











CITY OF SOMERVILLE

# ANNUAL REPORTS

1889



SOMERVILLE JOURNAL PRINT.

1890.



CITY GOVERNMENT AND OFFICERS FOR 1889.

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MAYOR.

CHARLES G. POPE.

Residence, Summit Avenue ; office, City Hall.

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ALDERMEN.

CHARLES L. NORTH, *President*.

WARD ONE.

GEORGE D. WEMYSS	.	.	.	Austin Street.
CHARLES M. HEMENWAY	.	.	.	Perkins Street.

WARD TWO.

CHARLES L. NORTH	.	.	.	High Street.
GEORGE A. KIMBALL	.	.	.	Prospect Hill Avenue.

WARD THREE.

ROBERT DUDDY	.	.	.	Bond Street.
EZRA D. SOUTHER	.	.	.	Pembroke Street.

WARD FOUR.

EDWARD H. BRADSHAW	.	.	.	Central Street.
JOHN W. CONVERSE	.	.	.	Broadway.

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CLERK OF BOARD OF ALDERMEN.

GEORGE I. VINCENT.

## COMMON COUNCIL.

ALBERT W. EDMANDS, *President*.

## WARD ONE.

CHARLES B. SANBORN . . . .	Austin Street.
BYRON L. FRENCH . . . .	Florence Street.
CLARENCE H. WILLEY . . . .	Flint Street.
EDWIN A. WILCOX . . . .	Glen Street.

## WARD TWO.

JEREMIAH J. LYONS . . . .	Washington Street.
CHARLES S. BUTTERS . . . .	Church Street.
ALLEN F. CARPENTER . . . .	Park Street.
L. ROGER WENTWORTH . . . .	Vinal Avenue.

## WARD THREE.

ALVANO T. NICKERSON . . . .	Broadway.
CHARLES B. OSGOOD . . . .	Gilman Street.
WILLIAM E. PULSIFER . . . .	School Street.
FREDERICK M. KILMER . . . .	Broadway.

## WARD FOUR.

ALBERT W. EDMANDS . . . .	Summer Street.
ISAAC R. WEBBER . . . .	Wallace Street.
WILLIAM A. HUNNEWELL . . . .	Cedar Street.
FRANK E. MERRILL . . . .	Fairmount Avenue.

## CLERK OF COMMON COUNCIL.

CHARLES S. ROBERTSON.

## JOINT STANDING COMMITTEES FOR 1889.

ACCOUNTS. — Aldermen Duddy, Kimball; Councilmen Lyons, Webber, Pulsifer.

CITY ENGINEERING. — Aldermen Bradshaw, North; Councilmen French, Butters, Merrill.

CLAIMS. — His Honor the Mayor; Alderman Hemenway; the President of the Common Council; Councilmen Kilmer, Wilcox.

FINANCE. — His Honor the Mayor ; Aldermen Wemyss, Kimball ; the President of the Common Council ; Councilmen Wilcox, Wentworth, Pulsifer, Hunnewell.

FIRE DEPARTMENT. — Aldermen Duddy, Converse ; Councilmen Sanborn, Osgood, Merrill.

FUEL AND STREET LIGHTS. — Aldermen Kimball, Hemenway ; Councilmen French, Nickerson, Webber.

HIGHWAYS. — Aldermen Bradshaw, Kimball ; Councilmen Willey, Carpenter, Kilmer.

LEGISLATIVE MATTERS. — His Honor the Mayor ; Alderman Bradshaw ; the President of the Common Council ; Councilmen Wentworth, Pulsifer.

ORDINANCES. — Aldermen Souther, Hemenway ; Councilmen Lyons, Osgood, Willey.

PRINTING. — Aldermen Converse, Souther ; Councilmen Sanborn, Carpenter, Webber.

PUBLIC GROUNDS. — Aldermen Souther, Bradshaw ; Councilmen Nickerson, Butters, Willey.

PUBLIC PROPERTY. — Aldermen Wemyss, North ; Councilmen Nickerson, Hunnewell, Wentworth.

SOLDIERS' RELIEF. — Aldermen North, Duddy ; Councilmen Lyons, Sanborn, Merrill.

WATER. — Aldermen Hemenway, Converse ; the President of the Common Council ; Councilmen French, Kilmer.

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#### COMMITTEES OF THE BOARD OF ALDERMEN.

##### STANDING COMMITTEES.

ELECTIONS. — Aldermen Wemyss, Converse.

ENROLLED ORDINANCES. — Aldermen Duddy, Wemyss.

LICENSES. — Aldermen Kimball, Bradshaw.

POLICE. — His Honor the Mayor ; Aldermen Hemenway, Souther.

SEWERS. — Aldermen North, Wemyss, Duddy.

STATE AID. — Aldermen Converse, North, Hemenway, Souther.

##### SPECIAL COMMITTEE.

BUILDING PERMITS. — Aldermen Bradshaw, Duddy.

## STANDING COMMITTEES OF THE COMMON COUNCIL.

ELECTIONS AND RETURNS.—Councilmen Osgood, Carpenter, Willey.

ENROLLED ORDINANCES AND RESOLUTIONS.—Councilmen Hunnewell, Butters, Wilcox.

## SCHOOL COMMITTEE.

CHARLES G. POPE, Mayor, Chairman, *ex officio*.ALBERT W. EDMANDS, President of the Common Council, *ex officio*.

(Term, three years.)

## WARD ONE.

S. NEWTON CUTLER (elected 1888)	.	.	Pearl Street.
HORACE C. WHITE, M. D. (elected 1886)	.	.	Perkins Street.
HORACE P. HEMENWAY, M. D. (elected 1887)	.	.	Perkins Street.

## WARD TWO.

ALPHONSO H. CARVILL, M. D. (elected 1888)	.	.	Bow Street.
JAMES F. BEARD (elected 1886)	.	.	Prospect Hill Av.
CHARLES I. SHEPARD (elected 1887)	.	.	Vinal Avenue.

## WARD THREE.

NORMAN W. BINGHAM (elected 1888)	.	.	School Street.
QUINCY E. DICKERMAN (elected 1886)	.	.	Central Street
WILLIAM P. HILL (elected 1887)	.	.	Sycamore Street.

## WARD FOUR.

HORACE P. MAKECHNIE, M. D. (elected 1886)	.	.	Elm Street.
MARTIN W. CARR (elected 1887)	.	.	Craigie Street.
ADDIE B. UPHAM (elected 1888)	.	.	Newbury Street.

CLARENCE E. MELENEY, *Superintendent and Secretary*.

## PRINCIPAL ASSESSORS.

(Term, three years.)

BENJAMIN F. THOMPSON (elected 1887), <i>Chair-</i> <i>man</i> . . . . .	Summit Avenue.
GEORGE W. HADLEY (elected 1888) . . . . .	Perkins Street.
HIRAM D. SMITH (elected 1889) . . . . .	Cross Street.

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## ASSISTANT ASSESSORS.

(Term, one year.)

## WARD ONE.

GEORGE W. BARTLETT . . . . .	Franklin Street.
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## WARD TWO.

DAVID A. SANBORN . . . . .	Prospect Street.
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## WARD THREE.

EDGAR T. MAYHEW . . . . .	Temple Street.
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## WARD FOUR.

SAMUEL T. RICHARDS . . . . .	Summer Street.
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## BOARD OF HEALTH.

(Term, Physician, three years; other members, two years.)

J. FRANK WELLINGTON (appointed 1889), Chairman . . . . .	Vinal Avenue.
CHARLES H. CRANE (appointed 1888) . . . . .	Webster Street.
ALVAH B. DEARBORN, M. D. (appointed 1889) . . . . .	Office, Police Building.
<i>Clerk</i> , WILLIAM P. MITCHELL, . . . . .	Office, City Hall.
<i>Inspector</i> , CALEB A. PAGE . . . . .	Webster Avenue.



## OVERSEERS OF THE POOR.

CHARLES G. POPE, *Mayor, Chairman, ex officio.*

HERBERT E. HILL, (elected 1886 for four years . . . . .)	Mt. Vernon Street.
EDWARD B. WEST (elected 1888 for unex- pired term) . . . . .	Prescott Street.
DANIEL C. STILLSON (elected 1888 for un- expired term . . . . .)	Tennyson Street.
CHARLES G. BRETT (elected 1889 for four years) . . . . .	Hall Street.

*Agent*, CHARLES C. FOLSOM, Office, Police Building, Bow Street.  
*Secretary*, FRANK W. KAAAN, Office, Police Building, Bow Street.

## REGISTRARS OF VOTERS.

(Terms of all, except City Clerk, three years.)

CROMWELL G. ROWELL (appointed 1888), *Chairman.*  
CHARLES P. LINCOLN (appointed 1889).  
WM. B. HAWES (appointed 1889 for unexpired term).

GEORGE I. VINCENT, *City Clerk.*

## SOMERVILLE MYSTIC WATER BOARD.

(Term, one year.)

J. ORLIN HAYDEN, <i>President</i> . . . . .	Hill Building, Union Square.
ADNA C. WINNING . . . . .	Fremont Street.
RICHARD DOWD . . . . .	Charles Street.
WALTER C. MENTZER . . . . .	Cedar Street.
SAMUEL W. HOLT . . . . .	Washington Street.

*Clerk*, FREDERICK W. STONE.

*Superintendent of Water Works*, NATHANIEL DENNETT.  
Office, Prospect Street, corner Somerville Avenue.



## TRUSTEES OF THE PUBLIC LIBRARY.

(Term three years.)

CHARLES S. LINCOLN (elected 1888), <i>Prest.</i> ,	. . .	Laurel Street.
J. HENRY FLITNER (elected 1889), <i>Sec'y</i> ,	. . .	Day Street.
GEORGE A. BRUCE (elected 1889) . . .	. . .	Highland Avenue.
WILLIAM E. WELD (elected 1887) . . .	. . .	Summer Street.
JAMES E. WHITAKER (elected 1887) . . .	. . .	Sycamore Street.
SANFORD HANSCOM, M. D. (elected 1887)	. . .	Webster Street.
CHRISTOPHER E. RYMES (elected 1888) . . .	. . .	Summer Street.
ELIJAH C. CLARK (elected 1889) . . .	. . .	Rush Street.
CHARLES H. BROWN (elected 1889 for unexpired term), . . . . .	. . .	Sycamore Street.

