

FIRE HYDRANTS.—*Concluded.*

STREETS	LOCATIONS.	Number	Total.
Main.	North side Main, opposite East Canal	1	
"	North side Main, near iron bridge	1	8
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
Washin't'n	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 George 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
Crescent.	North side Crescent, east of Canal	1	1
Merrimack	South side Merrimack, opposite Merrimack av.	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 Center	1	2
Spring.	North-east corner Spring and Church	1	1
Centre.	North-west corner Center 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
Penacook.	West side Penacook, opposite A. W. Rolfe's	1	1
	Whole number public hydrants		20
	PRIVATE HYDRANTS.		
	Boston & Maine railroad, upper yard, 6 post and 3 flush hydrants	6	
	Boston & Maine railroad, new shops	14	
	New state prison	3	
	Abbot-Downing Co.'s yard	6	
	Page Belting Co.'s yard	5	
	W. P. Foid & Co.'s yard	1	
	N. H. Asylum for Insane yard	1	
	Concord Gas Light Co.'s yard	1	
	St. Paul's school	1	
	Water work's pumping station grounds	1	39
	Whole number private hydrants		39

# HIGHWAY DEPARTMENT.

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## REPORT OF COMMISSIONER OF HIGHWAYS,

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*To the City Council:—*

Gentlemen:—As commissioner of highways, I hereby submit a report of the work of the highway department for the year of 1898.

But few new streets were granted, and therefore there has been but little work in that direction. The following amendment to the rules in regard to laying out streets and highways was passed this year by the board of aldermen, and has done much to check the constant demand for new streets, except in cases where they were really a public demand:

No petition for the laying out of any street or highway shall be considered by the board of Mayor and Aldermen unless it is accompanied by an agreement in writing, signed by responsible parties, that said highway, if laid out by the board of Mayor and Aldermen, shall be built at least fifty (50) feet wide and the grade established by the City Engineer, without expense to the city, or by certificate of the Commissioner of Highways that said street or highway is of the width of at least fifty (50) feet, and has been built and graded to his satisfaction, without expense to the city; except in cases where two-thirds of the board of Mayor and Aldermen shall deem the same to be of great public necessity. Upon the presentation to the board of Mayor and Aldermen of any such agreement or certificate the Mayor shall, by virtue of this rule, declare forthwith that such petition is denied, subject to a motion of any alderman that the public

necessity requires the consideration of such petition and its adoption by a two-thirds vote as aforesaid.

Last year I suggested that the line be established on the Hopkinton road, from Fruit street, west, which has been done this season as far as the Glennon estate, and the highway is now known as Pleasant street, from Railroad square to St. Paul's school. I presume the city will soon take some action in regard to macadamizing this road, as the travel demands a better highway.

A large amount of work has been done on bridges this year. After several suggestions made by people who had occasion to use the iron bridge on Main street across the Contoocook, at Penacook, that an inspection ought to be made on account of its being too light for the traffic, the following letter was sent to the company who built the bridge. It was considered that they would give a more favorable report of its condition, not wishing to condemn their own work.

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Concord, N. H., February 21, 1898.

Canton Wrought Iron Bridge Co., Canton, Ohio.

Gentlemen:—We have a bridge in our city built by your company in 1871, of which we would like a through inspection made this spring.

Have you an Eastern agent or inspector who could do the work?

Kindly inform me in regard to the matter and oblige,

Yours very truly,

ALFRED CLARK,

Commissioner of Highways.

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To this the following reply was received:

New York City, N. Y., Feb. 25, 1898.

Mr. Alfred Clark, Highway Commissioner, Concord, N. H.

Dear Sir:—Your esteemed favor of the 21st inst., directed to the company at Canton, has been referred by them to this office.

In further reply to the same we would say that we will take pleasure in having our agent, Mr. John M. Braly, call upon you and make this examination at any time suited to your convenience. If possible we should have a week's notice in advance of the time set, so that his movements can be arranged accordingly. Anytime except the last week in March or the first in April is open. Hoping to hear from you further in this matter, we are

Very truly yours,  
 Wrought Iron Bridge Co.,  
 Wynkoop and Braly,  
 General Eastern Agents.

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Mr. Wynkoop, the Eastern agent of the company, inspected the bridge in March, and made a verbal report immediately. He condemned the bridge and very strongly advised that the travel be restricted at once. This was done and Mr. Wynkoop was requested to submit a written statement of the exact conditions found in his examination of the bridge that it might be brought before the City Council. The following report was submitted:

New York City, N. Y., March 22, 1898.

Mr. Alfred Clark, Commissioner of Highways, Concord, N. H.

*Dear Sir:*—In obedience to your request, I have made an examination of the iron bridge over the Contoocook river on Main street, Penacook, N. H., and after consultation with our chief engineer and his assistant, as a result of the same I beg to submit the following report:

The bridge is of iron, of the type known as Whipple or Double Intersection, having cross beams of trussed outline and projecting brackets to carry the walks.

The roadway is 20 feet, and the two sidewalks are 5 feet wide each, making a total width of floor surface of 30 feet, not including the portion under the trusses. The floor system of wood is probably heavier than the bridge was intended to carry. The workmanship is very good for the time when done. The material

used is of the kind and quality incident to that period and an inquiry to the manufacturers has been made to learn if possible what the records of test were on this particular structure. The reply was that the records of that long past period had been destroyed by fire, but that the standard quality of iron used at the time was about as follows :

Ultimate strength, 48,000 to 50,000 pounds per square inch.

Elastic limit, 25,000 to 26,000 pounds per square inch.

The customary practice at that time was to use for compression members, Gordon's formula, with 10,000 pounds per square inch in the numerator and for tensile members 15,000 pounds per square inch, was the usual working stress, thus giving, as was then believed a factor of safety of 3 1-3 as referred to the ultimate strength. Then it was believed that any structure so designed with the above mentioned working units and for a given safe load, would only fail when 3 1-3 times that load had been placed upon it.

The experience and discoveries of later years have shown that this was not strictly true. That when any structure had been once loaded sufficiently to strain its members beyond the elastic limit, a permanent set or deformation occurred in the member and if a tensile member, its area was slightly reduced. If the same load were then applied successively, a comparatively small number of applications of the same load would suffice to destroy the structure.

The elastic limit is, or was, for standard iron used in bridges, about 1-2 the ultimate strength, so that instead of having a factor of safety of 3 1-3, such structures so designed actually had a factor of safety of only 1 2-3 or, a margin of 66 2-3 per cent. This margin was required to take care of the imperfections of shop and field work, the effect of swiftly moving loads and the possibility of overloading which too often occurs with long span bridges.

The analysis of the structure reveals the fact that the total strength of the trusses, 70 per cent is required for supporting the weight of the material, leaving 30 per cent available for carrying capacity. This 30 per cent amounts to 500 pounds per lineal foot of bridge or about 17 pounds per square foot of exposed floor surface, this being the net total carrying capacity of the span per

square foot, provided such load is quietly and gently applied. Anything more than that would be very unsafe and much less than that might cause failure if it were applied in any other way than described above.

It is the custom now to design bridges of this length to carry safely at least 60 pounds per square foot, and four times the capacity of the structure under discussion.

What has been said above regarding the strength of the bridge applies to the trusses. As to the floor system much need not be said except that it is totally inadequate and will certainly be broken through by any heavy concentrated load of more than usual size.

If the sidewalks were removed and a new floor system supplied, the trusses might be relied upon to take care of the ordinary traffic of a country bridge.

Located as it is, we deem it our duty to warn you that the bridge is unsafe and a menace to life and property.

It should be closed at once to all heavy traffic and light vehicles should be required to proceed slowly when crossing it.

