

Mr. Hill was first elected a member of the Board in 1895 and served continuously until his death on May 18, 1918. He served as clerk of the Board from April 5, 1902, to April 7, 1917, and as president of the Board from April 7, 1917, to May 18, 1918.

The following resolution was passed July 10, 1918, by the Board:

Resolved, That this Board will officially place upon its records this testimony to a faithful public servant and a warm and devoted friend; and that the Board respectfully tenders its heartfelt sympathy to Mrs. Hill and other members of the family in this season of their bereavement and affliction.

Respectfully submitted,

NATHANIEL E. MARTIN,
HARRY H. DUDLEY,
FRANK P. QUIMBY,
CHARLES R. WALKER,
GEORGE T. KENNEY,
BURNS P. HODGMAN,
JOHN B. ABBOTT,
OLIVER J. PELREN,
CHARLES J. FRENCH, *ex-officio*,

Board of Water Commissioners.

REPORT OF THE SUPERINTENDENT.

To the Board of Water Commissioners:

I herewith present to you the forty-seventh annual report of the operations of this department, showing the receipts, expenditures and abatements, together with a statement of the extensions and improvements made during the year ending December 31, 1918.

RECEIPTS.

For water, from consumers by fixed rates,	\$10,705.67
For water, from consumers by meter rates,	64,498.78
From delinquents,	78.30
For water for building purposes,	28.54
pipe and stock sold and labor,	1,249.21
old brass and iron sold,	98.12
old lumber and slate sold,	27.00
cement bags returned,	44.30
From wood and farm lands,	1,269.00
freight refund,	122.02
coal refund,	7.22
telephone refund,	.60
	\$78,128.76
Deduct abatements,	51.61
	\$78,077.15
Net receipts for 1918,	\$78,077.15

There has also been furnished the city free of charge the following use of water:

Public buildings,	\$179.50
Parks and playgrounds,	60.00
Cemeteries,	108.00
Street department,	774.00
Drinking fountains and watering troughs,	280.00
Sewer flush tanks,	45.00
457 fire hydrants at \$25,	11,425.00
	\$12,871.50

WATER DEPARTMENT.

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EXPENDITURES.

MAINTENANCE ACCOUNT.

General care and maintenance:

Salaries and labor,	\$7,241.23	
Maintenance of team,	189.91	
Maintenance of autos,	877.56	
Teaming and livery,	159.00	
Miscellaneous supplies and re- pairs,	370.17	
Tools,	116.94	
Repairs of buildings,	96.36	
Telephones and lighting,	118.49	
Insurance,	342.10	
Incidentals,	81.79	
	<hr/>	\$9,593.55

Office expenses:

Salaries,	\$1,124.95	
Postage and printing,	514.58	
Miscellaneous supplies,	32.29	
Telephone,	37.15	
	<hr/>	1,708.97

Care and repair of hydrants:

Stock,	\$48.39	
Labor,	170.88	
	<hr/>	219.27

Care and repair of meters:

Stock,	\$128.46	
Labor,	276.63	
	<hr/>	405.09

Relaying service pipes:

Stock,	\$14.25	
Labor,	110.82	
	<hr/>	\$125.07

Repairing leaks:

Stock,	\$3.80	
Labor,	83.82	
	<hr/>	87.62

Care of wood-lots,	278.23
Farm account,	450.64
Penacook Park,	66.88
Taxes, town of Webster,	56.00

Pumping Station:

Salaries and labor,	\$2,236.39	
Fuel,	1,705.72	
Supplies and repairs,	709.98	
Telephone and lighting,	57.91	
Insurance,	95.90	
	<hr/>	4,805.90

Total maintenance account,	<hr/>	\$17,797.22
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CONSTRUCTION ACCOUNT.

Distribution pipes:

Stock,	\$982.95	
Labor,	49.75	
	<hr/>	\$1,032.70

Service pipes:

Stock,	\$41.25	
Labor,	55.97	
	<hr/>	97.22

Hydrants:

Labor,	14.59
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Meters:

Stock,	\$75.00	
Labor,	34.86	
		\$109.86
Addition to coal shed,		478.28
		\$1,732.65

LAND AT PENACOOK LAKE.

State of New Hampshire, final pay-		
ment,	\$10,000.00	
Recording deed,	1.52	
		10,001.52
Total expenditures for 1918,		\$29,531.39

EXTENSIONS AND IMPROVEMENTS.

Cast-iron distribution pipe has been laid during the year as follows:

In Clarke Street,

Extended north, 96 feet 6-inch pipe, in place of 1 $\frac{1}{4}$ -inch pipe discontinued.

Total amount laid during the year, 96 feet.

Total length of main and distribution pipes now in use, 374,550 feet, equal to 70.94 miles.

Total number of gates now in use, 1,048.

There have been laid during the year and connected with the main pipes, 5 service pipes consisting of 126 feet of $\frac{3}{4}$ -inch pipe and 48 feet of 2-inch pipe. There have been discontinued, 2; total number of service pipes at the present time, 3,882; total length of service pipes, 91,844 feet or 17.39 miles.

There have been relaid 12 services and 14 curbs have been placed on old services.

We have set 21 meters during the year; removed, 3; total number now in use, 2,576.

The following table shows the height of water in Penacook Lake on the first day of each month:

January,	181.50	July,	182.55
February,	181.30	August,	181.90
March,	181.00	September,	181.35
April,	182.00	October,	181.60
May,	183.25	November,	181.20
June,	183.05	December,	181.15

The lowest point reached during the year was 181, on March 1 and on November 16; the highest was 183.35, on May 5; mean height for the year was 181.84, which was 1.97 feet lower than the mean height for 1917.

Water has been supplied to four community war gardens for spraying purposes only, free of charge, by vote of the Board of Water Commissioners and were located as follows:

Hall Street, at ball grounds,
Ridge Road, near Rev. Lorin Webster residence,
South Street, opposite I. W. Bushey residence,
West Concord, at Eastman field.

After twenty-six years of operating the pumping station by steam, it has been decided to install an electrically operated centrifugal pump. The present pumps, one of which was installed in 1893 and the other in 1904, are to be kept in good condition in readiness for any emergency.

A contract has been made with the Worthington Pump and Machinery Corporation for one Worthington 8 inch type 'BS' slow speed horizontally split casing volute centrifugal pump, to be operated by a 100-horse power A. C. motor. A satisfactory contract has been made with the Concord Electric Company for all power and it is hoped

that the unit will prove a success. A Venturi meter will be installed which will measure all water pumped and also check the performance of the pump and show the efficiency of the present pumps.

I wish to express my thanks to the members of the Board for their interest and support in the conduct of the affairs of the department and my appreciation of the faithful services of the employees.

Respectfully submitted,

PERCY R. SANDERS,
Superintendent.

REPORT OF THE ENGINEER AT PUMPING
STATION.

PUMPING STATION, CONCORD WATER WORKS.

P. R. Sanders, Superintendent:

SIR: I would report that the pumping machinery at the pumping station is in good working condition.

The boilers are in good condition, the fire boxes need some repairs.

Following is a statement of coal and other supplies used at the pumping station during the year, with a table showing the work for each month.

STATEMENT.

230.70 tons Beacon Smithing coal.
99 gallons valve oil.
10 gallons engine oil.
39 pounds of waste.
14 pounds of grease.
5½ cords of wood.
40 gallons of peroline boiler compound.

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ENGINE RECORD, 1918.

Months.	No. days pumping engine No. 1.	No. days pumping engine No. 2.	Total days pumping.	Total hours pumping.	Average time pumping.	Total gallons of water pumped.	Daily average pumped.	Total coal consumed.	Daily average coal consumed.	Total pounds of wood consumed.	Gallons pumped per pound of coal.
January	10	31	31	318:	H.M. 10:15	28,376,755	915,379	52,072	1,679	378	544
February	11	28	28	294:30	H.M. 10:31	27,130,007	951,071	50,694	1,810	469	535
March	8	29	31	291:	H.M. 9:23	26,799,181	864,489	49,311	1,590		543
April	11	19	28	264:	H.M. 8:48	23,265,484	775,516	41,931	1,397	572	554
May	12	20	27	266:	H.M. 8:34	23,682,088	763,938	42,589	1,373	582	556
June	15	14	25	252:	H.M. 8:24	21,936,906	731,230	38,852	1,295	894	564
July	17	16	27	229:	H.M. 7:23	23,376,329	754,075	41,890	1,351	1,760	558
August	16	16	27	249:30	H.M. 8: 2	22,390,333	722,268	40,922	1,320	789	547
September	16	14	25	230:	H.M. 7:40	20,116,646	670,554	37,579	1,252	1,029	535
October	16	16	27	237:	H.M. 7:38	21,103,736	680,765	39,845	1,285	833	529
November	17	13	25	231:	H.M. 7:42	20,156,890	671,896	38,575	1,285	1,067	522
December	15	16	25	270:30	H.M. 8:43	23,298,485	751,564	42,522	1,371	1,292	547
Total	164	232	326	3,132:30		281,632,840		516,782		9,665	544
Daily average					H.M. 8:34	771,596		1,415			

Coal consumed for the year, 230.70 tons.

