Annual Report

of the...

Department of Health

of...

The City of New York

for the...

Years 1910-1911

REPORT

OF THE

BOARD OF HEALTH

OF THE

DEPARTMENT OF HEALTH

OF

THE CITY OF NEW YORK

FOR THE

YEARS 1910 AND 1911.

GENERAL ADMINISTRATION.

The expansion in the scope and activities of the Department of Health which has been a notable feature of the general development of the municipal administration since the formation of the Greater City of New York has continued during the past two years. At the beginning of 1902 the number of employees in the department was approximately 1,000, and the total appropriation for that year was $1,294,371.11. At the end of 1910 there were 2,466 employees, and at the end of 1911 2,427 employees. The total financial resources of the department were $3,122,894.18 in 1910 and $3,874,-524.50 in 1911.

Reduction of the Death Rate.

The period under review has seen the establishment of two successive low records in the death rate of New York City, namely, 15.98 per thousand of the population for the year 1910 and 15.18 for the year 1911. A remarkable and continuous decrease in the death rate of the city has accompanied the development of our system of public sanitation. In 1866, the year in which the department was organized, the death rate of New York City was 36.31 per thousand. For the first ten years thereafter it averaged 26.61 per thousand. The figure fell continuously during succeeding decennia, reaching the rate of 18.84 for the ten-year period from 1899 to 1908, and falling to 16.00 for the year 1909. Comparing the death rate of 1910 with that of the first decennium under the organization of the Department of Health, we find a decrease of about 40 per cent., or a decrease of over 50 per cent. if the first and last years of this period are compared.

The Health of the City.

In order fairly to compare the health of New York City at the present time with conditions which obtained fifty years ago we are compelled to use the mortality figures of the constituent boroughs where vital statistics have been most carefully kept, namely, those portions of the present city comprised in the Boroughs of Manhattan and The Bronx (the former City of New York) and the Borough of Brooklyn (former City of Brooklyn). If the death rate for this area is tabulated for each year since 1868 it will be seen that there has been a steady fall from 27.90 in 1868 to 16.10 in 1910. If the data be examined more closely, it will be seen that this decrease was limited to deaths from certain diseases and in certain age groups. An enormous reduction in mortality has taken place in all age groups below forty-five, while there has not only been a decline but an actual increase in the mortality at all ages over forty-five.

If for the same period and the same area we tabulate the death rates from principal causes, it is found that there has been a decided reduction in the mortality from smallpox, typhoid fever, diphtheria and pulmonary tuberculosis, while there has been but little change in the mortality from measles, scarlet fever, bronchitis, and a well-marked increase of mortality from pneumonia, cancer, Bright's disease and heart disease.

Success of Sanitary Administration.

Without exception, therefore, the diseases in which a reduction of mortality has been effected belong to the class of infectious diseases, while of those diseases in which

there has been an increase in the mortality only one, pneumonia, belongs to that group, and as to this, a large part of the increase is only apparent, due to a change in the designation of deaths formerly ascribed to bronchitis.

These facts are doubly significant. In the first place they show in an unmistakable manner the success of public sanitary administration which has heretofore directed its efforts almost entirely against infectious diseases. They also point with equal clearness toward the field in which public hygiene must expect its greatest triumphs in the future, namely, the reduction of mortality from the diseases of middle and old age.

Generally speaking, a study of the vital statistics of New York or any community can hardly fail to indicate the enormous advances achieved by sanitary science in the past fifty years. Since the full benefits of the methods and practice of sanitary science are available to any intelligent and well-organized community which will make the necessary expenditures, it may be truly said that within certain limits *public health is purchasable.*

Organization.

During 1910 certain changes in the organization of the Department were deemed advisable. The Sanitary Bureau was previously organized in several divisions, each of which, under a centralized plan of control, exercised authority throughout the entire city. While it was believed that this form of organization made for efficiency, it was found on careful consideration to be of doubtful legality in view of Charter provisions assigning an assistant sanitary superintendent to each borough to have charge there of the routine work of the Department. Accordingly the organization of the Saniary Bureau was modified and the assistant sanitary superintendents have resumed functions more strictly in accordance with the Charter, and now supervise each in his respective borough the contagious disease and general inspection work of the Department. The position and functions of the assistant sanitary superintendents, the assistant registrars of records and the assistant chief clerks in the several boroughs have been more carefully defined so that these officers have full charge of the work and of the employees in their respective bureaus in strict accordance with the letter and spirit of the Charter.

The contagious disease hospitals, consisting of three large groups of institutions in the Boroughs of Manhattan, Brooklyn and The Bronx, constitute a distinct and coherent branch of the service of the Department, facing both the problems of general hospital administration and the peculiar requirements for the proper segregation and treatment of contagious diseases. In recent years the hospital plant has grown materially. It was therefore deemed advisable to give to the Division of Hospitals in effect the rank of a bureau of the Department and the Superintendent of Hospitals now reports directly to the Board of Health through the Commissioner, the work of the hospitals being also subject to the constant advisory oversight of the General Medical Officer.

In like manner the work of the Bacteriological Laboratories having grown of late years into a highly specialized division charged with research into the nature of infectious diseases, the perfection of methods of treatment and the manufacture of antitoxin, sera and vaccines for the cure of these diseases, this division also was assigned the standing of an independent bureau under the supervision of a Director of Laboratories reporting directly to the Commissioner.

Extension of Civil Service Principles.

