
Washington.....	Bergen.....	382	E. M. Bock, Reg.....	Westwood.
Washington.....	Burlington ..	568	Albert Sooy, Pres..... Thos. K. Sooy..... Chas. T. Allen..... John R. Koster, Sec. and Reg..... John E. Cary, M. D., Insp.....	Green Bank. " Lower Bank. Green Bank. Lower Bank.
Washington.....	Gloucester.....	1,336	Chas. D. Nicholson, Reg.....	Turnersville.
Washington.....	Mercer.....	1,173	Chas. Hulse, Pres..... David Taylor..... Chas. Tindle..... E. K. Cole, Sec. and Reg..... Geo. A. Silvers, M. D.....	Allentown. " Windsor. " "
Washington.....	Morris.....	2,021	John A. Parker, Pres..... Edward Sutton..... Matthias Fleming..... Geo. H. Sliker, Sec. and Reg..... Mahlon Van Nest, Inspector.....	Schroley's Mountain. German Valley. Parker. Pleasant Grove. German Valley.
Washington.....	Warren.....	1,039	Robt. W. Bours, Pres..... Wm. H. Appat..... Oren Perry..... Chas. B. Smith, M. D..... Samuel Rinehart, Sec. and Reg.....	Washington. " " " "
Waterford.....	Camden.....	2,713	Chas. D. Heath, Pres..... Xavier Oltger..... Wm. L. Walker..... H. N. Gillon, Sec..... Chas. D. Heath, Reg..... F. O. Stem, M. D., Insp.....	Berlin. " Waterford. Berlin. " "
Wayne.....	Passaic.....	2,017	Geo. W. Colfax, Pres..... Wm. H. Buckwrough..... J. Beider..... Thos. D. Ryerson, Sec. and Reg.....	Pompton. Paterson. Mountain View. Wayne.
Weehawken.....	Hudson.....	3,027	A. E. Fendrich, M. D., Pres..... Edward W. Berger..... Patrick McGann..... Thos. C. Minshull..... F. J. Bergmann Jr..... Eljah Blackhurst, Sec. and Inspector.....	Weehawken. " " " " "

List of Sanitary Districts, with Names and Addresses of Officers and Members—Continued.

NAME OF SANITARY DISTRICT.	County.	Population by census of 1906.	Names of members and officers.	Address.
<b>TOWNSHIPS—</b>				
Westampton.....	Burlington .....	542	Firman Dubell, Pres..... Wm. Austin..... Clarence Loveland..... Hudson B. Haines, Sec. and Reg..... Elmer Frickitt, M.D., Insp.....	Mount Holly. " " " " " " " "
West Amwell.....	Hunterdon .....	858	Chas. A. Slack, Pres..... Chas. E. Holcombe..... Wm. J. Cane..... Geo. H. Carr, Sec. and Reg..... F. W. Larson, Inspector.....	Lambertville. Mount Airy. Lambertville. " " " "
West Deptford.....	Gloucester.....	2,227	P. M. Plum, Pres..... Elmer E. Clement..... Wm. E. Gibbs..... James Hunter, M.D..... James Carter, Sec. and Reg.....	Thorofare. " " " " Westville. Thorofare.
West Milford.....	Passaic.....	2,022	Chilleon Lorge, Pres..... M. J. Shipper..... Wm. Eckhart..... Celestine Schulster, Sec. and Reg..... D. E. Drake, M.D., Insp.....	Newfoundland. Echo Lake. Newfoundland. " " Echo Lake. Newfoundland.
West Windsor.....	Mercer.....	1,320	C. H. Mather, Reg.....	Lawrence Station.
Weymouth.....	Atlantic.....	900	A. Campbell, Pres..... Thos. Bailey..... F. J. Bache..... F. R. McKeague, Sec. and Reg..... R. Marshall, M.D., Insp.....	Tuckahoe. " " Risley. " " Tuckahoe. " "
Willingboro.....	Burlington .....	658	Elwood Hart, Pres..... A. J. Jordan..... T. T. Buzby..... E. D. Frickitt, M.D..... Jerome Wills, Sec. and Reg.....	Rancocas. Burlington. Beverly. Mount Holly. Burlington.
Winslow.....	Camden.....	2,856	Joe. S. Stroek, Pres..... Jos. E. Imhoff..... Wm. Brimfield..... M. G. Burdsall, Sec. and Reg.....	Cedar Brook. Winslow. Blue Anchor. Tansboro.
Woodbridge.....	Middlesex.....	10,221	Chas. S. Farrell, Sec..... John S. Leisen, Reg.....	Woodbridge. " "
Woodland.....	Burlington .....	418	Victor Eitzendollar, Pres..... C. H. Grant..... Elmer Inman..... E. C. Dunfee, Sec. and Reg.....	Chatsworth. " " " " " "
Woodwich.....	Gloucester.....	1,138	Benj. Shoemaker, Pres..... N. Lippincott..... H. Crispin..... W. G. Simmons, M.D., Sec..... H. C. Howey, Reg.....	Swedesboro. " " Basset Station. Swedesboro Swedesboro

List of Coroners in New Jersey.

- Atlantic County—Edmund C. Gaskill, Jr., Richard C. Benson, Wm. B. Parcels.
- Bergen County—Ellsworth M. Pell, Archibald D. Lees, James A. Morgan.
- Burlington County—Enoch De Worth, William Grobler, Frank Ridgway.
- Camden County—Frank O. Stem, Ahah H. Lippincott, Grant E. Kirk.
- Cape May County—Robert S. Miller, John D. Craig, Chas. H. Clouting.
- Cumberland County—E. Burton Bradford, Samuel M. Hall, Frank B. Potter.
- Essex County—C. William Heilmann, Richard M. Pearce, Albert J. Holle.
- Gloucester County—Samuel S. Ledden, Wesley Grant Simmons, Howard A. Wilson.
- Hudson County—George J. Brackner, Peter J. Gormon, Edward C. Zeiger.
- Hunterdon County—George M. Pidcock, Isaac S. Cramer, Frank W. Larison.
- Mercer County—William W. Rogers, William M. Disbrow, James N. Rue.
- Middlesex County—William H. Quackenboss, John V. Hubbard, Edward C. Haines.
- Monmouth County—Frank J. Queeny, John W. Bennett, Russel G. Andrew, Jr.
- Morris County—Henry V. Day, Wilferd A. Surnburger, William E. Collins.
- Ocean County—David O. Parker, J. Clarence Cranmer, J. Fred. Conover.
- Passaic County—Edward L. Wheeler, Nixon Campbell, Jr., J. Mortimer Blauvelt.
- Salem County—Emerson P. McGeorge, Charles W. Denn, Samuel J. Shute.
- Somerset County—William H. Long, Jr., Frank L. Field, W. Howard Toms.
- Sussex County—Charles M. Dunning, Jephtha C. Clark, Edward S. Dalrymple.
- Union County—Henry M. Pierson, Russell A. Shirrefs, Alvin R. Eaton.
- Warren County—Michael Kenney, B. Frank Fox, Charles S. Amerman.

## List of County Physicians in New Jersey.

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Atlantic County—Emanuel C. Shauer, M.D.

Cumberland County—E. L. Diament, M.D.

Essex County—William H. McKenzie, M.D.

Hudson County—Charles B. Converse, M.D.

Mercer County—R. R. Rogers, Jr., M.D.

Middlesex County—Edgar Carroll, M.D.

Passaic County—Andrew F. McBride, M.D.

Salem County—Henry Jackson, M.D.

Somerset County—S. O. B. Taylor, M.D.

Union County—F. W. Westcott, M.D.

Warren County—L. B. Hoagland, M.D.

# List of Licensed Health Officers and Sanitary Inspectors.

## Licensed Health Officers.

Budd H. Obert.....	Asbury Park, N. J.
Hiram Williams, M.D.....	Passaic, N. J.
Alexander Marcy, Jr., M.D.....	Riverton, N. J.
William S. Green, M.D.....	Paterson, N. J.
Walter Taylor, M.D.....	Jersey City, N. J.
Maria M. Vinton, M.D.....	East Orange, N. J.
Edward Guion, M.D.....	Atlantic City, N. J.
Frederick W. Sell, M.D.....	Rahway, N. J.
Howard L. Baumgartner.....	Asbury Park, N. J.
Lewis L. Sharp, M.D.....	Palmyra, N. J.
Ferdinand N. Sauer, M.D.....	Jersey City, N. J.
George T. Tracy, M.D.....	Beverly, N. J.
Chester H. Wells.....	Montclair, N. J.
Duncan W. Blake, Jr., M.D.....	Gloucester City, N. J.
Samuel D. Mayhew, M.D.....	Bridgeton, N. J.
John O'Brien, Jr.....	Montclair, N. J.
James A. Exton, M.D.....	Arlington, N. J.
Frank H. Streightoff.....	Montclair, N. J.

## Licensed Sanitary Inspectors of First Class.

Fred. W. Hering.....	Jersey City, N. J.
George W. Gilmore.....	Newark, N. J.
Fred. C. Robertson, M.D.....	Jersey City, N. J.
John T. McClure.....	Harrison, N. J.
John G. Taylor.....	Dover, N. J.
Charles E. Bellows.....	Bridgeton, N. J.
Albert E. Geissler.....	Kearny, N. J.
Thomas S. Ainge.....	Lansing, Mich.
Charles S. Voorhis.....	Palmyra, N. J.
Lewis E. Boutillier.....	Newark, N. J.
Henry MacDonald.....	Newark, N. J.
Joseph C. Salle.....	Bloomfield, N. J.
Casper Benz.....	Newark, N. J.
Robert W. Meeker.....	Plainfield, N. J.
John K. Bennett, M.D.....	Gloucester City, N. J.
William H. Addis.....	Plainfield, N. J.
William W. Heberton, M.D.....	South Orange, N. J.
Irving M. Bininger.....	Plainfield, N. J.
Eric Ordell.....	Newark, N. J.
John Greaves.....	Jersey City, N. J.
Henry B. Francis.....	Camden, N. J.
John E. Rowe, D.V.S.....	Summit, N. J.
George N. Smith.....	Newark, N. J.

Licensed Sanitary Inspectors of Second Class.

Charles Cunningham, M.D.....Hammonton, N. J.

Licensed Sanitary Inspectors of Third Class.

David Jamieson.....Gloucester City, N. J.

## Inspection of Public Water Supplies in New Jersey.

BY A. CLARK HUNT, M.D., STATE MEDICAL INSPECTOR.

With the enactment in 1899 of the law to prevent the pollution of streams the first systematic inspection of the sources of public water-supplies in New Jersey was undertaken. The State board of health was entrusted with the work and the annual reports of the board show the results which have been accomplished. The records show that the water shed of the Hackensack river, from which water is distributed to more than thirty towns, has been almost entirely freed from direct sources of pollution, 254 sources of contamination having been removed, leaving only three known points of pollution, and these cases are at the present time before the court of chancery. The Pequannock water shed, which supplies the city of Newark, is remarkably free from sources of pollution, and those which are at present existing, three in number, are now under consideration by the court. The Rahway river has been condemned by the State board of health as a source of water-supply, and the authorities of the city of Rahway have been advised to secure a new supply. The Maurice river is being polluted by the sewage from the borough of Vineland, and a suit in chancery has been instituted to prevent the further contamination of the waters of this stream. Regular periodical examinations of the public water-supplies of a few of the larger towns of the State has been conducted in the State laboratory of hygiene for several years, and recently this service has been extended to include the following localities: Hoboken, Jersey City, New Brunswick, Princeton, Rahway, Lakewood, Bridgeton, Boonton, Bordentown, Millville, Morristown, Elizabeth, Camden, Atlantic City, Asbury Park, Long Branch, Trenton, Perth Amboy, Plainfield, Passaic, Orange and Newark.

The purpose of these laboratory examinations of the water is to supplement the inspection of the streams, and to furnish information which will indicate any changes which may occur in the quality of the water, and in this manner assist in detecting new or undiscovered contaminations.

#### HACKENSACK RIVER.

The inspection of the Hackensack river has been continued during the year, but at the present time the number of direct contaminations of this stream within the State of New Jersey has been reduced to three. The sanitary survey of the stream by an employe of the Hackensack Water Company has been continued, and it is evident that in future there will be the necessity for maintaining this system of inspection. A perfected system of filtration has been introduced by the company, and will be in operation in a very short time. The results of the work which has been done in the efforts to secure the purification of the waters of the Hackensack river is an evidence of what may be accomplished, by the constant inspection of a stream and the introduction of a filtration system, in providing a pure water-supply. When the filtration system is in operation the supply furnished to consumers from this river will be as well guarded as any surface supply in the State. During the year a number of reinspections have been made along the stream, and the record of these inspections is as follows:

No. 110. Inspection of premises located on Great Bear creek, north of Woodcliff, showed that a sink drain discharged into a stream which is one of the tributaries of the Hackensack river. Several notices have been sent to the owner to discontinue the contamination of the stream. As the notices have not been complied with the facts in the case were presented to the attorney-general, and an application has been made to the court of chancery for an injunction to restrain the owner from continuing the contamination.

No. 149. Inspection of premises on the Alpine road showed that manure is placed so near one of the tributaries of the Hackensack river as to cause contamination of its waters. A notice was served upon the owner to discontinue the contamination of the stream at

this point, and the notice has been complied with, but it will be necessary from time to time to reinspect the premises to prevent further pollution of the stream.

No. 173. Inspection of premises located on the Hook road showed that foul liquids from the barnyard were discharged directly into the Pascack river, which is one of the tributaries of the Hackensack river. Notice was served upon the owner to discontinue the contamination of the waters of the river at this point, but no attention having been paid to the notice the facts in the case were presented to the attorney-general, and an application has been made to the court of chancery for an injunction to restrain the owner from the further pollution of the waters of the stream.

No. 198. Inspection of premises located near Oradell showed that foul liquids from the cow stable and pig pen were washed directly into a stream which is one of the tributaries of the Hackensack river. These premises have been reinspected from time to time, but the pollution seems indirect, and under advice from the office of the attorney-general no action has as yet been taken in this case.

No. 205. Inspection of premises located at Park Ridge showed that a pig pen is placed within twelve feet of a stream which is one of the tributaries of the Hackensack river. A notice was served upon the owner to discontinue the contamination at this point, and a reinspection of the premises showed that the notice had been complied with.

No. 206. Inspection of premises located at Park Ridge showed that a privy vault was placed upon the bank of a stream which is one of the tributaries of the Hackensack river, and that the contents of the vault were overflowing upon the surface of the ground near the stream. A notice was served upon the owner to discontinue the contamination of the waters of the stream at this point, and a reinspection of the premises showed that the notice had been complied with.

No. 207. Inspection of premises located at Tenafly showed that waste liquids from a manure pile drain into a ditch, and thence to a tributary of the Hackensack river. A notice was served upon the owner to discontinue the contamination of the stream at this point, and a reinspection of the premises showed that the notice had been complied with.

No. 208. Inspection of premises in Norwood showed that drainage from a manure pile discharged into a small ditch, and thence into a tributary of the Hackensack river. A notice was served upon the owner to discontinue the further pollution of the waters of the stream at this point, and a reinspection of the premises showed that the notice had been partially complied with.

No. 209. Inspection of premises located at Norwood showed that drainage from a manure pile was discharged into a ditch which is connected with one of the tributaries of the Hackensack river. A notice was served upon the owner to discontinue the contamination of the waters of the stream at this point, and a reinspection of the premises showed that the notice had been complied with.

#### JUMPING BROOK.

"Following is a report of an inspection of Jumping brook, located about two and one-half miles west of Asbury Park and emptying into Shark river: The East Jersey Coast Water Company, of which Charles A. Buck, 1014 Monroe avenue, Asbury Park, is the superintendent, furnishes water to the following localities: Avon, Bradley Beach, Bradley Park, West Grove, West Asbury Park, Loch Arbour, and during the past summer, when the supply in Asbury Park was insufficient, a certain portion was furnished to that city. The pumping station is located near Kisner's pond, where formerly there was a mill, and the water is obtained from Jumping brook at a point a few hundred feet below the mill pond.

"The record of the inspection of the water shed of this stream is as follows: Above the pumping station, on the east side of the pond, is located the residence of Leroy Whitney. These premises are owned by the water company. A pile of garbage was found on said premises within forty feet of the pond and upon a steep bank which slopes to the pond. The old privy on the premises is within 100 feet of the pond, near the top of the bank, but a new privy has been constructed, which is 125 feet away from the pond and nearer the dwelling. Half a mile up the stream, and on the east side, a branch known as Hawkin's brook enters from the northeast. On the premises of Isaac Garrabrant a barnyard is located about 150 feet away from the stream, on a side hill, and a pig pen, which is in a filthy condition, is located within seventy feet of the brook. The privy on the premises is about 200 feet away, but so placed that there is little danger of contamination. A quarter of a mile further up, on the east side of the same stream, is the property occupied by Frank Marks. A chicken yard on these premises is located about seventy-five feet from the stream, and a privy vault is located about fifty feet away and on the same slope. A quarter of a mile further up, on the south side of the brook, are the premises of Elwood Palmer. A pig pen, which contains manure, is located within seventy-five feet of a ditch which discharges into the stream in wet weather, and a privy vault is located 125 feet from said ditch. One-half a mile further northeast, on the east side of the stream, are the premises of

M. L. Smock. A leaching privy vault is within twenty feet of a swale, and foul liquids were noticeable surrounding the brick vault. The pig pen on these premises is about 150 feet away from the stream. Garbage is fed to the pigs.

"The second branch, which enters from the east side, crosses the road which leads from Springfield avenue to Hamilton. Between this branch and the main brook are located the premises occupied by Wesley Sutphin. The pig pen on these premises is within 100 feet of the brook. The foul liquids from the barnyard cross the field by a small ditch and discharge into the street gutter, and could be traced to within ten feet of the road bridge over the brook. The house drain discharges into a small stream in the rear of the house and thence directly into Jumping brook. The privy vault is within forty feet of the stream, and the contents of the vault were flowing down the embankment toward the brook. One-quarter of a mile beyond this point, on the east side of Jumping brook, are located the premises of Charles A. Bennett. A spring is situated near the house, and from this spring the water flows directly into Jumping brook. Near the spring house two wash tubs were found, and there was evidence that clothes are washed at this point and that the wash water is thrown upon the bank of the brook. Two branches of Jumping brook cross the Green Grove road at a point one-quarter of a mile further north. On the most northerly of these branches are located two premises owned by John H. Truax. The barnyard on one of these premises is within sixty feet of the brook, and hog pens are located within 125 feet of the brook. At the time of inspection there was no water in this stream, but a bridge is constructed over it, and it is evident that in times of rain a considerable amount of water is carried directly from this point to Jumping brook. On the more southerly of the two branches mentioned is located the farm owned by Mary E. Neuman, of Belmar, and occupied by Goodenough Jackson. These premises are on the north side of Asbury avenue. A pig pen on the premises is located within 150 feet of a swale, and in times of freshet the washings from these premises would be conveyed to the tributary above mentioned. From the west side of Jumping brook, and north of Hamilton, a branch enters the stream from the west. On this branch is located the truck farm owned by Eliza Elmer. The pig pen is within 250 feet of the branch, and although there is no direct contamination, during times of rain the waste fluids will be carried directly into the brook. Garbage is fed to the pigs on these premises. On the south side of this branch are the premises of James Simpson, and garbage and liquid manure were found in the vicinity of the barn within 200 feet of the stream. Other premises were examined along the main road in Hamilton, but no direct contaminations were discovered."

Upon three of the premises mentioned in the above report the contamination of the waters of Jumping brook was direct, and notices were therefore sent to the owners to discontinue further pollutions of the waters of the stream. Reinspection of these premises showed that in two instances the notices had been complied with, and in the remaining case the owner of the premises immediately corrected the existing conditions.



## MAURICE RIVER.

From this river is obtained a portion of the supply of potable water for the city of Millville. On one of the tributaries of the river, within the borough limits of Vineland, has been placed the sewage disposal works for the borough. Frequent inspections and chemical examinations have been made of the effluent from the sewage disposal plant, and a notice was forwarded to the municipal authorities in Vineland to discontinue the further pollution of the waters of one of the tributaries of the Maurice river at this point. The facts in the case were finally submitted to the attorney-general, and a bill has been filed in chancery to enjoin the authorities in Vineland from the further pollution of the stream. This case is still pending in the courts.

## PEQUANNOCK RIVER.

From this stream the water-supply for the city of Newark is obtained. Careful inspections have from time to time been made of the water shed for the purpose of discovering possible sources of contamination. Twenty-two premises were inspected during the past year, and in but five instances were direct contaminations discovered. The cases are as follows:

No. 221. Inspection of creamery premises located at Stockholm showed that waste liquids from the creamery were conveyed by a wooden trough to a ditch and thence to the Pequannock river, and that the waters of the river were contaminated thereby. Notice was served upon the owner to discontinue the contamination of the waters of the river at this point, and as no action was taken by him the facts in the case were presented to the attorney-general, and an application has been made to the court of chancery for an injunction to restrain the owner from the further contamination of the stream at this point.

No. 222. Inspection of premises located at Stockholm showed that a pig pen is located on a sloping bank thirty-six feet from the river. A manure pile is also located within forty feet of the stream and a leaching privy vault is within sixty-six feet of the bank of the river. A notice was sent to the owner of the property requesting that the contamination of the stream at this point should

be discontinued, and a reinspection of the premises showed that the notice had been complied with.

No. 223. Inspection of premises in Williamsville showed that the privy vault near a school-house is located within a few feet of a swamp, and in times of heavy rain the waters of one of the tributaries of the Pequannock river may be contaminated by the foul liquids from the vault. A communication was addressed to the clerk of the board of education, requesting that a change should be made in the location of the privy.

No. 224. Inspection of premises near Stockholm showed that a pig pen on said premises is located over a brook which is one of the tributaries of the Pequannock river. A notice was forwarded to the owner to discontinue the contamination, but no action having been taken the facts in the case were reported to the attorney-general, and an application has been made to the court of chancery for an injunction to restrain the owner from further pollution of the stream.

No. 225. Inspection of premises located near Stockholm showed that a privy vault was located within thirty feet of a stream which is one of the tributaries of the Pequannock river, and that the cowyard is located on both sides of the brook. A notice to discontinue the contamination of the waters of the brook at this point was forwarded to the owner, and a reinspection of the premises showed that the notice had been complied with.

No. 226. Inspection of premises located in Newfoundland showed that waste liquids from a kitchen sink were discharged through an iron pipe to a ditch which leads to low ground near a tributary of the Pequannock river. Inspection also showed that a leaching privy vault is placed near the stream and that a pig pen is located near the privy. Notice to discontinue the contamination of the stream at this point was forwarded to the owner, and a reinspection of the premises showed that the notice had been complied with.

## RAHWAY RIVER.

The knowledge gained by constant inspection of this stream has led to the definite conclusion that water for potable purposes should no longer be taken from it, and that the city of Rahway should make provision for a new source of supply. Along the stream and its tributaries the population is rapidly increasing. When we consider that the various tributaries of the river pass through East Orange, West Orange, Orange, Millburn, Garwood and Cranford, and that a number of factories and residences are located directly upon the banks of the various streams, it will be seen that the purification of the waters of the river, under the present law, is impossible. Experience has shown that although a notice may be served on the individual upon whose premises there is contamination of the river, and the notice is complied with, that within a very short time the contamination is renewed. In addition to this all the street washings in the various municipalities reach the stream and tend to render its waters impure. At a meeting of the state board of health the conditions existing along the river were discussed, and a communication was addressed to the municipal authorities and the local board of health of Rahway in which the necessity of obtaining a new supply for that city was urged. During the year inspections of portions of the river have been made as follows:

No. 203. Inspection of the premises occupied by the Diamond Paper Mill, at Millburn, showed that a large amount of sewage from the mill was being discharged directly into the Rahway river. The mill is connected with the public sewer, but at the time of inspection only a portion of the sewage was discharged into the sewer. A notice to discontinue further contamination of the stream was sent to the owners, and a reinspection of the premises showed that the notice had been complied with.

No. 204. Inspection of the premises owned by the Lighthipe Paper Company, of Millburn, showed that sewage was discharged into the west branch of the river. Notice was served on the owners to discontinue the further pollution of the stream, and a reinspection of the premises showed that the notice had been complied with. A short time after this the mill was totally destroyed by fire.

Nos. 210, 211, 212 and 213. Inspection of four premises on Brookside avenue, Millburn, showed that in each instance house drainage was discharged directly into the pond below the Diamond Paper Mill. The owner was notified to discontinue the contamination of the waters of the pond, and in compliance with the notice the houses were at once connected with the public sewer system.

Nos. 214, 215, 216, 217 and 218. Five premises in Millburn own by one person were inspected, and the contamination of the river was direct in each case. The owner was notified to discontinue the contamination of the stream, and in all but one of the cases the notice was complied with.

No. 219. Inspection of a tenement property in Millburn showed that house drainage was discharged on to the surface of the ground near the river. The owners were notified of the conditions, and the premises were connected with the public sewer system.

No. 220. Inspection of premises on Springfield road showed that foul liquids from a house drain were discharged into the Rahway river. A notice to discontinue the contamination was served upon the owner, and a reinspection of the premises showed that the notice had been complied with.

No. 227. Inspection of the premises of the Eastern Tanning Company, at Kenilworth, showed that foul liquids from the tannery were discharged on to the ground, and during times of heavy rain contaminated the waters of the Rahway river. The owners took immediate steps to discontinue the contamination.

No. 228. Inspection of premises located in Cranford showed that a house drain discharged directly into a brook which is one of the tributaries of the Rahway river. A notice was sent to the owner to discontinue the contamination, and a communication was received from him in which it was stated that he was willing to take steps to prevent further contamination of the river.

# Report on Infectious Diseases of Animals.

BY A. CLARK HUNT, M.D., STATE SANITARY INSPECTOR.

During the year ending October 31st, 1905, two cases of anthrax appeared near Centre Square, Gloucester county. T. B. Rogers, D.V.S., was requested to supervise the application of preventive measures to control the spread of the disease, and his report, under date of April 17th, 1905, is as follows: "On the twenty-first of February last I received instructions from the State board of health to investigate a supposed outbreak of anthrax near Centre Square, Gloucester county, on the farm of Isaac Justice. I found that Mr. Justice had lost two cows, and that his son, Oliver Justice, had become infected with the disease through skinning one of them. The carcasses had been dragged into a ravine near the banks of Raccoon creek, and one of them had been almost entirely eaten by dogs and buzzards. The carcasses were cremated and the ravine filled up level with the surrounding ground. Free vaccination of the cattle and horses was offered to all the farmers in the infected district, and eighteen availed themselves of this offer, and for them eighty-five head of cattle and fifty-seven head of horses were immunized without accident."

A number of deaths of cattle from forage poisoning were reported as occurring in Lebanon township, Hunterdon county. The outbreak was investigated by W. H. Lowe, D.V.S., of Paterson, and his report follows: "I was in Hunterdon county on Monday, November 28th, 1904, in behalf of the owners of cattle, and visited five farms in the neighborhood of Lebanon. About twenty cows had died, and about as many more were sick, on the farms I visited, suffering from what I diagnosed as forage poisoning. The evidence seems to point to a certain carload of malt of brewers' grains as containing or producing the deadly agent that has given rise to such alarming and serious results. Whether the poisoning is due to or produced by some specie of fungi in the malt, or whether it is entirely a chemical action or process, can only be determined and demonstrated in the laboratory by chemical and bacteriological tests. I have this day forwarded a specimen of the malt to the laboratory at Trenton for examination. All the dead cows, as well as those affected, had had grains from the particular car referred to. No cows were affected on any of the farms except those that had been fed grains from this car. A poor farmer with eleven cows, who had run out of other feed, fed all grains and had eight cows dead at the time of my visit, and the remaining three affected. The trouble affects different animals differently, but the symptoms are essentially those of forage poisoning. Refusal to eat, suspension of secretion of milk, excessive salivation and frothing at the mouth, grinding of the teeth, contraction of the pupil of the eye, glassy appearance of the eye and in some cases blindness, animals becoming stiff and showing

a staggering gait when forced to move, animals assuming peculiar or unusual positions or attitudes, cerebral symptoms becoming marked as the disease advances. I saw one cow trying to stand on her head, another cow on her knees and standing on her two hind feet, pressing her head against the floor in front of her stall. The remedy consists in the removal of the cause. I ordered the feeding of the brewers' grains in question stopped altogether, and a change of food; recommended a soft, nutritious diet, such as bran mash, gruels, &c., and advised with the attending veterinarian as to the administration of suitable cathartics and other remedies as indicated, and the treatment of symptoms of the affected animals. I forbid the use or sale of milk from affected animals, as I do in all cases of sickness in milch cows."

The number of cases of glanders which have been reported is sixty-nine, as compared with 237 reported the previous year. The most serious outbreak which occurred was in the vicinity of Great Notch and Cedar Grove, in Passaic and Essex counties, where the construction of a reservoir, the building of roads and railroad improvements required the employment of a large number of horses. R. B. Smith, D.V.S., of Montclair, was directed to examine the stables where the disease occurred, and his report follows: "In compliance with your request of September 12th, 1905, I respectfully submit the following report of the outbreak of glanders in and about Great Notch, Acquackanonk township. On Saturday, July 15th, I was called by one Francis Jacobs, a contractor, to examine his stock of about fifteen head of horses. His only reason then was that his horses did not seem to be doing well. Upon examination I found that six of his horses were suffering from glanders, and so reported your board. The following day, with Dr. Lowe and Dr. De Graw, representing your board, I destroyed seven horses and found two more cases which should have been destroyed, but as Mr. Jacobs wanted to await developments, and the remaining horses were all kept by themselves, each with separate pail, we agreed to give him time. On July 18th Mr. Jacobs was served with a quarantine notice by your board, it having been suggested in view of the fact that there had been some one hundred teams exposed to the disease. At the time of this outbreak there were three large contracting jobs under way in the vicinity of Great Notch, the horses belonging mostly to four contractors, but, worst of all, the remaining horses on the jobs belonged here, there and all over, one man having a horse to a dump cart and another working a team, and then from week to week shifting from one job to another. By July 22d, in connection with Dr. M. Pierce, of Paterson, representing Mr. Jacobs, we had destroyed all of Mr. Jacobs' horses, fourteen in all, and in the course of the next few days destroyed three more belonging to his son and were stabled in the same barn.

"In my course of inspection of the horses that had been exposed I discovered one case in the stable of John R. Merrian, Albion place, Paterson, which was destroyed. This was the only horse he had. In a stable very close to Mr. Merrian's were four horses belonging to Mr. Joseph Olzer, one of which was affected with glanders and destroyed August 2d. At the Cedar Grove reservoir I found one case out of about forty head of horses, but, as I have reported you in a previous letter, I am satisfied that there were more cases there that had been quietly taken away before the outbreak was discovered by your board. The twenty teams at the reservoir had been shipped to Princeton by the middle of August, and since then I have heard nothing from them. Regarding the origin of the outbreak of

glanders in this district, I have formed an opinion which to me seems a very plausible one, viz., some time during the summer of 1904, the exact date of which I presume your board has a record, there was an outbreak of glanders in the express stables of E. B. Van Horne, in Jersey City, and I understand there were some twenty to thirty animals destroyed. Some of the remaining stock of this stable, which were then apparently O. K., were sent this spring to the Cedar Grove reservoir. From the horses at the reservoir Mr. Jacobs hired one team and kept them in his own stable. One of this team was taken sick at Mr. Jacobs' and returned to the reservoir, where it was destroyed before being allowed to enter the barn—for what reason I don't know, as stories do not agree. The remaining horse of the team was in Mr. Jacobs' stable at the time of my first call, and had at that time a typical case of latent glanders."

Six horses having mange were found in Atlantic City. At the request of the local authorities, a representative of the State board of health examined the animals and made a diagnosis. The local board of health, as soon as the true nature of the disease was determined, had the animals separated and proper medical treatment applied.

The following is a list of the cases of glanders which occurred during the year ending October 31st, 1905:

Name of Sanitary District.	Date and Number of Cases Reported.	Name of Person Making Report.	Disposal of Each Case.
Jersey City	Nov. 15, 1904.	2...Henry Smellie, H.O.	Animal destroyed.
"	" 16, "	1... " " " " " "	" " " "
Harrison	" 16, "	1...John T. McClure, H.O.	" " " "
Newark	" 17, "	1...W. H. Lowe, D.V.S.	" " " "
Orange	" 25, "	1...William Schluer, H.O.	" " " "
Jersey City	" 28, "	1...Henry Smellie, H.O.	" " " "
Moorestown	Dec. 3, "	1...Benj. M. Haines, Sec.	" " " "
Hasbrouck Heights	" 5, "	2...John G. Martin, Sec.	" " " "
Passaic City	" 9, "	2...J. P. Lowe, D.V.S.	" " " "
"	" 20, "	1... " " " " " "	" " " "
Woodcliff	Jan. 14, 1905.	2...G. J. Wortendyke, Sec.	" " " "
Jersey City	" 18, "	3...D. E. Matthews, D.V.S.	" " " "
Newark	" 19, "	6...D. D. Chandler, H.O.	" " " "
"	" 20, "	1... " " " " " "	" " " "
"	" 22, "	1... " " " " " "	" " " "
"	" 28, "	1... " " " " " "	" " " "
Jersey City	Feb. 10, "	3...Henry Smellie, H.O.	" " " "
Newark	" 10, "	2...D. D. Chandler, H.O.	" " " "
"	" 12, "	1... " " " " " "	" " " "
"	" 20, "	1... " " " " " "	" " " "
Orange	Mar. 7, "	2...William Schluer, H.O.	" " " "
Hackensack	" 15, "	1...C. T. Demarest, Sec.	" " " "
Bayonne	Apr. 12, "	1...D. E. Matthews, D.V.S.	" " " "
Newark	" 13, "	1...D. D. Chandler, H.O.	" " " "
Great Notch	July 16, "	7...R. B. Smith, D.V.S.	" " " "
"	" 22, "	7... " " " " " "	" " " "
"	" 28, "	3... " " " " " "	" " " "
Paterson	Aug. 8, "	1...A. Machan, D.V.S.	" " " "
East Orange	" 9, "	2...W. F. Harrison, D.V.S.	" " " "
Gloucester City	" 12, "	1...Carlos B. Allen, Sec.	" " " "
Paterson	" 17, "	1...A. Machan, D.V.S.	" " " "
Whippany	" 17, "	1...W. F. Harrison, D.V.S.	" " " "
Harrison	Sep. 8, "	1...John T. McClure, H.O.	" " " "
Union Hill	" 27, "	1...R. J. Meiners, D.V.S.	" " " "
Atlantic City	" 28, "	1...Edw. Gulon, M.D., H.O.	" " " "
Passaic City	Oct. 6, "	1...J. P. Lowe, D.V.S.	" " " "
East Orange	" 13, "	1...W. F. Harrison, D.V.S.	" " " "
Jersey City	" 17, "	1...R. J. Halliday, D.V.S.	" " " "
"	" 18, "	1...D. E. Matthews, D.V.S.	" " " "

Total number of cases of glanders reported, sixty-nine; of this number, fourteen cases occurred in Newark, five in Jersey City and two in Paterson. Near Great Notch, Passaic county, seventeen animals having glanders were destroyed.

## SUMMARY.

Losses of animals from anthrax.....	2
Vaccination to prevent spread of anthrax.....	142
Animals destroyed on account of glanders.....	69
Cases of forage poisoning reported.....	40
Deaths of animals from forage poisoning.....	20
Cases of mange in horses reported.....	6

## Report on State Laboratory of Hygiene.

BY R. B. FITZ RANDOLPH, DIRECTOR.

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

GENTLEMEN—I have the honor to submit the following report of the operations of the State laboratory of hygiene during the year ending October 31st, 1905.

The State laboratory of hygiene is located at 147 East State street, Trenton, N. J., and consists of two departments—the bacteriological department, and the department of food and drugs. The bacteriological department is engaged in the examination of specimens for diagnosis from suspected cases of certain communicable diseases, in the bacteriological examination of water from public and private supplies, and in such other investigations bearing upon the public health as it may be called upon from time to time to perform. The department of food and drugs is engaged in the analysis of specimens of food and drugs, the authority for such examination being contained in an act approved March 21st, 1901, entitled "An act to secure the purity of food, beverages, confectionery, condiments, drugs and medicine, and to prevent deception in the distribution and sales thereof." The lines of work in both these departments have, in the main, been a continuation of those pursued in former years. In the bacteriological department certain changes have been made in the methods employed in routine examinations which increase the accuracy of the results obtained although at an increased expenditure of time. It has been possible during the year to make considerable additions to the laboratory equipment, and we are now provided with apparatus reasonably adequate for the lines of investigation now in operation. The location of the laboratory, however, is by no means satisfactory and the room at our disposal is insufficient and badly arranged. In particular, the need of a storeroom is keenly felt, and its lack results in a much heavier annual depreciation of equipment than would occur if it were possible to take proper care of our apparatus. It also becomes necessary to again call attention to the necessity for providing a suitable place for the maintenance of animals for experimental purposes. The bacteriological department is seriously hampered and its usefulness is much impaired because it is impossible in our present location to keep animals in stock. The routine examination of specimens from suspected cases of glanders, rabies and anthrax, all of which should be regularly performed in the laboratory, can only be undertaken occasionally, and the results obtained have not the same degree of reliability as would be the case if a suitable animal room was available and an adequate stock of animals could be kept on hand. It is therefore earnestly recommended that, in the near future, some more suitable place be obtained, which will have at least double the floor space now at our disposal, and

will be so situated that a sufficient stock of animals can be kept on the premises. The bacteriological laboratory is open for the reception of specimens from 7:45 A. M. until 5 P. M. every day except Saturday and Sunday. On Saturday the laboratory closes at noon, and on Sundays and holidays it is open from 8:30 A. M. to 10 A. M. The last mail received at the laboratory arrives at 7 P. M. on weekdays and at 12 M. on Sundays. Specimens coming in by these mails will be examined on the following morning. The regular work of the bacteriological department consists of the routine examination for diagnosis of specimens from suspected cases of diphtheria, pulmonary tuberculosis, typhoid fever and malaria, and the bacteriological examination of samples of water from public and private supplies. Beside this regular work, the laboratory is prepared to undertake, when practicable, the investigation of other communicable diseases. For the regular work the laboratory provides mailing cases conforming to the requirements of United States Postal Order No. 176\*,

\* Order No. 176.

March 24, 1900.

That the order of the Postmaster-General of December 27th, 1897 (Order No. 677), prescribing the conditions under which specimens of diseased tissues may be admitted to the mails, is modified as follows:

Specimens of diseased tissues may be admitted to the mail for transmission to United States, State or municipal laboratories, only when inclosed in mailing packages constructed in accordance with the specifications hereinafter enumerated. Liquid cultures, or cultures of micro-organisms in media that are fluid at the ordinary temperature (below 45° C., or 113° F.), are unmailable. Such specimens may be sent in media that remain solid at ordinary temperatures. Upon the outside of every package shall be written or printed the words "Specimen for Bacteriological Examination. This package to be treated as letter mail." No package containing diseased tissue shall be delivered to any representative of any of said laboratories until a permit shall have first been issued by the Postmaster-General, certifying that said institution has been found to be entitled, in accordance with the requirements of this regulation, to receive specimens. Specifications for the construction of packages for safely conveying through the mails pathological specimens for bacteriological examination for diagnosis in cases of suspected diphtheria, tuberculosis and other communicable diseases:

1. The receptacle for moist specimens of diseased tissues shall be a strong glass vial or test tube, having a capacity not greater than two drams. Said vial shall be covered and made water-tight by the use of a metal screw cap and a rubber or felt washer, which has been immersed in melted paraffine; or, if a test tube be used, it shall be covered with a tightly-fitting rubber cap.

2. Said vial or test tube shall be placed inverted in a circular tin box. Said box shall be made of I. C. bright tinplate, and shall have flush or countersunk bottom and soldered joints and not be smaller than one and one-quarter inches in diameter and five and one-half inches long. This box shall be closed by a metal screw cover and a rubber or felt washer, or tightly-fitting metal sliding cover, and it shall be so packed with absorbent cotton that the glass vial or test tube contained in said box shall be evenly surrounded on all sides by said cotton, and the cotton shall be closely laid.

3. Said tin box shall be placed inverted inside of a larger tin box, similar to the one already described, which should snugly receive the specimen box. Upon the inside of the sides and bottom of this outer box there shall be a lining of compressed paper not less than three-sixteenths of an inch in thickness. Said outer tin box shall be closed by a metal screw cap and a rubber or felt washer; or this outside box may consist of hard wood, being a block having a cylindrical hole bored in one end and extending to within not less than one inch of the opposite end; the open end to be closed with a wooden or metal screw cap with a rubber or felt washer. Or the outside box may be a cylindrical wooden box having a screw cap and washer. The thickness of the sustaining part of the wooden tube to be not less than one-quarter of an inch and be lined as the tin box.

4. The receptacle for dry specimens of diseased tissues shall be a glass test tube, three inches in length and one-half inch in diameter. Said test tube shall be enclosed in a circular tin box similar to those already described, but measuring two and one-quarter inches in diameter and three and one-half inches in length, and be lined upon its sides and bottom with compressed paper not less than one-quarter of an inch in thickness. Said box shall be closed by a metal screw cap and a rubber or felt washer. Said test tube shall be closely packed in cotton.

which cases are distributed to repositories located throughout the State, and can be obtained from them or from the laboratory, on request. A list of these repositories will be found on pages 152 to 159 of this report. This list has been revised during the past year and now contains only the names of those persons who keep a supply of these cases on hand at all times. Persons desirous of having specimens other than those above mentioned examined should, in every case, make application to the director of the laboratory, in writing, before sending the specimens. No specimens from suspected cases of diphtheria, pulmonary tuberculosis, typhoid fever or malaria will be received for examination unless they are inclosed in the containers provided by the laboratory, unless the postage thereon is fully prepaid and the blank form accompanying the container fully filled in. Physicians are requested not to send specimens of urine, tumors, etc., to the laboratory, as no examinations will be made of such substances, the work of the laboratory being devoted wholly to the public health interests of the State. Reports of the results of examinations are invariably sent by mail. If the physician requests it, an additional report will be sent by telegraph at the expense of those interested. Reports will be made by telephone if the physician desiring such a report calls the laboratory and asks for it. On account of the possibility of mistakes due to the reception of telephone messages by unauthorized persons, and to imperfect transmission over long distances, the laboratory will not assume any responsibility for the correctness of reports issued by telephone, nor will physicians be called on the telephone for the purpose of reporting results to them.

The outfit for collecting a specimen from a case of suspected diphtheria consists of a circular, screw-capped, pasteboard-lined box, on the outside of which is a blue label bearing the address of the laboratory. Within is a small tube containing a sterile cotton swab on the end of a wire, and a blue slip, on one side of which is printed directions for preparing the specimen and on the other a form, which must be completely filled in if the specimen is to receive attention. It is of the greatest importance that this form be filled in legibly and in ink. Every slip is preserved and constitutes a permanent record of its case, and confusion constantly occurs because it is impossible to read the name of the physician, that of the patient, or both. Postage on all specimens must be fully prepaid at letter rates. If this is not done specimens are liable to serious delay in the post-office. Specimens from cases of suspected diphtheria are examined every day in the year. Those received at the laboratory at or before 7 P. M. are planted on modified Loeffler's medium, incubated over night at 37° C., and examined at 8 A. M. on the following morning. Specimens received in the morning before 11 A. M. are immediately planted and placed in the incubator. At 5 P. M. they are examined. It is frequently possible to find diphtheria bacilli after incubation for this length of time, and at least twelve hours are saved when they can be demonstrated on the same day on which they were planted. A negative result after such a short incubation is unreliable, and the specimen, if no diphtheria bacilli can be found in it, is replaced in the incubator and incubated over night in the usual way. This method of examination after five-hour incubation (originally proposed by Bolton) has been in operation for more than a year, and has given gratifying results. It is believed that the time so saved greatly increases the efficiency of the service. Under ordinary circumstances

reports of the results of the examination of diphtheria specimens are mailed at 8:30 A. M., and should reach nearly every city in the State on the same day. Reports sent by telegraph should reach the physician by 10 A. M. To insure prompt delivery of letters and telegrams, physicians should be careful to state their full addresses when sending specimens. Specimens mailed in the morning will usually reach the laboratory on the same day, and the physician should receive a report, if sent by telegraph, within twenty-four hours. The postmaster at Trenton has kindly furnished the laboratory with figures showing the hours when mails leave certain towns throughout the State in time to reach the post-office at Trenton on the mail which arrives at 7 A. M. It is impossible at this time to ascertain these figures for every town in the State in which a repository is located, but it is hoped that this will ultimately be accomplished. As many of these figures as have been obtained will be found in the list of repositories.

Persons having the bacillus of diphtheria in their throats or noses and presenting symptoms of the specific toxæmia due to absorption of the metabolic products of the bacillus, but showing no symptoms indicating a departure from health, while they cannot be regarded as having the disease, are capable of acting as sources of infection, and should be treated as such. It sometimes happens that negative results are obtained from specimens taken from patients who undoubtedly have diphtheria. This may be due to a variety of causes, and a second specimen should always be sent after a negative report has been received if the case is suspicious from a clinical standpoint. It is well established that, in the majority of cases, diphtheria bacilli are present in the throats or noses, or both, of convalescents after all symptoms of the disease have disappeared. In order to find out when the patient ceases to be infectious, it is necessary to have a bacteriological examination made. In no case should a patient be released from quarantine until the specific bacillus has disappeared from the throat and nose. Specimens for release should be taken both from the throat and nose, as it has been found that the bacillus is frequently demonstrable in the nose after the throat is clear. It is very desirable that two consecutive negative reports be received before the patient is released from quarantine, as it has been shown that in a considerable number of cases the diphtheria bacillus has been found after one negative result has been obtained. It sometimes happens that organisms are found in preparations made from specimens sent for diagnosis which resemble somewhat the diphtheria bacilli, but cannot be positively identified as such. In these cases the fact that such bacilli have been found is reported, and another specimen is requested. While the bacilli in the majority of these cases ultimately prove to be organisms other than the bacillus of diphtheria, it occasionally happens that a second specimen will show typical diphtheria bacilli.