Pounds of wood consumed ÷ 3 = equivalent amount of coal, 3,221 pounds.

Total equivalent coal consumed for the year includes that used for pumping, starting fires, banking fires and heating building, 232.14 tons.

Amount of equivalent coal consumed per thousand gallons pumped, .184.

HENRY A. ROWELL,
Engineer.

CITY TREASURER'S CONDENSED STATEMENT OF
WATER WORKS ACCOUNT.

ISAAC HILL, *Treasurer*, in account with Concord Water
Works.

RECEIPTS.

Balance on hand, January 1, 1918,	\$22,908.31	
P. R. Sanders, superintendent,	78,077.15	
	<hr/>	\$100,985.46

EXPENDITURES.

Interest on bonds,	\$16,230.00	
Bonds paid,	10,000.00	
Income investment,	20,846.00	
Orders paid,	29,531.39	
Cash on hand,	24,378.07	
	<hr/>	\$100,985.46

APPENDIX.

A.

RECEIPTS FOR EACH YEAR SINCE THE CONSTRUCTION OF
THE WORKS.

For the year ending January 31,	1874,	\$4,431.10
For fifteen months ending April 1,	1875,	17,535.00
For the year ending April 1,	1876,	16,921.24
“ “ “	1877,	19,001.07
“ “ “	1878,	20,763.03
“ “ “	1879,	21,869.86
“ “ “	1880,	22,451.53
“ “ “	1881,	26,744.58
For nine months ending December 31,	1881,	25,534.01
For the year ending December 31,	1882,	27,243.06
“ “ “	1883,	28,255.48
“ “ “	1884,	28,915.65
“ “ “	1885,	30,222.54
“ “ “	1886,	30,862.64
“ “ “	1887,	34,047.52
“ “ “	1888,	38,441.32
“ “ “	1889,	40,237.53
“ “ “	1890,	42,133.41
“ “ “	1891,	46,075.16
“ “ “	1892,	48,351.52
“ “ “	1893,	52,299.66
“ “ “	1894,	53,230.10
“ “ “	1895,	55,343.19
“ “ “	1896,	56,557.81
“ “ “	1897,	55,156.42
“ “ “	1898,	59,147.54
“ “ “	1899,	*53,953.13
“ “ “	1900,	*57,003.71
“ “ “	1901,	62,253.61
“ “ “	1902,	63,430.85

*No hydrant rental this year.

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For the year ending December 31,	1903.	\$65,088.45
“ “ “	1904,	68,570.48
“ “ “	1905,	71,076.44
“ “ “	1906,	73,063.45
“ “ “	1907,	73,782.64
“ “ “	1908,	71,362.67
“ “ “	1909,	*67,307.84
“ “ “	1910,	68,673.71
“ “ “	1911,	71,881.34
“ “ “	1912,	76,145.13
“ “ “	1913,	76,154.45
“ “ “	1914,	74,422.15
“ “ “	1915,	78,940.06
“ “ “	1916,	75,052.72
“ “ “	1917,	77,092.10
“ “ “	1918,	78,077.15
Total receipts for 46 years,		\$2,305,104.05

B.

MEAN HEIGHT OF WATER EACH YEAR.

1873,	175.86	1885,	176.80
1874,	179.50	1886,	178.10
1875,	180.00	1887,	179.04
1876,	180.28	1888,	181.96
1877,	176.46	1889,	180.91
1878,	179.50	1890,	181.90
1879,	179.74	1891,	180.00
1880,	175.30	1892,	174.32
1881,	174.70	1893,	173.38
1882,	179.15	1894,	172.81
1883,	176.40	1895,	171.15
1884,	178.18	1896,	178.96

* No hydrant rental after 1908.

1897,	183.33	1908,	183.41
1898,	184.31	1909,	181.40
1899,	183.49	1910,	180.22
1900,	183.09	1911,	177.60
1901,	183.86	1912,	178.86
1902,	184.98	1913,	179.20
1903,	184.75	1914,	179.55
1904,	184.40	1915,	180.00
1905,	183.37	1916,	184.15
1906,	183.94	1917,	183.81
1907,	183.59	1918,	181.84

C.

SCHEDULE OF IRON AND CEMENT-LINED PIPES AND GATES.

STREETS.	Back Conduit.	LENGTH AND SIZE OF IRON PIPE IN FEET.										Number of gates.			
		30-in.	24-in.	20-in.	18-in.	16-in.	14-in.	12-in.	10-in.	8-in.	6-in.		4-in.		
Conduit.....	2220														
Reserve main.....		282													
Low service main.....			331	1905	75										7
Pump main.....			13598	58	75	147									6
Gate-houses and layout.....															29
Force main.....		240	2962		42	20									5
Pumping station and layout.....															
Abbott.....											23	349			8
Academy.....											458				1
Albin.....								785							1
Alleyways.....											450	505			1
Allison.....											2492				4
Auburn.....						2182									1
Avon.....											724				2
Badger.....											5	689			1
Beacon.....											2145				3
Blake.....											265	250			2
Blanchard.....											475				1
Blossom Hill.....											1781				1
Bow.....											590				1
Bowery Avenue.....												245			
Bradley.....									1577						3
Bridge.....									327		1123				1
Broadway.....								2278	2052						3
Cambridge.....											6	154			1
Capitol.....									508		763				5
Carter.....											1077				2
Centre.....									3529	2690					14
Chandler.....											306				1
Chapel.....											585	56			2
Charles.....												516			1
Chestnut.....											265				1
Church.....										21	1600	547			7
Clarke.....											196				
Clinton.....									1942	180	1663				3
Columbus Avenue.....						2100									1
Concord.....											1593	286			5
Court.....											670				2
Curtice Avenue.....											422				2
Dakin.....											19	836			2
Dartmouth.....											414				1
Depot.....											387	242			2
Donovan.....											456				1
Downing.....											1977	92			4
Dunklee.....											1195				3
Durgin.....											265				1
Eastman.....											400	400			1
Electric.....											550				1
Elm.....											270	607			4
Engel.....											388				1
Essex.....											587				2

SCHEDULE OF IRON AND CEMENT-LINED PIPES AND GATES.—Continued.

STREETS.	Back Con- duit.	LENGTH AND SIZE OF IRON PIPE IN FEET.										Number of Gates.
		30-in.	24- in.	20- in.	18- in.	16- in.	14- in.	12- in.	10- in.	8- in.	6- in.	
Essex, North										262		1
Fairbanks										74		1
Fayette										1187		3
Ferry									1000		1066	4
Fisher										343		1
Fiske			1045									1
Fiske Road										750		1
Ford Place											225	1
Forest										628		2
Foster										180		1
Franklin						2166	1546			1317		12
Freight							438			285		3
Fremont											590	2
Fruit, North										1078		1
Fruit, South										2874		3
Fuller											88	1
Garden										194		1
Gas								550				1
Giles									300	88		3
Glen										840		2
Granite Avenue											210	7
Green								431		1755		4
Grove										1093		2
Hall								1621	1068	875		4
Hall's Court								905				1
Hammond											748	1
Hanover										600		2
Harrison										240	230	1
Harrod										4	329	1
Harvard											760	1
High								27		982		5
Highland										99	793	2
Hill's Avenue										69	312	2
Holly											710	1
Holt										646		1
Home Avenue										362		1
Hopkinton Road										615		1
Humphrey										498		2
Huntington										213		1
Hutchins, W. Concord			381				120			589		1
Iron Works Road										1332		1
Jackson										1576		3
Jefferson											311	1
Kensington Road									207			1
Kimball										400	334	1
Knight, W. Concord										350		1
Lake, W. Concord									1216	465		1
Langdon								360		358	357	4
Laurel										1550		2
Liberty						380	1311					3
Lincoln											367	2
Lyndon									508	726	300	5
Main, North			4209					5125		38		11
Main, South			300		2596	1026	1373	5179		1260	3650	15
Maitland										482		1
Maple										430	382	2

SCHEDULE OF IRON AND CEMENT-LINED PIPES AND GATES.—Continued.

