

to by members of the fire department under such rules and regulations as shall be prescribed by the chief engineer.

SEC. 33. The Veteran Fireman's Association is hereby constituted and made an auxiliary branch of the regular fire department of this city, the members of said association to be considered as honorary and to organize a coöperative working force to serve in emergency, without compensation, such service to be under the direction and control of the officers of the regular organization in allegiance and compliance thereto.

SEC. 34. The standing committee of the board of aldermen on fire department is authorized and directed to rent, at an expense not exceeding one hundred and fifty dollars a year, suitable rooms for the accommodation of said Veteran Firemen's Association, the same to be selected by said association, the same to be charged to the regular appropriation for fire department.

ADDITIONAL REGULATIONS.

ARTICLE 1. Any engine or hose company running out a line of hose from a hydrant or steamer shall be entitled to the pipe, although the hose of other companies may be attached, in order to reach the fire. And any company coming to a fire, and finding an incompleted line of hose laid out from a hydrant or steamer, shall attach to and lengthen out such line, in lieu of laying a line of its own.

ART. 2. When two or more engine companies are playing in a continuous line, the pipe shall belong to the company attaching to hydrant or steamer as provided in the foregoing article; but any company furnishing the entire line, and receiving water from a steamer, the pipe shall belong to such company so receiving.

ART. 3. Hose companies shall attach first lines to high-pressure hydrants where accessible; steamers attaching to those of low pressure, or reservoir.

ART. 4. No company shall take possession of a hydrant or reservoir unless their hose and apparatus for attaching to the same are at hand and ready for use.

ART. 5. In proceeding to, working at, or returning from fires, noisy demonstrations are strictly prohibited, and

it is required of officers of companies to maintain perfect order and decorum in their respective commands during all such service.

ART. 6. In case of fire the foreman first arriving shall be in command until the arrival of an engineer.

ART. 7. Drivers are strictly enjoined, in proceeding to a fire, to use the utmost care and caution consistent with promptness. Racing between companies is forbidden under any circumstances. Any collision or casualty occurring to horses or apparatus will be considered a sufficient cause for the suspension of the driver in charge at the time.

ART. 8. Fire hats are furnished by the city for the protection and identification of the firemen, and they must be worn at all fires except in the severest weather, when caps may be worn.

ART. 9. While attending fires it shall be the duty of members of the department, when not performing active service, to concentrate about their respective pieces of apparatus.

ART. 10. All engine and hose companies responding to second or general alarms will connect, but will not lay their lines until they have reported to the officer in command for orders.

ART. 11. The wearing of badges shall not be regarded by members of the department as conveying to them the privilege of free access to premises after fire has been extinguished.

ART. 12. All members of the department shall address all officers by their respective titles while on duty at fires.

ART. 13. The roll of each company shall be called as soon as the apparatus is housed, and no member will be excused except in case of sickness. Rolls must be called after every alarm. No officer or member will be marked present on the company roll unless present at fires and returns to house with apparatus, unless excused by an engineer.

ART. 14. All orders issued by the chief or an assistant engineer shall be promptly obeyed. At all fires occurring in the night, the chief engineer shall be identified by a red light, assistant engineers by blue lights.

ART. 15. Members of the department are expected to cheerfully comply with all rules and regulations which are adopted or which may be adopted. Captains will be held responsible for all lack of promptness and efficiency in their commands.

ROLL OF THE FIRE DEPARTMENT, 1912.

Permanent Chief Engineer.

WILLIAM C. GREEN, Office, Central Fire Station.

Assistant Engineers.

PRECINCT.

WALTER J. COFFIN, 1st Asst., Shipping clerk, 63 Pleasant Street.
SYLVESTER T. FORD, 2d Asst., Moulder, 41 So. Main Street.
WALTER J. COFFIN, Clerk of the Board.

WARD 1.

FRED M. DODGE, Electrical Inst. maker, 61 Merrimack Street.

WARD 2.

ELBRIDGE EMERY, Butcher, Potter St., East Concord.

WARD 3.

GEORGE W. KEMP, Overseer, 443 No. State St., West Concord.

KEARSARGE STEAM FIRE ENGINE AND HOSE COMPANY, NO. 2.

OFFICERS.

J. EDWARD MORRISON, *Captain.* CHARLES POWELL, *Lieutenant and Clerk.*
JAMES H. SANDERS, *Engineer and Treasurer.*

MEMBERS.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
1	J. Edward Morrison,	Machinist,	8 Thorndike Street.
2	Charles Powell,	Machinist,	75 Centre Street.
3	James H. Sanders,	Carriage painter,	45 Perley Street.
4	Thomas J. Morrison,	Carriage painter,	32 Downing Street.
5	C. W. Gay,	Machinist,	66 Perley Street.
6	George B. Davis,	Carriage painter,	3 South Main Street.
7	Herbert M. Sanders,	Collector,	11 Chapel Street.
8	Harry P. Blake,	Machinist,	8 Thorndike Street.
9	Harry L. Messer,	Machinist,	3 Broadway.
10	W. C. B. Saltmarsh,	Carriage trimmer,	5 Leighton Avenue.
11	H. C. Taylor,	Machinist,	81 South State Street.
12	Geo. L. Livingston,	Gas inspector,	38 Jackson Street.
13	L. F. Andrews,	Permanent driver,	Central Station.
14	A. P. Turner,	Permanent driver,	Central Station.

EAGLE STEAM FIRE ENGINE AND HOSE
COMPANY, NO. 1.

OFFICERS.

J. C. MCGILVRAY, *Captain.*J. D. ADAMS, *Lieutenant and Clerk.*

MEMBERS.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
18	John C. McGilvray,	Jig-sawyer,	9 Pearl Street.
19	David J. Adams,	Janitor,	107 North Main Street.
20	Charles H. Sanders,	Machinist,	11 Chapel Street.
21	Orrin C. Hodgdon,	Engineer,	31 Beacon Street.
25	Willis J. Sawyer,	Machinist,	39 Thorndike Street.
23	John M. Inman,	Carriage painter,	16 Wall Street.
24	John B. McLeod,	Electrician,	Colonial Block.
22	Eli Langlois, Jr.,	Painter,	5 Perry Avenue.
26	Charles W. Bateman,	Plumber,	60 Centre Street.
28	F. H. Fowler,	Electrician,	34 North Spring Street.
29	Daniel J. Brennan,	Electrician,	18 School Street.
27	Henry D. Johnson,	Bookkeeper,	28 Centre Street.
*30	A. B. Smart,	Permanent driver,	Central Station.

*On leave of absence, Henry Newton substitute driver.

GOVERNOR HILL STEAMER, NO. 4.

RELIEF ENGINE.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
34	Elmer H. Farrar, <i>Engineer,</i>	Machinist,	78 South State Street.
35	Henry O. Powell, <i>Fireman,</i>	Blacksmith,	11 Thompson Street.

ALERT HOSE COMPANY, NO. 2.

OFFICERS.

ERNEST E. SABEN, *Captain.*CHARLES C. CHESLEY, *Lieutenant and Clerk.*J. M. DAVIS, *Treasurer.*

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
36	E. E. Saben,	Car builder,	88 No. State Street.
37	C. C. Chesley,	Builder,	11 Prince Street.
41	J. H. Brunelle,	Blacksmith,	43 Tremont Street.
39	C. J. French,	Mayor,	5 Perkins Street.
40	C. H. Rowell,	Builder,	147 North Main Street.
42	F. P. McKenna,	Clerk,	19 Franklin Street.
43	J. M. Davis,	Blacksmith,	4 Tahanto Street.
44	J. Winnistrom,	Lineman,	145 North Main Street.
45	M. G. Davis,	Builder,	6 Beacon Street.
38	Geo. L. Osgood,	Clerk,	9 Thompson Street.
46	F. H. Silver,	Permanent driver,	Alert Station.

