

REPORT OF THE ENGINEER OF THE PUMP-
ING STATION.

PUMPING STATION, CONCORD WATER-WORKS.

V. C. Hastings, Superintendent :

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

The pumping engine is a Worthington triple expansion, with independent air pump and surface condenser; has steam cylinders, 9 inches, 14 inches, and 22 inches, and plungers 12 inches in diameter, with a stroke of 18 inches.

Following will be found 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.

147 tons 1,129 lbs. Cumberland coal, 66 gallons of oil.
61 tons 800 lbs. Pocahontas coal, 100 lbs. of waste.

ENGINE RECORD.

DATE.	Pumping time. h. m.	Water pumped.	Daily average pumped.	Total coal burned.	Daily average coal burned.
January.....	166:30	12,681,650	409,085	51,066	1,647
February.....	132:45	11,387,943	406,712	39,707	1,418
March.....	210:25	18,847,084	607,970	58,830	1,897
April.....	161:30	17,391,832	596,394	41,006	1,368
May.....	180:45	13,655,932	440,513	35,803	1,154
June.....	222:30	17,870,149	595,671	40,949	1,320
July.....	200: 5	17,312,100	558,454	44,223	1,426
August.....	183:15	15,307,975	493,805	36,758	1,185
September.....	144	12,172,405	405,746	25,006	833
October.....	148:15	13,306,175	429,231	28,058	905
November.....	151:30	12,469,185	412,306	28,078	935
December.....	200:30	16,729,280	539,428	38,369	1,237
Total.....	2,102	179,631,710	492,140	467,853	1,281
Daily average.....	5:45	492,140	.....	1,281	.....

Amount of coal consumed per thousand gallons pumped, 2.60 pounds.

HENRY A. ROWELL,
Engineer.

SANITARY ANALYSIS OF WATER, OCT. 31, 1893.

Sample No. 1, taken from over intake.

Odorless.....	
Colorless.....	
Evaporation.....	nearly quiet
Residue.....	white with few circles
Ignition of residue.....	it darkens some
Solids, grains per gallon.....	2.1
Loss on ignition, grains per gallon..	1.5
Hardness, degrees.....	0.7
Alkalinity, degrees.....	0.6
Chlorine, grains per gallon.....	0.1
Free ammonia, part per million.....	0.03
Albuminoid ammonia, part per million.....	0.098
Nitric acid.....	merest trace
Nitrous acid.....	none
Poisonous metals.....	none
Iron.....	trace
Sediment.....	scarcely any
Microscopic examination.....	nothing important
Oxygen for oxidation, grain per gallon.....	0.135
Bacteria per 1-100 c. c. at 68° F.....	1
Bacteria per 1-100 c. c. at blood temperature.....	0

This is excellent water.

Sample No. 2, taken 100 feet from intake.

Odorless.....	
Color.....	very slight yellowish tint
Evaporation.....	nearly quiet
Residue.....	white with few circles
Ignition of residue.....	it blackens some
Solids, grains per gallon.....	1.6
Loss on ignition, grains per gallon.....	0.9
Hardness, degrees.....	0.7
Alkalinity, degrees.....	0.6
Chlorine, grains per gallon.....	0.1
Free ammonia, part per million.....	0.01

Albuminoid ammonia, part per million.....	0.10
Nitric acid.....	merest trace
Nitrous acid.....	none
Poisonous metals.....	none
Iron.....	trace
Sediment.....	scarcely any
Microscopic examination.....	nothing important
Oxygen for oxidation, grains per gallon.....	0.156
Bacteria per 1-100 c. c. at 68° F.....	2
Bacteria per 1-100 c. c. at blood temperature.....	0

This is excellent water.



Sample No. 3, taken from tap at house of V. C. Hastings.

Odorless.....	
Color.....	slight yellowish tint
Evaporation.....	nearly quiet
Residue.....	slightly yellowish and few circles
Ignition of residue.....	it darkens some
Solids, grains per gallon.....	2.0
Loss on ignition, grains per gallon.....	0.7
Hardness, degrees.....	0.7
Alkalinity, degrees.....	0.6
Chlorine, grains per gallon.....	0.2
Free ammonia, part per million.....	0.00
Albuminoid ammonia, part per million.....	0.11
Nitric acid.....	merest trace
Nitrous acid.....	none
Poisonous metals.....	none
Iron.....	trace
Sediment.....	very little
Microscopic examination.....	diatoms, infusoria
Oxygen for oxidation, grains per gallon.....	0.146
Bacteria per 1-100 c. c. at 68° F.....	12
Bacteria per 1-100 c. c. at blood temperature.....	0

This is excellent water.



Sample No. 4, taken from tap at house of L. R. Fellows.

Odorless.....	
Colorless.....	
Evaporation.....	nearly quiet

Residue.....	white with few circles
Ignition of residue.....	it blackens some
Solids, grains per gallon.....	2.6
Loss on ignition, grains per gallon.....	1.5
Hardness, degrees.....	0.7
Alkalinity, degrees.....	0.6
Chlorine, grains per gallon.....	0.2
Free ammonia, part per million.....	0.035
Albuminoid ammonia, part per million.....	0.096
Nitric acid.....	merest trace
Nitrous acid.....	none
Poisonous metals.....	none
Iron.....	trace
Sediment.....	little
Microscopic examination.....	diatoms, mineral particles
Oxygen for oxidation, grains per gallon.....	0.175
Bacteria per 1-100 c. c. at 68° F.....	19
Bacteria per 1-100 c. c. at blood temperature.....	0

This is excellent water.

REPORT BY PROF. E. R. ANGELL.

DERRY, N. H., November 3, 1893.

MR. HASTINGS :

DEAR SIR : I have made a very careful analysis and bacteriological examination of the four samples of water which you sent. Every sample is excellent water. No bacterium, capable of living at the temperature of the human body, is present, consequently there are no disease germs in the water.

Sample at the intake contains only one bacterium per 1-100 c. c., while sample 1,000 feet into the lake contains two. I think the explanation is this: The number of bacteria in a pond diminishes from the surface toward greater depths, and, if the pond is very deep, far below the surface they may disappear altogether. At the intake some of the deep water is mingled in the flow with the surface water, giving a lower number of bacteria. Regarding the bacteria in samples 3 and 4, the number most likely varies with the time and distance of the flow. If No. 4 is longer in getting from the source—*i. e.*, the lake—than is No. 3, then we should expect it to contain more bacteria. I wish you would inform me whether this is probably so.

Yours very truly,

[Signed] EDMUND R. ANGELL.

AUDITOR'S REPORT.

CONCORD, N. H., January 8, 1894.

To the Board of Water Commissioners:

I certify that I have examined the books showing the receipts of the Concord Water-Works from January 1, 1893, to December 31, 1893, and find the same correct, and that the total amounts given therein correspond with the amount of receipts given by the superintendent, V. C. Hastings, in his report for the year.

ARTHUR H. CHASE, *Auditor.*

TREASURER'S REPORT.

W. F. THAYER, *Treasurer.*

In account with CONCORD WATER-WORKS.

RECEIPTS.

Bonds,	\$42,000.00
“ premium,	1,145.00
“ interest,	146.44
Coupons due Jan. 1, 1893, bonds on hand,	840.00
Notes,	55,000.00
Income of water-works,	52,299.66
	\$151,431.10

EXPENDITURES.

Balance due treasurer, Jan. 1, 1893,	\$24,075.15
Interest on water-works bonds,	28,485.00
“ “ notes,	1,933.33
Maintenance and extension,	55,147.66
Notes,	40,000.00
Bond,	200.00
Balance on hand Jan. 1, 1894,	1,589.96
	\$151,431.10

APPENDIX.

A.

Receipts for each Year since the Completion 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 Dec. 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
Total receipts for twenty-one years,	<u>\$622,336.91</u>

B.

Mean Height of the Water Each Year.

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

C.

Water is Now Supplied for the Following Uses :

3,521 families,	2 undertakers,
2,476 water-closets,	49 meters,
611 bath-tubs,	1 tannery,
955 wash-bowls,	2 bakeries,
241 heating-apparatus,	112 offices,
7 water motors,	90 stores,
7 elevators,	11 drug stores,
60 urinals,	25 grocery stores,
927 yard-hydrants,	12 markets,
228 fire-hydrants,	2 restaurants,
26 private fire-hydrants,	7 fountains,
3 drinking-fountains,	3 green-houses,
11 public watering-troughs,	11 barber-shops,
22 stand pipes,	28 mechanic shops,
17 churches,	5 plumber shops,
1 library,	26 stationary engines,
13 public schools,	6 printing establishments,
3 private schools,	1 organ and piano manufactory,
8 city buildings,	3 carriage manufactories,
1 state-house,	3 book-binderies,
1 post-office,	1 silver manufactory,
1 Masonic hall,	5 photographers,
1 Odd Fellows' hall,	1 dye-house,
4 banks,	4 laundries,
4 hotels,	8 livery stables,
2 railroads,	871 horses,
1 gas-works,	167 cattle,
3 foundries,	15 saloons,
1 electric light company,	1 jail,
1 cotton-mill,	1 state prison,
2 coal-yards,	6 cemeteries.

FIRE-HYDRANTS.