STREETS.	Brick Conc. DUTT.	LENGTH AND SIZE OF IRON PIPE IN FEET.										Number of gates.
		30-in.	24- in.	20- in.	18- in.	16- in.	14- in.	12- in.	10- in.	8- in.	6- in.	
Marshall											330	1
McKinley											738	2
Merrimack											1729	6
Mill Road, S. P. School									750	124	2604	3
Mills										26	1294	4
Minot										860		2
Monroe										1289		2
Montgomery										700		2
Morton										516		1
Myrtle											324	1
Oak											305	1
Odd Fellows Avenue									19		229	1
Old Hopkinton Road											814	1
Old S. Mill R'd, S. P. S.											3446	2
Orchard										620		1
Palm										596		1
Park										601		2
Peabody										380		1
Pearl										584		2
Penacook					300		2457			2295		9
Perkins										616		3
Perley										2215		4
Perry Avenue										460		2
Pierce										300		1
Pillsbury										2493		1
Pine									681	985		4
Pitman										480		6
Pleasant						10791	3428	292	185			18
Prince										531		1
Princeton										658		1
Prospect										800		1
Railroad										584		1
Ridge Road										1012		1
Rockingham										1320		2
Rollins										195		1
Rowell										142		1
Rumford							9	15	3502			17
School							5202	708		575		10
Second, W. Concord										210		1
Sewall's Falls Road										1655		1
Sexton Avenue										210		1
Short											223	1
South							4036	1072		4585		4
Spring, North							390		26	2629		12
Spring, South									2391		388	5
State, North			5969				31					6
State, South					3049	839	21					5
Stevens Avenue									53			1
Stickney Avenue								250				1
Stone										1080		1
Summer									19	370		1
Summit										172		1
Tahanto										1015		4
Thompson								38	326	1380		4
Thorndike								1898	250			4
Tremont									823	748		4
Union										1005		2

SCHEDULE OF IRON AND CEMENT-LINED PIPES
AND GATES.—Continued.

STREETS.	Back Con- durr.	LENGTH AND SIZE OF IRON PIPE IN FEET.										Number of gates.		
		30-in.	24- in.	20- in.	18- in.	16- in.	14- in.	12- in.	10- in.	8- in.	6- in.		4- in.	
Valley														1
View										256				1
Walker								705		648	639			4
Wall										754				2
Warren								454	4258	514				12
Washington								1404	1118	1244				9
Water								310						1
Waverly												272		1
West							1836	661		266				4
Westbourne Road										300				1
Wigin										403				1
Winter										23	202			1
Woodman										366				1
Wyman										220				1
Hydrant branches								177	158	5072	137			348
Blow-offs								132		83	145			70
PENACOOK.														
Penacook, high service main						10584								8
Canal, East								225	8					2
Canal, West														1
Centre								247		467				4
Charles														3
Church														1
Crescent								635		58				2
Cross														3
Electric Avenue										653				1
Elliott										476				1
Fowler										1300				3
High														1
Lindon										285				1
Main										150				4
Main, West										1678				2
Maple										327				1
Merrimack								70	37					5
Penacook										1923				2
Pine										364				1
Rolfe										1846				1
Spring														1
Stark														1
Summer								54						4
Union											261			1
Walnut and Bye										884				1
Washington									150	2205				4
Winter										450	4			1
Hydrant branches										27	542			66
Blow-offs												10		12
Totals	2220	522	28795	1963	2788	19788	24759	46778	22836	115731	31245			1048

SCHEDULE OF IRON AND CEMENT-LINED PIPES
AND GATES.—*Concluded.*

STREETS.	LENGTH AND SIZE OF CEMENT-LINED PIPE IN FEET.						
	18-in.	14-in.	12-in.	10-in.	8-in.	6-in.	4-in.
Old cement-lined main		2230					
Low service main	11391						
Chestnut						373	
Franklin						120	
Giles							772
High						1218	
Perkins							34
Rumford			5952	1203			
South						1229	
State, North			1764				
Valley						879	
Warren						11	
Washington						501	
Hydrant branches						312	88
Blow-offs							56
PENACOOK.							
Penacock, high service main		13110	1221				
Canal, East					628		
Canal, West					422		
Centre					479	245	
Charles						1777	
Church						482	
Cross					734		
High						2100	
Main			2573				
Merrimack			57		1181	2023	
Spring					652		
Stark				529			
Summer					1149		276
Washington					1193		
Hydrant branches						689	
Blow-offs							55
Totals	11391	15340	11567	1732	6438	11959	1281

HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Service.	Number.
South Main . . .	Southwest corner of South State	H	
	Northwest corner of Pillsbury	L	
	East side, opposite Pillsbury	H	
	West side, opposite entrance to R. R. shops	H	
	West side, 110 feet north of McKinley	L	
	West side, between McKinley and Rockingham	L	
Water	West side, below Wiggin	L	21
	West side, below Bridge	L	1
Hall	West side, opp. Rolfe and Rumford Asylum	L	
	West side, below No. 18	L	
	West side, at No. 32	L	
	West side, opposite Hammond	L	
	West side, opposite Home Avenue	L	
	East side, at No. 85	L	
Hammond	East side, near Rumford Field	L	7
	North side, near Bridge	L	1
Railroad	East side, opposite Ford & Kimball's	L	1
Fiske	West side, near North State	H	
	West side, south line of Walker School	H	2
Summer	Northeast corner of Pitman	L	1
Durgin	East side, opposite Toof's laundry	L	1
North State	Southwest corner of Penacook	H	
	Northwest corner of Walker	H	
	Northwest corner of Church	L	
	Northeast corner of Franklin	L	
	Northwest corner of Tremont	L	
	Northeast corner of Washington	L	
	West side, opposite Court	L	
	Southwest corner of Maple	L	
	Southeast corner of Centre	L	
	Southeast corner of Park	L	
	Southwest corner of School	L	
	Southeast corner of Warren	L	
	Northwest corner of Warren	H	
	Northwest corner of Pleasant	L	14
South State	Southeast corner of Pleasant	H	
	East side, opposite Wall	L	
	Southeast corner of Fayette	L	
	Northwest corner of Thompson	L	
	Southwest corner of Monroe	L	
	East side, opposite Laurel	L	
	Northeast corner of Downing	L	
Mills	Northeast corner of West	L	
	Southwest corner of Harrison	L	9
	West side, at No. 22	L	
	Northwest corner of Allison	L	2

HYDRANTS.—*Continued.*

STREETS.	LOCATIONS.	Service.	Number.
Dakin	West side, 220 feet north of Allison	L	1
Dunklee	West side, 150 feet south of West	L	
	Northwest corner of Allison	L	
	Northwest corner of Pillsbury	L	3
Broadway	West side, 80 feet north of Humphrey	L	
	Northwest corner of Allison	L	
	Northwest corner of Carter	L	
	Northwest corner of Stone	L	
	West side, at Rollins Park	L	
	West side, opposite McKinley	L	
	West side, between McKinley and Rocking- ham	L	7
Donovan	Northeast corner of Wiggan	L	1
Green	Northwest corner of Prince	H	
	East side, opposite Prince	L	
	Northwest corner of Warren	L	3
South	West side, opposite Wall	L	
	Northwest corner of Fayette	L	
	Northwest corner of Thompson	L	
	West side, opposite Monroe	L	
	West side, opposite Laurel	L	
	West side, below N. H. Memorial Hospital	L	
	West side, opposite Downing	L	
	West side, opposite Allison	L	
	West side, opposite Pillsbury	L	
	West side, near Paige's	L	
	West side, opposite I. W. Bushey's	L	
	Northwest corner of Iron Works Road	L	
	East side, at Quint's	L	
	West side, near Bow line	L	14
Bradley	Southwest corner of Penacook	H	
	Northwest corner of Walker	L	
	East side, opposite Highland	L	
	Northwest corner of Franklin	L	4
Union	Northwest corner of Maple	L	1
Jackson	Northeast corner of Church	H	1
Lyndon	Southwest corner of Tremont	H	
	East side, opposite Abbott	H	2
North Spring	Northeast corner of Maple	L	
	Southwest corner of Centre	H	
	West side, at High School	H	
	East side, opposite High School	L	
	Southwest corner of School	H	5
South Spring	Southwest corner of Oak	L	
	West side, opposite Thompson	L	
	West side, opposite Concord	L	
	West side, near Memorial Hospital	L	4

HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Service.	Number.
Academy	East side, at No. 10	H	1
Hanover	West side, at No. 10	L	1
Rumford	West side, south of cemetery gate	H	
	West side, opposite Perkins	L	
	Southeast corner of Walker	L	
	Northeast corner of Albin	L	
	Northeast corner of Franklin	L	
	Northwest corner of Beacon	H	
	Northeast corner of Abbott	L	
	Northeast corner of Cambridge	L	
	Northwest corner of Centre	H	
	Northeast corner of School	L	
	West side, at Morrill School	L	11
Huntington	West side, at head of Short	H	1
Tahanto	Northwest corner of School	H	1
Pine	Southwest corner of Centre	H	
	Southwest corner of Warren	H	2
Holt	East side, at No. 10	H	1
High	Northwest corner of Auburn	H	
	Northwest corner of Valley	H	
	East side, opposite Forest	H	
	Southwest corner of Franklin	H	4
Valley	Northeast corner of Forest	H	1
Auburn	Northeast corner of Chestnut	H	
	Northeast corner of Forest	H	
	North side, between Centre and Forest	H	3
Ridge Road	West side, between Nos. 11 and 13	H	1
Westbourne Rd.	North side, 135 feet north of Centre	H	1
Dartmouth	Southwest corner of Clinton	L	
	Northwest corner of Noyes	L	2
Princeton	Southwest corner of Clinton	L	
	Northwest corner of Noyes	L	2
Fruit	Northeast corner of Woodman	H	
	West side, 700 feet south of Pleasant	L	
	East side, opposite No. 70	L	
	East side, opposite No. 114	L	4
Minot	West side, north of Odd Fellows' Home	H	
	West side, south of Odd Fellows' Home	H	
	Northwest corner of Pleasant	H	3
Kensington Rd.	Northwest corner of Pleasant	H	1
Stevens Ave.	Northeast corner of Pleasant	H	1
Penacook	South side, near Concord Lumber Co.	H	
	South side, east of P. B. Co.'s storehouse	L	
	South side, near P. B. Co.'s	H	
	South side, near P. B. Co.'s office	H	
	Southeast corner of North Main	H	
	Southwest corner of Rumford	H	