The outfit for collecting a specimen of sputum from a case of suspected tuberculosis consists of a circular, screw-capped, pasteboard-lined tin case, having on the outside a white wrapper bearing the address of the laboratory and containing another screw-capped tin case in which is a quarter-ounce, screw-topped vial wrapped in absorbent cotton and containing enough carbolic acid solution to disinfect the sputum. Between the inner and outer cases is a white slip, bearing, on one side, directions for collecting the sample, and on the other a blank form to be filled in by the physician. The directions should be carefully followed and the case repacked,

care being taken to so wrap the vial that it will be kept from moving in transit. Postage should be prepaid at letter rates. Specimens of sputum are not examined on Sundays or holidays, but, when received on these days, are held until the following morning. Thin smears from the contents of the vials are made on large glass slides, capable of holding twelve smears. These are dried, fixed by heat and stained for five minutes at 80° C., in carbol fuchsin. After thorough washing the slide is immersed in a solution of three per cent. hydrochloric acid in methyl alcohol until decolorized, then stained for one minute in Loeffler's methylene blue, washed, dried and examined.

It should always be borne in mind that while the discovery of tubercle bacilli in the sputum of a patient is certain evidence of tuberculosis, yet a single negative result is of little value. In the early stages of the disease the bacilli may be entirely absent from the sputum or present in such small numbers as to escape detection. If a negative report is received on a specimen from a case suspected of having the disease, other specimens should be sent at intervals of a few days until the patient recovers or the bacillus is found. It should also be remembered that there is little or no relation between the number of bacilli present in a single specimen and the stage of the disease. Requests are frequently received for an estimate of the number of bacilli present in a given specimen, or for a comparison between the numbers present in two or more specimens from the same case. It has been customary to give the desired information when possible. This will not be done in the future, as it is believed that erroneous and misleading conclusions are frequently drawn from these reports.

The examination for typhoid fever is made by Widal's method. The outfit consists of a slip of sheet aluminium, having on one side two roughened depressions to receive the blood. A wire loop is fastened to the slip by means of a gummed label. This slip, together with a card bearing, one side, directions for collecting the specimen, and on the other a blank form to be filled in by the physician, is enclosed in a stout manila envelope, bearing the address of the laboratory on the outside. In collecting blood, physicians should be careful to deposit one full drop in each depression of the slip, and allow the drops to dry without the use of heat before replacing the slip in the envelope. Specimens from cases of typhoid fever are not examined on Sundays and holidays. These specimens are examined by making a dilution approximating one to fifteen with distilled water, mixing with an equal quantity of a twenty-four-hour broth culture of the typhoid bacillus, and examining in the hanging drop. For convenience, the results obtained are divided into three groups: (a) Positive, when agglutination and clumping can be observed within fifteen minutes and are complete within an hour; (b) negative, when neither clumping nor agglutination occur within an hour; (c) atypical, when signs of either clumping or agglutination show themselves but the reaction is not completed within the specified time.

A positive result from a specimen from a case of suspected typhoid fever at the dilution used is almost certain evidence that the patient is suffering from, or has experienced in the past, an invasion by the typhoid bacillus. A negative result has comparatively little significance, as cases frequently occur in which the reaction is delayed or absent altogether. Negative results from specimens taken before the fifth or sixth day of the disease have no significance whatever. Atypical reactions have no meaning. Subsequently specimens may turn out to be either positive or negative.

Examinations for malaria are made by staining a specimen of blood spread in a thin film on a slide or cover glass with some of the well-known stains devised for the purpose. Wright's is generally used. The outfit at present in use consists of two square glass covers wrapped in absorbent cotton and enclosed in half of a slide mailing case for protection. This outfit is objectionable in many ways and will be discarded as soon as a satisfactory one can be devised.

The demonstration of the parasite of malaria is satisfactory evidence that the patient is suffering from the disease. A negative report is of little value. The majority of specimens sent to the laboratory are improperly prepared and can only be examined imperfectly and with difficulty. Although the preparation of a thin and even film of blood, such as is needed for these examinations, does not seem to be difficult to the experienced worker, yet a very considerable amount of practice is necessary before it can be satisfactorily done. In chronic cases and in patients to whom quinine has been administered, the parasites in the peripheral circulation are so few in number that very lengthy and careful searching is necessary to demonstrate their presence. To properly examine specimens from such cases requires an expenditure of time far beyond that available with the present laboratory staff.

Besides the examinations classed as regular work, a variety of other specimens are frequently examined, the most important being those from animals suspected of having anthrax, rabies or glanders, and the bacterial examination of samples of water from public supplies, dairy premises and certain other localities.

In case an animal is suspected of having died of anthrax, either a small amount of blood (preferably from the heart or one of the larger vessels), or a portion of the liver or spleen, should be obtained from it with aseptic precautions and sent to the laboratory at once. The outfit issued for the collection of sputum may be used for the purpose if care is taken to thoroughly wash out the vial in order to free it from the carbolic acid which it contains. An ear, cut from an animal suspected of having died from anthrax, wrapped in paper and sent to the laboratory by mail, is not a satisfactory specimen and will not be examined. The attention of veterinarians is called to the fact that specimens for bacteriological examination cannot be sent through the mails unless enclosed in containers made in conformity with postal order No. 176 (see page 140, footnote). Unless sent in such containers they will not be accepted for examination. The careless practice, indulged in by certain veterinarians, of sending decomposing portions of animals dead of anthrax through the mails, wrapped simply in paper, is both dangerous and disgusting and calls for severe condemnation.

Reports of the examination of specimens for anthrax will usually be made in from twenty-four to seventy-two hours after the receipt of the specimen.

Animals suspected of suffering from rabies should not be killed, but securely confined and kept under observation by a competent veterinarian. Animals in which the disease has progressed far enough to develop those characteristic symptoms which excite suspicion will not live more than a few days, and, if kept under observation, a satisfactory diagnosis can be made in much less time than it takes to make an examination in the laboratory. If, however, it becomes necessary to send specimens to the laboratory, the head of large animals and the entire carcass of small ones, should be sent. Under no circumstances should the brain

be removed. As it is necessary to inoculate animals and wait for them to develop symptoms of the disease in order to make a satisfactory diagnosis, it is impossible to make a report in less than six days from the date when the specimen is received, and frequently a much longer time will elapse. On account of the lack of facilities for keeping animals for experimental purposes, and the difficulty of obtaining suitable ones at short notice, the examination of specimens for rabies must necessarily be somewhat unsatisfactory and uncertain until better laboratory facilities are available.

The routine examination of specimens from cases suspected of suffering from glanders cannot be undertaken at the present time on account of the lack of facilities for carrying on the work. The examination of specimens for glanders involves the inoculation of animals, and it is impossible to keep a stock of these on hand while the laboratory occupies its present quarters. As soon as suitable accommodations are provided for animals for experimental purposes the examination of specimens for glanders will be made a part of the regular work of the laboratory.

Specimens other than those above mentioned will not ordinarily be examined. Persons desirous of having such examinations made should in every case communicate with the director of the laboratory, stating in detail the character of the examination desired, before sending the specimen.

In former reports the date fixed for the beginning of the year for the bacteriological department has been October 1st. This year it has seemed desirable to harmonize the reports of the two departments as regards time, and consequently the following tables, setting forth the work done in the bacteriological department since the last report was made, cover a period of thirteen months, from October 1st, 1904, to October 31st, 1905, inclusive:







TABLE II.—SHOWING THE NUMBER OF SPECIMENS EXAMINED DURING THE YEAR, ARRANGED BY CITIES AND TOWNS—Continued.

TOWN.	DIPHTHERIA.			TUBERCULOSIS.			TYPHOID FEVER.			MALARIA.			MISCELLANEOUS.			Total.
	Primary.	Secondary.	Total.	Primary.	Secondary.	Total.	Primary.	Secondary.	Total.	Primary.	Secondary.	Total.	Primary.	Secondary.	Total.	
Summit.....	15	3	18	2	1	21	12	.....	12	.....	.....	.....	.....	.....	51	
Sussex.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Swedesboro.....	.....	.....	.....	2	2	4	.....	.....	.....	.....	.....	.....	.....	.....	4	
Sykesville.....	9	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	
Toms River.....	4	5	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	
Toms River.....	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	
Trenton.....	107	86	193	226	49	275	118	15	133	9	1	10	85	17	102	
Tuckahoe.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	
Upper Montclair.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Verona.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Vineland.....	8	.....	8	62	20	82	36	8	44	.....	.....	.....	.....	.....	129	
Waldwick.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Washington.....	15	8	23	6	2	8	5	.....	5	.....	.....	.....	.....	.....	38	
Weehawken.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	
(Town of Union)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
(Union Hill)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Wenonah.....	.....	.....	.....	4	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	4	
West Asbury Park.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	
Westfield.....	10	18	28	27	1	28	14	2	16	2	1	3	.....	.....	70	
West Hoboken.....	1	.....	1	24	7	31	8	1	9	.....	.....	.....	.....	.....	36	
West Long Branch.....	.....	.....	.....	3	1	4	.....	.....	.....	.....	.....	.....	.....	.....	4	
West Orange.....	.....	.....	.....	6	1	7	1	.....	1	1	.....	1	.....	.....	9	
Westville.....	.....	.....	.....	13	.....	13	1	1	2	.....	.....	.....	.....	.....	15	
Westwood.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	14	
Wharton.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	
Whippany.....	.....	.....	.....	3	.....	3	5	.....	5	.....	.....	.....	.....	.....	8	
White House Station.....	.....	.....	.....	4	1	5	2	.....	2	.....	.....	.....	.....	.....	7	
Windsor.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Woodbridge.....	41	15	56	19	2	21	1	.....	1	.....	.....	.....	.....	.....	78	
Woodbury.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	
Woodstown.....	.....	.....	.....	4	1	5	.....	.....	.....	.....	.....	.....	.....	.....	5	
Yardville.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	
Blank.....	.....	.....	.....	1	4	.....	4	1	.....	.....	.....	.....	.....	.....	6	
Totals.....	1866	1080	2946	2393	792	3185	1084	154	1238	102	7	109	62	22	8470	

Table I. shows the number of specimens examined during the year, arranged by weeks. Table II. is a summary of the examinations arranged by cities and towns. An inspection of this table shows that the numbers of specimens received from cities and towns bear no relation to the population of those towns, a few of the larger cities of the State contributing more than half of the total number of specimens, while many fairly large places are not represented at all. It is difficult to account for this fact in a year marked by no serious epidemics, and the conclusion is almost inevitable that physicians in some localities fail to avail themselves of the assistance offered by the laboratory. It is to be regretted, especially in the case of diphtheria, that this is so, for if cultures were sent to the laboratory from convalescents from this disease for the purpose of discovering when they cease to be infectious, the period of detention would, in most cases, be materially shortened, and the danger of infection from persons in whom the bacillus of diphtheria persists for longer than the usual time would be materially lessened. It seems important to again call attention to the fact that failure to find the diphtheria bacillus in cultures made from patients supposed to be suffering from diphtheria is by no means positive proof that the clinical diagnosis is erroneous. Failure to find these organisms in cases of undoubted diphtheria is especially frequent when the lesion is confined to the larynx, and therefore difficult to reach with the swab. It is therefore very desirable that more than one specimen be sent to the laboratory if the report of the examination of the first fails to agree with the clinical diagnosis. It is just as important that one or more specimens be sent for release, especially from laryngeal cases, after a negative result has been obtained. The number of specimens examined since the laboratory has been in operation is shown in Table III.

TABLE III.—SHOWING THE NUMBER OF SPECIMENS OF EACH KIND EXAMINED SINCE THE LABORATORY WAS ORGANIZED.

	1896-97.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.
Diphtheria.....	627	660	577	974	1,864	1,487	2,090	2,919	2,896
Tuberculosis.....	263	516	766	891	1,211	1,467	1,813	2,344	2,691
Typhoid fever.....	27	175	339	431	789	881	1,583	1,272	1,268
Malaria.....	.....	4	.....	58	113	196	151	98	109
Miscellaneous.....	7	18	.....	80	28	56	132	67	84
Totals.....	914	1,318	1,682	2,380	3,955	4,039	5,569	6,790	7,045

\* The number of these specimens has not been recorded.

Following is a list of the repositories where mailing cases for sending specimens from suspected cases of communicable diseases can be obtained:

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.

Town.	Repository.	Mail Leaves.
Allentown	Carlslake's Pharmacy	4:00 P. M.
Alloway	Dr. W. L. Ewen	
Andover	Dr. J. C. Clark	
Annandale	Dr. Willard E. Berkaw	
Arlington	Dr. A. A. Strasser	
"	J. B. Thompson, druggist	
Asbury	Dr. F. J. La Riew	
Asbury Park	Board of Health	3:00 P. M.
Atlantic City	Board of Health	
"	Atlantic City Hospital	
"	A. D. Cuskaden, druggist	
"	H. H. Deakne, druggist	
"	W. C. Westcott, druggist	
"	Wm. F. Ridgway, druggist	
Atlantic Highlands	R. S. Matthews, druggist	
Bakersville	A. R. Vickers, druggist	
Basking Ridge	Dr. F. C. Jones	3:00 P. M.
Bay Head	Dr. W. H. Katzenbach	
Bayonne	Bayonne Hospital	2:00 P. M.
"	Frank N. L'Estrange, druggist	
"	J. A. Balinsky & Sons, druggists	" "
"	Charles H. Landell, druggist	" "
Belleville	A. H. Osborne, druggist	
Belmar	Board of Health	4:00 P. M.
"	Seaside Pharmacy	" "
Belvidere	Faust Bros., druggists	
"	Dr. Wm. J. Burd	
Berlin	Board of Health	
Bernardsville	Dr. J. Meigh	1:00 P. M.
Beverly	Dr. J. V. Roberts	
"	Warren Street Pharmacy	
Blairstown	Dr. W. C. Allen	
"	Geo. A. Branigan, druggist	
Bloomfield	Geo. M. Wood, druggist	
"	Wm. W. Keyler, druggist	
Bloomsbury	Dr. E. L. Reigle	1:00 P. M.
Boonton	Dr. Jno. S. Taylor	
"	Dr. Cuthbert Wigg	
"	Dr. C. L. Decker	
"	Dr. A. E. Carpenter	
Bordentown	Dr. Wm. H. Shipps	5:00 P. M.
"	Wooley & Fitzgerald, druggists	" "
Bound Brook	Lloyd & McNabb, druggists	
Branchville	Dr. E. S. Dalrymple	
"	Dr. J. C. Price	
Bridgeton	Board of Health	
"	Bridgeton Hospital	
"	Albert S. Elwell, druggist	
"	Chas. F. Dare & Son, druggists	
"	Dr. Jno. H. Moore	

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Burlington	Jno. W. Davis, druggist	
"	H. B. Weaver, druggist	
Butler	S. E. Estler, druggist	
"	McCue's Drug Store	
Caldwell	Dr. Edwin E. Bond	
"	Wm. N. Hasler, druggist	
Califon	Dr. T. Miller	
Camden	Cooper Hospital	3:00 P. M.
"	L. B. Hirst, druggist	" "
"	Barrett Bros., druggists	" "
"	George M. Beringer, druggist	" "
"	George J. Pechin, druggist	" "
"	Dr. R. I. Haines	" "
"	F. S. Macpherson Co., pharmaceutical laboratory	" "
"	Wm. P. Weiser, druggist	" "
"	Mahaffey's Pharmacy	" "
Cape May City	Dr. Anna M. Hand	
"	Dr. James Mecray	
Cape May Court House	Willets Corson, druggist	
Carlstadt	Board of Health	
"	Albert Niederer, druggist	
Cedarville	Dr. W. P. Glendon	
Chatham	Dr. Wm. J. Wolfe	3:00 P. M.
"	Dr. Jos. E. Pollard	" "
Chester	Dr. Harris Day	1:00 P. M.
Clayton	C. F. Fisler, druggist	
Clinton	Wm. H. Baker, druggist	1:00 P. M.
Closter	Dr. L. B. Parsell	
Collingswood	Wm. A. Chamberlain, druggist	
Columbus	Dr. J. E. Dubell	
Cranford	John Marien, druggist	
"	Jno. R. Reay, druggist	
Crosswicks	Dr. Chas. L. Dey	
Dayton	Dr. Edgar Carroll	
Deckertown	W. J. Rinkel, druggist	
Deerfield	Dr. H. L. Cooper	
"	Dr. L. B. Phillips	
Delanco	Dr. H. K. Weiler	
Dennisville	Dr. Eugene Way	
Dover	Killgore & White, druggists	11:00 A. M.
Dumont	Dr. J. E. Pratt	
Dunellen	Dr. P. W. Brakeley	10:00 A. M.
East Millstone	J. C. Thatcher, druggist	
East Orange	Gillbard's Drug Stores	3:00 P. M.
"	Garrett Byrnes, druggist	" "
"	Frank L. Fieger, druggist	" "
East Rutherford	Board of Health	
Eatontown	Edward Van Buskirk, druggist	
Egg Harbor City	V. P. Hoffman, city clerk	

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Elizabeth	Board of Health.....	4:00 P. M.
"	Henry J. Schmidt, druggist.....	" "
"	E. W. Parsons, druggist.....	" "
"	Richard Frohwein, druggist.....	" "
"	Henry Schmidt, druggist.....	" "
"	Walter I. McCann, druggist.....	" "
"	David Strauss, druggist.....	" "
"	Oliver & Drake, druggists.....	" "
"	Geo. J. Martin, druggist.....	" "
"	Wm. R. Richart, druggist.....	" "
"	Fred. M. Egger, druggist.....	" "
"	Wm. H. Reibel, druggist.....	" "
"	Elizabeth General Hospital.....	" "
Elmer	Board of Health.....	12:00 M.
Englewood	L. Rockefeller Co., druggists.....	2:00 P. M.
"	Wm. E. H. Schneider, druggist.....	" "
"	Englewood Hospital.....	" "
"	Lewis W. Brown, druggist.....	" "
Englishtown	Dr. Wm. Edgar Anderson.....	5:00 P. M.
Fairton	Dr. Irvin W. Kirk.....	" "
Fanwood	Dr. F. W. Westcott.....	" "
Farmingdale	Dr. W. R. Kinmouth.....	3:00 P. M.
"	Dr. C. A. Palmer.....	" "
Flemington	Franklin C. Burk, druggist.....	4:00 P. M.
Forked River	Board of Health.....	" "
Fort Lee	Dr. Max Wyler.....	" "
"	Carl L. Richter, druggist.....	" "
Franklin Furnace	Dr. C. M. Dunning.....	" "
Freehold	Duryea & Johnson, druggists.....	3:30 P. M.
Frenchtown	E. M. Roche, druggist.....	" "
German Valley	Dr. Chas. N. Miller.....	" "
Gladstone	Dr. M. C. Smalley.....	" "
Glassboro	A. Trenchard, druggist.....	" "
"	F. G. Thomann, druggist.....	" "
Gloucester City	Atlantic Pharmacy.....	" "
"	W. S. Hilliard, druggist.....	" "
Guttenberg	Henry J. Gordon, druggist.....	" "
Hackensack	Hackensack Hospital.....	11:30 A. M.
"	Eugene A. McFadden, druggist.....	" "
"	Alex. Denig, druggist.....	" "
"	S. E. Van Stone, druggist.....	" "
Hackettstown	C. V. S. Rea, druggist.....	12:30 P. M.
"	Dr. L. Farrow.....	" "
Haddonfield	R. Willard, druggist.....	11:00 A. M.
Hainesport	Dr. W. C. Parry.....	" "
Hamburg	Dr. Joseph G. Coleman.....	" "
Hammononton	Dr. Charles Cunningham.....	12:00 M.
Harrison	Dr. E. S. Goudy.....	1:00 P. M.
"	"Squier's Pharmacy.....	" "
Harrisonville	Dr. Samuel F. Stanger.....	" "

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Hasbrouck Heights	J. A. Powelson, druggist.....	" "
Hibernia	Dr. R. C. Lumsden.....	" "
High Bridge	Dr. W. C. Alpaugh.....	1:00 P. M.
Hightstown	D. Hart Cunningham, druggist.....	" "
Hoboken	Board of Health.....	2:30 P. M.
"	Dr. H. B. Rue.....	" "
"	Charles H. Schmidt, druggist.....	" "
"	Adolph Schmidt, druggist.....	" "
"	Victor Schmidt & Co., druggists.....	" "
"	Wm. Kamlah, druggist.....	" "
"	Gustav Brandt, druggist.....	" "
"	Chas. Sunkel, druggist.....	" "
Holmdel	Dr. F. M. Wood.....	" "
Hopewell	George E. Pierson, druggist.....	" "
Imlaystown	Dr. Franklin C. Price.....	" "
Irvington	Dr. A. C. Christian.....	" "
"	Harry McDavitt, druggist.....	" "
Jamesburg	State Home for Boys.....	5:00 P. M.
Jersey City	L. E. Carpenter, druggist.....	" "
"	Frederick W. Frey, druggist.....	" "
"	John C. Gallagher, druggist.....	" "
"	A. Tod, druggist.....	" "
"	Board of Health.....	" "
"	Stein & Co., druggists.....	" "
"	Frank G. Cole, druggist.....	" "
"	Herman J. Lohmann, druggist.....	" "
"	Wm. Buchbinder, druggist.....	" "
"	Lyons & Ziegler, druggists.....	" "
"	Benjamin F. Bache, druggist.....	" "
"	R. E. Wilhelm, druggist.....	" "
"	Herman A. Bruckner, druggist.....	" "
"	Chas. H. Rogers, druggist.....	" "
"	Herman Roder, druggist.....	" "
"	Herman W. Mayer, druggist.....	" "
"	Chas. Zoeller, druggist.....	" "
"	James Foulke, druggist.....	" "
"	Geo. H. White, druggist.....	" "
"	Lischke Bros., druggists.....	" "
Junction	Dr. Hooper.....	3:00 P. M.
Keyport	W. E. Warn, druggist.....	" "
Lakewood	Charles A. Bye, druggist.....	" "
Lambertville	S. W. Cochran & Co., druggists.....	" "
Lawrenceville	Lawrenceville School.....	" "
Layton	Dr. M. D. Hughes.....	" "
Leesburg	Dr. S. Eldredge Ewing.....	" "
Little Falls	S. Austin Reilly, druggist.....	" "
Lodi	David A. Himadi, druggist.....	" "
Long Branch	Board of Health.....	3:00 P. M.
"	Monmouth Memorial Hospital.....	" "
"	Wm. J. Smythe, Jr., druggist.....	" "

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Long Branch	L. Rothenberg & Co., druggists.	3:00 P. M.
"	Jno. T. Britton, druggist.	" "
Lumberton	J. H. Sterner, druggist.	" "
Madison	Wm. F. Brown, druggist.	3:00 P. M.
"	W. H. Larison, druggist.	" "
"	Dr. F. H. Seward.	" "
Maplewood	Dr. E. B. Ranson.	" "
Marlton	W. H. Zelle, druggist.	" "
Matawan	Board of Health.	" "
"	Dr. Nathan Ervin.	" "
"	Dr. C. C. Straughn.	" "
Mays Landing	Dr. H. C. James.	" "
"	Board of Health.	" "
Maywood	Dr. Frank Freeland.	" "
Medford	Henry P. Thorn, druggist.	10:00 A. M.
Mendham	Leo Robinson, druggist.	" "
Merchantville	J. W. Kohlerman, druggist.	" "
Metuchen	Board of Health.	4:00 P. M.
"	Dr. W. V. McKenzie.	" "
"	George H. Hahm, druggist.	" "
"	C. A. Prickett, druggist.	" "
Middle Valley	Dr. Maxwell S. Simpson.	" "
Midland Park	Wm. J. Benjamin, druggist.	" "
Milford	C. H. Darmon, druggist.	" "
Millburn	Geo. S. Campbell, druggist.	" "
Millville	Jno. T. Doughty, druggist.	" "
"	Geo. W. Weber, druggist.	" "
"	Smith & Reeves, druggists.	" "
Montclair	Board of Health.	12:00 M.
"	David H. Baldwin, bacteriologist.	" "
"	Loeser's Pharmacies.	" "
"	Wm. L. Johnson, druggist.	" "
Moorestown	Dr. Frank G. Stroud.	1:00 P. M.
Morris Plains	State Hospital.	3:00 P. M.
Morristown	H. M. Smith, druggist.	" "
"	Brown & O'Connell, druggists.	" "
Mount Holly	Edward B. Jones, druggist.	2:00 P. M.
Mullica Hill	Dr. S. F. Ashcraft.	" "
Newark	Dr. Theodore W. Corwin.	4:30 P. M.
"	Dr. Wm. R. Ward.	" "
New Brunswick	Van Deursen Pharmacy.	5:00 P. M.
"	Skillman & Van Pelt.	" "
"	Wm. Rust & Sons, druggists.	" "
Newport	Dr. S. E. Robinson.	" "
Newton	Board of Health.	1:30 P. M.
North Plainfield	Board of Health.	" "
Nutley	Henry T. Lefferts, druggist.	" "
Ocean City	Bourse Pharmacy.	" "
Ogdensburg	Dr. L. C. Burd.	" "

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Old Bridge	Dr. I. C. Crandall.	" "
Orange	Orange Memorial Hospital.	3:30 P. M.
"	Sumpter L. Beegle, druggist.	" "
"	Abram Mosler, druggist.	" "
"	L. E. Tiesler's Pharmacy.	" "
Oxford	James A. Allen, druggist.	" "
Palmyra	Dr. L. L. Sharp.	" "
Partridge	Dr. H. C. Neer.	" "
Parsippany	Dr. E. P. Cooper.	" "
Passaic	Dr. H. C. Reynolds.	" "
"	Berger & Richter, druggists.	" "
"	Carroll Drug Co.	" "
"	Van Riper & Co., druggists.	" "
"	St. Mary's Hospital.	" "
"	Otto Lane, druggist.	" "
Paterson	Board of Health.	12:00 M.
"	Dr. W. H. Lowe.	" "
"	Gurdon E. Pellett, druggist.	" "
"	Dr. H. S. Willard.	" "
Paulsboro	C. E. Donnelly, druggist.	" "
Penns Grove	Robbins' Pharmacy.	" "
Perth Amboy	Dr. W. E. Ramsay.	" "
Phillipsburg	C. E. Griffin's Drug Store.	" "
Pitman	Dr. L. N. Slaughter.	10:00 A. M.
Plainfield	Board of Health.	2:00 P. M.
"	Dr. Wm. H. Murray.	" "
"	Dr. A. H. Dundon.	" "
Pleasantville	J. H. North, Jr., druggist.	" "
Pompton Lakes	Dr. J. C. Morgan.	" "
Port Norris	Dr. S. T. Day.	" "
Princeton	Wm. L. Briner, druggist.	5:00 P. M.
"	Marsh & Burke, druggists.	" "
Rahway	Dr. W. E. Cladek.	4:00 P. M.
"	George F. Brown, druggist.	" "
"	New Jersey Reformatory.	" "
Ramsey	Vanderbeek Drug Co.	" "
Raritan	Board of Health.	2:00 P. M.
Red Bank	Chas. A. Minton, druggist.	2:30 P. M.
Ridgefield Park	Dr. Henry C. Elsing.	" "
Ridgewood	H. A. Tice, druggist.	" "
"	Dr. W. L. Vroom.	" "
Ringoes	Dr. P. C. Young.	" "
Riverside	Warren C. Pine, druggist.	4:00 P. M.
Riverton	Dr. Alex. Marcy, Jr.	" "
Rockaway	Dr. Geo. H. Foster.	2:30 P. M.
"	Dr. F. W. Flagge.	" "
Rocky Hill	Board of Health.	" "
Roselle	Jay W. Rewalt, druggist.	" "
Rutherford	Board of Health.	" "
Salem	Salem Pharmacy.	12:00 M.

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
Salem	Jno. E. Davis, druggist.	12:00 M.
Sea Bright	Sea Bright Pharmacy.	
Shiloh	Dr. E. G. Hummel.	
Somerville	Jno. D. Case, druggist.	1:00 P. M.
South Amboy	Dr. E. V. Meacham	
South Bound Brook	Dr. J. T. Robinson	
South Orange	Dr. H. A. Pulsford.	
"	J. A. Griffing, druggist.	
South River	Dr. S. E. Selover.	
"	Dr. F. W. Bissett.	
Sparta	Dr. C. E. Dowling.	
Springfield	Dr. J. A. Stites.	
Spring Lake	Ann May Memorial Hospital.	
"	D. H. Hills, druggist.	
"	Dr. Wm. M. Trout.	
Stanhope	Nelden's Pharmacy.	
Stewartville	Dr. F. W. Curtis.	
Succasunna	Dr. N. H. Adsit.	
Summit	W. T. Green, druggist.	12:00 M.
"	Wm. H. Rogers, druggist.	" "
Sussex	W. J. Pinkel, druggist.	
Swedesboro	Guest & Guest, druggists.	12:00 M.
Toms River	Dr. Ralph R. Jones.	
"	Dr. Frank Brouwer.	
Town of Union (Weehawken).	August Frank, druggist.	
Trenton	State Laboratory of Hygiene.	
"	Board of Health.	
"	Mercer Hospital.	
"	H. N. Richards, druggist.	
"	Oliver Twist, druggist.	
"	Jno. J. Strasser, druggist.	
"	James L. Mathis, druggist.	
"	Lewis W. Long, druggist.	
"	G. D. Laird, druggist.	
"	Holcombe Brothers, druggists.	
"	D. Wiley Baker, druggist.	
Tuckahoe	Dr. J. S. Douglass.	
Tuckerton	Reeve's Pharmacy.	
Upper Montclair	J. H. Laubenheimer, druggist.	
Verona	Verona Pharmacy.	1:00 P. M.
Vincetown	Frank S. Hilliard, druggist.	
Vineland	Alfred M. Pierson, druggist.	11:00 A. M.
Waldwick	Dr. B. A. Ver Nooy.	
Wanaque	Dr. D. N. Shippee.	
Washington	Dr. Chas. M. Williams.	1:00 P. M.
Weehawken	Wm. Kyvitz, druggist.	
Westfield	Frutchey & Hathaway, druggists.	2:30 P. M.
"	Bayard Pharmacy.	" "
West Hoboken	A. Giray, druggist.	

TABLE IV.—LIST OF REPOSITORIES FOR MAILING CASES.—Continued.

Town.	Repository.	Mail Leaves.
West Hoboken	Joseph Parentini, druggist.	
"	Frank H. Eckert, druggist.	
West Nutley	Masonic Hall Pharmacy.	
Westville	C. E. Davis, druggist.	
Westwood	Dr. Theodore E. Townsend.	
Wharton	Dr. H. W. Kice.	
Whippany	Dr. Harry S. Wheeler.	
White House Station	Dr. W. W. Pursell.	
Windsor	Dr. Geo. A. Silver.	
Woodbridge	Board of Health.	12:30 P. M.
"	Dr. I. T. Spencer.	" "
"	Dr. B. W. Hoagland.	" "
Woodbury	J. W. Merritt, druggist.	
Woodstown	Buzby's Pharmacy.	
"	Harry Guest, druggist.	

This list has been carefully revised during the past year, and it is believed that outfits can be obtained at any of these places at any time. It sometimes happens that, on account of failure to notify the laboratory when the stock of cases runs low, some of these repositories are temporarily out of cases. During the last year, on account of insufficient funds, it has not always been possible to supply as many mailing cases as were needed. The laboratory is now provided with a sufficient number of these cases to meet all reasonable requirements, and if persons maintaining repositories will notify us promptly when outfits are needed it will be possible to keep repositories supplied at all times. The number of repositories is now 362, and it is believed that almost every locality in the State has one or more persons who can supply these cases to physicians. Any localities which are not supplied will be taken care of if application by physicians or officers of local boards of health are made to the laboratory for outfits. In the above list figures stating the time when the mails leave refer to the hours when the mails close at the post-office. To insure transportation by the mails given, it is advisable that specimens be left at the post-office at least fifteen minutes before the mail closes. It sometimes happens that mailing cases are mistaken by postmasters of local offices for third or fourth-class mail matter, and postage is charged at these rates. In order to insure speedy transportation, it is desirable that the attention of the postmaster be called to the fact that postage on these packages is paid at letter rates, and they should therefore be forwarded with first-class mail.

**Examination of Water From Public and Private Supplies.**—For a number of years the systematic examination of public water-supplies of the State has been contemplated, but pressure of other work and lack of equipment for the collection of samples has heretofore rendered this impossible, although a number of samples have been examined from various localities. The results of these examinations will be found in Table V. A plan has at last been devised by which it seems possible to begin this work in the near future without unduly taxing the resources of the laboratory, and the regular monthly examination of samples from about twenty-five public supplies will be commenced on or about December 1st, 1905.

TABLE V.—RESULTS OF ANALYSES OF SAMPLES OF WATER FROM CERTAIN CITY SUPPLIES—PARTS PER MILLION.

NO. DATE.	LOCALITY.	Color.	Odor, cold.	Odor, hot.	Turbidity.	Total solids.	Loss on ignition.	Mineral residue.	NITROGEN.				Chlorine.	Alkalinity.	Hardness.	Iron.	B. coli counts.	Appearance on filtration.
									As ammonia.	By alkaline permanganate.	As nitrates.	As nitrates.						
E 1576	July 17, Ashbury Park	0	0	0	0	112	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1577	" 17, "	0	0	0	0	110	0	0	0	0	0	0	0	0	0	0	0	Blackened strongly.
E 1578	" 17, "	0	0	0	0	115	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1579	Aug. 26, "	0	0	0	0	116	0	0	0	0	0	0	0	0	0	0	0	Some darkening.
E 1580	Oct. 15, "	0	0	0	0	117	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1581	Feb. 7, East Orange	0	0	0	0	118	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1582	Aug. 7, "	0	0	0	0	119	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1583	Aug. 7, "	0	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1584	Aug. 7, "	0	0	0	0	121	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1585	Aug. 28, Elmhurst	0	0	0	0	122	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1586	July 28, Elizabeth	0	0	0	0	123	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1587	July 28, Hoboken	0	0	0	0	124	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1588	July 28, Jersey City	0	0	0	0	125	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1589	Aug. 4, "	0	0	0	0	126	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1590	Oct. 4, "	0	0	0	0	127	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1591	Aug. 26, Mount Tabor	0	0	0	0	128	0	0	0	0	0	0	0	0	0	0	0	Some darkening.
E 1592	" 26, "	0	0	0	0	129	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
E 1593	" 26, "	0	0	0	0	130	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1594	Sept. 27, "	0	0	0	0	131	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1595	July 28, "	0	0	0	0	132	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1596	Nov. 11, Perth Amboy	0	0	0	0	133	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
E 1597	July 17, New Brunswick	0	0	0	0	134	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1598	Aug. 9, "	0	0	0	0	135	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1599	Sept. 18, "	0	0	0	0	136	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1600	Oct. 8, Ocean Grove	0	0	0	0	137	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1601	July 26, Orange	0	0	0	0	138	0	0	0	0	0	0	0	0	0	0	0	Some darkening.
E 799	Nov. 11, Perth Amboy	0	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.

TABLE V.—RESULTS OF ANALYSES OF SAMPLES OF WATER FROM CERTAIN CITY SUPPLIES—PARTS PER MILLION—Continued.

NO. DATE.	LOCALITY.	Color.	Odor, cold.	Odor, hot.	Turbidity.	Total solids.	Loss on ignition.	Mineral residue.	NITROGEN.				Chlorine.	Alkalinity.	Hardness.	Iron.	B. coli counts.	Appearance on filtration.
									As ammonia.	By alkaline permanganate.	As nitrates.	As nitrates.						
E 1596	July 17, Perth Amboy	0	0	0	0	134	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1597	Aug. 26, "	0	0	0	0	135	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1598	Aug. 9, "	0	0	0	0	136	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
E 1599	Sept. 18, "	0	0	0	0	137	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1600	Oct. 8, Point Pleasant	0	0	0	0	138	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 824	Dec. 8, Rahway	0	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1597	Aug. 26, "	0	0	0	0	140	0	0	0	0	0	0	0	0	0	0	0	Some blackening.
E 1598	Aug. 26, South Elberton	0	0	0	0	141	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1599	Aug. 26, Spring Lake	0	0	0	0	142	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1600	Aug. 26, "	0	0	0	0	143	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
E 798	Nov. 11, Thoroate	0	0	0	0	144	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
D 848	Feb. 20, Vineland	0	0	0	0	145	0	0	0	0	0	0	0	0	0	0	0	Much blackening.
E 1597	April 24, "	0	0	0	0	146	0	0	0	0	0	0	0	0	0	0	0	No darkening.
E 1598	July 17, Ashbury Park	0	0	0	0	147	0	0	0	0	0	0	0	0	0	0	0	Slight darkening.
E 1599	July 17, Westwood	0	0	0	0	148	0	0	0	0	0	0	0	0	0	0	0	No darkening.



Examination of Water Used on Dairy Premises.—During the year a considerable number of samples have been examined from wells and other sources of water located on premises where milk is produced for sale, the purpose of such examinations being the enforcement of chapter 196 of the laws of 1903, which prohibits the use of polluted water for washing cans and utensils used in handling milk. The results of these analyses disclose conditions which, while not unexpected, are nevertheless startling, and reveal clearly the dangers attendant upon careless and unsanitary methods of milk production in use throughout the State.

TABLE VI.—RESULTS OF ANALYSES OF SAMPLES OF WATER USED ON DAIRY PREMISES. PARTS PER MILLION.

NO.	DATE.	LOCALITY.	Odor, cold.	Odor, hot.	NITROGEN.					Chlorine.	B. coli communis present in.
					As ammonia.	By alkaline permanganate.	As nitrates.	As nitrites.	As nitric acid.		
BERGEN CO.—											
E 814	Nov. 25, 1904.	Garfield	1-0	1-0	.036	.034	.038	10.000	16.2	10 cc.	
E 1556	Oct. 9, 1905.	Glenrock	0	1-0	.038	.032	.070	1.000	7.5	None.	
BURLINGTON CO.—											
D 6486	Oct. 6, 1905.	Birmingham	0	0	.105	.004	.002	4.800	31.0	1 cc.	
D 6487	" 6, "	"	0	0	.018	.154	.160	24.000	160.0	0.1 cc.	
D 6488	" 6, "	"	0	0	.590	.380	.064	.000	7.5	0.1 cc.	
C 5954	Sept. 14, "	Deacon	0	0	.001	.001	.001	4.000	15.0	0.1 cc.	
C 5965	" 14, "	"	0	0	.001	.002	.690	9.5	0.1 cc.		
C 5991	" 25, "	Hainsport	0	0	.056	.054	.004	4.000	17.5	0.1 cc.	
E 1125	July 13, "	Kirkora	0	0	.024	.184	.000	.000	19.7	1 cc.	
C 5974	Sept. 16, "	Mount Holly	0	0	.018	.042	.002	.230	55.5	1 cc.	
C 5975	" 16, "	"	0	0	.006	.072	.005	32.000	185.0	1 cc.	
C 5990	" 26, "	"	0	0	.008	.054	.006	6.000	62.0	0.1 cc.	
C 5991	" 26, "	"	0	0	.004	.078	.003	12.000	114.5	0.1 cc.	
C 5972	" 16, "	Smithville	3-0	2-0	.164	.092	.012	4.000	12.0	10 cc.	
C 5973	" 16, "	"	1-0	1-0	.006	.054	.005	6.000	7.0	None.	
C 6100	Oct. 1, "	Vincetown	0	0	.738	.132	.020	.680	8.0	0.1 cc.	
C 6100	Oct. 1, "	"	0	0	.002	.038	.007	9.600	64.0	0.1 cc.	
C 6401	" 10, "	"	0	0	.006	.030	.002	2.000	46.0	1.0 cc.	
C 6402	" 10, "	"	0	0	.006	.030	.002	2.000	46.0	1.0 cc.	
CUMBERLAND CO.—											
D 3192	Nov. 17, 1904.	Vineland	0	0	.066	.034	.000	2.000	5.7	None.	
ESSEX CO.—											
D 3174	Nov. 12, 1904.	Belleville	0	0	.000	.014	.002	4.000	7.0	1 cc.	
D 3180	" 16, "	"	0	0	.006	.036	.0025	6.000	8.0	Doubtful.	
D 6132	Oct. 25, 1905.	Livingston	0	0	.042	.082	.015	8.000	19.5	1.0 cc.	
D 6113	Sept. 26, "	Livingston Township	0	0	.001	.001	.001	34.0	0.1 cc.		
D 6119	" 26, "	"	0	0	.001	.001	.001	38.0	1 cc.		
D 6121	Oct. 25, "	"	0	0	.020	.048	.007	28.000	34.0	0.1 cc.	
GLOUCESTER CO.—											
C 5996	Sept. 29, 1905.	Sewell	0	0	.092	.120	.100	16.000	65.0	1 cc.	
C 5997	" 29, "	"	1-e	1-e	.004	.044	.002	2.400	185.0	10 cc.	
C 6412	Oct. 16, "	Swedesboro	0	0	.166	.046	.050	8.000	12.0	10 cc.	
C 5998	Sept. 29, "	Wenonah	0	0	.052	.018	.007	4.000	11.0	10 cc.	
D 6116	" 26, "	Westville	0	0	.001	.001	.007	1.000	10.5	0.1 cc.	
HUNTERDON CO.—											
E 848	Apr. 27, 1905.	Flemington	0	0	.238	.084	.006	1.200	21.0	10 cc.	

TABLE VI.—RESULTS OF ANALYSES OF SAMPLES OF WATER USED ON DAIRY PREMISES. PARTS PER MILLION—Continued.

NO.	DATE.	LOCALITY.	Odor, cold.	Odor, hot.	NITROGEN.					Chlorine.	B. coli communis present in.
					As ammonia.	By alkaline permanganate.	As nitrates.	As nitrites.	As nitric acid.		
MERCER CO.—											
E 1004	June 3, 1905.	Ewing Township	0	0	.008	.034	.005	1.000	6.0	None.	
D 3381	Jan. 24, "	Lower Penn's Neck	0	0	.008	.016	.000	3.200	21.0	10 cc.	
D 3380	" 24, "	Penn's Neck	0	0	.006	.028	.000	2.400	9.0	None.	
D 3382	" 24, "	Princeton	0	0	.006	.014	.001	2.400	6.7	1 cc.	
D 3585	Mar. 29, "	"	0	0	.002	.090	.002	4.000	20.0	None.	
E 3586	" 29, "	"	0	0	.026	.102	.008	8.000	48.0	10 cc.	
D 3378	Jan. 24, "	Princeton	0	0	.004	.028	.000	3.200	10.0	None.	
D 3587	Mar. 23, "	Princeton Township	0	0	.020	.040	.000	2.000	10.0	0.1 cc.	
E 819	Dec. 1, 1904.	Yardville	0	0	.000	.018	.000	1.600	5.7	None.	
E 820	" 1, "	"	1-e	0	.000	.080	.000	3.200	6.5	None.	
E 821	" 1, "	"	1-w	0	.046	.052	.005	2.400	5.7	None.	
MIDDLESEX CO.—											
D 3583	Mar. 28, 1905.	South Brunswick Twp.	0	0	.084	.082	.400	5.000	18.0	?	
D 3680	May 25, "	Woodbridge Township	0	0	.010	.050	.006	3.200	10.0	1 cc.	
MONMOUTH CO.—											
D 3338	Jan. 10, 1905.	Colt's Neck	3	0	.008	.052	.000	.000	5.0	None.	
D 3346	" 10, "	"	2-w	3-w	.090	.018	.000	2.800	11.5	0.1 cc.	
D 6115	Sept. 19, "	Hamilton	0	0	.310	.038	.000	.000	17.0	None.	
D 3355	Jan. 7, "	Little Silver	0	0	.028	.034	.035	12.000	9.5	10 cc.	
D 6120	Oct. 12, "	Oceanport	2-m	2-m	.060	.180	.020	6.000	83.0	0.1 cc.	
D 6121	" 12, "	"	0	0	.000	.000	.120	11.5	1.0 cc.		
D 3361	Jan. 14, "	Red Bank	3-0	3-0	.006	.038	.001	3.200	16.0	10 cc.	
D 3577	" 21, "	Rumson Road	0	0	.061	.072	.009	4.800	19.5	0.1 cc.	
MORRIS CO.—											
D 6117	Sept. 26, 1905.	Hanover Township	5-0	5-0	.050	.000	.000	6.000	17.0	0.1 cc.	
E 1242	Oct. 12, "	Littleton	5-0	5-0	.000	.000	.000	3.0	0.1 cc.		
E 1167	" 4, "	Whippany	0	0	.140	.100	.18.000	65.5	0.1 cc.		
PASSAIC CO.—											
E 818	Nov. 25, 1904.	Richfield	0	0	.080	.036	.004	16.000	11.0	None.	
SALEM CO.—											
C 6419	Oct. 19, 1905.	Daretown	0	0	.034	.044	.008	8.000	17.0	1 cc.	
C 6421	" 23, "	"	0	0	.023	.038	.007	6.000	27.0	0.1 cc.	
C 6422	" 23, "	"	0	0	.022	.010	.003	2.800	6.0	0.1 cc.	
C 6423	" 23, "	"	0	0	.016	.022	.007	8.000	78.0	0.1 cc.	
C 6424	" 23, "	"	2-0	2-0	.014	.004	.004	12.000	25.5	0.1 cc.	
C 6430	" 30, "	"	1-e	1-e	.008	.022	.008	28.000	4.5	0.1 cc.	
C 6431	" 30, "	"	0	0	.012	.022	.003	3.200	6.5	1 cc.	
C 6429	" 27, "	Elmer	0	0	.002	.030	.001	2.800	11.0	None.	
C 6427	" 27, "	Pittsgrove	0	0	.004	.034	.002	2.400	9.0	None.	
C 6425	" 27, "	"	0	0	.010	.054	.010	4.400	25.5	0.1 cc.	
C 6107	" 13, "	Woodstown	0	0	.054	.064	.300	5.400	41.0	1 cc.	
C 6418	" 16, "	"	2-y	3-y	.024	.028	.000	5.000	76.0	0.1 cc.	
C 6414	" 16, "	"	0	0	.010	.034	.008	4.000	51.0	1 cc.	
C 6415	" 19, "	Yorktown	0	0	.024	.074	.100	8.000	46.5	1 cc.	
C 6426	" 19, "	"	0	0	.016	.054	.008	2.800	2.5	0.1 cc.	
SOMERSET CO.—											
E 792	Oct. 31, 1904.	Bridgewater Township	2-0	1-0	.040	.080	.007	11.200	48.5	1 cc.	
E 793	" 31, "	"	0	0	.016	.054	.003	1.600	77.0	1 cc.	
E 794	" 31, "	"	0	0	.008	.200	.031	1.800	20.0	0.1 cc.	
E 795	" 31, "	"	0	0	.034	.080	.007	12.800	5.9	0.1 cc.	
E 796	" 31, "	"	0	0	.006	.150	.006	.600	11.0	0.1 cc.	
E 797	" 31, "	"	0	0	.014	.116	.000	2.400	8.0	1 cc.	
D 3584	Mar. 28, 1905.	Kingston	0	0	.008	.086	.015	8.000	13.0	None.	
D 3378	Jan. 28, "	Rocky Hill	0	0	.000	.052	.000	.000	7.7	None.	
D 3146	Nov. 3, 1905.	Somerville	0	0	.000	.090	.002	4.000	38.5	None.	