STREETS.	LOCATIONS.	Number.	Total.
North Main	South-west corner North Main and Penacook.....	1	
"	East side North Main, near J. B. Walker's.....	1	
"	Junction North Main and Fiske.....	1	
"	East side North Main, near Larkin's store.....	1	
"	North-west corner North Main and Franklin.....	1	
"	East side North Main, opposite Pearl.....	1	
"	North-west corner North Main and Washington.....	1	
"	West side North Main, opposite Historical Society rooms.....	1	
"	East side North Main, opposite Chapel.....	1	
"	North-west corner North Main and Court.....	1	
"	North-west corner North Main and Pitman.....	1	
"	North-west corner North Main and Montgomery.....	1	
"	East side North Main, opposite Montgomery.....	1	
"	North-west corner North Main and Centre.....	1	
"	South-east corner North Main and Bridge.....	1	
"	South-west corner North Main and Park.....	1	
"	East side North Main, opposite Park.....	1	
"	North-west corner North Main and Capitol.....	1	
"	North-west corner North Main and School.....	1	
"	West side North Main, at Centennial block.....	1	
"	East side North Main, opposite Centennial block.....	1	
"	East side North Main, in rear Eagle Hotel.....	1	
"	East side North Main, in rear Woodward block.....	1	
"	North-west corner North Main and Warren.....	1	
"	West side North Main, at Central block.....	1	
"	South-east corner North Main and Depot.....	1	
"	North-west corner North Main and Pleasant.....	1	27
South Main.	South-east corner South Main and Pleasant.....	1	
"	North-east corner South Main and Freight.....	1	
"	East side South Main, opposite Fayette.....	1	
"	East side South Main, opposite Thompson.....	1	
"	South-east corner South Main and Chandler.....	1	
"	North-west corner South Main and Wentworth avenue.....	1	
"	North-west corner South Main and Thorndike.....	1	
"	East side South Main, opposite St. John's church.....	1	
"	North-west corner South Main and Perley.....	1	
"	West side South Main, near Abbot-Downing Co.'s.....	1	
"	East side South Main, opposite Abbot-Downing Co.'s.....	1	
"	North-west corner South Main and West.....	1	12
Turnpike.	East side Turnpike, near West.....	1	
"	West side Turnpike, opposite Gas.....	1	
"	West side Turnpike, near J. B. Weeks's.....	1	3
Water.	West side Water, near Capt. James Thompson's.....	1	1
Hall.	West side Hall, below Rolfe and Rumford Asylum.....	1	1
Fiske.	West side Fiske, near North State.....	1	1
Summer.	North-east corner Summer and Pitman.....	1	1
Durgin.	West side Durgin, near Toof's laundry.....	1	1
North State.	South-west corner North State and Penacook.....	1	
"	North-west corner North State and Walker.....	1	
"	North-west corner North State and Church.....	1	
"	North-west corner North State and Tremont.....	1	
"	North-east corner North State and Washington.....	1	
"	West side North State, opposite Court.....	1	
"	North-west corner North State and Maple.....	1	
"	North-east corner North State and Centre.....	1	
"	East side North State, opposite government building.....	1	
"	South-west corner North State and School.....	1	
"	North-west corner North State and Warren.....	1	
"	North-west corner North State and Pleasant.....	1	12
South State.	East side South State, opposite Wall.....	1	
"	North-west corner South State and Thompson.....	1	
"	South-west corner South State and Monroe.....	1	
"	East side South State, opposite Laurel.....	1	
"	South-east corner South State and Downing.....	1	
"	North-east corner South State and West.....	1	
"	Junction of South State and Turnpike.....	1	7

FIRE-HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Number.	Total.
Mills.	South-east corner Mills and Downing.....	1	
"	West side Mills, near Levi Call's.....	1	2
Dakin.	West side Dakin, near C. E. Harriman's.....	1	1
Broadway.	West side Broadway, near precinct line.....	1	1
Green.	North-west corner Green and Prince.....	1	
"	East side Green, opposite Prince.....	1	2
South.	West side South, opposite Wall.....	1	
"	North-west corner South and Thompson.....	1	
"	West side South, opposite Monroe.....	1	
"	West side South, opposite Laurel.....	1	
"	West side South, opposite Downing.....	1	
"	West side South, opposite Allison.....	1	
"	West side South, near Abbot farm.....	1	
"	West side South, opposite Smith farm.....	1	8
Bradley.	South-west corner Bradley and Penacook.....	1	
"	West side Bradley, opposite Walker.....	1	
"	East side Bradley, opposite Highland.....	1	3
Union.	North-west corner Union and Maple.....	1	1
Lyndon.	South-west corner Lyndon and Tremont.....	1	1
No. Spring.	South-west corner North Spring and Centre.....	1	1
So. Spring.	South-west corner South Spring and Oak.....	1	
"	West side South Spring, opposite Concord.....	1	
"	West side South Spring, opposite Perley proposed extension.....	1	3
Rumford.	West side Rumford, opposite Perkins.....	1	
"	North-east corner Rumford and Franklin.....	1	
"	West side Rumford, opposite Beacon.....	1	
"	North-east corner Rumford and Abbot.....	1	
"	North-east corner Rumford and Cambridge.....	1	
"	North-east corner Rumford and School.....	1	6
Tahanto	North-west corner Tahanto and School.....	1	1
Pine.	South-west corner Pine and Centre.....	1	1
High.	North-west corner High and Auburn.....	1	
"	East side High, opposite Forest.....	1	
"	South-west corner High and Franklin.....	1	3
Giles.	South-east corner Giles and School.....	1	1
Fruit.	North-east corner Fruit and Clinton.....	1	
"	East side Fruit, opposite Wm. W. Critchett's.....	1	
"	North-west corner Fruit and Woodman.....	1	3
Minot.	West side Minot, near Odd Fellows' Home.....	1	1
Penacook.	South-west corner Penacook and Rumford.....	1	
"	South-east corner Penacook and Columbus avenue.....	1	2
Highland.	North-east corner Highland and Rumford.....	1	1
Church.	North side Church, opposite Lyndon.....	1	
"	North-east corner Church and Rumford.....	1	2
Franklin.	North-west corner Franklin and Jackson.....	1	
"	South-west corner Franklin and Rumford.....	1	
"	South side Franklin, opposite W. J. Ahern's.....	1	
"	North-east corner Franklin and Auburn.....	1	4
Beacon.	North-west corner Beacon and Jackson.....	1	1
Blanchard.	North-west corner Blanchard and Essex.....	1	1
Ferry.	North side Ferry, east of C. & M. Railroad.....	1	1
Washington.	South-west corner Washington and Union.....	1	
"	North-west corner Washington and Rumford.....	1	
"	North side Washington, opposite Perry avenue.....	1	3
Valley.	North side Valley, opposite Forest.....	1	1
Auburn.	North-west corner Auburn and Forest.....	1	1
Centre.	North-east corner Centre and North State.....	1	
"	South-west corner Centre and Green.....	1	
"	North-west corner Centre and Union.....	1	
"	North-west corner Centre and North Spring.....	1	
"	North-west corner Centre and Rumford.....	1	
"	South side Centre opposite Essex.....	1	7
"	South-west corner Centre and Summit avenue.....	1	
Bridge.	South side Bridge, near easterly barn.....	1	1
Capitol.	North-east corner Capitol and North State.....	1	1
School.	North-west corner School and Green.....	1	

FIRE-HYDRANTS.—Continued.

STREETS.	LOCATIONS.	Number.	Total.
School.	North-west corner School and North Spring.....	1	
"	North-west corner School and Merrimack.....	1	
"	North side School, near city storehouse.....	1	
"	North side School, near W. S. Brooks's.....	1	5
Depot.	North-west corner Depot and Railroad square.....	1	1
Warren.	North-west corner Warren and Green.....	1	
"	North-west corner Warren and North Spring.....	1	
"	North-west corner Warren and Rumford.....	1	
"	South-west corner Warren and Merrimack.....	1	
"	North-west corner Warren and Tahanto.....	1	
"	South-east corner Warren and Liberty.....	1	
"	Junction Warren and Pleasant, near Fruit.....	1	7
Pleasant.	North-west corner Pleasant and Railroad Square.....	1	
"	North west corner Pleasant and Green.....	1	
"	North-west corner Pleasant and Rumford.....	1	
"	South side Pleasant, opposite Pine.....	1	
"	South side Pleasant, opposite Liberty.....	1	
"	North side Pleasant, near Salem.....	1	
"	South side Pleasant, near Mrs. Eddy's.....	1	
"	North side Pleasant, near Mrs. Lane's.....	1	
"	North side Pleasant, near J. McC. Hammond's.....	1	
"	South side Pleasant, opposite Pond road.....	1	
"	South side Pleasant, near J. Milnor Coit's.....	1	
"	North side Pleasant, opposite Infirmary.....	1	
"	South side Pleasant, near the mill.....	1	13
Marshall.	North side Marshall, opposite Fuller.....	1	1
Hill's ave.	North-east corner Hill's avenue and South Main.....	1	
"	South-west corner Hill's avenue and Railroad square.....	1	2
Fayette.	North-west corner Fayette and Elm.....	1	1
Chandler.	South side Chandler, opposite Railroad.....	1	1
Concord.	South side Concord, opposite Jefferson.....	1	1
Thorndike.	North-east corner Thorndike and Grove.....	1	1
Laurel.	North-east corner Laurel and Pierce.....	1	1
Perley.	North-west corner Perley and Grove.....	1	
"	South side Perley, near old brook.....	1	2
West.	North side West, near Badger.....	1	
"	North side West, opposite Dakin.....	1	
"	North side West, at intersection Broadway.....	1	3
Harrison.	North-west corner Harrison and Morton.....	1	1
Allison.	North-west corner Allison and Mills.....	1	1
Prospect.	North-west corner Prospect and Granite avenue.....	1	1
Curtice ave.	North side Curtice avenue, near John C. Kenney's.....	1	1
On main line	West side West Concord road, at water-works storehouse....	1	
"	North-east corner West Concord road and Foster.....	1	
"	East side West Concord road, near cemetery gate.....	1	
"	West side West Concord road, near Calvary cemetery.....	1	
"	East side West Concord road, near C. R. Farnum's.....	1	5
WEST CONCORD.			
Main.	East side Main, near old city farm.....	1	
"	East side Main, near engine-house.....	1	
"	East side Main, opposite D. Holden's.....	1	
"	West side Main, near north mill.....	1	
"	East side Main, opposite Geo. W. Brown's.....	1	
"	East side Main, near Mr. Harrington's.....	1	
"	East side Main, opposite A. Hollis's.....	1	7
Electric.	North-east corner of Electric and Main.....	1	
"	North side Electric, near power station.....	1	2
High.	East side High, near S. W. Kellom's.....	1	
"	East side High, near Mrs. G. E. Holden's.....	1	2
Depot.	South side Depot, opposite railroad station.....	1	1
Hutchins.	North side Hutchins, near B. T. Putney's.....	1	
"	North side Hutchins, near C. & C. Railroad.....	1	2
Pen'c'k Road	West side Penacook road, near Warner road.....	1	
"	West side Penacook road, near Mr. Currier's.....	1	2