The policy of appointing departmental employees in strict numerical order from the Civil Service lists was not at first applied specifically to the Department of Health; nevertheless, out of several hundred appointments made during the year 1910, less

than half a dozen cases occurred in which the first person on the list who was willing to accept the position was not appointed. In nearly all of the cases in which an exception was made, the reason was that some employee already in the service might either be retained or promoted.

On November 1, 1910, the Board of Health requested the Civil Service Commission to place in the competitive class fifteen positions previously in the non-competitive class. The approval of this request by the Municipal Civil Service Commission affected 236 individuals attached principally to the hospital service, including 44 drivers, 37 hospital clerks, 94 laborers, 21 firemen, 11 stationary engineers and other similar positions. The non-competitive class now includes practically only those hospital employees who are compelled to come into direct contact with the patients, which positions the Department must always be able to fill at a moment's notice.

Much attention has been directed toward the development of plans for the orderly advancement of employees in the service on the basis of efficiency only. Early in 1910 a committee was formed consisting of the chief executive officers of the several bureaus to advise the Commissioner on matters relating to salaries, promotions and discipline. This committee passes on all applications for increases of salary and on the selection of employees for advancement within civil service grades. In this and other ways, effort has been made to eliminate favoritism and improper influence in making promotions within the Department.

Use of Summonses.

In November, 1910, the practice of applying for a warrant for the arrest of persons who had violated the Sanitary Code was discontinued, and the Magistrate was requested instead to issue a summons for the defendant to appear. This change was made applicable to those cases in which the defendant had a store, or other place of business, or could be satisfactorily identified, and where there was no reason to suspect that he would not respond to the summons. Persons holding identification cards issued by the Police Department, pursuant to Chapter 659 of the Laws of 1910, were also to be proceeded against by summons instead of by arrest.

Offal Contract.

An important economy was effected in the reletting of the contract for the removal of offal and night-soil. On February 11, 1910, this contract was awarded for a period of five years to the lowest bidder, the Products Manufacturing Company, at an annual rate of $50,000 a year, representing a saving to the city of $19,880 annually over the former contract rate of $69,880.

Publications.

On January 1, 1911, the Department began the publication of the Monthly Bulletin and has since revised the form of its Weekly Report. Standard forms of publication of papers by officers of the Department and of reprints of similar papers from medical journals are being devised.

Information Bureau.

In 1911 an office was established near the main entrance of the Department building for the more convenient and expeditious handling of the great number of citizens who call at the Department to make complaints, to file applications for permits and to seek information regarding various branches of the work.

GENERAL ADMINISTRATION.

Filing Office.

Commencing in 1911 an improved plan of filing correspondence in one central office in the headquarters building was put in force. This plan has been gradually extended and is intended eventually to include the correspondence, reports and other papers of practically all divisions and offices.

Office of the Secretary.

The greater part of the routine work of general administration, comprising correspondence, keeping and filing records of Board action, and the issue of permits, notices and orders, together with the many details in connection with accounts and supplies in the Office of the Chief Clerk, comes under the jurisdiction of the Secretary of the Board of Health, whose office constitutes in effect a Bureau of General Administration. The following pages contain a summary statement of the work performed in the office of the Secretary, including the work done under the immediate direction of the Chief Clerk and the Law Clerk, and tables showing the financial resources of the Department:

Searches Made and Transcripts Issued of the Records of Births, Marriages and Deaths.

1910.

	Manhattan.	Brooklyn.	The Bronx.	Queens.	Richmond.	New York City.
Applications for Searches	29,145	16,964	3,949	1,828	610	52,041
Transcripts signed and authenticated: Births	4,609	3,005	257	216	124	8,211
Transcripts signed and authenticated: Marriages	2,967	2,054	75	101	38	5,235
Transcripts signed and authenticated: Deaths	20,987	13,747	4,170	2,083	571	41,558
Not Found Certificates issued	4,338	2,688	93	52	24	7,195
Communications received and answered	5,113	2,021	125	713	168	8,140
Fees received	$15,044 60	$8,525 70	$1,656 70	$956 40	$298 40	$26,481 80

1911.

	Manhattan.	Brooklyn.	The Bronx.	Queens.	Richmond.	New York City.
Application for Searches	30,224	19,890	4,041	1,949	672	56,776
Transcripts signed and authenticated: Births	4,749	3,040	341	176	95	8,401
Transcripts signed and authenticated: Marriages	3,176	1,805	73	63	51	5,168
Transcripts signed and authenticated: Deaths	22,526	14,279	4,200	2,576	617	44,198
Not Found Certificates issued	4,673	2,421	163	107	42	7,406
Communications received and answered	4,207	2,035	303	568	150	7,263
Fees received	$15,381 95	$8,580 80	$1,757 90	$1,098 00	$320 60	$27,139 25

Action Taken by the Board of Health on Reports, Communications, Permits, Notices and Orders.

	1910.	1911.
Special reports and communications submitted to the Board of Health for action	760	949
Premises declared a public nuisance	128	317
Premises ordered vacated	203	314
Lodging-house permits granted	140	96
Cow permits granted	101	73
Miscellaneous permits granted	9,395	9,848
Permits denied	3,703	2,735
Permits revoked	7,486	5,676
Board orders extended or modified	151	45
Extension or modification of Board orders denied	503	172
Delayed and imperfect certificates of births, marriages and deaths approved and ordered filed	3,114	73
Corrected certificates of births, marriages and deaths approved and ordered filed	888	1,050

GENERAL ADMINISTRATION.