TABLE VI.—RESULTS OF ANALYSES OF SAMPLES OF WATER USED ON DAIRY PREMISES. PARTS PER MILLION—Continued.

NO.	DATE.	LOCALITY.	Odor, cold.	Odor, hot.	NITROGEN.				Chlorine.	B. coli communis present th.
					As ammonia.	By alkaline permanganate.	As nitrites.	As nitrates.		
SUSSEX CO.—										
E 1155	Aug. 23, 1905.	Andover.....	2-g	3-g	.....	.....	.001	.000	3.0	1 cc.
A 3801	Jan. 6 "	Baleville.....	0	0	.....	.....	.000 .020 .002	1.400	3.0	None.
A 5744	Dec. 19, 1904.	Pepakating.....	0	0	.....	.....	.008 .018 .001	.560	5.0	None.
UNION CO.—										
D 3672	May 19, 1913.	Clark Township.....	0	0	.....	.....	.018 .068 .001	1.006	71.5	10 cc.
D 3673	" 25, "	" ".....	0	0	.....	.....	.004 .036 .002	3.600	32.0	10 cc.
D 3300	July 5, "	" ".....	0	0	.....	.....	.004 .020 .002	.800	22.2	10 cc.
D 3386	Jan. 9, "	Cranford.....	0	0	.....	.....	.000 .018 .002	1.200	15.5	1 cc.
D 3673	May 19, "	Linden Township.....	0	0	.....	.....	.018 .068 .004	9.600	53.2	0.1 cc.
D 3669	" 17, "	Madison Hill.....	0	0	.....	.....	.000 .038 .001	10.000	7.5	None.
D 3387	Jan. 9, "	Mountainside.....	0	0	.....	.....	.008 .068 .000	4.000	11.5	1 cc.
D 3670	May 17, "	Rahway.....	1-0	1-0	.....	.....	.100 .150 .020	2.800	13.2	0.1 cc.
D 3671	" 17, "	" ".....	0	0	.....	.....	.000 .052 .000	6.000	32.0	0.1 cc.
WARREN CO.—										
E 1567	Oct. 14, 1915.	Alpha.....	5-0	5-0	.....	.....	.000	.000	2250.0	0.1 cc.
E 1568	" 14, "	" ".....	0	0	.....	.....	.080	16.800	66.0	None
E 1248	" 12, "	" ".....	0	0	.....	.....	.000	2.000	8.0	0.1 cc.

These waters may be arbitrarily classified as follows:

First. Waters which are so seriously polluted that they are entirely unfit for domestic or dairy use, and if so used constitute a menace to the persons using milk which is obtained from dairies on which such water is found. This class, with very lenient standards in the interpretation of results, constitutes fifty-three per cent. of the whole number.

Second. Waters which show undoubted evidences of pollution, which pollution, however, is not so recent or apparently so dangerous as that described in Class 1. This class includes those waters in which the chemical and bacteriological results are discordant and those in which a sanitary inspection reveals no apparent sources of pollution. This class constitutes thirty-six per cent. of the total number.

Third. Waters which show no evidences of pollution. It is significant that this class constitutes only eleven per cent. of the total number.

These percentages, however, cannot be regarded as indicating the relative frequency of polluted and unpolluted wells on dairy premises, as samples were not taken indiscriminately, but were collected from those localities where a sanitary inspection indicated that pollution might exist.

It should be understood that this classification is entirely arbitrary, is made simply for convenience, and is not intended to indicate that the waters in Class 1, and possibly in Class 2, are actually dangerous at all times. The harmfulness of the water can be determined with a much greater degree of certainty by a careful sanitary reinspection of the source and its surroundings, if the preliminary examination and analysis indicate pollution. It is evident, however, that a well furnishing water such as

those grouped in the first class is a constant menace, as the fact that it has become so seriously polluted indicates with certainty that the habits of the persons living on the premises are such that, should typhoid or other water-borne diseases occur, the well would in all probability become infected. The results of analyses of waters of the second class cannot be said to indicate this with absolute certainty, although, in my opinion, a well showing decided evidences of pollution should never be regarded as safe, even if the colon bacillus is absent and the analysis indicates that ground filtration is efficient and complete. Changes in the ground water level, and the amount of water drawn from the well, and many other variables may at any time destroy the efficiency of this ground filtration without causing changes in the water which would be detected by the persons using it. It is therefore desirable that the use of waters of this class be abandoned for dairy purposes when more suitable supplies can be obtained. Inasmuch as under the ordinary working conditions at dairy farms and creameries small quantities of the water used for washing cans and utensils inevitably gets into the milk, it will be seen that the danger from a polluted water-supply, which may become infected at any time when conditions are favorable, is considerable, even if the numerous epidemics of typhoid fever in this State and others, directly attributable to infected milk-supplies, did not irresistibly point to the same conclusion.

The methods of bacteriological water analysis and the manner of interpreting results are dealt with in the report of this laboratory for 1904. The methods used in the chemical analysis of water are, in every case, those recommended by the committee on standard methods for water analysis of the American public health association.

During the year fifty-four samples have been examined from wells or other sources used as private supplies. While only such examinations have been made as were deemed to be absolutely necessary, the number investigated appears to be unduly large. The laboratory is maintained for the purpose of investigating matters relating to the public health, and the examination of private supplies should not be undertaken in such an institution. Regulations governing the examination of water samples will be found elsewhere in this report. (See Circular 113, page 1.)

TABLE VII.—RESULTS OF ANALYSES OF SAMPLES OF WATER TAKEN FROM PRIVATE SUPPLIES. PARTS PER MILLION.

NO.	DATE.	LOCALITY.	Odor, cold.	Odor, hot.	NITROGEN.					B. coli communis present th.
					As ammonia	By alkaline permanganate.	As nitrates.	As nitrites.	Chlorine.	
E 1241	Oct. 14, 1905	Alpha	0	0	.....	.....	0.03	.200	3.0	1.0 cc.
E 1244	" 14, " "	"	0	0	.....	.....	0.03	.120	2.5	0.1 cc.
E 1149	Aug. 20, " "	Atlantic Highlands	0	0	0.02	0.10	0.14	1.83	25.0	None.
E 1150	" 20, " "	"	0	0	0.01	0.20	0.30	1.40	6.0	0.1 cc.
E 1151	" 20, " "	"	0	0	0.01	0.18	0.10	.600	24.0	1.0 cc.
E 1553	" 20, " "	Blackwood	0	0	0.06	0.25	.000	.000	4.6	1.0
E 891	Dec. 16, 1904	Bordentown	0	0	0.01	0.46	0.00	.560	8.2	None.
E 1555	Oct. 3, 1905	Bound Brook	0	0	0.09	0.15	.002	.400	6.0	0.1 cc.
E 1134	July 20, " "	Bridgeton	1-w	1-w	0.21	1.90	0.07	.540	8.0	10 cc.
E 808	Nov. 16, 1904	Burlington	0	0	0.16	0.89	0.10	.680	8.0	None.
E 829	Aug. 14, 1905	"	0	0	0.06	0.22	.002	2.000	8.1	0.1 cc.
E 1238	Oct. 9, " "	Carpenterville	0	0	0.02	0.90	.000	.000	4.0	?
E 1204	" 9, " "	"	0	0	0.08	0.96	.001	.000	3.5	?
E 1564	" 9, " "	Farmingdale	0	0	0.05	0.96	.000	2.000	37.5	0.1 cc.
E 1145	Aug. 7, " "	Freehold	2-m	2-m	0.10	1.29	.005	5.600	35.0	1.0
E 1566	Oct. 16, " "	Haledon	0	0	0.15	0.84	0.10	8.000	27.0	1 cc.
E 649	May 1, " "	Hill Crest	0	0	0.06	0.46	0.015	2.600	5.5	1 cc.
E 1138	July 26, " "	"	2-0	4-0	0.78	0.42	.004	.000	6.0	0.1 cc.
D 858	Mar. 30, " "	Holmdel	0	0	0.05	0.96	.040	9.600	45.0	1 cc.
D 858	" 30, " "	"	2-w	2-w	0.23	1.36	.007	1.200	21.3	None.
E 822	Dec. 8, 1904	Lambertville	0	0	0.08	1.30	.021	.....	2.5	10 cc.
E 823	June 16, 1905	"	0	0	0.10	0.88	.005	.000	2.5	None.
E 1183	July 26, " "	"	0	0	0.19	0.70	.100	1.000	14.5	None.
E 809	" 18, " "	Lawrenceville	0	0	0.10	0.92	.002	.000	16.0	1 cc.
E 810	" 18, " "	"	0	0	0.08	0.86	.000	.800	10.0	0.1 cc.
E 891	Dec. 5, " "	"	0	0	0.10	0.86	.000	2.000	8.25	1 cc.
E 1200	Sept. 7, " "	"	0	0	0.10	0.14	.000	2.400	6.7	None.
E 1201	" 7, " "	"	0	0	0.45	0.35	.040	2.400	4.4	1 cc.
E 825	Jan. 13, " "	Manasquan	2-w	2-w	0.28	0.56	.005	6.450	3.6	None.
D 826	Nov. 19, " "	Morris Plains	0	0	0.04	0.68	.003	5.200	52.5	0.1 cc.
E 1288	Oct. 4, 1905	"	0	0	0.10	0.56	.000	.650	4.7	None.
E 1569	" 24, " "	Morristown	0	0	.....	.....	.000	1.800	6.5	None.
E 1202	" 4, " "	Morris Township	0	0	0.15	0.60	.000	16.000	30.1	0.1 cc.
E 1573	" 20, " "	Mount Laurel Township	0	0	0.00	0.28	.000	2.400	29.5	10 cc.
E 893	July 5, " "	Neptune Township	0	0	0.78	0.44	.060	6.000	37.0	0.1 cc.
E 1246	Sept. 13, " "	New Brunswick	1-w	1-w	1.58	0.74	.083	4.000	86.0	0.1 cc.
E 1056	May 20, " "	Orange	1-e	2-e	0.74	1.20	.012	1.000	30.1	0.1 cc.
E 1182	July 20, " "	"	0	0	0.04	0.46	.015	8.000	11.0	0.1 cc.
E 883	Dec. 31, 1904	Plainfield	1-e	1-e	0.68	0.70	.009	5.600	45.2	0.1 cc.
E 1205	Oct. 25, 1905	Pleasant Mills	3-e	0	0.08	1.06	.000	.200	9.5	None.
E 894	" 25, " "	"	3-e	0	0.04	0.74	.000	.000	6.0	None.
E 1248	" 26, " "	"	0	0	0.04	0.72	.000	.000	6.0	0.1 cc.
D 857	Mar. 29, " "	Princeton	0	0	0.12	0.42	.000	8.200	14.0	0.1 cc.
D 812	Oct. 13, " "	Spring Lake	0	0	0.18	0.26	.004	8.000	61.0	None.
E 839	Mar. 7, " "	Trenton	0	2-m	0.00	0.40	.002	.....	12.1	1 cc.
E 819	" 7, " "	"	0	2-m	0.12	1.06	.002	.....	31.1	1 cc.
E 1174	Oct. 5, " "	Washington Valley	0	0	.....	.....	.000	5.600	65.0	1 cc.
E 1571	" 24, " "	"	0	0	.....	.....	.060	5.600	15.5	0.1 cc.
E 809	Nov. 19, 1904	"	0	0	0.08	0.81	.000	.800	10.0	0.1 cc.
E 810	" 19, " "	"	0	0	0.10	0.96	.000	2.500	8.2	1.0 cc.

## RAILROAD STATIONS.

D 6138	Oct. 28, 1905	Finderne	0	0	.....	.....	.100	8.000	100.5	0.1 cc.	
D 898	July 31, " "	Lebanon	.....	.....	.....	.....	.372	.056	1.000	38.5	0.1 cc.

It is to be regretted that time could not be found during the year to continue the investigation of oysters and clams taken from localities liable to pollution. The importance of this work requires no explanation, and as the State becomes more thickly populated the opportunities for pollution of shellfish increase. It is hoped that a further investigation along these lines may be made during the coming year.

## DEPARTMENT OF FOOD AND DRUGS.

The work of this department has consisted, as for several years past, in the examination of certain substances particularly liable to sophistication, the systematic examination of milk and its products, and in the examination of water. The examination of water has already been discussed in the report of the bacteriological department. The variety of articles of food and drugs is limited for three reasons: (1) There is little or no necessity for investigating a large number of these products, which are regularly put on the market in a state of purity sufficient to meet all reasonable requirements; (2) it is only practicable to examine those substances whose degree of purity can be determined beyond question by well established methods of analysis; (3) the law under which these examinations are made is defective, in that it does not include many classes of substances which properly come within the jurisdiction of a pure food law. The following table shows the number of specimens examined during the year in this department:

TABLE VIII.—SHOWING THE NUMBER OF SPECIMENS EXAMINED DURING THE YEAR ENDING OCTOBER 31, 1905.

ARTICLE.	Above standard.	Below standard.	Total.
Milk.....	1,036	345	1,381
Cream.....	91	21	112
Foods.....	875	394	1,269
Drugs.....	292	395	687
Water.....	.....	.....	199
Totals.....	2,294	1,155	3,449

The analyses of water have been included in this table, as no account of them has been credited to the bacteriological department.

During the year, as in the past, the examination of milk has been confined to the determination of total solids, and the performance of tests for preservatives and coloring matter. The percentage of milk samples adulterated this year has been greater than in years past, resulting in the prosecution of an unusually large number of persons for violation of the laws in this respect. These prosecutions, while necessary for the enforcement of the law, are a serious inconvenience to the members of the laboratory staff, as they necessitate the absence of one and frequently of both chemists, who are required to attend the trials. This enforced absence of chemists has resulted in a decrease in the total number of foods and drugs analyzed during the year. It was found that so much time was required during the summer for the examination of milk samples and for attendance at court that the examination of food and drugs other than milk had to be temporarily abandoned. Inasmuch as the services of an additional chemist will be available in the near future, it is believed that this difficulty can be satisfactorily met next year.

TABLE IX.—FOODS OTHER THAN MILK.

ARTICLE.	Above standard.	Below standard.	Total.	Percentage of adulteration.
Butter.....	53	16	69	23.1
Candy.....	6	.....	6	0.0
Cocoa.....	40	3	43	6.9
Coffee.....	3	2	5	40.0
Honey.....	46	4	50	8.0
Lard.....	199	15	214	7.0
Maple sugar.....	.....	1	1	100.0
Maple syrup.....	11	16	27	59.2
Molasses.....	211	67	278	24.1
Oleomargarine.....	48	23	71	32.3
Olive oil.....	67	6	73	8.2
Syrup.....	3	1	4	25.0
Vinegar.....	4	1	5	20.0
“ brown.....	.....	2	2	100.0
“ cider.....	159	221	380	58.1
“ compound.....	1	.....	1	0.0
“ fermented syrup..	1	.....	1	0.0
“ malt.....	3	2	5	40.0
“ mixed.....	1	.....	1	0.0
“ red.....	1	.....	1	0.0
“ syrup.....	3	.....	3	0.0
“ white.....	14	7	21	33.3
“ white wine.....	.....	7	7	100.0
Miscellaneous.....	1	.....	1	0.0
Totals.....	875	394	1269	31.0

This table shows the results of analyses of foods other than milk. The percentages of adulteration given should not be taken to apply to all foods, as only those articles which are frequently adulterated are systematically examined.

TABLE X.—DRUGS.

ARTICLE.	Above standard.	Below standard.	Total.	Percentage of adulteration.
Ether.....	17	6	23	26.0
Antitoxin.....	2	.....	2	0.0
Aqua hydrogenii dioxidi.....	1	.....	1	0.0
Linimentum camphoræ.....	24	53	77	63.8
Oleum amygdalæ expressum.....	1	.....	1	0.0
Oleum olive.....	16	1	17	5.3
Potassii bitartras.....	129	10	139	7.1
Potassii et sodii tartras.....	1	.....	1	0.0
Sodii boras.....	67	30	97	30.9
Tinctura iodi.....	25	154	179	86.0
Tinctura opii.....	9	141	150	94.0
Totals.....	292	395	687	57.6

This table shows the results of examinations of drugs made during the year. On account of the radical changes made in the last United States Pharmacopœia, and the delay attendant upon its publication, it has been deemed advisable to refrain from the examination of many samples of drugs until pharmacists and physicians have had an opportunity to adapt themselves to the numerous changes found in this work. The trials of persons sued for violation of the law under which examinations of food and drugs are made has shown that this law is defective in some respects, and can be materially improved by additional legislation. Section 14 of this act provides that a person producing a warranty in proper form from the manufacturer or dealer from whom he purchases the article alleged to be adulterated, provided that manufacturer or dealer lives within the State, shall escape prosecution. This provision is too broad, in that it enables retailers to tamper with certain classes of goods while in their possession and then rely upon the warranty given by the wholesaler to escape punishment for acts which they themselves have committed. This section should be so amended that the warranty applies only to such articles as are packed in a manner which will prevent any person, except the one giving the warranty, from tampering with them or altering their condition in any way. Power should be given to the chief and other inspectors of the State board of health to confiscate and destroy articles of food and drugs when necessity for so doing arises. Under the act as it now stands, only milk can be treated in this way, but it is very desirable that this power be extended to include such classes of substances as tuberculous or tainted meat, decomposed food of any kind, and dangerous drugs, when they are likely to be used in such a manner as to do harm. The wording of that portion of the act relative to the labeling of articles of food is too indefinite. Foods should be required to be labeled in such a manner that the purchaser may easily ascertain from the label exactly what is being bought. Misbranding should be specifically prohibited under penalty. The provision in section 12, as amended in 1902, requiring that samples should be divided into two parts, should be changed. It is desirable in many cases to divide the samples into three or more parts, and this section should be worded in such a manner that such division will be legal.

Although some action should ultimately be taken regarding the use of preservatives in foods, yet it seems inexpedient to attempt legislation in this direction at this time. It is expected that in the near future the United States department of agriculture will define the attitude which the national government will take in this direction, and when the standards of the department of agriculture are announced it will be well to secure their adoption in this State. In some respects it would be desirable to permit courts to use a limited discretion in the amount of penalty imposed upon violators of the law. At times the penalty fixed by law seems to inflict unnecessary hardship upon persons convicted, and in other cases the penalty is entirely inadequate. Provisions should also be made for a larger penalty for second and subsequent offences.

# Report on the Inspection of Creameries.

BY GEORGE W. M'GUIRE, CHIEF INSPECTOR OF FOOD AND DRUGS.

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

GENTLEMEN—One hundred and twenty-six creameries have been inspected during the past year, and detailed records of these inspections are now on file. These records show that over three thousand farmers are engaged in supplying these establishments with milk, and that the quantity handled reaches over three hundred thousand quarts a day. The conditions reported show that but few creameries are operated in a cleanly and satisfactory manner, and some are so conducted as to render the milk unfit for distribution, while certain others are conducted with every safeguard against the dangers incident to careless management. One of the most serious features is where the family resides within the creamery building, the doors of the dwelling apartments opening into the rooms where milk is received, stored and prepared for market, thus permitting free access to the milk-room by the members of the family and other persons who happen to be in the building. Even the washing of soiled clothing is in some establishments carried on in rooms where milk is cooled and bottled, while in other places milk-rooms are used at times as play-rooms for children. In some creameries the milk is pumped from receiving vat to shipping can or bottling machine through iron pipes, in some instances not more than three-quarters of an inch in diameter. These pipes and the pump become coated on the inside with decomposed milk, over which passes the daily supply. In the better class of creameries the pumps and pipes are especially constructed and are easily taken apart for cleaning, and the pipes are of large diameter and of short lengths, so as to be readily disconnected and cleaned. But few creameries have a perfect system for cooling the milk. The prevailing method is to immerse uncovered cans in vats of ice water to the level of the constricted portion of the necks. The dirt from the exterior of the cans when received at the creamery is washed off in the vat water, and more or less of this filthy water invariably gets into the milk. While this system of cooling is permitted, it seems useless to insist upon scrupulous care in otherwise handling milk. There are but few creameries equipped with model cold storage rooms. Proprietors claim that the maintenance of such facilities is too expensive, but cold storage rooms should be provided in every creamery. The drainage system of every creamery inspected has been carefully examined, and the conditions are fully set forth in the detailed reports. In numerous instances leaky drains and rotted wood floors permit waste fluids to escape beneath the creamery building, saturating the ground and causing foul odors to rise.

Owners of creameries where serious defects in construction exist, on being warned, have shown a disposition to make the necessary improvements. In several creamery buildings new concrete floors have been laid and modern apparatus has been installed, and altogether better methods in handling milk have been adopted. Doubtless a reinspection of all creamery premises during the coming year will result in additional improvements.

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold.

BURLINGTON COUNTY.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1904					
Pemberton	Feb. 20	Montgomery & Smith	6000	58	Shipped to Camden, Atlantic City and Philadelphia. Surplus made into butter. Local sale of cream. Butter shipped to Trenton. Shipped to Philadelphia.	Yes.*
Hartford	Feb. 23	Thomas O. Plasket	900	25		Yes.
Columbus	Dec. 30	G. R. Supplee & Sons	7000	39		No.

CUMBERLAND COUNTY.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Bridgeton	Nov. 17	Arctic Ice and Milk Co.	10000	148	Manufacture ice cream and condensed milk. Ship milk to Philadelphia and Atlantic City. Retail in Bridgeton. Shipped to Atlantic City and Millville.	No.
Bridgeton	Nov. 17	William W. Atkins	300	15		No.

CAMDEN COUNTY.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Camden	Dec. 1	Harry R. Reed Co.	3000	25	Retailed in Camden.	Yes.

ESSEX COUNTY.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Pine Brook	Sept. 21	Halprin Bros	1400	30	Milk sold in Newark.	Yes.
W. Livingston	Aug. 27	Burn M. Dickinson	800	16	Retailed in Summit.	Yes.
Caldwell	Sept. 30	Harry F. Backus	760	15	Ships to Newark.	No.

HUNTERDON COUNTY.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Middle Valley	May 2	George Clark	1200	23	Ships to Bayonne, Newark and Elizabeth. Shipped to New York.	No.
White House	May 19	A. C. Durling	1700	25		Yes.
West Portal	Apr. 13	Chas. W. Vannatta	1600	29	Shipped to New York and Jersey City.	No.
Wertsville	Aug. 4	Hering & Northrup	2000	35		Yes.
Three Bridges	May 3	C. H. Cook	1400	13	Shipped to Philadelphia to Newark. Elizabeth and Perth Amboy.	No.

\*The word "yes" in the last column, indicates that notice has been sent to the owner of the creamery by the State Board of Health that conditions exist in or around the creamery which need improvement or modification. The word "no" indicates that it was not deemed necessary at this time to call the attention of the owner to any defects which may exist.

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold—Continued.

HUNTERDON COUNTY—Continued.						
LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1905					
Sunny Side	May 3	James Wyckoff	1400	27	Shipped to Elizabeth, Newark and Townley.	No.
Stockton	May 12	Owner absent	1000	22		Shipped to Bucks county, Pa.
Spring Mills	May 9	T. M. Moyer	1000	22	Made into butter	Yes.
Sergeantsville	May 12	William Strouse	4000	90	Made into butter	Yes.
Rosemont	May 12	William Strouse	1400	27	Made into butter	Yes.
Ringoes	May 12	William Strouse	2000	53	Made into butter	Yes.
Beaville	May 21	C. H. Cook	3300	51	Made into butter	Yes.
Readington	June 6	C. H. Cook	2000	51	Made into butter	Yes.
Pittstown	July 2	Empire State Dairy Co.	2500	36	Shipped to New York.	Yes.
Pattenburg	Apr. 16	Geo. N. Robinson	600	14	(Shipped to Brook- 177 Elizabeth and New York.)	No.
New Germantown	May 2	{ A. C. Durling } { Owner absent }				
Mt. Pleasant	May 9	{ George Scott } { Owner absent }				
Milford	May 9	E. C. Hurley	1000	22	Made into butter	No.
Ludlow	Apr. 15	H. F. Backus	1100	23	Shipped to Newark	No.
Locktown	May 10	{ Locktown Associa- } { tion Creamery }	1100	72	Made into butter	Yes.
Little York	May 9	Geo. S. Eckel	1000	26	Made into butter	No.
Lebanon	May 2	Howard Van Sickle	1400	20	Shipped to Plainfield.	No.
Lebanon	Mar. 27	Geo. Clark	1200	20	(Shipped to Bay- one and Newark } { Shipped to Jersey City }	No.
Jutland	Apr. 18	Geo. N. Robinson	1100	28		Made into butter
Idell	May 10	Wm. Strouse	1000	20	Made into butter	Yes.
Huffville	May 10	Harry Sassaman	2000	38	(Made into butter } { shipped to Bucks county }	No.
Glen Gardner	Aug. 1	John F. Force	700	14		(Shipped to Plain- field. Retailed in Glen Gardner.)
Flemington	Apr. 17	Seller Bros.	1900	31	Shipped to Newark.	
Everettstown	May 9	Owner absent				
Clover Hill	May 27	A. C. Durling	1000	21	(Churned and ship- ped to New York } { Shipped to New York, Jersey City, Newark and Elizabeth }	Yes.
Clinton	Apr. 7	James Wyckoff	2300	38		No.
Cherryville	May 12	Clinton E. Peterman	2000	36	Made into butter	Yes.
Califon	May 2	Isaac H. Hoffman	600	10	Shipped to New York. (Shipped to Staten Island and New York.)	No.
Califon	May 2	C. C. Demarest	1100	28		Made into butter
Barbertown	May 9	Wm. Strouse	1800	25	Made into butter	No.
Baptistown	May 9	Geo. Scott	1800	45	Made into butter	Yes.
Annandale	May 2	Marchant Bros.	1200	15	(Shipped to Plain- field and Newark.)	No.
Amwell Valley	May 3	C. H. Cook	750	20		Made into butter

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold—Continued.

MERCER COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1905					
Robbinsville.....	Aug. 8.....	Benj. F. Hulse.....	1000	20	Made into butter.....	Yes.
Hopewell.....	Dec. 7.....	Daniel S. Northrup.....	8000	39	{ Shipped to Phila- delphia.....}	Yes.
Pennington.....	Dec. 12.....	J. A. Kunkle.....	1500	20	Made into butter.....	No.
Harbourton.....	June 30.....	Samuel A. Burns.....	2300	84	Made into butter.....	Yes.

MONMOUTH COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Allentown.....	Aug. 3.....	Allentown Dairy Ass'n.....	1500	36	{ Shipped to Asbury Park and Spring Lake, Surplus made into butter. Milk sold in As- bury Park.....}	No.
Colt's Neck.....	Aug. 9.....	Colt's Neck Creamery Co.....	1200	19	{ Shipped to Asbury Park and Spring Lake, Surplus made into butter. Milk sold in As- bury Park.....}	Yes.

MORRIS COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Naughtright.....	May 2.....	Henry Quell.....	900	11	{ Shipped to Long Island City.....}	No.
Flanders.....	Mar. 31.....	Henry Quell.....	1600	16	{ Shipped to Kearny, Bayonne and Long Island City.....}	Yes.
Troy Hills.....	Aug. 9.....	H. F. Backus.....	350	5	Shipped to Newark.....	Yes.
Flanders.....	Apr. 12.....	{ Willwood Farms } Dairy Co.....	500	5	{ Shipped to Plain- field, Surplus made into butter.....}	No.
German Valley.....	May 2.....	Jacob W. Welch.....	500	10	Shipped to New York.....	No.

MIDDLESEX COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Cranbury.....	Sept. 12.....	Middlesex Dairy Co.....	2500	50	{ Cream shipped to Philadelphia. Surplus made into butter.....}	Yes.
New Brunswick.....	Jan. 9.....	Jordan & Robinson.....	2500	40	{ Retailed in New Brunswick.....}	Yes.

SALEM COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Woodstown.....	Nov. 22.....	C. F. Moore.....	3000	51	{ Shipped to Atlantic City and other seaside towns. Shipped to Wood- bury, Camden, Atlantic City and Philadelphia.....}	No.
Woodstown.....	Nov. 22.....	Busbey & Miller.....	3000	39	{ Sold in Salem. Retailed in Salem. { Sold in Salem and shipped to Phila- delphia.....}	No.
Sharptown.....	Mar. 18.....	Wm. Richman.....	1600	29	Sold in Salem.....	No.
Salem.....	Mar. 18.....	Wm. Richman.....	1000	20	Retailed in Salem.....	Yes.
Salem.....	Nov. 22.....	J. Q. Davis.....	1200	13	{ Sold in Salem and shipped to Phila- delphia.....}	No.
Monroeville.....	Dec. 1.....	{ Monroeville Cream- ery Co.....}	6000	50	{ Shipped to Atlantic City and Phila- delphia. Ice cream manufact- ured.....}	Yes.

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold—Continued.

SALEM COUNTY—Continued.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1905					
Elmer.....	Nov. 17.....	Cooper H. Oliphant.....	600	10	{ Shipped to Atlantic City.....}	.....
Elmer.....	Nov. 17.....	Isaac Reeve.....	1500	36	{ Sold in Elmer. Shipped to Phila- delphia. Made into butter.....}	No.
Daretown.....	Mar. 30.....	Ira S. Champion.....	1000	23	{ Retailed in Ocean City.....}	No.
Alloway.....	Nov. 22.....	Henry S. Van Leer.....	1000	20	{ Sold in seaside towns. Made into ice cream.....}	No.

SOMERSET COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Montgomery.....	Aug. 7.....	Chas. H. Cook.....	1000	20	{ Cream shipped to Belle Mead.....}	Yes.
South Branch.....	June 6.....	Chas. H. Cook.....	1400	21	{ Cream shipped to Belle Mead.....}	Yes.
Skillman.....	Dec. 23.....	J. B. Longshore.....	1400	80	{ Shipped to Phila- delphia.....}	No.
Pottersville.....	May 2.....	A. C. Durling.....	1000	22	Shipped to Newark.....	Yes.
North Branch.....	May 19.....	Geo. W. Fields.....	3650	43	Shipped to Bayonne.....	Yes.
Neshanic.....	June 10.....	E. O. Dennis.....	2000	20	Shipped to Newark.....	Yes.
Neshanic.....	Nov. 23.....	Sam'l Levy.....	1600	22	Shipped to New York.....	Yes.
Flagtown.....	June 6.....	Martin Quell.....	1000	42	{ Shipped to Green- point, N. Y.....}	Yes.
Belle Mead.....	Dec. 22.....	C. H. Cook.....	4000	80	{ Milk and cream shipped to Phila- delphia, Newark, Trenton and other towns. Butter made.....}	No.

SUSSEX COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
Sussex.....	June 21.....	Beakes Dairy Co.....	7500	36	Shipped to New York.....	Yes.
Woodruff's Gap.....	May 30.....	H. B. Chardavoyne.....	2300	16	Shipped to New York.....	Yes.
Sussex.....	June 31.....	Denis Reardon.....	3500	19	Shipped to Jersey City.....	Yes.
Stockholm.....	June 21.....	George Inhken.....	2400	20	{ Shipped to Brook- lyn, N. Y.....}	Yes.
Stillwater.....	June 20.....	{ Dermott-Bunger } Dairy Co.....	4000	33	Shipped to New York.....	Yes.
Sparta.....	June 21.....	George Inhken.....	2500	21	{ Shipped to Brook- lyn, N. Y.....}	Yes.
Quarryville.....	June 7.....	H. S. Pound.....	4000	27	Shipped to New York.....	Yes.
Price's Crossing.....	June 25.....	{ Orange County Milk Association.....}	4000	18	Shipped to New York.....	Yes.
Papakating.....	June 7.....	{ Borden Condensed Milk Co.....}	9000	47	{ Shipped to New York and New Jersey towns.....}	No.
Newton.....	June 21.....	Thorndale Farms.....	8000	48	{ Shipped to New York, Orange, South Orange and Chatham.....}	No.
Bevans.....	July 22.....	Seiler Bros.....	2500	23	Shipped to Newark.....	Yes.

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold—Continued.

## SUSSEX COUNTY—Continued.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1905.					
Mulford's .....	May 30.....	Fulboam Dairy Co. ....	2600	28	{ Shipped to Rutherford, Passaic, Paterson, Jersey City and New York.....	Yes.
Monroe .....	May 30.....	Fulboam Dairy Co. ....	2000	11	{ Shipped to Newark .....	Yes.
Monroe .....	May 12.....	Fulboam Dairy Co. ....	2500	19	{ Shipped to Paterson, New York and Jersey City.....	Yes.
Stillwater .....	June 3.....	Fulboam Dairy Co. ....	6600	65	{ Shipped to Paterson, Passaic, Jersey City and New York.....	Yes.
Macafee .....	June 20.....	H. F. Chardavoigne.....	3200	18	{ Shipped to Brooklyn, N. Y.....	Yes.
Lafayette .....	June 21.....	Wm. H. Bennett.....	7000	41	{ Shipped to Newark .....	No.
Huntsville.....	May 30.....	Fulboam Dairy Co. ....	6000	39	{ Shipped to Paterson, Newark, Jersey City and New York.....	Yes.
Hamburg .....	May 31.....	{ Warwick Valley Milk Association.....	3500	26	{ Shipped to New York.....	Yes.
Hamburg .....	May 31.....	Diamond Dairy Co. ....	6500	25	{ Shipped to New York.....	Yes.
Glenwood .....	June 7.....	Brown & Bailey.....	5200	25	{ Milk condensed.....	No.
Glove .....	June 8.....	J. J. Vansickle.....	2000	15	{ Shipped to New York.....	No.
Beemerville .....	June 7.....	{ Borden Condensed Milk Co.....			{ Quantity of milk and number of patrons included in Branchville record, next below.....	No.
Branchville.....	June 7.....	{ Borden Condensed Milk Co.....	5000	24	{ Shipped to New York and New Jersey towns.....	No.
Baleville .....	June 20.....	Alex. Campbell Milk Co.	5500	33	{ Shipped to Brooklyn, N. Y.....	No.
Angusta .....	June 20.....	T. O. Smith.....	15000	61	{ Shipped to New York and re-shipped to New Jersey towns.....	Yes.
Swartswood.....	June 13.....	George Ihnken.....	1600	15	{ Shipped to Brooklyn.....	No.
Andover.....	May 30.....	Fulboam Dairy Co. ....	3000	15	{ Shipped to Paterson, Jersey City and Newark.....	Yes.
Sussex .....	June 8.....	Horton Ice Cream Co.....	20000	96	{ Milk condensed.....	No.
Vernon .....	June 6.....	Robinson & Hawkins.....	3500	15	{ Shipped to Brooklyn, N. Y.....	Yes.

List of Creameries in New Jersey, Showing Location, Date of Inspection, Name of Proprietor, Quantity of Milk Received Daily, Number of Persons Supplying the Milk and Name of Place Where the Milk is Sold—Continued.

## WARREN COUNTY.

LOCATION.	DATE.	PROPRIETOR.	No. of quarts received daily.	No. of patrons.	Disposal of product.	Notified.
	1905.					
Tranquility.....	May 30.....	Sugar Loaf Dairy Co. ....	4800	31	{ Shipped to New York.....	Yes.
Rocksburg .....	July 17.....	Elmer Worthington.....	1800	30	{ Shipped to Centreville, Pa.....	Yes.
Marksboro.....	June 19.....	A. L. Roy.....	4000	45	{ Shipped to New York.....	Yes.
Hughesville.....	Aug. 12.....	Walter L. Jacoby.....	500	13	{ Shipped to New York.....	Yes.
Hainesburg.....	June 17.....	Howell Demarest & Co. (Alexander Campbell)	1600	24	{ Shipped to Brooklyn, N. Y.....	Yes.
Hackettstown.....	July 21.....	{ Milk Co.....	3000	15	{ Shipped to Brooklyn, N. Y.....	Yes.
Delaware .....	July 24.....	F. D. Jackson Milk Co.....	2000	20	{ Shipped to Hoboken.....	Yes.
Changewater.....	July 24.....	Taylor-Plate Milk Co.....	2000	19	{ Shipped to Brooklyn, N. Y.....	Yes.
Broadway.....	July 19.....	Harry F. Backus.....	700	16	{ Shipped to Newark.....	Yes.
Blairtown .....	June 22.....	J. P. Weirk.....	4500	48	{ Shipped to Brooklyn, N. Y.....	Yes.
Allamuchy.....	Sept. 18.....	Halprin Bros.....	700	8	{ Shipped to Newark.....	Yes.
Valis .....	June 5.....	Henry Tepperwin.....	4000	56	{ Shipped to New York.....	Yes.
Great Meadows.....	May 29.....	Sanford Dairy Co.....	4200	38	{ Shipped to New York.....	Yes.
Long Bridge.....	May 30.....	Sugar Loaf Dairy Co.....	3000	27	{ Shipped to New York.....	Yes.
Bridgeville.....	May 29.....	Garner Miller.....	1600	26	{ Shipped to Newark.....	No.



## Excerpts from the Annual Reports of Local Boards of Health for the Year ending October 1st, 1905.

*Atlantic City.*—The health officer furnishes the following information concerning the reorganization of the medical inspection of the pupils of the public schools:

ATLANTIC CITY, N. J., October 30th, 1905.

*Board of Education, Atlantic City, N. J.:*

GENTLEMEN—As you are aware, there is about to be organized in the city of Atlantic City, under the combined auspices of the board of public education and the board of health, a systematic medical inspection of the pupils attending the public schools. The success of the enterprise depends in a very great measure upon the co-operation of the principals and teachers of the various schools with the medical inspector detailed for the work. The object of the medical inspection of the school children is: (a) the identification of all pupils requiring medical care; (b) the prompt exclusion from school of all pupils suffering from transmissible diseases; (c) the exclusion from school, until appropriate medical treatment has been begun, of all pupils suffering from other than transmissible diseases; (d) the detection of defects of sight and hearing, and of deformities that may be corrected or improved by medical aid. With information in our hands upon the several phases of the subject here indicated, it is hoped and believed that much may be done for the health of children in attendance upon our schools. It is obviously of fundamental importance to the success of these investigations that the work be conducted with the least possible disturbance of class routine, and it is believed that this result can be best accomplished by observing the following suggestions: A. It is desirable that the medical inspector have the use of a room for the examination of children. B. The principal of the school and the medical inspector should agree upon an hour for the inspection, to be chosen with due regard to the convenience of each; this hour should be adhered to as nearly as circumstances will permit. C. The work of the medical inspector will be very much expedited and disturbance of school routine minimized through the assistance that can be rendered by the teachers in charge of the classes; in this relation it is recommended that the teacher set aside in a particular part of the class-room, or preferably in a separate room, every child that in her or his opinion needs medical exam-

ination, so that the medical inspector's attention be called to these cases immediately upon his arrival. D. When the routine examination of a class seems advisable the following plan of procedure is suggested: The medical inspector shall stand with his back to a window, and the teacher will have the pupils pass in single file before him; as each child passes, the medical inspector will examine the eyes, tongue, hands and hair; the conditions found by him that necessitate medical attention will be noted down by the teacher on cards provided for that purpose; the doctor communicates his diagnosis to the teacher, not by mentioning the name of the disease, but by giving its number on the code, since experience has shown that it is unwise to let one child know from what disease another is suffering; in order to prevent the dissemination of such information a code will be furnished both teacher and inspector, on which diseases of special moment are recorded by number. E. At each inspection the principal of the school is requested to furnish the inspector with: 1. A list of the children who have returned to school after an absence of one or more days. 2. The names of those in any way suspected of having contagious diseases or of having been in contact with contagious diseases. 3. The names of those who have returned to school after having been excluded. F. The inspector will furnish to the principal a list of all children excluded from the school, indicating the day from which the exclusion dates; these lists will be revised as the children return to school. G. Each child needing immediate medical care will be given an exclusion card, stating the nature of his or her illness and the date of inspection; this exclusion card will be enclosed in a sealed envelope and addressed to the parents. H. Many of the ailments from which school children suffer, while calling for medical attention, are not of sufficient gravity to justify prolonged exclusion from school. In these cases the child should be excluded only until he or she can bring a physician's certificate to the effect that he or she is receiving medical care. I. In all cases of exclusion the character of medical care to be received by the child is to be decided by the parents. By co-operation between teachers and inspectors, and by this alone, can the good that is hoped for be accomplished; it is urged that you assist in this work by careful consideration of the plan above outlined and by giving us the benefit of any suggestion that in your opinion would improve the proposed service.

BOARD OF HEALTH OF ATLANTIC CITY, N. J.  
EDWARD GUION, Health Officer.

The following notice has been sent to all of the principals in the city: The foregoing suggestions and regulations from the health officer of this city have been unanimously adopted by the board of education, and I wish herewith to inform you that a medical inspector has been appointed for each building, and that the same will report to the respective schools daily, according to the following plan: (a) All teachers will be furnished with cards to be used in reporting to the principal of the school the names of pupils suffering from transmissible diseases; (b) using the above cards, teachers will report to the principal each morning, not later than half-past nine, the names of pupils who, in their judgment, are suffering from some transmissible disease; (c) the principal of each building will notify the medical inspector by telephone, not later than ten o'clock each morning, of the number of cases reported to her and the necessity of his reporting or not reporting to her building on that particular day; (d) all

pupils thus reported will be seated in the principal's office, or some other room designated, until the arrival of the medical inspector; (e) all cards used by the teacher in reporting cases to the medical inspector will be forwarded to the city superintendent's office at the end of each calendar month; (f) a faithful observance to the above suggestions is earnestly requested.

Respectfully,

CHAS. B. BOYER,  
Supervising Principal of Schools.

Three lectures will be given to the teachers during the school year, subjects as follows (subject to change): 1. Recognition of Transmissible Diseases. 2. School Hygiene. 3. To be selected. Each inspector will make at least one inspection of each room of his school once a week, noting ventilation, &c. Snellen's test cards will be furnished to each room, and a test of each pupil and a full return of card "A" must be made before January 1st of each year. The medical board will hold a meeting at the high school on the first and fourth Wednesday of each month during the school year at 4:15 p. m. Each inspector will be expected, in the event of his absence from the city, to supply a substitute, and each inspector should arrange to be within call of his telephone at 10 a. m. Every school-room of each school will be fumigated by the board of health every two weeks, as a precautionary measure. Each inspector will be furnished biweekly (or oftener if necessary) a list of contagious diseases appearing in families having children in said inspector's school, or appearing in families in the district of said school. The inspector should see that all children of an infected house should be kept from school. After a case of contagious disease the children will not be admitted to the school until they can present a permit from the board of health.

*Asbury Park.*—The secretary writes as follows:

"The total number of deaths in Asbury Park for the year ending October 1st, 1905, was fifty-one, twenty-six among the resident and twenty-five among the non-resident population. The resident population, according to the State census of 1905, is 4,526; the death-rate, including all deaths, is 11.27; by including the resident deaths only, the death-rate is 5.75, which is the lowest death-rate recorded for Asbury Park since 1880. The principal causes of death, as reported, were: Endocarditis, seven; apoplexy, six; heart disease, four; accident, three; paralysis, three; bronchitis, three; myocarditis, three; angina pectoris, three. It is a notable fact that not one death from tuberculosis occurred in Asbury Park during the year. The number of births reported for the year, twenty-seven, is the same as that reported for the year 1904, which was the lowest recorded since 1880. An effort has been made during the year to obtain evidence of any neglect on the part of practicing physicians or others to report births at which they have professionally attended, and evidence has been obtained that some of the practicing physicians are very dilatory in making returns of births. Fifty-nine returns of marriages were received during the year, which, with the exception of the years 1897 and 1903, is the greatest number ever recorded in one year for Asbury Park. Twenty-eight cases of infectious diseases have been reported to the board of health of Asbury Park during the year; as follows: Diphtheria, seven;

scarlet fever, ten; typhoid fever, two; measles, nine. The first case of diphtheria reported was an adult, fifty-two years of age; three cultures were sent to the State laboratory of hygiene with negative results. The second case was a child twelve years of age, who attended the public school; the patient had been sleeping away from home with a friend who, it was later learned, had been affected with a very sore throat and had left the city prior to the date of attack of the patient. The third case was a child seven years of age in a family of Hebrews, eight in number, who came from New York on May 10th, 1905, and occupied a one-story building recently vacated as a fish market, floor of cement and size sixteen by thirty-two feet, in which they resided and conducted a tailoring business. Upon their arrival in the city the child, being ill, was taken to a physician, who diagnosed the case as diphtheria, which diagnosis was confirmed by a specimen sent to the State laboratory of hygiene. The fourth and fifth cases were a sister and brother of case No. 3. The sixth case was a child five years of age, who had recently arrived from New York State. Case No. 7 was a young man twenty-eight years of age, who had been in the city a short time, stopping at one of the hotels. In cases No. 6 and No. 7, successive specimens sent to the State laboratory failed to confirm the clinical diagnosis. The first case of scarlet fever was a child four years of age; the infection no doubt was from relatives of the family who resided in another sanitary district, in which family several cases of the disease existed preceding the date of attack of the patient. In case No. 2, a child seven years of age, the source of infection was not learned; the case was not discovered, it having been of a very mild type and no physician being called in attendance, until case No. 3 was reported to the board of health, a brother of case No. 2, six years of age, who died three days after date of attack. Case No. 5 was an adult, nineteen years of age; the source of infection was not learned. Case No. 6 was a child about nine years of age; rumors were received at the office of the board of health that the child in question was reported to be affected by scarlet fever; upon inquiring of the attending physician he stated that there was positively, in his opinion, no truth in said reports, and that the child was suffering from tonsillitis; seven days later other rumors were received stating that said child was desquamating, and at a meeting of the board of health held that evening it was ordered that a medical examination be made of said child; two physicians were engaged to conduct such an examination, with the result that each of the physicians reported that, "In their opinion, the said child was in a desquamative stage of scarletina." Case No. 7 was a child three years of age; the family was served with groceries from a grocer in an adjoining sanitary district, who was in the habit of fondling the child when he delivered goods, and it was learned that a child in his family had been affected with a similar disease. Case No. 8 was a sister of case No. 7. In case No. 9 the source of infection was not learned. Case No. 10 occurred in a family which had been residing in Asbury Park but a short time preceding the date of attack. The first case of typhoid fever was an adult who came from Washington, D. C. and was taken ill twelve days after arrival in Asbury Park. The second case was an adult fifty years of age, who was taken ill about thirty days after arrival in this city; the source of infection in this case was not learned. The cases of measles were scattered through the year and distributed in different parts of the city. During the early part of February it was learned that diphtheria and scarlet fever prevailed to some

extent in the adjoining sanitary districts, and it was also learned that a number of cases of tonsillitis existed in Asbury Park, whereupon the following communication was sent to the principal of public schools, in order that the board might obtain early information of any suspected case: "Diphtheria and scarlet fever are known to prevail to some considerable extent in the adjoining sanitary districts, at least one death from each of the above-named diseases having occurred, and two cases of diphtheria have recently been reported in Asbury Park; we are also informed that a number of cases of so-called tonsillitis exist in Asbury Park. In view of the above facts extra efforts should be made to weed out any case of sore throat among those in attendance at the public school, and any such case should be excluded until it can be positively ascertained that it is not of an infectious nature."