FIRE-HYDRANTS.— *Concluded.*

STREETS.	LOCATIONS.	Number.	Total.
PENACOOK.			
Main.	West side Main, opposite Stark street.....	1	
"	West side Main, near Mr. Prescott's.....	1	
"	South-west corner Main and Union.....	1	
"	Washington square, opposite Washington.....	1	
"	North-west corner Main and Charles.....	1	
"	North side Main, opposite East Canal.....	1	
"	North side, near iron bridge.....	1	7
West Main.	West side West Main, opposite Cemetery.....	1	1
High.	East side High, opposite Summit.....	1	
"	North-west corner High and Maple.....	1	
"	North-west corner High and Spring.....	1	3
Washington.	South-east corner Washington and Union.....	1	
"	South side Washington, opposite John Whitaker's.....	1	
"	South side Washington, opposite Charles.....	1	
"	South side Washington, near Contoocook bridge.....	1	4
Charles.	South-west corner Charles and Warren.....	1	
"	North side Charles, near Geo. W. Corey's.....	1	2
West Canal.	South-east corner West Canal and Warren.....	1	1
East Canal.	North side East Canal, near Contoocook Mfg. Co.....	1	
"	North side East Canal, near Crescent.....	1	2
Merrimack.	South side Merrimack, opposite Merrimack avenue.....	1	
"	North side Merrimack, opposite D. W. Fox's.....	1	
"	North side Merrimack, opposite Cross.....	1	
"	South side Merrimack, opposite Rolfe's shop.....	1	
"	North side Merrimack, near road to Island.....	1	
"	North-west corner Merrimack and Penacook.....	1	6
Summer.	North side Summer, opposite High.....	1	
"	North-east corner Summer and Centre.....	1	2
Spring.	North-east corner Spring and Church.....	1	1
Centre.	North-west corner Centre and Spring.....	1	1
Cross.	South-west corner Cross and Summer.....	1	1
Rolfe.	North side Rolfe, near James Corbett's.....	1	
"	North-west corner Rolfe and Penacook.....	1	2
Whole number of public hydrants.....			228
PRIVATE HYDRANTS.			
Concord Railroad yard, 3 post and 3 flush hydrants.....		6	
Northern Railroad yard, 4 post hydrants.....		4	
New state prison.....		3	
Abbot-Downing Co.'s yard.....		6	
Page Belting Co.'s yard.....		2	
W. P. Ford & Co.'s yard.....		1	
N. H. Asylum for Insane yard.....		1	
Concord Gas Light Co.'s yard.....		1	
S. Paul's school.....		1	
Water-works pumping station grounds.....		1	
Whole number of private hydrants.....			26

STREET DEPARTMENT.

REPORT OF COMMISSIONER OF HIGHWAYS.

To the City Council :

During the past season quite a number of catch-basins have been constructed and old ones repaired on the different streets, and an account of the expense of the same may be found in the statement of the expenditures.

A furnace has been built on the east side of the river, near the Loudon bridge, for the burning of the rubbish that is collected by the city and job teams. The teams attend to the weekly cleaning up on Main street in the evening, instead of the day-time.

An extra two-horse team has been added to the highway department, and is kept at the city sheds. I would recommend that another one be purchased, as good use can be made of it.

A shed 86 feet in length has been built on the city lot, to store the sprinklers that were purchased in 1893 ; and the fence around the city sheds has been repaired.

Five new sprinklers were bought the past season in consequence of the establishing of a sprinkling precinct. The number of sprinklers on hand is 9, and, if the precinct is not enlarged, they will do the work. An appropriation of \$3,000 will suffice to pay the expense.

I would recommend the purchase of a steam road-roller, of about 12 tons weight. In the matter of labor in the construction and repairing of streets, it would cause quite a saving of expense to the city.

Respectfully submitted :

ALFRED CLARK,
Commissioner of highways.

EXPENSE OF LABOR ON STREETS.

Grading Charles, Beacon, and White streets,	\$1,096.36
Grading Pine street, from School to Warren street,	128.55
Grading sidewalk on the west side of Auburn street,	758.90
Grading sidewalk on the east side of Rumford street, from Highland to Walker street,	70.60
Building a stone culvert on the Shaker road in East Concord,	109.00
Building a bridge in the Mountain district at the Hackett brook, so called, with wooden abutments,	200.00
Grading West Concord road with stone chips,	199.50
Grading Albin street,	194.50
Re-coating School street with concrete near the Board of Trade Building,	176.40
Repairing concrete sidewalk, near the Walker school-house, on Fiske street,	165.07
Gravel sidewalk on Dakin street,	68.00
Repairing gravel walk on South Spring street,	72.40
Gravel sidewalk on Walker street,	39.00
Grading Sexton avenue,	100.98
Concreting Capitol street,	2,031.12
Building sidewalks near the iron bridge at the South end,	68.00
Building a bank wall, a new bridge, and a new fence, and raising the grade, at St. Paul's school,	1,286.32
Grading South State street with gravel from Perley street to West street,	140.50
Grading North State street with stone chips from Penacook street to the electric railroad crossing,	166.50
A fill on Bridge street, on the west side of the river,	254.24
Paving a gutter on Church street,	20.50
Repairing Church street, from Jackson to Lyndon street,	93.00
Gravel walk on Church street,	10.75
Paving gutter on School street, from Tahanto to Pine street, and 140 feet west of Pine on School,	72.62
Relaying pavement on North Main street, from Pleasant to Depot street,	298.50
Taking care of the snow in 1893,	3,575.89
Building sidewalk on Eastman street, East Concord,	115.45
Grading sidewalk on Warren street,	34.86
There are 449 loads of sand in a pile on the east side of the river, for use when the new Loudon bridge is completed, and the cost was	61.75
A fill at the Borough bridge in Penacook,	891.07
Re-planking the twin bridge at Penacook,	87.50
Re-planking two bridges at East Concord village,	35.00
Grading Morton street,	97.87
Grading sidewalks on Morton street,	41.80

Lowering gutter on South Main street, from Fayette to Wentworth avenue,	\$107.75
Re-planking bridge on Soucook river, by Richardson mill,	47.80

EXPENSE OF BUILDING NEW CATCH BASINS.

Two on Water street, No. 16 and 18,	\$33.80
One on Clinton street, No. 16,	24.39
Two on Rumford street, corner of Walker street, No. 16 and 18,	43.74
One on North State street, near Chapel street,	21.13
One on Granite Avenue,	14.84
One on Curtis avenue,	12.68
Two on Beacon street,	29.87
Two on South Main, corner of Sexton avenue,	26.65
One on Charles street,	18.53
One on Morton street,	13.83
One on Badger street,	17.23
Two on Green street,	28.55
One on North State street, opposite Blossom Hill cemetery,	12.72
One on South Main street,	23.08
One on Essex street,	15.69
One on Rumford street, corner of Walker street,	23.47
One on North State street, opposite Calvary cemetery,	22.39
One on Martin street,	16.60
One on North State street, near state prison,	20.09
Two on South State street, near Downing street,	29.10
One on South State street, junction of Turnpike street,	24.03
Two on Auburn street, junction of High street,	33.97
One on South Main street, corner of Wentworth avenue,	27.20
Three corner of Pine and School streets,	38.75
One on Capitol street, corner of Main street,	18.00

EXPENSE REPAIRING OLD CATCH BASINS.

At corner of South Main and West streets,	\$3.00
At corner of South Main and Thorndike streets,	15.63
On Tremont, near Rumford street,	16.25
On North State street, at Fosterville,	34.18
On Ferry street,	33.93
On North State street, opposite pumping station,	6.91
On Green, corner of Warren street,	6.90
On Union, corner of Centre street,	5.30
On North Main, corner of Court street,	4.75
Moving and setting watering trough on the corner of Frank- lin and Rumford streets,	54.95
Cleaning out catch basins in the spring and fall of 1893,	578.05

STREET DEPARTMENT.