*Librarian*, HARRIET A. ADAMS.

## CITY CLERK AND CLERK OF BOARD OF ALDERMEN.

GEORGE I. VINCENT. Office, City Hall.

## CITY TREASURER AND COLLECTOR OF TAXES.

JOHN F. COLE. Office, City Hall.

## CITY MESSENGER.

JAIRUS MANN. Office, City Hall.

## CITY SOLICITOR.

SELWYN Z. BOWMAN. Office, 23 Court Street, Boston.

## CITY AUDITOR.

DOUGLAS FRAZAR. Office, City Hall.

## CITY ENGINEER.

HORACE L. EATON. Office, City Hall.

## SUPERINTENDENT OF STREETS.

FRANK G. WILLIAMS, Albion Street. Office, City Hall.

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## SUPERINTENDENT OF PUBLIC BUILDINGS AND LIGHTS.

THOMAS R. ROULSTONE. Office, City Hall.

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## SUPERINTENDENT OF TELEGRAPH AND TELEPHONE LINES.

JAMES R. HOPKINS. Office, Engine House, Highland Avenue.

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## CHIEF OF POLICE.

MELVILLE C. PARKHURST. Office, Police Station, Bow Street.

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## CHIEF ENGINEER OF FIRE DEPARTMENT.

JAMES R. HOPKINS. Office, Engine House, Highland Avenue.

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## INSPECTOR OF BUILDINGS.

JAMES R. HOPKINS. Office, Engine House, Highland Avenue.

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## INSPECTOR OF MILK AND VINEGAR.

THOMAS CUNNINGHAM, Oak Street.

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## CITY PHYSICIAN.

ALVAH B. DEARBORN, M. D., Bow Street.

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## CLERK OF ASSESSORS AND COMMITTEE.

WILLIAM P. MITCHELL. Office, City Hall.

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## ASSISTANT CLERK OF ASSESSORS AND COMMITTEE.

ALBERT B. FALES. Office, City Hall.

## CONSTABLES.

JAIRUS MANN.	WILLIAM D. HAYDEN.
ROBERT R. PERRY.	SAMUEL R. DOW.
CHARLES C. FOLSON.	JOSEPH J. GILES.
EDWARD MCGARR.	GEORGE CULLIS.
CHRISTOPHER C. CAVANAGH.	

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## FIELD DRIVERS.

SAMUEL R. DOW.	MYRON H. KINSLEY.
JOHN E. FULLER.	CHARLES S. THRASHER.
PHINEAS W. SKINNER.	GEORGE W. BEAN.
FRANCIS A. PERKINS.	CHARLES L. ELLIS.

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## FENCE VIEWERS.

CHARLES A. PEARSON.	ADONIRAM J. TAYLOR.
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## POUND KEEPER.

CHARLES A. SMALL.

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## SEALER OF WEIGHTS AND MEASURES.

AMMIEL COLMAN, 34 Marshall Street.

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## MEASURER OF WOOD AND BARK.

SAMUEL T. LITTLEFIELD.

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## WEIGHERS OF COAL.

JOHN CRAIG.	D. WARNER DANFORTH.
GEORGE K. WALCOTT.	

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## MEASURER OF GRAIN.

JOHN CRAIG.

## WEIGHER OF HAY AND STRAW.

JOHN CRAIG.

## UNDERTAKERS.

WILLIAM A. FLAHERTY.	PATRICK H. RAFFERTY.
EDWARD H. MARSH.	THOMAS J. BARKER.
ALFRED E. MANN.	PATRICK RAFFERTY.
HORACE D. RUNEY.	

## POLICE DEPARTMENT.

MELVILLE C. PARKHURST, *Chief.*

ROBERT R. PERRY, <i>Captain.</i>	SAMUEL R. DOW, <i>Sergeant.</i>
EDWARD MCGARR, <i>Sergeant.</i>	CHRISTOPHER C. CAVANAGH, <i>Sergeant.</i>
JOHN E. FULLER.	PHINEAS W. SKINNER.
ALBION L. STAPLES.	SAMUEL A. BROWN.
JUDSON W. OLIVER.	JOHN HAFFORD.
GEORGE W. BEAN.	IVAN LAIGHTON.
GEORGE L. SMITH.	MYRON H. KINSLEY.
EDWARD M. CARTER.	GEORGE A. BODGE.
JOHN F. JOHNSON.	DENNIS KELLY.
EUGENE A. CARTER.	GEORGE H. CARLETON.
EDWARD E. HAMBLIN.	HUBERT H. MILLER.
JAMES F. FOLEY.	FRANCIS A. PERKINS.
CHARLES L. ELLIS.	CHARLES S. THRASHER.
CHARLES E. WOODMAN.	WILLIAM H. JOHNSON.
ARTHUR E. KEATING.	JOHN G. KNIGHT.
STEPHEN S. SMITH.	

MELVILLE C. PARKHURST, *Lock-up Keeper.*

## MEETINGS.

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### BOARD OF ALDERMEN.

Second and fourth Wednesday evenings of each month.

### COMMON COUNCIL.

Thursday evenings following the second and fourth Wednesdays of each month.

### SCHOOL COMMITTEE.

Last Monday evening of each month.



MAYOR'S INAUGURAL ADDRESS.

# CITY OF SOMERVILLE.

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IN BOARD OF MAYOR AND ALDERMEN, }  
January 10, 1890. }

ORDERED, That the committee on printing be and is hereby authorized and instructed to have printed, for public use, six hundred copies of the address delivered by his Honor the Mayor at the inauguration of the present City Government, the expense incurred to be charged to Printing and Stationery account.

Read twice and adopted, and sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, January 10, 1890.

Read twice and adopted in concurrence.

CHARLES S. ROBERTSON, *Clerk.*

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Approved:

January 13, 1890.

CHARLES G. POPE, *Mayor.*



INAUGURAL ADDRESS  
OF  
HON. CHARLES G. POPE,

DELIVERED JAN. 6, 1889.

GENTLEMEN OF THE CITY COUNCIL : —

ANOTHER year in the life of our young and vigorous city has passed away, and by reason of the confidence of the people in our ability and willingness to manage their affairs satisfactorily, we are here to-day to enter upon the discharge of the duties assigned to the positions to which we have been severally elected. Others, standing in our places, — clothed with like powers as we, and charged with like duties, — have been faithful to the trust confided to them, and, completing their labors, have received the reward of public approval. Let their example stimulate our ambition, and, grateful for the honors that have been bestowed upon us, let us recognize the responsibilities that go with them, and resolve to spare neither time nor effort in an endeavor to perform our whole duty as officials faithfully and conscientiously.

In accordance with the usual custom, and in the hope of aiding you in your investigations, I shall present to you a brief statement of the condition of the various departments of the city as they have been represented to me, together with such suggestions as it seems proper to make.

FINANCES.

It appears by the last annual report that the funded debt of the city on the first day of January, 1888, was \$1,525,000, and the amount in the hands of the Commissioners of the Sinking Funds for the extinguishment of the same at maturity was \$654,305.29, making the net debt of the city at that date \$870,694.71.

Early in the year the city availed itself of the provisions of an act passed by the Legislature of 1887, whereby the sinking funds, which consisted wholly of its own bonds, could be applied to the immediate payment of so much of the funded debt as their value equalled, and a change could be made in the manner of dealing with the balance of the same.

The act which was accepted is Chapter 194 of the acts of that year, and is as follows:—

[CHAP. 194.]

AN ACT RELATING TO THE SINKING FUNDS AND THE FUNDED DEBT  
OF THE CITY OF SOMERVILLE.

*Be it enacted, etc., as follows:—*

SECTION 1. The city of Somerville is hereby authorized to apply its existing sinking funds, consisting wholly of its own bonds, and any accumulation of interest thereon, toward the payment of its existing funded debt.

SECT. 2. The said city, availing itself of the provisions of the foregoing section, may issue new notes, bonds, or scrip, from time to time, as the outstanding notes, bonds, or scrip, which shall then constitute the remainder of its indebtedness, shall severally mature, for the purpose of providing for the payment of the same, and may make said notes, bonds, or scrip, so issued as aforesaid, payable at a time not exceeding twenty years from the date of said issue, and shall at the time of said issue establish a sinking fund and contribute thereto from year to year an amount raised annually by taxation sufficient, with its accumulations, to pay said notes, bonds, or scrip, so issued as aforesaid, at their maturity; or, instead of providing for the payment of the said remainder of the said indebtedness in the manner just before provided, the said city may provide for its payment in such annual proportionate sums as will extinguish said indebtedness within the time hereby authorized.

SECT. 3. Nothing herein contained shall exempt said city of Somerville from the provisions of chapter three hundred and twelve of the acts of the year one thousand eight hundred and eighty-five.

SECT. 4. This act shall take effect upon its passage. [*Approved April 20, 1887.*]

In the exercise of the authority granted by the above legislation, the following ordinance, being “Ordinance No. 5” of the present city ordinances, was passed on the twenty-eighth day of February, 1888:—

*Be it ordained by the City Council of the City of Somerville as follows:—*

SECTION 1. The existing Sinking Funds of the city, consisting wholly of its own bonds, and any accumulation of interest thereon, shall be applied toward the payment of its existing funded debt, and the Board of Commissioners of the Sinking Funds shall forthwith thus apply all the existing Sinking Funds in their hands by delivering the same to the City Treasurer, by whom all the notes, bonds, and scrip of the city, constituting said Sinking Fund or a part thereof, shall be cancelled, and by whom all moneys constituting a part of said Sinking Fund shall be applied toward the payment of the existing funded debt under the direction of the Committee on Finance, and the records of said Board shall be delivered to and retained by the City Clerk.