GOOD WILL HOSE COMPANY, NO. 3.

OFFICERS.

JOHN C. MILLS, *Captain*.HIRAM T. DICKERMAN, *Lieutenant and Clerk*.GEORGE H. SAWYER, *Treasurer*.

MEMBERS.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
50	John C. Mills,	Blacksmith,	34 Downing Street.
51	Hiram T. Dickerman,	Painter,	36 Broadway.
52	George H. Sawyer,	Blacksmith,	5 Allison Street.
53	Frank S. Putnam,	Woodworker,	113 South State Street.
54	Jasper R. Mudgett,	Wood-worker,	98 South State Street.
55	Henry H. Ash,	Machinist,	23½ Perley Street.
56	Edgar D. Clark,	Machinist,	125 South State Street.
57	Albert W. Thompson,	Janitor,	114 South State Street.
58	Harry L. Peacock,	Painter,	36 Warren Street.
59	Herbert F. Ferrin,	Electrician,	104 South State Street.
60	William T. Happny,	Permanent driver,	Good Will Station.

CITY OF CONCORD HOOK AND LADDER COMPANY, NO. 1.

OFFICERS.

WILL A. KING, *Captain*.ED E. LANE, *Lieutenant and Clerk*.

MEMBERS.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
64	Will A. King,	Machinist,	38 Franklin Street.
65	Ed. E. Lane,	Wood-worker,	5 Fremont Street.
66	Frank T. Bean,	Wood-worker,	Odd Fellows' Home.
67	Benjamin Ouillette,	Wood-worker,	10 Jefferson Street.
68	Henry V. Tittmore,	Teamster,	57 Dunklee Street.
69	Lucius D. Caldon,	Wood-worker,	13 West Street.
70	George W. Grover,	Wood-worker,	29 Thorndike Street.
71	Daniel Crowley,	Coachman,	130 Warren Street.
72	Stephen P. Foster,	Wood-worker,	14 Wall Street.
73	Sam B. Morgan,	Wood-worker,	10 Avon Street.
74	Bion W. Hall,	Carpenter,	15 Humphrey Street.
75	Edwin H. French,	Wood-worker,	100 Warren Street.
76	D. Charles Parker,	Renovater,	63 South Street.
77	Ned E. Herrin,	Carpenter,	Ins. Blk., School Street.
78	Carmi L. King,	Machinist,	11 Warren Street.
79	Louis Cote,	Carpenter,	68 South Spring Street.
80	Clarence L. Clark,	Clerk,	71 South Street.
81	Bert J. Heath,	Wood-worker,	92 West Street.
82	William R. Reagon,	Steam fitter,	53 South Main Street.
83	Harry Leary,	Plumber,	6 Fremont Street.
84	F. C. Young,	Permanent driver,	Central Station.

CHEMICAL ENGINE COMPANY, NO. 1.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
91	M. S. Wakefield,	Permanent engineer and driver,	Central Station.
92	C. G. Pinkham,	Permanent assistant engineer,	Central Station.

PIONEER STEAM FIRE ENGINE COMPANY, NO. 3.

Penacook.

OFFICERS.

HENRY ROLFE, <i>Captain.</i>	FRANK P. ROBERTSON, <i>Lieut., Clerk and Treas.</i>
WALTER H. ROLFE, <i>Engineer.</i>	JOHN B. DODGE, <i>Steward.</i>

MEMBERS.

<i>Badge Nos.</i>	<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
100	Henry Rolfe,	Highway agent,	26 Penacook Street.
101	Frank P. Robertson,	Machinist,	6 Church Street.
102	Walter H. Rolfe,	Foreman,	37 Centre Street.
106	Fred H. Morrill,	Sash-maker,	45 Summer Street.
109	Alfred Beddow,	Stationary engineer,	44 Elm Street.
111	William H. McGirr,	Second hand,	36 Charles Street.
110	John B. Dodge,	Janitor,	59 Merrimack Street.
113	Peter A. Keenan,	Table-maker,	92 High Street.
118	George A. Griffin,	Painter,	15 Washington Street.
103	Harry F. Jones,	Teamster,	7 Washington Street.
123	William Corbett,	Axle-maker,	44 Centre Street.
120	Frank D. O'Brien,	Expressman,	19 Church Street.
124	Delmar R. Jones,	Teamster,	123 Merrimack Street.
114	Henry E. Templeton,	Wood-worker,	41 Washington Street.
112	Ambrose Sweet,	Wine clerk,	67 Washington Street.
119	William H. Holbrook,	Laborer,	9 Webster Street.
116	Loren H. Emerson,	Wood-worker,	110 Merrimack Street.
117	Guy B. Chase,	Teamster,	Union Street.
121	Albert Cassavaugh,	Table-maker,	9 Union Street.
104	Fred E. Miller,	Teamster,	Merrimack Avenue.

OLD FORT ENGINE COMPANY, NO. 2.

East Concord.

OFFICERS.

GEORGE O. ROBINSON, *Captain.*
C. E. ROBINSON, *Lieut. and Clerk.*

JOHN C. HUTCHINS, *Treasurer.*
CHARLES P. WHITE, *Steward.*

MEMBERS.

<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
George O. Robinson,	Water-dealer,	Penacook Street.
C. E. Robinson,	Clerk,	Penacook Street.
John C. Hutchins,	Engineer,	Penacook Street.
William L. Batchelder,	Farmer,	Potter Street.
Samuel G. Potter,	Milk-dealer,	Appleton Street.
Charles P. White,	Janitor,	Pembroke Street.
William E. Virgin,	Carpenter,	Penacook Street.
Rufus S. Boynton,	Belt-maker,	Penacook Street.
Fred S. Farnum,	Carpenter,	Penacook Street.
Shad Cate,	Farmer,	Pembroke Street.
Ross W. Cate,	Horseshoer,	Penacook Street.
Herbert Knowles,	Carpenter,	Shawmut Street.
James Cox,	Blacksmith,	Penacook Street.
Daniel Lewis,	Driver,	Shawmut Street.
Parker French,	Janitor,	Penacook Street.
Wesley Field,	Milkman,	Penacook Street.
John W. Sanborn,	Farmer,	Penacook Street.
Walter C. Sanborn,	Wood-worker,	Portsmouth Street.
Arthur P. Swain,	Moulder,	Penacook Street.
Michael Lacroix,	Blacksmith,	Eastman Street.
Clarence Tibbetts,	Clerk,	Penacook Street.
Reuben L. Cate,	Carpenter,	Cemetery Street.
John T. Cate,	Carpenter,	Shawmut Street.
C. A. Chamberlin,	Farmer,	Shawmut Street.
William F. Paige,	Painter,	Shawmut Street.
Lloyd Virgin,	Carpenter,	Penacook Street.
Daniel W. Sanborn,	Machinist,	Shawmut Street.
Thomas E. Chase,	Blacksmith,	Penacook Street.
Herbert A. Stuart,	Storekeeper,	Penacook Street.
Hiram Gardner, Jr.,	Blacksmith,	Pembroke Street.

CATARACT ENGINE COMPANY, NO. 3.

West Concord.

OFFICERS.

HIRAM E. QUIMBY, *Captain.*

ANDREW J. ABBOTT, *Treasurer.*

ALFRED J. FRASER, *Lieut. and Clerk.*

FRANK C. BLODGETT, *Steward.*

PATRICK RYAN, *Foreman of Hose.*

MEMBERS.