HYDRANTS.—*Continued.*

STREETS.	LOCATIONS.	Service.	Number.
Penacook	North side, opposite No. 69	H	
	Southeast corner of Columbus Avenue	H	8
Walker	Southwest corner of Martin	L	
	South side, 500 feet west from Rumford	L	2
Albin	North side, 160 feet west of Bradley	L	1
Highland	North side, at No. 22	L	
	Northeast corner of Rumford	L	2
Church	South side, east of Bradley	L	
	North side, opposite Lyndon	H	
	Northeast corner of Rumford	H	3
Franklin	Northwest corner of Jackson	H	
	Northeast corner of Lyndon	H	
	Southwest corner of Rumford	H	
	South side, opposite No. 64	H	
	North side, between High and Auburn	H	
	Northeast corner of Auburn	H	6
Chestnut	Northwest corner of High	H	1
Tremont	North side, east of Harrod	L	
	Southwest corner of Jackson	H	2
Pearl	North side, at No. 14	L	1
Beacon	North side, opposite Merrimack School	H	
	Northwest corner of Jackson	H	
	Southwest corner of Lyndon	H	
	North side, opposite White	H	
	South side, opposite Charles	H	5
Rowell	Northeast corner of White	H	1
Blanchard	Northwest corner of Essex	H	1
Ferry	North side, opposite Ford's foundry	H	
	North side, near N. E. Granite Works	H	
	North side, east of C. & M. R. R.	L	
	Northwest corner of Huntoon Avenue	H	4
Washington	North side, opposite Rollins	L	
	Southwest corner of Union	L	
	Northeast corner of Lyndon	H	
	Northwest corner of Rumford	H	
	Northwest corner of North Essex	H	
	North side, opposite Perry Avenue	H	6
Chapel	South side, near Methodist Church	L	1
Montgomery	South side, opposite No. 18	L	1
Centre	Northeast corner of North State	H	
	Southwest corner of Green	L	
	Northwest corner of Union	H	
	Northwest corner of North Spring	L	
	South side, opposite Essex	H	
	Southwest corner of Summit Avenue	H	
	South side, on east line of Dewey School lot	H	
	Northeast corner of Ridge Road	H	8

HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Service.	Number.
Bridge	South side, near easterly barn	L	3
	North side, opposite Concord Coal Co.'s	H	
Park	North side, opposite Concord Shoe Factory	H	1
	North side, at St. Paul's Church	L	
Capitol	North side, at south gate of State House yard	H	2
	Northeast corner of North State	H	
Garden	Northeast corner of Huntington	H	1
School	South side, west of Durgin	H	11
	Northwest corner of North State	H	
	Northeast corner of Green	H	
	Northwest corner of Green	L	
	Northwest corner of North Spring	L	
	Northwest corner of Rumford	L	
	Northwest corner of Merrimack	H	
	Northwest corner of Pine	H	
	Northeast corner of Liberty	H	
	North side, at No. 106	H	
	Southeast corner of Giles	H	
Warren	Southeast corner of Odd Fellows Avenue	H	9
	Southeast corner of Fremont	L	
	Northwest corner of North Spring	L	
	Northwest corner of Rumford	H	
	Southwest corner of Merrimack	H	
	Northwest corner of Tahanto	H	
Depot	Northeast corner of Liberty	H	2
	Northeast corner of Giles	H	
Blake	Junction of Pleasant, near Fruit	H	1
	South side, at north end of train shed	H	
Orchard	Northwest corner of Railroad Square	L	1
	South side, opposite No. 8-10	L	
Pleasant	South side, opposite No. 8	H	1
	Southwest corner of Railroad Square	H	
	Northwest corner of Railroad Square	L	
	South side, at South Congregational Church	L	
	Southeast corner of South	L	
	Northeast corner of Fremont	L	
	Southwest corner of Spring	H	
	South side, opposite Rumford	H	
	South side, opposite Merrimack	H	
	South side, opposite Pine	H	
	South side, opposite Liberty	H	
	North side, near city stable	H	
	South side, near Gale	H	
	South side, opposite Mrs. Aiken's	H	
	South side, near Mrs. Eddy's cottage	H	
South side, at Lavery's	H		
South side, opposite No. 270	H		

HYDRANTS.—*Continued.*

STREETS.	LOCATIONS.	Service.	Number.
Pleasant	North side, near E. B. Chesley's	H	24
	North side, opposite No. 291	H	
	North side, near J. McC. Hammond's	H	
	South side, opposite Fiske Road	H	
	Southwest corner of School Avenue	H	
	North side, at chapel	H	
	South side, opposite Lower School	H	
	South side, near new Upper School	H	
Fiske Road	East side, at Trask's	H	1
Hopkinton Rd.	South side, near new infirmary	H	1
Mill Road, St. P. School.	East side, near laboratory	H	3
	North side, at Orphans' Home	H	
Old Hopkinton Road	South side, at tenement No. 7	H	1
	Junction of Hopkinton Road	H	
Wall	Northeast corner of Elm	L	1
Marshall	North side, opposite Fuller	L	1
Freight	No. side, at southwest corner pass. station	H	1
Hill's Avenue	Southwest corner of Railroad Square	L	2
	Northeast corner of South Main	L	
Fayette	Northwest corner of Elm	L	1
Thompson	North side, opposite Jefferson	L	1
Chandler	South side, opposite Railroad	L	1
Concord	Southwest corner of South State	L	3
	Northwest corner of Jefferson	L	
	Northeast corner of South	L	
Monroe	North side, opposite Grove	L	2
	South side, at Rumford School	L	
Thorndike	North side, between So. Main and So. State	L	5
	Southwest corner of South State	L	
	Northeast corner of Grove	L	
Laurel	North side, opposite Pierce	L	2
	Northeast corner of South Spring	L	
Perley	Northwest corner of Grove	L	4
	Northwest corner of Pierce	L	
Downing	South side, at No. 75	L	3
	South side, opposite Grove	L	
	Southeast corner of Mills	L	
Clinton	Southwest corner of Redwood Avenue	L	L
	North side, opposite Harvard	L	
	North side, opposite Avon	L	
	Northeast corner of Fruit	L	
	North side, near No. 108	L	

HYDRANTS.—Continued.

STREETS.	LOCATION .	Service.	Number.
Clinton	North side, at State Fair grounds	L	5
West	North side, near South Main	L	
	North side, near Badger	L	
	Northeast corner of Mills	L	
	North side, opposite Dakin	L	
	Northwest corner of Broadway	L	5
Avon	Northwest corner of South	L	1
Harrison	Northwest corner of Morton	L	1
Humphrey	North side, near Kimball	L	1
Allison	Northeast corner of Badger	L	1
Pillsbury	North side, opposite Foster Ward	L	
	Northeast corner of Broadway	L	
	Northwest corner of Kimball	L	3
Carter	Northeast corner of Eastman	L	1
Stone	North side, 300 feet from Bow	L	1
Holly	North side, west of South Main	L	1
McKinley	North side, at Dunklee St. proposed exten'n.	L	1
Rockingham	Northeast corner of Broadway	L	
	North side, at Donovan	L	2
Iron Works Rd.	South side, at Brown's	L	1
Prospect	Northwest corner of Granite Avenue	L	
	East side, north of Granite Avenue	L	2
Curtice Ave.	North side, 230 feet E. of North State	L	1
North State	West side, at Water-Works storehouse	L	
	Northeast corner of Foster	L	
	East side, at Tahanto School	L	
	Northeast corner of Curtice Avenue	L	
	East side, near north entrance Blossom Hill Cemetery	H	
	West side, near Calvary Cemetery	L	
	East side, near No. 226	L	
	East side, near No. 252	H	
	East side, near No. 262	L	
	East side, near No. 272	H	
	West side, at south line of prison wall	L	
	West side, at north line of prison wall	L	
	East side, near No. 296	L	13
Palm	North side, west of Fairbanks	H	1
North State	Northwest corner of Palm	H	
	West side, near Concord Woodworking Co.	L	
	East side, near No. 312	L	
	East side, near No. 324	H	
	East side, near No. 330	L	
	East side, opposite Dolan	L	
	East side, opposite No. 362	H	
	West side, opposite No. 382	L	
	East side, at No. 382	H	9

HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Service.	Number.
WEST CONCORD.			
North State	Southeast corner of K	H	
	Northeast corner of Peabody	L	
	East side, at No. 426	H	
	East side, near engine house	H	
	East side, at No. 464	H	
	West side, near Crescent Mfg. Co.	H	
	East side, at No. 498	H	
	East side, at No. 516	H	
	East side, opposite No. 533	H	
	East side, near Sewall's Falls Road	H	10
Fisher	Southwest corner of Engel	L	1
View	Northeast corner of K	L	1
Electric	Northeast corner of North State	L	
	North side, near power station	L	2
Clarke	Northeast corner of Fisher	L	1
	East side, near S. W. Kellom's	L	
Lake	West side, at No. 13	H	
	West side, near Wilson's	H	
	East side, at No. 33	L	
	South side, near Quaker	H	5
Knight	South side, opposite railroad station	H	
	South side, at Quaker	L	2
Hutchins	North side, near No. 22	H	
	North side, near C. & C. Railroad	H	
	North side, at No. 40	H	3
First	North side, near A. H. Knight's	H	1
Sewall's Falls Road	East side, at north line of cemetery	H	1
	West side, opposite Frost's	H	
Penacook Rd.	West side, opposite Blanchard's	H	
	West side, near Warner Road	H	3
PENACOOK.			
South Main	West side, at Harriman's	H	
	West side, at Annis's	H	
	West side, at Garvin's	H	
	West side, south of Willow Hollow	H	
	West side, north of Willow Hollow	H	
	West side, at south end of Woodlawn Cem'y	H	
	West side, at north end of Woodlawn Cem'y	H	
	West side, opposite Stark	H	
	West side, near Hoyt's garage	H	
	West side, near No. 88	H	
	Southwest corner of Union	H	

HYDRANTS.—*Continued.*

STREETS.	LOCATIONS.	Service.	Number.
South Main . . .	Washington Square, opp. Exchange Block . . .	H	15
	Northwest corner of Charles	H	
West Main . . .	North side, opposite East Canal	H	2
	North side, near iron bridge	H	
High	West side, opposite cemetery	H	4
	West side, at Pine	H	
Washington . . .	Northwest corner of Stark	H	6
	East side, opposite Summit	H	
Fowler	Northwest corner of Maple	H	1
	Northwest corner of Spring	H	
Electric Ave. . .	South side, near South Main	H	1
	Southeast corner of Union	H	
Elliott	South side, at No. 41	H	2
	South side, opposite Charles	H	
Charles	South side, near Contoocook bridge	H	3
	North side, at Rolfe's sawmill	H	
West Canal . . .	West side, at Charles Holmes'	H	1
	East side, near Elliott's	H	
East Canal . . .	South side, junction of Washington	H	1
	Northeast corner of Electric Avenue	H	
Crescent	Southwest corner of Warren	H	3
	South side, at schoolhouse	H	
Walnut	North side, near No. 36	H	1
	Southeast corner of Warren	H	
Merrimack . . .	North side, near Contoocook Mfg. Co.	H	2
	North side, near Crescent	H	
Summer	West side, north of Canal	H	1
	North side, at Bye	H	
Spring	South side, opposite Merrimack Avenue	H	8
	North side, opposite No. 36-38-40	H	
Maple	North side, opposite Cross	H	3
	South side, opposite Bye	H	
Winter	South side, opposite Rolfe's shop	H	1
	South side, opposite Symonds' factory	H	
Centre	North side, near road to Island	H	2
	Northwest corner of Penacook	H	
Cross	North side, opposite High	H	3
	Northeast corner of Centre	H	
Rolfe	North side, opposite Church	H	1
	Northeast corner of Church	H	
High	Northeast corner of Pleasant	H	1
	North side, near Pleasant	H	
Maple	Northwest corner of Spring	H	2
	West side, opposite No. 47	H	
Winter	Northwest corner of Spring	H	2
	Southwest corner of Summer	H	
Centre	Northwest corner of Spring	H	1
	West side, opposite No. 47	H	
Cross	Northwest corner of Spring	H	2
	Southwest corner of Summer	H	
Rolfe	Northwest corner of Spring	H	2
	Southwest corner of Summer	H	
High	Northwest corner of Stark	H	4
	East side, opposite Summit	H	
Washington . . .	Northwest corner of Maple	H	6
	Northwest corner of Spring	H	
Fowler	South side, near South Main	H	1
	Southeast corner of Union	H	
Electric Ave. . .	South side, at No. 41	H	2
	South side, opposite Charles	H	
Elliott	South side, near Contoocook bridge	H	3
	North side, at Rolfe's sawmill	H	
Charles	West side, at Charles Holmes'	H	1
	East side, near Elliott's	H	
West Canal . . .	South side, junction of Washington	H	1
	Northeast corner of Electric Avenue	H	
East Canal . . .	Southwest corner of Warren	H	3
	South side, at schoolhouse	H	
Crescent	North side, near No. 36	H	1
	Southeast corner of Warren	H	
Walnut	North side, near Contoocook Mfg. Co.	H	2
	North side, near Crescent	H	
Merrimack . . .	West side, north of Canal	H	1
	North side, at Bye	H	
Summer	South side, opposite Merrimack Avenue	H	8
	North side, opposite No. 36-38-40	H	
Spring	North side, opposite Cross	H	3
	South side, opposite Bye	H	
Maple	South side, opposite Rolfe's shop	H	1
	South side, opposite Symonds' factory	H	
Winter	North side, near road to Island	H	2
	Northwest corner of Penacook	H	
Centre	North side, opposite High	H	3
	Northeast corner of Centre	H	
Cross	North side, opposite Church	H	1
	Northeast corner of Church	H	
Rolfe	Northeast corner of Pleasant	H	1
	North side, near Pleasant	H	
High	Northwest corner of Spring	H	2
	West side, opposite No. 47	H	
Washington . . .	Northwest corner of Spring	H	6
	Southwest corner of Summer	H	

HYDRANTS.—*Concluded.*

STREETS.	LOCATIONS.	Service.	Number.
Rolfe	Northwest corner of Penacook	H	2
Penacook	West side, opposite A. W. Rolfe's	H	
	West side, at No. 35	H	
	East side, at No. 41	H	3
	Whole number public hydrants		457
	PRIVATE HYDRANTS.		
	Abbot & Downing Co.	H	6
	Boston & Maine Railroad, upper yard	L	4
	Boston & Maine Railroad, shops	H	15
	Boston & Maine Railroad, power house, West		
	Concord	H	1
	Brampton Woolen Co.	H	3
	Concord Gas Light Co.	L	1
	Concord Shoe Factory	H	1
	Concord Worsted Mills	H	2
	Wm. B. Durgin Co.	H	1
	Wm. B. Durgin Co.	L	1
	Ford Foundry Co.	L	1
	N. E. Box Co.	H	3
	N. H. Spinning Mill	H	6
	N. H. State Hospital	H	12
	N. H. State Prison	H	4
	N. H. State Prison	L	2
	Page Belting Co.	H	9
	Page Belting Co.	L	1
	St. Paul's School	H	14
	Water-works pumping station	H	1
	Whole number private hydrants		88

E.

SUMMARY OF STATISTICS.

FOR THE YEAR ENDING DECEMBER 31, 1918.

In form recommended by the New England Water Works Association.

CONCORD WATER WORKS.

CITY OF CONCORD, COUNTY OF MERRIMACK, STATE OF NEW HAMPSHIRE.

GENERAL STATISTICS.

Population by census of 1910—21,497.

Date of construction—1872.

By whom owned—City of Concord.

Source of supply—Penacook Lake.

Mode of supply—Gravity, also pumping to reservoir for high service and fire protection.

PUMPING.

1. Builders of pumping machinery—Henry R. Worthington, Harrison, N.J.
2. Description of fuel used—*a.* Kind—bituminous.
 - b.* Brand of coal—Beacon Forge coal.
 - c.* Average price of coal per gross ton delivered, \$8.059.
 - d.* Percentage ash, 9.4%.
3. Coal consumed for year—230.7 tons.

4. (Pounds of wood consumed) \div 3 = equivalent amount of coal—3,221 lbs.

5. Total equivalent coal consumed for the year for pumping purposes—232.14 tons.

6. Total pumpage for the year without allowance for slip—281,632,840 gallons.

7. Average static head against which pump works—103.84 feet.

8. Average dynamic head against which pump works—105 feet.

9. Number of gallons pumped per pound of equivalent coal—541.6.

10. Duty =

$$\frac{281,632,840 \text{ gallons pumped, } \times 8.34 \text{ (lbs.) } \times 100 \times \text{dynamic head, } 105}{\text{Total fuel consumed } 520,000 \text{ pounds.}} = 47,314,000$$

Cost of pumping figured on pumping station expenses—\$4,805.90.

11. Per million gallons pumped—\$17.064.

12. Per million gallons raised one foot (dynamic)—\$0.162.

DISTRIBUTION.