SECT. 2. New notes, bonds, or scrip may be issued from time to time, as the outstanding notes, bonds, or scrip, which shall at the time of the application of the Sinking Funds provided for in the foregoing section constitute the remainder of the indebtedness of the city, shall severally mature, for the purpose of providing for the payment of the same, and said notes, bonds, or scrip, so issued as aforesaid, shall be payable at a time not exceeding twenty years from the date of said issue, and the City Council shall provide for the payment of the said remainder of the said indebtedness, and of said notes, bonds, or scrip, issued as aforesaid therefor, in such annual proportionate sums as will extinguish such indebtedness within the time hereby authorized.

SECT. 3. The foregoing sections of this ordinance apply to the funded debt of the city, existing at the time of the passage of said ordinance, and any extensions or renewals thereof: the words "debt," or "debts," or "indebtedness," as hereinafter used in this ordinance, apply to and mean the debt, debts, or indebtedness, incurred by the city after the passage of this ordinance.

SECT. 4. All debts, other than those incurred for temporary loans in anticipation of taxes, shall be payable within the following periods, namely: Debts incurred in supplying the inhabitants with water, and for constructing water works, within not exceeding thirty years; debts incurred in constructing sewers and drains within not exceeding twenty years; and all other debts within not exceeding ten years. The interest on all debts shall be raised by taxation annually.

SECT. 5. Instead of establishing a Sinking Fund for the payment of the indebtedness of the city, the City Council shall provide for the payment of such indebtedness in such annual proportionate payments as will extinguish the same within the time heretofore prescribed, and the amount required thereby shall be assessed by the assessors of the city in each year thereafter, until the debt shall be extinguished, in the same manner as other taxes are assessed under



the provisions of Section 34 of Chapter 11, of the Public Statutes.

SECT. 6. The City Treasurer annually, in the month of January or February, shall certify to the Committee on Finance the amounts under this ordinance required to be raised by taxation during the current financial year, and to the Board of Assessors of taxes the amount required to be assessed under the provisions of the fifth section of this ordinance.

SECT. 7. The notes, bonds, and scrip to be issued by the city in payment of any indebtedness, whether heretofore or hereafter incurred, shall be, so far as practicable, issued in such amounts and on such times as will enable the city to make the annual proportionate payments of such indebtedness by taking up and cancelling such proportionate part of said notes, bonds, and scrip.

SECT. 8. Number 5 of the city ordinances, entitled "Sinking Funds," is hereby repealed, and this ordinance is substituted in place thereof, but such repeal shall not affect any act done, nor any rights acquired, or liabilities incurred under said repealed ordinance, and the said Board of Commissioners of the Sinking Funds shall continue to hold their office until they shall have performed the duties imposed upon them by the provisions of the first section of this ordinance.

On the twenty-third day of March last the Commissioners of the Sinking Funds paid over to the city the assets in their hands, namely, bonds amounting to \$652,500, and cash amounting to \$1,812.66, the same were applied as allowed by said act, and the sinking funds were abolished.

As will be seen by an examination of the ordinance above quoted, the remainder of the city's funded debt, after the application of the amount received from the sinking funds, and all subsequent additions thereto, are to be paid in accordance with the second provision of the above statute, namely by the "payment in such annual proportionate sums as will extinguish said indebtedness within the time" authorized by said act.

In compliance with this requirement, there was included in the tax levy of 1888 an appropriation of \$35,187.34 for the reduction of the funded debt, leaving the same after its application \$835,500, which is represented by

City Loan Bonds, . . . . .	\$597,000
Water Loan Bonds, . . . . .	238,500

There have been issued during the year for the extension of the water works bonds amounting to \$25,000, making the funded debt of

the city on the first day of January, 1889, \$860,500, divided as follows :

City Debt, . . . . .	\$597,000
Water Debt, . . . . .	263,500

The above represents the net indebtedness of the city; the unfunded liabilities for temporary loans, etc., being equalled by its assets, which consist of uncollected taxes, sewer and sidewalk assessments, etc.

The real estate of the city was valued last year at \$26,488,200, and the personal property at \$2,277,200; total valuation, \$28,765,400, showing a natural increase over the previous year by the addition of new property of \$1,293,600.

The tax rate was \$14 on each \$1,000 valuation, and, together with 9,371 polls assessed, an increase of 509 over 1887, produced \$421,458.60, the amount of the tax levy.

As the expense of conducting the schools, together with the amounts expended for debt requirements, State and County taxes, water maintenance, and support of poor, give a total of about \$270,000, it will be seen that only a small part of the money expended by the city during the past year has been entirely within the control of the City Council.

I insert for your information and for future reference the following table, showing the valuation, tax levy, and rate of each year since the incorporation of the city:—

YEAR.	VALUATION.	TAX LEVY.	RATE.
1872 . . .	\$22,755,325 . . .	\$274,374.45 . . .	\$13.00
1873 . . .	29,643,100 . . .	389,214.48 . . .	12.80
1874 . . .	30,837,700 . . .	473,235.50 . . .	15.00
1875 . . .	31,317,000 . . .	518,161.40 . . .	16.20
1876 . . .	26,573,400 . . .	504,745.24 . . .	18.60
1877 . . .	25,479,400 . . .	471,789.14 . . .	18.10
1878 . . .	20,976,900 . . .	409,496.10 . . .	19.00
1879 . . .	18,950,100 . . .	352,553.80 . . .	18.00
1880 . . .	20,458,100 . . .	402,927.71 . . .	19.10
1881 . . .	22,569,100 . . .	452,945.45 . . .	19.50
1882 . . .	23,162,200 . . .	425,721.16 . . .	17.80
1883 . . .	23,812,900 . . .	411,645.43 . . .	16.70
1884 . . .	24,331,100 . . .	418,750.26 . . .	16.60
1885 . . .	24,878,400 . . .	428,605.44 . . .	16.60
1886 . . .	26,003,200 . . .	416,987.28 . . .	15.40
1887 . . .	27,471,800 . . .	424,309.14 . . .	14.80
1888 . . .	28,765,400 . . .	421,458.60 . . .	14.00

I insert also the following table, showing the amount contributed annually to the reduction of the funded debt and the rate per \$1,000 of valuation since the enactment of the law regulating municipal indebtedness:—

Year.	Amount.	Rate per \$1,000 of valuation.
1876 . . . . .	\$45,130.62 . . . . .	\$1.70
1877 . . . . .	48,828.58 . . . . .	1.92
1878 . . . . .	51,004.64 . . . . .	2.43
1879 . . . . .	53,061.76 . . . . .	2.80
1880 . . . . .	55,739.35 . . . . .	2.72
1881 . . . . .	58,498.64 . . . . .	2.59
1882 . . . . .	61,390.59 . . . . .	2.65
1883 . . . . .	64,479.01 . . . . .	2.70
1884 . . . . .	67,719.33 . . . . .	2.78
1885 . . . . .	71,305.66 . . . . .	2.87
1886 . . . . .	66,894.23 . . . . .	2.57
1887 . . . . .	70,252.88 . . . . .	2.56
1888 . . . . .	37,000.00 . . . . .	1.28

From this table it will be found that the average tax rate required to make the annual contributions to the sinking funds was \$2.52 on each \$1,000 valuation, and if the same system had been continued, the rate would have increased from year to year, as it would have been necessary to contribute larger and larger amounts annually to the sinking funds until the entire debt was extinguished. The contribution required in 1887 increased the tax rate \$2.56 on each \$1,000 valuation, but, under the operation of the new law, the rate last year was increased because of the contribution to the payment of the funded debt only \$1.28 on each \$1,000 valuation. With the same indebtedness this rate, after the present year, would steadily decrease until the entire debt was paid. From which it is apparent that under the system of contributing to the sinking funds as heretofore, the tax rate for the last year would have been \$15.28 on each \$1,000 valuation, instead of \$14.00, the result of the operation of the new law.

The important gains by the change are a reduced tax rate and a longer time for the payment of the debt, thereby lessening the necessary efforts of the citizens to meet their obligations in this direction.

The value of a low rate of taxation is obvious. By lessening the burden it helps to the prosperity of the people, retains in our midst those that are here, and invites within our borders those who will come to improve our vacant lands and increase the capacity of the city to manage the necessary burdens of its development.

An examination of the statistics shows that from 1875 to 1881, while the tax rate was increasing from year to year, the property poll tax-payers gradually decreased in number, while from 1882 to 1888, as the rate was reduced annually, the property poll tax-payers correspondingly increased, until now, for the first time, they equal in number those of 1875.

Somerville may well congratulate herself on her financial condition. Her debt is smaller per cent. of her valuation than that of a majority of the cities in the Commonwealth, she has twenty years more time than any other city in which to pay it, and her tax rate the past year was lower than four-fifths of her sister cities. Great credit is due to those of her chief magistrates, and the officials associated with them, whose labors have contributed to establish a financial policy that could lead to such a desirable result.

### FIRE DEPARTMENT.

The fire apparatus consists of : —

One steam fire-engine, with hose carriage, three horse hose carriages, one hose wagon, one hook and ladder carriage, and eight thousand feet of hose.

There are also belonging to the department : —

One steam fire-engine, one horse hose carriage, and one hook and ladder carriage, all of which can be put in condition for service in case of necessity, although they are not equipped for immediate use.

The manual force consists of sixty-one men, namely : —

One chief engineer, one assistant engineer, one engine company numbering twelve men, of whom four are permanently employed and eight are call-men, four hose companies of eight men each, and one hook and ladder company numbering fifteen men.

Of the men in the hose companies and the hook and ladder company only five are permanently employed.

The fire alarm telegraph consists of forty miles of wire, forty-one signal boxes, six tower bell-strikers, and eighteen gongs.

The buildings and apparatus are in good condition.

There is in process of erection a hose house at the corner of Somerville Avenue and Lowell Street, which when completed will necessitate the addition of another hose company to the working force of the department.



## POLICE.

From a knowledge of the police force derived from experience in another official position, I do not hesitate to express the opinion that ours is as well disciplined, and as efficient for its size, as any police force in the Commonwealth. It consists of:—

One chief, one captain, three sergeants, and twenty-four patrolmen, the number of the latter having been decreased in September last by the death of Patrick J. Bench.