Care should also be taken not to allow many cattle or sheep to cross in a bunch and crowds of people should not be allowed to gather on the bridge.

Respectfully submitted,

JAS. H. WYNKOOP,

Representative Wrought Iron Bridge Co., 183 Union Square,  
New York City.

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Upon this report the City Council thought it advisable to build a new bridge across the Contoocook on Main street, and it was found that by shortening and putting in a new floor system that the old bridge could be used across the Contoocook in place of the old wooden Twin bridge which had been condemned. The contract for this work was let to the Wrought Iron Bridge Co. of Canton, Ohio. It was necessary to build a new abutment on the north side of the Twin bridge and to repair and raise the one on the south side. This department has expended \$172.99 for stone-work, etc., on the Main street bridge, and \$1,594.28 on the abutments to the Twin bridge.

A modern iron bridge was constructed on the Dunbarton road at St. Paul's School this year. New stone abutments were built, and the roadway raised about three feet. The cost of the bridge was \$1,396.40, of which the School paid \$433.23 and furnished 255 loads of gravel without charge. This makes a substantial bridge which will last a great many years without much repairing. About 550 feet of iron fence was built at the approaches to this bridge at an expense of \$177.78.

The Loudon bridge across the Merrimack has been painted, this season, at an expense of \$347.65, and the floor concreted at an expense of \$299.88. The Federal bridge on the East Concord road has been replanked. Expense, \$283.93. For the expense on smaller bridges, see Financial Report.

The numerous heavy winds have called this department's attention very forcibly to the fact that our city's shade-trees are dying quite fast. The number of requests from owners of property to have dangerous trees and limbs removed, has been large.

In the month of August Concord was visited by a cyclone which did considerable damage to our trees. One immense elm on South Main street, opposite B. A. Kimball's, was uprooted and thrown across the street, tearing down electric and telephone wires. Another at the corner of Green and Pleasant street was blown down, beside several smaller ones in other parts of the city.

The bank wall on Hanover street gave way this spring, and had to be rebuilt. In re-building, it was found best to lengthen it, which was done. The total cost of the work was \$170.73.

For permanent work, this season, North Main street, opposite the Eagle Hotel, has been concreted and the paving taken from there used to pave Bridge street from Main street to the Railroad bridge; School street, opposite the Insurance building, has been concreted; North Main street from Franklin to Chapel on the east side, and from Pearl to Court on the west side, has been macadamized; new culvert on Noyes street; and a new iron bridge built at St. Paul's School. See table for expense, etc.



The portable crusher was used again, this year, on High street, and the material there has nearly all been crushed. This leaves the street in a condition where it can now be put in shape at a very small expense.

The work of cleaning the streets has been carried on this year the same as usual, the garbage from the business section being collected at night. There is a great demand to have this territory extended, but it cannot be done with the present appropriation. As the money for cleaning streets is raised by a general tax, residents in the thickly settled part of the city consider that their garbage should be removed weekly, the same as around the business blocks. I would suggest that the city be divided into street cleaning sections where collections could be made once a week.

Quite a number of catch basins have been built this year on new streets, and some rebuilt. Several have been rebuilt in Penacook, mostly old ones constructed a number of years ago, where the basin was found too small and allowing too much sand to enter the sewer. One hundred and sixteen feet of 10-inch pipe for surface water was laid on Main street, Penacook, and the catch basins taken from the sewer and connected to this separate pipe. Several years ago the department considered the purchase of a steel sanitary dump-cart for cleaning catch basins, but they were found too expensive. There are several large catch basins built along Main street from Centre to Freight, which are so constructed that it is impossible to run the water into the sewer, and it must be emptied into the gutter before the basin may be cleaned. This, though perfectly harmless, is quite unsightly, and the steel cart would be a great improvement on the present method.

Several new gravel walks have been built, this year, and all concrete walks granted by the board of aldermen have been laid. The following table shows the length, cost, etc., of the gravel walks granted by the board:

Street.	From	To	Length.	Cost.
			Feet.	
South, west walk.....	Noyes .....	South.....	87.0	\$48.18
South, east walk.....	Allison .....	Bow .....	689.6	59.70
Eastman, east walk.....	Allison .....	Pillsbury .....	350 0	28.55
North State, east walk.	C. & C. R. R.....	South .....	453 0	60.40
Clinton, south walk....	Harvard .....	West.....	943 5	40 55
Kimball, east walk....	Allison .....	Humphrey.....	672.0	14.30
Kimball, west walk....	Allison .....	Humphrey.....	672.0	11 70
West State, east walk..	C. & C. R. R.....	Opp. Chas. Farnum's	803 0	73.32
Broadway, east walk..	Allison .....	orth .....	533 0	56.88
Pillsbury, north walk..	Turnpike.....	West.....	390 0	16 85
Pillsbury, south walk..	South .....	Eastman.....	227 0	14 77
Pillsbury, south walk..	Broadway.....	South.....	225 0	16.02
			6855 1	\$441.22

In the case before the Supreme Court regarding the removal of snow from the sidewalks by the owners of property was found to be unconstitutional. Therefore it is left optional with the owners regarding the removal of snow. The majority of the citizens clear their walks, but some are left in bad shape. The walks are plowed as usual by the department, but it would be impossible to employ sufficient help to clean the snow from the walks without a heavy expense. If the citizens demand that the department remove the snow it appears to me advisable to form a precinct in which the money could be raised, so that those in the country portion of the city would not be taxed for this purpose.

We have two snow plows here on trial from the Union Road Machinery Co., which do good work and have proved very satisfactory. I think it would be advisable to purchase them.

In the spring, the Street Railway Company moved their track on Main street, Penacook to the new location. It was then necessary to put in bank walls at the south and north ends of Pleasant street, and opposite the premises of John Wilde and Harry A. Cleveland. An appropriation of \$800 was made, and after a change in the plans which extended the wall opposite the premises of Mrs. Sarah A. Abbott, \$200 more was necessary. The total cost of the work, including that done during the fall of 1897, has been \$1,620.63.

The regular appropriations for the highway department are as

follows: General maintenance, \$18,000.00; cleaning streets, \$4,300.00; catch basins, \$1,300.00; permanent work, \$6,500.00; new concrete, \$2,000.00; repairing concrete, \$1,500.00. The appropriation of \$18,000.00 for general maintenance may seem large, but when we consider that from this amount must come the winter expense, such as plowing and sanding walks in the central portions of the city, and the snowing bridges and breaking roads in the entire town, covering over some 300 miles, which for 1898 was \$5,376.15, we see that it is reduced considerably. The balance could easily be expended by the first of July, and then not begin to keep up with the demands of the people. As this appropriation is expected to last throughout the year, the department aims to attend to the more urgent calls and those from which the public may derive the most benefit. Therefore, really, the amount expended for repair of the roads alone is that of \$6,500.00 for permanent work and the balance of general maintenance after the winter expense is deducted. On the concrete walks is expended the \$1,500.00 for repairs and \$2,000.00 for new walks, which is governed by the petitions granted by the board. The appropriation for catch basins of \$1,300.00 can not be expended directly for improving the streets. Of the cleaning streets amount, a large portion is used for the spring and fall removal of garbage from around the business blocks.

It has been quoted by many that the highway department annually expends \$50,000 on the streets. It may easily be seen by the above that the total amount appropriated in 1898 was only \$33,600.00, beside that for sprinkling, which is in a precinct, and I hope that the taxpayers of Concord will make an effort to read this report wherein I have endeavored to make plain the amount expended. A record is kept in the office of all work of every description and is open for public examination at any time.