TABLE SHOWING THE NUMBER OF REPORTED CASES OF INFECTIOUS DISEASES IN ASBURY PARK, AND DEATHS OCCURRING THEREFROM, DURING THE PAST TWENTY-ONE YEARS.

YEARS.	Resident population (estimated except for census years).	NUMBER OF CASES REPORTED.					DEATHS.						
		Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Consumption.	Small-pox.
1885.....	2,900	14	3	1	.....	.....	.....	2	1	.....	.....	.....	.....
1886.....	2,123	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1887.....	2,250	8	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1888.....	2,375	.....	20	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1889.....	2,500	10	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890.....	2,525	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1891.....	2,750	1	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1892.....	2,575	36	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1893.....	3,000	.....	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
1894.....	3,380	7	7	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1895.....	3,761	6	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1896.....	3,585	89	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1897.....	3,916	5	14	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
1898.....	3,993	5	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
1899.....	4,071	4	6	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1900.....	4,148	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1901.....	4,225	6	29	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1902.....	4,302	17	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1903.....	4,379	30	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
1904.....	4,456	120	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
1905.....	4,532	9	10	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....		415	151	84	86	5	11	1	9	27	5	79	1

During the year the ladies of the Present Day Club of Asbury Park have furnished window screens for the windows and doors, window shades, cooking utensils, dishes and a hot air heater for the municipal hospital building, and also a cement floor in cellar and a hot air heater for the caretaker's cottage on the municipal hospital grounds, at a cost of \$672.12. The present pavilion has been used during the past year for diphtheria, five cases having been received and cared for at said pavilion.

The search on private premises for breeding places for mosquitoes was continued during the year, and thirty premises were found upon which mosquitoes were breeding in miscellaneous receptacles, such as rain-water barrels, horse-drinking troughs, wooden tubs, tin cans, &c.

During the year the board has enforced the ordinance declaring the construction, maintenance, use or continuance of any privy vault, or other receptacle in or upon the ground, for human excrement in such manner that the filthy contents thereof may be accessible to flies, to be a nuisance, with the result that eighty-six privy vaults have been cleaned, filled with earth and their use abandoned, and there are but ten such structures now remaining in the city, and for four of these plumbing plans are now on file for the construction of the plumbing work necessary to secure abandonment of the vaults.

On several occasions during the summer an inspector of the State board of health collected samples of milk for analysis in this city. Preservatives were found in a number of the samples and a few of the samples were found to be below the standard in solids required by law. Prosecution by the State board of health followed in each case.

There are but two premises in Asbury Park on which dwellings are located which are not connected with the public sewer system, neither of which is occupied. During the year the city has adopted a change in the method of discharging the sewage into the ocean. The two outlets heretofore in use have been connected and a pipe laid into the ocean twelve hundred feet from shore, where all the sewage from Asbury Park is now discharged. This change was made as an experiment, and the pipes have been so connected and laid that a settling or precipitating basin can readily be constructed, and which it is proposed to construct should the present method prove ineffective in preventing the sewage from flowing upon the shore or the bathing grounds.

During the past summer the common council contracted with the East Jersey Coast Water Company to supplement the water-supply of Asbury Park, which formerly had been drawn wholly from artesian wells owned by the city. On August 9th a connection was made between the mains of said company and Asbury Park, and I am informed by the superintendent of the department of water and sewers of Asbury Park that about one hundred and fifty thousand gallons of water were received daily to September 5th. The East Jersey Coast Water Company takes water from Kisner's pond, which is supplied by Jumping brook and its tributaries. There seemed to be some question as to the purity of water taken from Kisner's pond, and a motion was passed at a meeting of the board of health held September 22d, 1905, requesting information from the State board of health in relation to the condition of this water shed. A copy of a report of inspection of Jumping brook and its tributaries showed numerous sources of direct and indirect contamination along its borders.

A new contract for three years for the removal and disposal of garbage, dead animals and rubbish from Asbury Park was made by the city during the year with new contractors. By reference to the citizens' complaint table it will be seen that the number of complaints against this service are far in excess of any previous year. The following report of the inspector of the board of health describes the method of disposal: "To the Board of Health of the City of Asbury Park: On August 17th, 1905, an inspection of the premises of Messrs. Redfern & Koenemund, garbage and rubbish contractors of the city of Asbury Park, located near Corlies avenue, about two miles from the city limits, on the borders of a brook flowing into Shark river, showed the following conditions: The disposal plant consists of two steam boilers, eight open wooden vats, about sixteen and a half feet by four and a half feet by three feet in size, holding about eight cartloads or about two hundred and thirty-three cubic feet of garbage each, in which garbage is cooked by steam liberated from perforated pipes at the bottom of the vats, located under a shed, with an earth floor. There are eight additional open wooden vats of same size as those above referred to, into which the garbage is drawn after cooking; the latter stand along the brook. Garbage when received at said plant is shoveled from the vehicles into the open wooden vats under the shed. The garbage is cooked in these vats, as above stated, for the purpose of recovering the grease. The residue remaining after the grease has been taken off is disposed of by selling to farmers for hog food, and the refuse not removed by the farmers is carted by the contractors to the county farm and dumped upon the surface of the ground, where, at the time of this inspection, it covered a space of approximately eight hundred feet long by fifteen feet wide, where it is left to decompose. This mass of decomposing organic matter serves as a breeding place for flies, which swarm about the place in countless numbers. The ground beneath and around the vats in which the garbage is cooked and the residue is stored is grossly polluted from leakage from the vats and slopping over from the vehicles carting the material to and from the place, in loading and unloading. The plant, as stated, stands upon the borders of a running stream which flows into Musquash cove, Shark river, where oysters are grown and which is receiving the pollution from the plant, and into which the washings from the carts and wagons flow. At the time of this inspection there were approximately one hundred cubic yards of uncooked garbage upon the ground, probably due to the lack of facilities to cook the material as fast as it is received. The method of unloading the carts upon arrival at the plant is by shoveling the garbage from the carts into the vats, during which time considerable culling is done to remove tin cans and that portion of garbage containing little or no grease; this manner of unloading and culling consumes considerable time, while dumping the carts would require but a few seconds; at the time of this inspection three loaded vehicles were waiting to be unloaded, thus losing more time and preventing the use of the carts to their full capacity in removing garbage from the city. The specifications of the contract require that rubbish be burned daily in open fires. At the time of this inspection an accumulation of unburned rubbish, approximately seventy-five hundred cubic feet, was stored in a hollow, also draining into the stream above referred to, and an employe at work culling this rubbish stated that no burning had been done for two or three weeks; this accumulation ranged in depth from a few inches to about fifteen feet,

and unless burned daily, as is required by the specifications, it becomes wet and sodden, and a large portion of the combustible material will not be consumed. Rubbish contains material more detrimental to the public health, when not properly disposed of, than garbage. Flies were also swarming about this accumulation of rubbish in countless numbers, and it evidently afforded them a very favorable breeding place. Complaints were received from the inspector of the Neptune township board of health, in which township the garbage is disposed of, that garbage taken from the rendering plant of Messrs. Redfern & Koenemund by farmers is creating a nuisance, and the odors from same are very obnoxious; and also that the loaded rubbish carts are driven through the township without covering, thereby permitting loose rubbish to escape and litter the streets and roads. On August 18th, 1905, in company with said inspector, an investigation of the places complained of, and of several others, showed that garbage taken from this place is disposed of by farmers by feeding to hogs. On a number of the places the pens in which the hogs are kept indicate frequent moving, and practically no odor was noticeable at the time of this inspection; upon others, from the condition of the pens, they are evidently not moved, and the hogs were wallowing in the garbage and muck to a depth varying from an inch to three or four feet; in the cases of greater depth, stable manure or sod is placed in the accumulation, which prevents the hogs from sinking. At one place approximately two hundred cubic yards of garbage has been composted, and the greater portion of the compost is covered with a few inches of stable manure; considerable odors are emitted from this accumulation, and it will undoubtedly prove a very great nuisance when uncovered, which will probably be done during the coming spring, as was proven a few years ago in the McTague case, where the garbage, after lying from summer until spring in a compost, was found to have decomposed but very little, and the odors emanating therefrom were so great in Asbury Park that several citizens in Asbury Park lodged complaints with the board of health, and the inspector traced, by the odors, the nuisance to the place named, about two miles distant. The odors from the places where the hog pens are seldom, if ever, changed is also quite obnoxious. The rubbish carts, when loaded, are very poorly covered, and in many instances only a small part of the load is covered at all, thereby permitting loose articles on the top of the load, such as loose paper, &c., to blow or fall therefrom and litter the streets or roads over which they are carried."

The cost of removal and disposal of these waste products is considerably lower than for any preceding year since 1899, when the supervision of the removal and disposal of garbage, rubbish and dead animals was placed under the control of the board of health. The specifications contained in the new contract, which was for three years, from June 15th, 1905, provide that the contractors shall pay the city the sum of fifteen per centum per annum on the cost price of all the vehicles and supplies furnished by the city and used by them in the work. The contractors made a proposition to the common council that if they would waive that portion of the contract requiring them to pay fifteen per centum per annum on the cost price of the vehicles owned by the city and used by them in the work, and extend the contract for a period of two years at the same price, the contractors would furnish all necessary vehicles to do the work and place the fifteen old vehicles owned by the city in first-class condition, which agree-

ment the common council has entered into. When the board of health learned of the above contemplated contract, a protest against the change of this contract was made, which protest is as follows: "Whereas, the board of health of Asbury Park are informed that the common council of said city contemplate entering into a contract with Messrs. Redfern & Koenemund, garbage and rubbish contractors for the said city, to waive that portion of section 16 of the specifications for the collection, removal and disposal of garbage, dead animals and rubbish from said city, to wit, 'the contractor shall pay to the common council the sum of fifteen per centum per annum, in equal monthly payments, on the cost of all vehicles, harness and supplies furnished the contractor by the city for use in carrying out the requirements of these specifications,' in lieu of which it is contemplated to extend the contract for a term of two years after the expiration of the present contract, the contractors agreeing to furnish five additional garbage carts before June 1st, 1906, and to repair the carts now owned by the city free of cost to the city. Whereas, no provision in the said contemplated contract provides for the said contractors to furnish any additional rubbish carts which are needed in the work. Whereas, it has been shown to your honorable body, in a report from this board under date of August 14th, 1905, that the ten garbage carts and two of the rubbish carts can be repaired and placed in good condition at an approximate cost of \$240, and by purchasing five new garbage and three new rubbish carts, at a cost of \$800, the city would then own all the carts which it is believed to be needed for this service, thus assuring a uniform service and good appearance. Therefore be it *Resolved*, that your honorable body be requested to reconsider the changing of the said contract, and require the said contractors to continue their work under the present contract, and pay to the city the sum of fifteen per centum per annum on the cost of all vehicles furnished said contractors by the city. *Resolved*, that your honorable body be requested to cause the ten garbage and two rubbish carts to be repaired as outlined in a report from this board dated August 14th, 1905 (above referred to), reimbursing the contractors for the cost of the repairs which they have made to the carts which were due to wear, and purchase five additional garbage and three additional rubbish carts like those now owned by the city and in use by the contractors." The service rendered by the garbage and rubbish contractors during the past summer has not been up to the standard of preceding years, noticeably in that the garbage carts have frequently been filled too full, thereby permitting the contents to fall upon the streets; an increasing number of complaints has been received from householders of neglect on the part of the contractors to render daily service; rubbish has been carelessly gathered, the carts overloaded and the streets littered with paper; garbage and rubbish carts have often been reported driven through the streets without covers, and the method of final disposal of these waste products has been conducted with a view solely to recover the valuable parts contained therein, regardless of the nuisances created.

TABLE SHOWING THE AMOUNT AND COST PER CUBIC YARD FOR THE REMOVAL AND DISPOSAL OF GARBAGE, DEAD ANIMALS AND RUBBISH FROM ASBURY PARK FOR THE PAST SEVEN YEARS.

*Garbage and Dead Animals.*

YEAR.	Contract price.	Number of cubic yards removed.	Average cost per cubic yard.
1899 .....	\$2 400 00	3,652.83	\$0 6570
1900 .....	2,400 00	3,540.54	0 6777
1901 .....	2,400 00	3,601.74	0 6663
1902 .....	2,850 00	3,634.61	0 7841
1903 .....	2,850 00	3,481.97	0 8185
1904 .....	2,850 00	3,849 58	0 7403
1905 .....	2,166 66	5,567.97	0 3891

*Rubbish.*

YEAR.	Contract price.	Number of cubic yards removed.	Average cost per cubic yard.
1899 .....	\$2,000 00	7,038.5	\$0 2841
1900 .....	2,000 00	7,494.0	0 2669
1901 .....	2,000 00	8,410.0	0 2373
1902 .....	2,000 00	8,804.0	0 2271
1903 .....	2,000 00	10,509.4	0 1903
1904 .....	2,000 00	10,437.4	0 1916
1905 .....	2,166 66	13,253.8	0 1635

Since the organization of the board of health of Asbury Park, in 1880, individual sanitary records of properties have been kept. The original style of bound books was replaced by a loose-leaf system. A separate pliable leather cover is provided for each street, each block is divided and indexed by the first number of the block, and a record can be inserted at any place. The system has been found to be very convenient and complete. A number of changes was also made in the record blank. The following is a record of a property made during the year, which will give an idea of the value of these records. Owners, contemplating purchasers or lessees of property frequently consult these records to learn its condition, and many owners are zealous that their property shall be kept in such a condition that no unfavorable report can be recorded in these records by the board of health.

During the winter months many complaints were received from citizens of Asbury Park by the common council and the board of health against the unclean and unsightly condition of Wesley lake, many claiming the condition to be injurious and dangerous to health, in that the stream flows through a portion of Neptune township where hog-pens, cow-yards, privy vaults, &c., are located upon its borders, and drainage from houses flow into the stream, and the washings from the streets in Asbury Park and Ocean Grove also flow therein, thereby making it unsightly, obnoxious and dangerous to health. Frequent inspections have been made of this

lake, and no mosquito larvæ have ever been found therein, the many fish which abound in its waters eating up the larvæ, thereby preventing their developing into the mosquito. The waters of this lake flow into the ocean, and is not used in any way for potable purposes. The common council decided to remove the most unsightly portion of the sediment of the bed of that part of Wesley lake in Asbury Park, and proceeded to execute the work; after removing a few cubic yards of the material the owner stopped them from performing the work. The common council then passed a resolution requiring that the board of health should clean Wesley lake and present bill to owner. At a meeting of the board of health held February 17th, 1905, it was, by resolution, agreed that the board has no jurisdiction in the matter, not being able to prove that the present condition of Wesley lake is dangerous to the public health, and that the board of health does not consider that it can take any action in the matter. Following is an opinion by S. A. Patterson, Esq., the attorney of the board: "Mr. Obert, secretary of your board, has submitted to me the question as to the power of the board of health to cause Wesley lake to be cleaned, and also whether the expense of cleaning the lake could be recovered from the lake owners. I beg to advise you that, under section 13 of the act of 1887, page 93, local boards of health have the power to inquire into any nuisance known to exist which may be injurious to the health of the public, and cause the same to be abated. Section 14 provides that in case such nuisance be found on private property, the board shall cause notice thereof to be given to the owners to remove and abate the same, at the expense of said owner, within such time as the board may deem proper, and if such owner fails to do this the board may proceed to abate the nuisance and then recover by an action of debt the expenses incurred by the board in such abatement from any person who shall have caused such nuisance. Therefore, the first thing to be determined by the board of health before taking any proceedings in this matter is to establish to a reasonable certainty that such lake is a nuisance—that is, that it is dangerous to public health. Second. This must be done on notice to the owner, so that he may have an opportunity to appear before the board of health and answer the evidence that may be presented in the matter. Third. The fact that the board of health concludes after this examination that the lake in question is a nuisance does not necessarily end the matter, for in the legal proceedings brought to recover the expense incurred by the board the owner could deny that there was ever any ground for the abatement of the nuisance in question, and deny that any dangerous nuisance ever existed in the lake. In case the board did not desire to abate the nuisance in a summary manner, if it be proven to be a nuisance, a bill in chancery could be filed by the board of health to accomplish that purpose. A private individual can also institute proceedings in chancery for the abatement of any nuisance. Finally, the solution of the inquiry will depend upon the ability of the board of health to prove that the lake, in its present condition, is such a nuisance as is injurious to the health of the public. Unless this fundamental fact can be shown, your board would have no jurisdiction in the matter."

\* \* \* \* \*

No action having been taken by the owner of said lake to abate the alleged nuisance, it was ordered, at a meeting of the board of health held April 25th, 1905, at which time bids were received for cleaning the bed of Wesley lake, that the lowest bidder be awarded the contract to remove the filthy accumulation in that portion of Wesley lake, in Asbury Park, declared to be a nuisance by the board of health at a meeting held April 4th, 1905, which work was done as per contract. The expense of removing the sediment in the bed of the lake, as above referred to, amounted to \$395, which amount was paid by the board of health from a special appropriation made by the common council. After the completion of the work a bill was tendered to the owner of the lake for the costs incurred by the board of health in abating the alleged nuisance, which bill has not yet been paid.

*Harrison.*—Under date of August 2d, 1905, the following resolution was forwarded to His Excellency Edward C. Stokes, and by him it was referred to the State board of health for report:

*Resolved,* That the common council of Harrison protest against the proposed action of the New York authorities in shipping consumptive patients across the Erie ferries and into the Erie railroad station and to be taken to Otisville, N. Y., in the trains in which many commuters of this section travel. While this common council realizes the great work of New York city in providing an institution for the care of people with the dread disease, we also feel justified in protesting against that which will cause the disease to spread among the people of this section. And be it further

*Resolved,* That Town Counsel Michael T. Barrett be instructed to file a protest with Governor Stokes and the State board of health expressing our views against the present plan by the health authorities of New York city.  
True copy.

B. P. WALSH, T. C.

The following communication was sent to the Governor:

AUGUST 4TH, 1905.

Hon. Edward C. Stokes, Governor, Trenton, N. J.:

DEAR SIR—The letter from Michael T. Barrett, Esq., dated August 2d, 1905, enclosing resolution of the common council of the town of Harrison, and transmitted to this office by you with a request that a report be made on the matter referred to in the resolution, has been received.

While I am not authorized to speak for the State board of health in reference to the subject of the resolution, it is my personal view that the proposal to prohibit the transportation of consumptive patients from New York city to the sanitarium to be established in Otisville, New York, in the passenger cars of railroads traversing the State of New Jersey, is not justified by any risks of infection which will be incurred by fellow-passengers, for a capable attendant will, we are informed, accompany each group of patients sent from that city to the institution, and the patients will be provided with spit cups and be instructed concerning the danger of spreading the disease by careless and unclean habits. Under these circumstances

there will be far less probability of communicating the disease to other persons than at present exists in public conveyances, for it is undoubtedly true that a considerable percentage of all travelers are affected with pulmonary tuberculosis, and many of these persons expectorate upon the floor and use the public drinking cups without knowledge of the danger of spreading the infection which these thoughtless acts involve.

Pulmonary tuberculosis is usually a chronic affection, and it cannot be dealt with as we deal with scarlet fever, diphtheria, and other acute diseases, for the isolation and quarantine which is effective and reasonable in restricting the spread of these affections would be barbarous when applied in the case of consumption, for the duration of the isolation would be equivalent to unlimited seclusion. Moreover, enough has been learned of the manner in which consumption is disseminated to warrant the view that a sufferer from this disease, when he shall have been properly instructed, and provided he is considerate of the safety of his associates, need not spread the disease to other persons. In New Jersey a public institution is now in the course of erection for the reception and instruction of incipient cases of pulmonary tuberculosis, and every line of railroad in the State will, in the near future, be called upon to transport persons from their homes to the State sanitarium for consumptives. Inasmuch as it is altogether unnecessary to provide separate conveyances for these individuals, it would be very unreasonable to make such a demand, and the whole duty of sanitary authorities will have been done, so far as the management of this class of travelers in concerned, if it shall be required that every individual who is known to be infected with this disease shall, before he travels in a public conveyance, be carefully advised in regard to methods by which the disease is spread and provided with a suitable pocket receptacle for sputa. When any passenger in a public conveyance affected with pulmonary tuberculosis shall wantonly or carelessly endanger the health of other travelers it will then be in order to take more vigorous measures than those above suggested for the protection of the public health.

Very respectfully,

HENRY MITCHELL,  
Secretary.

*Maywood Borough.*—The following ordinance was adopted by the board of health May 29th, 1905:

SECTION 1. The following are defined and declared to be nuisances when existing in or upon the streets, highways, lots, and all public and private places:

The placing, depositing or accumulating in or upon any street or alley, or in or upon any public or private property, any dead animal or part of same, or filth from privies or cesspools or catch basins of any foul liquids, or any rubbish of any kind or description, or any house or kitchen slops, or garbage, manure or sweepings (provided that stable manure may be used as a fertilizer); also, any foul, offensive, obnoxious or unsightly matter or substance whatever; also any full or leaky privy vault, cesspool or any other receptacle of filth, or any privy vault or cesspool offensive to the smell; allowing or permitting any night soil, garbage or other offensive or decomposing solid or fluid matter or substance to leak or ooze from any cart or wagon or vessel in which the same may be conveyed or carried;

also the carrying or conveying through the roads or streets any substance which has been removed from any privy vault or cesspool, excepting in tightly covered tanks or vessels; also the burning of any matter or substance which shall emit or produce or cast off any foul, obnoxious, offensive, hurtful or annoying gas, smoke, steam or odor, other than coal, wood, charcoal, gas or oils; also the pollution in any manner whatsoever of any stream, well, spring or reservoir of water used for drinking purposes, either by human being or beast, or for domestic purposes, the accumulation of any decaying animal or vegetable substance or substances, or of other offensive matter in the form of rubbish or offal, until the same shall become hazardous to health, or until the same shall, by reason of offensive odors, become a source of discomfort to persons living or passing in the vicinity thereof; the overflow of any foul liquids or gases into any place where they may become injurious to health, or the keeping or forming such sunken places or excavations upon any lot or land as accumulate foul water or offensive animal or vegetable matter, is hereby prohibited; and every nuisance as above defined is hereby prohibited and forbidden within the borough of Maywood, and any person or persons making, causing, maintaining, permitting or aiding in causing, maintaining or permitting any of the said nuisances shall forfeit and pay a penalty of not less than five nor more than one hundred dollars.

SECTION 2. That any person who shall carelessly, negligently or willfully aid in or contribute to the doing of any act dangerous to life or detrimental to the health of any human being, except for justifiable motives and for adequate reasons, or who shall omit any precaution reasonable and proper to prevent or remove danger or detriment to life or health of any human being, shall be liable to a penalty of twenty-five dollars.

SECTION 3. Every proprietor, lessee, tenant, occupant and owner of any tenement-house, or other house or building, or any part thereof, who shall keep or maintain, or cause to be kept or maintained, any such tenement-house, or other house or building, or any part thereof, in such state of uncleanness, or the crowding of persons in any tenement-house in such a manner as to endanger the health of persons dwelling therein, and any person or persons through whose act or neglect such state of uncleanness shall be caused, and any person or persons by whom such crowding shall be caused, shall be liable to a penalty of not less than ten nor more than fifty dollars, and if not complied with within thirty days a further fine shall be imposed, at the discretion of the board.

SECTION 4. That any person who shall have a building in this borough from which shall go pipes or drains in such a manner or in such a position as to communicate directly with any outside surface, or with any sewer, privy, cesspool or other receptacle, so as to cause a nuisance or to endanger the health and comforts of the occupants of such house and of those living and passing in the vicinity thereof, shall, upon notice from this board, remove and prevent any nuisance caused thereby, and shall provide a suitable trap or ventilating opening between said house and any outside receptacle in which said pipe empties, and every person who shall violate this section shall forfeit and pay a penalty of not less than ten nor more than fifty dollars for every such offence.

SECTION 5. Every physician shall report to the board in writing the name, age and address of every person under his care having scarlet fever, diphtheria, small-pox or varioloid, cholera, typhoid fever, typhus fever,

chicken-pox, membranous croup, measles, German measles, yellow fever, whooping cough, bubonic plague, or any other contagious or infectious disease publicly declared by this board to be dangerous to public health, within twenty-four hours after such physician has first ascertained the fact, under penalty of fifty dollars for failure to comply with any of the provisions of this section.

SECTION 6. Every physician, or others in attendance, shall report, in writing, the name, age and address of any person who shall have died of any of the diseases mentioned in the foregoing sections within twelve hours after he shall have been informed of said death, and such report shall be independent of the regular certificate of death required by law, under a penalty of fifty dollars for failure to comply with the provisions of this section.

SECTION 7. When a case of any infectious or contagious disease shall occur, the persons affected thereby shall, at the discretion of this board, be isolated, quarantined or removed to such locality as the board may order and direct; and all buildings, clothing, property and premises which may become infected by the presence of persons affected by contagious or infectious diseases shall be disinfected or destroyed, and said disinfection or fumigation shall be done in such manner and with such materials as this board may direct, and this board may establish such separation and isolation or domestic quarantine of the sick from persons not necessary as attendants, and also provide and effect such special care, disinfection and cleaning of property and premises as shall be needed in order to prevent the spread of such disease, and any person interfering with or hindering the said board or its agents in carrying out and enforcing the provisions of this section shall forfeit and pay a penalty of not less than ten nor more than one hundred dollars.

SECTION 8. That the keeping of any dwelling-house in which there is or has been any polluting or communicable disease without thorough airing, cleansing and disinfection is hereby prohibited; any person or persons offending against this section shall be liable to a penalty of twenty-five dollars.

SECTION 9. No swill, garbage, dead animals, offal, rubbish or any other refuse matter shall be thrown into any privy vault or any other structure not appropriate to the purpose, and every privy vault and cesspool shall be cleaned out as often as is necessary to keep the contents from overflowing on the surface of the ground, or as may at the option of the board be considered advisable, and such cleaning shall be done in such a manner as the board of health shall direct, nor shall any privy vault or cesspool be filled with earth or permanently closed until its filthy contents shall have been removed, and no cesspool or privy shall be cleaned or emptied without notice to the board of health and its consent first obtained; any person violating any of the provisions of this section shall forfeit and pay a penalty of not less than five nor more than fifty dollars, and if not complied with within ten days, a further fine shall be imposed, at the discretion of the board.

SECTION 10. When this board shall be of the opinion that any privy vault or cesspool is a nuisance, source of filth or a possible cause of sickness, this board may abate, at their option, such nuisance by ordering the removal of the said vault or cesspool, or the proper filling of the same with clean earth, in compliance with written instructions from the board to



such effect; every owner, agent or occupant of any building or premises which is not provided with a suitable privy vault or closet shall, within the time designated by this health board, cause a proper privy vault or closet to be constructed for such building or premises; any person violating any of the provisions of this section shall forfeit and pay a penalty of not less than five nor more than fifty dollars, and if not complied with within ten days a further fine shall be imposed, at the discretion of the board.

SECTION 11. Any person or corporation who desires to engage in the business of scavenger in cleaning cesspools and privy vaults shall first apply for and obtain a license from this board for that purpose, which application shall be in writing and shall give the place of residence of said applicant, and every person so licensed and about to engage in this occupation shall give notice to the health inspector of the time and place where he is to be so engaged, and to indicate the place where and when he purposes to dump the material gathered; every person so licensed shall pay a license fee of one dollar for each vehicle or conveyance he may use in said business, and that each license shall continue for the term of one year from the day of granting the same, and every person engaging in said business without paying said license or without giving the notice herein provided for shall forfeit and pay the penalty of twenty-five dollars for each and every offense.

SECTION 12. That any physician, midwife, nurse, clergyman, magistrate or other person who shall officiate at any death, birth or marriage, and who shall neglect to make return thereof to the proper officer according to law, shall, for each and every failure to make such return or report, be liable to a penalty of fifty dollars.

SECTION 13. That the keeping of any pen or enclosure for goats, swine or any other animals, or any slaughter-house, tannery or factory, in such manner that offensive odors or noises shall emanate therefrom to the detriment of the health of persons living or passing in the vicinity thereof, or to common discomfort, is hereby prohibited; any person or persons who shall keep any such pen, enclosure, slaughter-house, tannery or factory in such manner as aforesaid shall be liable to a penalty of not less than twenty-five dollars nor more than one hundred dollars, and this fine may be repeated as often as the board may direct until said nuisance is abated.

SECTION 14. It shall be the duty of the physician or midwife present at the birth of every child born in this borough, and in case there is no physician or midwife present it shall be the duty of the parent or witness present at said birth, to report in writing to the board of health of this borough all particulars concerning said birth, and said report shall be made within thirty days next after the date of said birth, in accordance with the State law and penalty; any person violating any of the provisions of this section shall forfeit and pay a penalty of fifty dollars.

SECTION 15. In case of any person dying within this borough it shall be the duty of the physician who may have attended during the last illness to furnish the undertaker or any member of the family a certificate of death, in accordance with the State law; any person violating any of the provisions of this section shall forfeit and pay a penalty of not less than five nor more than fifty dollars.

SECTION 16. No meat, fish, bird, fowl, vegetable or fruit, or any other article of food not being in a sound, healthy and wholesome condition and

safe for human food, or that is preserved in a manner which may render them dangerous to health, nor the meat of any fish, bird, fowl or animal that has died from disease or accident, shall be brought into the borough or offered for sale or sold; no milk or butter, nor any other food or drink, which has been exposed to the emanation or infection of any communicable disease, shall be brought into the borough or held or offered for sale in said borough; any person or persons offending against any of the provisions of this section shall forfeit and pay a penalty of not less than five nor more than fifty dollars.

SECTION 17. Whenever this board shall have satisfactory evidence that any well, the water of which is used for domestic purposes, has become polluted and rendered unsafe for potable use, notice to discontinue the use of said polluted water shall be sent to the owner or party in charge of said well, and, at the discretion of this board, the owner or party in charge of said well may be ordered, in writing, to close, fill up or withdraw from the ground the said well; every well which shall be excavated subsequent to the adoption of this ordinance, and which shall be intended for domestic purposes, shall be at least twenty-five (25) feet distant from every privy vault, catch basin, cesspool, manure vault and horse stable, and every well at this time in use for domestic purposes which fails to comply with these conditions may, at the discretion of the board, be ordered closed; no horse stable, cow stable, chicken-house, manure vault, privy vault, cesspool or catch basin shall be hereafter constructed or placed within twenty-five (25) feet of any well used for drinking or domestic purposes, or within twenty-five (25) feet of any house; any person or persons violating any provision of this section shall forfeit and pay a penalty of not less than five nor more than fifty dollars.

SECTION 18. Any act committed by any person or persons in this borough not already specified in the above code of ordinances, and which, in the opinion of the board of health, is regarded as an infringement of sanitary laws or as a menace to the public health, shall, if continued after due warning, be by this board deemed an offense, and the person or persons so offending shall be subjected to a penalty of twenty-five dollars.

SECTION 19. All ordinances or parts of ordinances inconsistent with the provisions of this code are hereby repealed.

Complaints of violation of the above code should be made in writing, over the name and address of complainant, and mailed or delivered to the secretary of the board of health. All written communications to this effect should be addressed to the secretary of the board of health.

*Montclair.*—The health officer of the town of Montclair writes as follows:

"During the year just ended there has been no epidemic of any kind, and there have been but five deaths from communicable diseases, exclusive of pneumonia and tuberculosis. Two of these deaths have been from scarlet fever and three from typhoid fever. The total number of cases of communicable diseases reported during this period has been but sixty per cent. of the number reported during the previous year. Nearly all buildings on the line of the sewers are now connected, and much time has been spent in securing abolishment of the privies. The progress made in this direc-

tion has been highly gratifying, and we confidently predict that the last one will disappear in the early spring. We are spending considerable time on the protection of our milk-supply, and we expect shortly to adopt more rigid regulations covering this branch of our work."

*Newark.*—Sections 4 and 5 of the ordinance governing the sale of milk in the city of Newark were amended July 6th, 1905, to read as follows:

SECTION 4. That no person, partnership or corporation shall sell or deliver, or have in possession for sale or delivery, in the city of Newark, any milk without first obtaining a license from the board of health of said city for such sale or delivery.

SECTION 5. That no license, as required in the next preceding section, shall be issued by the board of health or shall be valid until there shall have been paid to the said board for the issuing thereof, and for a proper inspection and supervision of the sale of milk, the sum of two dollars for each store, depot or station used for the sale or delivery of milk, and for each vehicle or conveyance from which milk shall be sold or delivered, the sum of two dollars; such license shall continue until and shall expire on the first day of September next after the issuing thereof.

Upon the granting of every such license for the sale and delivery of milk as hereinbefore provided, the board of health shall furnish to each licensee a license, and a copy thereof for each store, depot or station used for the sale or delivery of milk, and also two signs for each vehicle or conveyance used by such licensee for the sale or delivery of milk; such signs shall have written or printed thereon the words "Department of Public Health, Newark, N. J. Milk License," and the year of the expiration of the license; and it shall be the duty of the said licensee to have the signs so furnished conspicuously placed, and in a manner satisfactory to the health officer, one on each of the two sides of every such vehicle or conveyance, and shall keep the same thereon until the expiration or revocation of such license, and no longer; in the case of a store, depot or station, the license, or a copy thereof furnished as aforesaid, shall be conspicuously displayed therein, to the satisfaction of the health officer.

*Northampton Township, Burlington County.*—The following ordinance was adopted:

SECTION 1. That hereafter no person shall sell or expose for sale in the township any kind of adulterated food or drink, or sell or expose for sale any kind of meat or vegetables unfit or unwholesome for food, and every person who shall violate this section shall forfeit and pay a penalty not to exceed one hundred dollars and not less than two dollars for every such offence.

SECTION 2. That whatever is dangerous to human health, or whatever renders the ground, the water, the air or food a hazard or an injury to human health, is hereby declared to be a nuisance, and any person or persons creating or maintaining, or aiding in the creation or maintenance

of, any such nuisance, shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 3. That the accumulation of any decaying animal or vegetable substance or substances, or of other offensive matter in the form of rubbish, garbage or offal, in or upon any lot, road, avenue, street, alley or highway, or in or upon any public or private place, and allowing the same to remain in or upon any such lot, street, highway, public or private place until the same shall become hazardous to health, or until the same shall, by reason of offensive odors, become a source of discomfort to persons living or passing in the vicinity thereof, is hereby declared to be a nuisance, and any person or persons who shall cause any such accumulation, or who shall aid therein, shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 4. Hereafter any physician neglecting or refusing to report to the board of health any infectious or contagious disease in his practice in the township shall be punished by a fine of ten dollars for each and every offense; and any person or persons having the care or charge of anyone in this township having any such disease neglecting or refusing to comply with the directions of the board of health concerning the prevention and spreading of such diseases shall be punished by a fine of twenty-five dollars for each and every offense.

SECTION 5. That whenever the board of health in this township shall know of a person sick with any contagious or infectious disease in a house, building or locality from which the interests of the public health require his or her removal, it may direct the removal of said person to a suitable place, when said removal can be made without undue risk to the person sick, and may cause the premises where such person has been sick to be disinfected; and every person or persons who shall violate any notice or command given by the said board of health under this section shall forfeit and pay a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 6. Hereafter in every case of contagious disease the board of health will place a placard on the house containing such disease and stating the name of the same; and any person or persons removing this card without permission of the board of health shall be punished by a fine not exceeding one hundred dollars and not less than two dollars for each and every offense.

SECTION 7. That the keeping of any pen or enclosure for goats, swine or other animals, or of any slaughter-house, tannery or factory, in such manner that offensive odors shall emanate therefrom to the detriment of the health of the persons living or passing in the vicinity thereof, or to common discomfort, is hereby declared to be a nuisance, and any person or persons who shall keep any such pen, enclosure, slaughter-house, factory or tannery in such manner as aforesaid shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 8. That the storage of animal refuse, or decayable or putrescible matter, in liquid or solid form, in any vault, cesspool or other receptacle in such manner as to endanger the health, or in such manner that the same shall, by reason of offensive odors emanating therefrom, become a source of discomfort to persons living or passing in the vicinity thereof, is hereby declared to be a nuisance, and any person or persons causing or maintaining any such nuisance, or aiding therein, shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 9. That the keeping of any tenement-house, or other house or building, or any part thereof, in such state of uncleanness, or the crowding of persons in any tenement-house in such a manner as to endanger the health of the persons dwelling therein, is hereby declared to be a nuisance, and any person or persons through whose act or neglect such state of uncleanness shall be caused, and any person or persons by whom such crowding shall be caused, shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 10. That the dumping of garbage, the overflow of any foul liquids or gases into any place where they become injurious to health, or the keeping or forming such sunken places or excavations upon any lot or land as accumulate foul water or offensive animal or vegetable matter, is hereby declared to be a nuisance, and any person or persons who shall cause or maintain such nuisance, or who shall aid in causing or maintaining any such nuisance, shall be liable to a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 11. Hereafter no person shall, under any circumstances, clean out or cause to be cleaned out any privy or private vault between the hours of six o'clock in the morning and ten o'clock at night, or without a written permit from the said board of health, and persons having privies or privy vaults upon their premises, or the premises occupied by them as tenants, shall forthwith cause the same to be thoroughly cleaned, if so ordered in writing by the said board of health; and persons having privies, privy vaults, cesspools, or any other nuisance prejudicial to the health of the town on their premises or the premises occupied by them as tenants, situate in such place or places as shall be considered detrimental to the public health by said board, shall, upon the written order of said board, forthwith remove or alter the same, as the said board shall direct; any person violating this section of this code, or any part thereof, shall be punished by a fine not to exceed one hundred dollars and not less than two dollars for each and every offense.

SECTION 12. Every owner of property on any street in which a public sewer has been laid shall connect with the same forthwith, unless such property has a private drain into the creek approved by the inspector; and any owner of property on any street in which the public sewer shall hereafter be laid shall connect with the same as soon as completed, unless such property has private drain into creek approved by the inspector; and be it enacted that any property-owner refusing to comply with the provisions of this section as amended, or any part thereof, shall be punished by a fine of twenty-five dollars, and the drain to be connected to said sewer by the board of health at the expense of property-owner; it shall be the duty of the inspector to examine every property fronting on a street in which a public sewer has been or shall hereafter be laid, and require the owners thereof to make connections with the same, and, upon their refusal, to report the same to said board of health, who shall at once take necessary steps to have said connections made and the expenses thereof collected and the fine imposed as provided in this section.

SECTION 13. Hereafter no person shall drain, or allow to be drained, or cause to be drained, into any of the streets, roads, lanes or alleys of this township, from their premises or premises occupied by them as tenants, any water or liquid of any kind, unless the same be free from any odor or vegetable or animal substance or matter; and all existing drains cov-

ered by the provisions of this section shall be forthwith abandoned; any person violating this section of this code, or any part thereof, shall be punished by a fine not exceeding one hundred dollars and not less than two dollars for each and every offense.

SECTION 14. Hereafter there shall be no surface or open drains leading from any privy, cesspool or privy vault in this township, and where such drains now exist, the person or persons so using or owning or draining into the same shall forthwith change the same so as not to violate this section of the code; any person violating this section of this code shall be punished by a fine not exceeding one hundred dollars and not less than two dollars for each and every offense.

SECTION 15. Hereafter no person shall, under any circumstances, bathe, swim or go into the water in the Rancocas creek above the dam in the township of Northampton, under a penalty not to exceed one hundred dollars and not less than two dollars for each and every offense.

SECTION 16. Hereafter no person shall, under any circumstances, throw, place, or allow or cause to be thrown or placed, in the Rancocas creek above the dam in the township of Northampton, or in the basin on the Mount, any dead animal or animals, offal, decaying or vegetable substances of any kind; or drain, or cause to be drained, or allow to be drained, into said creek, above said dam, any impure liquor, or animal or vegetable substance; any person violating this section of this code, or any part thereof, shall be punished by a fine of fifty dollars for each and every offense.

SECTION 17. That if any well or spring in this township, or any water used for drinking purposes, is found to be polluted, or the cause of any sickness, the board of health may order the same not to be used, or closed, or to be used only after thorough boiling, and every person or persons who shall violate this section shall forfeit and pay a penalty not to exceed one hundred dollars and not less than two dollars.

SECTION 18. Hereafter no public burial shall be held of the body of a person dying of small-pox, scarlet fever, or any other malignant or infectious disease, in this township, and it shall not be lawful for any person or persons to disinter any dead body during the months of June, July, August or September without first obtaining a permit so to do from the township assessor; any person violating this section of this code shall be punished by a fine not exceeding one hundred dollars and not less than two dollars.

SECTION 19. That any penalty incurred under the provisions of these ordinances, or any expense incurred in the abatement of any nuisance by the board, shall be collected in the manner prescribed by the act cited in the preamble hereto, with the supplements thereto; or, in lieu thereof, the local board of health may file a bill in the court of chancery for an injunction pursuant to the provisions of said act.

SECTION 20. That all ordinances and codes heretofore passed and enacted by the local board of health are repealed upon the taking effect of these ordinances.

*Plainfield.*—The health officer of the city of Plainfield writes, in part, as follows, for the year ending December 31st, 1904:

While the work for the past year has to a great extent been of a routine nature, two problems, very important to the health and improvement of our city, were investigated. These were—first, a sanitary survey of our city; second, a municipal collection and disposal of the garbage of our city. A sanitary survey was started in 1904, but owing to the small amount of money that could be used, the work was not completed. I would strongly urge that the money necessary to complete a sanitary survey of every house in Plainfield be obtained. A study of the tables and statistics will show the great need to the health of our city of continuing this work. The question of obtaining a proper collection and disposal of the garbage of the city has been thoroughly discussed in previous reports. I would, however, recommend the adoption of some system before the coming summer of 1905. Our estimated population for 1904 is 16,750. This estimate is based on the census reports for the past ten years, and is probably very low. There have been 286 deaths recorded, which represents a death-rate of 17.07 per thousand population. This is a much higher death-rate than usual, and is due in a great measure to the large number of deaths of elderly people. As can be seen in the table below, seventy-five of the 286 deaths were among those over sixty years of age. The following is a comparison of this death rate of 17.07 with those of the past seven years:

Year.	Population.	Number deaths.	Rate.
1897.....	14,330.....	227.....	15.84
1898.....	14,670.....	218.....	14.85
1899.....	15,020.....	229.....	15.25
1900.....	15,369.....	234.....	18.48
1901.....	15,700.....	255.....	16.24
1902.....	16,000.....	257.....	16.06
1903.....	16,400.....	261.....	15.91
1904.....	16,750.....	286.....	17.07

There were 338 births reported in 1904. This represents a birth-rate of 20.13 per thousand. There were sixteen still-births reported during the year 1904; of these, nine were male and seven female; two were white and six colored, giving a rate of 0.96 per thousand. During the year there were 125 marriages, of which 104 were white and twenty-one colored. This gives a rate of 7.46 per thousand. During the year 1904, 387 cases of communicable diseases were reported, fifty-eight of which resulted in death. The following table shows the number of cases of different diseases reported during the year:

Diseases.	Cases.	Deaths.
Scarlet fever .....	37	1
Diphtheria .....	53	4
Chicken-pox .....	28	..
Measles .....	171	..
Typhoid fever .....	35	9
Tuberculosis .....	59	44
Small-pox .....	1	..
Whooping cough .....	2	..
Totals .....	387	58

The city has been remarkably free from scarlet fever during the past year. But thirty-seven cases were reported, with one death. The cases were fairly evenly distributed throughout the year, and the majority could be traced to no definite source. The number of cases of diphtheria reported during 1904 was only what would be expected in a city the size of Plainfield. There were fifty-seven cases reported, four of which resulted in death. This is a marked contrast to the number of cases reported last year. But twenty-six cases of chicken-pox were reported, with no deaths, during the year. During the past year we had a mild epidemic of measles, 171 cases being reported; none of these cases resulted in death. The cases were almost wholly confined to school children, and the large number was undoubtedly due to some child attending school while suffering from the disease in a mild form and infecting others. It is a most difficult disease to control, because of its highly infectious character, and more especially because it is contagious in the early stages, before the child or its parents are aware of the nature of the disease. There has been a slight increase in the number of cases of typhoid fever during the year. There were thirty-eight cases reported, with nine deaths—a mortality of 23.7 per cent., which, though high, is somewhat less than the mortality of last year. A great many of these cases were from among people who had just returned from their summer vacation. The source of a large percentage was definitely traced outside of the city. Much trouble was experienced during the year in having cases of tuberculosis promptly reported. There were fifty-nine cases, with forty-four deaths, reported. Such a record is undoubtedly incomplete, and shows that the law requiring tuberculosis to be reported is not obeyed. We hope during the coming year to more fully control this disease, and prevent, if possible, its spreading. A large percentage of the increase of deaths for the year is due to this disease. There was one case of small-pox reported in the city during the year, but as we were well equipped, the disease was readily handled, and although the exposures from this case were numerous, no secondary cases developed. The case was reported on January 19th, in the person of a colored man living at 770 East Second street. The patient was a barber employed in one of the barber shops of the city, and had worked for the first two days of his illness, thereby exposing a great number of people. The disease developed rapidly and proved to be most severe. The patient was removed to our isolation hospital, from which, after a ten weeks' illness, he was discharged as cured. The barber shop in which the patient worked was closed for two days while everything was being cleaned. All instruments, cups, fixtures, &c., were sterilized, and when this was done the whole place was thoroughly disinfected. Our usual methods of wholesale vaccination of persons exposed and thorough disinfection were carried out with very good success. The source of infection in this case could not be positively determined, but it was probably due to a drummer representing the National Barbers' Supply Company, who came from Philadelphia, where small-pox was prevalent. This man was in the barber shop about two weeks before the outbreak of the disease. In view of the widespread exposures from the above case of small-pox, free vaccination was offered to the public. Only twenty-three persons availed themselves of this privilege, however. But, considering the large number of persons vaccinated two years ago, the small number of applications was not so surprising.

There was a change in the past year of the source of the ice-supply of our city. During the season of 1904 the ice sold in the city came from four different sources. Two were artificial and two natural ices. The artificial ices were manufactured by the Plainfield Hygeia Ice Company and the Elizabeth Ice Company. The natural ices came from Watchung lake and Little Gap, Carbon county, Pa.