The introduction of the signal system during the past year has added greatly to the strength and effective force of the department. By means of it the officer in charge at headquarters is enabled to have hourly communication with the men on street duty, they being required to report to him either by signal or telephone from the boxes on their route, and can direct their movements from the station by day or by night; while the men themselves are made much more valuable in affording protection, because they can remain on their beats and summon assistance to take charge of their arrests. Sometimes in this way a serious disturbance of the peace is prevented by the speedy removal of the active cause of trouble. Nearly all the secret signal boxes are located in Wards One, Three, and Four, and the patrol wagon can, when summoned, reach the one farthest away in ten minutes, and very many of them in four or five minutes. The cost of introducing the system was almost \$4,200. This does not include the expense of a stable, with accommodations for the men on duty as drivers, which would have been provided, I am informed, but for a failure of the appropriation. This deficiency in the outfit you will be called upon to supply, and I think investigation will prove to you its necessity and value.

## POOR.

The appropriation for the support of the poor was the same last year as in 1887, namely \$14,000. Of this sum the Overseers report an unexpended balance of about \$2,700, showing that the net expenses of the department were some \$600 less than in the previous year. This is believed to be due to good management, and not to a failure to supply in a proper manner the needs of those having a claim upon us for assistance.

The city is paying board at the present time for fifty-one persons.



twenty-eight of whom are insane and are provided for in various insane asylums. Of the remaining twenty-three, thirteen are in private families, and ten in the almshouses and other charitable institutions of neighboring cities and towns. One hundred and ninety-three families have been aided at their homes the past year, and 791 individuals in all.

It is thought by the Overseers, and with good reason, it seems to me, that a city of our size should provide for its unfortunates within its own borders, and under circumstances that will enable it to know that the right thing is done for them at all times.

I therefore renew to you the recommendation of my predecessor to the last two or three City Councils, "that an almshouse be built on the land on Broadway, owned by the city, and known as the City Farm," and trust that it may receive your early and careful consideration.

#### HIGHWAYS, SIDEWALKS AND SEWERS.

The appropriation for highways in 1888 was \$44,000, the larger part of which was used in repairing the old streets. Only two new streets were built, making the total length of streets in the city, public and private, 84.24 miles. Five thousand five hundred ninety-seven feet of edgestones were set. Nearly \$26,000 were spent for labor.

The sidewalk appropriation was \$4,500, and 5,536 feet of brick, and 4,738 feet of gravel sidewalk were constructed.

The length of the system of public sewers in the city is 41.5 miles, 5,218 feet, or .98 of a mile, having been built during the past year. This has been done at an entire cost of \$9,906.10, of which the city assessed \$8,744.67 on the abutters, and assumed the balance, namely, \$1,161.43. The cost of the system thus far has been about \$760,000.

#### SCHOOLS.

The value and importance of our public schools are not to be questioned. Although not beyond improvement, they compare favorably with any in the Commonwealth. Our citizens have always intrusted their care to intelligent, able, and earnest representatives of their number, and provided liberally the means to secure the best instruction for the children and youth to be benefited.

There was appropriated for school purposes last year about \$125,000, nearly one-third of the entire tax levy, and of this sum \$85,693.16 was expended for salaries of teachers.

The whole number of schools is 114: 1 High, 62 grammar and 51 primary; an increase of six over 1887. These are under the care of 128 teachers.

Whole number of pupils registered during the year is 7,264; High, 559; grammar, 3,145, and primary, 3,560.

Number in attendance in December last is 5,909: High, 415, grammar, 2,910, and primary, 2,584.

Average daily attendance for the year, 5,184, an increase over 1887 of 306.

To provide for this large and increasing number in daily attendance on our schools, it is to be expected that there will be calls from time to time for further accommodations. School buildings must be provided according to the need, and with due regard to the future. It belongs to the School Committee to say what is required and in what part of the city. To you is given the duty of deciding how much of the demand shall be complied with at any one time.

The forthcoming report of the Board will show that increased accommodations must be furnished in the near future for the High school, and for the pupils in Wards Two, Three and Four. From the best information I can obtain, it seems to me that the most pressing need is in the Prospect Hill District. It contains more than one-third of the entire school population below the High School grade, and nearly as many pupils as in East Somerville and Winter Hill sections combined. These last two sections are much better provided with suitable buildings, and have the benefit of the services of three male instructors. The Prospect Hill District has one grammar school and master only, and very inadequate accommodations for a large part of its pupils.

I trust you will second the requests of the School Board for relief in this locality, when made, and furnish the buildings that may be required.

### STREET LIGHTS.

The city has 70 electric lights, 340 gas lights, and 76 oil lamps, and the appropriation for lighting the streets during the past year was \$16,000.

More than half of this amount was used to pay the expense of the electric lights, they costing \$25.90 per night, or thirty-seven cents each.

Although the public are very much better provided for in this respect than ever before, still many of them are not satisfied either with the number of the lights or the time they burn, and undoubtedly you will be asked during the year to increase the accommodation in one or the other particular.

I respectfully request that you will carefully consider the subject before taking any action in the matter.

### WATER WORKS.

The appropriation for water maintenance the past year was \$19,000, and there was borrowed on funded debt account, as previously stated, the sum of \$25,000 for the extension of the works.

The Board have relaid 9,831 feet of old mains, extended the works 10,678 feet, laid 414 new services, nearly all for new houses, and set fourteen post hydrants during the year.

The importance of this department cannot be overestimated. Your every day experience and observation furnish you the evidence, and make argument unnecessary.

The question of a high-water service will, without doubt, be presented to you for consideration. So much has been said in the local papers of late in regard to the matter, that you must be fully informed of the advantages to be derived from its introduction, and any repetition of them cannot but be superfluous.

If the residents on the hills can be supplied with water as those in other parts of the city, the vacant lands now practically out of the market for building purposes can thereby become available, and the protection from fire can be so increased that it shall mean something where practically it has not heretofore; then I think it is your duty, in the interest of the whole city, to thoroughly investigate the subject, and act as the facts may warrant and your judgment may dictate. Perhaps there has never been a better time than now to undertake this matter. Taking even the extreme estimate of cost, the income from the works as they now exist would pay for the improvement in a very few years.

I would not advise any definite action, however, until the cost has been ascertained, so far as it is possible to do so, and the ability of the city to undertake the matter fully and carefully considered.

GENTLEMEN OF THE CITY COUNCIL : —

I have endeavored to present to you in brief the condition of the various departments of the city and its financial standing as we are called upon to assume its management. For more minute particulars I refer you to the various reports made to and by the retiring officials. They may not furnish fascinating reading, but it will be profitable, and I think it is your duty to examine them carefully.

In addition, there are a few things I wish to say before closing, because I can say them at this time without being accused of indulging in criticism of any one's action. It is apparent to you all, undoubtedly, that the city is now on a good financial basis and in a prosperous condition. We wish our successors to find it so. To accomplish this it seems to me that the same policy should be adhered to that has produced this result. An economical administration of affairs is what should be aimed at, and it is what the public have a right to expect at our hands. I do not mean by this that no money should be spent except what we are absolutely obliged to furnish. If that is economy, it is not the kind in my judgment that we are expected to practise. A *wise* economy is what is demanded, which may mean withholding or expending money, according to the reasonable needs of the city considered in the light of its future growth and development. And here your most careful investigations and best judgment will be required. In this it will be necessary to mark the wide difference between want and need. Many wants will be brought to your attention. After the needs have been attended to, then let the wants be thought of, and not till then. And of the needs, let those be met first that are the most pressing, and all be responded to with due regard to the ability of the city to meet them.

While it is true that each of you is indebted to his friends for his election rather than to his enemies, if he has any, I trust that each will recognize the fact that even his friends had no right to elect him to be other than a representative of the whole city, and in the consideration of matters presented to him will forget ward lines and act, as I believe you intend, for the best interests of the entire public.

Perhaps I may be allowed to say one thing further. In the conduct of the city's affairs it is necessary to subdivide the labor and appoint committees. Do not, however, consider that the whole care and responsibility for the highways, the sewers, etc., is given to the



committees on those departments, and that no one else in the government has any right to question their acts, or do aught but acquiesce in their conclusions. You cannot in that way be true to your oath of office. They are but the eyes and ears of the City Council, to watch, and listen, and report. It is not only the province, but the duty of each member of the Council to consider what they bring to his attention, taking time for further investigation, if he thinks it necessary, and understanding the subject matter, to direct their future movements as his judgment may dictate. In this way, and this only, it seems to me, can you do your whole duty.

We are the only government, gentlemen, in town or city, that has ever been assembled within our municipal limits, except at the call of one who can no longer speak to us by word or pen. One year ago, when on a similar occasion our predecessors were inducted into office, Charles E. Gilman performed his last day's work for the citizens of Somerville. Annually elected to his office since the incorporation of the town in 1842, he yearly gave to the people faithful, conscientious service. Let us hope that at the end of our term we may have furnished proof that we have profited by his example.



REPORT  
OF THE  
TREASURER AND COLLECTOR OF TAXES.

# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 22, 1890.

Referred to Committee on Finance, and sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Jan. 22, 1890,

Referred to committee on finance in concurrence.

CHARLES S. ROBERTSON, *Clerk.*

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IN COMMITTEE ON FINANCE, Feb. 10, 1890.

*To the City Council of Somerville:*—The committee on finance, to which was referred the annual report of the treasurer and collector of taxes for the year 1889, reports that it has, in conjunction with the city auditor, examined the books and vouchers of the treasurer and collector of taxes for the year ending December 31st, 1889, in the manner prescribed by the ordinances, and has compared the same with the auditor's book, and with the statements received from the several committees, boards, and officers of the city, by which examination and comparison it appears that the report of the treasurer and collector of taxes agrees with the books and vouchers, and that the treasurer's accounts are correct.

\* The cash on hand has been found to agree with the cash balance reported, by actual count and an inquiry at the banks of deposit, and our inspection of the work of the treasurer has proved highly satisfactory. It is, therefore, recommended that his report be accepted and printed in the annual reports.

CHARLES G. POPE,	} <i>Committee.</i>
CHARLES M. HEMENWAY,	
ALBERT W. EDMANDS,	
CHARLES B. OSGOOD,	
L. ROGER WENTWORTH,	
WILLIAM E. PULSIFER,	
ISAAC R. WEBBER,	

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Accepted and referred to the committee on printing, to be printed in the annual reports. Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHARLES S. ROBERTSON, *Clerk.*



# CITY OF SOMERVILLE.

TREASURER'S OFFICE, JAN. 20, 1890.