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COST OF PATCHING STREETS, 1893.

Main,	\$102.50	West,	\$11.30
State,	98.10	Downing,	4.05
South,	135.95	Perley,	7.50
Green,	19.25	Laurel,	1.85
Spring,	19.35	Thorndike,	11.30
Rumford,	9.80	Monroe,	4.95
Merrimack,	3.80	Concord,	8.95
Union,	3.05	Thompson,	7.20
Jackson,	1.80	Fayette,	1.85
Lyndon,	1.95	Hill's avenue,	1.48
Fiske,	6.30	Bridge,	11.90
Penacook,	36.65	Park,	2.75
Walker,	1.57	Orchard,	2.75
Church,	4.20	Pitman,	1.10
Franklin,	1.30	Clinton,	6.00
Tremont,	1.70	Mills,	11.00
Beacon,	5.20	Summit avenue,	1.10
Washington,	9.35	Huntington,	1.47
Centre,	9.15	Tahanto,	1.57
School,	16.75	Water,	9.90
Warren,	32.25	Capitol,	2.95
Pleasant,	62.65	Granite avenue,	7.00
Elm,	7.50	Curtis avenue,	1.95
Grove,	8.25	Prospect,	1.65
Turnpike,	50.20		

There has been paid to the city treasurer the sum of \$1,083.29, collected of abutters for their proportions of concrete sidewalks, as follows:

W. S. Blanchard,	. . . . .	\$8.95
H. Mansur,	. . . . .	10.39
T. McCarthy,	. . . . .	8.97
George Mansur,	. . . . .	20.62
I. M. Savage,	. . . . .	75.79
Bishop Niles, house,	. . . . .	89.72
Levi Lamprey,	. . . . .	6.51
S. S. Kimball,	. . . . .	12.33
C. H. Hardy,	. . . . .	11.75
Frank L. Sanders,	. . . . .	14.87
S. G. Lane,	. . . . .	8.09
E. Jackman,	. . . . .	12.41
C. W. Lynam,	. . . . .	41.54
Frank W. Maynard,	. . . . .	18.12
Bridget Gannon,	. . . . .	23.59

Mrs. George Clough,	\$27.98
G. K. Hazeltine,	10.40
G. H. Marston,	10.90
J. E. Frye,	26.29
Miss J. H. Abbott,	8.15
W. Kershaw,	10.50
Frank Abbott,	24.77
J. A. Gervais,	7.04
A. W. Cilley,	4.81
J. T. Batchelder,	25.29
N. A. Ketchum,	16.36
Mrs. B. F. Caldwell,	10.91
Gust Walker,	14.60
J. E. Randlett,	13.32
F. C. Ferrin,	6.42
Thomas Dagnan,	11.50
E. Hoit,	11.65
A. P. Foster,	6.41
T. B. Little,	10.62
C. E. Foote,	7.22
James Farrand,	10.80
L. M. Currier,	10.90
Mrs. N. M. Philbrick,	12.87
Julia Dagnan,	21.82
N. F. Hurd,	15.04
Concord Water-Works,	171.07
L. B. Goodridge,	4.66
Miles F. Farmer,	10.86
J. H. McKeogh,	24.34
G. O'Brien,	41.31
Mrs. Hiram Carter,	19.80
B. Bilsborough,	7.51
A. G. Bourlet,	12.53
J. E. Pecker,	40.20
F. Pettingill,	25.94
John Hutchins,	10.64
Mrs. Nichols,	14.21
	<hr/>
	\$1,083.29

CONCRETE BILLS REMAINING UNPAID.

A. O. Mansur,	\$10.39
T. Murphy,	18.22
P. Glennon,	7.65
Howard Trevette,	31.11
Nancy Dutton,	18.05
Mrs. C. G. Blanchard, estate,	149.72
C. R. Robinson,	36.44

STREET DEPARTMENT.

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S. A. Smith,	\$20.39
C. Jorden,	10.24
G. H. Sager,	11.55
W. H. Putnam,	5.75
H. Flanders,	16.14

REFUSE TO PAY.

Contocook Co.,	\$50.02
Boscawen Mills,	34.75

ASSETS OF STREET DEPARTMENT.

Lumber, stone, etc., at city storehouse,	\$250.00
One pair of horses at fire station,	400.00
One pair of horses at city shed,	250.00
Two stone rollers,	200.00
Nine street sprinklers,	2,725.00
One stone crusher and boiler,	1,500.00
One street sweeper,	360.00
Three road machines,	300.00
Two large two-horse sleds,	150.00
Two small one-horse sleds,	15.00
Two two-horse dump carts,	200.00
One derrick,	100.00
Two snow-rollers,	170.00
One two-horse wagon,	50.00
Three work-harnesses,	100.00
Picks, shovels, and small tools,	375.00
	<hr/> \$7,145.00

REPORT OF THE COMMITTEE ON SEWERS AND DRAINS.

To the City Council:

The ordinance creating an engineering department, passed March 14, 1893, provided that the city engineer "shall act as clerk of the committee on sewers and drains, and shall keep a full record of the doings of said committee." This requirement has been carried out to the letter, and a record of the business transacted by the committee is preserved in permanent form, in a book provided for that purpose. The number of meetings held during the year was fifteen, and frequent inspections of the sewer work while in progress were made by the several members of the committee. The season was a favorable one for sewer work, commencing in May and ending in October. It was deemed advisable to solicit bids for such sewer pipe as would be needed during the year, and eight bids were received, as follows:

Thompson & Hoague, up to and including 24-inch, 77 per cent. discount from list prices; for 30-inch, 2 $\frac{1}{4}$ inches thick, 57 per cent. discount; for 30-inch, 2 inches thick, 59.2 per cent. discount.

Isaac Baty, up to and including 24-inch, 76.5 per cent. discount; 30-inch, no bid.

George D. Goodrich, up to and including 24-inch, 76.5 per cent. discount; 30-inch, no bid.

Portland Stone Ware Co., up to and including 24-inch, 75 per cent. discount; Portland deep and wide socket pipe, up to and including 24-inch, 65 per cent. discount; double strength pipe, 12-inch to 24-inch, 50 per cent. discount; double strength pipe, 30-inch, 40 per cent. discount, and the freight to your station in carload lots.

N. S. Gale & Co., for use in Penacook only, 75 per cent. discount.

Humphrey & Dodge, for the 30-inch, \$5.50 per foot less 55 per cent., delivered on cars here; 8-inch to 24-inch, for 75 per cent.

Blackmer & Post Pipe Co., 8-inch, $\frac{3}{4}$ inch thick, 21 cts.; 9-inch, 7-8

inch thick, 25½ cts.; 10-inch, 7-8 inch thick, 30½ cts.; 12-inch, 1 inch thick, 37½ cts.; 14-inch, 1 inch thick, 49 cts.; 15-inch, 1 1-8 inch thick, 54½ cts.; 16-inch, 1 1-8 inch thick, 61½ cts.; 18-inch, 1¼ inch thick, 78½ cts.; 20-inch, 1 3-8 inch thick, \$1.09; 21-inch, 1 3-8 inch thick, \$1.16; 22-inch, 1½ inch thick, \$1.31; 24-inch, 1½ inch thick, \$1.68; 30-inch, 2 inches thick, \$3.25.

D. W. Lewis, up to and including 24-inch, 76½ per cent. discount; 30-inch, no bid.

The bid of Messrs. Thompson & Hoague was accepted, and the pipe furnished by them arrived in good condition from the manufactory and was satisfactory in quality.

The North End and South End sewers, granted in 1892 and partly laid the same year, received early attention. No appropriation having been voted, or provision made for issuing bonds to cover their construction at the time they were granted, it became necessary to provide for means to continue the work upon them. This was done by the passage of the following joint resolution, by the city council, July 24, 1893 :

City of Concord, in the year of our Lord one thousand eight hundred and ninety-three.

A RESOLUTION AUTHORIZING A TEMPORARY LOAN FOR SEWERS.

Resolved by the City Council of the City of Concord as follows :

That the city treasurer be and hereby is authorized to borrow, on the credit of the city, a sum not exceeding twenty-five thousand dollars, for the purpose of defraying the expense of constructing sewers in the city sewerage precinct, and the same is hereby appropriated for that purpose; and said sum so expended is to be paid back into the city treasury from the sale of bonds which are hereafter to be issued by said city to cover the amount so used.

Of the money thus provided, the sum of \$7,367.90 was appropriated to pay the deficiency occasioned by work on the North End and South End sewers in 1892; \$9,000 was appropriated to complete the North End sewer, all of which was expended in 1893; and \$8,632.10 was appropriated to continue the work on the South End sewer. Of the South End sewer appropriation, \$4,178.21 was expended in 1893, leaving an unexpended balance of \$4,453.89.

Daniel Higgins declined to accept the award of \$25 made to

him for damage occasioned by the laying of the North End sewer through his premises in 1892, and took an appeal to the April term of the supreme court. An agreement was made by the city solicitor and counsel for Mr. Higgins, by which the award for damages in full to Mr. Higgins was fixed at \$150, and the same awaits the approval of the board of mayor and aldermen.

The petitions for sewers, referred to the committee, were disposed of as follows :

George Barnes et als., for sewer on Centre street, granted and laid.

Fred Reed et als., for sewer on Auburn street, granted and laid to Chestnut court.

N. E. Martin et als., for sewer on Valley street.

Albin & Martin, for sewer on Albin street, granted.