The question of collecting and disposing of the garbage of our city, which has in the last few years become of such vital importance, has been thoroughly investigated during the years of 1903 and 1904. Reports were made by the board of health to the common council, with the result that a joint committee from the common council and the board of health was appointed to make further investigation and to report its findings to the common council. The present means of garbage collection, besides being most unhealthful and unsanitary, is also expensive. The collectors are private individuals, licensed by the board of health to carry on the business. At the present time there are nine—two women, four white and three colored men, who use ten wagons in the collection. The board attempts to regulate by ordinance the kind of vehicle to be used in the transportation of the garbage through the streets of the city, and to prescribe the frequency of collection, but the power of the board is very limited, and consequently much annoyance results to both the public and the board of health. The garbage collectors are confined in no way to routes, and because they have the whole city as a field for their business, the citizens are unnecessarily subjected many times a day to the sight of these wagons and to the odors emanating from them. If this work were done by the city in a systematic way, only four wagons at the most would be needed, and these wagons could always be in a sanitary condition. That this method of collection is an expensive one is shown by the following list of prices of the average collector: Medium size can (collector furnishing can), 75 cents per month or \$9 per year; medium size can (householder furnishing can), 50 cents per month or \$6 per year; large size can, \$1 per month or \$12 per year.

It is estimated that over \$12,000 is spent yearly for the removal, at irregular intervals, of the refuse from less than one-third of the houses. The present method of the disposal of the garbage is also so unsatisfactory that it is hardly necessary to show the need of an improvement. The garbage is now fed to hogs on farms situated in all directions from Plainfield. The farms are a nuisance and a menace to the health of the citizens of our suburban districts and neighboring towns, and Plainfield has no right to subject them to the stench emanating from the hog pens and from the garbage which is hauled there, a goodly portion of which the hogs will not eat. The cost, as estimated by the joint committee, of the collection and disposal of the entire garbage of the city is \$6,000 a year. A thorough system of collection would necessitate three single-horse metal carts with six men, two men to each cart. That the general public is most anxious for the city to take up this work is shown by the response to a circular letter sent to nearly a thousand of the leading citizens. Of 423 replies, 400 were in favor and twenty-three against a municipal collection and disposal system. The joint committee made an exhaustive and thorough study of the problem, and in a report of their findings to the common council unanimously made the following resolutions: "First. That the land and building formerly owned by the Plainfield Sanitary Company,

situated on Dumellen avenue, at the head of DeKalb avenue, be purchased, and the crematory at present located in the above building be put in working order. Second. That a thorough system of garbage collection be established, the necessary wagons, horses and equipment be purchased. To do this work it will require three single-horse metal carts and six men. The garbage can then be collected from each house in our city every other day." As a result of the report of the joint committee, the land and buildings above mentioned, valued at \$12,000 to \$15,000, were purchased by the city at a cost of \$2,100. Now that we have gone so far in this work, I should strongly urge its completion—both from a sanitary and economical standpoint—so that by the coming summer we could have a complete municipal collection and disposal system installed.

One of the most important branches of the work of this board was the starting, during the summer of 1904, of a thorough house-to-house inspection. One extra inspector was employed, and the work was carried on for two and a half months. In this time nearly 800 houses were inspected, covering those sections of the city bounded by Park avenue, East Second, Richmond and East Sixth streets, and Park avenue, West Second street, Grant avenue and West Third street. This is the first time that a house-to-house inspection has been made in Plainfield, and the results show the great need of a continuance of this work and of having every house in the city inspected. The most noticeable feature, from a sanitary standpoint, was the large number of privy vaults and cesspools found. The majority of the houses were connected with the sewer, but in most cases a privy vault was maintained. On 481 of the 800 properties inspected privy vaults were found. These were, in every case where the property was on the line with the sewer, ordered cleaned and abolished.

The total number of nuisances investigated during the year was ninety-eight. The most important causes for complaints were: First, garbage and refuse; second, unclean vaults. As in previous years, the garbage and refuse accumulating in the back yards has been the cause of many just complaints. The only way to relieve the citizens of this nuisance is to have the city remove the garbage and refuse from the back yards regularly. A continuance and completion of the house-to-house inspection will rid the city of the vast number of privy vaults, and consequently the source of any complaints of odors emanating from them. There is no excuse for the existence of so many privy vaults in a city so well provided with sewers as Plainfield, and every one should be abolished.

During the past few years there has been a constantly increasing demand for disinfection; where once it was difficult to obtain the co-operation of the householders in this work, they now, of their own accord, ask for disinfection. This is due to two causes: First, the householder has come to realize the necessity of disinfection as a safeguard against disease; and second, modern methods enable disinfection to be done without injury to furniture or fabric, while at one time many things in a house were ruined by fumigation. Formaldehyde was, as in previous years, used as a disinfectant. An entire new equipment of generators was purchased the early part of the year. These generators were thoroughly tested before being bought and found very effective. They are smaller and consequently easier to handle than the old style, but the general principle on which they are made, i. e., the production of formaldehyde in a gaseous state from ordinary wood alcohol, is the same as in the old generator. During the coming year we hope to make disinfection compulsory after deaths from tuberculosis. This will mean an increased amount of disinfection, but it will help to check any spread of that dreaded disease.

The large number of sewer connections during the year, ordered on account of the house-to-house inspection, made a great deal of work for the plumbers, and consequently more for the board. Much trouble was experienced on account of the delay of the plumbers in finishing their work. One plumber had nine different pieces of work, started as far back as May, 1904, still under way on December 31st. During the coming year the plumbers will be required to complete work without any unnecessary delay. One hundred and forty-three plumbing plans were filed during the year. One prosecution was made during the year for a violation of our plumbing ordinances.

After three years of unceasing effort to secure a clean and pure milk supply for Plainfield, it is felt that a certain amount of success has been attained. The milk sold in Plainfield to-day is cleaner and of better quality than ever before, and it comes from cleaner and better dairies. The man who retails milk in our city realizes that it is impossible to market an unclean, impure milk, simply because the public will not buy it when a rich, clean milk can be obtained at the same price. The dairymen have learned something of the modern successful dairy methods, and realize that to produce a clean, pure milk their stables must be clean and well ventilated, cattle must be healthy, well fed and well cared for; that there must be a good, pure water-supply, and that absolute clean methods must be used in the handling and transporting of the milk. They are also beginning to realize the effect that bacteria have on milk. They know that to produce a milk low in bacteria, besides having clean methods, a milk must be thoroughly cooled, stored at a low temperature, and delivered to the customer also at a low temperature. The standard of cleanliness adopted by boards of health and milk commissions throughout the country has been the number of bacteria per cubic centimeter of the milk. A large number of bacteria in a milk is a sure sign of dirt. It may be through carelessness of milkers, dirty cows, dusty stables, or improper cooling or storing of the milk. Some market milks contain from two to three million bacteria per cubic centimeter. A pure milk should contain not more than 30,000 per cubic centimeter. The legal standard for milk in New Jersey requires that it shall contain not less than 12 per centum total milk solids, and but few samples of milk have been taken during the past year that fell below this standard. The record of the dairymen in this respect has been excellent. During the past year several new dairies of a very high standard have been added to the list of those supplying milk in Plainfield. Two creameries have also been established, the milk from which comes to this city. The system of dairy inspection and milk analysis established two years ago is still carried out with much care. The dairies are inspected as often as possible, and the milk, as sold in the city, carefully watched. One hundred and eighty-seven samples of milk were analyzed during 1904, and 225 inspections made of dairies. During the hot summer months a thorough examination was made of all the milks sold in Plainfield for a preservative; but one sample out of thirty-nine contained a preservative; this one contained formaldehyde, and measures were immediately taken to prevent its further use. Systematic dairy inspection and milk analysis is slowly spreading in our neighboring cities, but not, however, as rapidly as we would like. Westfield is establishing such a system, and when all the other cities and towns have reached that point we will receive great help in this work.

Following is a copy of the ordinance of the city of Plainfield governing barber shops:

SECTION 1. Every person having, keeping, owning, letting or conducting a barber shop in the city of Plainfield shall, on or before June 1st, 1905, and annually thereafter, procure a permit in writing from the board of health of the city of Plainfield, for which permit the sum of two dollars (\$2) shall be paid.

SECTION 2. The following rules and regulations must be strictly adhered to and enforced in barber shops in the city of Plainfield:

Rule 1. Barbers must wash their hands thoroughly with soap and water before attending any person, and keep their finger-nails short and clean.

Rule 2. No alum or other astringent shall be used in stick form. If used at all it must be applied in form of powder.

Rule 3. The use of powder puffs is prohibited.

Rule 4. No towel shall be used for more than one person without being washed.

Rule 5. A sponge must not be used on more than one person.

Rule 6. Mugs and shaving brushes shall be thoroughly washed in boiling water after use on each person.

Rule 7. Combs, razors, clippers and scissors shall be thoroughly cleaned by the use of some germicide at frequent intervals.

Rule 8. Floors must be swept or mopped every day, and all furniture and woodwork kept free from dust.

Rule 9. Hot and cold water must be provided.

Rule 10. No person shall be allowed to use any barber shop to sleep in.

SECTION 3. From and after June 1st, 1905, a printed copy of this ordinance shall be placed and kept in a conspicuous place on the wall of each and every barber shop in such place and position that the same may be easily seen and read by the patrons of the shop.

SECTION 4. Any person or persons offending against or violating any of the provisions of this ordinance shall, on conviction thereof, forfeit and pay a penalty of not less than two dollars (\$2) nor more than twenty dollars (\$20), the amount of such penalty to be left to the discretion of the court or magistrate before whom complaint may be made.

*Shrewsbury Township.*—Following is a copy of a letter sent, under date of July 24th, 1905, to the secretary of the board of health of Shrewsbury township:

*Mr. A. C. Harrison, Secretary Board of Health of Shrewsbury Township,  
Red Bank, N. J.:*

DEAR SIR—Investigation along both branches of the Shrewsbury river has shown that these waters receive sewage at numerous points, and that they are thereby rendered unfit for the production of oysters and clams. One outbreak of typhoid fever which occurred in and near Oceanic some time ago is believed to have been caused by the use of clams taken from the south branch of the river, and we therefore call your attention to the risk which may attend the further use of clams taken from the said polluted waters, and advise that measures shall be taken by your board to prohibit the sale of shellfish collected from the waters in question.

Very respectfully,

HENRY MITCHELL,  
Secretary.

## New Jersey Sanitary Association.

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The meeting of the New Jersey Sanitary Association for 1905 will be held in the Laurel in the Pines, Lakewood, December 8th and 9th. The following program has been issued:

- I. INTRODUCTORY REMARKS AND ANNOUNCEMENTS,  
W. G. Schauffer, M.D., Chairman Executive Council, Lakewood.
- II. EXAMINATION OF HEALTH OFFICERS AND HEALTH INSPECTORS,  
John L. Leal, M.D., Paterson.
- III. CREAMERIES: THEIR CONSTRUCTION AND MANAGEMENT,  
George W. McGuire, Trenton.
- IV. REPORTS OF CHAIRMEN OF COMMITTEES ON PUBLICATION, UNIFORM SANITATION, LEGISLATION, ANIMAL DISEASES AND FOODS, METHODS OF GARBAGE DISPOSAL, PREVENTION OF MALARIA AND TYPHOID FEVER, CIVIC SANITARY SOCIETIES.
- V. MISCELLANEOUS BUSINESS.
- VI. PRAYER, Rev. C. P. Butler, Lakewood.
- VII. PRESIDENT'S ADDRESS: OUR ASSOCIATION—NEW JERSEY STATE SANITARY ASSOCIATION,  
Norton L. Wilson, M.D., Elizabeth.
- VIII. SECRET NOSTRUMS,  
Samuel Hopkins Adams, Esq., of Collier's Weekly.  
Discussion opened by Alexander Lambert, M.D., New York.
- IX. ORGANIZATION OF ANTI-TUBERCULOSIS CAMPAIGN,  
Livingston Farrand, M.D., Executive Secretary National Tuberculosis Association.
- X. MEDICAL INSPECTION OF SCHOOLS, Dr. F. S. Shepherd, Asbury Park.  
Discussion opened by James E. Bryan, Camden.
- XI. WHAT METHODS ARE MOST SUITABLE FOR DISPOSAL OF SEWAGE ON THE ATLANTIC COAST,  
Geo. M. Fuller, C.E., New York City.  
Discussion by H. M. Herbert, C.E.
- XII. DISINFECTION AS A MEANS OF RESTRICTING COMMUNICABLE DISEASES,  
Henry Mitchell, M.D., Asbury Park.
- XIII. ELECTION OF OFFICERS.
- XIV. MISCELLANEOUS BUSINESS AND OPENING QUESTION BOX.
- XV. ADJOURNMENT.

### DISINFECTION AS A MEANS OF RESTRICTING THE SPREAD OF COMMUNICABLE DISEASES.<sup>1</sup>

BY HENRY MITCHELL, M.D.

The opinions of sanitarians have undergone very great changes in recent years concerning the value of some of the measures designed to prevent the spread of infectious diseases, and a revolution has occurred in the practice of progressive health officers in the use of disinfectants. In a considerable number of diseases the nature of the infection has been learned, but very great difficulty, insurmountable thus far in the case of many affections, has attended efforts to trace the avenues through which the germs are conveyed to the patient, and the employment of a germicide will be of no avail unless its destructive influence can be brought to bear directly upon the infective agent. The purpose of disinfection is to destroy disease-producing agencies and to prevent their finding a suitable soil in which to multiply, but the limits within which well-directed measures can be applied for the extermination of pathogenic organisms are extremely narrow. In tuberculosis, diphtheria, malaria, yellow fever, typhoid fever and certain other affections the infective organism has been identified, and intelligent and effective warfare can be waged against the transmission of these diseases by the employment of the recognized preventive measures. In the case of scarlet fever, measles, whooping cough, &c., all efforts at disinfection have thus far been empirical, for the specific cause of these affections has not been discovered, and we do not know with certainty just how these diseases are transmitted nor how the germs may be successfully attacked. True disinfection, therefore, should be aimed at the cause of the particular disease with which we have to deal, and the materials employed and the manner of application will be quite different in different affections. For example, the infective agent in typhoid fever is known to be discharged from the intestinal canal and from the bladder, and disinfection to prevent the spread of this disease is effected by receiving all excreta in a germicidal solution, and by subjecting garments and other infected articles to steam at a temperature of 240 degrees Fahrenheit in a suitable chamber for not less than thirty minutes, or by

prolonged boiling or immersion in a germicidal solution. In diphtheria, where the infectious material is discharged from the nose and throat, the procedure is altogether different, as it is believed that the transmission of the infectious bacteria is commonly affected by moist particles floating through the air, as well as by soiled hands and other direct means of conveyance. Pulmonary tuberculosis, pneumonia and certain other affections are believed to be carried in the same way, and disinfection for the prevention of these diseases is directed to the destruction of infectious material which is discharged from the diseased surfaces, and which find lodgment in the sick-room and upon door knobs, stair rails and other places where infected hands can carry it. There is little reason to believe that the ceilings and those portions of the side walls of dwellings above the reach of the patient and attendants will retain infection, for if floating droplets or infected dust should reach these portions of the sick-room they will soon become dry and the bacilli will die. The floors, the woodwork which is within reach of infected hands, and the furniture, particularly all articles which have been touched by the patient, are the objects which are most liable to retain infectious substances, and it is against these objects that disinfection should be directed. But, even with intelligent application of the most efficacious disinfectants, the operator cannot always be sure that the infectious substances have all been rendered harmless. Disinfection, like curative medicine, aims to repair injuries already inflicted, and it would rarely be required if nurses and other attendants upon the sick would promptly deal with all infectious emanations in a manner which will immediately destroy their vitality. To practice room disinfection according to the prevailing custom, after skillful and faithful bedside precautions have been taken, is not only useless, but meddlesome and indefensible. As ordinarily conducted by untrained persons, disinfection, so-called, is an humiliating exhibition, for too frequently the only information which the inspector has acquired relating to the subject has been forced upon him by the advertising circulars of parties who have apparatus to sell or by traveling salesmen whose business it is to make customers of health boards throughout the country. From these and other equally unreliable sources inspectors of the class referred to have received statements which they accept as facts, and they go forth equipped with a handsomely

<sup>1</sup> Read at the annual meeting of the New Jersey Sanitary Association, 1905.



polished "generator" to disinfect dwellings in which sickness has recently occurred. Doubtless some of these officials really believe that the irrespirable gas which is liberated by the apparatus is destructive to all causes of sickness which may exist in the house, but in the case of others the opportunity to charge a fee is the first consideration, and but little thought is expended upon the efficiency of the operation. It is a conservative statement to assert that 90 per cent. of the disinfecting operations which are at present being conducted are of no value. This state of affairs is largely due to the individualism which prevails in the public health service, and it would be corrected in great measure if the men who are entrusted with these duties could meet each other from time to time in order that all might learn the opinions and practice of those among them who are most experienced and capable. The views of theorists are liable to be quite as objectionable as are those of the unlearned, for no two sanitary problems are exactly alike, and rigid rules cannot be adhered to. Let us remember that the chief defenses which nature has provided to protect humanity against extinction by reason of infectious diseases are sunlight and fresh air, and let us humbly follow the instinct which is planted in every normal mind, and which prompts us to be cleanly in all our habits and practices, for it is upon these influences mainly that we must depend for escape from the communicable diseases. In Circular 98, issued by the State board of health, is published a brief outline of the steps to be taken in preventing the spread of infectious diseases, and disinfection forms a part of the defense which is recommended, but the precautions which should be taken in the sick-room have first place in the presentation of the subject.

#### RESTATEMENT.

1. It is the patient himself who is the source of infection, and the best sanitary service consists in isolation of infected persons.
2. Cleanliness in the sick-room and immediate treatment by the nurse of all infectious substances will leave little for the official disinfecter to accomplish.
3. When house disinfection is performed it should be done under the supervision of a person who is familiar with the effects of the disinfecting agent employed, and who has a clear comprehension of the objects to be accomplished.

## Circulars and Laws.

During the legislative session of 1905 the following bills relating to the public health were introduced:

#### ASSEMBLY BILLS.

No. 5, Mr. Layden. Prohibits the sale of any potable water from any river or stream or other fresh-water body by any person or corporation to any person or corporation. (Municipal Corporations.)

\* No. 8, Mr. Hildreth. Provides for locating and destroying mosquito-breeding areas and appropriations by State and municipalities for such purpose. (Public Health.)

\* No. 32, Mr. Riordan. Authorizes governing bodies in incorporated towns to build and construct house connections with sewers therein. (Public health.)

No. 34, Mr. F. C. Henry. Authorizes the State board of health to provide diphtheria anti-toxin for free distribution to the inhabitants of the State. (Judiciary.)

\* No. 40, Mr. Lehlbach. Amendment to the trunk sewer act of 1899, relative to joint building of the same by two or more municipalities, relative to the assessments for benefits by either of such municipalities, upon land in such municipality. (Public Health.)

No. 95, Mr. Pennington. Authorizes the governor to appoint five persons to constitute the board of undertakers and embalmers of the State of New Jersey. Members of board must have had five years' experience as a practical undertaker and embalmer. Terms of members to be five years. This board shall examine and license all persons who practice this profession. Salary of members not to exceed \$5 per day, to be paid from fees received. Practicing without such license a misdemeanor punishable by fine not exceeding \$100. (Public Health.)

No. 149, Mr. Lehlbach. Regulates the practice of barbering, authorizes the governor to appoint a board of examiners for such purpose, to consist of three members, one boss barber and two practical journeymen barbers, for terms of two years. This board shall have a president, secretary and treasurer from their membership. Three dollars per day and expenses shall be paid each member out of the fees received. The board shall provide for examining, licensing and granting certificates to barbers; shall also provide for improved sanitary conditions, &c. (Municipal Corporations.)

No. 150, Mr. Coyne. Permits cities to make assessments of taxes toward annual expense of collecting and cremating garbage and other refuse, and interest and installment of principal of bonds issued for the erection of crematories, without regard to any limitation upon the same heretofore fixed by any act of the legislature. (Municipal Corporations.)

No. 169, Mr. F. C. Henry. Repeals the act for the free distribution of diphtheria anti-toxin passed 1904. (Judiciary.)

No. 200, Mr. Gallagher. Provides that all cities having a sewer system may appoint, through its board of health, a board for the examination and licensing of sanitary plumbers, which shall license all plumbers, &c. (Public Health.)

\* These Bills became laws.

No. 208, Mr. Wilson. Provides for the appointment of three commissioners by the boards of health of cities to examine and license plumbers. (Public Health.)

No. 285, Mr. Mahners. Amends third section of the pure food act. (Public Health.)

No. 318, Mr. Heck. Requires that ferry boats plying over a distance of two miles or more between any point in New Jersey and another State to provide and maintain proper toilet rooms. (Railroads and Canals.)

No. 335, Mr. Taylor. Gives to local boards of health power by ordinance to regulate, control or prevent the blowing of whistles, ringing of bells and other noises injuriously affecting or tending to affect the public health; to prohibit the discharge of dense smoke within corporate limits, and to inspect the source of water-supply; also to remove dead animals and dispose of the same. (Public Health.)

\* No. 374, Mr. Reed. Provides for boards of health of seven members, appointed by mayor in cities like Long Branch. (Municipal Corporations.)

#### SENATE BILLS.

\* No. 126, Mr. Horner (by request). Amends pure food act of 1901, section 1, by designating "food" as every article used for food or drink by man and every ingredient used in such food, and defines the word or term "drug" as including every article of medicine for internal or external use. Section 2 is amended by defining more clearly what constitutes the adulteration of food or drugs. (Public Health.)

\* No. 171, Mr. Horner. Amends the rural cemetery association act of 1875 as amended in 1904 by requiring permission of the State board of health, as well as the local governing board, for the location of a new or enlargement of an old cemetery or burying-ground. If decision of board of health is adverse it is final; if favorable, objections to the location of a cemetery may appeal to the supreme court. (Miscellaneous Business.)

No. 199, Mr. Lee. Prohibits the sale of poisons except on the original written order or prescription of a lawfully authorized practitioner or person believed by the dispenser to be such, which order or prescription shall contain date and the name of the person for whom prescribed, and specifying quantities which may be excepted from the prohibition. (Public Health.)

\* No. 191, Mr. Hutchinson. Amends the "pure food" act of March 21st, 1901, concerning vinegar. (Public Health.)

No. 196, Mr. Brown. Provides for an annual meeting of health officers and sanitary inspectors from the various municipalities of the State. Health officers and sanitary inspectors may be appointed delegates to such meeting and their expenses may be paid by the municipality. (Public Health.)

No. 232, Mr. McKee. Amends the supplement to the general public health act of 1903 by providing that no person except those now so employed shall be eligible to act as local health officers or inspectors without obtaining a license as required by the act. (Public Health.)

No. 243. Amends the board of health act by requiring all health officers and inspectors to pass an examination and secure a license after January 1st, 1906.

\* These Bills became laws.

#### CIRCULARS.

The following circulars are now in print and ready for distribution: No. 89, Bulletins 3 and 4; No. 94, Contagious Diseases of Animals; No. 97, Illuminating Oils; No. 98, Restriction of Communicable Diseases; No. 100, Transportation of the Dead; No. 101, Births, Marriages and Deaths; No. 103, Food and Drugs; No. 104, Prevention of Small-pox; No. 105, State Laboratory of Hygiene; No. 110, Sanitary Inspection Service; No. 112, Restriction of the Spread of Malaria; No. 113, Collection of Samples of Water for Analysis.

The following circulars were issued during the past year:

#### CIRCULAR 112.

##### Introduction.

The average number of deaths caused by malarial affections in New Jersey during the past twenty-six years has been 182, and for the fourteen years, 1879-1892, the average number of deaths in the State from malaria was 256. The diminishing mortality from this cause has been very marked during the past seven years (1898, eighty-two; 1899, ninety-six; 1900, eighty-four; 1901, fifty; 1902, thirty-six; 1903, forty; 1904, forty-three), and the remarkable falling off in deaths for the past few years leaves no doubt that some unusual influence has produced this improvement. No new methods of treatment have recently been introduced, and only one explanation of the decrease in the prevalence of this disease has been suggested, viz., the recognition of the cause of the malady and the application of rational measures to reduce the extent of mosquito-breeding areas. Individuals can do much toward defending themselves against this disease by protecting themselves from the bites of mosquitoes at night and during evenings by the use of screens and canopies, and, as the anopheles rarely flies far from breeding places, almost all communities can free their localities from the carriers of the infection by drainage and by filling in wet places. The efforts of local boards of health to rid their various districts of breeding places for the anopheles should be systematic and continuous. Diagrams of each sanitary district should be prepared, showing every spot where standing water is found by the inspector, and each pool or receptacle which affords opportunity for the propagation of mosquitoes should be declared by the local board of health to be a nuisance, and its abatement should be secured by the enforcement of appropriate ordinances made for that purpose. Authority for ordinances of this character is found in paragraph 3 of section 12 of chapter 68 of the laws of 1887. The diagnosis of obscure cases of malaria is now regularly made in the State laboratory of hygiene by the examination of the blood of patients, and the physicians of the State are very generally availing themselves of this service. It is advisable that local boards of health shall require reports from physicians of all cases of malaria which may come

under observation, for by this means the sanitary inspector will be greatly assisted in tracing out undiscovered breeding places of the insects. Measures for the isolation of individuals who are infected with the malarial parasite have never been seriously considered by sanitarians, for, like tuberculosis, it is usually a chronic affection, and great hardship would attend the segregation of persons who are not themselves actually ill, yet capable of transmitting the disease. Moreover, when the great number of persons who are infected is considered, it is apparent that isolation would be altogether impracticable.

**Malaria is a General Term**, first employed to indicate a group of febrile disorders, which were then believed to be air-borne, and to emanate in some mysterious manner from decaying and water-soaked vegetation, but in 1880 Laveran demonstrated the causative relation of a certain protozoan parasite to these affections, and more recent investigators have clearly proved that this parasite is transmitted to human beings only by mosquitoes of the genus *Anopheles*. It has not yet been positively shown that this organism exists anywhere outside of the bodies of mosquitoes and human beings, but investigations concerning the life-cycle of the parasites are still in progress.

**The Infection of the Anopheles Mosquito** occurs when blood containing the spores of the malarial parasite is sucked from a bite made in the flesh of a human being who is affected with malaria. In the body of the mosquito the parasite develops and multiplies, and finally it is discharged into the blood of a new victim, together with the venom which these insects always inject when they bite.

**The Anopheles Breeds in Stagnant Water**, like all other gnats. The eggs are deposited upon the surface of the water in boat-like groups, pass through the larval or wriggler stage and develop into winged insects in the course of six or seven days. Neither the eggs nor the larvæ of mosquitoes can withstand thorough drying. They obtain nourishment from fruit and leaves, as well as from cattle, birds and human beings. The favorite breeding places for anopheles are shallow pools (fresh or salt) and puddles, gutters, ditches, cisterns, cesspools, rain-water barrels, old tin cans, &c.

**The Anopheles May Be Distinguished** from other varieties of mosquitoes by its relatively large size and by its lighter color. The legs of the anopheles are longer, and when at rest its body stands nearly at a right angle to the surface to which the insect is attached. The wings of the anopheles are spotted or smoky, while those of the *Culex* are clear. The body of the anopheles is nearly straight from beak to tail, while the body of the *Culex* is bent or humped at the thorax.

**The Diagnosis of Malaria** is regularly conducted in the State laboratory of hygiene, Trenton, by staining and examining specimens of blood spread in a thin film on a slide or cover glass. The detection of the parasite of malaria is satisfactory evidence that the patient is suffering from the disease. A negative report is of little value. Although the preparation of a thin and even film of blood, such as is needed for these examinations, does not seem to be difficult to the experienced worker, yet a very considerable amount of practice is necessary before it can be satisfactorily done. In chronic cases and cases where quinine has been administered, the parasites in the peripheral circulation are so few in number that very lengthy and careful searching is necessary to demonstrate their presence.

**The Prevention of Malaria** can best be accomplished by ridding the

locality of stagnant water. Pools and swampy places should be drained or filled; gutters and ditches should be freed of all standing water; old tin cans should be removed; rain-water barrels and all other receptacles for water should be kept closely covered with fine wire netting. When drainage is depended upon the work should be thoroughly done, so that no holes or hollows are left, for even footprints left on soft ground may hold water enough to breed hundreds of mosquitoes. Encouragement for careful and continuous efforts to prevent the local breeding of mosquitoes is found in the fact that the insects do not, as a rule, fly far, and therefore almost every locality breeds its own mosquitoes. The use of crude petroleum as a temporary expedient, to prevent the larvæ from reaching the surface of the water, may be advisable in dealing with cesspools and other small bodies of water where drainage or filling cannot be resorted to, but, to be effectual, its application should be frequently repeated. One ounce of crude oil to fifteen square feet of surface may be sprayed by the use of a pump and hose, or it may be applied by means of a saturated rag attached to a pole. Permanent bodies of water should be deepened at the borders and stocked with small fish.

Fish which grow to a large size are not desirable, for they destroy the larvæ-eating fishes. The margins of ponds, lakes and sluggish water-courses should be kept free from grass, to permit the fish to have access to all portions of the water. Frogs and other aquatic animals are also useful in destroying mosquito larvæ. The anopheles mosquitoes fly more at twilight and at night than during the daytime, and protective measures against the bites of these insects should therefore be employed with greatest care from an hour before sunset to an hour after sunrise. Dwellings should be screened at every opening, and mosquitoes which manage to find admission should be destroyed by the smoke of burning flea powder (*pyrethrum roseum*). Before the smoke is liberated, all windows and doors should be closed and each room should be treated separately. The powdered pyrethrum should be placed loosely upon a tin plate or other metal surface and be allowed to smoulder slowly, enough of the powder being used to produce a dense smoke. After the room has been opened up all flies and mosquitoes found upon the floor should be swept up and burned, for they may, in some instances, be only stupefied. The entire extermination of mosquitoes has not thus far been accomplished in any locality which they have once infested, but the number can, by the measures which have been described, be so reduced that the danger of infection will be greatly diminished, if not altogether eliminated.

#### RESTATEMENT.

Malaria is conveyed to human beings only through the agency of the anopheles mosquito.

Mosquitoes become infected by biting persons who are already affected with the disease.

Mosquitoes can be destroyed (a) by removing all stagnant water; (b) by deepening ponds and pools which cannot be drained or filled up, and introducing fish; (c) by clearing away obstructions and weeds from gutters and ditches to permit of free escape for storm water; (d) by destroying the larvæ with oil in situations where more radical treatment cannot be applied; (e) by destroying adult mosquitoes which hibernate in cellars, drains, cesspools and other places by the use of the smoke of burning insect powder and by brushing them out and consuming them by fire.

## CIRCULAR 113.

## Analysis of Water.

So many applications have been received for the analysis, in the state laboratory of hygiene, of the waters from private wells that it becomes necessary to call attention to the regulations under which the laboratory service is rendered. The examination of samples of water from public supplies will proceed regularly and periodically, but it is impossible to undertake the analysis of water from other sources, except to a limited extent, and it is incumbent upon the persons who request such examinations to show that the results of the analysis may assist in solving questions concerning the public health. The laboratory is conducted for the benefit of the public, and analytical work which has no bearing upon the public health cannot be performed.

*Regulations governing the collection and examination of samples of water from private premises.*

1. Any person desiring the analysis of a sample of water, to determine its fitness for potable use, should apply to the local board of health of the township or municipality in which he resides, stating in full why such an examination is desired. If that board, or its executive officer, considers that the circumstances render an examination of the water desirable, he will approve the application and forward it to the state board of health. Should the latter approve the application they will either instruct an inspector of the state board to collect a sample, or forward the application to the director of the state laboratory of hygiene, who will ship a container to the person forwarding the application.
2. The sample must be collected by the health officer making the application, or by some person designated by the state board of health. The person collecting the sample must fill in fully the blank sent, for the purpose of giving a description of the source of the water.
3. Samples collected in any other way or by other persons than those mentioned above, or collected in bottles not furnished by the laboratory, will not be received for examination.
4. Transportation charges on bottles must be paid both ways by the persons interested.
5. The state board of health assumes no responsibility for the correctness of analyses made of samples collected by persons other than inspectors of the board.

## CIRCULAR 103 (REVISED 1905).

## Introduction.

The enforcement of the provisions of the act of 1901, to prevent the sale of unwholesome and adulterated food and drugs, drew attention to certain omissions in this enactment, and supplements have been passed which are designed to strengthen the previous law and also to rectify the defects which have been observed. The supplement of April 4th, 1902, specifies clearly the method to be pursued in conducting prosecutions for the penalty where the law has been violated. The supplement approved May 22d, 1905, fixes the standard for vinegar, and the act approved April 4th, 1902, authorizes the establishment of standards for other articles of food, standards for which had not previously been fixed by law. Soon after the enactment of the supplement of 1902 preliminary action was taken by the state board of health to fix the limits of variability in food, but in view of the announcement that a list of definitions and standards for food was in preparation by the United States bureau of chemistry, final action was not taken by the board of health of the State of New Jersey until December 18th, 1903. An examination of the subjoined list will show that it coincides very closely with the recommendations adopted under the United States statute for the regulation of imported articles. It will be observed that the list is still incomplete, and that standards for many groups of food have not yet been arranged.

Many letters of inquiry have been received asking for information concerning the requirements of the New Jersey laws relative to the labeling of containers of food, and particularly in relation to the extent to which the use of the word "compound," when placed upon the label of prepared food, will release the vendor of the article from the penalties which have been provided to prevent the sale of adulterated goods. Reference to section 6 of chapter 85 of the laws of 1901 shows that the law prohibits the sale of any food or drug which is an imitation of any other article, and requires that every article of food or drug which is mixed, or the quality or value of which is diminished or lowered by the addition of a cheaper substance, and which is sold as an imitation of some other article, shall be sold under the true name of the imitation. The word "compound" is not the "true name," for example, of glucose, and when a package labeled "molasses," but which is, in fact, a mixture of glucose and molasses, is sold in response to a demand from a customer for molasses, the vendor is not released from responsibility if the label, in addition to the word "molasses," also bears the word "compound."

The definitions and standards published herewith will, if carefully examined, clearly guide dealers in prepared food concerning the labeling of these articles.

The warning notices which are sent to dealers from whom adulterated articles, or articles which fall below the standard fixed by law, have been purchased, will inform interested parties that the sale of such articles is unlawful, and is liable to be followed by prosecution for the penalty if the sale of such articles is continued.

ACTS GOVERNING THE SALE OF FOOD AND DRUGS IN  
NEW JERSEY.

An Act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. (As amended April 12th, 1905.) The term "food," as used in this act, shall include every article used for food or drink by man, and every ingredient in such article, and all confectionery and condiments; and the term "drug," as used in this act, shall include every article of medicine for internal or external use, and every ingredient in such article.

2. The following drugs shall be deemed to be impure within the meaning of this act: (1) any drug which, being known under or by a name recognized in the last revised United States pharmacopœia, possesses a strength, quality or degree of purity inferior to or different from that laid down in such pharmacopœia; (2) any drug which, not being known under or by a name recognized in the United States pharmacopœia, but which is found in some other pharmacopœia, or in some other standard work on materia medica, possesses a strength, quality or degree of purity inferior to or different from that laid down in such other pharmacopœia or standard work, and (3) any drug whose strength, quality or degree of purity falls below the professed standard under which it is sold.

3. (As amended April 12th, 1905.) The following foods shall be deemed to be impure within the meaning of this act: (1) any food which is rendered poisonous or injurious to health, or whose quality, strength or degree of purity is injuriously reduced, lowered or affected by adding thereto or mixing therewith any other substance or substances; (2) any food for any of whose constituents there have been substituted any substance or substances inferior to or cheaper than the constituents naturally or customarily composing such food or any part thereof; (3) any food from which has been wholly or partially abstracted any valuable or necessary constituent; (4) any food which consists wholly or in part of diseased, decomposed, putrid, infected, tainted or rotten animal or vegetable substance, whether manufactured or not, and (5) in the case of milk, if it contains more than eighty-eight per centum of watery fluids or less than twelve per centum of milk solids, or if any water, drug, chemical, preservative or other substance be added thereto or mixed therewith, and (6) in the case of cream, if it contain less than sixteen per centum of butter fat, or if any package containing cream having less than sixteen per centum of butter fat is not plainly and legibly so marked, or if any water, drug, chemical, preservative or other substance be added thereto or mixed therewith; no person shall kill or aid in killing, for human food, any calf less than three weeks old, or sell or offer for sale, or have in possession with intent to sell, for human food, any such calf or any of the meat thereof.

4. No person shall distribute or sell, or have in his possession with intent to distribute or sell, any article of food or drug which, under any of the provisions of this act, is or shall be deemed to be impure.

5. No person shall distribute or sell, or offer to distribute or sell, any article of food or any drug which is an imitation of some other article of food or of some other drug under or by the name of the article of food or drug imitated, but the same shall be distributed and sold, or offered for distribution or sale, only by the true name of the imitation.

6. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any article of food which shall have been colored, coated, polished, powdered or treated in such manner as to conceal any element of injury or damage therein or any inferiority of quality thereof.

7. No person shall keep cows for the production of milk in a crowded or unhealthy place or condition, or feed any cow kept for the production of milk or swill, or any substance in a state of putrefaction or rottenness, or on any substance of an unwholesome nature, or on any food or substance that may produce diseased or unwholesome milk; and no person shall distribute or sell, or offer to distribute or sell, or have in his possession with intent to distribute or sell, any milk which is the produce of cows so kept or fed.

8. No person having the possession or care of any milk shall permit it to be exposed to, or contaminated by, the emanations, discharges or exhalations from any person or persons sick with any contagious disease; and no person shall distribute or sell, or offer to distribute or sell, or have in his possession with intent to distribute or sell, any milk which has been so exposed or contaminated.

9. No person shall sell, or offer or expose for sale, or have in his possession for the purpose of sale, any milk from which the cream or any part thereof has been removed, unless every can, vessel or package containing such milk shall have a metal label or tag of metal distinctly, durably and permanently soldered in a conspicuous place upon the outside and not more than six inches from the top thereof, with the words "skimmed milk" stamped, indented or engraved on the label or tag in letters not less than two inches in height, and the several lines of which shall be not less than three-eighths of an inch in width; *provided, however,* that every glass bottle, in lieu of such label or tag, may have blown in it the words "skimmed milk" in letters which shall not be less than one inch in height, and the several lines of which shall be not less than one-eighth of an inch in width; such milk shall only be sold or shipped in or retailed out of a can, bottle, vessel or package so marked.

10. No person shall sell, supply or bring to be manufactured to any person or party operating any cheese or butter manufactory in this state any milk which, under any of the provisions of this act, is or shall be deemed to be impure, or from which the cream or any part thereof has been removed, or the sale of which by any of the provisions of this act is prohibited.

11. The state board of health shall have the power from time to time to adopt, promulgate and publish, by circular or otherwise, such general rules and regulations for the government of the analysts, chemists, chief inspector, and such other inspectors and employes appointed by the said board as they may deem proper; they shall also have the power to give to any analysts, chemists or chief inspector, or other inspector or employe appointed by the board, such orders concerning any performance of duty as they from time to time may deem proper; they shall also have the power from time to time to appoint such analysts, chemists, chief in-

spector and other inspectors and employes as they may deem proper, who shall hold their respective positions during the pleasure of said board and perform such general or special services as said board may by their general rules and regulations or by their special orders require, and to fix and allow to said analysts, chemists, chief inspector and other inspectors and employes, respectively, such salaries, fees or compensation as the said board shall deem to be reasonable, which salaries, fees and compensation shall be paid out of the appropriations from time to time made by the legislature for carrying out the provisions of this act; the said board shall have the power, and it shall be their duty, through said analysts, chemists, chief inspector and other inspectors and employes, and in such other ways as the said board of health may deem practicable, to make inquiries and investigations concerning alleged or probable violations of any of the provisions of this act, to cause any and all persons guilty of any violation thereof to be prosecuted under the provisions of this act, and, generally, to adopt, carry out and enforce such rules and regulations as shall promote the purposes of this act.

12. (As amended April 4th, 1902.) Every person who shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any article of food or drug, shall, on the request therefor and the tender of the value thereof by any chief or other inspector appointed under the authority of this act, deliver to such chief or other inspector so much of any such article of food or drug as said chief or other inspector may request; if such request shall not be immediately granted, said chief or other inspector shall thereupon have the power to demand and take so much of any such article of food or drug as such chief or other inspector may think proper, he, at the time of said demand and taking, tendering to the person in charge of such article of food or drug what he may deem to be the reasonable value thereof; said chief or other inspector shall, at the time of the delivery to him of such article of food or drug, or of his demanding and taking the same, divide the sample so delivered or demanded and taken, in the presence of one or more witnesses, into two parts, and shall duly seal each part in a suitable can, vessel or package, and, at the time of taking such sample, shall tender, and if accepted, shall deliver one part to the person of whom the request or demand was made, with a statement, in writing, signed by said chief or other inspector, that such sample is taken for the purpose of analysis; and in any prosecution of any person for the violation of any provision of this act, or of any other statute of this state relative to the prevention of deception in the sale of food products, no proof of any analysis thereof shall be given in evidence by the prosecutor unless a part of the sample shall have been sealed up and tendered, with such writing as aforesaid, to the person of whom the request or demand was made; the chief and every other inspector appointed under the authority of this act, whenever he has reason to believe that any of the provisions of this act concerning the sale or distribution of milk, or the offering or exposing of milk for sale, or the having of milk in possession for the purpose of sale, is being violated, shall have power to open any can, vessel or package containing such suspected milk, whether the can, vessel or package be sealed or locked or not, and whether it be in transit or not; and if, upon inspection, he shall believe that such milk is being distributed or sold, or had in possession with intent to distribute or sell, or offered or exposed for sale, contrary to any of the provisions of this act, he may, in the presence of one or more

witnesses, take a sample thereof and seal it in a can, vessel or package, and send the sample thus enclosed and sealed for analysis to any chemist appointed under the authority of this act; he may also in any such case condemn such milk and pour it upon the ground.

13. Every person who shall violate any of the provisions of this act, and every person who shall obstruct or in anywise interfere with any analysts, chemists, chief inspector or other inspector or employe of the State board of health in the performance of any duty under this act, shall be liable to a penalty of fifty dollars; *provided, however*, that if any person charged with the violation of any of the provisions of this act concerning impure foods or impure drugs shall prove at the hearing or trial of the complaint that the article alleged to be impure was produced under a warrant from any person or persons residing within this state, in the form hereinafter set forth, that said article was pure within the meaning of this act, and prior to the hearing or trial shall have filed in the district court, or with the justice of the peace, police justice or recorder, before whom the case is prosecuted, and with the attorney of the prosecutor of the case, a copy of such warrant, the person so complained against shall be discharged from prosecution; the warrant to justify such discharge shall specifically name and describe the article or articles warranted and shall be of the following form, to wit: "It is hereby warranted that the following-described article or articles, to wit, \_\_\_\_\_ are pure and unadulterated within the meaning of the act of the legislature of the State of New Jersey entitled 'An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof,' approved the \_\_\_\_\_ day of \_\_\_\_\_, A. D. nineteen hundred and one;" every such warrant shall be signed by the warrantor, but no warrant shall be a defense if the person offering it shall have been notified, prior to the sale complained of, that the article or articles mentioned in it were impure within the meaning of this act.

14. Every district court and every justice of the peace in any city or county, and every police justice or recorder in any city, is hereby empowered, on complaint under oath or affirmation made according to law that any person or persons has or have violated any of the provisions of this act, to issue process, in the name of the board of health of the State of New Jersey, as prosecutor, for the use of the State of New Jersey, or in the name of any local board of health of the township, city, borough, town or other municipal government within whose limits the penalty may have been incurred, as prosecutor, for the use of such township, city, borough, town or other local municipal government; said oath or affirmation, if made by any member, inspector, or other officer of the state board of health, or of any local board of health, may be upon information or belief; said process shall be in the nature of either a summons or warrant against the person or persons so charged; when in the nature of a warrant, it shall be returnable forthwith, but before any warrant shall issue out of any district court the judge thereof shall endorse upon the complaint an order in the following or similar words, "let the warrant issue in this case," to which said judge shall sign his name; and when in the nature of a summons, it shall be returnable in not less than one or more than ten entire days; such process shall state what section of the law is alleged to have been violated by the defendant or defendants; and on the return thereof, or at any time to which the trial shall have been adjourned, the said district court, justice of the peace, police justice or recorder, if no

jury be demanded in accordance with the provisions of the next succeeding section, shall proceed to hear the testimony, and to determine and give judgment in the matter, without the filing of any pleadings, either for the prosecutor for the recovery of such penalty with costs, or for the defendant or defendants; if such judgment be for the prosecutor as aforesaid, it shall be in the following or similar form: "State of New Jersey, county of \_\_\_\_\_, ss.: Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, in the year of our Lord nineteen hundred \_\_\_\_\_, at \_\_\_\_\_, in said county, C. D., defendant, was, by the district court of the city of T. (or by me, E. F., justice of the peace, police justice or recorder of the city of \_\_\_\_\_, or as the case may be), convicted of violating the \_\_\_\_\_ section of the act of the legislature of New Jersey entitled 'An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof,' approved the \_\_\_\_\_ day of \_\_\_\_\_, A. D. nineteen hundred \_\_\_\_\_, in a summary proceeding, at the suit of the board of health of the State of New Jersey (or of the local board of health of the township of A., or as the case may be), as prosecutor; and further, that the witnesses in said proceeding who testified for the prosecutor were (name them); and the witnesses who testified for the defendant were (name them); wherefore the said court (or justice of the peace, police justice or recorder, as the case may be) doth hereby give judgment that the prosecutor recover of the defendant fifty dollars penalty and \_\_\_\_\_ dollars costs of this proceeding, and that execution do issue against the goods and chattels of said defendant for the amount of said penalty and costs, and for want of sufficient goods and chattels whereon to levy and make the same, to take the body of the defendant and convey him to the common jail of the county and deliver him to the keeper thereof, to be there confined until the said penalty and costs be fully paid, or until he be thence delivered by due course of law;" said judgment shall be signed by the judge of the district court, justice of the peace, police justice or recorder giving the same.