The amount raised for sprinkling in 1898 was \$3,500.00, and with the balance of \$461.49 from 1897 gave \$3,961.49. We have nine sprinklers, all repaired and painted for the coming season. As the season was quite favorable a balance of \$841.50 is left on this appropriation.

Aside from the regular appropriation a special one of \$150 was



## HIGHWAY DEPARTMENT.

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D. E. Sullivan	15.73
F. H. Hill	4.52
Charles I. Johnson	9.77
Mrs. Jane Clark	17.24
Daniel H. Williams	10.60
George W. Crockett, Est.,	11.48
George P. Clark	19.31
Robert Hall	20.19
Mrs. Mary F. Tilton	10.55
Mrs. Mary Riley	10.77
D. D. Taylor	31.73
N. A. Dunklee	17.17
Mrs. John Bolger	20.07
Daniel Parker	22.95
Mrs. Josiah Batchelder	7.57
Mrs. G. W. Brown	7.55
H. E. Conant	77.31
J. S. Moses	8.96
C. T. Wason	7.28
E. B. Hutchinson	8.76
George L. Danforth	2.91
George L. Theobald	27.60
Christian Science Hall	47.71
Charles J. Pelissier	20.95
Mrs. Lewis Brown	8.55
F. E. Coates	1.00
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	\$576.67

## Collected for crushed stone, labor, etc.:

N. H. State Prison, crushed stone	\$ 1.60
Darius Philbrick	1.00
E. S. Barrett	1.00
J. H. Rowell & Co.	12.50
N. H. Asylum for Insane	22.50
J. H. Lamprey	1.25

A. S. Roundy . . . . .	.50
Henry H. Chase . . . . .	1.25
St. Paul's School, bridge . . . . .	433.23
Byron Clough, use pump . . . . .	1.00
Beaver Meadow Golf Club, use roller . . . . .	25.00
Benjamin Bilborough . . . . .	2.75
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	\$503.58

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The following concrete bills remain unpaid :

A. O. Mansur . . . . .	\$ 10.39
T. Murphy . . . . .	18.22
Howard Trevette . . . . .	21.11
Mrs. C. G. Blanchard estate . . . . .	149.72
John Healy . . . . .	7.60
F. E. Coates . . . . .	2.33
Jackman & Hall . . . . .	47.96
James Coleman . . . . .	16.96
George W. Brown estate . . . . .	10.00
Dr. A. W. Hill . . . . .	10.24
I. J. Hutchinson . . . . .	8.38
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	\$320.05

## SEWERS AND DRAINS.

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### REPORT OF COMMITTEE ON SEWERS AND DRAINS.

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TO THE CITY COUNCIL: The committee on sewers and drains held four meetings during the season, and careful consideration was given all petitions.

During the year 95 permits for sewer connections were issued by the clerk of the committee.

There has been deposited with the city treasurer, for which the clerk holds his vouchers, the sum of \$16.00 for rent of pumps and the sum of \$12.48 for materials sold. These amounts are to the credit of the city precinct.

No new work was done in the East Concord precinct the past season but the sum of \$12.00 was paid for work done during the season of 1897.

The West Concord Precinct expended the sum of \$912.38 for the Engel street outlet and the ordinary repairs and flushing.

The Penacook sewer precinct expended the sum of \$739.33 for the Merrimack street extension,—the relaying of about two hundred feet of sewer on East Canal street and by streets,—the ordinary repairs and flushing.

(signed)

Albert B Woodworth,  
James H. Rowell,  
Frank E. Dimond,  
Charles H. Sanders,  
George A Hoit.

### PETITIONS RECEIVED AND ACTION TAKEN.

David D. Taylor, for sewer in Pillsbury street: granted and built.

George W. Sanborn and others, for sewer in Turnpike street; the petitioners were given leave to withdraw, but the committee recommended that the sewer be constructed in Turnpike street and connected with Pillsbury street; recommendations adopted and sewer built.

James Adams and others, for sewer in Clinton and Harvard streets ; granted and sewer built in Clinton street to Harvard street, and in Harvard street to the premises of James Liberty.

Fiesco P. Engel and others, for sewer in Engel street ; granted and built.

D. F. Hurley, for sewer in Merrimack street, Penacook ; granted and built.

Levi W. Everett and others, for sewer in Winter street, Penacook ; petitioners given leave to withdraw.

Augusta S. Chase and others, for sewer in Main and Pleasant streets ; petitioners given leave to withdraw.

Seth R. Dole and others, for sewer in Warren street ; granted and built.

John W. Edgerly and others, for sewer in Jackson West Court (now Gordon street) ; granted and built.

R. B. Frost and others, for sewer in Pleasant street ; West of Minot street ; granted and built.

Walter McMahan, for sewer in Water street : referred to the next city government.

William A. Sleeper and others, for sewer in White street ; petitioners given leave to withdraw.

Frank Lynch, for sewer in West Washington street ; referred to the next city government.

J. E. Gage, for sewer in Clinton street ; referred to the next city government.

Alvertus Evans and others, for sewer in Warren street and Bowery Avenue ; petitioners given leave to withdraw, as the Bowery Avenue sewer has been repaired.

## REPORT OF THE COLLECTOR OF TAXES.

*To the City Council:—*

I herewith submit the report of collection of taxes to the close of business December 31, 1898.

### 1896 REPORT.

Total lists, including interests as per reports Jan. 1, 1898 . . . . .	\$264,315.23
Tax added since last report . . . . .	2.40
Interest collected since last report . . . . .	22.48
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	\$264,340.11

Cash paid treasurer as per report	
Jan. 1, 1898 . . . . .	\$253,562.79
Cash paid treasurer since last report	165.00
Discounts . . . . .	3,611.31
Abatements as per report Jan. 1, 1898	6,781.38
Abatements since last report . . . . .	48.80
Cash in office . . . . .	.85
Accounts adjusted . . . . .	25.18
Uncollected* . . . . .	144.80
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	\$264,340.11

\*This amount is secured by real estate.

### 1897 REPORT.

Resident list as corrected to date Dec. 31, 1898	\$233,955.92
Non-resident list . . . . .	957.44
Interest collected as per report Dec. 31, 1897	24.99
Interest collected since report . . . . .	793.74
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	\$235,732.09

Cash paid treasurer as per report	
Dec. 31, 1897 . . . . .	\$193,125.00

Cash paid treasurer since report	
Dec. 31, 1897 . . . . .	32,445.00
Discounts . . . . .	3,404.02
Abatements as per report Dec. 31, 1897	3,151.07
Abatements since report Dec. 31, 1897	1,711.97
Cash in office Dec. 31, 1898 . . . . .	.69
Uncollected* . . . . .	1,894.34
	<u>          </u> \$235,732.09

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1898 REPORT.

Resident lists as committed . . . . .	\$219,925.85
Errors and omissions (resident list) . . . . .	1,253.15
Resident lists as corrected to date . . . . .	221,179.00
Non-residents as committed . . . . .	1,154.36
Interest collected to date . . . . .	23.34
	<u>          </u> \$222,356.70
Cash paid treasurer to date . . . . .	\$181,825.00
Discounts . . . . .	2,879.84
Abatements . . . . .	3,247.62
Cash in office at closing, Dec. 31, 1898	320.97
Uncollected . . . . .	34,083.27
	<u>          </u> \$222,356.70

I have examined the foregoing accounts of the Tax Collector for the years 1896, 1897 and 1898, and find them to be correct.

JOHN B. ABBOTT,

City Auditor.

\*Of this amount \$1,612.17 is secured by real estate.

## REPORT OF CITY ENGINEER.

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### TO THE CITY COUNCIL :

The report herewith submitted, shows the work done by the engineering and sewer departments for the year ending Dec. 31, 1898.