J. H. Goodrich, for sewer east of Main street, granted and laid.

George M. Perkins et als., for sewer on North State street, granted.

Fred A. Carr et als., for sewer on Holt street, granted and laid.

G. D. B. Prescott et als., for sewer on Pillsbury street.

Mary F. Tilton, for sewer on Broadway, granted and laid.

L. Jackman, relaying and lowering School street sewer from Main street west, granted and laid.

W. H. Page, for sewer in Hall street.

G. L. Theobald et als., for sewer in Clinton street west of Spring street.

J. E. McShane et als., for sewer in Clough's avenue.

The following petitions were laid on the table for further action :

W. H. Page, for sewer in Hall street.

G. L. Theobald, for sewer in Clinton street.

J. E. McShane, for sewer in Clough's avenue.

N. E. Martin, for sewer in Valley street.

G. D. B. Prescott, for sewer in Pillsbury street.

Petitions granted and left over by previous committee :

Beacon street, from White to Charles street, laid 1893.

Charles street, laid 1893.

Eastman street.
 Broadway, from Allison to Humphrey street.
 Humphrey street.
 Sexton's avenue, laid 1893.
 Centre street, from Pine street to F. N. Ladd's house, laid 1893.
 Allison street, from the South End sewer to Eastman street,
 granted and 392 feet laid in 1892 ; 324 feet laid in 1893.
 North End sewer, built to and across Ferry street in 1892 ;
 completed in 1893.

The appropriation for sewers in the city precinct, for 1893, was \$7,000. The total expenditures were \$7,457.71, thus overdrawing the appropriation \$457.71. This was caused by the purchase of a hoisting-engine, house for the same, and a steam-pump, which add more than \$1,000 to the assets of the precinct. The tool account for the year is as follows :

Paid for hoisting-engine,	\$850.00
house for same,	69.17
steam-pump,	181.45
picks, pick-handles, and shovels,	45.58
cement-pails,	18.00
tool-boxes,	6.80
brass number checks,	7.00
trucking,	42.00
Total,	<u>\$1,220.00</u>

Tools on hand December 31, 1893, belonging to city precinct sewer department:

Double drum hoisting-engine, and house for same; 1 steam-pump, 4 Edson pumps, 90 feet of suction hose, 4 spanners, 4 strainers, 36 round-pointed shovels, 23 square-pointed shovels, 6 long-handled round-pointed shovels, 5 steel bars, 4 axes, 58 picks, 64 pick handles, 12 cement-pails, 23 pairs rubber boots, 7 wooden mauls, 1 brick-hod, 12 hand drills, 3 saws, 3 chains, 2 striking hammers, 1 set of iron blocks, 2 monkey wrenches, 2 hand hammers, 3 hoes, 3 water-pails, 4 dippers, 1 two-gallon wooden oil-bucket, 1 one-gallon tin oil-can, 2 pairs pipe tongs, 9 lanterns, 2 Edson pump diaphragms, and 4 tool-boxes.

Work on the North End sewer was commenced near the north line of Ferry street, and the sewer was completed to the foot of Walker street in State street, in accordance with the original

plan. There was built during the season of 1893, 1,930 feet of 24-inch x 36-inch brick sewer, and 423 feet of 30-inch pipe, 903 feet of 24-inch pipe, and 363 feet of 18-inch pipe were laid, at a total cost of \$9,350.01. The special appropriation of \$9,000 was overdrawn \$350.01.

Work on the South End sewer was carried forward during the season of 1893. The depth of cutting, and the nature of the material excavated, made this by far the most expensive sewer work yet done by the city. Of the special appropriation of \$8,632.10, there was expended \$4,178.21.

PENACOOK SEWER PRECINCT.

The following petitions were received from this precinct :
George N. Dutton, for sewer in Pleasant street. Granted, and laid.

Henry Rolfe, for sewer in Penacook street. Granted, and laid.

In this precinct 970 feet of 10-inch sewer pipe has been laid—750 feet in Pleasant street, and 220 feet in Penacook street—all of which has been paid for from the tax raised in the precinct during the present year. In addition, the sewers have been thoroughly flushed twice during the season, and found in good condition.

Though the sewer system in this precinct is practically completed, and all the thickly settled portion of the precinct is supplied with good sewer facilities, a large percentage of the dwellings are still unconnected, and their sewage is deposited on the surface of the ground, or in cesspools, a constant menace to the health of the community. The attention of the board of health is called to this fact, with the recommendation that the matter be attended to during the coming summer, and the city ordinance relating to sewers and drains enforced.

The property of the precinct is as follows :

One derrick, 1 Edson pump, 16 feet of suction pipe, 30 picks, 2 iron-bars, 1 striking hammer, 1 hand hammer, 1 tool-box, 6 12-inch Ys, 1 8-inch Y, 20 feet of 18-inch pipe, 140 feet of 15-inch pipe, 14 feet of 12-inch pipe, 60 feet of 10-inch pipe, 16 feet of 8-inch pipe.

The following is a financial statement of the receipts and expenditures for the year :

STREET DEPARTMENT.

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RECEIPTS.	EXPENDITURES.
Balance from last year, . . . \$77.05	Labor on new sewer, . . . \$417.60
Appropriation, 900.00	Pipe, 145.32
Pipe sold, 2.04	Brick, 9.00
	Cement, 10.00
	Castings, 16.95
	Trucking, 8.73
	" (1892), 6.00
	Inspection, 38.00
	Flushing, 62.37
	Blacksmithing, 8.25
	Cash on hand, 256.87
\$979.09	\$979.09

New pipe laid, 970 feet, 10 inch.

Average cost per foot, 67 cents.

Material excavated, sand, gravel, and boulders.

WEST CONCORD SEWERAGE PRECINCT.

The system of sewers for the West Concord precinct, which was commenced in 1892, was completed this season. The trench through Main street north from the southern outlet to the power station of the Concord Street Railway, was about fifteen feet deep, and the bottom of the trench for a greater part of the distance was rock work, thus increasing the cost of the work materially. In High street, near the Concord & Claremont track, ledge was found which was removed with some difficulty, as the track had to be kept open for travel at all times.

Cost of sewers laid in 1893:

Paid for labor,	\$5,164.24
pipe,	30.37
brick,	42.00
cement,	65.17
castings,	54.61
blacksmithing,	154.73
hardware,	54.93
blasting materials,	44.76
lumber,	176.54
Boston & Maine R. R., supporting tracks,	68.83

Paid for repairs,	\$1.35	
Foss & Merrill, surveys,	15.00	
		<u>\$5,872.53</u>
Balance January 1, 1893,	\$7,956.34	
Lumber sold,	49.53	
		<u>\$8,005.87</u>
Expenditures,		5,872.53
Balance December 31, 1893,		<u>\$2,133.34</u>

Pipe laid in 1893: 764 feet of 15-inch, 1,944 feet of 12-inch, 1,898 feet of 10-inch. Total length, 4,606 feet. Average cost per foot, \$1.26. Material excavated, gravel, sand, boulders, and solid rock.

Tools on hand belonging to this precinct:

One Edson pump, 20 feet of suction hose, 2 derricks, 2 sets of blocks and ropes, 35 picks, 28 pairs of rubber boots, 3 grub hoes, 3 long chains, 2 short chains, 28 pick handles, 2 iron mauls, 1 wooden maul, 31 round-pointed shovels, 10 square-pointed shovels, 3 long-handle shovels, 22 lanterns, 3 steel bars, 4 tag ropes, 24 drills, 11 plug drills, 6 points, 1 axe, 1 water pail, 1 hand hammer, 2 striking hammers, 1 nail hammer, 1 sledge hammer, 1 wood saw, 1 hand saw, 1 branding iron, 1 oil can, 1 hoe, 1 mortar bin, and 1 wheelbarrow.

Pipe on hand December 31, 1893: 2 two-foot 12 inch Ts; 2 two-foot 15x6 inch Ys; 6 three-foot 15x12 inch Ys; 3 three-foot 15x12 inch Ts; 875 feet of 10-inch pipe.

The total length of sewer built in the city in 1893 was 14,898 feet, of which 2,254 feet were brick in the city precinct, and 12,644 feet Akron pipe. Of the pipe 7,068 feet were laid in the city precinct; 4,606 in West Concord precinct; and 970 feet in Penacook precinct.

Calls for use of the city sewer pumps became so frequent that the committee fixed a charge of \$1 a day per pump when loaned. The following is the account for use of city sewer pumps:

C. W. Brown,	\$ 0.50
P. A. Clifford, . . . . .	.50
Page Belting Co.,	1.52
Ferrin & Woodman, for J. H. Sanborn,	25.00
Page Belting Co., pipe,	1.02
City water-works, pipe,	3.00
W. P. Ford & Co., barrels,	8.70
G. L. Theobald,	2.00
New England Granite Co.,	6.25

STREET DEPARTMENT.