<i>Names.</i>	<i>Occupations.</i>	<i>Residences.</i>
Hiram E. Quimby,	Stone-cutter,	490 North State Street.
Alfred J. Fraser,	Stone-cutter,	19 Clark Street.
Andrew J. Abbott,	Farmer,	382 North State Street.
Jeremiah Cotter,	Blacksmith,	5 Engel Street.
Patrick Ryan,	Stone-cutter,	50 Hutchins Street.
Abial C. Abbott,	Quarryman,	513 North State Street.
Frank G. Peterson,	Stone-cutter,	346 North State Street.
Frank C. Blodgett,	Stone-cutter,	436 North State Street.
Edward Lovering,	Stone-cutter,	1 Clark Street.
Abram D. Cushing,	Blacksmith,	517 North State Street.
Joseph Daley,	Blacksmith,	455 North State Street.
Luther E. Rowe,	Quarryman,	453 North State Street.
Robert Henry,	Silversmith,	513 North State Street.
Benjamin Kemp,	Laborer,	461 North State Street.
Clarence J. Spead,	Plumber,	439 North State Street.
Arthur Spead,	Stationary engineer,	439 North State Street.
Matthew H. Peabody,	Stationary engineer,	14 View Street.
Carl A. Anderson,	Stationary engineer,	480 North State Street.
Carl A. Ekstrom,	Stone-cutter,	16 Gladstone Avenue.
Oscar Johnson,	Stone-cutter,	516 North State Street.

VETERANS' AUXILIARY COMPANY.

VETERAN'S AUXILIARY COMPANY.

OFFICERS.

WILLIAM E. DOW, *Captain.*

FRED S. JOHNSON, *Lieutenant.*

MEMBERS.

W. E. Dow,	W. M. Chase,	W. W. Kennedy,
J. E. Howard,	C. F. Thompson,	A. O. Mansur,
E. F. Horne,	D. L. Neal,	O. Thompson,
F. D. Hurd,	A. H. Britton,	E. A. Saltmarsh,
G. H. Davis,	C. A. Herbert,	D. B. Newhall,
J. M. Colbert,	Fred S. Johnson,	W. K. Wingate,
D. Holloran,	A. L. Walker,	C. H. Barrett,
C. E. Palmer,	S. S. Upham,	F. Leighton,
C. C. Hill,	A. G. Jewett,	H. P. Bowers,
C. L. Mason,	F. T. Smith,	E. D. Ashley.

POLICE DEPARTMENT.

REPORT OF CITY MARSHAL.

*To the Honorable Mayor and Board of Aldermen for the
Year ending December 31, 1912:*

GENTLEMEN: I have the honor to submit to you the report
of the Police Department for the year beginning January 1,
1912, and ending December 31, 1912.

ROSTER.

CITY MARSHAL.

George A. S. Kimball.

ASSISTANT CITY MARSHAL.

Charles H. Rowe.

CAPTAIN.

Victor I. Moore.

SERGEANT.

Christopher T. Wallace.

REGULAR PATROLMEN.

Samuel L. Bachelder,	George H. Silsby,
Samuel Rodd,	Elmer J. Brown,
Irving B. Robinson,	Albert W. Braley,
Edward J. McGirr,	Harry L. Woodward,
Joseph E. Silva,	Fred N. Marden.

JANITOR OF POLICE STATION.

Charles W. Hall.

SPECIAL RESERVE OFFICERS.

CAPTAIN.

Thomas P. Davis.

Harry F. Jones,	W. A. Little,
Joseph A. Flanders,	Charles H. Guilbault,
George G. Allen,	Jonas Welcome,
Orrin H. Bean,	James Jepson,
Charles E. Kelley,	George E. Drury,
Elmer Tremblay,	Walter H. Beane,
Nelson Forrest,	Clark D. Stevens.

FINANCIAL STATEMENT.

Total receipts for fines and costs,	\$2,586.40
Total appropriation for 1912,	\$16,646.07
Special appropriation for horse,	290.00
Special appropriation,	1,607.00
	<hr/>
Total expenditures,	\$18,543.07

DISBURSEMENTS.

Fuel,	\$398.46
Helmets, caps and buttons,	38.35
Horse-hire, city and Penacook,	334.00
Board and shoeing horse,	258.90
Ice,	6.05
Incidentals,	1,425.65
Salaries (regulars),	14,549.10
Salaries (specials),	835.85
Salary of janitor,	300.00
Lights,	181.39
Water,	43.00
Police signal system,	172.32
	<hr/>
Total,	\$18,543.07

NUMBER OF ARRESTS AND CAUSES.

Whole number of arrests, including Penacook,	1,366
Whole number of arrests at Penacook,	159
Brought before the court,	905
Discharged by the court,	4
Discharged without being brought before the court,	461
Adultery,	3
Assault,	22
Assault on officer,	2
Assault with intent to kill,	1
Aggravated assault,	2
Breaking and entering,	4
Bastardy,	2
Assault with intent to rape,	1
Breaking seal on freight car,	1
Drunkenness, including Penacook,	925
Drunkenness at Penacook,	93
Deserters,	4
Obtaining money by false pretences,	1
Escaped from House of Correction,	1
Pulling in a false alarm of fire,	1
Fornication,	9
Arrests for out-of-town officers,	9
Insane,	20
Fighting,	4
Larceny,	23
Rude and disorderly conduct,	8
Safe-keeping,	235
Threatening to do bodily harm,	1
Rude and indecent conduct,	3
Failing to send children to school,	5
Evading railroad fare,	1
Begging,	1
Killing deer in closed season,	3
Non-support,	7
Hunting without a license,	5
Carrying concealed weapons,	1

POLICE DEPARTMENT.

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Intent to cheat and defraud,	1
Fraud,	5
Embezzlement,	2
Overspeeding automobiles,	8
Runaway boys,	2
Killing robins,	1
Setting snares,	1
Keeping liquor for sale,	5
Abandonment,	1
Idle persons,	4
Interfering with a locomotive,	1
Obstructing an officer,	2
Street walkers,	1
Running an automobile without proper lights,	1
Overloading a horse,	1
Riding bicycles on sidewalks,	4
Running a lottery,	1
Gambling,	3
Abusing his wife,	2
Escape from jail,	1
Polluting a water supply,	1
Escapes from the Industrial School,	2
Procuring liquor for man on the black list,	1
Selling eye glasses without a license,	1
Abusive language on a public street,	1
Pointing a loaded gun at his wife,	1
Running an employment bureau without a license,	1
Procuring liquor for minors,	3
Selling liquor,	2

MISCELLANEOUS

Whole number of lodgers, including Penacook,	1,205
Whole number of lodgers at Penacook,	436
Number of doors found open and secured, including Penacook,	145
Number of doors found open and secured at Penacook,	53
Whole number of doors tried, including Penacook,	509,980

Whole number of doors tried at Penacook,	67,980
Lost children returned to their parents,	8
Disturbances quelled,	51
Stray teams found,	2
Stray horses found,	1
Number of times ambulance used,	132
Number of duty calls rung in on the police signal,	47,769
Accidents reported,	12
Dogs killed,	16
Bicycles found,	38
Dead bodies found,	6
Cases investigated by officers, including Penacook,	748
Cases investigated by officers at Penacook,	80
Defects in sidewalks and streets reported,	3
Dangerous dogs reported,	15
Dangerous wires reported,	7
Fire alarms rung in by officers,	3
Gas street lights reported out,	5
Lanterns placed at dangerous places,	4
Water leaks reported,	4
Lost dogs restored,	6
Runaway horses stopped by officers,	4
Street obstructions removed,	5
Assisted at accidents,	8
Assisted in cases of sickness,	124
Persons reported bitten by dogs,	8
Lights reported out,	156
Number of officers attending fires, including Penacook,	115
Number of officers attending fires at Penacook,	9
Sick persons given aid at Police Station,	6
Sick persons given aid at Penacook Police Station,	2
Sick and injured persons assisted,	10
Bound over to the superior court,	23
Committed to jail,	32
Committed to the House of Correction,	308
Committed to the New Hampshire State Hospital,	20
Number of fines paid,	271

POLICE DEPARTMENT.	265
Mittimus not to issue till called for,	259
Appeals,	1
Cases not passed,	11
Assistance rendered at drowning accidents,	2

LOCATION OF POLICE SIGNAL BOXES.