The expense attending the construction of sewers built during the year will be found upon the following pages.

There are some districts in the city, that have been somewhat inconvenienced by the lack of sufficient capacity in the mains in those districts, and some attention should be given them as their troubles increase from year to year as the districts are enlarged.

The contract for the sewer in Warren and Pleasant streets was completed early in the season, and the balance due the contractors paid over to them. This was the only piece of contract work done by the sewer department this year.

No serious breaks have occurred in the sewer system during the season of 1898 (as in 1897) and only ordinary repairs have been made, together with the regular spring and fall flushing of the entire system.

The general survey of the city was extended so far as we were able to devote time to it, and generally on the westerly side of the city proper.

The contract for the removal of the "Main Street" bridge, at Penacook, changing its length and width and re-erecting it on the site of the "Twin" bridge, together with the erection of a new bridge on the Main street site, was let to the Wrought Iron Bridge Co., of Canton, Ohio, for the sum of \$8,100.00. Only one other bridge company submitting proposals for the work, viz: the Boston Bridge Works, for the sum of \$9,400.00.. The Main street bridge was practically completed on Nov. 22 but no money has been paid the bridge company, as their contract calls for payment, only, upon the completion of the entire contract.

The amount spent from the appropriation for this work will appear in the report of the commissioner of highways.

The "Twin" bridge is not yet completed but probably will be in the month of January 1899. The inspection of the field work on

these bridges has been done by this department, thus saving the additional expense for an inspector. The completion of these structures will leave the city without a wooden bridge upon the Contoocook river, so far as highway bridges are concerned.

The usual measurements of concrete sidewalks laid, setting grade stakes and similar work for the highway department, together with the demands of other departments, have been attended to as promptly as possible.

The employes of this department for the past season have been : Frank W. Brown, Russel Burroughs, principal assistants ; Fred W. Lang, transitman ; Harry C. Hill, Charles H. Chandler, William A. Ellis, rodmen, who have all attended cheerfully to the duties assigned them

Whatever success may have attended the efforts of this department were largely due to the support of the mayor and city council, and I wish to express to you my appreciation of it.

The expenses of the department for the year 1898 are as follows :

Paid for salaries	\$2,511.82	
“ “ supplies	88.64	
“ “ repairs	4.19	
“ “ rent	204.00	
“ “ incidentals	177.86	
	<u>2,986.51</u>	
Appropriation	\$3,000.00	
Expended	2,986.51	
		<u>\$13.49</u>

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#### STREETS LAID OUT 1898.

Warren street, from Pine street to Fruit street.  
 Pleasant street, from Fruit street to the Glennon property.  
 Turnpike street, from Pillsbury street to Bow line.  
 Donovan street.  
 Holly street.  
 East Canal street. (Penacook)  
 Washington street, South line, opposite White Park.  
 Road near Saint Pauls School, from the iron bridge to a point near the rectory.

East sidewalk, Broadway from Allison street north 533 feet.  
East sidewalk, West State street, from Concord and Claremont.  
Railroad to Bound No. 18.  
East sidewalk, Dakin street.  
North sidewalk, Perley street, from a point 91 feet west of the west line of Pierce street to South street.  
South sidewalk, West street, from Morton street to South State street.  
East sidewalk, Badger street, from West street to Harrison street.  
Kimball street.  
East sidewalk, Kimball street.  
West sidewalk, Kimball street.  
Concord street railway extension, in Broadway.  
Concord street railway extension, in Turnpike street.  
East sidewalk, Broadway, from Allison street to the Cogswell school.  
North sidewalk, Warren street, from Holt street west 69 feet.  
West sidewalk, South street, south from F. Sargent's south line 91.5 feet.  
North sidewalk, Pillsbury street, from J. B. Weeks west line, west 550 feet.  
South sidewalk, Centre street, from east line of State Library to Main street.  
Donovan street  
East and west sidewalks, Donovan street.  
Holly street.  
North and south sidewalks, Holly street.  
East sidewalk, Broadway, from Downing street to West street.  
South sidewalk, East Canal street.. (Penacook ).  
South sidewalk, Clinton street, from Harvard street west 943.5 feet.  
North sidewalk, Blake street, from State street west 182.5 feet.  
West sidewalk, South street, from Noyes street south 867 feet.  
East sidewalk, South street, from Allison street to Bow street.  
East sidewalk, Eastman street.  
East sidewalk, No. State street, from the Concord & Claremont railroad south, 483 feet.

## COST OF SEWERS LAID, 1898.

## BROADWAY, NORTH FROM PILLSBURY STREET.

270 feet of 8-inch pipe.

Paid for labor	.	.	.	.	.	\$76.10
“ pipe	.	.	.	.	.	40.58
“ castings	.	.	.	.	.	.41
“ trucking	.	.	.	.	.	5.50
						<hr/>
						\$122.59

Average cost per foot, \$0.454

Material excavated sand.

## WARREN STREET, EAST FROM SOUTH END SEWER.

643 feet of 8-inch pipe.

Paid for labor	.	.	.	.	.	\$433.70
“ “ pipe	.	.	.	.	.	93.57
“ “ brick	.	.	.	.	.	20.25
“ “ cement	.	.	.	.	.	8.05
“ “ castings	.	.	.	.	.	16.70
“ “ wrought iron	.	.	.	.	.	.78
“ “ trucking	.	.	.	.	.	22.00
“ “ sand	.	.	.	.	.	1.10
“ “ black-smithing	.	.	.	.	.	9.59
“ “ freight	.	.	.	.	.	5.42
“ “ cil	.	.	.	.	.	1.00
“ “ plumbing	.	.	.	.	.	3.72
						<hr/>
						\$615.88

Average cost per foot, \$0.957

Materials excavated, marl and gravel.

## JACKSON STREET. (Extension.)

20 feet 6-inch pipe

Paid for labor	.	.	.	.	.	\$2.37
“ “ pipe	.	.	.	.	.	2.24
						<hr/>
						\$4.61

Average cost per foot, \$0.23

Material excavated, sand

PILLSBURY STREET, EAST FROM 38 INCH OUTLET.

845 feet 10-inch pipe.

Paid for labor . . . . .	\$498.42
“ “ pipe . . . . .	185.84
“ “ brick . . . . .	23.62
“ “ cement . . . . .	11.50
“ “ castings . . . . .	22.80
“ “ wrought iron . . . . .	1.25
“ “ trucking . . . . .	13.50
“ “ blacksmithing . . . . .	.75
“ “ hardware . . . . .	2.25
“ “ oil . . . . .	1.00
	<hr/>
	\$760.93

Average cost per foot, \$0.90.

Materials excavated, clay and sand.

NORTH MAIN STREET, CONNECTION WITH PENACOOK STREET.

185 feet 12-inch pipe.

Paid for labor . . . . .	\$63.92
“ “ pipe . . . . .	39.53
“ “ trucking . . . . .	1.00
	<hr/>
	\$104.45

Average cost per foot, \$0.564.

Materials excavated, gravel and sand.

CLINTON STREET, WEST FROM SOUTH END SEWER.

220 feet of 18-inch pipe.

Paid for labor . . . . .	\$350.87
“ “ pipe . . . . .	89.12
“ “ brick . . . . .	13.50
“ “ cement . . . . .	6.90
“ “ castings . . . . .	17.93

Paid for wrought iron . . . . .	.75
“ “ trucking . . . . .	34.50
“ “ lumber . . . . .	33.25
“ “ oil . . . . .	.50
“ “ pump fittings . . . . .	4.00
	<hr/>
	\$551.32

Average cost per foot, \$2.506.