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Gustavus Walker,	\$0.25	
Ferrin & Woodman,	3.50	
Concord Light and Power Co.,	22.00	
G. W. Wilson,	2.00	
Concord Land and Water Power Co.,	10.00	
Clifford & Hood,	1.00	
Concord Light and Power Co.,	22.00	
		<u>\$108.22</u>
Cash received for same :		
C. W. Brown,	\$ 0.50	
P. A. Clifford, . . . . .	.50	
Page Belting Co.,	1.52	
City water-works,	3.00	
W. P. Ford & Co.,	8.70	
G. L. Theobald,	2.00	
New England Granite Co.,	6.25	
Gust Walker, . . . . .	.25	
Ferrin & Woodman,	3.50	
Concord Light and Power Co.,	22.00	
G. W. Wilson,	2.00	
Clifford & Hood,	1.00	
Ferrin & Woodman, for J. H. Sanborn,	25.00	
Deposited with city treasurer,		<u>\$76.22</u>
Balance due :		
Concord Light and Power Co.,	\$22.00	
Concord Land and Water Power Co.,	10.00	
		<u>\$32.00</u>

For further details of the cost of the work done on sewers in the city precinct, see the report of the city engineer, which follows this report.

The number of permits to enter the public sewers issued during the year were : City precinct, 93 ; West Concord precinct, 28 ; Penacook precinct, 16. Total, 137.

P. B. COGSWELL,

T. P. SULLIVAN,

A. E. EMERY,

A. P. HOLDEN,

JAMES H. SANDERS,

Committee on Sewers and Drains.

REPORT OF CITY ENGINEER.

OFFICE OF THE CITY ENGINEER,
CONCORD, N. H., December 30, 1893.

To the City Council:

I have the honor to submit the first report from this department, from its organization in March to December 31, 1893. After entering upon the duties of this office, I found that the general public supposed that a much wider range of work came under my supervision than is actually the fact. A careful reading of the ordinance creating this department will make the duties accompanying it more plainly understood by all.

NEW SEWERS.

The total length of new sewers laid the past season, including relaying Bowery avenue, was 9,322 feet in the city proper, 4,606 feet in West Concord precinct, and 970 feet in Penacook precinct. The material used was brick and vitrified pipe. The brick sewer laid was of the egg-shaped pattern, 24x36 inch; the pipe sewers were from 8 inches to 30 inches in diameter. A statement of the cost of sewers built this season will be found in this report.

It would probably result in the saving of a large expense, if the sewers were built by contract instead of by day work; this would, of course, require the constant attendance of an inspector on the work, but the amount required for his services would be amply repaid by the quality of work performed. Sewers should be carefully laid on the grades as given to the workmen, and not as suits the foreman or disinterested spectators. Good service in sewers can only be obtained where the utmost care is used in their construction, and when properly constructed they prove

a source of small expense to maintain. All parties connecting with the public sewers should use the openings left for their premises, and not cut into the pipe wherever they choose. The health officer during the past season has, I think, tried to have this done in all cases.

NORTH END SEWER.

Work was commenced where it was suspended in 1892, at a point 20 feet north of the northerly line of Ferry street, and the sewer was laid in accordance with the original plan to the foot of Walker street at State street. This sewer, as now built, extends from a point just above the Loudon bridge, northwesterly across the intervale to Penacook street, near the works of the Page Belting Co., thence westerly along Penacook street, under the tracks of the Northern railroad and the Claremont railroad, to the easterly side of State street, thence southerly to the foot of Walker street. This sewer will fill a long-felt want and relieve the old 20-inch outlet, which has caused some trouble in times past by overflowing and backing into cellars connected with it.

SOUTH END SEWER.

Work was continued on this sewer under the same difficulties as in 1892, so far as the material excavated was concerned. The depth of cutting, which averages 20 feet, in sand, clay, and quick-sand, makes it next to impossible to curb the ditch and hold it in place while the masonry is being built. The introduction of steam-hoisting apparatus materially aided the excavation. The expense attending this work exceeds any previous sewer work done by the city.

LOUDON BRIDGE.

The matter of repairing this bridge was brought to the attention of the city council, and a report on its condition was asked for by that body. Samuel F. Patterson was employed to examine the structure and report as to the advisability of repairing the same. His report satisfied the city council that economical repairs could not be made to the old structure, and

they voted to rebuild the bridge, substituting iron for wood, and instructed Alderman Ranney, Councilman Forrest, and the city engineer to make arrangements with some competent bridge engineer to make plans for a new iron bridge to replace the old wooden bridge, and report to the city council, with plans for their approval, at some later meeting. This committee employed John E. Cheney, C. E., of Boston, to make the necessary plans, which were presented to the city council at the August meeting and were adopted. The bridge, when completed, will be a credit to the city and its designer.

A special committee, consisting of the committee on roads and bridges, with the addition of the mayor, Alderman Sanders, Councilman Dodge, and the city engineer, were appointed to ask for bids and award the contract. The committee, as revised, is the mayor, Aldermen Ranney, Emery, Sanders, Councilmen Forrest, Engel, Dodge, and the city engineer.

Bids were received from fifteen different parties. The bids were asked for in two ways, one including the removal of the old bridge by the bidder, and the other requiring the city to remove the old bridge on three weeks' notice from the successful bidder that they were ready to commence the erection of the new work. Bids were received by the committee until 7 p. m., August 21, 1893, and were as follows :

	No. 1.	No. 2.
Schultz Bridge Co.,	\$25,250	\$24,500
Rochester Bridge and Iron Works,	21,313	20,213
Wrought Iron Bridge Co.,	18,180	17,900
Groton Bridge and Manufacturing Co.,		18,720
Berlin Iron Bridge Co.,	17,662	17,362
Philadelphia Bridge Co.,	18,730	18,220
Boston Bridge Works;	18,935	18,935
Toledo Bridge Co.,	18,479	17,979
Dean & Westbrook,		20,530
New Jersey Steel and Iron Co.,	20,817	20,317
Massilon Bridge Co.,	19,460	18,960
J. E. Buddington;	23,500	23,500
R. F. Hawkins,	18,650	
Penn Bridge Co.,	20,298	20,298
Edge Moor Bridge Co.,	19,839	19,659

The bid of the Berlin Bridge Company, being the lowest, was accepted, and a bond of \$6,000 was required for the faithful performance of the contract. After some delays in procuring material, the Bridge Company were ready to commence the shop work, but not in season to complete the contract on the specified date. Work was commenced at the bridge site on December 27, 1893, and is now going on.

There has been expended up to December 31, 1893, the following :

Paid for labor on masonry,	\$277.40
stone,	83.50
trucking,	23.00
hardware,	1.85
blue print paper,	17.00
tool sharpening,	28.30
cement,	62.51
expenses to Boston,	20.87
	<hr/>
	\$514.43
Appropriation,	\$20,000.00
Expended,	514.43
	<hr/>
Balance December 31, 1893,	\$19,485.57

CITY ENGINEER'S OFFICE AND WORK.

The plans and records of this office accumulate rapidly, and some provision should be made for properly storing the same. A suitable plan case can be built at a small expense, and would prove a great aid in arranging the plans and keeping them in proper shape.

A statement of the work done on a general survey of the city is given in this report, also the street and sidewalk grades established.

The statement given below covers the expenses of this department for the season of 1893. The charge for instruments and office furniture, of \$1,067.51, is for the necessary outfit for carrying on the work of this department, and will not appear another year. The other charges are probably about the same as will occur from year to year, excepting the charge for

salaries, which will exceed the past season, as only nine months are covered in 1893.

The employees of this department during the season of 1893 were: Harley W. Morrill, assistant engineer; Frank W. Brown, rodman; Russell Burroughs, rodman; who have cheerfully attended to the duties entrusted to them.

EXPENSES 1893.

Paid for salaries,	\$1,978.50
instruments and office furniture,	1,067.51
supplies, stationery, etc.,	124.54
repairs,	9.95
horse hire,	77.00
car fares and expenses,	149.47
Total,	<u>\$3,406.97</u>

COST OF SEWERS LAID 1893.

Beacon and Charles streets, 754 feet of 10-inch.	
Paid for labor,	\$340.42
pipe,	135.72
brick,	11.25
cement,	4.05
castings,	10.50
trucking,	12.75
Total,	<u>\$514.69</u>

Average cost per foot, 68 cents.

Material excavated, gravel.

Centre street, west of Pine, 574 feet 15-inch and 501 feet of 10-inch.	
Paid for labor,	\$1,142.52
pipe,	314.04
brick,	20.25
cement,	18.62
hardware,	10.31
castings,	54.50
trucking,	28.00
blacksmithing,	2.82
concrete and repairs,	9.00
Total,	<u>\$1,600.06</u>

Average cost per foot, \$1.49.

Material excavated, hard-pan and boulders.

STREET DEPARTMENT.

169

Auburn street, 500 feet of 12-inch and 850 feet of 10-inch.	
Paid for labor,	\$1,746.99
pipe,	379.16
brick,	18.52
cement,	15.96
castings,	15.50
trucking,	42.50
blacksmithing,	25.87
	<hr/>
	\$2,244.50

Average cost per foot, \$1.66.

Material excavated, hard-pan and boulders.

School street, repairs between Green and Spring streets.	
Paid for labor,	\$20.00
pipe,	8.00
cement,	1.33
trucking, . . . . .	.75
	<hr/>
	\$30.08

Centre street, east of Tahanto, 60 feet of 10-inch.

Paid for labor,	\$34.75
pipe,	10.81
	<hr/>
	\$45.56

Average cost per foot, 76 cents.

Material excavated, gravel.

Sexton's avenue, 150 feet of 10 inch.	
Paid for labor,	\$73.45
pipe,	27.33
brick,	3.75
cement,	2.70
castings,	5.75
trucking,	11.00
	<hr/>
	\$123.98

Average cost per foot, 83 cents.

Material excavated, clay and marl.