CONTRACTS.

In 1910 93 contracts for supplies were made at a total cost of $439,701.94; 20 contracts for building construction, building materials, and architect's services were made at a cost of $122,124.29. During the year many items which had previously been purchased on open market orders were included under contract purchase, namely, horseshoeing, guinea pigs and rabbits, green groceries and fruits, textiles, furniture, wagons, etc.

In 1911 127 contracts for supplies were made at a total cost of $493,013.39; 18 contracts for building construction and building materials were made at a cost of $340,624.40.

NEW BUILDINGS.

The following schedule shows the new buildings and permanent improvements to existing plant for which contracts were let during the two years under review in this report:

1910.

Description and Location.	Cost.
Foundation for two pavilions at Riverside Hospital	$15,955 00
Lighting fixtures for Brooklyn Office Building	2,690 00
Erection of two pavilions at Riverside Hospital	76,700 00
Steam heating for antitoxin stable at Otisville, N. Y.	2,038 00
Installation dynamo and electric plant at Otisville, N. Y.	5,949 00
Total	$103,332 00

1911.

Description and Location.	Cost.
Erection of a measles pavilion at Willard Parker Hospitals	$222,950 00
Extension to boiler house at Riverside Hospital	35,164 00
Installation of boilers and pipe tunnel at Riverside Hospital	43,000 00
Lighting fixtures for two pavilions at Riverside Hospital	3,275 00
Partitions for two pavilions at Riverside Hospital	1,820 00
Painting two pavilions at Riverside Hospital	645 00
Installation of fire-alarms and equipments—all hospitals	7,904 94
Installation of heating systems at Otisville	2,246 00
Total	$317,004 94

STATEMENT SHOWING SALE AND DISTRIBUTION OF LABORATORY PRODUCTS.

ANTITOXIN.

	1910.		1911.	
Stock and ledger accounts at beginning of year	$35,753 99		$26,909 57	
Value of antitoxin received from laboratory	271,860 13		212,412 08	
	$307,614 12		$239,321 65	
Less antitoxin to replace old stock	11,723 50		12,678 65	
		$295,890 62		$226,643 00
Free distribution	$228,187 35		$172,677 15	
Cash	40,245 51		22,544 84	
Discounts to agents	2,256 65		1,673 19	
On sale with agents and ledger accounts	23,734 16		28,053 02	
Stock on hand	1,466 95		1,694 80	
		$295,890 62		$226,643 00

GENERAL ADMINISTRATION.

PREVENTIVE HYDROPHOBIA TREATMENTS.

Amount owing at beginning of year	$8,840 00	$11,434 00
Treatments reported during year	16,182 00	13,205 00
	$25,022 00	$24,639 00
Cash receipts during year	10,981 00	13,165 00
Amount owing at end of year	$14,041 00	$11,474 00

VIRUS.

Stock and ledger accounts at beginning of year	$2,220 09		$2,610 44	
Value of vaccine virus from laboratory	34,672 30		33,776 45	
	$36.892 39		$36,386 89	
Less virus to replace old stock	6,283 75		4,234 35	
		$30,608 64		$32,152 54
Free distribution	$12,898 20		$12,804 90	
Cash	11,243 73		10,299 76	
Discount to agents	4,581 27		4,010 21	
On sale with agents and ledger accounts	1,645 79		4,618 52	
Stock on hand	239 65		419 15	
		$30,608 64		$32,152 54

CORPORATE STOCK ISSUED FOR PERMANENT IMPROVEMENTS.

1910.

Code C.D.H.	18—June 3—Erection of measles pavilion, foot of East 16th street	$200,000 00
" C.D.H.	7R—June 3—Construction of buildings and improvements of grounds by Departmental labor	40,000 00
Total, 1910		$240,000 00

1911.

Code C.D.H.	3A—Construction of new boiler house and tunnel system at Riverside Hospital	$90,000 00
" C.D.H.	3B—Construction of dormitory for female help at Riverside Hospital	90,000 00
" C.D.H.	3C—Construction of extension to nurses' home at Riverside Hospital	65,000 00
" C.D.H.	3D—Construction of two concrete pavilions for tuberculosis patients at Riverside Hospital	110,000 00
" C.D.H.	3E—Construction of a concrete pavilion for venereal diseases at Riverside Hospital	55,000 00
" C.D.H.	3F—Construction and improvement of roads on North Brother Island—Riverside Hospital	5,000 00
" C.D.H.	3G—Lighting fixtures, furniture and equipment for two new concrete pavilions at Riverside Hospital	15,000 00
" C.D.H.	5A—Kingston Avenue Hospital—Construction of kitchen building	75,000 00
" C.D.H.	5B—Kingston Avenue Hospital—Construction of sewer lines, etc	25,000 00
" C.D.H.	7B—Sanatorium at Otisville, N. Y.—Additional water supply and water lines	50,000 00
" C.D.H.	7R—Sanatorium at Otisville, N. Y.—Construction of buildings and improvement of grounds by Department labor	75,000 00

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Code C.D.H.	18—Erection of measles pavilion, foot of East 16th street, Borough of Manhattan	$60,000 00
" C.D.H.	19A—Construction of an underground tunnel at Willard Parker and Reception Hospitals	35,000 00
" C.D.H.	24—Construction of a hospital for contagious diseases, Borough of The Bronx	125,000 00
" C.D.H.	25—Construction of a hospital for contagious diseases, Borough of Queens	125,000 00
Total, 1911		$1,000,000 00

Statement Showing the Total Financial Resources of the Department During the Period from 1902 to 1911.