Material excavated, wet sand.

The price per foot for this work was very materially increased by the crossing under Bow brook; at this point cast-iron pipe was used and the culvert was taken down and rebuilt.

NORTH SPRING STREET, EXTENSION NORTH OF  
CENTRE STREET.

140 feet 8-inch pipe.

Paid for labor . . . . .	\$57.90
“ “ pipe . . . . .	21.66
“ “ cement . . . . .	1.15
“ “ castings . . . . .	.41
“ “ trucking . . . . .	1.00
“ “ oil . . . . .	.20
	<hr/>
	\$82.32

Average cost per foot, \$0.588.

Materials excavated, marl and gravel.

PLEASANT STREET, WEST OF MINOT STREET.

178 feet 12 inch pipe.

Paid for labor . . . . .	\$85.72
“ “ pipe . . . . .	53.97
“ “ cement . . . . .	1.15
“ “ castings . . . . .	.41
	<hr/>
	\$141.25

Average cost per foot, \$0.793.

Material excavated, gravel.

## RIDGE ROAD.

340 feet of 8-inch pipe	
Paid for labor	\$154.93
“ “ pipe	44.58
“ “ brick	6.75
“ “ cement	4.60
“ “ castings	7.74
“ “ trucking	8.50
“ “ sand	1.10
“ “ blacksmithing	12.47
“ “ hardware.	1.31
“ “ oil	.50
	<hr/>
	\$242.48

Average cost per foot, \$0.713

Materials excavated, hard-pan

## HARVARD STREET.

360 feet 10-inch pipe.	
Paid for labor	\$292.78
“ “ pipe	48.75
“ “ brick	6.75
“ “ cement	6.90
“ “ oil	1.00
	<hr/>
	\$356.18

Average cost per foot, \$0.989.

Material excavated, sand.

## JACKSON WEST COURT.

80 feet of 8-inch pipe.	
Paid for labor	\$ 22.88
“ “ pipe	13.37
“ “ brick	6.75
“ “ cement	1.15
“ “ castings	8.43
	<hr/>
	\$52.58

Average cost per foot, \$0.657.

Material excavated, sand

## TURNPIKE STREET.

264 feet 10-inch pipe.

Paid for labor	.	.	.	.	.	.	\$64.08
“ “ pipe	.	.	.	.	.	.	51.30
“ “ brick	.	.	.	.	.	.	10.12
“ “ cement	.	.	.	.	.	.	3.45
“ “ castings	.	.	.	.	.	.	7.65
“ “ trucking	.	.	.	.	.	.	8.00
“ “ oil	.	.	.	.	.	.	.50
							<hr/>
							\$145.10

Average cost per foot, \$0.549,  
Material excavated, sand.

## REPAIRS.

Bowery avenue	.	.	.	.	.	.	\$94.53
Beacon street	.	.	.	.	.	.	5.25
South street	.	.	.	.	.	.	43.94
Bradley street,	.	.	.	.	.	.	16.90
West street	.	.	.	.	.	.	97.10
Rumford street	.	.	.	.	.	.	.50
Albin street	.	.	.	.	.	.	13.60
North State street	.	.	.	.	.	.	2.00
Concord street	.	.	.	.	.	.	1.76
Tremont street	.	.	.	.	.	.	21.37
Ferry street	.	.	.	.	.	.	18.90
Pine street	.	.	.	.	.	.	.50
Abbott court	.	.	.	.	.	.	6.62
Downing street	.	.	.	.	.	.	8.25
Pillsbury street	.	.	.	.	.	.	193.00
North Main street	.	.	.	.	.	.	8.50
Thorndike street	.	.	.	.	.	.	14.74
Pleasant street	.	.	.	.	.	.	10.05
Granite avenue	.	.	.	.	.	.	1.40
Flushing	.	.	.	.	.	.	220.86
Tool account	.	.	.	.	.	.	61.67
Lamp pole castings	.	.	.	.	.	.	12.32
							<hr/>
Total repairs	.	.	.	.	.	.	\$853.76

## NEW WORK.

Broadway . . . . .	\$122.59
Warren street . . . . .	615.88
Jackson street . . . . .	4.61
Pillsbury street . . . . .	760.93
North Main street . . . . .	104.45
Clinton street . . . . .	551.32
North Spring street . . . . .	82.32
Pleasant street . . . . .	141.25
Ridge road . . . . .	242.48
Harvard street . . . . .	356.18
Jackson west court . . . . .	52.58
Turnpike street . . . . .	145.10
	<hr/>
	\$3,179.69
Paid Ella Upton . . . . .	25.00
Repairs . . . . .	853.76
	<hr/>
Total expenditure . . . . .	\$4,058.45
Appropriation . . . . .	\$4,000.00
Transferred from South end appropriation . . . . .	100.00
	<hr/>
Total appropriation . . . . .	\$4,100.00
Amount expended . . . . .	4,058.45
	<hr/>
Unexpended balance, Dec. 31, 1898 . . . . .	\$41.55

## SOUTH END SEWER APPROPRIATION.

Amount taken for sewers . . . . .	\$4,100.00
Paid L. R. Fellows & Son under contract of 1897 . . . . .	919.25
Trucking . . . . .	1.00
	<hr/>
Total expenditure 1898 . . . . .	\$5,020.25
Unexpended balance January 1, 1898 . . . . .	6,361.46
Total expenditure 1898 . . . . .	5,020.25
	<hr/>
Balance December 31, 1898 . . . . .	\$1,341.21

## SEWERS BUILT 1898.

8-inch pipe	. . . . .	1,723 feet.
10 " "	. . . . .	2,154 "
12 " "	. . . . .	1,855 "
18 " "	. . . . .	220 "
Total	. . . . .	5,952 feet.

SEWERS BUILT IN CITY PRECINCT TO DECEMBER  
31. 1898.

8-inch pipe	. . . . .	21,235 feet.
10 " "	. . . . .	44,314 "
12 " "	. . . . .	37,879 "
15 " "	. . . . .	10,627 "
18 " "	. . . . .	5,734 "
20 " "	. . . . .	3,434 "
24 " "	. . . . .	1,749 "
30 inch pipe	. . . . .	969 "
Brick, 12-inch x 14-inch	. . . . .	2,758 "
" 16-inch x 24-inch	. . . . .	1,848 "
" 14-inch x 22-inch	. . . . .	350 "
" 20-inch x 32-inch	. . . . .	2,527 "
" 24-inch x 36-inch	. . . . .	17,937 "
" 28-inch x 48-inch	. . . . .	883 "
" 24-inch circular	. . . . .	1,515.5 "
" 30-inch "	. . . . .	402 "
" 38-inch "	. . . . .	4,080 "
24-inch cast-iron pipe	. . . . .	1,576 "
30-inch cast-iron pipe	. . . . .	1,054.5 "
Total,		160,872 feet.

Total miles in City precinct, to date, 30.468.

## WEST CONCORD SEWER PRECINCT.

This was the only new work in the precinct during the season and with the exception of the ordinary flushing and minor repairs is the total amount expended in the precinct.

## ENGEL STREET OUTLET, AND KIT FACTORY ROAD.

Paid for labor . . . . .	\$393.39
“ “ pipe . . . . .	349.07
“ “ brick . . . . .	58.00
“ “ cement . . . . .	19.55
“ “ castings . . . . .	54.81
“ “ trucking . . . . .	12.40
“ “ blacksmithing . . . . .	.20
“ “ hardware . . . . .	12.95
“ “ oil . . . . .	.60
“ “ wrought iron . . . . .	1.07
	<hr/>
	\$902.04

Average cost per foot, \$0.487.