*To the Honorable the Mayor and City Council of the City of Somerville.*

GENTLEMEN,—The undersigned presents herewith the eighteenth annual report of the financial condition of the city, and a statement showing in detail the receipts and disbursements for the year ending Dec. 31, 1889.

The value of the property of the city, December 31, 1888, was \$1,287,023.44. The property acquired during the year was as follows:—

Equipments for Highway repairs (steam road roller)	\$4,750.00
Hose House, Ward Four, No. 5	13,744.62
Police stable	3,858.35
School-house, in Ward Two (unfinished)	14,727.14
Morse School-house, addition unfinished	5,439.88
Water-Works extension and improvement	81,117.43
making the value of the public property, Dec. 31, 1889, as per Table A,	\$1,410,660.86.

The funded debt of the city, Dec. 31, 1888, as per Table B of the last annual report, was \$835,500.00.

The debt was increased during the year by appropriations as follows:—

For the erection of a School-house in Concord Square, \$25,000.00; addition to Morse School-house, \$25,000.00, and for the extension and improvement of the Water Works, and construction of a high service system, \$80,000.00, making the total increase \$130,000.00.

Water Loan Bonds, No. 57 to 65 at 5 per cent. int.	\$9,000 00
“ “ “ No. 278 at 4 per cent. int.	1,000 00
“ “ “ No. 46 to 54 at 5 per cent. int.	9,000 00
City Loan Bonds, No. 508 to 575 at 4 per cent. int.	68,000 00

Amounting to . . . . . \$87,000 00

became due during the year, and to provide for the amount which

the city was authorized to renew, and the appropriations above mentioned, the following new bonds, bearing interest at four per cent. were issued:—

Water Loan Bonds, No. 303 to 329, \$1,000 each, \$3,000 payable annually 1890 to 1898 . . . . .	\$27,000 00
Water Loan Bonds, No. 330 to 342, \$1,000 each, payable 1899 . . . . .	13,000 00
Water Loan Bonds, No. 343 to 352, \$1,000 each, \$2,000 payable annually 1900 to 1904 . . . . .	10,000 00
Water Loan Bonds, No. 353 to 382, \$1,000 each, \$3,000 payable annually 1905 to 1914 . . . . .	30,000 00
Water Loan Bonds, No. 383 to 392, \$1,000 each, \$2,000 payable annually 1915 to 1919 . . . . .	10,000 00
City Loan Bonds, No. 914 to 948, \$1,000 each, \$5,000 payable annually 1890 to 1896 . . . . .	35,000 00
City Loan Bonds, No. 949 to 969, \$1,000 each, payable 1897 . . . . .	21,000 00
City Loan Bonds, No. 970 to 993, \$1,000 each, payable 1898 . . . . .	24,000 00
City Loan Bonds, No. 994 to 1002, \$1,000 each, payable 1899 . . . . .	9,000 00
Amounting to . . . . .	\$179,000 00

making \$38,000 in bonds retired during the year, and leaving the funded debt of the city, Dec. 31, 1889, \$952,500.00.

The current expenses, public improvements, State and county taxes, and debt requirements were provided for by the following

RESOURCES :

Assessors' warrant for the tax levy, assessed upon the polls and estates of the inhabitants as follows, viz. :—

Real estate, valuation . . . . .	\$27,830,700 00
Personal property, valuation . . . . .	2,173,900 00
Total valuation . . . . .	\$30,004,600 00

At a rate of \$14.00 on \$1,000 valuation

2,202 property polls.

7,920 single polls.

10,122 polls at \$2 each, and	
32 polls (women) at \$0.50 each . . . . .	440,324 40
Amount carried forward, . . . . .	\$440,324 40

<i>Amount brought forward,</i>	\$440,324 40
Borrowed on funded debt account to provide for the cost of public improvements	130,000 00
Received of City of Boston for return on water contract	51,470 91
Received from all other sources	65,885 36
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making the total amount of resources for the year end- ing Dec. 31, 1889	\$687,680 67

The appropriations, credits, and balances of the various accounts were as follows:—

Accounts.	Appropriations.	Additional Credits.	Expenditures and Balances.
<b>Fire Department:—</b>			
Appropriation,	\$32,000 00		
Received for old materials,		\$ 231 35	
Expenditures,			\$32,696 65
Deficiency,			465 10
<b>Health Department:—</b>			
Appropriation,	\$5,500 00		
Received for permits, licenses, etc.		226 00	
Expenditures,			5,226 54
Unexpended balance,			499 46
<b>Highways:—</b>			
Appropriation,	\$42,000 00		
Transferred from "High- ways Steam Road Rol- ler" account,	250 00		
	<hr/>		
	42,250 00		
Received for labor and materials,		3,809 44	
Expenditures,			46,608 95
Deficiency,			549 51
<b>Highways, Steam Road Roller:—</b>			
Appropriation,	\$5,000 00		
Transferred to "High- ways" account,	250 000		
	<hr/>		
	4,750 00		
Expended,			4,750 00
<b>Hose House in Ward Four:—</b>			
Unexpended balance from 1888,		7,486 60	
Expenditures,			7,320 06
Unexpended balance,			166 54

Accounts.	Appropriations:	Additional Credits.	Expenditures and Balances.
<b>Indigent Soldiers and Sailors :—</b>			
Appropriation, . . . . .	600 00		
Received from State of Massachusetts, . . . . .		614 50	
Expenditures, . . . . .			1,229 00
Deficiency, . . . . .			14 50
<b>Interest :—</b>			
Appropriation, . . . . .	30,000 00		
Received interest, corporation and bank taxes, etc., . . . . .		28,355 14	
Expenditures, . . . . .			45,824 16
Unexpended balance, . . . . .			12,530 98
<b>Miscellaneous :—</b>			
Appropriation, . . . . .	4,000 00		
Received for costs on taxes, licenses, etc., . . . . .		2,159 54	
Expenditures, . . . . .			9,373 25
Deficiency, . . . . .			3,213 71
<b>Police :—</b>			
Appropriation, . . . . .	\$31,200 00		
Transferred to "Police Stable" account, . . . . .	358 35		
	30,841 65		
Received for court fees, fines, etc.,		4,886,04	
Expenditures, . . . . .			34,854 15
Unexpended balance, . . . . .			873 54
<b>Police Stable :—</b>			
Appropriation, . . . . .	\$3,500 00		
Transferred from "Police" account, . . . . .	358 35		
	3,858 35		
Expenditures, . . . . .			3,858 35
<b>Police Station Incidentals :—</b>			
Appropriation, . . . . .	2,000 00		
Received for rent, . . . . .		568 00	
Expenditures, . . . . .			2,528 58
Unexpended balance, . . . . .			39 42
<b>Public Library :—</b>			
Appropriation, . . . . .	3,000 00		
Received for dog licenses, etc., . . . . .		2,736 21	
Expenditures, . . . . .			6,151 66
Deficiency, . . . . .			415 45

Accounts.	Appropriations.	Additional Credits.	Expenditures and Balances.
Public Grounds :—			
Appropriation, . . . . .	7,000 00		
Expenditures, . . . . .			9,109 58
Deficiency, . . . . .			2,109 58
Printing and Stationery :—			
Appropriation, . . . . .	4,000 00		
Expenditures, . . . . .			5,189 11
Deficiency, . . . . .			1,189 11
Reduction of Funded Debt :—			
Appropriation, . . . . .	38,000 00		
Expended, . . . . .			38,000 00
Relief and Burial of Indigent Soldiers and Sailors :—			
Transferred from "Support of Poor" account, . . . . .	500 00		
Expended, . . . . .			271 00
Unexpended balance, . . . . .			229 00
Salaries :—			
Appropriation, . . . . .	25,900 00		
Expended, . . . . .			25,494 91
Unexpended balance, . . . . .			405 09
School Contingent :—			
Appropriation, . . . . .	18,000 00		
Received for tuition of non-resident pupils, etc., . . . . .		104 18	
Expenditures, . . . . .			20,556 00
Deficiency, . . . . .			2,451 82
School Fuel :—			
Appropriation, . . . . .	7,000 00		
Expended, . . . . .			6,049 90
Unexpended balance, . . . . .			950 10
School House Incidentals :—			
Appropriation, . . . . .	13,000 00		
Expenditures, . . . . .			14,225 38
Deficiency, . . . . .			1,225 38
School Teachers' Salaries :—			
Appropriation, . . . . .	40,000 00		
Received from "City of Boston Water rates", . . . . .		51,470 91	
Expended, . . . . .			93,065 49
Deficiency, . . . . .			1,594 58



Accounts.	Appropriations.	Additional Credits.	Expenditures and Balances.
<b>Sewers :—</b>			
Appropriation . . . . .	11,000 00		
Received for permits, etc., . . . . .		123 57	
Expenditures, . . . . .			15,716 07
Deficiency, . . . . .			4,592 50
<b>Sidewalks :—</b>			
Appropriation, . . . . .	8,200 00		
Received for edgestones, labor, etc. . . . .		470 87	
Expenditures, . . . . .			8,654 89
Unexpended balance, . . . . .			15 98
<b>Street Lights :—</b>			
Appropriation, . . . . .	18,000 00		
Received for repairs, etc., . . . . .		12 60	
Expenditures, . . . . .			16,986 17
Unexpended balance, . . . . .			1,026 43
<b>Support of Poor :—</b>			
Appropriation, . . . . .	\$14,000 00		
Transferred to "Relief and Burial of Indigent Soldiers and Sailors, . . . . .	500 00		
	<u>13,500 00</u>		
Received for support of paupers, . . . . .		2,240 62	
Expenditures, . . . . .			14,610 92
Unexpended balance, . . . . .			1,129 70
<b>Watering Streets :—</b>			
Appropriation, . . . . .	3,500 00		
Received from abutters, . . . . .		5,478 32	
Expenditures, . . . . .			9,228 28
Deficiency, . . . . .			246 96
<b>Water Maintenance :—</b>			
Appropriation, . . . . .	18,000 00		
Received for labor, materials, etc., . . . . .		559 24	
Expenditures, . . . . .			16,542 35
Unexpended balance, . . . . .			2,016 89
<b>County of Middlesex, County Tax :—</b>			
Appropriation, . . . . .	21,367 03		
Expended, . . . . .			21,367 03
<b>State of Massachusetts, State Tax :—</b>			
Appropriated, . . . . .	27,560 00		
Expended, . . . . .			27,560 00
<b>Overlay and Abatement :—</b>			
Appropriated, . . . . .	6,997 37		
Applied and to be applied to abatements on taxes, . . . . .			6,997 37