- Box 1. Bridge Street and Stickney Avenue.
- Box 2. South Main and West Streets.
- Box 3. South Main and Concord Streets.
- Box 4. South Main and Pleasant Streets.
- Box 5. North Main and School Streets.
- Box 6. North Main and Park Streets.
- Box 7. Washington, between North Main and State Streets.
- Box 8. North Main and Church Streets.
- Box 9. North State and Penacook Streets.
- Box 10. Curtice Avenue and North State Street.
- Box 11. West Concord, opposite Shepard's store.
- Box 12. Penacook (Square).
- Box 13. Center, opposite Union Street.
- Box 14. South and Perley Streets.
- Box 15. Broadway, corner Carter Street.
- Box 16. Center and Pine Streets.
- Box 17. Pleasant and South Streets.
- Box 18. Warren, opposite Tahanto Street.
- Box 19. Beacon and Rumford Streets.

RECOMMENDATIONS.

I believe that the efficiency of this department would be greatly increased if we had a combination ambulance and patrol automobile, and I recommend the purchase of one. I also recommend the appointing of two more patrolmen.

CONCLUSION.

I will take this opportunity of expressing my appreciation to His Honor, Mayor Charles J. French and the Honorable Board of Aldermen, Judge George M. Fletcher, and City Solicitor Alexander Murchie for their many favors and courtesies extended to me during the past year.

I also wish to thank the officers and patrolmen for their valuable assistance and loyal support in enforcing the laws and maintaining the efficiency and discipline of the Police Department.

Respectfully submitted,

GEORGE A. S. KIMBALL,
City Marshal.

REPORT OF CITY ENGINEER.

CITY ENGINEER'S OFFICE, CITY HALL.

CONCORD, N. H., December 31, 1912.

To the Board of Mayor and Aldermen:

In compliance with the ordinance creating this department, the twentieth annual report showing the expenditures and operations of the engineering department for the year ending December 31, 1912 is herewith submitted:

Paid for engineer and assistants,	\$2,893.25
car-fares, livery and express,	102.44
supplies,	150.90
telephone rental and tolls,	23.20
services, supplies and transportation,	
assessors' maps,	994.73
	<hr/>
	\$4,164.52
Appropriation,	\$4,275.00
Expended,	4,164.52
	<hr/>
Unexpended balance December 31, 1912,	\$110.48

SEWERS.

The amounts expended on construction, repairs and maintenance, together with a statement of the general condition of the sewers in the city precinct, will be found in the report made to the Board of Public Works covering the work done under their supervision.

WATER WORKS.

Considerable time was spent in making surveys for proposed additional storage at Penacook Lake, flowage areas computed and much valuable data secured for future use.

FIRE DEPARTMENT.

Plans showing the location of the hydrants and fire-alarm boxes, both in the city proper and in Penacook, were brought up to date, prints of same made and turned over to the chief engineer of the department.

BUILDING PERMITS.

Together with the chief engineer of the fire department I have attended twenty-six hearings, on petitions for new buildings and for alterations to existing structures.

Twenty-five petitions were granted and one petition was referred to the Board of Mayor and Aldermen.

CEMETERIES.

No new blocks were laid out the past season, but in company with the superintendent of cemeteries we have formulated plans for additional lots during the coming season and all material available for grading has been used to the best advantage in grading the new portion.

The deed books have been brought up to date, covering the lots sold and transferred during the past year.

TOWN LINES.

The lines between Concord and the towns of Webster, Boscawen, Canterbury and Loudon were perambulated during the fall of 1912, together with the selectmen of said towns, or, a portion of their boards.

The old bounds were found in good condition with the exception of one on the Boscawen line, which is situated on the "Island," so called, where the plant of the Symonds Table Company is located.

The old bound was broken off and had to be replaced. This was done by the city paying for the bound and cutting same, the town of Boscawen transporting the bound to its proper location and setting the same. Your engineer was present at the setting of the new bound and saw it placed in the ground on the location formerly occupied by the old one. The new bound is much more substantial than the old one and should not be disturbed by future freshets.

STREETS.

Linden Street, in Ward One, was laid out and accepted for a distance of four-hundred feet and grades established.

Home Street, running easterly from Hall Street for a distance of 926.65 feet was laid out and grades established.

River Street, in West Concord, was laid out with the usual provision, that the abuttors rough grade the street, for a distance of 393.9 feet.

Gladstone Street was extended 100 feet as an accepted street.

The above changes make our street mileage as follows:

In the compact portion of the city 44.94 miles and in the outlying districts 126.33 miles, a total of 171.27 miles of streets and highways in the town.

Lines and grades were given for macadam roadways on South Street, North State Street, in West Concord; for gravel roadway on the Loudon road and for new concrete sidewalk construction and for other work of the street department when requested.

The usual monthly measurements of concrete sidewalks were made during the season for this work, and statements showing the square yards laid, cost and location of the same made and delivered to the superintendent of streets.

ASSESSORS' MAPS.

The field work on these maps was carried on as usual during the summer months. We have now covered the territory lying west of the Merrimack river and plans covering this territory will be ready for the assessors in April 1913.

The special appropriation for this work was \$1,000, of which amount \$994.73 was expended. The balance was carried to the credit of the engineering department.

Many pieces of property are still carried as estates of former owners, and it requires much time and labor to properly show ownership of them.

It is surprising to note the number of unsettled estates and the number of people who do not record their deeds.

Many deeds are very indefinite in their descriptions and we have not tried to settle disputes over property lines but show the various properties as they are occupied.

The general filing of inventories the past season aided us in many cases to place property which was obscurely located and hard to locate without the aid of plans and deeds.

We have now listed about forty-five hundred owners and their property shown on plans. Many of these owners have several tracts of land and the above number does not indicate the number of tracts shown.

MISCELLANEOUS.

Grades were given the committee on playgrounds at the Kimball playground and a start made to properly grade this lot. Owing to the small appropriation available the results obtained were not all that could be desired.

Street lines and grades for private parties have been given as desired.

Meetings of the Board of Aldermen, the Board of Public Works and committees of the Board of Aldermen have been attended when requested and information given or acquired for their use.

The labors of the Board of Examiners of Plumbers and the Hydrant Commissioners are set forth under their respective headings, in reports to your Board.

The employees of this department during the past season were:

Fred W. Lang, principal assistant; Forrest F. Owen, assistant; Orion H. Hardy, transitman; William E. Nash, Harrold H. Betton, George W. Burke and Earland B. Cook, rodmen.

To the Mayor and the Board of Aldermen, I wish to express my appreciation for the many courtesies shown.

Respectfully submitted,

WILL B. HOWE,
City Engineer.

WATER DEPARTMENT.
1912

BOARD OF WATER COMMISSIONERS.

CHARLES J. FRENCH, Mayor, *ex officio*.
HENRY C. HOLBROOK, to March 31, 1916.
FRANK P. QUIMBY, to March 31, 1916.
EDSON J. HILL, to March 31, 1915.
GEORGE D. B. PRESCOTT, to March 31, 1915.
HARRY H. DUDLEY, to March 31, 1914.
NATHANIEL E. MARTIN, to March 31, 1914.
SOLON A. CARTER, to March 31, 1913.
BURNS P. HODGMAN, to March 31, 1913.

SOLON A. CARTER, *President*.
EDSON J. HILL, *Clerk of Board*.

SUPERINTENDENT.

P. R. SANDERS.

CLERK.

ALICE G. COCHRAN.

FOREMAN.

JAMES T. DAVIS.

INSPECTOR.

HARRY E. STEVENS.