Material excavated, sand.

Paid for flushing and cleaning outlets . . . . .	\$10.34
“ “ new work . . . . .	902.04
	<hr/>
Total expenditure, . . . . .	\$912.38
Unexpended balance January 1, 1898 . . . . .	\$1,189.68
Expended 1898 . . . . .	912.38
	<hr/>
Unexpended balance Dec. 31, 1898 . . . . .	\$277.30

## EAST CONCORD PRECINCT.

Unexpended balance January 1, 1898 . . . . .	\$158.90
Paid for repairs . . . . .	12.00
	<hr/>
Balance December 31, 1898 . . . . .	\$146.90

At present we have not in our possession the grades of all old sewers and at times we are confronted with questions of grades and elevations that are not easily answered.

There should be, in the near future, sufficient data secured to plot profiles of the entire sewer system, thus removing some of the doubtful elements now met with.

Respectfully submitted,

W. B. HOWE, *City Engineer.*

# PUBLIC LIBRARY.

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## REPORT OF THE TRUSTEES.

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*To the City Council:*

The Trustees of the Public Library present herewith the report of the Librarian for the year 1898.

This institution, while politically and industrially of less importance than many of the departments of the city government, comes very close to the daily lives of most of our people, and for this reason it is interesting to observe how its privileges are used and extended.

The large number of books of fiction taken from libraries, as compared with those of serious character, is a subject of frequent comment, and is regretted by many who believe that novel reading is a waste of time, and that it tends to weaken character and create false ideas in life. But if it were possible, as it is not, to prohibit or nearly suppress the reading of fiction, the loss in pleasure would far exceed the gain in profit. As Judge Foster wrote in the report of 1892, "imagination has not perished from the earth, and dull and heavy would society become if it ever should or could."

Nevertheless, while we believe that the reading of good fiction in moderation is healthful, it is the policy of the library management to give special encouragement to the reading of other literature. By far the larger portion of the book money is spent upon works of more weighty character; people are allowed to take from the library several non-fiction volumes at one time; the young are encouraged to read books of travel, biography, history and science; the freshest and most attractive volumes of this character are placed upon the delivery desk where they solicit attention; patrons are welcome to the reference room; adults are permitted to take books from the shelves and read them in the alcoves; and the best periodicals are placed upon the tables of the reading room.

The results of this liberal policy are marked. The reference room is well patronized; an increasing number of people are pursuing

courses of serious study either privately or in clubs and classes; and the number of visitors in the reading room for purposes other than merely the reading of stories is large and constant.

The Trustees, actuated solely by a due regard for the public good, urge that city council make ample appropriation for the support of the library. Last year, by reason of necessary repairs, the expense of publishing a much needed non-fiction catalogue, and the reduced amount of the appropriation, but few new books were purchased. Every book published during the year, of general interest and permanent value, as well as the books of the day most talked about, we should like to place upon the shelves; but we have come, and necessarily will come, far short of this ideal limit.

Respectfully submitted,

CHARLES H. SANDERS,  
AMOS J. SHURTLEFF,  
JOHN E. FRYE,  
PAUL R. HOLDEN,  
JOHN M. MITCHELL,  
JAMES S. NORRIS,  
WILLIAM W. FLINT,  
EDSON J. HILL,  
MOSES H. BRADLEY.

Concord, February 9, 1899.

## Report of the City Librarian.

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*To the Board of Trustees of the Concord Public Library:*

*Gentlemen:—*

The report for 1898 can be given in a few gratifying statistics:— the circulation has increased 4000 over last year, bringing it up to almost 89,000, out of which only two books have been lost; 716 new borrowers have been registered, over 100 more than in 1897; and the reading of fiction has decreased 5 per cent.

The gain in circulation is especially gratifying because many libraries complain of a loss owing to the assiduous reading of newspapers during the war.

The increased reading of the more solid works may be ascribed largely to four causes, 1st, the lists for collateral reading given teachers and pupils by our school superintendent; 2nd, the reference work done by the yearly increasing scientific, literary or current events clubs; 3rd, the interest aroused in travel and history by the Walker Lectures; 4th, the rapidly growing use of the non-fiction card.

It is interesting to note that a new book set forth in the boy's corner is snapped up in five minutes, while a book in the girl's corner may remain unnoticed for days; yet when they are grown up, the girls become better users of the Library than the boys and seem to believe it has books which can help them; while it is to be wished that men realized we try to keep a supply of books useful in their vocations, from those on municipal government to those on sanitary plumbing or poultry-raising. Again I will say that we want recommendations from experts as to the best books in their specialties, particularly in science and the useful arts, in which departments books get so quickly superannuated.

Besides the Library's prosperity along its regular lines, it has gained during 1898 in two unusual matters of great importance; it has a new roof, and a new, complete, printed non-fiction catalogue. Upon the latter the "Library Journal," the national organ of the profession, has set the seal of its approval, and in conse-

quence we are getting bequests from as remote states as New York, Illinois and Louisiana for samples of what the "Journal" was pleased to call "a good working model for other libraries."

The expense attendant upon the roof and the catalogue has cramped our action in other respects, but this year the appropriation can be divided so as to allow the purchase of more books and the making of improvements in incidental ways.

It has taken four years hard work to modernize the Library. It may be more puzzling to keep it from standing still. But there are always the library periodicals to ponder, library conventions to attend, the inspection of other libraries and best of all, the study of local needs, to give one fresh ideas as to policy and management. The writer has made it a point to visit libraries in twenty-two different towns and cities since she came into office. The recent annual meeting of the State Library Association held this year in Portsmouth, was most helpful and interesting.

If, as George Elliot says, "the way to get much out of an individual is to expect much of him," may it not be so with institutions?

Let the public try it on the Library,

Respectfully submitted,

GRACE BLANCHARD, *Librarian.*

# SANITARY DEPARTMENT.

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## REPORT OF THE BOARD OF HEALTH.

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TO HIS HONOR THE MAYOR AND THE CITY COUNCIL :

*Gentlemen*.:—In submitting our annual report we desire to congratulate our fellow citizens upon the excellent sanitary condition of Concord during the year, and to express our appreciation of the hearty co-operation which we have received in our efforts to secure a thorough and impartial enforcement of the regulations under which the business of this department is conducted. Our sanitary officer, Mr. Charles E. Palmer, has fully maintained his reputation as a model official, and his report to this board which is herewith submitted gives ample proof of his zeal and industry. We think the city is exceedingly fortunate in possessing an official who fills a position of so great importance to the welfare of the community in a manner which meets with the unqualified approval of all with whom his duties bring him in contact. His report indicates that the work of the year has been carried on along the same general lines as formerly, and if a greater amount has been accomplished it has been because the co-operation of your honorable body, the medical profession, and the community generally has made the prescribed tasks easier of accomplishment.

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### Our Schools.