Accounts.	Appropriations.	Additional Credits.	Expenditures and Balances.
School-house in Ward Two :—			
Appropriation by borrowing on Funded Debt account, . . . . .	25,000 00		
Expended, . . . . .			14,727 14
Balance to be expended in 1890, . . . . .			10,272 86
Morse School-house Addition :—			
Appropriation by borrowing on Funded Debt account, . . . . .	25,000 00		
Expended, . . . . .			5,439 88
Balance to be expended in 1890, . . . . .			19,560 12
Water Works Extension :—			
Appropriation by borrowing on Funded Debt account, . . . . .	80,000 00		
Balance from 1888, . . . . .		5,661 11	
Received for pipe, labor, etc., . . . . .		161 83	
Expenditures, . . . . .			82,279 26
Balance to be expended in 1890, . . . . .			3,543 68
	<hr/>	<hr/>	<hr/>
	\$570,324 40	\$117,356 27	\$705,751 87
Credits from various sources, . . . . .	117,356 27		
Accounts overdrawn, . . . . .			18,071 20
	<hr/>		<hr/>
	\$687,680 67		\$687,680 67
	<hr/>		<hr/>

RECAPITULATION.

Appropriations :—			
As per tax levy, . . . . .	\$440,324 40		
Funded debt account, . . . . .	130,000 00		
Received from City of Boston, water account, . . . . .	51,470 91		
Received from various sources, . . . . .	65,885 36		
Expenditures, . . . . .			\$652,492 08
Unexpended balances, \$23,022 26			
Expended in excess of appropriations, . . . . .	18,071 20		
	<hr/>		
Balance to credit of excess and deficiency account, . . . . .			1,811 93
Balances to be expended in 1890, . . . . .			33,376 66
	<hr/>		<hr/>
	\$687,680 67		\$687,680 67
	<hr/>		<hr/>

The assets of the city available for the payment of its unfunded liabilities are as follows:—

Taxes . . . . .	\$140,892 12
Real-estate liens . . . . .	55 44
State of Massachusetts, State aid . . . . .	4,380 00
State of Massachusetts, indigent sailors and soldiers . . . . .	602 50
Sidewalk assessments . . . . .	6,855 04
Sewer assessments . . . . .	15,928 09
Water service assessments . . . . .	2,102 79
City of Boston, water rates . . . . .	1,329 08
Cash . . . . .	21,002 02

Total amount of available assets . . . . .	\$193,147 08
--	--------------

The liabilities are:—

Temporary loans . . . . .	\$150,000 00
Overplus on tax sales . . . . .	102 13
Sundry persons . . . . .	55 10
School-house in Ward two . . . . .	10,272 86
Morse school-house addition . . . . .	19,560 12
Overlay and abatement . . . . .	4,662 13
Water-works extension . . . . .	3,543 68

Total amount of unfunded liabilities . . . . .	\$188,196 02
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Excess of available assets over unfunded liabilities . . . . .	4,951 06
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\$193,147 08

The financial condition of the city, exclusive of its public property, is as follows:—

Funded debt, city loan . . . . .	\$618,000 00
Funded debt, water loan . . . . .	334,500 00

Total funded debt . . . . .	\$952,500 00
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Excess of available assets over unfunded liabilities . . . . .	4,951 06
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Leaving a net indebtedness, Dec. 31, 1889 . . . . .	\$947,548 94
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Total cash receipts for the year, including a balance of \$20,101.85 from the year 1888 . . . . .	1,254,633 29
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Total cash disbursements . . . . .	1,233,631 27
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Leaving in the treasury the sum of . . . . .	\$21,002 02
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- A detailed statement of the public property, funded debt, and the receipts and disbursements of the various accounts will appear in the appendix.

Respectfully submitted,

JOHN F. COLE,

*Treasurer.*

APPENDIX TO TREASURER AND COLLECTOR'S REPORT.

TABLE A.

PUBLIC PROPERTY, DEC. 31, 1889.

Central Hill land (12 acres, 27,920 feet) . . . . .		\$100,000 00
City Hall . . . . .	10,000 00	
Furniture . . . . .	3,000 00	
	<hr/>	13,000 00
Public Library . . . . .		8,500 00
Public Library building . . . . .		28,338 45
Steam fire engine house . . . . .	10,000 00	
Furniture . . . . .	500 00	
Steam fire-engine and apparatus . . . . .	4,000 00	
Steam fire-engine, hose carriage, and apparatus . . . . .	2,000 00	
	<hr/>	16,500 00
High School-house . . . . .	\$40,000 00	
Furniture . . . . .	3,500 00	
Philosophical apparatus . . . . .	500 00	
	<hr/>	44,000 00
Prescott School-house, land (21,444 ft.) and building . . . . .	\$40,000 00	
Furniture . . . . .	2,000 00	
	<hr/>	42,000 00
Luther V. Bell School-house, land (23,396 feet) and building . . . . .	\$40,000 00	
Furniture . . . . .	3,000 00	
	<hr/>	43 000 00
<i>Amount carried forward,</i> . . . . .		<hr/> <hr/> \$295,338 45

<i>Amount brought forward,</i>			\$295,338 45
Forster School-house, land (27,499 feet) and building		\$37,922 24	
Furniture		1,500 00	
		<hr/>	39,422 24
Morse School-house, land (29,109 feet) and building		\$25,000 00	
Furniture		1,000 00	
		<hr/>	26,000 00
Highland School-house, land (23,260 feet) and building		\$32,000 00	
Furniture		1,000 00	
		<hr/>	33,000 00
Lincoln School-house, land (17,662 feet) and building		\$14,742 17	
Furniture		744 93	
		<hr/>	15,487 10
Prospect Hill School-house, land (25,313 feet) and building		\$20,000 00	
Furniture		600 00	
		<hr/>	20,600 00
Jackson School-house, land (11,212 feet) and building		\$8,000 00	
Furniture		300 00	
		<hr/>	8,300 00
Bennett School-house, land (20,560 feet) and building		\$8,000 00	
Furniture		300 00	
		<hr/>	8,300 00
Webster School-house, land (11,050 feet) and building		\$8,000 00	
Furniture		300 00	
		<hr/>	8,300 00
Union School-house, land (9,360 feet) and building		\$2,500 00	
Furniture		100 00	
		<hr/>	2,600 00
Harvard School, land (9,810 feet) and building		\$2,500 00	
Furniture		100 00	
		<hr/>	2,600 00
			<hr/>
<i>Amount carried forward</i>			\$459,947 79

<i>Amount brought forward,</i>		\$459,947 79
Ederly School-house, land (26,428 feet) and building	\$25,000 00	
Furniture	500 00	25,500 00
Ederly School-house addition	\$17,000 00	
Furniture	600 00	17,600 00
Brastow School-house, land (10,019 feet) and building	\$6,000 00	
Furniture	250 00	6,250 00
Franklin School-house, land (33,017 feet) and building	\$14,000 00	
Furniture	300 00	14,300 00
Beach Street School-house, land (6,000 feet) and building	\$4,500 00	
Furniture	250 00	4,750 00
Spring Hill School-house, land (4,991 feet) and building	\$1,600 00	
Furniture	100 00	1,700 00
Davis School-house, Tufts Street, land (29,584 feet) and building	\$17,606 22	
Furniture	726 99	18,333 21
Cummings School-house, School Street, land (11,300 feet) and building	\$14,643 21	
Furniture	714 16	15,357 37
Bingham School-house, Lowell Street, land (21,017 feet) and building	\$14,553 56	
Furniture	551 33	15,104 89
Burns School-house, Cherry Street, land (16,080 feet) and building	\$14,662 40	
Furniture	587 12	15,249 52
<i>Amount carried forward,</i>		\$594,092.78

<i>Amount brought forward</i>	.	.	.	.	\$594,092.78
City farm, land (10 acres, 12,523 feet)	.	.	.	.	30,000 00
Cedar Street School-house	.	.	.	\$700 00	
Furniture	.	.	.	100 00	
				<hr/>	800 00
City stables and dwelling houses	.	.	.	.	7,000 00
Equipments for highway repairs	.	.	.	.	7,750 00
Watering-carts and sheds	.	.	.	.	2,300 00
No. 1 Hose-house, land (4,312 feet)					
and building	.	.	.	\$2,300 00	
Furniture	.	.	.	400 00	
John E. Wool hose-carriage and apparatus	.	.	.	2,000 00	
				<hr/>	4,700 00
No. 2 Hose-house, land (5,400 feet)					
and building	.	.	.	\$7,500 00	
Furniture	.	.	.	300 00	
Winter Hill hose-carriage and apparatus	.	.	.	2,000 00	
				<hr/>	9,800 00
No. 3 Hose-house, land (5,226 feet)					
and building	.	.	.	\$9,000 00	
Furniture	.	.	.	300 00	
George H. Foster hose-carriage and apparatus	.	.	.	2,000 00	
R. A. Vinal hook-and-ladder truck and apparatus	.	.	.	3,400 00	
Prescott hook-and-ladder truck and apparatus	.	.	.	100 00	
				<hr/>	14,800 00
No. 4 Hose-house, land (9,100 feet) and building	.	.	.	\$11,000 00	
Furniture	.	.	.	400 00	
George O. Brastow, hose-carriage and apparatus	.	.	.	2,000 00	
Relief Hose-carriage	.	.	.	600 00	
				<hr/>	14,000 00
<i>Amount carried forward,</i>	.	.	.	.	\$685,242 78