Year.	Appropriation.	Bond Issue.	Sales of Laboratory Products.	Care and Maintenance of Immigrants.	Total.
1902...	$984,391 48	$242,662 50	$32,048 13	$35,272 00	$1,294,374 11
1903...	1,034,391 48	230,600 00	21,432 91	33,726 00	1,320,150 39
1904...	1,109,391 48	429,458 00	28,353 61	24,256 00	1,591,459 09
1905...	1,259,391 48	422,397 88	32,368 32	47,546 00	1,761,703 68
1906...	1,344,396 66	576,257 50	25,638 08	86,580 00	2,032,872 24
1907...	1,847,819 66	409,446 08	34,964 04	96,562 00	2,388,791 78
1908...	2,279,849 50	191,500 00	37,581 03	60,570 00	2,569,500 53
1909...	2,484,859 25	554,275 00	43,491 16	56,090 00	3,138,715 41
1910...	2,747,723 00	316,436 25	62,470 24	146 00	3,126,775 49
1911...	2,823,499 50	1,036,025 00	46,009 60	7,548 00	3,913,082 10

Dead Animals, Offal and Night Soil Ordered Removed—1910 *and* 1911.

	New York.		Manhattan.		Brooklyn.		The Bronx.		Queens.		Richmond.	
	1910.	1911.	1910.	1911.	1910.	1911.	1910.	1911.	1910.	1911.	1910.	1911.
Carcasses Removed:												
Large Animals:												
Horses	20,552	19,921	10,340	9,634	6,224	6,158	1,776	1,691	1,656	1,895	556	543
Mules	6	8	2	2	.....	3	1	....	....	1	3	2
Donkeys	7	8	5	1	.....	5	1	1	....	....	1	1
Colts	40	31	28	22	8	2	2	2	2	3	....	2
Ponies	12	27	11	6	1	15	....	1	....	3	....	2
Cattle	209	359	74	200	19	31	10	19	86	75	20	34
Other large animals	10	12	.....	9	9	2	....	....	1	1	....	....
Total large animals	20,836	20,366	10,460	9,874	6,261	6,216	1,790	1,714	1,745	1,978	580	584
Small Animals:												
Calves	788	981	773	963	7	9	....	1	6	2	2	6
Sheep	177	236	175	236	.....	.....	....	....	2	....	....	....
Goats	109	134	16	20	54	78	....	....	32	28	7	8
Hogs	89	.....	84	.....	2	.....	....	....	....	....	3	....
Pigs	1	124	.....	112	.....	5	....	....	....	3	1	4
Cats and dogs from streets	136,160	124,788	99,172	89,700	17,295	14,858	11,536	11,898	1,867	1,898	6,290	6,434
Cats and dogs from A. S. P. C. A. "Shelter"	305,390	350,242	221,414	249,657	82,181	98,693	....	....	....	....	1,795	1,892
Other small animals	2	7	2	.....	.....	6	....	....	....	....	....	1
Total small animals	442,716	476,512	321,636	340,688	99,539	113,649	11,536	11,899	1,907	1,931	8,098	8,345
Total all animals	463,552	496,878	332,096	350,562	105,800	119,865	13,326	13,613	3,652	3,909	8,678	8,929
Quantity of Meat, Offal, etc., Removed:												
Pounds of meat	42,350	11,025	36,750	11,025	5,600	.....	....	....	....	....	....	....
Pounds of poultry	98,100	128,115	98,100	128,115	.....	.....	....	....	....	....	....	....
Pounds of rabbits	.....	15	.....	.....	.....	.....	....	....	....	....	....	15
Pounds of fish	2,243,413	662,350	1,585,680	32,750	657,733	629,600	....	....	....	....	....	....
Pounds of offal	3,285,607	3,685,600	2,127,340	2,429,200	1,158,267	1,256,400	....	....	....	....	....	....
Total pounds	5,669,470	4,487,105	3,847,870	2,601,090	1,821,600	1,886,000	....	....	....	....	....	15
Quantity of Night Soil Removed:												
Cubic yards of night soil removed	1,946	1,802	.....	.....	794	630	....	....	1,152	1,172	....	....

Inspection and Condemnation of Meat.

New York.	Year 1910.			Year 1911.		
	Inspections.	Condemnations.	Pounds Condemned.	Inspections.	Condemnations.	Pounds Condemned.
Butcher shops	70,941	317	20,429	22,694	486	27,517
Stores	25,429	114	19,906	9,177	185	28,495
Packing houses	4,520	58	55,710	992	6	865
Ice houses	16,617	165	48,704	7,843	172	31,345
Stands	51,310	108	2,549	15,285	654	83,327
Vessels	598	8	206,465	726	4	901
Markets	2,035	1,008	167,320	1,185	174	25,076
Railroad depots	1,012	40	18,445	456	51	30,660
Stock yards	3,916	234	168,283	766	701	198,399
Slaughter houses	12,534	3,494	1,140,992	5,349	8,036	339,699
Commission houses	7,581	110	30,655	16,312	1,603	139,156
Fat houses	804	.....	.....	666	.....	.....
Licensed venders	33,984	41	1,314	4,892	20	3,193
Cow sale stables	1	.....	.....	40	.....	.....
Total	231,282	5,697	1,880,772	86,383	12,092	908,633

Inspection and Condemnation of Fruit, Fish and Other Foods.