All must admit the great need of providing the best arrangements for lighting, heating, ventilating and plumbing in buildings occupied for so many hours every year by those of tender age, and must recognize the menace to health occasioned by serious defects in any of these essentials. Our school buildings may be in as good sanitary condition as the average in the state, and yet

be far from the standard of today; many of them were constructed years ago and have not been improved as the progress of the times demand. If the condition is such as to warrant changes in order that the best interests of the scholars and teachers may be subserved, then these changes should be made without delay. In many cases the basements are poorly lighted, and particularly in those parts wherein are placed the water closets and urinals; the air here is bad, unpleasant odors are prominent, and yet much of this finds its way to the floors above by the natural outlets, and even through the loosely jointed wooden boxes supplying what is supposed to be pure air to the furnaces. In some instances the main sewer pipe of the sewer is ventilated a few feet from the window occupied by the cold air duct for the furnace. It is not difficult to believe that those rooms receive impurities in the air furnished them for heating. The drinking water is supplied in the basement, and, in some, from wooden pails, with tin dippers, not always bright and clean. There is a reasonable doubt about the ventilation of the latrines; the cover of the vault is open a good part of the time, and the seats of the closet are more often open than closed. Some of these, when examined, showed very little suction power to the ventilating pipe. It would seem wise to have this system replaced by the more modern sanitary arrangement in use in the schools recently built. Three of our schools in the compact part of the city still maintain outhouses not connected with the sewer; the Tahanto school has had new heating and ventilating introduced during the past year, and sanitary water closets; the West End school will remove the objections to the Bow Brook school, leaving the Manual Training and Sewing schools to be provided for this season. Everything considered, the West Concord school is probably in the poorest condition of the schools in the city, and radical changes will be necessary to put it in a sanitary state.

To attain the best results, more thought and work must be devoted to the physical side of school life; a sound body is as necessary today as ever to maintain a sound mind, and all the environments of school children must be jealously guarded to realize the full blessings of education.

### City Ambulance.

Some years ago the city purchased an ambulance, but so far as we can learn from a careful perusal of the city records, did not place it under any specific regulations. It was put in charge of the police department without any definite instructions. In a matter of so much importance, there should be no doubt on any point--the police should be given such rules for their guidance that there could not be at any time any question as to their duty in the premises. There are cases such as small-pox, diphtheria, scarlet fever, and measles, which would properly be placed in our charge with full power. All others, as emergencies, accidents, and ordinary cases of illness not specified as being under our board, could with safety and propriety be delegated to the police department.

We would respectfully recommend that you draft rules and regulations for its equipment and management that will remedy the existing condition.

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### PLUMBING LAWS.

We have at different times in our reports referred to the great necessity of having some wholesome supervision of plumbing in our city, and have been instrumental in giving opportunities to physicians, plumbers and others to consider the question. We have not found any opposition to such a measure; all are agreed that it is urgently needed and that its results from every standpoint will be beneficial. There is every reason of assurance that the present legislature will enact a law compelling cities to regulate and supervise all plumbing done in its precincts. As it is today, every one having any alterations in his plumbing or any new work done is entirely dependent on his confidence in the ability and integrity of the man doing the work; there is no authority to say what shall be done. Hence so many unscientific specimens of so-called sanitary plumbing. As much of the work is buried under ground or placed between floors, its worst features are oftentimes not recognized until some obscure illness develops and the

attending physician calls in our Health Officer to examine the plumbing. Then the cause of the trouble is found—a loose joint or broken pipe with sewer gas freely pouring out. The effects of this poison are so gradual, yet at the same time so ruinous, that it usually happens the system is severely damaged before the origin of the trouble is discovered. We have known in this city of many instances of flagrant violations of even ordinary workmanship where sickness was directly traceable to it: fixtures improperly trapped are not vented, joints not closely made, pipes imperfect, all turned over to the property-owner without any test having been made. This very serious menace to health has been too long tolerated in our community; our common interest demands its immediate remedy. If these conditions were not so, we would not hear so much talk of the greater safety in the old-fashioned earth-closet nor meet with the opposition, as at present, to make connections with the public sewer. Our hope is that every party advertising to do plumbing must satisfy competent examiners of his efficiency before he can engage in business, that all his work shall be done according to specifications furnished him by a legally authorized commission, and finally have the results of his labor examined and approved by an inspector before it is accepted.

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#### Contagious Diseases.

The board have been highly gratified at the uniform success attained in preventing the spread of such contagious diseases as have appeared in our community.

While in placing credit for this happy outcome, the medical fraternity should not be ignored, the afflicted families are also deserving of much praise for the faithful manner in which they have seconded our efforts; they have seemingly appreciated that it is our wish and as we believe our duty to render every assistance in our power to the sick, as well as to protect the public health. It is certainly never our purpose to impose any unnecessary hard-

ship. A bill is likely to be presented to the Legislature this winter which if approved will materially aid boards of health in the care of families placed in quarantine.

E. A. CLARK, M. D.,

D. E. SULLIVAN, M. D.,

E. N. PEARSON.

*Board of Health.*

## REPORT OF SANITARY OFFICER.

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To the Board of Health :

Gentlemen : I have the honor to present herewith the report of my labors as Sanitary Officer for the year ending December 31, 1898, in which report will be found a brief account of the sanitary conditions of the city during this period, and the results which have been attained by the department in its various lines of sanitary work.

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### GENERAL HEALTH OF THE CITY.

As our report for the year 1897 stated, so we can say in our report for the past year, there has been no epidemic of a serious character. This is undoubtedly due in part to the existence and maintenance of proper sanitary conditions throughout the city. Urgent efforts have been continually made to cause the abatement of any nuisance which has come to our knowledge, as speedily and completely as possible, and as a result the city has been kept almost free during the past year.

The number of deaths registered during the year was 303, 46 less than the previous year. This includes all that died at the hospitals and other institutions, a large number of whom came here for treatment from other localities, and are eliminated from the death rate.

## CONTAGIOUS DISEASES.

The following table shows the number of contagious diseases reported during each month of the year and the deaths resulting therefrom ;

Months.	DIPH- THERIA.		SCARLET FEVER.		TYPHOID FEVER.		MEASLES.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
January .....			2				17	
February .....	1		1				16	
March .....			2				75	
April .....			1				12	
May .....			2				2	
June .....							1	
July .....							1	
August .....	1				1	1		
September .....					1			
October .....	1				4	1	1	
November .....					2	1	1	
December .....	1					1		
	4		8		8	4	125	

Number of cases of typhoid fever brought to hospital from Chickamauga and other places, 64 ; deaths, 4.

RECORD OF CONTAGIOUS DISEASES BY WARDS.

Wards.	1	2	3	4	5	6	7	8	9	Total
Diphtheria.....					1	3				4
Scarlet Fever.....	1			5					2	8
Typhoid Fever.....	2	1	1	1	1	1	1			8
Measles.....	2			18	17	6	77	4	2	126

COMPARATIVE TABLE.

The following table contains the number of cases of contagious diseases and the deaths resulting therefrom, for the years since and including 1890 :

Years,	DIPH- THERIA.		SCARLET FEVER.		TYPHOID FEVER.		MEASLES.		TOTALS.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1890.....	6	2	9	.....	17	5	6	.....	38	7
1891.....	12	3	7	.....	14	6	2	.....	35	9
1892.....	13	3	37	3	7	1	2	.....	59	7
1893.....	48	.....	41	.....	13	.....	300	.....	402	.....
1894.....	17	3	113	6	13	3	21	.....	164	12
1895.....	55	8	4	.....	15	5	452	.....	526	13
1896.....	38	8	44	8	21	3	158	.....	261	19
1897.....	13	1	22	1	17	2	138	.....	190	4
1898.....	4	.....	8	.....	8	4	120	.....	146	4

DIPHTHERIA.

While diphtheria has prevailed in many cities and towns around us to an alarming extent, it is a pleasure to record the fact that we have had but very little trouble from this dreaded disease. There have been but four cases reported during the year.

The culture method of assisting in making the diagnosis of cases of diphtheria is very generally employed by the physicians in the city. Tubes for the purpose are furnished by the health department, and can always be procured at this office.

SCARLET FEVER.

There were but eight cases reported at this office during the year. All proved to be very mild, and no deaths resulted from

this cause. Quarantine regulations were strictly observed, thereby preventing its spread.