South street, repairs.	
Paid for labor,	\$14.05
pipe,	1.23
	<hr/>
	\$15.28

Bradley street, repairs.	
Paid for labor,	\$5.26
back valve,	5.70
trucking, . . . . .	.40
	<hr/>
	\$11.36
Jefferson street, repairs.	
Paid for labor,	\$7.00
back valve,	5.70
	<hr/>
	\$12.70
J. H. Goodrich sewer, 228 feet of 10-inch.	
Paid for labor,	\$92.02
pipe,	42.73
brick,	6.75
cement,	5.32
castings,	10.50
trucking,	4.25
land damage,	2.00
	<hr/>
	\$163.57
Average cost per foot, 72 cents.	
Material excavated, light loam and sand.	
Holt street, 522 feet of 10-inch.	
Paid for labor,	\$234.07
pipe,	98.53
brick,	4.05
cement,	10.64
castings,	6.15
trucking,	13.00
hardware, . . . . .	.99
	<hr/>
	\$367.43
Average cost per foot, 70 cents.	
Material excavated, gravel.	
Railroad street, 170 feet of 10-inch.	
Paid for labor,	\$21.75
pipe,	14.72
cement,	1.33
trucking,	4.00
	<hr/>
	\$41.80
Average cost per foot, 25 cents.	
Material excavated, sand.	

STREET DEPARTMENT.

171

School street, relaying and lowering 162 feet of 18-inch.	
Paid for labor,	\$318.16
pipe,	138.35
brick,	14.50
cement,	8.40
castings,	21.08
trucking,	16.00
blacksmithing,	2.25
oil for lighting street, . . . . .	.40
	<hr/>
	\$519.14

Average cost per foot, \$3.20.

Material excavated, sand and clay.

Broadway, north from West street, 240 feet of 10-inch.	
Paid for labor,	\$103.00
pipe,	53.00
cement,	11.05
brick,	6.75
castings,	16.65
trucking,	12.75
hardware,	1.25
oil for lighting street, . . . . .	.20
	<hr/>
	\$204.65

Average cost per foot, 85 cents.

Material excavated, sand and clay.

Between South and Spring streets, 507 feet of 8-inch.	
Paid for labor,	\$130.75
pipe,	101.88
brick,	20.22
cement,	13.36
castings,	15.00
trucking,	3.25
	<hr/>
	\$284.46

Average cost per foot, 56 cents.

Material excavated, loam and sand.

Bowery avenue, 161 feet of 10-inch. This pipe replaces an old 18-inch cement pipe.	
Paid for labor,	\$67.75
pipe,	29.64
brick,	6.75
cement,	6.65

Paid for castings,	\$5.00
trucking,	3.00
	<hr/>
	\$118.79
Average cost per foot, 74 cents.	
Material excavated, loam, sand, and gravel.	
Flushing sewers:	
Paid for labor,	\$65.26
trucking,	8.70
	<hr/>
	\$73.96

Total Expenditures for 1893.

GENERAL APPROPRIATION FOR CITY PRECINCT.

Beacon and Charles streets,	\$514.69
Centre street, west of Pine,	1,600.06
Auburn street,	2,244.50
School street, repairs,	30.08
Centre street, east of Tahanto,	45.56
Sexton's avenue,	123.98
South street, repairs,	15.28
Bradley street, repairs,	11.36
Jefferson street, repairs,	12.70
J. H. Goodrich, sewer,	163.57
Holt street,	367.43
Railroad street,	41.80
School street, relaid,	519.14
Broadway, north from West street,	204.65
Between South and Spring streets,	284.46
Bowery avenue,	118.79
Flushing sewers,	73.96
Tool account,	1,220.00
	<hr/>
Total,	\$7,592.01
Less pipe on hand Jan. 1, 1893, and excess paid,	114.50
	<hr/>
	\$7,477.51
Less bills paid contracted in 1892,	19.80
	<hr/>
Net amount expended in 1893,	\$7,457.71
Appropriation for sewers,	7,000.00
	<hr/>
Overdrawn,	\$457.71

STREET DEPARTMENT.

173

NORTH END SEWER.

Paid for labor,	\$5,668.65
pipe,	1,641.75
brick,	944.75
cement,	409.64
castings,	145.17
trucking,	17.50
blacksmithing,	14.73
hardware and tools,	104.00
lumber,	162.00
repairs on concrete walks,	7.00
land damage,	150.00
Boston & Maine Railroad, for track work,	20.82
highway department,	64.00
Total,	<u>\$9,350.01</u>

Average cost per foot, \$2.58. Material excavated, sand, gravel, and clay.

There was built during the season of 1893, 1,930 feet of 24x36-inch brick sewer, and 423 feet of 30-inch pipe, 903 feet of 24-inch pipe, and 363 feet of 18-inch pipe was laid.

Amount expended in 1893,	\$9,350.01
Special appropriation,	9,000.00
Overdrawn,	<u>\$350.01</u>

SOUTH END SEWER.

Paid for labor,	\$3,526.15
brick,	13.50
cement,	78.30
hardware and tools,	125.85
lumber,	383.56
trucking,	8.85
coal,	42.00
	<u>\$4,178.21</u>
Special appropriation for 1893,	\$8,632.10
Amount expended in 1893,	<u>4,178.21</u>
Balance,	\$4,453.89

There was built during the season of 1893, 324 feet of 24x36-inch brick sewer.

Average cost per foot, \$12.89. Material excavated, sand, quick-sand, and clay.

WEST CONCORD SEWERAGE PRECINCT.

Paid for labor,	\$5,164.24
pipe,	30.37
brick,	42.00
cement,	65.17
castings,	54.61
blacksmithing,	154.73
hardware,	54.93
blasting materials,	44.76
lumber,	176.54
Boston & Maine Railroad, for supporting tracks,	68.83
repairs,	1.35
Foss & Merrill, for surveys,	15.00
	<hr/>
	\$5,872.53
Less amount received for lumber sold,	49.53
	<hr/>
Total,	\$5,823.00
Balance December 31, 1892,	\$7,956.34
Amount expended in 1893,	5,823.00
	<hr/>
Balance,	\$2,133.34

Pipe laid in 1893, 764 feet of 15-inch, 1,944 feet of 12-inch, 1,898 feet of 10-inch. Total length, 4,606 feet.

Average cost per foot, \$1.26. Material excavated, gravel, boulders, and solid rock.

TOTAL LENGTH OF SEWERS BUILT IN 1893.

24x36-inch brick,	2,254 feet.
30-inch Akron pipe,	423 "
24 " " "	903 "
18 " " "	525 "
15 " " "	574 "
12 " " "	500 "
10 " " "	3,636 "
8 " " "	507 "
	<hr/>
Total in city precinct,	9,322 feet.

WEST CONCORD.

15-inch Akron pipe,	764 feet.
12 " " "	1,944 "
10 " " "	1,898 "
	<hr/>
Total,	4,606 feet.

STREET DEPARTMENT.

175

City precinct,	9,322 feet.
West Concord,	4,606 "
Total,	13,928 feet.

SEWERS BUILT PREVIOUS TO 1893

8-inch pipe,	15,049 feet.
10 " "	29,233 "
12 " "	33,382 "
15 " "	7,480 "
18 " "	3,907 "
20 " "	3,434 "
24 " "	846 "
Brick, 12x14 inch,	2,758 "
16x24 "	1,848 "
14x22 "	350 "
20x32 "	2,977 "
24x36 "	15,233 "
28x48 "	883 "
38-inch circular,	4,080 "
Total number of feet built previous to 1893,	121,460 "
" " " " " in 1893,	9,322 "
Total,	130,782 feet.

Length of sewers built, 24.77 miles.

The above statement does not include the sewers in West Concord or Penacook precincts.

Streets Surveyed.

Auburn.	Clinton, from South to Spring.
Avon.	Cross country, from South to
Albin.	Turnpike.
Bradley.	Cross country, from Millville road
Rumford.	to Clinton.
Allison.	Curtice avenue.
Broadway.	Eastman, East Concord.
Birch.	Fruit.
Bow, Rockingham to South.	Franklin, from Bradley to Au-
Bridge.	burn.
Church, from Bradley to Rum-	Giles.
ford.	Glen.
Clinton, from Harvard to Birch.	Harvard.

Highland.	Penacook, from Rumford to Federal bridge.
Hall, from Bow line to Water.	Rumford.
Hammond.	Rockingham.
Iron Works road, from Birch to South.	Water, from Hammond to Hall.
Jackson, from Highland to Franklin.	Street back of Woodlawn cemetery, Penacook.
Liberty.	School, from High to Fruit.
Lyndon, from Church to Franklin.	South.
Martin.	South Spring.
Merrimack River, from Federal bridge to Bow line.	South, from Bow line to Clinton street.
Millville road, from Fruit street to Mrs. Eddy's.	Turnpike.
Pleasant, corner of Main street.	Washington, from White to Centre.
Charles, Penacook.	White, extension.
Washington, Penacook.	Warren, from Fruit to Giles.
Pleasant, from Spring to Fruit.	Walker, from Bradley to Rumford.
Perkins.	

SURVEYS.

Blossom Hill cemetery, entrance and lots laid out.
 Calvary cemetery wall.
 Gate house, Penacook lake.
 South and Spring, location of properties between.
 Loudon bridge.

Sidewalk Grades.