New York.	Year 1909.			Year 1910.			Year 1911.		
	Inspections.	Condemnations.	Pounds Condemned.	Inspections.	Condemnations.	Pounds Condemned.	Inspections.	Condemnations.	Pounds Condemned.
Commission houses	64,779	1,888	1,166,793	90,518	3,301	3,547,629	45,778	1,606	3,545,840
Retail stores	60,686	1,052	269,129	60,595	704	516,110	44,986	2,595	362,682
Licensed venders	104,257	1,380	219,753	127,437	1,022	208,051	37,977	512	36,029
Vessels and wharves	12,261	1,208	17,847,255	10,654	1,191	13,310,227	8,674	941	8,354,063
Railroad depots	456	211	384,215	1,157	357	615,308	1,199	156	333,396
Stands	88,357	3,090	136,913	180,367	2,380	203,995	104,162	1,931	151,298
Markets	1,823	463	703,390	8,097	987	1,899,248	4,443	299	141,402
Ice houses	430	37	161,857	783	29	115,205	1,339	35	100,351
Pushcarts	137,018	8,936	186,707	160,794	8,934	263,609	144,321	10,825	95,947
Total	470,067	18,265	21,076,012	640,402	18,905	20,679,382	392,879	18,900	13,121,008

Pounds of Meat Condemned and Destroyed.

CITY OF NEW YORK.

	1910							
	Beef.	Veal.	Sheep.	Hogs.	Assorted Meats.	Poultry.	Game.	Total.
Butcher shops	2,708	2,815	730	1,065	8,762	4,211	42	20,420
Stores	560	115	100	2,997	14,084	1,749	232	19,900
Packing houses	50,150	100	200	4,135	1,125	.....	....	55,710
Ice houses	27,063	546	485	4,306	13,065	1,449	1,790	48,704
Stands	820	550	....	25	451	703	....	2,549
Vessels	186,225	.....	18,480	.....	1,550	200	10	206,465
Markets	10,621	16,187	605	631	10,076	126,800	1,800	167,320
Railroad depots	.....	3,267	....	25	350	14,693	110	18,445
Stock yards	59,600	61,333	15,650	22,350	250	9,100	...	168,283
Slaughter houses	348,033	153,377	10,608	155,807	454,243	18,924	....	1,140,992
Commission houses	50	7,153	125	.....	6,535	16,605	187	30,655
Fat houses	.....	.....	....	.....	....	.....	....	.....
Licensed venders	.....	.....	....	50	300	364	600	1,314
Cow sale stables	.....	.....	....	.....	....	.....	....	.....
Total	685,929	245,443	47,049	191,391	511,391	194,798	4,771	1,880,772

	1911							
	Beef.	Veal.	Sheep.	Hogs.	Assorted Meats.	Poultry.	Game.	Total.
Butcher shops	5,358	1,091	257	3,122	9,376	7,884	429	27,517
Stores	1,566	145	523	3,586	20,645	2,030	....	28,495
Packing houses	.....	.....	....	400	465	.....	....	865
Ice houses	8,403	1,480	985	6,109	10,523	3,745	100	31,345
Stands	7,092	5,380	830	1,452	1,672	66,054	847	83,327
Vessels	.....	.....	....	255	.....	646	....	901
Markets	750	3,664	120	130	348	19,864	....	25,076
Railroad depots	18,815	4,197	4,950	300	130	2,268	....	30,660
Stock yards	106,579	51,898	11,330	21,851	6,716	25	7	198,39
Slaughter houses	149,217	49,067	375	9,963	127,090	3,217	770	339,699
Commission houses	3,583	14,065	1,289	5,109	16,022	85,247	13,841	139,156
Fat houses	.....	.....	....	....	.....	.....	....	.....
Licensed venders	.....	.....	....	....	.....	3,193	....	3,193
Cow sale stables	.....	.....	....	....	.....	.....	....	.....
Total	301,363	130,987	20,659	52,277	193,187	194,173	15,987	908,633

Pounds of Fruit, Fish and Other Foods Condemned and Destroyed.

CITY OF NEW YORK.

	1910								
	Fruit.	Vegetables.	Canned Goods.	Confectionery.	Groceries.	Eggs.	Fish.	Miscellaneous.	Total.
Commission house...	1,052,494	1,930,773	125,820	45,760	19,844	69,179	284,725	19,034	3,547,629
Retail stores.....	73,312	124,724	16,691	39,572	249,071	4,561	6,247	1,932	516,110
Licensed venders.....	61,715	44,071	2,000	....	....	50	100,215	....	208,051
Vessels and wharves.	10,472,122	2,652,027	31,491	....	43,560	1,730	74,875	34,422	13,310,227
Railroad depots.....	33,630	580,550	243	....	....	250	520	115	615,308
Stands.....	32,406	136,150	750	148	25	350	34,100	....	203,995
Markets.....	193,265	1,704,565	373	....	....	....	1,045	....	1,899,248
Ice houses.....	3,120	550	.....	53,800	.....	8,940	42,375	6,420	115,205
Pushcarts.....	215,251	26,731	38	477	15	15	20,972	110	263,609
Total.....	12,137,375	7,200,147	177,406	139,757	312,515	85,075	565,074	62,033	20,679,382