#### TYPHOID FEVER.

This disease has declined in the past year, but eight cases being reported, with a fatality of three, not including those brought to the hospital for treatment from other places. While many physicians think this disease is not contagious, it is essential that it should be reported to this department, that the proper care and investigation of the cause of the disease may be attained. Proper measures relative to the disinfection of the discharges of such patients, and their disposal should be invariably and thoroughly carried out, and in no way can this be accomplished without the board having knowledge and authority in these cases.

#### MEASLES.

Our records show one hundred and twenty-six cases of measles reported with no deaths. Of this number of cases sixty-five developed at St. Paul's school and nineteen cases were at the Orphan's Home adjoining the school.

#### NUISANCES, COMPLAINTS, INSPECTIONS.

The number and nature of requests for investigation and complaint of existing nuisances, and those found by house inspection, are found by the following table:

Accumulation of decayed fruit, coal ashes . . . . .	19
Bad sink drainage . . . . .	21
Broken sewer traps . . . . .	3
Catch basins not trapped . . . . .	7
Dead animals . . . . .	19
Decayed meat and fish . . . . .	3
Defect in house sewer . . . . .	1
Dumping rubbish . . . . .	20
Dropping manure in street . . . . .	3
Defective plumbing . . . . .	10
Filthy stables . . . . .	8
Filthy cellars . . . . .	2
Filthy swill barrels . . . . .	5

Filthy yards . . . . .	3
Filthy alleyways . . . . .	10
Foul and offensive cesspools . . . . .	3
Keeping hogs . . . . .	14
Keeping hens . . . . .	5
Offensive manure heaps . . . . .	19
Offensive privy vaults . . . . .	58
Odors arising from water . . . . .	2
Offensive odor in house . . . . .	13
Offensive odors from stables . . . . .	9
Privy vaults full . . . . .	45
Private sewers obstructed . . . . .	7
Sinks found without traps . . . . .	6
Sewer gas in house . . . . .	5
Stagnant water on vacant lots . . . . .	2
Street sewer obstructed . . . . .	7
Sewers not properly ventilated . . . . .	7
Slaughter houses . . . . .	1
Surface sink drains . . . . .	4
Throwing swill in alleyways . . . . .	4
Throwing swill in ash barrels . . . . .	3
Throwing ashes in street . . . . .	5
Throwing slops into street . . . . .	3
Water closets without water supply . . . . .	5
Water closets foul and offensive . . . . .	8
Water closets not ventilated . . . . .	13
Water closets out of repair . . . . .	8
Water in cellars . . . . .	8
Sewerage backed into cellars . . . . .	5
Total . . . . .	403

## SANITARY INSPECTIONS.

The ordinance requiring house to house inspection has been complied with, as time would allow. And the results obtained by these inspections show the same interesting features of improvement that have been developed in the past. These inspections include the business blocks, school houses, all the buildings located

on the shore of Penacook lake, where our water supply is obtained, factories, stores, markets, alleyways, tenement and private houses. In making this inspection I have tried to impress upon our citizens the necessity of good sanitation. and have endeavored to be considerate in my demands for cleanliness, exacting that which I thought best for the interest of the public health.

#### PREMISES INSPECTED.

Private dwellings . . . . .	107
Tenement houses . . . . .	269
Stores . . . . .	48
Stables . . . . .	36
Markets . . . . .	8
Factories . . . . .	11
Hotels . . . . .	3
School houses . . . . .	28
Alleyways . . . . .	41
Inspections at Penacook lake . . . . .	24
Inspections at reservoir . . . . .	18
Business blocks . . . . .	34
Total . . . . .	<u>627</u>

#### SEWER INSPECTION.

As in other years, I have endeavored to perform my duty in regard to the enforcement of the rules and regulations relative to sewers and drains. During the past year there have been one hundred and six (106) connections made with the public sewer, and a complete record made and kept on file in this office, and copies sent monthly to the city council. The following table shows the various sizes and kinds of pipe used :

1,587 feet of 6 inch Akron pipe.
4,777 " 5 " " "
257 " 4 " " "
198 " 3 " " "
44 " 6 " iron "
100 " 5 " " "
204 " 4 " " "
<u>7,167</u>

Making a total of 7,167 feet, or an average of about 68 feet to each lateral sewer.

This amount of drainage has been furnished to the following classes of buildings :

Private dwellings . . . . .	48
Tenement houses . . . . .	45
Business blocks . . . . .	6
Factories . . . . .	1
Churches . . . . .	1
Public institutions . . . . .	2
Stables . . . . .	3
	<hr/>
	106
Water closets put in . . . . .	213
Privies abolished . . . . .	114
Cesspools abolished . . . . .	63
Surface drains abolished . . . . .	42

#### INSPECTION OF PLUMBING.

From personal observation I am, and long have been, thoroughly convinced that one of the urgent and indispensable needs for a proper sanitary administration in Concord, is an inspector of plumbing.

While defective plumbing is not universal in our city, I believe there is much bad workmanship in existence, in both old and new work. In many instances I have been requested to examine the source of bad odors in dwelling houses and business blocks, and almost invariably these complaints were in direct traceable connection with faulty plumbing of water closets, bath tub, or wash basin. There is no ordinance on the subject of plumbing, and I earnestly renew at this time my suggestion of other years, that an inspector of plumbing be appointed, and the enactment of ordinances, similar to those in force in other cities. Honest, skillful plumbing alone can secure the inhabitants of dwellings having modern conveniences in them against the poisonous sewer gas. Careless and dishonest plumbing is always and under all circumstances, full of danger to the inhabitants. There is but one way possible out of this difficulty, and that is to have a sanitary plumb-

ing inspector appointed, whose duty it shall be to test the plumbing of each building, as it is finished by the plumber, and certify to the city whether or not the work has been carefully and honestly planned and executed:

Houses placarded in cases of contagious diseases . . . . .	140
Placards removed . . . . .	140
Visits made to contagious diseases . . . . .	491
Rooms fumigated . . . . .	83
Pieces of bedding and clothes burned . . . . .	118
Pieces of clothing disinfected at pest house . . . . .	84
Library and school books fumigated . . . . .	64
Burial permits issued . . . . .	303
Burial permits issued to non-residents . . . . .	67
Transfer permits issued . . . . .	75
Peppermint tests of plumbing made . . . . .	23
Water tests made . . . . .	2
Smoke tests witnessed . . . . .	2
Number of reports of contagious disease sent State Board of Health . . . . .	32
Number of monthly mortuary reports sent in exchange to other cities . . . . .	1200
Number of certificates issued for children to return to school . . . . .	26

EXPENSES' OF THE HEALTH DEPARTMENT  
FOR THE YEAR 1898.

	Appropriations.	Expended.	Balance.
Salary, Sanitary Officer . . . . .	\$800 00	\$800 00	.....
Salary, Board of Health . . . . .	75 00	75 00	.....
Rent . . . . .	108 00	108 00	.....
Lights . . . . .	19 00	2 40	\$7.60
Care of pest house . . . . .	15 00	6 02	8 98
Assistant Sanitary Officer . . . . .	100 00	39 80	60 20
Bacteriological tests . . . . .	150 00	62 80	87 20
Material for fumigation . . . . .	27 00	6.41	20 59
Incidental expenses . . . . .	150 00	112 12	37 80
	\$1,435 00	\$1,213.15	\$221 85

A table appended exhibits the mortuary statistics for the year 1898.

Again I most respectfully return sincere thanks to His Honor, the Mayor, members of the City Council, and Board of Health, and other city officials for many courtesies shown me in dealing with matters relative to the Health Department.

Respectfully submitted,

CHARLES E. PALMER,

*Sanitary Officer.*



MORTALITY REPORT.