<i>Amount brought forward</i> . . . . .		\$685,242 78
No. 5 Hose-house, land (39,456 feet)		
and building . . . . .	\$16,113 68	
Furniture and apparatus . . . . .	2,630 94	
	<hr/>	18,744 62
Fire-alarm telegraph . . . . .		15,800 00
Police-station, land (15,232 feet) and		
building (Bow Street) . . . . .	\$40,000 00	
Furniture . . . . .	3,000 00	
	<hr/>	43,000 00
Police stable . . . . .		3,858 35
Prospect Street, land (7,918 feet) and building . . . . .		7,000 00
Public Park (cost \$212,993.20) . . . . .		125,000 00
Joy Street, land (2,960 feet) . . . . .		500 00
Walnut Hill, land (10,980 feet) . . . . .		1,000 00
Elm Street, land (18,000 feet) . . . . .		3,600 00
Holland Street (5 acres, 6,806 feet) . . . . .		12,000 00
Gravel-land in Waltham (about 35 acres) . . . . .		15,000 00
Gravel-land in Wakefield (about 1 $\frac{1}{3}$ acres) . . . . .		5,000 00
Gravel-land in Winchester (about 2 acres) . . . . .		500 00
Somerville water-works (cost \$443,065.08) . . . . .		441,456 32
Oliver Street, land (63,069 feet) . . . . .		7,500 00
Whipple Street, land, lots Nos. 30 and 31 (15,240		
feet) . . . . .		388 27
Concord Square (about 24,517 feet) . . . . .		4,903 50
"    "    School-house (unfin-		
ished) . . . . .		14,727 14
Morse School-house addition (unfin-		
ished) . . . . .		5,439 88
		<hr/>
Total value of public property. . . . .		\$1,410,660 86



**TABLE B.**  
**FUNDED DEBT DEC. 31, 1889.**

Date.	Loan.	Number of Bonds.	Rate per cent. of Interest.	When due.	Denomination.	Amount.
1888. July 1.	Water.	279	4	1890. July 1.	1,000	1,000
1880. Oct. 1.	"	55	5	Oct. 1.	9,000	9,000
1889. Oct. 1.	"	303 to 305	4	Oct. 1.	1,000	3,000
Oct. 1.	City.	914 to 918	4	Oct. 1.	1,000	5,000
1884. Oct. 1.	City.	576 to 646	4	Oct. 1.	1,000	71,000
1888. July 1.	Water.	280	4	1891. July 1.	1,000	1,000
1884. Oct. 1.	City.	647 to 720	4	Oct. 1.	1,000	74,000
1889. Oct. 1.	City.	919 to 923	4	Oct. 1.	1,000	5,000
Oct. 1.	Water.	306 to 308	4	Oct. 1.	1,000	3,000
1881. Jan. 1.	"	66 to 76	5	1892. Jan. 1.	1,000	11,000
1888. July 1.	"	281	4	July 1.	1,000	1,000
1881. Oct. 1.	"	78 to 88	5	Oct. 1.	1,000	11,000
1884. Oct. 1.	City.	721 to 798	4	Oct. 1.	1,000	78,000
1889. Oct. 1.	City.	924 to 928	4	Oct. 1.	1,000	5,000
Oct. 1.	Water.	309 to 311	4	Oct. 1.	1,000	3,000
1885. July 1.	"	856 to 880	4	1893. July 1.	1,000	25,000
1888. July 1.	"	282	4	July 1.	1,000	1,000
1885. Oct. 1.	"	89 to 99	5	Oct. 1.	1,000	11,000
1884. Oct. 1.	City.	799 to 852	4	Oct. 1.	1,000	54,000
1889. Oct. 1.	City.	929 to 933	4	Oct. 1.	1,000	5,000
Oct. 1.	Water.	312 to 314	4	Oct. 1.	1,000	3,000
1888. July 1.	"	283	4	1894. July 1.	1,000	1,000
July 1.	City.	887 to 909	4	July 1.	1,000	23,000
<i>Amount carried forward . . . . .</i>						\$404,000

TABLE B.—Continued.

Date.	Loan.	Number of Bonds.	Rate per cent. of Interest.	When due.	Denomination.	Amount.
	<i>Amount</i>	<i>brought forward</i>	. . .	. . .	. . .	\$404,000
<b>1881.</b> Oct. 1.	Water.	100 to 111	5	<b>1894.</b> Oct. 1.	1,000	12,000
<b>1889.</b> Oct. 1.	"	315 to 317	4	Oct. 1.	1,000	3,000
Oct. 1.	City.	934 to 938	4	Oct. 1.	1,000	5,000
<b>1888.</b> July 1.	Water.	284	4	<b>1895.</b> July 1.	1,000	1,000
<b>1883.</b> July 1.	"	112 to 124	5	July 1.	1,000	13,000
<b>1876.</b> Oct. 1.	City.	190 to 194	5	Oct. 1.	5,000	25,000
Oct. 1.	"	195 to 334	5	Oct. 1.	1,000	140,000
<b>1889.</b> Oct. 1.	City.	939 to 943	4	Oct. 1.	1,000	5,000
Oct. 1.	Water.	318 to 320	4	Oct. 1.	1,000	3,000
<b>1876.</b> July 1.	Sewer.	1 to 7	5	<b>1896.</b> July 1.	5,000	35,000
<b>1882.</b> July 1.	Water.	125 to 136	5	July 1.	1,000	12,000
July 1.	"	137	5	July 1.	500	500
<b>1888.</b> July 1.	"	285	4	July 1.	1,000	1,000
<b>1889.</b> Oct. 1.	"	321 to 323	4	Oct. 1.	1,000	3,000
Oct. 1.	City.	944 to 948	4	Oct. 1.	1,000	5,000
<b>1882.</b> July 1.	Water.	138 to 151	5	<b>1897.</b> July 1.	1,000	14,000
<b>1888.</b> July 1.	"	286	4	July 1.	1,000	1,000
July 1.	City.	910 to 913	4	July 1.	1,000	4,000
<b>1889.</b> Oct. 1.	"	949 to 969	4	Oct. 1.	1,000	21,000
Oct. 1.	Water.	324 to 326	4	Oct. 1.	1,000	3,000
<b>1882.</b> July 1.	"	152 to 166	5	<b>1898.</b> July 1.	1,000	15,000
<b>1888.</b> July 1.	"	287	4	July 1.	1,000	1,000
<b>1889.</b> Oct. 1.	Water.	327 to 329	4	Oct. 1.	1,000	3,000
Oct. 1.	City.	970 to 993	4	Oct. 1.	1,000	24,000
<b>1882.</b> July 1.	Water.	167 to 181	5	<b>1899.</b> July 1.	1,000	15,000
July 1.	"	182	5	July 1.	500	500
<b>1888.</b> July 1.	"	288	4	July 1.	1,000	1,000
	<i>Amount</i>	<i>carried forward</i>	. . .	. . .	. . .	\$770,000



TABLE B. — *Continued.*

Date.	Loan.	Number of Bonds.	Rate per cent. of Interest.	When due.	Denomination.	Amount.
	<i>Amount</i>	<i>brought forward</i>	. . .	. . .	. . .	\$770,000
1889.				1889.		
Oct. 1.	Water.	330 to 342	4	Oct. 1.	1,000	13,000
Oct. 1.	City.	994 to 1,002	4	Oct. 1.	1,000	9,000
1882.				1900.		
July 1.	Water.	183 to 194	5	July 1.	1,000	12,000
July 1.	"	195	5	July 1.	500	500
1888.	"					
July 1.	"	289	4	July 1.	1,000	1,000
1884.	"					
Oct. 1.	"	200 to 202	4	Oct. 1.	1,000	3,000
1889.	"					
Oct. 1.	"	343 to 344	4	Oct. 1.	1,000	2,000
1888.	"			1901.		
July 1.	"	290	4	July 1.	1,000	1,000
1884.	"					
Oct. 1.	"	203 to 212	4	Oct. 1.	1,000	10,000
1885.	"					
July 1.	"	214 to 219	4	July 1.	1,000	6,000
1889.	"					
Oct. 1.	"	345 to 346	4	Oct. 1.	1,000	2,000
1885.	"			1902.		
July 1.	"	220 to 226	4	July 1.	1,000	7,000
1886.	"					
July 1.	"	229 to 238	4	July 1.	1,000	10,000
1889.	"			1902.		
Oct. 1.	"	347 to 348	4	Oct. 1.	1,000	2,000
1886.	"			1903.		
July 1.	"	239 to 256	4	July 1.	1,000	18,000
1889.	"					
Oct. 1.	"	349 to 350	4	Oct. 1.	1,000	2,000
1886.	"			1904.		
July 1.	"	257 to 266	4	July 1.	1,000	10,000
1889.	"					
Oct. 1.	"	351 to 352	4	Oct. 1.	1,000	2,000
Oct. 1.	"			1905		
	"	353 to 355	4	Oct. 1.	1,000	3,000
1876.	"			1906.		
July 1.	"	30 and 31	5½	July 1.	5,000	10,000
1889.	"					
Oct. 1.	"	356 to 358	4	Oct. 1.	1,000	3,000
1886.	"			1907.		
July 1.	"	267 to 276	4	July 1.	1,000	10,000
1889.	"					
Oct. 1.	"	359 to 361	4	Oct. 1.	1,000	3,000
1888.	"			1907.		
July 1.	"	291	4	July 1.	1,000	1,000
	<i>Amount</i>	<i>carried forward</i>	. . .	. . .	. . .	\$910,500