ENGINEER.

HENRY A. ROWELL.

CONCORD WATER BOARD.

Date of election and length of service of members.

Abraham G. Jones,* <i>ex officio</i> ,	1872—three months.
John M. Hill,*	1872-1878.
Benjamin A. Kimball,	1872-1878.
Josiah Minot,*	1872. Resigned Jan. 10, 1874.
David A. Ward,*	1872-1874.
Edward L. Knowlton,*	1872. Resigned Sept. 25, 1875.
Benjamin S. Warren,*	1872-1873.
John Kimball, <i>ex officio</i> ,	1872-1876.
John Abbott,*	1873-1876.
John S. Russ.*	1874-1877.
Abel B. Holt,*	1874-1877.
Samuel S. Kimball,*	1875. Resigned July 1, 1891.
Geo. A. Pillsbury,* <i>ex officio</i> ,	1876-1878.
Luther P. Durgin,*	1876-1885.
John Kimball,	1877. Resigned July 1, 1891.
William M. Chase,	1877. Resigned July 1, 1891.
Horace A. Brown,* <i>ex officio</i> ,	1878-1880.
James L. Mason,*	1878-1893.
James R. Hill,*	1878. Died in 1884.
Geo. A. Cummings,* <i>ex officio</i> ,	1880-1883.
Edgar H. Woodman,* <i>ex officio</i> ,	1883-1887.
Joseph H. Abbot,*	1884-1893.
George A. Young,*	1885-1894.
John E. Robertson, <i>ex officio</i> ,	1887-1889.
Stillman Humphrey,* <i>ex officio</i> ,	1889-1891.
Henry W. Clapp,* <i>ex officio</i> ,	1891-1893.
Willis D. Thompson,	1891-1895.
William P. Fiske,	1891-1902.
James H. Chase,*	1891. Died in 1893.
John Whitaker,*	1892. Died in 1903.

*Deceased.

Henry E. Conant,*	1892. Resigned Jan. 8, 1895.
Parsons B. Cogswell,* <i>ex officio</i> ,	1893-1895.
Solon A. Carter,	1893. Now in office.
Frank D. Abbot,	1893-1901.
William M. Mason,	1893-1899.
William E. Hood,	1894-1902.
Henry Robinson, <i>ex officio</i> ,	1895-1897.
Ebenezer B. Hutchinson,*	1895. Resigned Jan. 10, 1899.
Edson J. Hill,	1895. Now in office.
Albert B. Woodworth,* <i>ex officio</i> ,	1897-1899.
Nathaniel E. Martin, <i>ex officio</i> ,	1899-1901.
Henry E. Conant,*	1899. Died in 1911.
Timothy P. Sullivan,	1899. Resigned May 14, 1901.
Harry G. Sargent,* <i>ex officio</i> ,	1901-1903.
Obadiah Morrill,	1901-1905.
George D. B. Prescott,	1901. Now in office.
Harry H. Dudley,	1902. Now in office.
Nathaniel E. Martin,	1902. Now in office.
Charles R. Corning, <i>ex officio</i> ,	1903-1909.
Henry C. Holbrook,	1903. Now in office.
Harley B. Roby,	1905. Resigned Jan. 24, 1911.
Charles J. French, <i>ex officio</i> ,	1909. Now in office.
Burns P. Hodgman,	1911. Now in office.
Frank P. Quimby,	1911. Now in office.

PRESIDENTS OF THE BOARD.

Josiah Minot,*	1872. Resigned Jan. 10, 1874.
Benjamin A. Kimball,	1874-1875.
Edward L. Knowlton,*	1875. Resigned Sept. 25, 1875.
John Kimball,	1875-1876.
Benjamin A. Kimball,	1876-1878.
John Kimball,	1878. Resigned July 1, 1891.
William P. Fiske,	1891-1902.
Solon A. Carter,	1902. Now in office.

*Deceased.

SUPERINTENDENTS.

V. C. Hastings,*
P. R. Sanders,

1873. Died March 14, 1907.
1907. Now in office.

*Deceased.

CONSTRUCTION.

Cost of land damages, flowage and water rights:

Paid B. F. & D. Holden, for water rights,	\$60,000.00
Concord Manufacturing Co., for water rights,	83,000.00
W. P. Cooledge, for mill privilege and land,	5,500.00
Humphrey & Farnum, for kit-shop privilege,	4,900.00*
flowage rights around Penacook Lake,	4,375.61
W. P. Cooledge, Hutchins lot,	1,050.00†
Mary C. Rowell, for land,	1,500.00
Moses H. Bradley, for land,	5,000.00
Joseph B. Walker, for land,	2,214.00
John G. Hook, for land,	370.00
A. S. Ranney, for land,	1,350.00
Alfred Roberts, for land,	1,275.00
Charles E. Ballard, for land,	2,500.00
Mary G. Carter, for land,	1,250.00
Elizabeth Widmer, for land,	1,564.50
A. L. Proctor, for land,	450.00
Robert Crowley, for land,	3,000.00
Miles Hodgdon, for land,	2,200.00
heirs of Lowell Brown, for land,	1,032.55
Coffin & Little, for land,	800.00
O. F. Richardson, for land,	100.00
M. H. & C. R. Farnum, for land,	4,500.00
Cook & Hood, for land,	1,750.00
Charles H. Farnum, for land,	1,401.36

* Original cost, \$5,000; land sold for \$100.

† Original cost house and lot, \$2,250; portion of lot sold for \$1,200.

Paid Fred N. Ladd, for land,	\$300.00
A. W. Hill, for land,	6,500.00
Helen G. Evans and others, for land,	2,000.00
Frank B. Kilburn, for land,	2,500.00
Joseph A. and Mary E. Hal- loran, for land,	600.00
Wheelock Club, for land,	1,400.00*
Dr. I. A. Watson, for land,	2,490.00†
Frank E. Horner, for land,	1,900.00
Frank E. and William H. Horner, for land,	100.00
C. H. Amsden, water and flowage rights,	5,000.00
Cost of property and rights of Tor- rent Aqueduct Association, 20,000.00 dam, gate-house and appurte- nances,	32,756.17
conduit and gate-houses,	29,484.05
mains (low service main and pump main from the dam to Penacook Street, force main from the pump to the reservoir, fire main through North and South Main Streets, and high service Main from Penacook Street to Stark Street, Penacook),	182,241.70
distribution pipe,	383,930.97
service pipe,	61,505.65
reservoir,	42,460.09
pumping station, shop, sta- ble and storehouse,	22,954.48
pumping machinery,	17,000.42

* Original cost, \$1,500; house sold for \$100.

† Original cost, \$2,700; house sold for \$210.

Cost of engineering and super-	
intendence,	\$14,913.12
incidentals,	6,531.19
	<hr/>
Cost of works, January 1, 1913,	\$1,027,659.86

Bonds of the city have been issued to pay a part of said cost, of which the following are still outstanding:

When due.	Rate.	Amount.
Jan. 1, 1913,	4,	\$10,000.00
Jan. 1, 1914,	4,	10,000.00
Jan. 1, 1915,	4,	5,000.00
Jan. 1, 1916,	4,	9,000.00
Jan. 1, 1917,	4,	10,000.00
Jan. 1, 1918,	4,	10,000.00
Jan. 1, 1919,	4,	10,000.00
Nov. 1, 1920,	3,	7,000.00
Nov. 1, 1921,	3,	4,000.00
April 1, 1921,	3½,	5,000.00
Jan. 1, 1922,	4,	352,000.00
March 1, 1922,	3½,	20,000.00
April 1, 1922,	3½,	30,000.00
Jan. 1, 1923,	3½,	15,000.00
Jan. 1, 1924,	3½,	15,000.00
		<hr/>
		\$512,000.00

REPORT OF WATER COMMISSIONERS.