	1911								
	Fruit.	Vegetables.	Canned Goods.	Confectionery.	Groceries.	Eggs.	Fish.	Miscellaneous.	Total.
Commission house...	696,517	1,513,459	958,526	64,696	144,211	29,278	91,736	47,417	3,545,840
Retail stores.....	23,597	36,069	193,450	21,171	34,934	5,160	18,448	29,853	362,682
Licensed venders.....	18,763	11,293	6	52	....	1,990	3,920	5	36,029
Vessels and wharves.	7,530,381	687,091	50,332	500	49,560	2,021	17,633	16,545	8,354,063
Railroad depots.....	65,660	264,005	3,046	15	.....	....	670	....	333,396
Stands.....	29,196	20,943	22	873	23,645	107	76,412	100	151,298
Markets.....	5,139	9,083	1	....	.....	.....	126,954	225	141,402
Ice houses.....	25	.....	53,664	....	665	33,689	12,300	8	100,351
Pushcarts.....	65,955	25,257	318	449	200	540	2,474	754	95,947
Total.....	8,435,233	2,567,200	1,259,365	87,756	253,215	72,785	350,547	94,907	13,121,008

FOOD AND MILK INSPECTION.

MILK INSPECTION.

The plans of the Department for the improvement in the sanitary control of the city's milk supply, which have been under development since January 1, 1910, are the most radical and important since the establishment of milk inspection in New York in the early 80's, and no subject has received more effective consideration during the period covered by this report.

Pasteurization.

During the past three years the course of events has furnished striking proof of the need of pasteurization of all except special grades of milk. By means of a well-organized system of inspection, based on the issue of permits to ship and sell milk in New York City, the Department is in a position to trace the history and source of all milk brought into the city, and is thereby enabled to undertake satisfactory detective work in determining the causes of given outbreaks of infectious disease due to contaminated milk. Studies carried out in this manner have proved beyond reasonable doubt that since August, 1909, at least two extensive outbreaks of typhoid fever in the city were caused by the infection of particular milk supplies from chronic bacillus carriers. In the case of one outbreak traced to Camden, N. Y., the infection came from a dairyman who had had typhoid fever in Wisconsin in 1863. The subsequent history of his family showed that the disease had attacked nearly every member of his household, including farm laborers who had worked with him from time to time. Bateriological examinations in 1909, forty-six years after he had had the disease, resulted in the development of almost pure cultures of typhoid fever bacilli.

Danger from "Typhoid Carriers."

The necessity of extraordinary precautions, particularly in the case of largycites, to guard the milk supply against such danger is self-evident. Typhoid bacillus carriers are not the rare phenomena they were formerly supposed to be, and the presence of even one of these unfortunate persons in the great army of workers engaged in producing and handling the milk supply of a large city is a source of danger which is the more threatening and insidious because it is so impossible to detect by ordinary means. To insure the safety of milk from such infection would require repeated bacteriological examinations of every individual connected with the production, transportation and marketing of the milk. There are, perhaps, three hundred thousand persons who stand in this relation to the milk supply of New York City, and a recent estimate of the relative frequency of bacillus carriers gives reason for the belief that there are at least one hundred such individuals among this number. No matter how many inspectors of dairies, creameries and stores the Department might employ, no matter how perfectly organized the system of permits and information as to the source of milk, these forces alone cannot protect the health of the city.

On March 23, 1910, the General Medical Officer presented to the Board a report dealing with the newly understood source of danger to the milk supply and strongly advising the adoption of measures to secure the extension of pasteurization. On consideration of this report the Board of Health thereupon adopted the following resolution:

> *Resolved,* That it is the sense of this Board that milk used for drinking purposes should be either properly pasteurized or boiled unless it is what is technically known as certified, guaranteed or inspected milk.

In order to bring this advice home to the people of the city, the Department

caused to be posted in all places in the city where milk is sold a printed notice reading as follows:

> FOR INFANT FEEDING USE CERTIFIED OR GUARANTEED MILK OR BOTTLED PASTEURIZED MILK.
>
> IF YOU USE OTHER BOTTLED MILK, OR ANY MILK FROM CANS, IT SHOULD BE EITHER BROUGHT TO A BOIL OR PASTEURIZED AT HOME BEFORE FEEDING IT TO THE BABY.

With this emphatic announcement of its policy the Department took up the work of formulating a plan for the enforcement of pasteurization of all except special grades of milk, to be put into effect as soon as practicable.

CLASSIFICATION OF MILK.

As developed, this plan also included the cognate object of grading the milk sold in New York. It was believed that an ordinance requiring all dealers to begin pasteurization at once would be unenforcible, in view of physical problems involving many difficulties, the installation of new equipment the adjustment of trade conditions and the change of long accustomed routine. Moreover, it was thought that the problem could be better solved by establishing a classification of the milk which should provide for the sale of both raw and pasteurized grades, but under such high requirements for raw milk as to bring about the gradual but inevitable adoption of pasteurization by the majority of dealers. Such a grading system, moreover, would constitute in itself an important advance by classifying milk according to its intended use and would thus make possible greater economy and efficiency in the work of its inspection and control, as well as giving the consumer, through the requirement of appropriate labeling of bottles and cans, a far more accurate idea of what he was purchasing.

On January 31, 1911, the Board of Health decided that the time had come for a definite announcement that after January 1, 1912, the pasteurization of all except special grades of milk would be required.