MAINS.

1. Kind of pipe—cast iron and cement-lined.
2. Sizes—from two-inch to twenty-four-inch.
3. Extended—96 feet during year.
4. Renewed—000 feet during year.
5. Discontinued—96 feet during year.
6. Total now in use—70.94 miles.
7. Number of leaks per mile for year—
8. Length of pipes two inches and less diameter—3.29 miles.
9. Number of hydrants added during year—public, 0.
10. Number of hydrants now in use—public, 457; private, 88.

11. Number of stop gates added during year—0.
12. Number of stop gates now in use—1,048.
13. Number of stop gates smaller than four-inch—
14. Number of blow-off gates—82.
15. Range of pressure on mains at center of city—88.
pounds high service and 48 pounds low service.

SERVICES.

16. Kind of pipe—cement-lined.
17. Sizes—three-fourths-inch to ten-inch.
18. Extended—174 feet.
19. Discontinued—20 feet.
20. Total now in use—91,884 feet.
21. Number of service taps added during year—5.
22. Number now in use—3,882.
23. Average length of service—23.65 feet.
24. Average cost of service for the year—\$28.02.
25. Number of meters added during year—21.
26. Number now in use—2,576.
27. Percentage of services metered—66.33.
28. Percentage of receipts from metered water—85.66.
29. Number of elevators added—none.
30. Number now in use—9.
31. Number of standpipes for street watering—44.

FINANCIAL.

RECEIPTS.

Balance brought forward:	
(a) From ordinary (maintenance) receipts,	\$22,908.31
(b) From extraordinary receipts (bonds, etc.),	.....
Total,	\$22,908.31
From Water Rates:	
A. Fixture rates,	\$10,243.38
B. Meter rates,	64,542.30
C. Total from consumers,	74,785.68
D. For hydrants,	.....
E. For fountains,	.....
F. For street watering,	.....
G. For public buildings:	
School,	\$474.00
All others,	.....
H. For miscellaneous uses,	.....
I. General appropriation,	.....
J. Total from municipal departments,	474.00
K. From tax levy,	.....
L. From bond issue,	.....
M. From other sources,	2,817.47
N. Total,	\$100,985.46

EXPENDITURES.

Water Works Maintenance:	
AA. Operation (management and repairs),	\$17,797.22
BB. Special,	.....
CC. Total maintenance,	\$17,797.22
DD. Interest on bonds,	16,230.00
(CC + DD, \$34,027.22)	
EE. Payment of bonds,	10,000.00
FF. Investment of net income,	20,846.00
Water Works Construction:	
GG. Extension of mains,	1,047.29
HH. Extension of services,	97.22
II. Extension of meters,	109.86
JJ. Special,	478.28
KK. Total construction,	1,732.65
LL. Unclassified expenses:	
Land,	10,001.52
MM. Balance:	
(aa) Ordinary,	\$24,378.07
(bb) Extraordinary,	.....
Total balance,	24,378.07
Total,	\$100,985.46

- O. Net cost of works to date, \$1,092,003.83.
- P. Bonded debt at date, \$407,000.
- Q. Value of investment of net income, \$36,570.61.
- R. Average rate of interest, 3.89 per cent.

INVENTORY.

OF THE PROPERTY OF THE WATER DEPARTMENT, INCLUDING
THE PLANT AND WATER RIGHTS, AND ALL THE REAL
ESTATE AND PERSONAL PROPERTY IN THEIR POSSESSION,
JANUARY 1, 1919.

Water rights—land, etc.,	\$1,092,003.83
Water office—furniture, etc.,	1,100.00
Pumping station—furniture, supplies, etc.,	2,000.00
Shop at pumping station:	
Machinery, tools, meters, service pipe, etc.,	5,500.00
Service truck, runabout, horse, wagons and supplies,	2,500.00
Storehouse—hydrants, water gates, special castings, etc.,	3,467.56
Pipe yard—cast-iron pipe,	7,440.00
Shop at Penacook—pipe, etc.,	100.00
Shop at West Concord—pipe, etc.,	40.00
	<hr/>
	\$1,114,151.39

FIRE DEPARTMENT.

REPORT OF CHIEF ENGINEER.

To the Board of Aldermen:

In accordance with the requirements of the city ordinance, I herewith submit for your consideration the report of the Fire Department for the year 1918.

The department responded to 43 bell alarms and 198 still alarms.

In addition, two fires occurred, entailing loss, for which no alarms were given, making a total of 243 for the year.

	Bell.	Still.	No alarm .	Total.
Precinct,	20	150		170
Penacook,	13	39	2	54
East Concord,	9	4		13
West Concord,	1	5		6
	—	—	—	—
	43	198	2	243

This report will be found to contain statements in detail embracing the amount of expenditures, a complete roll of the department with residence and occupation of each member, a record of all fires and alarms which have occurred during the year and the causes thereof as nearly as could be ascertained, with the names of the owners or occupants and the value, loss, insurance, and insurance recovered in each case.

Of the aggregate loss entailed by fire during the year more than eighty per cent resulted from four fires, two occurring in the precinct and one each at Penacook and East Concord.

The apparatus is in good condition.

One motor-driven combination chemical and hose car was added to the equipment and another contracted for but not yet delivered.

Combination 1 was provided with a new set of tires at an expense of \$363.00.

The fire alarm systems of the precinct and Penacook are in good condition.

One six-inch mechanical tapper was added to the Penacook system.

The plates in the precinct storage battery are now well along on the fourth year of service.

As in theory the tenure of usefulness is but three years necessity for renewal cannot be far off.

As no hose was purchased during the year I respectfully recommend the purchase of five hundred to one thousand feet depending largely upon return of price to normal condition.

Provision should also be made for relining approximately one thousand feet.

The duties incumbent upon the undersigned in the line of inspection of wires and buildings have been performed.

The constantly diminishing forage, horse shoeing and veterinary bills bear ample evidence of the wisdom of the policy of motorizing the apparatus.

During the month of June I had the pleasure of attending the convention of the International Association of Fire Engineers held at Chicago, Ill., a report of which I rendered at that time.

I wish again to take occasion to thank your honorable body for the opportunity afforded me to attend.

Respectfully submitted,

W. C. GREEN,
Chief Engineer.

APPROPRIATIONS AND DISBURSEMENTS.

Appropriation,		\$40,392.76
Disbursements:		
Permanent men,	\$17,150.00	
Vacations,	603.81	
Call men,	9,215.00	
House man,	100.00	
Rent Veteran's Association,	150.00	
Forage,	1,309.53	
Fuel,	2,401.48	
Lights,	701.60	
Incidentals	3,255.65	
Horse shoeing,	157.25	
Horse hire,	980.90	
Fire alarm,	535.65	
Penacook fire alarm,	161.46	
Supplies auto combinations,	296.00	
Laundry,	60.00	
Auto combination, Alert,	3,200.00	
	<hr/>	40,278.33
Balance unexpended,		<hr/> \$114.43

ALARMS.

PRECINCT.

Box 28. January 1, 1.08 a. m. Alarm occasioned by glare of plumber's torches being mistaken for fire. Recall 1.27 a. m.

STILL. January 1, 4.27 p. m. Chimney fire in residence of John Moran, 137 School Street. Extinguished by Combination 1. No loss.

STILL. January 2, 7.17 a. m. Burning rags in residence of J. A. Corriveau, 13 Harvard Street. Cause unknown. Extinguished by Combination 3. No loss.

STILL. January 2, 10.17 a. m. Chimney fire in residence of A. J. McClure, 20 Holt Street. Extinguished by Combination 3. No loss.

STILL. January 2, 11 a. m. Chimney fire in residence of William Welcome, 4 Monroe Street. Extinguished by Combination 3. No loss.

STILL. January 2, 11.05 a. m. Chimney fire in residence of J. H. Potter, 9 Granite Avenue. Combination 2 responded. See next alarm.

STILL. January 2, 11.29 a. m. A call for assistance from scene of preceding fire. Extinguished by Combinations 1 and 2. No loss.

STILL. January 2, 12.33 p. m. Chimney fire in residence of Mrs. Thomas Nawn, 41 No. Spring Street. Extinguished by Combination 1. No loss.

STILL. January 3, 8.17 a. m. Chimney fire in residence of William Goodwin, 37 Thorndike Street. Extinguished by Combination 1. No loss.

STILL. January 3, 7.40 p. m. Chimney fire in residence of William Diffley, 154 No. Main Street. Extinguished by Combination 1. No loss.

STILL. January 4, 4.50 p. m. Fire in basement of residence 5 Summer Street, owned by the Anne Morris Estate, and occupied by James Morris. Cause unknown. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$1,500.00	\$75.00	\$700.00	\$75.00

STILL. January 5, 7.27 a. m. Chimney fire in residence of George Wells, 27 Holly Street. Extinguished by Combination 1. No loss.

STILL. January 5, 12.44 p. m. Chimney fire in residence of John Camolli, 171 Rumford Street. Extinguished by Combination 1. No loss.