15. Either party to any proceeding instituted under the provisions of this act may, at any time previous to the hearing of the complaint in such proceeding, demand a trial by jury, and if a jury is demanded a venire shall be issued to summon a jury of twelve men, being citizens of this state above the age of twenty-one years and under the age of sixty-five years, and in nowise akin to the defendant or defendants, nor interested in the proceeding, to be and appear before the district court, justice of the peace, police justice or recorder issuing the venire, at such time and place as shall be expressed therein, to make a jury for the trial of the matter mentioned therein; and the constable or sergeant-at-arms shall, at the return of the said venire, return, annexed thereto, a panel containing the names of the jurors whom he shall have summoned by virtue thereof; and if, on the return of the venire, it shall appear that one or more of the jurors are disqualified to serve, or do not appear, then it shall be lawful for the constable or sergeant-at-arms who served the same, by order of the court, justice of the peace, police justice, or recorder before whom the trial is to be had, immediately to summon others who shall serve in their stead; such jury, having been first duly sworn or affirmed according to law, with the court, justice of the peace, police justice or recorder before whom the trial is to be had, shall thereupon proceed to hear the testimony, the jury rendering their verdict upon the facts, and the court, justice of the peace,

police justice or recorder deciding upon all questions of law; if the jury find the defendant or defendants guilty, the court, justice of the peace, police justice or recorder shall give judgment in the matter, without the filing of any pleadings, for the prosecutor for the recovery of said penalty with costs; if the jury find the defendant or defendants not guilty, the judgment shall be generally for such defendant or defendants; if judgment be given for the prosecutor as aforesaid, it shall be in the following or similar form: "State of New Jersey, county of \_\_\_\_\_, ss.: Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, in the year of our Lord nineteen hundred and \_\_\_\_\_, at \_\_\_\_\_, in said county, C. D., defendant, was, by a jury, duly summoned before the district court of the city of T. (or before me, E. F., justice of the peace, police justice or recorder of the city of \_\_\_\_\_, or as the case may be), convicted of violating the \_\_\_\_\_ section of the act of the legislature of the State of New Jersey entitled 'An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof,' approved the \_\_\_\_\_ day of \_\_\_\_\_, A. D. nineteen hundred and \_\_\_\_\_, in a summary proceeding, at the suit of the board of health of the State of New Jersey (or of the local board of health of the township of A., or as the case may be), as prosecutor; and further, that the witnesses in said proceeding who testified for the prosecutor were (name them), and the witnesses who testified for the defendant were (name them); wherefore the said court (or justice of the peace, police justice or recorder, as the case may be) doth hereby give judgment that the prosecutor recover of the defendant fifty dollars penalty and \_\_\_\_\_ dollars costs of this proceeding, and that execution do issue against the goods and chattels of said defendant for the amount of said penalty and costs, and for want of sufficient goods and chattels whereon to levy and make the same, to take the body of the defendant and convey him to the common jail of the county and deliver him to the keeper thereof, to be there confined until the said penalty and costs be fully paid, or until he be thence delivered by due course of law;" said judgment shall be signed by the judge of the district court, justice of the peace, police justice or recorder giving the same.

16. (As amended April 4th, 1902.) If either the prosecutor or the defendant or defendants be dissatisfied with any judgment given under the provisions of either the fourteenth or the fifteenth section of this act, the dissatisfied party may appeal to the court of common pleas of the county in which the judgment appealed from shall have been rendered, which appeal shall be taken by filing with the court, justice of the peace or recorder who gave the judgment, a notice of such appeal, signed by the appealing party, or his, her or their agent; *provided, however*, that no appeal shall be allowed to or taken by any defendant from any judgment against such defendant unless, with said notice of appeal, such defendant shall also file a bond, with at least one sufficient surety, to be approved by the court, justice of the peace or recorder who shall have given the judgment, in double the amount of the judgment, and conditioned that the appellant or appellants shall appear and prosecute the appeal in said court of common pleas, shall stand to and abide the judgment of said court of common pleas, and shall pay such costs as shall be taxed against the appellant or appellants, if the judgment appealed from be affirmed; the court, justice of the peace or recorder who shall have given the judgment

appealed from shall send a transcript of the proceedings and judgment and said notice of appeal, together with any bond that may have been filed under the provisions of this section above contained, to the clerk of the court of common pleas to which the appeal is taken on or before the first day of the term of said court next ensuing such appeal; in any case of appeal by a defendant after execution shall have been issued, the court of common pleas to which the appeal is taken, upon receiving satisfactory proof that the notice of appeal above mentioned has been filed with the court, justice of the peace or recorder who gave the judgment, and upon filing with the clerk of the court of common pleas to which the appeal is taken such bond as aforesaid, to be approved by said court of common pleas, may stay the execution until the further order of said last-mentioned court, a rule to which effect shall be entered in the minutes of the said last-mentioned court and a copy thereof, certified by the clerk of said last-mentioned court, shall be served on the constable in whose hands the execution may be; the proceedings for bringing on the hearing of such appeal, and for conducting such hearing, shall be the same as in the case of the trial of causes on appeal to the court of common pleas under the provisions of the act entitled "An act constituting courts for the trial of small causes," approved the twenty-seventh day of March, in the year one thousand eight hundred and seventy-four, and the acts supplementary thereto and amendatory thereof.

17. In case judgment as aforesaid shall be rendered against any defendant, in any such proceedings as aforesaid, execution shall thereupon be granted by the court, justice of the peace, police justice or recorder giving the judgment, commanding the officer to whom the execution is delivered to levy and make the amount of the penalty and costs imposed by the judgment out of the goods and chattels of the defendant, and for want of sufficient goods and chattels whereon to levy and make the same, to take the body of the defendant and convey him to the common jail of the county and deliver him to the keeper thereof, to be there confined until the said penalty and costs be fully paid, or until he be thence delivered by due course of law.

18. The officers to serve and execute any process or execution issued as aforesaid shall be the constable of the county, and within the jurisdiction of any district court shall include the sergeant-at-arms thereof, which service and execution shall in all cases be made in the same manner and under the same liabilities that other processes and executions issued out of the district court of this state are served and executed under and by virtue of the provisions of the act entitled "An act concerning district courts," approved June fourteenth, in the year eighteen hundred and ninety-eight; the costs taxable and recoverable in any case prosecuted as aforesaid shall be the costs allowed by the act last above mentioned in cases prosecuted in district courts; the penalty recoverable in any such action shall be paid to the prosecutor therein, who shall pay the same into the treasury of this state when such prosecutor is the state board of health, and when the prosecutor is a local board of health such local board shall pay the penalty into the treasury of the township, city, borough, town or other local municipal government within which such local board has jurisdiction; the judge of the district court, justice of the peace, police justice or recorder before whom any case is prosecuted under the provisions of this act, may adjourn the hearing thereof from time to time, not

exceeding thirty days from the return day of the summons or warrant; and in any case where a warrant shall have been issued may require the defendant to enter into a bond with sufficient surety to the plaintiff in the penal sum of two hundred dollars, conditioned to appear at the time and place of the hearing or trial, and in default of such bond may commit the defendant to the common jail of the county, to be there detained until the hearing or trial of the complaint; and if any defendant shall fail to appear at the time and place to which the hearing or trial shall be so adjourned, the bond shall be delivered to the prosecutor, who may sue thereon, and all moneys recovered in such suit shall be paid by the prosecutor into the same treasury into which it is above required to pay the penalty recovered from any defendant for violation of any of the provisions of this act.

19. Any person who shall give or utter any false warranty of the form prescribed in the fifteenth section of this act shall be guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine of not more than five hundred dollars, or imprisonment at hard labor for not more than one year, at the discretion of the court.

20. The state board of health may expend annually for the purposes of carrying out the provisions of this act a sum not exceeding fifteen thousand dollars, which sum shall be paid by the treasurer of this state upon the warrants of the comptroller; *provided, however,* that an appropriation therefor shall first be made by the legislature; and should this act go into effect the sum appropriated to the use of the dairy commissioner shall be placed to the account of the state board of health.

21. The office of state dairy commissioner is hereby abolished, and all duties now imposed upon the state dairy commissioner by an act of the legislature not repealed by this act shall hereafter be performed by the chief inspector appointed under the authority of this act, and under the direction of the state board of health.

22. The following acts are hereby repealed: "An act to protect butter and cheese manufacturers," approved March twenty-third, eighteen hundred and sixty-five; "An act relative to the dairy commissioner," approved June thirteenth, eighteen hundred and ninety-five; "An act to prevent the adulteration and to regulate the sale of milk," approved March fourteenth, eighteen hundred and eighty-two, and all acts supplementary thereto and amendatory thereof; "An act to prevent the adulteration of food or drugs," approved March twenty-fifth, eighteen hundred and eighty-one, and all acts supplementary thereto and amendatory thereof; "An act to prevent the adulteration of candy," approved March fourteenth, eighteen hundred and ninety-five; and "An act to prevent deception in the sale of cakes and biscuits and to preserve the public health," approved March twenty-second, eighteen hundred and ninety-five, and all other acts and parts of acts inconsistent with this act.

23. This act shall take effect on the first day of November, in the year nineteen hundred and one.

Approved March 21, 1901.



CHAPTER 183 OF THE LAWS OF 1902.

A Supplement to the act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, anno domini one thousand nine hundred and one.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

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6. The state board of health shall, from time to time, have power to fix the limits of variability permissible in any article of food or drug, the standard of which is not fixed in any law of this state.
  7. This act shall take effect immediately.
- Approved April 4th, 1902.

CHAPTER 126 OF THE LAWS OF 1903.

A Supplement to the act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, one thousand nine hundred and one.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. No person shall knowingly distribute or sell, or offer to distribute or sell, or have in his possession with intent to distribute or sell, any milk which has been produced by cows that have not been daily supplied with pure and wholesome water; and no person shall wash or attempt to cleanse any can or utensil used for handling or transporting milk in water which he shall have reason to believe is polluted, contaminated or impure.
  2. Every person who shall violate any of the provisions of the first section of this act shall be liable to a penalty of fifty dollars, which shall be recoverable in the same manner and in any court or before any magistrate that any penalty is recoverable under the provisions of the act to which this act is a supplement.
  3. This act shall take effect immediately.
- Approved April 7th, 1903.

CHAPTER 99 OF THE LAWS OF 1904.

A Further Supplement to an act entitled "An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, one thousand eight hundred and eighty-seven.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. Whenever any person shall keep cows for the production of milk in a crowded or unhealthy place or condition, or feed any cows kept for the production of milk on swill or any substance in a state of putrefaction or

rotteness, or on any substance of an unwholesome nature, or on any substance that may produce disease or unwholesome milk; or who shall sell or distribute, or offer to sell or distribute, or have in possession with intent to sell or distribute, any milk which is the produce of cows so kept or fed, then it shall be lawful for the state board of health to file a bill in the court of chancery in the name of the state, on the relation of such board, for an injunction to prohibit the keeping of cows for the production of milk in such crowded or unhealthy place or condition, or the feeding of cows on swill or any substance in a state of putrefaction or rottenness, or any substance of an unwholesome nature, or on any food or substance that may produce disease or unwholesome milk, or the continuance of the sale, distribution or transportation of such milk, as the case may be, and for such other or further relief in the premises as the court of chancery shall deem proper.

2. This act shall take effect immediately.
- Approved March 28, 1904.

CHAPTER 204 OF THE LAWS OF 1904.

A Supplement to an act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, one thousand nine hundred and one.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. It shall be the duty of any person, persons or corporation to whom milk is shipped by any person in this state, before returning to such shipper the can or vessel used for transporting such milk, to remove all milk from such can or vessel and to thoroughly rinse such can or vessel with pure water, or to cause the same to be done; and it shall be the duty of any person, persons or corporation shipping milk to any point or points within or without this state to thoroughly cleanse, or cause to be cleansed, the can or vessel used for transporting such milk before the milk is placed therein.
  2. Whenever any person, persons or corporation shall violate any of the provisions of the first section of this act, such person, persons or corporation shall be liable to a penalty of twenty-five dollars, which shall be recoverable in the same manner and in any court or before any magistrate that any penalty is recoverable under the provisions of the act to which this is a supplement.
  3. This act shall take effect immediately.
- Approved March 30, 1904.

## CHAPTER 211 OF THE LAWS OF 1904.

**A Supplement to an act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, one thousand nine hundred and one.**

*BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:*

1. The board of health of any municipality in this State shall have the power to designate from among its sanitary inspectors one or more inspectors who shall be known as inspector or inspectors of foods and drugs of such municipality, and whose duties shall be, besides the usual duties of a sanitary inspector in such municipality, to aid in the enforcement of the act to which this is a supplement, and who shall have all the powers and authority given or to be given by said act or the acts supplementary thereto or amendatory thereof to any inspector appointed thereunder.

2. This act shall take effect immediately.

Approved March 30, 1904.

## CHAPTER 245 OF THE LAWS OF 1905.

**A Further Supplement to an act entitled "An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof," approved March twenty-first, anno domini one thousand nine hundred and one.**

*BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:*

1. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as cider vinegar or apple vinegar, any vinegar which is not produced exclusively by the alcoholic and subsequent acetous fermentations of the juice of apples, or is not *lavo-rotatory*, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams, or which contains less than one and six-tenths grams of apple solids or less than twenty-five one-hundredths of one gram of apple ash in one hundred cubic centimeters. The water-soluble ash from one hundred cubic centimeters of the vinegar shall require not less than thirty cubic centimeters of decinormal acid to neutralize its alkalinity, and shall contain not less than ten milligrams of phosphoric anhydride.

2. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as wine vinegar or grape vinegar, any vinegar which is not produced exclusively by the alcoholic and subsequent acetous fermentations of the juice of the grape, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams, or which contains less than one and four-tenths grams of grape solids, or less than thirteen one-hundredths of one gram of grape ash in one hundred cubic centimeters.

3. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as malt vinegar, any vinegar which is not made exclusively by the alcoholic and subsequent

acetous fermentations, without distillation, of an infusion of barley malt or cereals whose starch has been converted by malt, or is not *dextro-rotatory*, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams, or which contains less than two grams of solids or less than two-tenths of one gram of ash in one hundred cubic centimeters. The water-soluble ash from one hundred cubic centimeters of the vinegar shall require not less than four cubic centimeters of decinormal acid to neutralize its alkalinity and shall contain not less than nine milligrams of phosphoric anhydride.

4. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as sugar vinegar, molasses vinegar or syrup vinegar, any vinegar which is not made exclusively by the alcoholic and subsequent acetous fermentations of solutions of a sugar, syrup, molasses or refiners' syrup, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams.

5. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as glucose vinegar, any vinegar which is not made exclusively by the alcoholic and subsequent acetous fermentations of solutions of starch sugar, glucose or glucose syrup, or is not *dextro-rotatory*, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams.

6. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, as spirit vinegar, distilled vinegar or grain vinegar, any vinegar which is not made exclusively by the acetous fermentation of dilute distilled alcohol, or the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams.

7. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any vinegar, the total amount of acid in one hundred cubic centimeters of which, calculated as acetic acid, is less than four grams, or which contains any mineral acid, any artificial coloring matter or any preservative.

8. No person shall distribute or sell, or offer for distribution or sale, or have in his possession with intent to distribute or sell, any vinegar contained in any barrel, vessel, bottle or package, unless such barrel, vessel, bottle or package bears a label or imprint thereon in legible type, designating the name and address of the manufacturer of the vinegar and the name of the particular kind of vinegar contained therein.

9. Any person violating any of the provisions of the first, second, third, fourth, fifth, sixth, seventh or eighth sections hereof shall be liable to a penalty of fifty dollars, to be sued for and recovered in the same manner as penalties are recovered under the act to which this act is a further supplement.

10. Sections three and four of the act entitled "A supplement to the act entitled 'An act to secure the purity of foods, beverages, confectionery, condiments, drugs and medicines, and to prevent deception in the distribution and sales thereof,' approved March twenty-first, anno domini one thousand nine hundred and one," approved April fourth, one thousand nine hundred and two, be and the same are hereby repealed.

11. This act shall take effect immediately.

Approved May 22, 1905.

## CHAPTER 84 OF THE LAWS OF 1886.

An Act to prevent deception in the sale of oleomargarine, butterine or any imitation of dairy products, and to preserve the public health.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. That no person shall offer or expose for sale, or sell, or have in possession for the purposes of sale, any oleomargarine or butterine or suine, or any substance in imitation or semblance of natural butter or cheese, or any substance that is rendered, made, manufactured or compounded out of any animal or vegetable or mineral fat or oil, not produced from pure milk or cream from pure milk, unless contained in, or sold out of or in tubs, pails, firkins, vessels or other packages marked and labeled as required by section three of this act.

2. That no person shall offer or expose for sale, or sell, or have in possession for the purposes of sale, any mixture or compound of natural butter or cheese with oleomargarine, butterine, suine, or any animal or vegetable or mineral fat or oil, or any substance not the product of pure milk or cream from pure milk, except such mixture or compound shall be sold out of or in contained in tubs, firkins, pails, vessels or packages marked or labeled as required by section three of this act.

3. That no oleomargarine, butterine or suine, or any substance or compound or mixture in imitation or semblance of natural butter or cheese, or any substance that is rendered, made, manufactured or compounded out of animal or vegetable or mineral fat or oil, not the product of pure milk or cream from pure milk, shall be sold or exposed or offered for sale, or held in possession for the purposes of sale, except when contained in tubs, pails, boxes, firkins, vessels or other packages that are marked or labeled as follows, to wit: every such tub, pail, box, firkin or other vessel or package shall have painted on the outside thereof, and midway between the top and bottom thereof, a stripe or band at least three inches wide, and extending completely around said vessel or package, and said stripe or band shall be painted with black paint; every such vessel or package shall have legibly branded and burnt in, by means of a branding or burning-iron, on the outside of the cover and on the outside of said vessel or package, in two places as nearly opposite each other as possible, the words "oleomargarine," "butterine," "suine" or "imitation butter," or "imitation cheese," as the case may be, and said name or title shall be composed of Roman letters at least one-half an inch high and at least one-quarter of an inch broad, and said name or title shall be at least ten inches long; and every such tub, pail, box, firkin or other vessel or package shall bear a label or shall have branded on it a mark giving the name and address of the maker of the contents thereof, and the name and location of the manufactory.

4. That no person shall sell any oleomargarine, butterine, suine, or any substance in imitation or semblance of natural butter or cheese, or any substance that is rendered, made, manufactured or compounded out of any animal or vegetable or mineral fat or oil, not produced from pure milk or the cream from pure milk, at retail or in quantities less than the original tub, firkin or other package, unless he shall first inform the purchaser that the substance is not natural butter or cheese, but is imitation butter or cheese, and at the time of sale and with each sale he shall give to the

purchaser a card or notice, printed on which shall be the name of the substance sold and the name and address of the seller or vendor, and nothing else shall be printed thereon unless it be the weight of the parcel; and said notice or card shall be at least six inches long and at least four inches wide, and the printing thereon shall be in letters at least of the size known as two-line English, and said notice or card shall be printed in black and in the English language, upon white paper, plainly and legibly, and shall be either upon the outside of the outer wrapper in which the substance is delivered to the purchaser or upon a separate card or paper attached thereto; in either case the notice shall be so placed that no part thereof shall be concealed from view.

5. That no person shall offer or expose for sale, or sell, or have in possession for the purposes of sale, any oleomargarine, butterine, suine, or any substance in imitation of natural butter or cheese, or any substance that is rendered, made, manufactured or compounded out of any animal or vegetable or mineral fat or oil, not produced from pure milk or cream from pure milk, that is colored, stained or mixed with annatto or any other coloring matter or substance.

6. That for the purposes of this act the terms "natural butter," or "natural butter or cheese," shall be taken to mean the product or products usually known by these names and which are made and manufactured exclusively from milk or cream, or both, with salt or salt and rennet, and with or without coloring matter or sage; and the terms "oleomargarine," "butterine," "suine" or "substance in imitation or semblance of natural butter or cheese," shall be to mean any substance that is rendered, made, manufactured or compounded out of any animal or vegetable or mineral oil or fat, not the product of pure milk or the cream from pure milk; also, any compound or mixture of natural butter or cheese, or milk or cream, with any of these substances not milk or cream.

7. That the possession by any person who is either manufacturer, merchant, broker, wholesale or retail dealer, or a hotel, inn, restaurant or boarding-house keeper, of any oleaginous substance, mixture or compound whatever as defined by this act, not natural butter, that is not contained in a tub, box, pail or vessel, plainly marked and branded in accordance with the provisions of section three of this act, shall be prima facie evidence of intent to sell the same.

8. That no person shall in any way or manner erase, cancel or obliterate, deface or cover over or remove either the band or stripe of paint, or the brands required by section three of this act to be placed on the tub, box, pail or vessel containing any oleaginous substance, mixture or compound, as defined by this act.

9. That every person who shall violate any of the provisions of this act shall be liable to a penalty of one hundred dollars for the first offense, and two hundred dollars for each second or subsequent offense.

10. That every district court in any city, and every justice of the peace in any county, and any recorder in any city, is hereby empowered, on oath or affirmation made according to law that any person or persons has or have violated any provision of this act, to issue process at the suit of the commissioner hereafter named as plaintiff, for the use of the State of New Jersey, either in the manner of a summons or a warrant against the person or persons so charged, which process shall, when in the nature of a warrant, be returnable forthwith, and when in the nature of a summons shall be returnable in not less than one or more than ten entire days; such

process shall state what provision of the law is alleged to have been violated by the defendant or defendants, and 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 or recorder shall proceed to hear testimony and to determine and give judgment in the matter, without the filing of any pleadings, for the plaintiff, for the recovery of such penalty, with costs, or for the defendant; and the said court, justice of the peace or recorder shall, if judgment be rendered for the plaintiff, forthwith issue execution against the goods and chattels and person of the defendant or defendants; and the said court, justice of the peace or recorder is further empowered to cause any such defendant who may refuse or neglect to pay the amount of the judgment rendered against him, and all the costs and charges incident thereto, unless an appeal is granted, to be committed to the county jail for any period not exceeding ninety days.

11. That the officers to serve and execute all process under this act shall be the officers authorized to serve and execute process in said courts, and before such magistrates and officers as aforesaid, including the constables of such counties and all police officers of such cities.

12. That said district court, justice of the peace or recorder shall have power to adjourn the hearing or trial in any case, from time to time, not exceeding thirty days from the return of the summons or warrant, and to bail the person so charged in such sum as he shall deem proper for his appearance at such time and place as said trial or hearing shall be adjourned to, and in default of bail, to commit the person so charged to the common jail of said county, to be there detained until the trial or hearing of said charge.

13. That either the complainant or defendant, upon paying all costs incurred and by filing with said district court, justice or recorder, within ten days after trial before him, a written notice of his or her intention to appeal from the decision of said court, justice or recorder, may appeal to the next court of general quarter sessions of the peace of the county in which said complaint may have been determined, and said court of general quarter sessions shall proceed and try the same and make such adjudications as are herein provided in case of such trial before said district court, justice or recorder.

14. That all penalties imposed under this act shall be, immediately on receipt, paid into the treasury of this state by the commissioner.

\* \* \* \* \*

16. That the said commissioner shall be authorized to expend for the purposes of this act an amount not exceeding ten thousand dollars in any one year, and all expenses shall be paid by the treasurer of this state on warrant of the comptroller, upon presentation of properly-certified accounts made by said commissioner, but such expenses shall not exceed in any one year the amount stated in this section.

17. That the said commissioner, and assistants, and clerks, and agents, as shall be duly commissioned so to do by the commissioner, shall have full and free access, ingress and egress to all places of business, factories, farms, buildings, hotels, restaurants, boarding-houses, carriages, cars, vessels and cans used in the manufacture and sale of any dairy products, or any imitation thereof; they shall also have the power to open any package, can or vessel containing such articles which may be manufactured, sold

or exposed for sale in violation of the provisions of this act, if they have reason to believe it is being violated, and may inspect the contents therein, and may take therefrom samples for analysis.

18. That this act and each section thereof is declared to be enacted to prevent deception in the sale of oleomargarine, butterine or any imitation of any dairy product, and to preserve the public health.

19. That an act entitled "An act for the protection of dairymen, and to prevent deception in sales of butter," approved February twenty-first, one thousand eight hundred and eighty-four, and an act entitled "An act to prohibit the manufacture and sale of impure and imitation dairy products," approved May fifth, one thousand eight hundred and eighty-four, and all acts and parts of acts inconsistent or in conflict with this act be and the same are hereby repealed.

Approved March 22, 1886.

#### CHAPTER 149 OF THE LAWS OF 1887.

1. That nothing in said act shall be so construed as to permit the sale, or the offering or exposing for sale, or the having in possession for the purposes of sale, of any oleomargarine or butterine, or any substance in imitation of natural butter, that is colored, stained or mixed with annatto or any other coloring matter or substance.

\* \* \* \* \*

5. That the conviction in prosecutions under the act to which this is a supplement shall be in the following or similar form:  
State of New Jersey, county of A., ss.

Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, at \_\_\_\_\_, in said county, C. D., defendant, was, by the district court of the city of J. (or by the recorder, or as the case is), convicted of violating the \_\_\_\_\_ section of "An act to prevent deception in the sale of oleomargarine, butterine or any imitation of dairy products, and to preserve the public health," approved March twenty-second, one thousand eight hundred and eighty-six, in a summary proceeding at the suit of A. B., state dairy commissioner, who sues for the use and benefit of the State of New Jersey, plaintiff, upon a complaint made by E. F.; and, further, that the witnesses in said proceeding who testified for the plaintiff were (name them), and the witnesses who testified for the defendant were (name them); wherefore the said court (or recorder, or as the case is) doth hereby give judgment that the plaintiff recover of the defendant one hundred dollars penalty, and \_\_\_\_\_ dollars costs of this proceeding.

The said conviction shall be signed by the judge of the district court, recorder or other magistrate before whom the conviction is had; in case of the infliction of a penalty of two hundred dollars the conviction shall contain a statement that it appeared that the defendant had been previously convicted of violating the said act; when an appeal is taken there shall be sent to the appellate court a copy of the complaint, summons, conviction or judgment and notice of appeal; the costs in prosecutions under the act to which this is a supplement shall be the same as costs in the district courts in actions on contract.

Approved April 21, 1887.

## CHAPTER 332 OF THE LAWS OF 1895.

1. That no person, by himself or his agents or servants, nor as an agent or servant, shall render or manufacture, sell, offer for sale, expose for sale or have in his possession with intent to sell, any article, product or compound made wholly or partly out of any fat, oil or oleaginous substance or compound thereof, not produced from unadulterated milk or cream from the same, which shall be artificially colored in imitation or semblance of yellow butter produced from pure, unadulterated milk or cream of the same; *provided*, that nothing in this act shall be construed to prohibit the manufacture or sale of oleomargarine in the manner regulated by the act to which this is a supplement, and in such manner as will advise the consumer of its real character, free from artificial color that cause it to look like butter.

2. That any person or persons who shall sell any article mentioned in the preceding section of this act representing the same as butter made from unadulterated milk or cream, or any product other than it really is, except in the manner provided in existing laws, shall be guilty of a misdemeanor, and upon conviction thereof be punished by imprisonment not exceeding six months or a penalty of two hundred dollars, in the discretion of the committing magistrate or court.

Approved April 25, 1895.

An Act to prohibit the sale of adulterated and skimmed milk in cities of this state.

Approved March 23, 1893.

1. That no milk which has been watered, adulterated, or changed in any respect by the addition of water, or other substance, or by removal of cream, or any part thereof, shall be kept or offered for sale in any city of the first class in this State.

2. That any person who shall violate any of the provisions of this act shall be liable to a penalty of fifty dollars for the first offense and one hundred dollars for a second or subsequent offense, and that such penalties shall be recovered upon like evidence, by like procedure, and in the same method now provided for the collection of fines and penalties, under the act entitled "An act to prevent the adulteration and to regulate the sale of milk," approved March fourteenth, one thousand eight hundred and eighty-two.

An Act to provide for the regulation and control of the slaughter of horses and the sale of horse flesh for food.

Approved March 24, 1899.

BE IT ENACTED by the Senate and General Assembly of the State of New Jersey:

1. Local boards of health shall have power to pass, alter and amend ordinances for the following purposes, in addition to the purposes now authorized by law:

I. To regulate and control the sale of horses for food, to provide for their inspection both before and after slaughter, and to provide for the

granting of permits to carry on the business of slaughtering horses for food;

II. To regulate and control the manner of constructing, repairing, furnishing and caring for houses and buildings used, or intended to be used, for the slaughter of horses in all matters relating to their sanitary condition, and to regulate and control the locating of such houses and buildings.

2. Any local board of health may prescribe a penalty, not exceeding one hundred dollars, for the violation of any ordinance or any section of any ordinance adopted under the authority of this act, which penalty shall be recoverable in the same manner as any penalty may be recovered for the violation of any ordinance adopted under the provisions of the act entitled "An act to establish in this state boards of health and a bureau of vital statistics, and to define their respective powers and duties," approved March thirty-first, eighteen hundred and eighty-seven, and the supplements thereto.

3. No person shall sell, or offer or expose for sale, or in anywise aid in selling, or offering or exposing for sale, any horse flesh unless every carcass, piece and parcel of horse flesh so sold, or offered or exposed for sale, shall have conspicuously attached thereto a label or tag not less than three inches wide and four inches long, on which shall be printed or stamped, in letters not less than one inch in height, the words "horse flesh;" and any person who shall violate any of the provisions of this section shall be liable to a penalty of one hundred dollars; every such penalty 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 inspector appointed by the state board of health, and of any member of any local board of health, and of any local health inspector, who shall know or be informed of any violation of any of the provisions of this act, to make, and any other person having such knowledge may make, under oath or affirmation, a complaint in writing against the person or persons, copartnership of persons or corporation incurring such penalty, setting forth the facts of such violation, which complaint may be on information and shall be filed with the clerk of any district court or with 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 city or other municipality within which any local board of health bringing suit shall have jurisdiction; and the clerk of the district court with whom any such complaint shall be filed, upon the order of the judge thereof, and the justice of the peace, police justice or recorder with whom any such complaint shall be filed, is hereby authorized and required to issue process in the nature of a summons when the complaint is on information, and in other cases 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 of witnesses and the proofs in the case, 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 forthwith issue against the goods and chattels and person of the defendant

or defendants 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 process or execution issued out of a district court, shall be made in the same manner and under the same liabilities as other processes and executions issued out of said courts 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 other processes and executions issued out of the courts for the trial of small causes; the costs recoverable in any case prosecuted in a district court shall be the same as in other cases prosecuted in said court, and in any case prosecuted before a justice of the peace, police justice or recorder they shall be the same as are allowed in cases prosecuted in the courts for the trial of small causes; the penalty recovered in any such action 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.

4. The judge of the district court, justice of the peace, police justice or recorder before whom any case is prosecuted under the next preceding section of this act may adjourn the hearing thereof from time to time, not exceeding thirty days from the return day of the summons or warrant, and in any case where a warrant shall have been issued may require the defendant or defendants to enter into a bond with sufficient surety to the plaintiff in the penal sum of two hundred dollars, conditioned to appear at the time and place of the hearing or trial, and in default of such bond may commit the defendant or defendants to the common jail of the county, to be there detained until the hearing or trial of the complaint; and if the defendant or defendants shall fail to appear at the time and place to which the hearing or trial shall be so adjourned, the bond shall be delivered to the plaintiff, who may sue thereon and apply the moneys recovered in such suit to any purpose for which it may be legally authorized to expend money.

5. The conviction in prosecutions under the next preceding section of this act shall be in the following or similar form:

"State of New Jersey, county of \_\_\_\_\_, ss.—Be it remembered that on this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 18—, at \_\_\_\_\_, in said county, C. D., defendant, was, by the district court of the city of T. (or by me, E. F., justice of the peace, police justice or recorder of the city of \_\_\_\_\_, or as the case may be), convicted of violating the \_\_\_\_\_ section of 'An act to provide for the regulation and control of the slaughter of horses and the sale of horse flesh for food,' approved \_\_\_\_\_, 1899, in a summary proceeding at the suit of the local board of health of the township of A. (or as the case may be); and further, that the witnesses in said proceeding who testified for the plaintiff were (name them), and the witnesses who testified for the defendant were (name them); therefore, the said court (or justice of the peace, police justice or recorder, as the case may be) doth hereby give judgment that the plaintiff recover of the defendant one hundred dollars penalty and \_\_\_\_\_ dollars costs of this proceeding."

The said conviction shall be signed by the judge of the district court, justice of the peace, police justice or recorder before whom the conviction is had.

6. This act shall take effect immediately.

## FOOD STANDARDS.

Established Under Authority Contained in the Act of the Legislature of New Jersey Approved April 4th, 1902.

### ANIMAL PRODUCTS.

#### MEATS.

1. *Meat* is any sound, dressed and properly prepared edible part of animals in good health at the time of slaughter. The term "animals," as herein used, includes not only mammals, but fish, fowl, crustaceans, mollusks, and all other animals used as food.

2. *Fresh meat* is meat from animals recently slaughtered or preserved only by refrigeration.

3. *Salted, pickled, and smoked meats* are unmixed meats preserved by salt, sugar, vinegar, spices or smoke, singly or in combination, whether in bulk or in packages.

#### MANUFACTURED MEATS.

1. *Manufactured meats* are meats not included in paragraphs 2 and 3, whether simple or mixed, whole or comminuted, in bulk or packages, with or without the addition of salt, sugar, vinegar, spices, smoke, oils or rendered fat. If they bear names descriptive of composition they correspond thereto, and when bearing such descriptive names, if force or flavoring meats are used, the kind and quantity thereof are made known.

#### LARD.

1. *Lard* is the rendered fresh fat from slaughtered, healthy hogs, is free from rancidity, and contains not more than one (1) per cent. of substances, other than fatty acids, not fat, necessarily incorporated therewith in the process of rendering.

2. *Leaf lard* is lard rendered at moderately high temperatures from the internal fat of the abdomen of the hog, excluding that adherent to the intestines, and has an iodine number not greater than sixty (60).

3. *Neutral lard* is lard rendered at low temperatures.

#### MILK AND ITS PRODUCTS.

1. *Milk (whole milk)* is the lacteal secretion obtained by the complete milking of one or more healthy cows, properly fed and kept, excluding that obtained within fifteen days before and five days after calving, and contains not less than twelve (12) per cent. of total solids, not less than eight and one-half (8.5) per cent. of solids not fat, and not less than three and one-quarter (3.25) per cent. of milk fat.

2. *Skim milk* is milk from which a part or all of the cream has been removed, and contains not less than nine and one-quarter (9.25) per cent. of milk solids.

3. *Buttermilk* is the product that remains when butter is removed from milk or cream in the process of churning.

4. *Pasteurized milk* is milk that has been heated below boiling, but sufficiently to kill most of the active organisms present, and immediately cooled to fifty degrees (50°) Fahr. or lower to retard the development of their spores.

5. *Sterilized milk* is milk that has been heated at the temperature of boiling water or higher for a length of time sufficient to kill all organisms present.

6. *Condensed milk* is milk from which a considerable portion of water has been evaporated and contains not less than twenty-eight (28) per cent. of milk solids, of which not less than one-fourth is milk fat.

7. *Sweetened condensed milk* is milk from which a considerable portion of water has been evaporated and to which sugar (sucrose) has been added, and contains not less than twenty-eight (28) per cent. of milk solids, of which not less than one-fourth is milk fat.

8. *Condensed skim milk* is skim milk from which a considerable portion of water has been evaporated.

## MILK FAT OR BUTTER FAT.

1. *Milk fat or butter fat* is the fat of milk and has a Reichert-Meißl number not less than twenty-four (24) and a specific gravity not less than

$$0.905 \begin{pmatrix} 40^{\circ} \text{ C} \\ 40^{\circ} \text{ C} \end{pmatrix}$$

## CREAM.

1. *Cream* is that portion of milk, rich in butter fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, and contains not less than sixteen (16) per cent. of milk fat.

2. *Evaporated cream* is cream from which a considerable portion of water has been evaporated.

## BUTTER.

1. *Butter* is the product made by gathering in any manner the fat or fresh or ripened milk or cream into a mass, which also contains a small portion of the other milk constituents, with or without salt, and contains not less than eighty-two and five-tenths (82.5) per cent. of butter fat.

2. *Renovated or process butter* is the product made by melting butter and reworking, without the addition or use of chemicals or any substances except milk, cream or salt, and contains not more than sixteen (16) per cent. of water and at least eighty-two and five-tenths (82.5) per cent. of butter fat.

## CHEESE.

1. *Cheese* is the solid and ripened product made by coagulating the casein of milk by means of rennet or acids, with or without the addition of ripening ferments and seasoning.

2. *Whole milk or full cream cheese* is cheese made from milk from which no portion of the fat has been removed and contains, in the water-free substance, not less than fifty (50) per cent. of butter fat.

3. *Skim-milk cheese* is cheese made from milk from which any portion of the fat has been removed.

4. *Cream cheese* is cheese made from milk and cream, or milk containing not less than six (6) per cent. of fat.

## MISCELLANEOUS MILK PRODUCTS.

1. *Whey* is the product remaining after the removal of fat and casein from milk in the process of cheese-making.

2. *Kumiss* is the product made by the alcoholic fermentation of mare's or cow's milk, with or without the addition of sugar (sucrose).

## VEGETABLE PRODUCTS.

## GRAINS AND MEALS.

1. *Grain* is the fully matured, clean, sound, air-dry seed of wheat, maize, rice, oats, rye, buckwheat, barley, sorghum, millet, or spelt.

2. *Meal* is the sound product made by grinding grain.

3. *Flour* is the fine, sound product made by bolting wheat meal and contains not more than thirteen and one-half (13.5) per cent. of moisture, not less than one and twenty-five hundredths (1.25) per cent. of nitrogen, not more than one (1.0) per cent. of ash, and not more than fifty hundredths (0.50) per cent. of fiber.

4. *Graham flour* is unbolted wheat meal.

5. "*Whole wheat flour*," "*entire wheat flour*," improperly so called, is fine wheat meal from which a part of the bran has been removed.

6. *Gluten flour* is the product made from flour by the removal of starch and contains not less than five and six-tenths (5.6) per cent. of nitrogen and not more than ten (10) per cent. of moisture.

7. *Maize meal, corn meal, or Indian corn meal* is meal made from sound maize grain and contains not more than fourteen (14) per cent. of moisture, not less than one and twelve hundredths (1.12) per cent. of nitrogen, and not more than one and six-tenths (1.6) per cent. of ash.

8. *Rice* is the hulled and polished grain of *Oryza sativa*.

9. *Oatmeal* is meal made from hulled oats and contains not more than eight (8) per cent. of moisture, not more than one and five-tenths (1.5) per cent. of crude fiber, not less than two and twenty-four hundredths (2.24) per cent. of nitrogen, and not more than two and two-tenths (2.2) per cent. of ash.

10. *Rye, flour* is the fine sound product made by bolting rye meal and contains not more than thirteen and one-half (13.5) per cent. of moisture, not less than one and thirty-six hundredths (1.36) per cent. of nitrogen, and not more than one and twenty-five hundredths (1.25) per cent. of ash.

11. *Buckwheat flour* is bolted buckwheat meal and contains not more than twelve (12) per cent. of moisture, not less than one and twenty-eight hundredths (1.28) per cent. of nitrogen, and not more than one and seventy-five hundredths (1.75) per cent. of ash.

## SUGARS AND RELATED SUBSTANCES.

1. *Sugar* is the product chemically known as sucrose (saccharose) chiefly obtained from sugar cane, sugar beets, sorghum, maple, or palm.

2. *Granulated, loaf, cut, milled, and powdered sugars* are different forms of sugar and contain at least ninety-nine and five-tenths (99.5) per cent. of sucrose.

3. *Maple sugar* is the solid product resulting from the evaporation of maple sap.

4. *Masseuite, melada, mush sugar, and concrete* are products made by evaporating the purified juice of a sugar-producing plant, or a solution of sugar, to a solid or semi-solid consistence in which the sugar chiefly exists in a crystalline state.

## MOLASSES AND REFINERS' SIRUP.

1. *Molasses* is the product left after separating the sugar from masseuite, melada, mush sugar, or concrete, and contains not more than twenty-five (25) per cent. of water and not more than five (5) per cent. of ash.

2. *Refiners' sirup* ("treacle") is the residual liquid product obtained in the process of refining raw sugars and contains not more than twenty-five (25) per cent. of water and not more than eight (8) per cent. of ash.

## SIRUP.

1. *Sirup* is the product made by purifying and evaporating the juice of a sugar-producing plant without removing any of the sugar and contains not more than thirty (30) per cent. of water and not more than two and five-tenths (2.5) per cent. of ash.

2. *Sugar-cane sirup* is sirup made by the evaporation of the juice of the sugar cane or by the solution of sugar-cane concrete.

3. *Sorghum sirup* is sirup made by the evaporation of sorghum juice or by the solution of sorghum concrete.

4. *Maple sirup* is sirup made by the evaporation of maple sap or by the solution of maple concrete.

5. *Sugar sirup* is sirup made by dissolving sugar to the consistence of a sirup.

## GLUCOSE PRODUCTS.

1. *Starch sugar* is the solid product made by hydrolyzing starch or a starch-containing substance until the greater part of the starch is converted into dextrose. Starch sugar appears in commerce in two forms, anhydrous and hydrous. The former, crystallized without water of crystallization, contains not less than ninety-five (95) per cent. of dextrose and not more than eight-tenths (0.8) per cent. of ash. The latter, crystallized with water of crystallization, is of two varieties—70 sugar, also known as brewers' sugar, contains not less than seventy (70) per cent. of dextrose and not more than eight-tenths (0.8) per cent. of ash; 80 sugar, climax or acme sugar, contains not less than eighty (80) per cent. of dextrose and not more than one and one-half (1.5) per cent. of ash.

The ash of all these products consists almost entirely of chlorids and sulphates.

2. *Glucose, mizing glucose, or confectioner's glucose* is a thick, sirupy, colorless product made by incompletely hydrolyzing starch, or a starch-containing substance, and decolorizing and evaporating the product. It varies in density from forty-one (41) to forty-five (45) degrees Baumé at a temperature of one hundred (100) degrees F. (37.7° C.), and conforms in density, within these limits, to the degree Baumé it is claimed to show, and for a density of forty-one (41) degrees Baumé contains not more than twenty-one (21) per cent. and for a density of forty-five (45) degrees not more than fourteen (14) per cent. of water. It contains on a basis of forty-one (41) degrees Baumé not more than one (1) per cent. of ash, consisting chiefly of chlorids and sulphates.

3. *Glucose sirup or corn sirup* is glucose unmixed or mixed with sirup, molasses, or refiners' sirup and contains not more than twenty-five (25) per cent. of water and not more than three (3) per cent. of ash.

## CANDY.

1. *Candy* is a product made from a saccharine substance or substances with or without the addition of harmless coloring, flavoring, or filling materials, and contains no terra alba, barytes, talc, chrome yellow, or other mineral substances, or poisonous colors or flavors, or other ingredients injurious to health.

## HONEY.

1. *Honey* is the nectar and saccharine exudations of plants gathered, modified and stored in the comb by honey bees (*Apis mellifica*). It is lævo-rotatory, contains not more than twenty-five (25) per cent. of water, not more than twenty-five hundredths (0.25) per cent. of ash, and not more than eight (8) per cent. of sucrose.

2. *Comb honey* is honey contained in the cells of comb.

3. *Extracted honey* is honey which has been separated from the uncrushed comb by centrifugal force or gravity.

4. *Strained honey* is honey removed from the crushed comb by straining or other means.

## CONDIMENTS (EXCEPT VINEGAR).

## SPICES.

1. *Spices* are aromatic vegetable substances used for the seasoning of food and from which no portion of any volatile oil or other flavoring principle has been removed, and which are sound and true to name.

2. *Allspice or pimento* is the dried fruit of *Pimenta pimenta* (L.) Karst. and contains not less than eight (8) per cent. of quercitannic acid; <sup>1</sup> not more than six (6) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than twenty-five (25) per cent. of crude fiber.

<sup>1</sup> Calculated from the total oxygen absorbed by the aqueous extract.



3. *Anise* is the fruit of *Pimpinella anisum* L.
4. *Bay leaf* is the dried leaf of *Laurus nobilis* L.
5. *Capers* are the flower buds of *Capparis spinosa* L.
6. *Caraway* is the fruit of *Carum carvi* L.

## CAYENNE AND RED PEPPERS.

7. *Red pepper* is the red, dried ripe fruit of any species of *Capsicum*.
8. *Cayenne pepper* or *cayenne* is the dried ripe fruit of *Capsicum frutescens* L., *Capsicum baccatum* L., or some other small-fruited species of *Capsicum*, and contains not less than fifteen (15) per cent. of non-volatile ether extract; not more than six and five-tenths (6.5) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid; not more than one and five-tenths (1.5) per cent. of starch, and not more than twenty-eight (28) per cent. of crude fiber.
9. *Celery seed* is the dried fruit of *Apium graveolens* L.
10. *Cinnamon* is the dried bark of any species of the genus *Cinnamomum* from which the outer layers may or may not have been removed.
11. *True cinnamon* is the dried inner bark of *Cinnamomum zeylanicum* Breyn.
12. *Cassia* is the dried bark of various species of *Cinnamomum*, other than *Cinnamomum zeylanicum*, from which the outer layers may or may not have been removed.
13. *Cassia buds* are the dried immature fruit of species of *Cinnamomum*.
14. *Ground cinnamon* or *ground cassia* is a powder consisting of cinnamon, cassia, or cassia buds, or a mixture of these spices, and contains not more than eight (8) per cent. of total ash and not more than two (2) per cent. of sand.
15. *Cloves* are the dried flower buds of *Caryophyllus aromaticus* L. which contain not more than five (5) per cent. of clove stems; not less than ten (10) per cent. of volatile ether extract; not less than twelve (12) per cent. of quercitanic acid;<sup>1</sup> not more than eight (8) per cent. of total ash; not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.
16. *Coriander* is the dried fruit of *Coriandrum sativum* L.
17. *Cumin seed* is the fruit of *Cuminum cyminum* L.
18. *Dill seed* is the fruit of *Anethum graveolens* L.
19. *Fennel* is the fruit of *Feniculum feniculum* (L.) Karst.
20. *Ginger* is the washed and dried or decorticated and dried rhizome of *Zingiber zingiber* (L.) Karst. and contains not less than forty-two (42) per cent. of starch, not more than eight (8) per cent. of crude fiber, not more than eight (8) per cent. of total ash, not more than one (1) per cent. of lime, and not more than three (3) per cent. of ash insoluble in hydrochloric acid.
21. *Limed* or *bleached ginger* is whole ginger coated with carbonate of lime and contains not more than ten (10) per cent. of ash, not more than four (4) per cent. of carbonate of lime, and conforms in other respects to the standard for ginger.
22. *Horse-radish* is the root of *Roripa armoracia* (L.) Hitchcock either by itself or ground and mixed with vinegar.

23. *Mace* is the dried arillus of *Myristica fragrans* Houttuyn and contains not less than twenty (20) nor more than thirty (30) per cent. of non-volatile ether extract, not more than three (3) per cent. of total ash, not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.