At the same time the Department announced the general outline of its plan for grading the milk supply. The intention was to warn the public and dealers that beginning in 1912 the Department proposed to adopt extraordinary measures to improve the sanitary quality of the city's milk. Nearly a year was then devoted to working out the details of the proposed grading plan, during which time the dealers had full knowledge of the general purpose of the Board. During the fall of 1911 conferences with representative milk dealers and producers and associations and individuals interested in the milk question were held, and every detail of the proposed new rules and regulations was carefully gone over. On December 30, 1911, the Board approved and announced the following system of grading, this action to be followed shortly by the necessary changes in the Sanitary Code and a general revision of the rules and regulations relating to the sale of milk.

GRADING PLAN.

Grade A. For Infants and Children. This grade includes (1) certified milk or guaranteed milk; (2) inspected milk, which is raw milk produced from tuberculin-tested cows at farms obtaining at least 75 points on the official score card of the Department of Health; this milk must contain an average of more than 60,000 bacteria per c.c. when delivered to the consumer; (3) selected milk pasteurized; milk of this grade must be produced at farms which score at least 60 points and must not contain more than an average of 50,000 bacteria per c.c. when delivered; no milk averaging more than 200,000 bacteria per c.c. shall be pasteurized for sale under this designation.

Grade B. For Adults. This grade includes a selected raw milk, which must be produced at farms scoring at least 68 points and from cows which have been physically examined by a regularly qualified veterinarian at least once each year. All other milk to be sold under Grade B must be pasteurized under the regulations of the Department.

Grade C. For Cooking and Manufacturing Purposes Only. This includes raw milk not conforming to the requirements of Grade A or Grade B. Milk of Grade C may not be sold at retail from stores, but must be sold to restaurants, hotels and manufacturing plants only.

The sale of condensed or concentrated milk is also allowed under special permit.

Typhoid Fever Prevention.

In view of the seriousness of the danger of milk infections from "typhoid carriers," the Department has endeavored to improve its methods of detecting infection of the milk supply. By means of the system of permits the Department is in a position to discover very quickly where a suspected lot of milk came from. More than this, by means of a system of accounting the Department is constantly keeping track of the number of cases of typhoid occurring among the customers of each milk company selling milk in the city. As soon as any one concern appears to have an undue number of cases of typhoid fever among its customers a very searching investigation is at once begun. Accurate information is collected to determine whether the source of the infection was in the city or in the country. If in the country several of the regular inspectors are at once ordered by telegraph to investigate the suspected creameries, and if a likely source of infection is discovered the milk from that point is at once shut out or ordered to be pasteurized. Owing to the long time elapsing between the time of infection and the date of onset and the additional time required to establish the diagnosis, it is impossible by this method to entirely prevent milk infections. This has been repeatedly illustrated in this city in the past, in which, despite the very prompt work on the part of the Department, large outbreaks of milk-borne infections have occurred.

On January 1, 1911, an additional set of records was started in connection with milk inspection. Reports of examinations of milk taken either for chemical or bacteriological examination are now reported and classified so that it is possible by the inspection of a series of filing cards to ascertain at once the quality of the milk supply of any particular dealer throughout the entire city for any given period of time; or so that it is possible to ascertain within the same length of time the same information in reference to any particular locality within the city.

Dairy Inspection.

The work of dairy inspection during the first half of the year showed that the result of such inspection during the preceding years was the reconstruction of old stables and other buildings essential to the dairying industry and the building of new stables where such were found necessary. It was therefore considered that the time had arrived for calling the attention of milk producers to the far greater importance which attaches to the methods employed in the production and handling of milk than to the provision of expensive equipment. It was furthermore considered important to bring home these facts to the dairymen at first hand rather than to follow up the inspection merely by a routine form letter.

New Score Card.

With these two objects in view a new dairy score card was devised and put in use, on which the items pertaining to equipment and construction were separate and distinct from those applying to the method of production. The latter items were now

accorded a total score of sixty points as against forty points for construction, thereby calling attention to the great importance of cleanly methods. This score card was so prepared for use as to enable the inspector to make a carbon copy of his original report, to be left with the dairyman whose premises were reported upon, thus giving opportunity for a complete understanding of each item adversely criticized and for the inspector to advise the dairyman whenever his advice was requested.

Increased Bacteriological Examinations.

After this duplicate score card had been in use for a few months it was decided to further emphasize the greater importance of cleanly methods by making bacteriological examinations of the samples of milk as actually delivered by each individual dairyman, in order that indications of improper methods as shown by high bacterial counts might be investigated at the dairy and the cause ascertained. With this end in view, four of the country inspectors were given a course of instructions in taking samples for bacteriological examination and were then detailed to take such samples at the creameries in regular rotation. It was not found difficult to establish a certain bacterial standard for the milk so examined, and the names of all dairymen whose milk had been found to contain a higher bacterial content than set by this standard were immediately sent to the district inspectors in order that a thorough investigation might be made, the cause of the high counts ascertained and advice given toward the correction of faulty methods.

It was found that the work of this Bacteriological Squad had an added value, in that the assignment required the presence at the creamery of the inspector taking samples during the entire procedure involved in a day's work. He was required to be on hand when the creamery opened early in the morning, in order that the milk from each dairyman might be separately sampled as delivered. After all of the milk had been received and prepared for shipment samples were taken of the cans or bottles that had been so prepared, and in a majority of instances samples of bottle or can rinsings were taken, with a view of ascertaining the degree of cleanliness that obtained after these containers had been washed. Owing to this fact a great many minor laxities in the operation of the creameries were noted that would probably have escaped attention during a routine creamery inspection, and a number of these laxities were discovered to be of prime importance as contributing causes to the occasional excessive bacterial counts reported in samples of milk taken within the city.