STILL. January 6, 1.53 a. m. Fire in basement of residence 76 Allison Street, owned by George Forrest and occupied by James Lanigan. Caused by felt on steam pipes

taking fire and dropping into barrels of refuse. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$3,000.00	\$100.00	\$2,000.00	\$100.00

STILL. January 6, 11.52 a. m. Chimney fire in residence of A. F. Brown, 1 Wall Street. Extinguished by Combination 1. No loss.

STILL. January 9, 4.14 p. m. Fire in pan of scraps in restaurant, 168 No. Main Street, conducted by Mrs. Mary Taylor. Extinguished by Combination 1. No loss.

STILL. January 15, 9.25 a. m. Chimney fire in residence of J. B. Abbott, 236 No. Main Street. Combination 1 responded but no assistance was required. No loss.

2-2-2. January 15, 11.30 a. m. School signal.

STILL. January 17, 12.31 p. m. Chimney fire in residence of John Pillsbury, 111 No. State Street. Extinguished by Combination 1. No loss.

STILL. January 23, 12.40 p. m. Chimney fire in residence of Blanche O. Jarts, 38½ Walker Street. Extinguished by Combination 1. No loss.

STILL. January 23, 10.26 p. m. Fire in residence 217 No. Main Street, owned and occupied by Mrs. Lucy Griffin. Caused by upsetting oil stove. Combination 1 responded but had hardly started when a bell alarm was sent in.

Box 15. January 23, 10.27 p. m. Box pulled for preceding fire. Extinguished with chemicals. Recall 11.03 p. m.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$2,500.00	\$86.00	\$2,000.00	\$86.00
Contents,	2,000.00	60.00	1,500.00	60.00

STILL. January 24, 7.25 a. m. Chimney fire in residence of Joseph Machello, 40 Tremont Street. Combination 1 responded but was disabled en route. Extinguished by Combination 2. No loss.

STILL. January 26, 12.54 p. m. Chimney fire in residence of Horace Olson, 197 No. State Street. Extinguished by Combination 1. No loss.

STILL. January 29, 9.40 a. m. A call to investigate cause of smoke in residence of Mrs. Grace Waldron, 39 School Street. Detail sent from Central Station.

STILL. January 30, 9.55 a. m. Same as preceding call.

STILL. January 31, 7.48 a. m. Fire in residence 16 Washington Street, owned by the Gilbert Foster Estate. Caused by overheated furnace. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$7,000.00	\$25.00	\$3,000.00	\$25.00

Box 471. January 31, 9.54 a. m. Fire in blacksmith shop, owned and occupied by W. C. Jones, rear 59 Clinton Street. Cause unknown. Seven hundred feet of hose wet. Recall 11.25 a. m.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$300.00	\$100.00	None	None
Contents,	100.00	15.00	None	None

STILL. January 31, 9.12 p. m. Chimney fire in residence of George Rochwell, 9 Lee Avenue. Extinguished by Combination 1. No loss.

STILL. February 2, 6.48 a. m. Chimney fire in residence of G. K. Ford, 9 Humphrey Street. Extinguished by Combination 1. No loss.

STILL. February 2, 8.28 a. m. Chimney fire in the W. S. Dole grain store, rear of 42 No. Main Street. Extinguished by Combination 1. No loss.

STILL. February 4, 5.54 p. m. Fire in mattress in residence of Leo Martel, 26 Clinton Street. Caused probably by cigarette. Extinguished by Combination 1. Loss trifling.

STILL. February 5, 9.20 p. m. Fire in partition of residence 7 Pearl Street, owned by Joshua P. Merrill and occupied by John Cable. Caused by thawing water pipes with gasoline torch. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$2,500.00	\$10.00	\$2,000.00	\$10.00

STILL. February 6, 6 a. m. Chimney fire in residence of A. W. Braley, 52 So. Main Street. Extinguished by Combination 3. No loss.

STILL. February 6, 9.16 a. m. Chimney fire in residence of M. F. Jordan, 136 So. Main Street. Extinguished by Combination 1. No loss.

STILL. February 9, 11.27 a. m. Fire in First National Bank Building, 18 No. Main Street, owned by W. K. and A. M. McFarland and occupied by various parties. Fire originated in waste basket in office of Metropolitan Insurance Co., probably from cigarette. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$30,000.00	\$175.00	\$12,000.00	\$175.00

STILL. February 9, 6.50 p. m. Chimney fire in residence of A. Annis, 5 Merrimack Street. Extinguished by Combination 1. No loss.

STILL. February 12, 3.55 p. m. A call to investigate cause of smoke in residence of Henry W. Stevens, 73 Warren Street. Combination 1 responded. No fire.

STILL. February 14, 6.15 p. m. Chimney fire in residence of R. M. Clark, 7 Myrtle Street. Extinguished by Combination 3. No loss.

STILL. February 18, 3.32 p. m. Fire in basement of building, Railroad Square, owned by Stratton & Co., and occupied by owner and Swift & Co. Fire originated in basement of Swift & Co. plant from explosion of hot water heater. Combination 1 responded but later a bell alarm was sent in. See next alarm.

Box 5. February 18, 3.55 p. m. Box pulled for preceding fire. One thousand fifty feet of hose wet. Recall 6.01 p. m.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$11,000.00	\$650.00	None	None
Contents,	20,000.00	None	None	None

Repairs made by occupants who carry own risk.

STILL. February 20, 11.31 a. m. Chimney fire in residence of W. C. Jones, 59 Clinton Street. Extinguished by Combination 1. No loss.

STILL. February 20, 3.05 p. m. Chimney fire in residence of E. A. Harriman, 12 Blake Street. Extinguished by Combination 1. No loss.

STILL. February 23, 4.25 p. m. Chimney fire in residence of W. A. Drew, 5 Albin Street. Extinguished by Combination 1. No loss.

STILL. February 26, 11.56 a. m. Fire in residence 67 Washington Street, owned by George Goodhue and occupied by James McNally. Caused by upsetting of oil stove. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$2,000.00	\$25.00	\$1,500.00	\$25.00
Contents,	2,000.00	30.00	1,000.00	30.00

STILL. March 2, 7.14 a. m. Chimney fire in residence of William Johnson, 18 Donovan Street. Extinguished by Combination 1. No loss.

STILL. March 3, 11.15 a. m. Chimney fire in residence of Mrs. W. R. Struthers, 35 Concord Street. Extinguished by Combination 3. No loss.

STILL. March 8, 7.38 a. m. A call to investigate cause of smoke in building 78 No. Main Street. Detail from Central Station sent. Fire located in ash can in closet. No loss.

STILL. March 10, 8.34 p. m. Chimney fire in residence of Walter Hackshaw, 36 Mills Street. Extinguished by Combination 1. No loss.

STILL. March 13, 8.53 a. m. Chimney fire in residence of M. B. Braley, 77 No. Main Street. Extinguished by Combination 1. No loss.

STILL. March 15, 2.36 p. m. Chimney fire in residence of A. M. McKenna, 24 Jackson Street. Extinguished by Combination 1. No loss.

STILL. March 21, 5.36 p. m. Awning on Board of Trade building destroyed. Caused probably by cigarette thrown from above. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Contents,	\$10,000.00	\$22.00	\$5,000.00	\$22.00

STILL. March 23, 4.40 p. m. Grass fire in rear of 127 Rumford Street. Extinguished by Combination 1. No loss.

STILL. March 25, 10.15 a. m. Chimney fire in residence of W. J. McFarland, 109 South Street. Extinguished by Combination 1. No loss.

STILL. March 28, 9.29 a. m. Chimney fire in residence of J. A. Morey, 14 Clinton Street. Extinguished by Combination 1. No loss.

4-4-4. March 31, 1.47 p. m. Brush fire on Kearsarge Club grounds. Details about to start by barge and electric car when word was received that assistance was not needed. Needless alarm. No loss.

STILL. April 2, 12.24 a. m. A call to Phenix Hall for slight fire in fire exit. Caused probably by cigarette. Combination 1 responded but no assistance was required. No loss.

STILL. April 6, 3.14 p. m. Grass fire corner No. State and Penacook Streets. Extinguished by Combination 1. No loss.

STILL. April 7, 5.10 p. m. Grass fire in rear of the Ralph Benjamin place Loudon Road. Extinguished by Combination 1 and Plains volunteers. No loss.

STILL. April 10, 11.29 a. m. Chimney fire in residence of B. T. Upham, 27½ Grove Street. Extinguished by Combination 1. No loss.

STILL. April 10, 2.33 p. m. Grass fire, corner Valley and High Streets. Extinguished by Combination 1. No loss.

STILL. April 11, 5.14 p. m. Chimney fire in residence 13 Waverly Street, owned by Margaret Casey and occupied by J. M. Morrison. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$1,200.00	\$20.38	\$1,500.00	\$20.38

Box 12. April 11, 5.23 p. m. Box pulled for preceding fire. Needless alarm. Recall 5.48 p. m.