Warren street, south side, west from Liberty street, 300 feet.
 North State street, east side, north from Foster street, 100 feet.
 Penacook street, East Concord, west side, south from Eastman street, 1,220 feet.
 Walker street, north side, Walker to Bradley.
 Park street, north side, east from State street, 154.5 feet.
 North State street, east side, Park to Centre.
 Centre street, south side, east from State street, 182.5 feet.
 White street, west side, Washington to Beacon.
 Washington street, north side, White to Centre.
 Pleasant street, changed at the Home for the Aged.
 Church street, north side, west from Jackson street, 252 feet.
 Church street, north side, east from Jackson street, 119 feet.
 Jackson street, west side, north from Church street, 262 feet.

South Main street, east side, south from Pleasant street, 206.7 feet.
Main street, West Concord, north from Highland road, 524 feet.
Centre street, south side, east from Pine street, 100 feet.
High street, Penacook, west side, from Summer street to a point 185 feet south of Summit street.
Summer street, Penacook, north side, from a point 50 feet east of Cross street to Washington square.
South street, east side, south from West street, 61 feet.
West street, south side, from Broadway to South.
Franklin street, south side, west from Rumford street, 186 feet.
Albin.
Rumford, from Albin to Highland.
Holt.
Glen.
Auburn, from High to Towle's land.
Harvard.
Franklin, extension.
Rumford, from Highland to Church.
School, from High to Giles.

Respectfully submitted:

W. B. HOWE,
City Engineer.

PUBLIC LIBRARY.

REPORT OF THE TRUSTEES.

To the City Council:

The trustees of the Public Library present herewith the report of the librarian, which contains a full account of the work done by that institution during the past year.

It is with deep regret that we mention the death of our friend and colleague, Joseph T. Clough, who has faithfully served the public as a member of this board for twenty consecutive years. His interest in the welfare of the library always has been active, his counsel prudent, and his assistance helpful.

The day has passed when, in towns of this size, public libraries were considered mere conveniencies, or even luxuries, when money was spent upon them niggardly, when they were open to the public only on certain days, or but a short time each day, while the shelves contained few books of value, with a relatively large amount of inferior literature. To-day a well selected and voluminous library is a necessity in every intelligent community like this. Not merely does it furnish means of amusement for an idle hour, but it has an educational influence hardly second to that of the public schools. An examination of the librarian's report, and of the past history of this institution, will show that the generous appropriations heretofore made for its support have been wise and judicious, and we earnestly recommend the same liberality in the future.

Very respectfully,

CHARLES H. SANDERS,	WARD	1.
JOHN E. FRYE,	“	2.
PAUL R. HOLDEN,	“	3.
WILLIAM L. FOSTER,	“	4.
AMOS J. SHURTLEFF,	“	5.
JAMES S. NORRIS,	“	6.
WILLIAM W. FLINT,	“	7.

LIBRARIAN'S REPORT.

To the Board of Trustees:

ADDITIONS TO THE LIBRARY.

Twelve hundred and seventy-eight books have been bought, and sixty-five have been received as donations for the use of the library during the past year.

Seventy pamphlets and maps have also been received as donations to the library.

Five hundred and twenty-four books have been discarded, many of them being imperfect, and most of them so badly worn as to be unfit for further use.

CIRCULATION OF BOOKS AND MAGAZINES.

Eighty thousand four hundred and eighty-seven books and magazines have been given out, the daily and weekly circulation being as follows:

From January 1 to June 30.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Days.	Total.
Week ending Jan. 7,	190	245	178	166	200	608	6	1587
" " " 14,	139	272	134	176	288	606	6	1615
" " " 21,	240	289	197	191	278	569	6	1764
" " " 28,	214	273	159	205	320	510	6	1681
" " Feb. 4,	254	301	199	214	170	690	6	1828
" " " 11,	148	205	221	234	178	761	6	1747
" " " 18,	141	351	200	222	336	589	6	1839
" " " 25,	48	326	83	288	376	710	6	1831
" " Mar. 4,	249	348	206	222	320	597	6	1942
" " " 11,	229	355	211	146	362	667	6	1970
" " " 18,	239	286	253	177	369	604	6	1928
" " " 25,	225	303	229	203	333	640	6	1960
" " Apr. 1,	245	357	233	153	321	632	6	1941
" " " 8,	229	309	254	72	266	765	6	1895
" " " 15,	211	339	189	150	279	476	6	1644
" " " 22,	252	318	197	137	162	746	6	1812
" " " 29,	192	289	155	141	320	618	6	1715

CITY OF CONCORD.

	Mon.	Tues.	Wed.	Thur	Fri.	Sat.	Days.	Total.
Week ending May 6,	144	245	160	135	332	565	6	1581
“ “ “ 13,	162	251	143	80	249	570	6	1455
“ “ “ 20,	155	232	180	185	263	548	6	1563
“ “ “ 27,	144	210	171	126	230	540	6	1421
“ “ June 3,	143	17	279	156	212	563	6	1370
“ “ “ 10,	132	181	152	122	224	496	6	1307
“ “ “ 17,	146	238	109	103	190	483	6	1269
“ “ “ 24,	120	219	129	149	129	566	6	1312
5 days ending June 30,	185	224	134	161	225		5	929
	4,803	6,983	4,755	4,314	6,932	15,119	155	42,906

From July 1 to December 31.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Days.	Total.
July 1,						405	1	405
Week ending July 8,	190	21	189	189	275	361	6	1225
“ “ “ 15,	227	197	117	138	250	386	6	1315
“ “ “ 22,	153	238	121	123	205	324	6	1164
“ “ “ 29,	224	206	152	167	264	402	6	1415
“ “ Aug. 5,	170	203	115	118	231	278	6	1115
“ “ “ 12,	163	248	135	94	214	221	6	1075
“ “ “ 19,	219	248	166	97	203	367	6	1300
“ “ “ 26,	139	283	165	89	247	329	6	1252
“ “ Sept. 2,	170	176	280	140	225	268	6	1259
“ “ “ 9,	20	322	205	110	278	452	6	1387
“ “ “ 16,	144	237	119	125	238	471	6	1334
“ “ “ 23,	182	247	174	135	176	557	6	1471
“ “ “ 30,	98	244	140	95	174	507	6	1258
“ “ Oct. 7,	165	232	144	144	197	542	6	1424
“ “ “ 14,	124	260	170	132	209	438	6	1333
“ “ “ 21,	191	276	174	143	294	509	6	1587
“ “ “ 28,	107	311	189	147	277	577	6	1608
“ “ Nov. 4,	202	265	164	137	250	412	6	1430
“ “ “ 11,	225	304	162	186	253	570	6	1700
“ “ “ 18,	191	322	139	168	306	509	6	1635
“ “ “ 25,	179	327	181	190	245	566	6	1688
“ “ Dec. 2,	170	258	276	6	250	626	6	1586
“ “ “ 9,	198	283	231	194	286	567	6	1759
“ “ “ 16,	181	248	138	190	266	497	6	1520
“ “ “ 23,	248	290	292	178	255	372	6	1635
“ “ “ 30,	12	327	244	208	325	585	6	1701
	4,292	6,573	4,582	3,643	6,393	12,098	157	37,581

Summary, 1893.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Days.	Total.
Jan. 1 to June 30, inc ,	4803	6983	4755	4314	6932	15119	155	42906
July 1 to Dec. 31, inc.,	4292	6573	4582	3643	6393	12098	157	37581
	<u>9,095</u>	<u>13,556</u>	<u>9,337</u>	<u>7,957</u>	<u>13,325</u>	<u>27,217</u>	<u>312</u>	<u>80,487</u>

Summary, 1892.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Days.	Total.
Jan. 1 to June 30, inc ,	5458	7658	4664	4362	7151	15761	156	45054
July 1 to Dec. 31, inc ,	4124	6326	4194	3609	6512	13400	158	38165
	<u>9,582</u>	<u>13,984</u>	<u>8,858</u>	<u>7,971</u>	<u>13,663</u>	<u>29,161</u>	<u>314</u>	<u>83,219</u>

PENACOOK BRANCH.

Boxes of books have been sent to Penacook on Tuesday and Friday of each week, the number in each month being as follows:

January,	770
February,	659
March,	802
April,	705
May,	671
June,	628
July,	513
August,	673
September,	695
October,	748
November,	642
December,	707
	<u>8,213</u>

CHANGES IN THE LIBRARY ROOM.

A large and convenient storage room, for the reception of congressional documents and other publications but seldom called for, has been fitted up in the basement, which has relieved the crowded shelves in the stack-room, and seems well fitted for the use to which it is put, being dry and warm, with conveniences for lighting each alcove. Desirable improvements have also been made in lighting the alcoves and delivery room.

THE REFERENCE ROOM

is frequently visited by many of our citizens, for the purpose of consulting the books, and it seems to be quite a help to the teachers and scholars in our schools in preparing their lessons.

Files of the current magazines are among the most valuable of the

reference books, and it is desirable that the collection should be increased as much as possible. In researches among the magazines, Poole's index is one of the greatest of time and labor saving machines.

THE READING ROOM

is also well patronized. Frequently every chair in the room is occupied by attentive readers of the newspapers and magazines to be found there.

REPAIRS NEEDED ON THE LIBRARY BUILDING.

The outside wood-work of the Library building needs a coating of paint badly, and it would not be amiss to make a thorough examination of the tin covering of the roof, and give it such repairs as may be necessary, preparatory to giving it another coating of paint. Forty years' exposure to the weather is very likely to start some leakage.

Respectfully submitted:

DANIEL F. SECOMB,

Librarian.

January 1, 1894.