As the members of the bacteriological squad worked only in creameries, taking a different creamery each day, it can readily be seen that a greater number of creameries were inspected than had been previously the rule, and these inspections were also of far greater value, as they showed in detail the actual handling of milk during its receipt, refrigeration and preparation for shipment.

Other Improvements in Country Milk Inspection.

A veterinarian has been added to the country milk force. His duties consist in examining dairy herds in which diseased cows have been reported. Four of the inspectors are physicians and investigate all cases of infectious diseases occurring on dairy farms and among milk handlers. In the city very strict lines have been drawn around the sale of "loose" milk, and where stores have been found to be in an unsanitary condition permits to sell milk have been revoked.

During the latter part of 1911 the inspectors were directed to examine all creameries shipping milk to New York City, making thorough reports as to the present conditions of creameries in their respective districts. The object of this campaign is to bring all creameries up to the standard score and cause particular defects to be remedied before the summer of 1912.

FOOD AND MILK INSPECTION.

City Milk Inspection.

In June, 1911, the sanitary, bacteriological and chemical functions of city milk inspection were more carefully distinguished and special squads of inspectors assigned to each of these branches. The "sanitary" squad was directed to clean up the stores within city limits. As a result many permits for the sale of milk were revoked. A system has been adopted during 1911 of following up high bacterial counts of samples taken in the city, and the milk is traced back to the country to locate the point of contamination. In general, the Department has emphasized at every turn its determination to keep down the bacteriological count of milk sold in the city, as well as to eliminate adulterated milk. The principal cause of high counts appears to be the improper cleaning and sterilization of containers. It is found that the milk when delivered by the farmer to the creamery is usually low in bacterial content and that the heaviest increase takes place after arrival at the creamery, in transit and during the handling in the city.

During the year bacteriological examination was made of 14,058 samples of raw milk and showed that 55.32 per cent. of these samples contained less than 250,000 bacteria per c.c. This is a much better showing than in any previous year. 6,378 samples of pasteurized milk were also taken and a bacteriological examination showed that 75.22 per cent. of these samples contained less than 50,000 bacteria per c.c.

Percentage of Samples of Milk Taken During 1911 According to Bacterial Content.

Number of Bacteria.	Raw.	Pasteurized.
Under 10,000	14.95%	43.99%
10,000 to 50,000	15.52%	31.23%
50,000 to 100,000	10.69%	10.91%
100,000 to 250,000	14.15%	7.88%
250,000 to 500,000	11.59%	2.36%
500,000 to 1,000,000	10.87%	1.53%
1,000,000 to 5,000,000	16.71%	1.01%
5,000,000 to 10,000,000	3.21%	0.17%
Over 10,000,000	1.70%	0.07%
Spoiled	0.55%	0.79%

Pasteurizing Plants.

There are nineteen such plants within the City of New York and two more at nearby points. In these twenty-one plants about 250,000 quarts of milk are pasteurized daily, representing from 10 to 15 per cent. of the total daily milk supply of New York City. It is probable that 50,000 additional quarts of milk are also held or pasteurized within the creameries or shipping points outside the city.

Systematic inspections and reports are made of the city plants. A form of report has been put into use which gives a complete record of the process and methods employed. In addition, samples are frequently taken before, during and after pasteurization, to check the efficiency of the process. The Sanitary Code requires that pasteurization must be carried on under permits issued by the Department of Health. In each of the city plants all the apparatus in use is inspected, tested and approved by inspectors and the Chief Executive Officer of the Department before such permits are granted. The thorough cleansing of milk containers is insisted upon and checked by bacteriological test. Automatic temperature recording devices must be installed on the heating machines and the records kept on file for examination by the inspectors. Holding tanks are tested with colored water to determine the exact length of time the liquid is held in each machine. In many cases it has been found that the actual time is considerably less than the theoretical time, and in all such cases the dealers have been required to raise the temperature of pasteurization to a point which will insure

conformity with the schedule of temperatures and duration of exposure prescribed by the rules of the Department. The rapid cooling of pasteurized milk to a low temperature is required, and it is also necessary that all of the apparatus be thoroughly cleaned and sterilized after use. When the results of inspections show that the apparatus is not doing effective work the dealers are notified, and if on reinspections results are still unsatisfactory the sale of the milk is ordered discontinued. The tests made during the past year, however, have shown that the processes employed are generally satisfactory.

Reduction of the Milk Standard.

From the point of view of the consumers of milk in New York City it is much to be regretted that legislation was enacted in 1910 reducing the standard of total milk solids from 12 to 11.50 per cent. This bill was drawn in the interests of owners of Holstein cows, a breed which gives milk of a somewhat lower percentage of milk solids than that of other cows. While it is argued that the laws of the State should not attempt to maintain a higher standard than that of the natural product, it would hardly seem that this argument is convincing, for such a law as that recently passed is a reduction of the standard in favor of dairymen who raise this particular breed of cow. Such a reduction of the standard is an actual stimulus of adulteration, since it makes it legally possible for unscrupulous dealers to impair the food value of milk normally good by the addition of water or by a lower grade of milk until it is brought down to a point just within the legal standard. How inevitable such a result was the records of the Department already show. Certain dealers whose milk under the old law was just within the required standard of 12 per cent. are now dispensing milk which, on repeated analysis, has been shown to be just within the lowered standard of 11.50 per cent.