OFFICE OF THE BOARD OF WATER COMMISSIONERS,
CONCORD, N. H., February 24, 1913.

To His Honor the Mayor and the Board of Aldermen:

The Board of Water Commissioners transmits herewith the report of the superintendent, exhibiting in detail the operations of the department for the year ending December 31, 1912, together with the report of the engineer of the pumping station, which documents are made a part of this report.

The works have continued to meet all reasonable demands upon them and the supply has been abundant for domestic purposes and for fire protection.

The report of the superintendent shows that the expenditures for repairs and extensions have been comparatively small for the past year.

The pump which was installed in 1892 in connection with the high service system will require a considerable expenditure the coming year to put it in first-class condition, but the auxiliary pump which was installed in 1904 will undoubtedly furnish an ample supply while the repairs are in progress.

The board has been confronted with a serious problem by the appearance of the gypsy moth in the grove adjoining Penacook Park, which seriously threatened not only the growth on the tract controlled by the board, but also that under control of the park commission and that in the city lot.

The city government has taken steps to endeavor to control the ravages of the pest and it is hoped the effort will be successful.

In the report of the board for the year 1911, it was stated that it was probable that it would be possible to anticipate the redemption of \$15,000 of the water bonds

during the year 1912. The decreased expenditures for repairs and extensions have permitted the redemption of \$41,000 of the water bonds during the year, of which \$32,000 were due January 1, 1922.

The following statement of the amount of bonds issued for the construction of the works, the amount paid and the balance outstanding January 1, 1913, will undoubtedly prove of interest to all citizens of Concord:

Total amount bonds issued,	\$1,140,000.00
of which,	420,000.00
were refunding issues.	
Net amount bonds issued,	<u>\$720,000.00</u>
Total amount bonds paid,	\$628,000.00
Paid by refunding issues,	420,000.00
Net amount bonds paid,	<u>\$208,000.00</u>
Bonds outstanding January 1, 1913,	512,000.00
Net issues as above,	<u>\$720,000.00</u>

The construction account of the Concord Water Works to January 1, 1913, is \$1,027,659.86.

The debt on above account, January 1, 1913, is \$512,000.

Paid from earnings of system, \$515,659.86.

The board desires to commend its employees in all departments for the intelligent and faithful performance of their duties.

Respectfully submitted,

HENRY C. HOLBROOK,
FRANK P. QUIMBY,
EDSON J. HILL,
GEORGE D. B. PRESCOTT,
HARRY H. DUDLEY,
NATHANIEL E. MARTIN,
SOLON A. CARTER,
BURNS P. HODGMAN,
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-first 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, 1912:

RECEIPTS.

For water, from consumers by fixed rates,	\$15,326.36
For water, from consumers by meter rates,	60,267.00
From delinquents,	93.68
For water for building purposes,	76.64
pipe and stock sold and labor,	401.03
old brass and iron sold,	68.25
	\$76,232.96
Deduct abatements,	87.83
	\$76,145.13
Net receipts for 1912,	

EXPENDITURES.

GENERAL EXPENSES.

Paid pay-rolls, salaries and labor,	\$10,278.32
S. G. Sanborn, rent of shop in Penacook,	24.00
Ira C. Evans Company, printing and postage,	189.15
Rumford Printing Company, books,	53.75
George H. Richardson, pens,	3.50
Frost & Adams Co., office supplies,	6.93

Paid E. C. Eastman, office supplies,	\$3.55
Addressograph Company, addressograph, graphotype and supplies,	344.14
<i>Concord Evening Monitor</i> , advertising,	4.60
Patriot Printing Company, advertising,	4.30
Concord Electric Company, lighting,	55.21
N. E. Telephone & Telegraph Company, telephones,	93.10
Mitchell Manufacturing Company, badges,	5.56
W. A. Thompson, rubber boots,	16.00
Thorne Shoe Store, rubber boots,	10.00
Concord Hardware Company, hardware,	72.03
Thompson & Hoague Co., hardware,	61.13
Joseph T. Walker, hay,	200.41
Walter E. Dole, grain and straw,	118.77
G. N. Bartemus & Co., grain and straw,	94.50
H. Thompson, rattan brooms,	6.25
Robert Crowley, coke,	3.70
Barrett Manufacturing Company, paint,	15.92
Tragle Cordage Company, packing,	28.49
Eagle Garage, gasoline,	13.00
Standard Oil Company, gasoline,	8.25
John Swenson Granite Company, dynamite,	10.50

Paid Cushman Electric Company, transformer,	\$111.50
Concord Lumber Company, lumber,	20.58
Page Belting Company, sup- plies,	61.87
Concord Belting Company, supplies,	10.50
Batchelder & Co., oil, etc.,	37.20
George Abbott, Jr., supplies,	3.61
C. H. Martin & Co., supplies,	15.99
Woodworth & Co., cement,	14.85
U. S. Cast Iron Pipe & Foundry Co., cast-iron pipe, -	2,395.79
R. D. Wood & Co., cast-iron pipe and hydrant repairs,	422.95
Builders Iron Foundry, cast- ings,	364.93
A. P. Smith Manufacturing Company, castings and valves,	132.60
Water Works Equipment Com- pany, castings and valves,	36.80
Ludlow Valve Manufacturing Company, valves and hy- drants,	803.94
Rensselaer Manufacturing Company, valves and hy- drants,	597.61
Norwood Engineering Com- pany, hydrants,	84.00
Pratt & Cady Co., valves,	16.00
Bingham & Taylor, gate-boxes,	148.92
Chadwick-Boston Lead Com- pany, pig lead and lead pipe,	347.80
Richards & Co., pig lead,	177.89
Prescott Piano Company, old lead,	2.19

Paid A. M. Byers Company, wrought-iron pipe,	\$176.05
Hays Manufacturing Company, service box rods,	10.00
Concord Foundry & Machine Co., castings,	27.65
F. L. Badger, brass castings,	12.07
Walworth Manufacturing Company, tools and supplies,	152.72
H. Mueller Manufacturing Company, brass goods and tools,	143.48
Peter A. Frasse & Co., trench horses,	17.00
Harold L. Bond Co., tools,	12.70
Chandler & Farquhar Co., tools,	2.81
Concord Pipe Company, pipe and fittings,	57.74
Orr & Rolfe, fittings,	3.67
National Meter Company, meters and repairs,	770.26
Thomson Meter Company, meters and repairs,	362.80
Neptune Meter Company, meters,	327.60
Henry R. Worthington, meters and repairs,	89.54
Union Water Meter Company, meters and repairs,	72.00
Mrs. Nellie Spicer, meter,	9.00
Hersey Manufacturing Company, meter repairs,	7.20
Globe Horseshoeing Shop, smith-work,	110.10
Ross W. Cate, smith-work,	43.05
Jasper E. Brown, smith-work,	4.33

WATER DEPARTMENT.

285

Paid J. M. Crossman, smith-work,	\$2.80
Chandler Eastman Company, repairs,	30.95
George D. Huntley, repairs,	15.35
Abbot & Downing Co., repairs,	3.22
C. Pelissier & Co., repairs and supplies,	15.35
George L. Theobald, team- work,	146.00
Henry M. Richardson, team- work,	65.00
E. L. Davis, team-work,	7.50
C. H. Carter, auto hire,	19.00
N. A. Dunklee, auto hire,	2.75
William S. Kaime, livery,	2.00
F. A. Clough, horse hire,	98.65
C. E. Bartlett, transportation of men,	44.00
George F. Tandy, repairing concrete,	582.04
Hutchinson Building Company, lumber and labor,	232.27
Rowell & Plummer, mason- work,	32.55
B. Bilsborough & Sons, paint- ing,	33.03
C. W. Dadmun, electrical work and supplies,	18.27
Morrill & Danforth, insurance and bond,	415.55
Eastman & Merrill, insurance,	15.00
Boston & Maine Railroad, freight,	477.60
town of Webster, taxes,	40.00
Engineering News,	5.00
A. G. Cochran, clerk, cash paid out, car fares, express, post- age, etc.,	117.64

Paid Lulu M. Hastings, clerical work,	\$45.83	
city highway department, re-		
pairs to streets,	25.50	
incidentals,	52.28	
		————— \$22,489.48

PUMPING STATION EXPENSES.