STILL. April 15, 3.02 p. m. Grass fire on city lot, Bridge Street. Extinguished by Combination 1. No loss.

STILL. April 16, 12.19 a. m. Slight fire in McShane Block, Odd Fellows Avenue, owned by the James McShane Estate and occupied by Welch & Sullivan. Caused probably by cigarette. Extinguished by Combination 1. Loss trifling.

STILL. April 16, 3.38 p. m. Grass fire in rear of the D. J. Adams place, So. Pembroke Street. Extinguished by Combination 1. No loss.

STILL. April 17, 9.23 p. m. Dump fire near 20 Forest Street. Extinguished by Combination 1. No loss.

STILL. April 18, 8.21 p. m. Chimney fire in residence of E. J. Knuckey, 91 Franklin Street. Extinguished by Combination 1. No loss.

STILL. April 22, 8.30 p. m. Grass fire in rear of 58 Hall Street. Combination 1 responded but no assistance was required. Extinguished by B. & M. R. R. employees. No loss.

STILL. April 25, 2.40 p. m. Brush fire Plains District near Soucook River on land owned by Charles Thompson and others. Twenty acres burned over on the Concord side of the river, far larger area on the Pembroke side. Combination 1 responded. See next alarm.

4-4-4. April 25, 2.43 p. m. Alarm given for preceding fire. Details sent in autos. Labored two hours. No loss on Concord side of river.

STILL. April 26, 8.33 a. m. Chimney fire in residence of E. S. Brooks, 40 Monroe Street. Extinguished by Combination 1. No loss.

STILL. April 26, 12.24 p. m. Chimney fire in residence of F. W. Chandler, 8 Wheaton Avenue. Extinguished by Combination 1. No loss.

STILL. April 26, 3.31 p. m. Grass fire on Fan Road. Extinguished by Combination 1. No loss.

STILL. April 27, 7.34 p. m. Chimney fire in residence of H. O. Martin, 45 Center Street. Extinguished by Combination 1. No loss.

4-4-4. May 5, 12.57 p. m. A call for assistance from West Concord at scene of forest fire near Sewalls Falls Road. Detail sent in barge but before arrival word was received that the fire was under control. See West Concord report.

STILL. May 8, 7.15 a. m. Chimney fire in residence of J. M. Welch, 37½ Thorndike Street. Combination 1 responded but no assistance was required. No loss.

STILL. May 8, 2.27 p. m. Forest fire on land owned by St. Paul's School, Hopkinton Road. Combination 1 responded and laid out one thousand feet of hose from hydrant.

4-4-4. May 8, 2.34 p. m. A call for assistance from scene of preceding fire. Details sent in autos, generously furnished by St. Paul's School and others.

STILL. May 8, 3.11 p. m. Another call for help from scene of preceding fire. Motor-driven Engine 1 sent, and line laid by Combination 1 spliced. Engine worked two hours saving a large quantity of cord wood and young pine. Twelve hundred and fifty feet of hose wet.

	Value.	Loss.	Ins.	Ins. Paid.
Cord wood,		\$84.00	None	None
Young pine,		66.00	None	None

STILL. May 9, 6.28 p. m. Chimney fire in residence of A. D. Piggott, 38 Perley Street. Extinguished by Combination 1. No loss.

STILL. May 10, 12.16 p. m. Chimney fire in residence of W. H. Reed, Fan Road. Extinguished by Combination 1. No loss.

STILL. May 11, 7.55 a. m. Chimney fire in residence of Louis Edmonds, 2 Chandler Street. Extinguished by Combination 1. No loss.

STILL. May 13, 2.36 p. m. Chimney fire in residence of H. L. Rollins, 37 Fayette Street. Combination 1 responded but no assistance was required. No loss.

STILL. May 13, 6.52 p. m. Grass fire on bluff west of So. Pembroke Street. Extinguished by Combination 1. No loss.

STILL. May 16, 3.32 p. m. Slight fire in residence 28 Merrimack Street, owned by W. S. Baker and occupied by W. S. Baker. Caused by hot ashes in wooden box. Extinguished by Combination 1.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$5,000.00	\$12.80	\$2,000.00	\$12.80

Box 24. May 22, 6.54 p. m. Slight fire in building 119 No. Main Street, owned by H. Livingston and occupied by W. Thompson as a pool room. Cause unknown. Recall 7.31 p. m. Extinguished with chemicals.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$12,000.00	\$150.00	\$8,000.00	\$150.00

STILL. May 28, 4.40 p. m. Slight fire in moving picture out-fit while being demonstrated at Walker School. Extinguished by Combination 1. Loss trifling.

STILL. May 30, 12.44 p. m. Slight fire in residence of James O. Lyford, 11 Pitman Street. Combination 1 responded but no assistance was required. No loss.

STILL. May 30, 6.37 p. m. Chimney fire in residence 121 No. State Street, owned by Mrs. J. C. Ordway and occupied by Charles E. Morton. Combination 1 responded. Horse drawn engine.

STILL. May 30, 6.39 p. m. Combination 2 sent to assist at scene of preceding fire.

STILL. May 30, 6.41 p. m. Combination 3 sent to assist at scene of preceding fire. Extinguished with chemicals.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$3,500.00	\$176.25	\$3,000.00	\$176.25
Contents,	2,500.00	225.00	1,500.00	195.00

STILL. June 1, 4.15 p. m. Alarm occasioned by oil stove taking fire in residence of George G. Jenness on Loudon Road, Plains District. Extinguished by Combination 1. Loss trifling.

STILL. June 1, 6.25 p. m. Fire in electric car on Broadway near Rollins Park. Caused by short circuiting of wires. Extinguished by Combination 1. Loss trifling.

STILL. June 6, 6.57 p. m. Chimney fire in residence of George A. Wright, 41 Thorndike Street. Extinguished by Combination 1. No loss.

STILL. June 13, 6.31 p. m. Chimney fire in residence of Charles Byrne, 11 Washington Street. Extinguished by Combination 2. No loss.

Box 51. June 21, 7.03 p. m. Fire in machine and boiler shop, So. Main Street, owned and occupied by B. & M. R. R. Caused by overfeeding oil heater. Extinguished by shop department. Recall 7.13 p. m.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$75,000.00	\$200.00	\$54,000.00	\$200.00

STILL. June 28, 11.29 p. m. Fire in building 84 So. State Street, owned by Hon. N. E. Martin and occupied by C. W. Nelson as a grocery store. Caused by ashes in wooden receptacle. Combination 1 responded but before arrival a bell alarm was sent in.

Box 414. June 28, 11.30 p. m. Box pulled for preceding fire. One hundred and fifty feet of hose wet but no water used in the building. Extinguished with chemicals. Recall 12.07 a. m., 29th inst.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$1,000.00	\$60.00	\$1,000.00	\$60.00
Contents,	1,500.00	115.00	1,000.00	115.00

STILL. June 30, 7.11 a. m. Fire in stove pipe in residence of J. Mechello, 40 Tremont Street. Combination 1 responded but no assistance was required. No loss.

STILL. June 30, 12.40 p. m. Reported brush fire on Auburn Street. Combination 1 responded but could locate no fire.

STILL. July 4, 2.14 a. m. Alarm occasioned by burning tar barrel near Kimball play ground, Rumford Street. Set by boys. Extinguished by Combination 1. No loss.

STILL. July 4, 6.50 p. m. Fire on roof of residence 123 So. State Street, owned by Jeremiah Foley and occupied by Ulric Maher. Caused probably by sparks from chimney. Combination 3 responded but a bell alarm followed the still alarm almost immediately. See next alarm.

Box 414. July 4, 6.51 p. m. Box pulled for preceding fire. Needless alarm. Recall 7.03 p. m. Extinguished by Combination 3.

	Value.	Loss.	Ins.	Ins. Paid.
Building,	\$2,500.00	\$30.00	\$1,300.00	\$30.00

STILL. July 4, 9.45 p. m. Fire in dump 129 So. Main Street. Extinguished by Combination 1. No loss.

STILL. July 4, 10.46 p. m. Bonfire near Blossom Hill Cemetery. Combination 1 responded but no assistance was required. No loss.

2-2. July 14, 2.30 p. m. Signal informing the public that church services would not be held in the parks on account of rain.

2-2-2-2-2. July 19, 6.40 p. m. Sounded in connection with the church bells to celebrate the second victory of the Marne.

STILL. July 27, 2.19 p. m. Incipient brush fire on land owned by Wilfred Bourke east of Black Hill. Extinguished by residents of summer cottages and Combination 1. No loss.

STILL. August 10, 6.01 p. m. A call to investigate cause of smoke at 5 Pleasant Street extension. Combination 1 responded but no assistance was required. No fire.

STILL. August 11, 9.28 a. m. Auto fire near 51 School Street. Extinguished by Combination 1. No loss.

2-2. August 11, 2.30 p. m. Signal informing the public that church services would not be held in the parks on account of rain.