24. *Macassar* or *Papua mace* is the dried arillus of *Myristica argentea* Warb.

25. *Bombay mace* is the dried arillus of *Myristica malabrica* Lamarck.

26. *Marjoram* is the leaf, flower and branch of *Majorana majorana* (L.) Karst.

27. *Mustard seed* is the seed of *Sinapis alba* L. (white mustard), *Brassica nigra* (L.) Koch (black mustard), or *Brassica juncea* (L.) Cosson (black or brown mustard).

28. *Ground mustard* is a powder made from mustard seed, with or without the removal of the hulls and a portion of the fixed oil, and contains not more than two and five-tenths (2.5) per cent. of starch and not more than eight (8) per cent. of total ash.

29. *Nutmeg* is the dried seed of *Myristica fragrans* Houttuyn deprived of its testa, with or without a thin coating of lime, and contains not less than twenty-five (25) per cent. of non-volatile ether extract, not more than five (5) per cent. of total ash, not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than ten (10) per cent. of crude fiber.

30. *Macassar, Papua, male, or long nutmeg* is the dried seed of *Myristica argentea* Warb. deprived of its testa.

31. *Paprika* is the dried fruit of *Capsicum annuum* L., or some other large-fruited species of *Capsicum*.

32. *Black pepper* is the dried immature berry of *Piper nigrum* L. and contains not less than six (6) per cent. of non-volatile ether extract, not less than twenty-five (25) per cent. of starch, not more than seven (7) per cent. of total ash, not more than two (2) per cent. of ash insoluble in hydrochloric acid, and not more than fifteen (15) per cent. of crude fiber. One hundred parts of the non-volatile ether extract contain not less than three and one-quarter (3.25) parts of nitrogen. *Ground black pepper* is the product made by grinding the entire berry and contains the several parts of the berry in their normal proportions.

33. *Long pepper* is the dried fruit of *Piper longum* L.

34. *White pepper* is the dried mature berry of *Piper nigrum* L. from which the outer coating or the outer and inner coatings have been removed and contains not less than six (6) per cent. of non-volatile ether extract, not less than fifty (50) per cent. of starch, not more than four (4) per cent. of total ash, not more than five-tenths (0.5) per cent. of ash insoluble in hydrochloric acid, and not more than five (5) per cent. of crude fiber. One hundred parts of the non-volatile ether extract contain not less than four (4) parts of nitrogen.

35. *Saffron* is the dried stigma of *Crocus sativus* L.

36. *Sage* is the leaf of *Salvia officinalis* L.

37. *Savory* or *summer savory* is the leaf, blossom and branch of *Satureja hortensis* L.

38. *Thyme* is the leaf and tip of blooming branches of *Thymus vulgaris* L.

<sup>1</sup> Calculated from the total oxygen absorbed by the aqueous extract.

## BEVERAGES.

## COCOA AND COCOA PRODUCTS.

1. *Cocoa beans* are the seeds of the cacao tree, *Theobroma cacao* L.
2. *Cocoa nibs*, or *cracked cocoa* is the roasted, broken cocoa bean freed from its shell or husk.
3. *Chocolate*, *plain* or *bitter*, or *chocolate liquor*, is the solid or plastic mass obtained by grinding cocoa nibs without the removal of fat or other constituents except the germ, and contains not more than three (3) per cent. of ash insoluble in water, three and fifty hundredths (3.50) per cent. of crude fiber, and nine (9) per cent. of starch, and not less than forty-five (45) per cent. of cocoa fat.
4. *Sweet chocolate* and *chocolate coatings* are plain chocolate mixed with sugar (sucrose), with or without the addition of cocoa butter, spices, or other flavoring materials, and contain in the sugar and fat-free residue no higher percentage of either ash, fiber or starch than is found in the sugar and fat-free residue of plain chocolate.
5. *Cocoa* or *powdered cocoa* is cocoa nibs, with or without the germ, deprived of a portion of its fat and finely pulverized, and contains percentages of ash, crude fiber and starch corresponding to those in chocolate after correction for fat removed.
6. *Sweet* or *sweetened cocoa* is cocoa mixed with sugar (sucrose), and contains not more than sixty (60) per cent. of sugar (sucrose), and in the sugar and fat-free residue no higher percentage of either ash, crude fiber or starch than is found in the sugar and fat-free residue of plain chocolate.

## FRUIT JUICES.

1. *Wine* is the product made by the normal alcoholic fermentation of the juice of sound, ripe grapes, and the usual cellar treatment, and contains not less than seven (7) nor more than sixteen (16) per cent. of alcohol, by volume, and, in one hundred (100) cubic centimeters, not more than one-tenth (0.1) gram of sodium chlorid nor more than two-tenths (0.2) gram of potassium sulphate; and for red wine not more than fourteen hundredths (0.14) gram, and for white wine not more than twelve hundredths (0.12) gram of volatile acids derived from fermentation and calculated as acetic acid. *Red wine* is wine containing the red coloring matter of the skins of grapes. *White wine* is wine made from white grapes or the expressed fresh juice of other grapes.
2. *Dry wine* is wine in which the fermentation of the sugars is practically complete and which contains, in one hundred (100) cubic centimeters, less than one (1) gram of sugars and for dry red wine not less than sixteen hundredths (0.16) gram of grape ash, and not less than one and six-tenths (1.6) grams of grape solids, and for dry white wine not less than thirteen hundredths (0.13) gram of grape ash and not less than one and four-tenths (1.4) grams of grape solids.
3. *Fortified dry wine* is dry wine to which brandy has been added, but which conforms in all other particulars to the standard of dry wine.
4. *Sweet wine* is wine in which the alcoholic fermentation has been arrested, and which contains, in one hundred (100) cubic centimeters, not less than one (1) gram of sugars, and for sweet red wine not less than

sixteen hundredths (0.16) gram of grape ash, and for sweet white wine not less than thirteen hundredths (0.13) gram of grape ash.

5. *Fortified sweet wine* is sweet wine to which wine spirits have been added.

6. *Sparkling wine* is wine in which the after part of the fermentation is completed in the bottle, the sediment being disgorged and its place supplied by wine or sugar liquor, and which contains, in one hundred (100) cubic centimeters, not less than twelve hundredths (0.12) gram of grape ash.

7. *Sugar wine* is the product made by the addition of sugar to the juice of sound ripe grapes and subsequent alcoholic fermentation with the usual cellar treatment.

8. *Raisin wine* is the product made by the alcoholic fermentation of an infusion of dried or evaporated grapes, or of a mixture of such infusion or raisins with grape juice.

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REPORT  
OF THE  
Bureau of Vital Statistics  
OF THE  
STATE OF NEW JERSEY  
FOR THE  
Year Ending December 31st, 1904.

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BERGEN COUNTY.

Table 38.—Births, Marriages and Deaths, by Counties, Cities, Boroughs and Townships, and Totals for the State, for the Year Ending December 31st, 1904, and Showing Increase and Decrease from Previous Year.

ATLANTIC COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Absecon.....	9		8	3	11	5
Atlantic City.....	575	36	388	29	523	19
Buena Vista.....	59	1	27	10	81	10
Brigantine.....	1	1				3
Egg Harbor City.....	89	7	24	4	45	14
Egg Harbor.....	38	5	11	4	49	2
Galloway.....	26	14	6	5	20	14
Hamilton.....	42	3	11	2	29	
Hammonon.....	1	88		40	2	68
Linwood.....	7	7	12	8	12	5
Mullica.....	10	12	4	1		5
Pleasantville.....	61	2	20	4	46	29
Somers Point.....	5	5	4	3	5	1
South Atlantic City.....	1				1	1
Ventnor.....	1	1				
Weymouth.....	17	2	4		9	
	902	58	126	518	60	46
					801	77
						91

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Allendale.....	7		2		8	1
Alpine Borough.....	7	7	2		4	1
Bergen Township.....					1	1
Bergenfield.....		3	5	2	7	3
Bogota.....	10		2		10	7
Castatd.....	67	5	23	2	37	3
Cliffside Park.....	31	3	4		21	4
Closter Borough.....	2	9	7	2	2	6
Cresskill.....	2		3		6	1
Delford.....	26	3	3		16	12
Demarest Borough.....	11	11	1		1	1
Dumont.....	13	3	4	1	10	6
East Rutherford.....	44	12	22	11	37	12
Edgewater.....	22	8	3	2	17	2
Englewood City.....	118	4	55	10	130	77
Englewood Cliffs.....		4	1		5	3
Ema.....	14	2	1		11	6
Fairview.....	49	4	1		14	
Fort Lee.....	29	29	17	7	26	26
Franklin.....	25	19	15	10	19	5
Garfield.....	169	2	50	12	61	33
Glen Rock.....	15				15	5
Hackensack City.....	245	39	129	25	154	22
Harrington.....	24	23	5		6	24
Harrington Park Borough.....	2	2			5	5
Hasbrouck Heights.....	85	18	5	1	14	2
Haworth Borough.....	2		3	2	1	1
Hillsdale.....	10		3	2	17	8
Hobokus.....	28	10	16	2	43	3
Leonia.....	14	1	2	3	8	3
Little Ferry.....	46	2	3	3	15	2
Lodi Borough.....	5	19	17	8	26	19
Lodi Township.....	84	15		4	15	10
Maywood.....	13			1	15	10
Midland.....	19	2	5		45	5
Midland Park.....	32	1	13	10	19	3
Montvale.....	7	1	3	3	8	3
North Arlington.....		2			3	2
Oakland.....	11	1	3	4	6	2
Old Tappan.....	3	1	7		1	4
Orvil.....	6			1	12	
Overpeck.....	39	15	12	5	27	7
Palisade.....	22	2	4		16	4
Palisade Park.....	16	2	1		17	7
Park Ridge.....	27	10	8	1	18	2
Ridgefield Borough.....	3	5	3		5	7
Ridgefield Township.....	3	50	3	15	25	27
Ridgewood.....	73	1	20	7	88	8
Riverside.....	11	5	5		7	7
Rutherford.....	81	16	24	2	50	21
Saddle River Borough.....	14	9	3		5	1
Saddle River Township.....	40	2	5	2	30	8
Teaneck.....	11	5	3	1	17	6
Tenafly.....	37	6	9	1	25	5
Undercliff Borough.....			5	2	1	1
Union.....	23	14	5	5	26	4
Upper Saddle Borough.....	2	2	1		1	1
Wallington.....		3			1	
Washington.....	6	2		1	4	
Westwood.....	15		6	1	11	5
Woodcliff.....	3		1		8	6
Wood Ridge.....	19	10			10	2
			*1			
	1686	262	195	539	133	63
					1228	279
						176

BURLINGTON COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Bass River.....	12	3	4	4	10	4
Beverly City.....	23	5	17	7	78	7
Beverly Township.....	30	11	18	4	81	4
Bordentown City.....	48	3	45	5	81	4
Bordentown Township.....	4	2	2	4	4	2
Burlington City.....	114	83	93	165	7	1
Burlington Township.....	4	3	1	7	1	1
Chester.....	83	3	37	7	65	9
Chesterfield.....	14	1	5	4	11	2
Cinnaminson.....	26	9	5	1	12	4
Delran.....	22	5	4	1	15	4
Eastampton.....	4	1	1	4	2	2
Evesham.....	24	4	9	2	17	2
Fieldsboro.....	9	9	6	5	8	8
Florence.....	40	8	11	2	30	3
Lumberton.....	16	2	3	3	32	15
Mansfield.....	9	2	14	7	21	7
Medford.....	31	7	21	2	24	10
Mount Laurel.....	42	4	1	6	26	8
New Hanover.....	22	3	9	22	22	6
Northampton.....	64	41	51	15	132	18
Palmyra.....	62	9	24	38	38	3
Pemberton Borough.....	10	4	21	14	4	3
Pemberton Township.....	8	4	5	1	49	7
Riverside.....	70	13	16	1	89	1
Riverton Borough.....	35	6	5	7	16	1
Shamong.....	8	1	1	7	7	4
Southampton.....	6	2	1	1	16	6
Springfield.....	6	1	2	2	6	6
Tabernacle.....	3	4	1	1	1	4
Washington.....	3	2	3	1	4	3
Westampton.....	2	2	2	1	3	6
Willingboro.....	2	7	8	1	1	1
Woodland.....	2	2	2	1	3	3
	859	93	114	446	40	44
					973	106
						55

CAMDEN COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Camden City.....	1406	41	202	1547	266	8
Centre.....	58	22	6	41	2	2
Chestlhurst.....	2	7	2	84	19	4
Clementon.....	45	16	9	24	5	2
Collingswood.....	37	3	24	23	1	2
Delaware.....	24	10	24	23	1	2
Gloucester City.....	160	17	66	22	127	7
Gloucester Township.....	32	8	14	5	79	10
Haddon.....	36	19	8	10	15	4
Haddonfield.....	55	19	28	1	23	4
Haddon Heights Borough.....	3	3	2	27	3	3
Merchantville Borough.....	31	11	40	12	88	6
Pensauken.....	31	3	9	1	31	6
Stockton Township.....	12	7	1	29	7	2
Voorhees.....	63	13	14	1	21	6
Waterford.....	29	6	4	4	31	7
Winslow.....	68	1	4	3	1	2
Wood Lynne Borough.....	3	1	5	3	1	2
	2034	129	71	2209	224	59
				224	50	2064
					287	59

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

CAPE MAY COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Anglesea Borough.....	6	4	2	4	4	4
Avalon.....	17	7	6	15	4	2
Cape May City.....	48	9	27	4	49	12
Cape May Point.....	2	6	5	4	2	2
Dennis.....	21	7	3	23	12	12
Holly Beach Borough.....	14	8	13	11	8	8
Lower.....	45	13	16	3	40	6
Middle.....	27	1	10	1	30	5
Ocean City.....	4	1	1	11	11	11
Sea Isle City.....	14	1	6	8	14	1
Upper.....	16	8	2	7	7	1
West Cape May.....	7	1	1	4	8	2
Wildwood.....	47	3	6	5	5	6
Woodbine.....	266	47	32	15	31	57
					215	19

CUMBERLAND COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Bridgeton.....	244	34	105	11	38	5
Commercial.....	48	8	17	4	27	5
Deerfield.....	48	22	20	6	43	15
Downs.....	19	4	11	2	23	6
Fairfield.....	32	11	7	4	17	2
Greenwich.....	20	15	6	1	20	5
Hopewell.....	23	5	11	4	45	5
Laudis.....	80	9	10	1	72	4
Lawrence.....	21	1	13	5	36	19
Maurice River.....	35	1	14	1	12	3
Millville City.....	254	40	122	22	178	26
Stow Creek.....	17	7	3	1	14	4
Vineland.....	108	1	91	5	68	16
<b>Total</b> .....	<b>937</b>	<b>122</b>	<b>423</b>	<b>45</b>	<b>795</b>	<b>117</b>

ESSEX COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Belleville.....	109	3	82	18	116	5
Bloomfield City.....	203	21	80	15	160	41
Caldwell Borough.....	18	3	7	3	35	15
Caldwell Township.....	3	6	2	4	9	5
Clinton.....	1	18	1	7	72	18
East Orange City.....	434	43	147	21	29	62
Essex Falls.....	7	7	2	1	7	5
Glen Ridge.....	26	7	9	4	24	10
Irrington.....	123	15	57	3	7	13
Livingston.....	3	18	3	1	45	7
Millburn.....	51	10	8	3	45	7
Montclair City.....	821	13	118	45	319	48
Newark City.....	6793	708	2712	381	5801	400
North Caldwell Borough.....	1	11	2	2	2	2
Nutley Borough.....	76	25	1	2	42	2
Orange City.....	735	44	183	27	551	26
South Orange Borough.....	95	26	50	7	43	15
South Orange Township.....	19	10	8	6	25	7
Vailsburg.....	53	13	15	4	40	4
Verona.....	25	3	15	11	47	13
West Caldwell Borough.....	6	6	3	4	4	4
West Orange City.....	173	50	19	5	85	6
<b>Total</b> .....	<b>9292</b>	<b>942</b>	<b>3489</b>	<b>477</b>	<b>82</b>	<b>647</b>

GLOUCESTER COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Clayton.....	48	6	18	10	27	8
Deptford.....	26	6	6	2	40	21
East Greenwich.....	20	5	12	7	28	28
Elk.....	9	3	2	2	13	10
Franklin.....	56	6	13	7	85	6
Glassboro.....	53	1	32	7	85	6
Greenwich.....	23	19	7	2	14	10
Harrison.....	15	2	10	1	25	9
Logan.....	29	13	3	1	13	4
Mantua.....	41	11	22	5	54	8
Monroe.....	1	4	8	12	37	7
National Park Borough.....	1	1	9	9	20	20
South Harrison.....	23	2	4	4	23	10
Swedesboro.....	25	9	15	2	19	10
Washington.....	12	4	1	1	19	10
Wenonah.....	10	5	11	3	5	2
West Deptford.....	39	6	11	3	24	4
Woodbury.....	78	28	55	17	71	8
Woolwich.....	17	8	2	1	17	8
<b>Total</b> .....	<b>570</b>	<b>111</b>	<b>45</b>	<b>34</b>	<b>482</b>	<b>124</b>

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

HUDSON COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Bayonne.....	1840	112	256	15	714	35
East Newark.....	83	4	14	4	60	6
Giitlenburg.....	146	25	24	7	89	27
Harrison.....	226	26	85	10	196	14
Hoboken.....	1846	13	823	18	1420	569
Jersey City.....	4192	461	2243	175	4699	250
Kenary.....	233	6	85	7	266	58
Secaucus.....	253	21	48	1	176	47
Secaucus.....	35	16	2	2	239	34
Town of Union.....	368	4	37	20	42	36
Weehawken.....	122	19	259	46	890	78
West Hoboken.....	749	137	48	10	85	20
West New York.....	197	45	48	10	85	20
<b>Total</b> .....	<b>9762</b>	<b>829</b>	<b>79</b>	<b>287</b>	<b>8738</b>	<b>1278</b>

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

## HUNTERDON COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.			
	Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.	
Alexandria.....	12		4	2		3	12		7	
Bethlehem.....	29	3		10		1	30		2	
Clinton Borough.....	7	6		11	2		12	2		
Clinton Township.....	32	11		6	6		33	12		
Delaware.....	16		6	17	4		19		4	
East Amwell.....	12		4	7	8		19	6		
Franklin.....	12		10	11			10		10	
Frenchtown.....	13	2		11			19	2		
High Bridge.....	34	3		13	6		18		1	
Holland.....	10		9	4	1		17		9	
Junction.....	13		4	8			8		1	
Kingwood.....	24	1		4	3		17		2	
Lambertville.....	97		56	16			68	8		
Lebanon.....	29	5		8	10	30	5		5	
Raritan.....	45	20		33	6		59		6	
Readington.....	28	13		2	1		41		2	
Stockton.....	6		1	3	2		15	3		
Tewksbury.....	36		6	17	1	21	1		10	
Union.....	16	4		2	1		11		7	
West Amwell.....	7		7	1	1		7		5	
	478	48	57	*1	283	89	34	465	40	57

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

## MERCER COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.			
	Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.	
East Windsor.....	6		10			4	15		2	
Ewing.....	10		10			2	11		8	
Hamilton.....	26		8				61		14	
Hightstown.....	50	10		28	10		22		5	
Hopewell Borough.....	6		22	18	1		13	2		
Hopewell Township.....	23	16		3		14	23		6	
Lawrence.....	17	8		2		3	10		3	
Pennington Borough.....	59		12	6			13		1	
Princeton Borough.....	59		15	31	8		74	8		
Princeton Township.....	16	5			3		12	1		
Trenton.....	1017	94		858	78		1482	77		
Washington.....	7		1		2		13	5		
West Windsor.....	10		4		2		8		7	
	1215	183	69	*2	981	111	29	1757	115	80

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

## MIDDLESEX COUNTY.

NAME OF PLACE.	BIRTHS.			MARRIAGES.			DEATHS.		
	Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Cranbury.....	19			18	5		23	4	
Dunellen.....	23		9	6		16	25		3
East Brunswick.....	26	14		6		4	18		4
Helmetta.....	14		9	1			2		1
Jamesburg.....	15		3	15		11	4		1
Madison.....	28	13		4		1	10		29
Metuchen.....	37	3		12		10	29		2
Milltown.....	17		16	11	2		11		7
Monroe.....	11		8	4	3		22		5
New Brunswick.....	393	56	193	5	445	48			8
North Brunswick.....	5		2	4	1		17		8
Perth Amboy.....	316	61	333	16	291	85			2
Piscataway.....	42	31	16	9	6	56			15
Raritan.....	142	26	19	7	44	2			2
Sayreville.....	89		14	37	1	112	1		2
South Amboy.....									
South Amboy Township.....						2	92		3
South Brunswick.....	93		10	53		58	24		9
South River.....	136	3		31	8	176	58		
Woodbridge.....									
	1461	91	169	777	88	64	1339	194	44

## MONMOUTH COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.				
	Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Allenhurst.....	8	2	2	2	1	5			
All town.....	4	4	13	20	13	53			
Asbury Park.....	25	11	78	20	5	9			
Atlantic.....	11	2	3	1	9	6			
Atlantic Highlands.....	17	2	9	5	18	5			
Avon.....	4	1	4	5	4	4			
Belmar.....	17	5	5	17	4	23			
Bradley Beach Borough.....	16	6	6	1	12	4			
Deal.....	8	6	.....	.....	.....	1			
Eatontown.....	31	19	20	5	41	8			
Englishtown.....	4	2	7	4	6	2			
Farmingdale.....	8	8	.....	1	2	3			
Freehold.....	73	2	62	16	104	15			
Highlands.....	9	5	6	2	20	4			
Holmdel.....	14	5	4	3	11	7			
Howell.....	58	23	21	36	10	36			
Long Branch.....	150	12	132	53	928	28			
Manalapan.....	21	11	6	13	18	3			
Manasquan.....	26	4	15	6	21	10			
Marlboro.....	12	8	4	24	5	5			
Matawan Borough.....	42	10	15	4	12	42			
Matawan Township.....	13	7	4	1	10	1			
Middletown.....	66	.....	31	8	70	8			
Millstone.....	12	3	2	8	12	16			
Neptune Township.....	156	28	62	11	184	45			
Neptune City Borough.....	7	6	2	2	13	6			
North Spring Lake.....	.....	.....	.....	.....	.....	.....			
Ocean.....	17	4	.....	11	15	3			
Raritan.....	98	2	24	4	82	12			
Red Bank City.....	89	3	55	12	93	21			
Sea Bright.....	8	6	8	2	7	2			
Shrewsbury.....	53	1	18	6	54	16			
Spring Lake Borough.....	8	5	2	2	10	1			
Upper Freehold.....	26	8	5	1	32	10			
Wall.....	37	15	29	13	44	15			
	1158	150	80	672	157	88	1314	328	89

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

## MORRIS COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.				
	Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.		Number in 1904.	Variation from 1903.	
		Increase.	Decrease.		Increase.	Decrease.		Increase.	Decrease.
Boonton City.....	59	6	.....	85	4	63	17	.....	.....
Boonton Township.....	1	1	.....	.....	1	14	14	.....	4
Butler.....	58	16	7	.....	.....	.....	.....	.....	.....
Chatham Borough.....	35	8	13	1	18	5	.....	.....	.....
Chatham Township.....	4	8	.....	2	4	1	.....	.....	.....
Chester.....	13	2	7	4	20	9	.....	.....	.....
Dover City.....	126	9	43	26	94	4	.....	.....	.....
Florham Park Borough.....	6	.....	.....	.....	12	9	.....	.....	.....
Hanover.....	34	3	19	10	216	61	.....	.....	.....
Jefferson.....	4	.....	6	5	22	10	.....	.....	.....
Madison.....	95	26	.....	2	58	12	.....	.....	.....
Mendham.....	23	10	9	8	19	6	.....	.....	.....
Montvale.....	11	4	2	15	.....	4	.....	.....	.....
Morris Township.....	19	2	1	1	14	18	.....	.....	.....
Morristown City.....	175	15	110	37	227	8	.....	.....	.....
Mount Arlington.....	2	3	1	1	4	2	.....	.....	.....
Mount Olive.....	16	1	9	2	18	2	.....	.....	.....
Netcong.....	18	22	4	1	9	10	.....	.....	.....
Passaic.....	38	.....	6	1	28	8	.....	.....	.....
Pegannock.....	23	3	9	2	14	10	.....	.....	.....
Randolph.....	14	9	2	17	14	14	.....	.....	.....
Rockaway Borough.....	52	290	16	1	23	1	.....	.....	.....
Rockaway Township.....	22	12	2	10	77	1	.....	.....	.....
Roxbury.....	29	21	19	9	29	2	.....	.....	.....
Washington.....	30	7	10	5	20	4	.....	.....	.....
Wharton Borough.....	53	11	11	1	29	23	.....	.....	.....
	947	84	380	377	75	69	1069	147	102



OCEAN COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Barnegat City	5	3	2	2	1	1
Bay Head	8	1	3	3	2	2
Beach Haven	8	1	1	3	3	1
Berkeley	42	5	10	2	17	4
Brick	43	5	21	3	40	18
Dover	2	1	2	2	8	4
Eagleswood	2	1	5	5	2	1
Island Heights	15	1	4	1	18	4
Jackson	14	37	5	1	2	30
Lacey	51	20	33	3	59	2
Lakewood	3	2	6	2	2	1
Lavalette	3	2	6	2	2	1
Little Egg Harbor	11	6	1	2	10	4
Long Beach	26	3	1	2	20	2
Manchester	3	1	6	2	15	14
Ocean	26	3	1	2	5	4
Plumstead	3	1	6	2	2	14
Point Pleasant Beach	12	1	4	2	4	18
Sea Side Park Borough	17	2	7	4	15	3
Stafford	12	1	4	5	16	3
Tuckerton	17	2	16	13	17	12
Unica	12	5	16	13	17	3
	261	22	65	*1	274	12
			145	23	24	84

\* Marriage certificate received from County Clerk in which the place where the marriage was performed is not stated.

PASSAIC COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Acquanackonk	128	49	25	6	89	17
Hawthorne	30	5	13	3	22	14
Little Falls	49	6	29	11	45	11
Manchester	34	12	10	2	28	2
North Haledon	3	2	1	3	8	2
Passaic City	1938	88	1023	13	654	11
Pateron	39	24	10	16	54	20
Pompton	16	24	9	7	11	8
Pompton Lake Borough	12	5	2	4	24	7
Prospect Park Borough	16	8	8	8	20	2
Totowa	18	8	11	8	22	10
Wayne	38	8	11	8	22	10
West Milford						
	3260	174	534	7916	89	184
					2974	324

SALEM COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Alloway	22	3	13	2	16	1
Elmer Borough	81	2	15	2	20	4
Elsinboro	8	4	1	7	19	7
Lower Alloways Creek	12	7	1	1	22	8
Lower Penns Neck	22	3	4	2	22	3
Mannington	12	10	7	4	33	4
Oldmans	11	14	9	3	25	3
Penns Grove Borough	51	17	20	1	31	11
Pilesgrove	34	12	8	7	27	2
Pittsgrove	25	21	3	2	18	1
Quinton	17	13	6	5	22	8
Salem City	99	5	70	4	118	9
Upper Penns Neck	16	13	4	2	9	4
Upper Pittsgrove	19	30	17	6	27	7
Woodstown	17	3	5	6	27	4
	400	42	76	194	428	13

SOMERSET COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.	
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.
		Increase.		Decrease.		Increase.
Bedminster	29	17	6	3	29	9
Bernards	20	1	2	17	41	5
Bound Brook Borough	65	11	36	2	40	5
Branchburg	14	2	7	10	10	15
Bridgewater	21	8	3	3	14	2
Franklin	27	1	13	47	26	4
Hillsborough	35	1	17	11	38	8
Millstone	11	3	6	1	12	2
Montgomery	11	5	26	20	65	7
North Plainfield City	110	5	1	1	11	1
North Plainfield Township	13	6	1	9	33	3
Raritan	16	4	1	8	11	8
Rocky Hill	18	3	43	1	72	5
Somerville	76	1	5	4	12	4
Warren	14	1	4	4	12	4
	467	32	82	172	428	82

SUSSEX COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.			
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.		
		Increase.		Decrease.		Increase.	Decrease.	
Andover.....	11	2	5	2	10	1		
Branchville.....	7				7	4		
Brooklyn.....	11	18		10	9	1		
Byram.....	19	16	8	3	15	8		
Frankford.....	19	16	8	3	15	8		
Fredon Borough.....	6	6	2	2	13	12		
Green.....	8	2	7	4	5	12		
Hampton.....	25	2	27	16	4	8		
Hardyston.....	8	2	1	4	8	3		
Hopatcong.....	10	2	4	6	6	7		
Lafayette.....	4	1	5	1	4	4		
Montague.....	12	4	1	5	15	15		
Newton.....	13	4	5	3	8	5		
Sandyton.....	32	6	9	3	24	7		
Sparta.....	10	10	9	9	18	13		
Stanhope Borough.....	18	1	11	1	10	9		
Stillwater.....	11	7	23	1	23	1		
Sussex Borough.....	4	5	5	1	27	13		
Vernon.....	4	1	5	1	2	2		
Walpack.....	15	12	8		18	1		
Wantage.....								
<b>Total</b>	<b>287</b>	<b>68</b>	<b>81</b>	<b>36</b>	<b>34</b>	<b>291</b>	<b>85</b>	<b>24</b>

UNION COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.			
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.		
		Increase.		Decrease.		Increase.	Decrease.	
Clark.....	7	3			7	5		
Crenfoll.....	41	4	25	6	32	2		
Elizabeth.....	1051	47	421	41	1100	166		
Fanwood Borough.....	3	1			3	3		
Fanwood Township.....	12	12		3	17	6		
Garwood Borough.....	15	13			6	3		
Linden Borough.....	1	2	2	2	8	3		
Linden Township.....	28	18	2	1	12	4		
Mountainside.....	2	1	1		3	3		
New Providence Borough.....	12	4	2		8	3		
New Providence Township.....	11	1	1	1	9	5		
Plainfield.....	346	20	128	8	283	20		
Rahway.....	110	19	58	5	117	12		
Roselle Borough.....	32	11	10	7	11	1		
Roselle Park.....	43	5	9	1	14	5		
Springfield.....	24	2	6	6	13	5		
Summit City.....	128	8	28	78	29	2		
Union.....	13	8	5		5	6		
Westfield.....	92	5	32	3	58	5		
<b>Total</b>	<b>1969</b>	<b>142</b>	<b>25</b>	<b>741</b>	<b>62</b>	<b>1812</b>	<b>218</b>	<b>36</b>

WARREN COUNTY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.		
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	
		Increase.		Decrease.		Increase.	Decrease.
Allamuchy.....	9	3		1	9		
Belvidere.....	29	12	24	5	30		
Blairtown.....	16	4	2		21	3	
Franklin.....	19	5	4		23	1	
Frelinghuysen.....	17	3			14	4	
Greenwich.....	18	3	12		22	6	
Hackettstown.....	38	2	1	18	49	4	
Hardwick.....	5	3	1		2	4	
Harmony.....	22	5	3		9	6	
Hope.....	2	6	8		14	1	
Independence.....	2	13	1		25	14	
Knowlton.....	11	5	13		9	2	
Lopatcong.....	21	5	9		33	11	
Mansfield.....	24	20	16		12	1	
Oxford.....	39	25	17		27	2	
Pahaquarry.....	15	5	17	38	62	6	
Phillipsburg.....	30	34	20	6	48	6	
Fohatcong.....	65	2	42	10	49	8	
Washington Borough.....	17	5	2		19	8	
Washington Township.....	67				43		
<b>Total</b>	<b>547</b>	<b>69</b>	<b>97</b>	<b>17</b>	<b>578</b>	<b>61</b>	<b>20</b>

\* Marriage certificates received from County Clerk in which the places where the marriages were performed are not stated.

SUMMARY.

NAME OF PLACE.	BIRTHS.		MARRIAGES.		DEATHS.				
	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.	Number in 1904.	Variation from 1903.			
		Increase.		Decrease.		Increase.	Decrease.		
Atlantic County.....	902	74	513	3	801	14			
Bergen County.....	1696	66	589	89	1228	47			
Burlington County.....	859	21	446	16	373	87			
Camden County.....	2034	56	2249	172	2064	328			
Cape May County.....	266	10	99	17	215	38			
Cumberland County.....	937	11	423	21	795	69			
Essex County.....	9232	869	3483	367	7239	614			
Gloucester County.....	570	48	327	14	482	99			
Hudson County.....	9752	753	4221	280	8738	1201			
Hunterdon County.....	478	9	238	6	465	17			
Mercer County.....	1215	64	981	91	1757	95			
Middlesex County.....	1461	77	777	28	1388	150			
Mounmouth County.....	1158	70	672	67	1814	140			
Morris County.....	947	1	377	6	1659	58			
Ocean County.....	264	7	145	7	274	72			
Passaic County.....	3260	360	1916	145	2974	819			
Salem County.....	430	84	184	7	423	69			
Somerset County.....	467	1	172		428	1			
Sussex County.....	287	44	191	2	291	61			
Union County.....	1969	101	741	48	1812	174			
Warren County.....	547	29	849	70	578	48			
<b>Total</b>	<b>38751</b>	<b>2992</b>	<b>613</b>	<b>18919</b>	<b>407</b>	<b>1000</b>	<b>85298</b>	<b>4667</b>	<b>89</b>



TABLE 39.—SHOWING AGES AT DEATH AND OCCUPATIONS OF DECEDENTS IN DECEMBER 31,

NEW JERSEY FROM CERTAIN SELECTED DISEASES FOR THE YEAR ENDING 1904.—Continued.

	Sailors and watchmen.	Jewelers and watchmakers.	Laborers.	Laundresses.	Laundrymen.	Lawyers.	Leatherworkers.	Letter carriers.	Linenen.	Locksmiths.	Machinists.	Managers and superintendents.	Manufacturers.	Masons.	Mechanics.	Milkmen.	Millers.	Ministers.	Musicians.	Nurses.	Painters.	
Consumption.																						
10 to 15		1	1	1							6	6	6	6	6					10	14	
15 to 20		1	1	1							2	2	2	2	2					2	2	
20 to 30		1	1	1							1	1	1	1	1					1	1	
30 to 40		1	1	1							1	1	1	1	1					1	1	
40 to 50		1	1	1							1	1	1	1	1					1	1	
50 to 60		1	1	1							1	1	1	1	1					1	1	
60 to 70		1	1	1							1	1	1	1	1					1	1	
70 to 80		1	1	1							1	1	1	1	1					1	1	
80 to 90		1	1	1							1	1	1	1	1					1	1	
Over 90		1	1	1							1	1	1	1	1					1	1	
Totals	8	15	880	4	2	5	25			28		6	6	6	6				3	5	85	
Cancer.																						
10 to 15																						
15 to 20																						
20 to 30		1	3								1	1	1	1	1					1	1	
30 to 40			1								1	1	1	1	1					1	1	
40 to 50			1								1	1	1	1	1					1	1	
50 to 60			1								1	1	1	1	1					1	1	
60 to 70		1	22								3	4	4	4	4					2	2	
70 to 80		1	16								3	3	3	3	3					2	2	
80 to 90		1	1								1	1	1	1	1					1	1	
Over 90		1	1								1	1	1	1	1					1	1	
Totals	4	2	61		4	1	2			6	2	1	2	2	2				2	3	5	
Suicide.																						
10 to 15																						
15 to 20																						
20 to 30																						
30 to 40		1	3								1	1	1	1	1					1	1	
40 to 50			1								1	1	1	1	1					1	1	
50 to 60			1								1	1	1	1	1					1	1	
60 to 70			1								1	1	1	1	1					1	1	
70 to 80			1								1	1	1	1	1					1	1	
80 to 90			1								1	1	1	1	1					1	1	
Over 90			1								1	1	1	1	1					1	1	
Totals	2	1	43							6	2	1	2	2	2				2	3	5	
Diseases of the nervous system and of the organs of sense.																						
10 to 15																						
15 to 20																						
20 to 30																						
30 to 40		2	12																			
40 to 50		3	29																			
50 to 60		4	40																			
60 to 70		6	34																			
70 to 80		4	35																			
80 to 90		4	44																			
Over 90		1	13																			
Totals	15	13	219		13	10				12	6	15	15	15	15				2	9	624	
Diseases of the urinary system.																						
10 to 15																						
15 to 20																						
20 to 30																						
30 to 40		1	25																			
40 to 50		1	43																			
50 to 60		2	46																			
60 to 70		3	58																			
70 to 80		3	64																			
80 to 90		3	62																			
Over 90		2	2																			
Totals	15	7	226		3	3				21	12	16	16	16	16				2	4	15	

	Paperhangers.	Photographers.	Physicians.	Plumbers.	Porters.	Potters.	Printers.	Railroad employes.	Rubberworkers.	Sailors.	Salesmen.	Shoemakers.	Silkworkers and silkwavers.	Bioncutters.	Tailors.	Tanners.	Teachers.	Telegraphers.	Tinsmiths.	Undertakers.	Upshoerers.	Waiters.	Weavers.	Wheelwrights.	Wireworkers.	All other occupations.	All other professions.	
Consumption.	2	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cancer.																												
Suicide.																												
Diseases of the nervous system and of the organs of sense.	2	12	5	5	7	6	12	11	7	11	17	11	9	6	13	2	2	2	5	2	1	7	6	5	2	15	1	
Diseases of the urinary system.	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Totals	2	12	5	5	7	6	12	11	7	11	17	11	9	6	13	2	2	2	5	2	1	7	6	5	2	15	1	

TABLE 39.—SHOWING AGES AT DEATH AND OCCUPATIONS OF DECEDENTS IN DECEMBER 31,

Table with columns for age groups (10 to 15, 15 to 20, ..., Over 90) and rows for various occupations and disease categories (Diseases of the respiratory system, digestive system, genito-urinary system, etc.).

NEW JERSEY FROM CERTAIN SELECTED DISEASES FOR THE YEAR ENDING 1904.—Continued.

Large table with columns for various occupational groups (Dressmakers and seamstresses, Dentists, Drivers, headdress and runners, etc.) and rows for age groups (10 to 15, 15 to 20, ..., Over 90).

TABLE 39.—SHOWING AGES AT DEATH AND OCCUPATIONS OF DECEDENTS IN DECEMBER 31,

Table showing age at death and occupations of decedents in December 31, categorized by disease type (Digestive system, Diseases of the respiratory system and adenae, Pneumonia, All others) and age group (10 to 15, 15 to 20, etc.).

NEW JERSEY FROM CERTAIN SELECTED DISEASES FOR THE YEAR ENDING 1904.—Continued.

Table showing deaths from certain selected diseases in New Jersey for the year ending 1904, categorized by disease type and occupation (Paperhangers, Photographers, Physicians, Plumbers, etc.).



## REPORT OF THE BOARD OF HEALTH.

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904.

CITIES.	Estimated population of cities.	FAC-TORY TOY PLAYERS.																													
		Architects.	Bankers, &c.	Bakers.	Barbers.	Bartenders, &c.	Blacksmiths.	Boatmen.	Bookkeepers.	Brems and iron-workers.	Butchers.	Butt-makers.	Chemists.	Cigar-makers.	Civil engineers.	Clerks.	Contractors and carpenters.	Cook.	Coopers.	Dentists.	Dress-makers.	Drivers, &c.	Druggists.	Dyers.	Electricians.	Hatters.	Huglers.	Ironpressmen.	Males.	Females.	
Atlantic City.....	8544																														
Bloomfield.....	4301																														
Bridgeton.....	10281																														
Bordentown.....	14410																														
Bordentown.....	7180																														
Camden City.....	80224																														
Trenton.....	6676																														
East Orange.....	28770																														
Elizabeth.....	6000																														
Elizabeth.....	6000																														
Gloucester City.....	7882																														
Hackensack.....	11172																														
Hoboken.....	48688																														
Hoboken.....	48688																														
Jersey City.....	223449																														
Jersey City.....	6749																														
Long Branch.....	11228																														
Long Branch.....	10774																														
Monclair.....	15730																														
Morris-town.....	12047																														
Newark.....	272322																														
Newark.....	5630																														
North Plainfield.....	22221																														
Orange.....	35686																														
Passaic City.....	25221																														
Pateron.....	20483																														
Phillipsburg.....	10228																														
Plainfield.....	16761																														
Rahway.....	7958																														

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904—Continued.

CITIES.	Farmers.	Firemen.	Fishermen.	Florists, &c.	Foundrymen.	Glassblowers.	Glassworkers.	Grocers.	Hatters.	Hotelkeepers.	Joiners.	Bambers, &c.	Jewelers.	Landrymen.	Lawyers.	Leatherworkers.	Letter carriers.	Linenmen.	Housewives.	Laborers.	Locksmiths.	Machinists.	Managers, &c.	Manufacturers.	Merchants.	Millmen.	Miners.	FAC-TORY TOY PLAYERS.			
																												Males.	Females.		
Atlantic City.....	2	1																													
Bloomfield.....																															
Bridgeton.....																															
Bordentown.....																															
Bordentown.....																															
Camden City.....																															
Trenton.....																															
East Orange.....																															
Elizabeth.....																															
Elizabeth.....																															
Gloucester City.....																															
Hackensack.....																															
Hoboken.....																															
Hoboken.....																															
Jersey City.....																															
Jersey City.....																															
Long Branch.....																															
Long Branch.....																															
Monclair.....																															
Newark.....																															
Newark.....																															
North Plainfield.....																															
Orange.....																															
Passaic City.....																															
Pateron.....																															
Phillipsburg.....																															
Plainfield.....																															
Rahway.....																															



REPORT OF THE BOARD OF HEALTH.

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904.—Continued.

CITIES.	OCCUPATIONS																													
	Musicians.	Nurses.	Painters.	Paperhangers.	Photographers.	Physicians.	Plumbers.	Porters, etc.	Porters.	Printers.	Railroad employes.	Rubberworkers.	Sailors.	Salesmen.	Shoemakers.	Silk workers.	Stonecutters.	Tailors.	Tanners.	Teachers.	Telegraphers.	Thimblets.	Undertakers.	Upshoers.	Walters.	Weavers.	Wheelwrights.	Wireworkers.	All other professions.	All other occupations.
Atlantic City.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bayonne.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bloomfield.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Bordentown.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Burlington.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Camden City.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Doylestown.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Elizabeth.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Englewood.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Gloucester City.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Haddonfield.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Harrison.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hoboken.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Irvington.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Jersey City.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Long Branch.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Millville.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Montclair.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Montross.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
New Brunswick.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Orange.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Orange City.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Passaic.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Parsippany.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Peth Amboy.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phillipsburg.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Plainfield.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Railway.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904.—Continued.

CITIES.	Estimated population of cities.	OCCUPATIONS																													
		Architects.	Artists.	Bankers, etc.	Barbers.	Barbers &c.	Blacksmiths.	Boatmen.	Bookkeepers.	Brass and iron workers.	Brothers.	Butchers.	Chemists.	Cigar makers.	Civil engineers.	Clergymen.	Clerks.	Contractors and carpenters.	Contractors and Constables and policemen.	Cooks.	Coopers.	Dentists.	Dressmakers.	Drivers, etc.	Druggists.	Dyers.	Electricians.	Engineers.	Engravers.	Expressmen.	Males.
Red Bank.....	896	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Salem City.....	8311	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
South Amboy.....	6978	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Summit.....	9984	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Trenton.....	81989	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Union.....	1066	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West Hoboken.....	26932	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West New York.....	6967	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West Orange.....	7717	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
.....	10.....	8158	50	134	78	137	756	112	4	71	10	87	4	36	341	335	60	28	9	4	44	333	11	22	31	9	1	57	62		

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904.—Continued.

CITIES.	Farmers.	Fishermen.	Porters, etc.	Foundrymen.	Glassblowers.	Glassworkers.	Grinders, etc.	Grocers.	Hatters.	Hotelkeepers.	Ironmen.	Jamlers, etc.	Jewelers.	Landrresses.	Laundrymen.	Lawyers.	Leatherworkers.	Letter carriers.	Linemmen.	Housewives.	Laborers.	Locksmiths.	Machinists.	Managers, etc.	Manufacturers.	Masons.	Merchants.	Millmen.	Millers.	Miners.				
Red Bank.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Salmon City.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Summit.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Town of Union.....	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Trenton.....	22	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
West New York.....	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
West Orange.....	112	30	18	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	112	30	18	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

TABLE 41.—SHOWING OCCUPATIONS OF DECEDENTS IN CITIES OF OVER 5,000 INHABITANTS IN NEW JERSEY FOR YEAR ENDING DECEMBER 31, 1904.—Continued.

CITIES.	Musicians.	Nurses.	Painters.	Parbandgers.	Photographers.	Physicians.	Pumpers.	Porters, etc.	Printers.	Railroad employes.	Rubberworkers.	Salitors.	Salesmen.	Shoemakers.	Silkworkers.	Stonecutters.	Tailors.	Tanners.	Teachers.	Telegraphers.	Trasmiths.	Undertakers.	Upholsterers.	Walters.	Wearers.	Wheelwrights.	Winegrowers.	All other professions.	All other occupations.			
Red Bank.....																																
Salmon City.....																																
Summit.....																																
Town of Union.....																																
Trenton.....	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West New York.....	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
West Orange.....	22	26	146	4	383	46	90	62	60	198	9	168	96	38	22	88	11	29	4	42	5	8	40	73	10	10	70	16	68			











TABLE 44.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN BAYONNE.	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to fifty.
Typhoid Fever.....	1										
Measles.....	5										
Scarlet Fever.....	6										
Whooping Cough.....	7										
Diphtheria and Croup.....	8										
Influenza.....	14										
Pyæmia and Septicæmia.....	17										
Rabies.....	18										
Relapsing Fever.....	19										
Intermittent Fever.....	21										
Of the Lungs.....	B										
Of the Meninges.....	C										
Of Other Organs.....	E										
General.....	24										
Syphilis.....	A										
Of the Mouth.....	B										
Cancer.....	C	25									
Of the Stomach and Liver.....	D										
Of the Female Genital Organs.....	E										
Others.....	26										
Rheumatism.....	28										
Diabetes.....	32										
Anæmia Chlorosis.....	34										
Alcoholism (Acute or Chronic).....	39										
Simple Meningitis.....	42										
Cerebral Hemorrhage and Congestion.....	43										
Softening of the Brain.....	44										
Paralysis Without Indicated Cause.....	47										
Epilepsy.....	49										
Convulsions of Infants.....	52										
Other Diseases of the Nervous System.....	55										
Pericarditis.....	56										
Endocarditis.....	57										
Organic Diseases of the Heart.....	58										
Angina Pectoris.....	59										
Diseases of Arteries, Atheroma, Aneurism, &c.....	65										
Hemorrhage.....	68										
Diseases of the Larynx and Thyroid Body.....	69										
Acute Bronchitis.....	70										
Chronic Bronchitis.....	71										
Broncho-Pneumonia.....	72										
Pneumonia.....	73										
Pleurisy.....	74										
Congestion and Apoplexy of Lungs.....	76										
Asthma.....	77										
Other Diseases of the Respiratory System.....	79										
Diseases of the Esophagus.....	80										
Ulcer of Stomach.....	81										
Other Diseases of Stomach (Cancer excepted).....	82										
Infantile Diarrhæa, Athrepsia.....	83										
Diarrhæa and Enteritis.....	84										
Gonorrhœa.....	86										
Hernia and Intestinal Obstructions.....	90										
Cirrhosis of the Liver.....	92										
Other Diseases of the Liver.....	93										
Inflammatory Peritonitis (Non-Puerperal).....	95										
Appendicitis.....	96										
Acute Nephritis.....	97										
Bright's Disease.....	100										
Other Diseases of the Kidneys and Adnæxæ.....	100										

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AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.							
			Color of decedent while in this State, unless designated by mark.	United States.	England.	France.	Germany.	Ireland.	Italy.	Scandinavia.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.			
Fifty to fifty-five.																				
Fifty-five to sixty.																				
Sixty to seventy.																				
Seventy to eighty.																				
Eighty to ninety.																				
Over ninety.																				
Not stated.																				
Male.																				
Female.																				
Color of decedent while in this State, unless designated by mark.																				
United States.																				
England.																				
France.																				
Germany.																				
Ireland.																				
Italy.																				
Scandinavia.																				
Sweden.																				
Other foreign.																				
Not stated.																				
Married.																				
Single.																				
Widowed.																				
Not stated.																				