Paid pay-rolls, engineer and fire-		
man,	\$1,869.65	
labor on fuel,	102.53	
Concord Lumber Company,		
coal and slabs,	889.57	
Boston & Maine Railroad,		
freight on coal,	239.77	
W. C. Robinson & Sons Co.,		
oil,	59.93	
Eagle Oil & Supply Co., pack-		
ing,	33.20	
Revere Rubber Company,		
packing,	11.69	
Jenkins Brothers, packing,	15.68	
Philadelphia Grease Company,		
grease,	4.75	
Crosby Steam Gage Company,		
gauge,	3.85	
William T. Bailey & Co., re-		
pairs,	13.69	
Globe Horseshoeing Shop,		
repairs,	2.50	
M. E. Clifford & Co., supplies,	6.63	
Concord Hardware Company,		
supplies,	4.40	
W. S. Dole, grass seed,	7.00	
Chandler & Farquhar Co., tools,	5.96	
Concord Light & Power Co.,		
lighting,	11.25	

WATER DEPARTMENT.

287

Paid N. E. Telephone & Telegraph		
Co., telephone,	\$34.50	
Boston & Maine Railroad,		
freight,	1.27	
Morrill & Danforth, insurance,	75.00	
incidentals,	1.25	
	<hr/>	3,394.07
Total expenditures for 1912,		<hr/> \$25,883.55

The expenditures are divided as follows:

GENERAL EXPENSES.

For office expenses,	\$1,549.67	
maintenance,	6,658.61	
inspection,	830.00	
care and repair of hydrants,	341.71	
new service-pipes,	872.80	
new distribution-pipes,	7,739.80	
new hydrants,	1,431.08	
new meters,	1,722.05	
work at Penacook Lake.,	49.00	
care of wood-lots at Penacook		
Lake,	513.91	
new shed at cottage at Penacook		
Lake,	265.30	
incidentals,	515.55	
	<hr/>	\$22,489.48

PUMPING STATION EXPENSES.

For salaries, engineer and fireman,	\$1,869.65	
fuel,	1,232.07	
oil and packing,	121.15	
repairs,	16.19	
supplies,	34.46	
lighting and telephone,	45.75	
insurance,	75.00	
	<hr/>	\$3,394.07

EXTENSIONS AND IMPROVEMENTS.

Cast-iron main and distribution pipes have been laid and hydrants set during the year as follows:

In School Street,
west from North Main Street to Rumford, 1,796 feet
feet 10-inch pipe.

In Warren Street,
west from North Main Street to North State, 454 feet
10-inch pipe.

In Pleasant Street,
west from Main Street to State, 375 feet 10-inch pipe.

In Pleasant Street,
on connection at North Spring Street, 22 feet 10-inch
pipe.

In North Spring Street,
north from Pleasant Street, 357 feet 10-inch pipe.

In North Spring Street,
south from School Street, 33 feet 10-inch pipe.

In North State Street,
north from Warren Street, 31 feet 10-inch pipe.

In South State Street,
south from Pleasant Street, 21 feet 10-inch pipe.

In Rumford Street,
on connection at School Street, 15 feet 10-inch pipe.

In South Main Street,
south from Maitland Street to Langdon, 182 feet 10-
inch pipe in place of 6-inch pipe discontinued.

In Pleasant Street Extension,
east from Main Street, 292 feet 8-inch pipe.

- In Odd Fellows Avenue,*
south from Warren Street, 19 feet 8-inch pipe.
- In Fiske Road,*
north from Pleasant Street, 750 feet 6-inch pipe in
place of 2-inch and 1-inch pipe discontinued.
- In Home Avenue,*
east from Hall Street, 362 feet 6-inch pipe.
- In Langdon Street,*
east from South Main Street, 358 feet 6-inch pipe.
- In Sexton Avenue,*
east from South Main Street, 210 feet 6-inch pipe in
place of 1-inch pipe discontinued.
- In Maitland Street,*
west from South Main Street, 192 feet 6-inch pipe in
place of 1-inch pipe discontinued.
- In Penacook Street,*
extended east, 179 feet 6-inch pipe in place of 1-inch
pipe discontinued.
- In Clarke Street, West Concord,*
extended east, 23 feet 6-inch pipe in place of 1-inch
pipe discontinued.
- In Linden Street, Penacook,*
south from Washington Street, 285 feet 6-inch pipe.
- On hydrant branches,*
137 feet 8-inch pipe and 36 feet 6-inch pipe.
Also 931 feet 1-inch pipe.

Thirteen new hydrants have been set, as follows:

- On Capitol Street, at south gate of State House Yard.
- On School Street, at Durgin.
- On School Street, at North State.

On School Street, at Green.
 On Warren Street, at Odd Fellows' Avenue.
 On North State Street, at Warren.
 On Pleasant Street Extension, at Railroad Square.
 On South State Street, at Pleasant.
 On North Spring Street, at High School.
 On North Spring Street, at School.
 On Fiske Road, at Trask's.
 On Penacook Road, at Harriman's.
 On Electric Avenue, Penacook, at Washington.
 There have been set 31 gates.

SUMMARY OF THE FOREGOING.

NEW PIPES, HYDRANTS AND STOP-GATES.

<i>Pipes.</i>	<i>Hydrants.</i>	<i>Stop-Gates.</i>
1-inch, 931 feet.	In City, 11	4-inch, 1
4-inch, 4 feet.	In Penacook, 2	6-inch, 12
6-inch, 2,395 feet.		8-inch, 11
8-inch, 448 feet.		10-inch, 7
10-inch, 3,286 feet.		
—	—	—
7,064 feet.	13	31
equal to 1.337 miles.		

Total length of main and distribution pipes now in use,
 367,395 feet, equal to 69.58 miles.

Total number of gates now in use, 1011.

Total number of hydrants now in use, 430.

SERVICE PIPES.

There have been laid during the year and connected with
 the main pipes, 43 service pipes consisting of

34 $\frac{3}{4}$ -inch,	822 feet.
2 1-inch,	81 feet.
3 2-inch,	52 feet.
4 4-inch,	104 feet.
—	—
43	1,059 feet.

There have been discontinued, 28; of these, 21 were services which had supplied buildings now town down and most of them had been shut off for several years. Whole number of services at the present time, 3,752; total length of service pipes, 87,520 feet or 16.57 miles.

We have set 99 meters during the year; 9 have been removed, making the total number now in use, 2,243.

Of the 3,752 services now connected, 1,206 are on high service and 2,546 on low service; of the 2,243 meters, there are on high service, 663 and on low service, 1,580; of the 430 hydrants, 216 are on high service and 214 on low service.

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

January,	176.50	July,	180.80
February,	176.15	August,	180.15
March,	175.95	September,	179.05
April,	178.90	October,	178.45
May,	180.60	November,	178.00
June,	181.00	December,	178.05

The lowest point reached during the year was on March 10, being 175.85; the highest was on June 10 and was 181.40; mean height for the year was 178.86 which was 1.26 feet higher than the mean height for the year 1911.

A chart showing the rise and fall of the water in Penacook Lake during the years 1908, 1909, 1910, 1911 and 1912 is included with this report. It will be seen that the lake shows at the end of each year for the first four years, a net loss of head; the several years showing, a loss of 4.85 feet from Jan. 1, 1908, to Dec. 31, 1908, " " " 1.00 " " " 1, 1909, " " 31, 1909, " " " 1.25 " " " 1, 1910, " " 31, 1910, " " " 1.40 " " " 1, 1911, " " 31, 1911, making a total loss of head of 8.50 feet from January 1, 1908, to December 31, 1911.