TABLE 49.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
 THE YEAR ENDING

DEATHS IN CAMDEN.	AGE PERIODS.									
	Under one month.	Under one year.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Forty to forty-five.	Forty-five to fifty.
	A	B	C	D	E	F	G	H	I	J
Typhoid Fever.....	1									
Smallpox.....	4									
Measles.....	5									
Scarlet Fever.....	5									
Whooping Cough.....	2									
Diphtheria and Group.....	6	34	18	10	1	1	1	1	1	1
Influenza.....	9	1	1	1	1	1	1	1	1	1
Pyæmia and Septicæmia.....	14	1	1	1	1	1	1	1	1	1
Intermittent Fever.....	19	1	1	1	1	1	1	1	1	1
Tuberculosis.....	22	A	B	C	D	E	F	G	H	I
Of the Lungs.....		A	B	C	D	E	F	G	H	I
Of the Meninges.....		A	B	C	D	E	F	G	H	I
Of the Skin.....		A	B	C	D	E	F	G	H	I
Of Other Organs.....		A	B	C	D	E	F	G	H	I
General.....		A	B	C	D	E	F	G	H	I
Syphilis.....	24	A	B	C	D	E	F	G	H	I
Of the Mouth.....		A	B	C	D	E	F	G	H	I
Of the Stomach and Liver.....		A	B	C	D	E	F	G	H	I
Of the Intestines and Rectum.....		A	B	C	D	E	F	G	H	I
Of the Female Genital Organs.....	25	A	B	C	D	E	F	G	H	I
Of the Breast.....		A	B	C	D	E	F	G	H	I
Others.....		A	B	C	D	E	F	G	H	I
Rheumatism.....	26									
Diabetes.....	28									
Exophthalmic Goitre.....	29									
Leukæmia.....	31									
Anæmia Chlorosis.....	32	1								
Alcoholism (Acute or Chronic).....	34									
Other Chronic Poisonings of Occupations.....	36									
Simple Meningitis.....	40	12	16	5	1	1	1	1	1	1
Progressive Locomotor Ataxia.....	40									
Progressive Muscular Atrophy.....	41									
Cerebral Hemorrhage and Congestion.....	42	3	1	2	1	1	1	1	1	1
Softening of the Brain.....	43									
Paralysis Without Indicated Cause.....	44									
General Paralysis.....	45									
Other Forms of Insanity.....	46									
Epilepsy.....	47									
Convulsions of Infants.....	49	8	18	8	4	2				
Tetanus.....	50									
Other Diseases of the Nervous System.....	53	1								
Pericarditis.....	55									
Endocarditis.....	56									
Organic Diseases of the Heart.....	57	8	3	1	4	1	1	1	1	1
Angina Pectoris.....	58									
Diseases of Arteries, Atheroma, Aneurism, &c.....	59									
Phlebitis and Other Diseases of the Veins.....	62									
Hemorrhage.....	65	1								
Other Diseases of the Circulatory System.....	66									
Diseases of the Larynx and Thyroid Body.....	68									
Acute Bronchitis.....	69	1	4	3	1	1	1	1	1	1
Broncho-Pneumonia.....	71	1	4	3	1	1	1	1	1	1
Pneumonia.....	72	4	87	29	7	3	2	1	5	2
Pleurisy.....	73									
Congestion and Apoplexy of Lungs.....	74	2	10	6	1	1	1	1	1	1
Asthma.....	76									
Pulmonary Emphysema.....	77									
Other Diseases of the Respiratory System.....	80	2	1	1	1	1	1	1	1	1
Ulcer of Stomach.....	80									
Other Diseases of Stomach (Cancer excepted).....	81	2	6	1	1	1	1	1	1	1

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 DECEMBER 31, 1904.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.					
			United States.		England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.
			Color of decedent white unless designated by mark.	Female.														
Fifty to fifty-five.			10	6	1	13	2								6	10		
Fifty-five to sixty.			7	5		7	2								1	5		
Sixty to seventy.			4	4		11	1								14	11		
Seventy to eighty.			31	31		9									2	3		
Eighty to ninety.			6	6		4									8	1		
Over ninety.			4	3		4									3	3		
Not stated.			1	1		2									1	1		
Male.			77	77		188									84	61		
Female.			4	4		2									2	9		
Color of decedent white unless designated by mark.			1	1		1									1	1		
United States.			2	2		2									2	2		
England.			1	1		1									1	1		
France.			1	1		1									1	1		
Germany.			1	1		6									1	3		
Ireland.			1	1		1									1	1		
Italy.			1	1		1									1	1		
Scotland.			1	1		1									1	1		
Hungary.			1	1		1									1	1		
Sweden.			1	1		1									1	1		
Other foreign.			1	1		1									1	1		
Not stated.			1	1		1									1	1		
Married.			1	1		1									1	1		
Single.			1	1		1									1	1		
Widowed.			1	1		1									1	1		
Not stated.			1	1		1									1	1		

TABLE 49.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN CAMDEN.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Infantile Diarrhoea, Atrepsia.....	82	10	78	14	1	1						
Diarrhoea and Enteritis.....	83	1	2	1	1	1						
Dysentery.....	84	2	1									
Hernia and Intestinal Obstructions.....	86	1	1			1	1	1	1	2		
Other Diseases of the Intestines.....	87 A										4	1
Cirrhosis of the Liver.....	92		2									
Other Diseases of the Liver.....	90		4									
Inflammatory Peritonitis (Non-Puerperal).....	93		2	8	1	1	4	2	4	2	1	1
Appendicitis.....	95		5	1	1	2	1	1	1	1	1	1
Acute Nephritis.....	96		1	2	2	1	3	3	5	4	3	7
Bright's Disease.....	97		1	2	2	1	3	3	5	4	3	7
Other Diseases of the Kidneys and Adnexa.....	100											
Diseases of the Bladder.....	102	1										2
Diseases of the Prostate.....	104											1
Uterine Tumors (Non-Cancerous).....	111											1
Other Diseases of the Female Genital Organs.....	114 C											1
Puerperal Septicemia.....	119 A											1
Puerperal Metropertionitis.....	120											1
Erysipelas.....	125											1
Gangrene.....	126											1
Phlegmon. Acute Abscess.....	129 F	1	1									1
Other Diseases of Skin and Adnexa (Cancer excepted).....	130		1									1
Pott's Disease.....	130											1
Congenital Debility, Icterus and Sclerema.....	138 32	30	4									
Senile Debility.....	141											
Suicide or Attempt at Suicide.....	142											
{ By Poison.....	A											
{ By Strangulation.....	B											
{ By Firearms.....	C											
{ By Drowning.....	D											
Fractures.....	143											
Other Accidental Injuries.....	145		1	1	1	4	5	1	1	1	1	2
Burns by Fire.....	146 A		8	1								6
Sunstroke and Freezing.....	147											
Accidental Drowning.....	148											
Inanition.....	149 B	9	18	2								
Inhalation of Noxious Gases (Suicide excepted).....	150											
Other Accidental Poisoning.....	151											
Other External Violence.....	152											
Dropsy.....	153											
Other Tumors.....	159											
Unknown or Not Specified Diseases.....	161 3											

Total deaths, 1,547. Death-rate, 19.12.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.											SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.			
Fifty to fifty-five.	58	51	10	104														104		
Fifty-five to sixty.	55	55	4	82														6	2	1
Sixty to seventy.	21	7	2	2														2	2	5
Seventy to eighty.	1	1		1														1	1	1
Eighty to ninety.	10	8	2	14														10	6	2
Over ninety.	2	8	2	18														18	3	1
Not stated.	1	1		4														6	14	4
Male.	17	7	3	21														17	14	4
Female.	50	56	8	77														67	14	22
Color of decedent not designated by mark.	1	1		2														5	1	2
United States.	1	1		1														1	1	1
England.	1	1		1														1	1	1
France.	1	1		1														1	1	1
Germany.	1	1		1														1	1	1
Ireland.	1	1		1														1	1	1
Italy.	1	1		1														1	1	1
Scotland.	1	1		1														1	1	1
Hungary.	1	1		1														1	1	1
Sweden.	1	1		1														1	1	1
Other foreign.	1	1		1														1	1	1
Not stated.	1	1		1														1	1	1
Married.	67	67		67														67	14	22
Single.	1	1		1														1	1	1
Widowed.	1	1		1														1	1	1
Not stated.	1	1		1														1	1	1

TABLE 50.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31, 1904.

DEATHS IN DOVER.	AGE PERIODS.									
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty-five.	Twenty-five to thirty.	Thirty to forty-five.	Forty to fifty-five.	Fifty to fifty-five.
Typhoid Fever.....	1									
Measles.....	6									
Scarlet Fever.....	1									
Whooping Cough.....	1									
Tuberculosis. { Of the Lungs.....	22	A								
{ Of the Meninges.....	3	B								
Cancer. { Of the Stomach and Liver.....	25	D								
{ Of the Female Genital Organs.....	2	E								
Rheumatism.....	26									
Diabetes.....	28									
Cerebral Hemorrhage and Congestion.....	42									
Softening of the Brain.....	43									
General Paralysis.....	45									
Other Forms of Insanity.....	46									
Convulsions of Infants.....	49	1								
Organic Diseases of the Heart.....	68									
Diseases of the Larynx and Thyroid Body.....	69	1								
Acute Bronchitis.....	70	1								
Chronic Bronchitis.....	71	1								
Broncho-Pneumonia.....	72	1								
Pneumonia.....	73	1								
Other Diseases of the Respiratory System.....	77	B								
Ulcer of Stomach.....	80									
Infantile Diarrhea, Athrepsia.....	82	2								
Diarrhea and Enteritis.....	83									
Other Diseases of the Intestines.....	87	A								
Inflammatory Peritonitis (Non-Puerperal).....	93									
Acute Nephritis.....	96									
Bright's Disease.....	97									
Congenital Debility, Icterus and Sclerema.....	136	8	1							
Senile Debility.....	141									
Suicide or Attempt at Suicide—By Poison.....	142	A								
Other Accidental Injuries.....	145		1							
Inhalation of Noxious Gases (Suicide excepted).....	150			1	2					
Other Tumors.....	159									

Total deaths, 94. Death-rate, 14.09.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.	SOCIAL CONDITION.			
				Married.	Single.	Widowed.	Not stated.
Fifty to fifty-five.	1	2	1	1	1	1	1
Fifty-five to sixty.	1	1	1	1	1	1	1
Sixty to seventy.	1	1	1	1	1	1	1
Seventy to eighty.	1	1	1	1	1	1	1
Eighty to ninety.	1	1	1	1	1	1	1
Over ninety.	1	1	1	1	1	1	1
Not stated.	1	1	1	1	1	1	1
Male.	1	1	1	1	1	1	1
Female.	1	1	1	1	1	1	1
Color of decedent white unless designated by mark.	1	1	1	1	1	1	1
United States.	1	1	1	1	1	1	1
England.	1	1	1	1	1	1	1
France.	1	1	1	1	1	1	1
Germany.	1	1	1	1	1	1	1
Ireland.	1	1	1	1	1	1	1
Italy.	1	1	1	1	1	1	1
Scotland.	1	1	1	1	1	1	1
Hungary.	1	1	1	1	1	1	1
Sweden.	1	1	1	1	1	1	1
Other foreign.	1	1	1	1	1	1	1
Not stated.	1	1	1	1	1	1	1
Married.	1	1	1	1	1	1	1
Single.	1	1	1	1	1	1	1
Widowed.	1	1	1	1	1	1	1
Not stated.	1	1	1	1	1	1	1



TABLE 51.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

DEATHS IN EAST ORANGE.	AGE PERIODS.										
	Under one month.	One to year.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1										
Diphtheria and Group.....	8	1	1								
Influenza.....	9	1	1								
Pyæmia and Septicæmia.....	14										
Of the Lungs.....	1										
Of the Meninges.....	1										
Of Other Organs.....	22										
General.....	1										
Cancer.....											
Of the Stomach and Liver.....	25										
Of the Intestines and Rectum.....	1										
General.....	1										
Rheumatism.....	26										
Diabetes.....	28										
Leukæmia.....	31										
Encephalitis.....	33										
Simple Meningitis.....	39	6	5	1	2						
Cerebral Hemorrhage and Congestion.....	42	1			1				1	3	
Softening of the Brain.....	43										
Paralysis Without Indicated Cause.....	44										
General Paralysis.....	45										
Epilepsy.....	47										
Non-Puerperal Eclampsia.....	48										
Convulsions of Infants.....	49	1	1								
Other Diseases of the Nervous System.....	53	0									
Endocarditis.....	56		1		1	1					
Organic Diseases of the Heart.....	57					1	1	1	1		
Angina Pectoris.....	58										
Diseases of Arteries, Atheroma, Aneurism, &c.....	59										
Embolism.....	60										
Diseases of the Larynx and Thyroid Body.....	68										
Acute Bronchitis.....	69										
Chronic Bronchitis.....	70										
Pneumo-nia.....	71	4	8								
Broncho-Pneumonia.....	72	1	1		1	1	8	2	1		
Pneumonia.....	74										
Congestion and Apoplexy of Lungs.....	76										
Asthma.....	77										
Other Diseases of the Respiratory System.....	80										
Ulcer of Stomach.....	81		8							1	
Other Diseases of Stomach (Cancer excepted).....	82	15	1								
Infantile Diarrhœa, Athrepsia.....	83										
Diarrhœa and Enteritis.....	84										
Dysentery.....	86										
Hernia and Intestinal Obstructions.....	90										
Cirrhosis of the Liver.....	92										
Other Diseases of the Liver.....	93										
Inflammatory Peritonitis (Non-Puerperal).....	96										
Acute Nephritis.....	97		1			2		1	8	8	
Bright's Disease.....	98										
Perinephritis and Perinephritic Abscess.....	102										
Diseases of the Bladder.....	103										
Accidents of Pregnancy.....	116										
Puerperal Hemorrhage.....	117										
Puerperal Septicæmia.....	119										
Erysipelas.....	125										
Mæ formations.....	137	1	2								
Congenital Debility, Icterus and Sclerema.....	138	7	4								
Senile Debility.....	141										
Suicide or Attempt at Suicide—By Firearms.....	142										
Other Accidental Injuries.....	145										
Burns by Fire.....	146										
Inhalation by Noxious Gases (Suicide excepted).....	150										
Dropsy.....	155										
Unknown or Not Specified Diseases.....	161										

Total deaths, 295. Death-rate, 12.11.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.	SOCIAL CONDITION.			
				Married.	Single.	Widowed.	Not stated.
Fifty to fifty-five.							
Fifty-five to sixty.							
Sixty to seventy.							
Seventy to eighty.							
Eighty to ninety.							
Over ninety.							
Not stated.							
Male.							
Female.							
Color of decedent (English-ness indicated by mark.)							
United States.							
England.							
France.							
Germany.							
Ireland.							
Italy.							
Scotland.							
Hungary.							
Sweden.							
Other foreign.							
Not stated.							
Married.							
Single.							
Widowed.							
Not stated.							



TABLE 52—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN ELIZABETH.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Acute Nephritis.....	96	1	1	1	1	1	1	1	1	1	1	1
Bright's Disease.....	97	1	1	1	1	1	1	1	1	1	1	1
Diseases of the Bladder.....	103											
Puerperal Hemorrhage.....	117											
Other Accidents of Labor.....	118											
Puerperal Septicæmia.....	119 A											
Puerperal Metritis.....	120											
Puerperal Metriperitonitis.....	121											
Puerperal Albuminuria and Eclampsia.....	123	2	1									
Erysipelas.....	126											
Gangrene.....	128	1	1									
Phlegmon. Acute Abscess.....	132	1	1									
Other Diseases of Bones.....	134 A											
Other Diseases of the Joints—Arthritis.....	137											
Malformations.....	138	6	22	5								
Congenital Debility, Icterus and Sclerema.....	141											
Senile Debility.....	143					2	1					
Suicide or Attempt at Suicide.....	142	A	C	D								
By Poison.....												
By Strangulation.....												
By Firearms.....												
By Cutting Instruments.....												
Other Accidental Injuries.....	145		1	2	4	2	1	6	8	8	3	
Burns By Fire.....	146 A		5	1	2	1	1	2	1	1	1	
Accidental Drowning.....	148											
Inanition.....	149 B	3	3	1	1	1	1	1	1	1	1	
Inhalation of Noxious Gases (Suicide excepted).....	150											
Other Accidental Poisoning.....	151											
Other Tumors.....	159											
Unknown or Not Specified Diseases.....	161	1										

Total deaths, 1,100. Death-rate, 18.72.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.					
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
Fifty to fifty-five.	5	1	7	1											4	8	2	
Fifty-five to sixty.	1	1	2	1											1	16	12	
Sixty to seventy.	10	6	8	10	1	1									1	2	2	
Seventy to eighty.	1	1																
Eighty to ninety.																		
Over ninety.																		
Not stated.																		
Male.	8	18																
Female.	2	1																
Color of decedent white unless designated by mark.																		
United States.			7	1														
England.			2	1														
France.			8	1														
Germany.			2	2														
Ireland.			3															
Italy.																		
Scotland.																		
Hungary.																		
Sweden.																		
Other foreign.																		
Not stated.																		
Married.															2	1		
Single.															4	8	2	
Widowed.															1	16	12	
Not stated.															1	2	2	

























TABLE 62.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES  
THE YEAR ENDING

DEATHS IN MILLVILLE.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1											
Measles.....	5		1									
Whooping Cough.....	7	1	1									
Diphtheria and Croup.....	8	1	4									
Influenza.....	9											
Pyæmia and Septicæmia.....	14											
Tuberculosis. { Of the Lungs.....	22	A	1	1	1	1	1	2	2			
{ Of the Meninges.....		B										
{ General.....		F										
Cancer. { Of the Stomach and Liver.....	25	B										
{ Of the Female Genital Organs.....		D										
{ Of the Breast.....		E										
{ Of the Skin.....		F										
Diabetes.....	28										1	
Alcoholism (Acute or Chronic).....	34									1	1	
Other Chronic Poisonings.....	37			1								
Simple Meningitis.....	39		1	2								
Cerebral Hemorrhage and Congestion.....	42					1		1				
Paralysis Without Indicated Cause.....	44	1										
General Paralysis.....	45								1		2	
Convulsions of Infants.....	49	1	1									
Other Diseases of the Nervous System.....	52	C										
Endocarditis.....	56										1	
Organic Diseases of the Heart.....	57	1		2		1						
Angina Pectoris.....	58											
Diseases of Arteries, Atheroma, Aneurism, &c.....	59											
Diseases of the Larynx and Thyroid Body.....	68				1							
Acute Bronchitis.....	69											
Broncho-Pneumonia.....	71											
Pneumonia.....	72	1	1						1	1		
Congestion and Apoplexy of Lungs.....	74											
Other Diseases of Stomach (Cancer excepted).....	81	2	1	1						1		
Infantile Diarrhæa, Athropeia.....	82	15	8									
Diarrhæa and Enteritis.....	83	1										
Dysentery.....	84											
Hernia and Intestinal Obstructions.....	86											
Cirrhosis of the Liver.....	90		1									
Acute Nephritis.....	96											
Bright's Disease.....	97		1								1	
Other Diseases of the Female Genital Organs.....	114	C										
Puerperal Septicæmia.....	119	A					1					
Other Diseases of Bones.....	132											
Malformations.....	137											
Congenital Debility, Icterus and Sclerema.....	138	8	5									
Senile Debility.....	141											
Suicide or Attempt at Suicide—By Poison.....	142	A										
Other Accidental Injuries.....	145											
Burns by Fire.....	146	A										
Accidental Drowning.....	148		2									
Other Accidental Poisoning.....	151				1							

Total deaths, 178. Death-rate, 16.67.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR  
DECEMBER 31, 1904.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.	SOCIAL CONDITION.			
				Married.	Single.	Widowed.	Not stated.
Fifty to fifty-five.	2	1	United States.				
Fifty-five to sixty.	1	1	England.				
Sixty to seventy.	4	5	France.				
Seventy to eighty.	1	1	Germany.				
Eighty to ninety.	1	1	Ireland.				
Over ninety.	1	1	Italy.				
Not stated.	1	1	Ecosland.				
Male.	1	1	Hungary.				
Female.	1	1	Sweden.				
Color of decedent white unless designated by mark.	1	1	Other foreign.				
Not stated.	1	1	Not stated.				
United States.	16	16	Not stated.				
England.	1	1	Married.	1	1		
France.	9	9	Single.			1	
Germany.	1	1	Widowed.				1
Ireland.	1	1	Not stated.				
Italy.	1	1					
Ecosland.	1	1					
Hungary.	1	1					
Sweden.	1	1					
Other foreign.	1	1					
Not stated.	1	1					
Married.	1	1					
Single.	1	1					
Widowed.	1	1					
Not stated.	1	1					

TABLE 63.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

DEATHS IN MONTCLAIR.	AGE PERIODS.										
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.
Typhoid Fever.....	1										
Measles.....	5										
Scarlet Fever.....	2										
Diphtheria and Croup.....	8										
Influenza.....	9										
Pyemia and Septicæmia.....	14										
Tuberculosis.....	22										
{ Of the Lungs.....	B										
{ Of the Meninges.....	E										
Syphilis.....	24										
{ Of the Mouth.....	A										
{ Of the Stomach and Liver.....	C										
Cancer.....	25										
{ Of the Intestines and Rectum.....	A										
{ Of the Skin.....	E										
{ Others.....	G										
Diabetes.....	28										
Simple Meningitis.....	39										
Progressive Muscular Atrophy.....	41										
Cerebral Hemorrhage and Congestion.....	42										
Paralysis Without Indicated Cause.....	44										
General Paralysis.....	45										
Epilepsy.....	49										
Convulsions of Infants.....	51										
Other Diseases of the Nervous System.....	52										
Endocarditis.....	56										
Organic Diseases of the Heart.....	57										
Angina Pectoris.....	58										
Diseases of Arteries, Thrombosis, Aneurysm, &c.....	59										
Hemorrhage.....	65										
Acute Bronchitis.....	69										
Chronic Bronchitis.....	70										
Broncho-Pneumonia.....	71										
Pneumonia.....	72										
Pleurisy.....	73										
Other Diseases of the Respiratory System.....	77										
Other Diseases of Stomach (Cancer excepted).....	81										
Infantile Diarrhea, Atresia.....	82										
Dysentery.....	84										
Hernia and Intestinal Obstructions.....	86										
Cirrhosis of the Liver.....	90										
Other Diseases of the Liver.....	92										
Inflammatory Peritonitis (Non-Puerperal).....	93										
Appendicitis.....	95										
Bright's Disease.....	97										
Diseases of the Prostate.....	104										
Accidents of Pregnancy.....	116										
Puerperal Septicæmia.....	119										
Erysipelas.....	123										
Gangrene.....	126										
Other Diseases of the Skin and Adnexa (Cancer excepted).....	129										
Other Diseases of Bones.....	132										
Malformations.....	137										
Congenital Debility, Icterus and Sclerema.....	138										
Want of Care.....	139										
Senile Debility.....	141										
Suicide or Attempt at Suicide.....	142										
{ By Poison.....	A										
{ By Asphyxia.....	B										
{ By Firearms.....	D										
Fractures.....	143										
Other Accidental Injuries.....	145										
Burns by Corrosive Substances.....	146										
Other Accidental Poisoning.....	151										
Unknown or Not Specified Diseases.....	161										

Total deaths, 119. Death-rate, 20.28.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.			4	2															
Fifty-five to sixty.			1	1															
Sixty to seventy.			2	1															
Seventy to eighty.			1	1															
Eighty to ninety.			1	1															
Over ninety.			1	1															
Not stated.			1	1															
Male.			11	11															
Female.			11	11															
Color of decedent while in case (designated by mark).			10	10															
United States.			19	19															
England.			1	1															
France.			1	1															
Germany.			1	1															
Ireland.			1	1															
Italy.			1	1															
Scotland.			1	1															
Hungary.			1	1															
Sweden.			1	1															
Other foreign.			1	1															
Not stated.			1	1															
Married.			7	7															
Single.			14	14															
Widowed.			1	1															
Not stated.			1	1															

















TABLE 69.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN PASSAIC CITY.	AGE PERIODS.									
	Under one month	Under one year.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.
Typhoid Fever.....	1									
Messles.....	5									
Scarlet Fever.....	6									
Diphtheria and Croup.....	9									
Influenza.....	14									
Pyæmia and Septicæmia.....	24									
Tuberculosis, { Of the Lungs..... } 22										
{ General..... } 24										
Syphilis, { Of the Stomach and Liver..... } 25										
{ Of the Intestines and Rectum..... } 25										
{ Of the Female Genital Organs..... } 25										
{ Others..... } 25										
Rheumatism.....	23									
Diabetes.....	32									
Anæmia Chlorosis.....	32									
Alcoholism (Acute or Chronic).....	34									
Encephalitis.....	38									
Simple Meningitis.....	42									
Cerebral Hemorrhage and Congestion.....	44									
General Paralysis.....	45									
Other Forms of Insanity.....	46									
Convulsions of Infants.....	50									
Tetanus.....	54									
Diseases of the Ears.....	56									
Endocarditis.....	57									
Organic Diseases of the Heart.....	66									
Embolism.....	63									
Hemorrhage.....	68									
Diseases of the Larynx and Thyroid Body.....	69									
Acute Bronchitis.....	70									
Chronic Bronchitis.....	71									
Broncho-Pneumonia.....	72									
Pneumonia.....	73									
Pleurisy.....	74									
Congestion and Apoplexy of Lungs.....	76									
Asthma.....	77									
Other Diseases of the Respiratory System.....	79									
Diseases of the Esophagus.....	80									
Ulcer of Stomach.....	81									
Other Diseases of Stomach (Cancer excepted).....	83									
Infantile Diarrhœa, Athrepsia.....	84									
Diarrhœa and Enteritis.....	85									
Dysentery.....	86									
Hernia and Intestinal Obstructions.....	88									
Cirrhosis of the Liver.....	89									
Other Diseases of the Liver.....	90									
Inflammatory Peritonitis (Non-Puerperal).....	93									
Appendicitis.....	95									
Acute Nephritis.....	96									
Bright's Disease.....	97									
Puerperal Hemorrhage.....	117									
Puerperal Septicæmia.....	119									
Puerperal Metropertinitis.....	120									
Erysipelas.....	125									
Phlegmon, Acute Abscess.....	128									
Foetus Disease.....	130									
Malformations.....	137									
Congenital Debility, Icterus and Sclerema.....	138									

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			Chlor of Recent Immigrants (English-born by mark.)	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.	
Fifty to fifty-five.			4	1															
Fifty-five to sixty.			2	1															
Sixty to seventy.			6	1															
Seventy to eighty.			2	1															
Eighty to ninety.			2	1															
Over ninety.			2	1															
Not stated.			2	1															
Male.			4	1															
Female.			2	1															
Chlor of Recent Immigrants (English-born by mark.)			1																
United States.			21	1															
England.			1																
France.			1																
Germany.			1																
Ireland.			6																
Italy.			2																
Scotland.			2																
Hungary.			1																
Sweden.			15																
Other foreign.			1																
Not stated.			2																
Married.			8																
Single.			1																
Widowed.			2																
Not stated.			1																











TABLE 72.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

DEATHS IN PHILLIPSBURG.	AGE PERIODS.									
	Under one month.	Under one year.	One to five	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty-five to thirty.	Thirty to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1									
Diphtheria and Croup.....	3									
Pyæmia and Septicæmia.....	14		1	2						
Intermittent Fever.....	19			1						
Tuberculosis.....	22	A			1	2	1			
Of the Lungs.....		B								
Of the Stomach and Liver.....		C								
Of the Intestines and Rectum.....		D								
Of the Female Genital Organs.....	25	E								
Of the Breast.....		F								
Others.....		G								
Diabetes.....	28									1
Anæmia Chlorosis.....	32									
Simple Meningitis.....	39		1	1	1					
Cerebral Hemorrhage and Congestion.....	42		1	1			1			
Paralysis Without Indicated Cause.....	44			1						1
General Paralysis.....	45									
Convulsions of Infants.....	49		2	1	1					
Endocarditis.....	56			1						
Organic Diseases of the Heart.....	57		1							1
Angina Pectoris.....	58									
Diseases of Arteries, Atheroma, Aneurism, &c.....	59									
Embolism.....	60									
Hemorrhage.....	65									
Diseases of the Larynx and Thyroid Body.....	68				1					
Broncho-Pneumonia.....	71		2							
Pneumonia.....	72		8	1	1	1				
Pleurisy.....	73									
Congestion and Apoplexy of Lungs.....	74		1							
Ulcer of Stomach.....	80		1							
Other Diseases of Stomach (Cancer excepted).....	81		1							
Broncho-Erteritis.....	82		2	6						
Infantile Diarrhœa, Atrepsia.....	83				1					
Diarrhœa and Enteritis.....	86		2	1						
Hernia and Intestinal Obstructions.....	87		A							
Other Diseases of the Intestines.....	90		1							
Chirrhosis of the Liver.....	90									
Inflammatory Peritonitis (Non-Puerpera).....	97				1	2				
Bright's Disease.....	102									
Diseases of the Bladder.....	119		A							
Puerperal Septicæmia.....	121									
Puerperal Albuminuria and Eclampsia.....	127									
Anthrax Carbuncle.....	137		1							
Malformations.....	138		2	1						
Congenital Dehility, Icterus and Sclerema.....	141									
Senile Debility.....	143									
Other Accidental Injuries.....	145				1	1	2	2		
Burns by Fire.....	148		2	1	1					
Accidental Drowning.....	155									
Dropsy.....	155									
Abdominal Tumor.....	158									

Total deaths, 168. Death-rate, 15.52.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.	SOCIAL CONDITION.			
				Married.	Single.	Widowed.	No stated.
Fifty to fifty-five.	1	2	10	1	1	1	1
Fifty-five to sixty.	1	1	1	1	1	1	1
Sixty to seventy.	1	2	6	1	1	1	1
Seventy to eighty.	1	1	1	1	1	1	1
Eighty to ninety.	1	1	1	1	1	1	1
Over ninety.	1	1	1	1	1	1	1
Not stated.	1	1	1	1	1	1	1
Male.	1	1	1	1	1	1	1
Female.	1	1	1	1	1	1	1
Color of decedent white unless designated by mark.	1	1	1	1	1	1	1
United States.	1	1	1	1	1	1	1
England.	1	1	1	1	1	1	1
France.	1	1	1	1	1	1	1
Germany.	1	1	1	1	1	1	1
Ireland.	1	1	1	1	1	1	1
Italy.	1	1	1	1	1	1	1
Scotland.	1	1	1	1	1	1	1
Hungary.	1	1	1	1	1	1	1
Sweden.	1	1	1	1	1	1	1
Other foreign.	1	1	1	1	1	1	1
Not stated.	1	1	1	1	1	1	1
Married.	1	1	1	1	1	1	1
Single.	1	1	1	1	1	1	1
Widowed.	1	1	1	1	1	1	1
No stated.	1	1	1	1	1	1	1





TABLE 75.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN RED BANK.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Measles.....	5	1	4									
Diphtheria and Croup.....	8	2										
Intermittent Fever.....	19											
Tuberculosis of the Lungs.....	22	A			1							
Cancer. (Of the Stomach and Liver.....)	25	B			2							
Cancer. (Of the Female Genital Organs.....)	D											
Rheumatism.....	26											1
Alcoholism (Acute or Chronic).....	34											1
Simple Meningitis.....	39											
Cerebral Hemorrhage and Congestion.....	42											
General Paralysis.....	45											
Convulsions of Infants.....	49	1	1									
Other Diseases of the Nervous System.....	52	C										
Endocarditis.....	56											
Organic Diseases of the Heart.....	57											
Diseases of Arteries, Atheroma, Aneurism, &c.....	59											
Acute Bronchitis.....	69	1	1									
Chronic Bronchitis.....	70											
Broncho-Pneumonia.....	71											
Pneumonia.....	72	2										
Other Diseases of Stomach (Cancer excepted).....	81											
Infantile Diarrhoea, Athrepsia.....	82	6										
Cirrhosis of the Liver.....	90											
Inflammatory Peritonitis (Non-Puerperal).....	93											
Acute Nephritis.....	96			1								
Bright's Disease.....	97											
Congenital Debility, Icterus and Sclerema.....	138	2	2									
Senile Debility.....	141											
Suicide or Attempt (By Asphyxia.....)	142	B										
at Suicide. (By Strangulation.....)	C											
Other Accidental Injuries.....	145											1
Burns by Fire.....	146	A										
Inanition.....	149	B										
Unknown or Not Specified Diseases.....	161											
Total deaths, 93. Death-rate, 15.87.												

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.						
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.		
Fifty to fifty-five.	1	4	1																
Fifty-five to sixty.	1	2	1																
Sixty to seventy.	1	1	1																
Seventy to eighty.	2	1	2																
Eighty to ninety.	10	2	11																
Over ninety.																			
Not stated.																			
Male.	1	4	1																
Female.	1	2	1																
Color of decedent white unless designated by mark.																			
Nativity.																			
United States.																			
England.																			
France.																			
Germany.																			
Ireland.																			
Italy.																			
Scotland.																			
Hungary.																			
Sweden.																			
Other foreign.																			
Not stated.																			
Social Condition.																			
Married.																			
Single.																			
Widowed.																			
Not stated.																			











TABLE 80.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

DEATHS IN TRENTON.	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
Typhoid Fever.....	1	1	1	6	5	8	2	1	4	4	1	1
Smallpox.....	4	1	1	2	2	2	2	2	2	2	2	1
Measles.....	3	1	1	1	5	8	1	1	1	1	1	1
Scarlet Fever.....	1	1	1	1	1	1	1	1	1	1	1	1
Whooping Cough.....	7	3	2	2	1	1	1	1	1	1	1	1
Diphtheria and Croup.....	8	1	5	2	2	2	1	1	1	1	1	1
Influenza.....	9	2	2	1	1	1	1	1	1	1	1	1
Pyæmia and Septicæmia.....	14	2	2	1	1	1	1	1	1	1	1	2
Relapsing Fever.....	18	1	1	1	1	1	1	1	1	1	1	1
Intermittent Fever.....	19	1	1	1	1	1	1	1	1	1	1	1
Tuberculosis.....	22	A	4	1	2	9	18	20	26	21	15	9
Of the Lungs.....		B	2	1	1	1	1	1	1	1	1	1
Of the Meninges.....		C	1	1	1	1	1	1	1	1	1	1
Of Other Organs.....		E	1	1	1	1	1	1	1	1	1	1
General.....		F	1	1	1	1	1	1	1	1	1	1
Syphilis.....	24	B	1	1	1	1	1	1	2	3		
Of the Stomach and Liver.....		C										
Of the Intestines and Rectum.....		D										
Of the Female Genital Organs.....		E										
Of the Breast.....		F										
Others.....		G										
Cancer.....	25	B	1	1	1	1	1	1	2	3		
Of the Stomach and Liver.....		C										
Of the Intestines and Rectum.....		D										
Of the Female Genital Organs.....		E										
Of the Breast.....		F										
Others.....		G										
Rheumatism.....	26	1	1	1	1	1	1	1	1	1	1	1
Diabetes.....	28	1	1	1	1	1	1	1	1	1	1	1
Anæmia Chlorosis.....	29	1	1	1	1	1	1	1	1	1	1	1
Alcoholism (Acute or Chronic).....	34	1	1	1	1	1	1	1	1	1	1	1
Simple Meningitis.....	39	8	18	11	1	1	1	1	1	1	1	1
Progressive Locomotor Ataxia.....	40	1	1	1	1	1	1	1	1	1	1	1
Cerebral Hemorrhage and Congestion.....	42	1	2	1	1	1	1	1	1	1	1	1
Softening of the Brain.....	43	1	1	1	1	1	1	1	1	1	1	1
Paralysis Without Indicated Cause.....	44	1	1	1	1	1	1	1	1	1	1	1
General Paralysis.....	45	1	1	1	1	1	1	1	1	1	1	1
Other Forms of Insanity.....	46	1	1	1	1	1	1	1	1	1	1	1
Epilepsy.....	47	1	1	1	1	1	1	1	1	1	1	1
Convulsions of Infants.....	49	13	28	5	1	1	1	1	1	1	1	1
Tetanus.....	50	1	1	1	1	1	1	1	1	1	1	1
Other Diseases of the Nervous System.....	52	C	2	1	1	1	1	1	1	1	1	1
Diseases of the Ears.....	54	1	1	1	1	1	1	1	1	1	1	1
Pericarditis.....	55	1	1	1	1	1	1	1	1	1	1	1
Endocarditis.....	56	1	1	1	1	1	1	1	1	1	1	1
Organic Diseases of the Heart.....	57	5	1	1	1	1	1	1	1	1	1	1
Angina Pectoris.....	58	1	1	1	1	1	1	1	1	1	1	1
Embolism.....	60	1	1	1	1	1	1	1	1	1	1	1
Phlebitis and Other Diseases of the Veins.....	62	1	1	1	1	1	1	1	1	1	1	1
Hemorrhage.....	63	1	1	1	1	1	1	1	1	1	1	1
Other Diseases of the Circulatory System.....	66	1	1	1	1	1	1	1	1	1	1	1
Diseases of the Larynx and Thyroid Body.....	68	1	1	1	1	1	1	1	1	1	1	1
Acute Bronchitis.....	69	16	4	1	1	1	1	1	1	1	1	1
Chronic Bronchitis.....	70	1	1	1	1	1	1	1	1	1	1	1
Broncho-Pneumonia.....	71	2	3	1	1	1	1	1	1	1	1	1
Pneumonia.....	72	8	2	20	8	2	2	4	6	7	9	4
Pleurisy.....	73	1	1	1	1	1	1	1	1	1	1	1
Congestion and Apoplexy of Lungs.....	74	2	2	1	1	1	1	1	1	1	1	1
Asthma.....	76	1	1	1	1	1	1	1	1	1	1	1
Other Diseases of the Respiratory System.....	77	B	1	1	1	1	1	1	1	1	1	1
Ulcer of Stomach.....	80	1	1	1	1	1	1	1	1	1	1	1
Other Diseases of Stomach (Cancer excepted).....	81	4	1	1	1	1	1	1	1	1	1	1
Infantile Diarrhoea, Dysentery.....	82	6	49	14	1	1	1	1	1	1	1	1
Diarrhoea and Enteritis.....	83	7	1	1	1	1	1	1	1	1	1	1
Dysentery.....	84	1	1	1	1	1	1	1	1	1	1	1
Hernia and Intestinal Obstructions.....	86	1	2	1	1	1	1	1	1	1	1	1

AGE PERIODS.	SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.				
			United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Singly.	Widowed.	Not stated.
Fifty to fifty-five.	1	2	3	25	1	3	3	1	1	1	1	2	13	8	1	1	1
Fifty-five to sixty.	1	2	3	7	1	1	1	1	1	1	1	2	8	2	1	1	1
Sixty to seventy.	1	2	3	15	1	1	1	1	1	1	1	2	15	5	1	1	1
Seventy to eighty.	1	2	3	17	1	1	1	1	1	1	1	2	16	5	1	1	1
Eighty to ninety.	1	2	3	6	1	1	1	1	1	1	1	2	8	3	1	1	1
Over ninety.	1	2	3	26	2	4	4	1	1	1	1	2	56	8	1	1	1
Not stated.	1	2	3	3	1	1	1	1	1	1	1	2	4	2	1	1	1
Male.	24	12	8	106	12	12	12	6	6	4	8	64	71	3	15	8	3
Female.	19	12	8	12	1	1	1	3	3	1	5	11	18	2	1	1	1
Color of decedent white unless designated by mark.	24	12	8	106	12	12	12	6	6	4	8	64	71	3	15	8	3
Nativity.	24	12	8	106	12	12	12	6	6	4	8	64	71	3	15	8	3
Social Condition.	24	12	8	106	12	12	12	6	6	4	8	64	71	3	15	8	3





TABLE 81.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

DEATHS IN WEST HOBOKEN.	AGE PERIODS.												
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.	
Congenital Debility, Icterus and Sclerema.....	138	17	12										
Senile Debility.....	141												
Suicide or Attempt at Suicide.	142	A	B	C	D	By Poison.....	1	1				1	
By Asphyxia.....											1	1	
By Strangulation.....													
By Firearms.....													
Other Accidental Injuries.....	145	1											
Burns by Fire.....	146	A	1	1			1						
Inanition.....	149	B	1	1									
Inhalation of Noxious Gases (Suicide excepted).....	150		1	1	2	1							
Asphyxia-Cyanosis.....	156	1											
Total deaths, 890. Death-rate, 14.48.													

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904—Continued.

AGE PERIODS.	SEX.	COLOR.	NATIVITY.	SOCIAL CONDITION.			
				Married.	Single.	Widowed.	Not stated.
Fifty to fifty-five.	Male.						
Fifty-five to sixty.	Female.						
Sixty to seventy.	Color of decedent stated as being noted by mark.						
Seventy to eighty.	United States.						
Eighty to ninety.	England.						
Over ninety.	France.						
Not stated.	Germany.						
	Ireland.						
	Italy.						
	Scotland.						
	Hungary.						
	Sweden.						
	Other foreign.						
	Not stated.						
	Married.						
	Single.						
	Widowed.						
	Not stated.						





TABLE 83.—TABULATION OF DEATHS FROM THE CLASSIFIED DISEASES THE YEAR ENDING

	AGE PERIODS.											
	Under one month.	Under one year.	One to five.	Five to ten.	Ten to fifteen.	Fifteen to twenty.	Twenty to twenty-five.	Twenty-five to thirty.	Thirty to thirty-five.	Thirty-five to forty.	Forty to forty-five.	Forty-five to fifty.
DEATHS IN WEST ORANGE.												
Measles.....	5											
Scarlet Fever.....	6											
Diphtheria and Croup.....	5											
Tuberculosis—Of the Lungs.....	22	A										
Of the Mouth.....		A										
Of the Stomach and Liver.....		B										
Of the Female Genital Organs.....	25	D										
Others.....		C										
Cancer.....												
Diabetes.....	28											
Simple Meningitis.....	39		2	1	1	1						
Cerebral Hemorrhage and Congestion.....	42											
Paralysis Without Indicated Cause.....	44											
Convulsions of Infants.....	49											
Endocarditis.....	56											
Organic Diseases of the Heart.....	57											
Angina Pectoris.....	58											
Embolism.....	60		1									
Broncho-Pneumonia.....	71											
Pneumonia.....	72		1									
Asthma.....	76											
Pulmonary Emphysema.....	77	A										
Other Diseases of the Respiratory System.....		B										
Other Diseases of Stomach (Cancer excepted).....	81											
Infantile Diarrhœa, Athrepsia.....	82		7									
Dysentery.....	84		1									
Hernia and Intestinal Obstructions.....	86											
Inflammatory Peritonitis (Non-Puerperal).....	92				1							
Appendicitis.....	95											
Acute Nephritis.....	96		1									
Bright's Disease.....	97											
Other Diseases of Bones.....	132				1							
Malformations.....	137											
Congenital Debility, Icterus and Sclerema.....	138		4									
Senile Debility.....	141											
Suicide or Attempt at Suicide—By Cutting Instruments.....	142	E										
Other Accidental Injuries.....	143	E										
Burns by Fire.....	145	A										
Asphyxia-Cyanosis.....	156		1									
Unknown or Not Specified Diseases.....	161											

Total deaths, 85. Death-rate, 11.01.

IN THE STATISTICAL DIVISIONS OF THE STATE OF NEW JERSEY FOR DECEMBER 31, 1904.

	AGE PERIODS.						SEX.	COLOR.	NATIVITY.										SOCIAL CONDITION.								
	Fifty to fifty-five.	Fifty-five to sixty.	Sixty to seventy.	Seventy to eighty.	Eighty to ninety.	Over ninety.			Not stated.	Male.	Female.	Color of descent (designated by mark).	United States.	England.	France.	Germany.	Ireland.	Italy.	Scotland.	Hungary.	Sweden.	Other foreign.	Not stated.	Married.	Single.	Widowed.	Not stated.
.....								1	1																1	1	
.....											1														1	1	
.....			1																						1	1	
.....								2	11																7	6	
.....								1	1																1	1	
.....																									1	1	
.....								1	1																1	1	
.....								1	4																1	6	
.....								1	1																1	1	
.....								1	1																1	1	
.....								1	1																1	1	
.....								2	1																1	1	
.....								1	1																1	1	
.....								1	1																1	1	
.....								1	1																1	1	
.....								4	4					6											1	4	8
.....								1	1																1	1	
.....								1	1																1	1	
.....								1	1																1	1	
.....								1	1																1	1	
.....								3	4					2											1	7	
.....								1	1					1											1	1	
.....								2	1					1											2	1	
.....								1	1					1											1	1	
.....								2	2					1											2	1	2
.....								1	1					1											1	1	
.....								1	1					1											1	1	
.....								3	2					5											5	5	
.....								1	1					1											1	1	
.....								1	1					1											1	1	
.....								1	1					1											1	1	
.....								1	1					1											1	1	
.....								1	1					1											1	1	

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