The year 1912 shows a net gain of 1.60 feet from January 1 to December 31.

The rainfall for the past six years was as follows:

1907,	39.36 inches.
1908,	26.25 “
1909,	30.94 “
1910,	30.19 “
1911,	34.13 “
1912,	36.43 “

The normal amount of rainfall is 40.11 inches and these figures are given in order to show the effect of the less than normal amount upon the lake during the past few years.

There being but few calls for extensions this year, the work of the department has been mainly the extension of the high service system in the section as already noted in this report. These lines are connected directly to the 20-inch main in North Main Street with the exception of North Spring Street which is an extension from the Pleasant Street 10-inch main. The ten hydrants which have been set on these lines are 8-inch, four-way, independent nozzle valve hydrants and are connected to the mains by 8-inch laterals. With these extensions, the high pressure service is enabled to be of protection to a much larger district than heretofore. The class of property thus protected includes public schools, churches, business blocks, apartment houses, the Y. M. C. A. building and the Central Fire Station. The total cost was \$6,023.60.

All hydrants have been tested regularly and thoroughly examined and left in the best possible condition.

During the months of February and March we had a large number of frozen services owing to the unusually cold winter. The process of thawing water pipes by the use of electricity is familiar to many water departments but its application to water pipes in Concord was tried for the first time this year and found to be very satisfactory. A transformer was purchased from the Cushman Electric Company and with the assistance of the Concord Electric Company, the services connected to iron mains were thawed

by this method. The time occupied in thawing a service was generally from eight to fifteen minutes after connecting the wire to the pipes, and we were enabled to thaw some services which otherwise would have had to remain frozen until spring.

There have been relaid 32 services in streets that were to be resurfaced and curb-stops were placed on 21 old supplies.

We continue to use cement-lined wrought-iron pipe for all services, being convinced that for our water supply it has no superior.

The three-year-old pine seedlings raised by the department were transplanted to permanent locations around the lake and five thousand four-year-old seedlings were purchased from the Concord Electric Company and also set out. These have thrived in almost every case, very few having died for any reason.

Gypsy moths are beginning to make their presence known upon our water-shed and with the help of the brown-tail moth are doing considerable damage. It will be necessary to remove the hard wood in the infected districts to stop their destructive work and further spread.

There are not many requests at present for extensions in 1913 and it will not require a large amount of pipe for new work.

Our office equipment has been greatly improved by the addition of an addressograph to be used in making water bills and in addressing postal card notices, and a graphotype for making the metal plates used in the addressograph.

In conclusion, I would express my appreciation of the continued support and coöperation of your board.

Respectfully submitted,

PERCY R. SANDERS,
Superintendent.

**REPORT OF THE ENGINEER OF THE
PUMPING STATION.**

PUMPING STATION, CONCORD WATER WORKS.

P. R. Sanders, Superintendent,

SIR:—I would report that the pumping machinery at the pumping station will need some repairs the coming year.

Air pump on Pump No. 2 will need new sleeves on the water end very soon as they are badly worn and do not hold up a good vacuum.

Pump No. 1 will need a general overhauling which will put the plant in good working condition for some years to come.

During the past four years the pumping has decreased on an average of eight million gallons a year which would show that the capacity of the plant is sufficient for some years.

The boilers have been inspected within three months and pronounced in very good condition.

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.

126 tons 1,023 pounds New River coal.
9 tons 1,822 pounds Cumberland coal.
104 tons 1,537 pounds Pocahontas coal.
81 gallons valve oil.
12 gallons engine oil.
36 pounds waste.
13 pounds grease.
11½ cords slabs.

ENGINE RECORD.

MONTHS.	No. days pumping engine		Total days pumping.	H. M.		Total water pumped.	Daily average pumped.	Total coal consumed.*	Daily average coal consumed.	Total pounds of wood consumed.	Gallons pumped per pound of coal.
	No. 1.	No. 2.		H. M.	H. M.						
January	2	30	30	289:30	9:20	25,117,332	810,236	46,731	1,507	2,139	537
February	3	26	28	287:30	9:54	25,481,695	878,679	48,977	1,688	2,165	520
March	6	26	31	282:30	9: 6	25,080,802	809,058	49,132	1,584	2,385	510
April	4	23	26	267:	8:54	22,957,857	765,261	43,803	1,460	2,685	524
May	2	26	27	271:	8:44	23,340,285	752,912	44,145	1,424	2,618	528
June	4	25	27	298:	9:56	26,573,646	885,788	49,475	1,649	1,841	537
July	4	29	31	307:	9:54	27,020,673	871,957	51,057	1,644	864	529
August	1	30	31	261:30	8:26	22,170,656	715,182	43,464	1,402	386	510
September	1	24	25	282:30	9:25	20,825,342	694,178	40,117	1,337	2,047	519
October	1	27	27	272:30	8:47	23,547,763	759,605	45,926	1,451	1,727	512
November	24	24	219:30	7:19	19,584,440	652,814	37,914	1,263	2,164	516
December	25	25	231:30	7:28	20,100,518	648,403	39,001	1,258	2,618	515
Total	28	315	332	3,270:	281,801,009	772,953	539,742	1,474	23,639	522
Daily average	8:57	772,953	1,474

* Amount of coal consumed includes that used for starting fires, banking fires and heating buildings.

Amount of coal consumed per thousand gallons pumped, 1.94 pounds.

HENRY A. ROWELL,
Engineer.

**CITY TREASURER'S CONDENSED STATEMENT OF
WATER WORKS ACCOUNT.**

W. F. Thayer, treasurer, in account with Concord
Water Works.

RECEIPTS.

Balance on hand, January 1, 1912,	\$29,617.84	
P. R. Sanders, superintendent,	76,145.13	
	<hr style="width: 100%;"/>	\$105,762.97

EXPENDITURES.

Interest on bonds,	\$20,920.00	
Bonds paid,	41,000.00	
Interest,	960.94	
Orders paid,	25,883.55	
Cash on hand,	16,998.48	
	<hr style="width: 100%;"/>	\$105,762.97

AUDITOR'S STATEMENT.

I hereby certify that I have examined the books showing the receipts of the Concord Water-Works from January 1, 1912, to December 31, 1912, and find the same correct; and that the total amounts given therein correspond with the amount of receipts given by Percy R. Sanders, superintendent, in his report for the year and also with the receipts reported by William F. Thayer, city treasurer.

HENRY E. CHAMBERLIN.

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
“ “ “ 1903,	65,088.45

* No hydrant rental this year.

WATER DEPARTMENT.

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For the year ending December 31, 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,	76,144.83
Total receipts for 39 years,	<u>\$1,845,365.12</u>

B.

MEAN HEIGHT OF WATER EACH YEAR.

1873,	175.86	1893,	173.38
1874,	179.50	1894,	172.81
1875,	180.00	1895,	171.15
1876,	180.28	1896,	178.96
1877,	176.46	1897,	183.33
1878,	179.50	1898,	184.31
1879,	179.74	1899,	183.49
1880,	175.30	1900,	183.09
1881,	174.70	1901,	183.86
1882,	179.15	1902,	184.98
1883,	176.40	1903,	184.75
1884,	178.18	1904,	184.40
1885,	176.80	1905,	183.37
1886,	178.10	1906,	183.94
1887,	179.04	1907,	183.59
1888,	181.96	1908,	183.41
1889,	180.91	1909,	181.40
1890,	181.90	1910,	180.22
1891,	180.00	1911,	177.60
1892,	174.32	1912,	178.86

† No hydrant rental after 1908.