TABLE B. — *Concluded.*

Date.	Loan.	Number of Bonds.	Rate per cent. of Interest.	When due.	Denomination.	Amount.
	<i>Amount</i>	<i>brought forward</i>				\$910,500
1888. July 1.	Water.	292	4	1908. July 1.	1,000	1,000
1889. Oct. 1.	"	362 to 364	4	1908. Oct. 1.	1,000	3,000
1888. July 1.	"	293	4	1909. July 1.	1,000	1,000
1889. Oct. 1.	"	365 to 367	4	Oct. 1.	1,000	3,000
1888. July 1.	"	294	4	1910. July 1.	1,000	1,000
1889. Oct. 1.	"	368 to 370	4	Oct. 1.	1,000	3,000
1888. July 1.	"	295	4	1911. July 1.	1,000	1,000
1889. Oct. 1.	"	371 to 373	4	Oct. 1.	1,000	3,000
1888. July 1.	"	296	4	1912. July 1.	1,000	1,000
1889. Oct. 1.	"	374 to 376	4	Oct. 1.	1,000	3,000
1888. July 1.	"	297	4	1913. July 1.	1,000	1,000
1889. Oct. 1.	"	377 to 379	4	Oct. 1.	1,000	3,000
1888. July 1.	"	298	4	1914 July 1.	1,000	1,000
1889. Oct. 1.	"	380 to 382	4	Oct. 1.	1,000	3,000
1888. July 1.	"	299	4	1915. July 1.	1,000	1,000
1889. Oct. 1.	"	383 to 384	4	Oct. 1.	1,000	2,000
1888. July 1.	"	300	4	1916. July 1.	1,000	1,000
1889. Oct. 1.	"	385 to 386	4	Oct. 1.	1,000	2,000
1888. July 1.	"	301	4	1917. July 1.	1,000	1,000
1889. Oct. 1.	"	387 to 388	4	Oct. 1.	1,000	2,000
1888. July 1.	"	302	4	1918. July 1.	1,000	1,000
1889. Oct. 1.	"	389 to 390	4	Oct. 1.	1,000	2,000
1889. Oct. 1.	"	391 to 392	4	1919. Oct. 1.	1,000	2,000
	<i>Total</i>	<i>Funded Debt.</i>				\$952,500

TABLE C.

## STATEMENT OF ACCOUNTS SHOWING APPROPRIATIONS, EXPENDITURES, ETC., TO DEC. 31, 1889.

## APPROPRIATIONS.

	CREDIT.
Taxes, amount assessed . . . . .	\$384,400 00
Property debt and balance . . . . .	179,000 00
	<hr/>
	\$563,400 00
	DEBIT.
Fire Department . . . . .	\$32,000 00
Health Department . . . . .	5,500 00
Highways . . . . .	42,000 00
Highways, Steam Road Roller . . . . .	5,000 00
Indigent Soldiers and Sailors . . . . .	600 00
Interest . . . . .	30,000 00
Miscellaneous . . . . .	4,000 00
Morse School-house addition . . . . .	25,000 00
Police . . . . .	31,200 00
Police Stable . . . . .	3,500 00
Police station incidentals . . . . .	2,000 00
Public Library . . . . .	3,000 00
Public grounds . . . . .	7,000 00
Printing and stationery . . . . .	4,000 00
Reduction of funded debt . . . . .	38,000 00
Renewals of funded debt . . . . .	49,000 00
Salaries . . . . .	25,900 00
School contingent . . . . .	18,000 00
School fuel . . . . .	7,000 00
School-house incidentals . . . . .	13,000 00
School teachers' salaries . . . . .	40,000 00
School-house in Ward two . . . . .	25,000 00
Sidewalks . . . . .	8,200 00
Street lights . . . . .	18,000 00
Support of poor . . . . .	14,000 00
	<hr/>
<i>Amount carried forward</i> . . . . .	\$450,900 00

<i>Amount brought forward</i>	. . . . .	\$450,900 00
Sewers	. . . . .	11,000 00
Watering streets	. . . . .	3,500 00
Water maintenance	. . . . .	18,000 00
Water works extension	. . . . .	80,000 00

\$563,400 00

## CASH.

## CREDIT.

County of Middlesex	. . . . .	\$21,367 03
Funded debt	. . . . .	87,000 00
Fire Department	. . . . .	32,696 65
Health Department	. . . . .	5,226 54
Highways	. . . . .	46,608 95
Highways, steam road-roller	. . . . .	4,750 00
Hose-house in Ward Four	. . . . .	7,320 06
Indigent soldiers and sailors	. . . . .	1,229 00
Interest	. . . . .	45,804 16
Miscellaneous	. . . . .	9,373 25
Police	. . . . .	34,854 15
Police stable	. . . . .	3,858 35
Police station incidentals	. . . . .	2,528 58
Public Library	. . . . .	6,151 66
Public Grounds	. . . . .	9,169 08
Printing and stationery	. . . . .	5,189 11
Relief and burial of indigent soldiers and sailors	. . . . .	271 00
Sundry persons	. . . . .	285 00
State aid	. . . . .	4,525 00
Salaries	. . . . .	25,494 91
School contingent	. . . . .	20,556 00
School fuel	. . . . .	6,081 15
School-house incidentals	. . . . .	14,244 13
School teachers' salaries	. . . . .	93,065 49
School-house in Ward Two	. . . . .	14,727 14
Morse School-house addition	. . . . .	5,439 88
Sewers	. . . . .	33,330 37
Sidewalks	. . . . .	16,838 70
<i>Amount carried forward</i>	. . . . .	<u>\$557,985 34</u>

<i>Amount brought forward</i>	.	.	\$557,985	34
Street lights	.	.	16,986	17
Support of poor	.	.	14,610	92
State of Massachusetts	.	.	27,560	00
Temporary Loans	.	.	500,000	00
Watering streets	.	.	9,228	28
Water maintenance	.	.	16,542	35
Water services	.	.	8,438	95
Water works extension	.	.	82,279	26
			<hr/>	
				1,233,631 27
Balance to debit in account 1890	.	.		21,002 02
				<hr/>
				\$1,254,633 29

## DEBIT.

Balance from 1888	.	.	\$20,101	85
Funded debt	.	.	179,000	00
Fire Department	.	.	231	55
Health Department	.	.	226	00
Highways	.	.	3,809	44
City of Boston water rates	.	.	50,141	83
Interest	.	.	28,355	14
Miscellaneous	.	.	2,159	54
Police	.	.	4,886	04
Police station incidentals	.	.	568	00
Public Library	.	.	2,736	21
Public grounds	.	.	59	50
Real estate liens	.	.	280	14
State aid	.	.	12	00
School Contingent	.	.	104	18
School Fuel	.	.	31	25
School-house incidentals	.	.	18	75
Sewers	.	.	123	57
Sidewalks	.	.	470	87
Sewer assessments	.	.	8,595	08
Sidewalk assessments	.	.	3,421	94
Street lights	.	.	12	60
Support of poor	.	.	2,240	62
State of Massachusetts, State aid	.	.	3,935	00
			<hr/>	
<i>Amount carried forward</i>	.	.	\$311,521	10

<i>Amount brought forward</i>	.	.	\$311,521 10
State of Massachusetts, indigent soldiers and sailors	.	.	507 50
Taxes	.	.	448,323 12
Tempoary loans	.	.	480,000 00
Watering streets	.	.	5,478 32
Water maintenance	.	.	101 06
Water services	.	.	487 74
Water service assessments	.	.	8,052 62
Water works extension	.	.	161 83
			<hr/>
			\$1,254,633 29

## COUNTY OF MIDDLESEX.

## CREDIT.

Taxes, amount assessed	.	.	\$21,367 03
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## DEBIT.

Cash, paid county tax	.	.	\$21,367 03
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## CITY OF BOSTON WATER RATES.

## CREDIT.

Cash, received of City of Boston re-  
turn on water rates:—

50 per cent. on \$100,283.66	.	.	\$50,141 83
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City of Boston, 50 per cent. on \$2,658.16	.	.	1,329 08
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			<hr/>
			51,470 91

## DEBIT.

School teachers' salaries, transferred	.		\$51,470 91
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## CITY OF BOSTON.

## CREDIT.

Balance to debit in account 1890	.		\$1,329 08
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## DEBIT.

City of Boston water rates, 50 per cent. on \$2,658.16	.	.	\$1,329 08
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## EXCESS AND DEFICIENCY.

## CREDIT.

Balance from 1888 . . . . .	\$3,139 13	
Health Department, credit balance of account . . . . .	499 46	
House House in Ward Four, credit balance of account . . . . .	166 54	
Interest, credit balance of account . . . . .	12,530 98	
Police, credit balance of account . . . . .	873 54	
Police Station incidentals, credit balance of account . . . . .	39 42	
Relief and burial of indigent soldiers and sailors, credit balance of account . . . . .	229 00	
Salaries, credit balance of account . . . . .	405 09	
School fuel, credit balance of account . . . . .	950 10	
Sidewalks, credit balance of account . . . . .	15 98	
Street lights, credit balance of account . . . . .	1,026 43	
Support of poor, credit balance of account . . . . .	1,129 70	
Water maintenance, credit balance of account . . . . .	2,016 89	
	<hr/>	\$23,022 26

## DEBIT.

Fire Department, debit balance of account . . . . .	465 10
Highways, debit balance of account . . . . .	549 51
Indigent soldiers and sailors, debit balance of account . . . . .	14 50
Miscellaneous, debit balance of account . . . . .	3,213 71
Public library debit balance of account . . . . .	415 45
Public grounds, debit balance of account . . . . .	2,109 58
Printing and stationery, debit balance of account . . . . .	1,189 11
School contingent, debit balance of account . . . . .	2,451 82
School-house incidentals, debit balance of account . . . . .	1,225 38
	<hr/>
<i>Amount carried forward</i> . . . . .	\$11,634 16

<i>Amount brought forward</i> . . . . .	\$11,634 16	
School teachers' salaries, debit balance of account . . . . .	1,594 58	
Sewers, debit balance of account . . . . .	4,592 50	
Watering streets, debit balance of ac- count . . . . .	249 96	
	<hr/>	
	\$18,071 20	
Balance to credit of account of 1890 . . . . .	4,951 06	
	<hr/>	<u>\$23,022 26</u>

## FUNDED DEBT.

## CREDIT.

Balance from 1888 . . . . .		\$860,500 00
Cash, received from sale of City Loan Bonds, Nos. 914 to 1002 . . . . .	\$89,000 00	
Water Loan Bonds, Nos. 303 to 392 . . . . .	90,000 00	
	<hr/>	179,000 00
		<hr/>
		\$1,039,500 00

## DEBIT.

Cash, paid sundry persons:—		
City Loan Bonds Nos. 508 to 575 . . . . .	\$68,000 00	
Water Loan Bonds, Nos. 46 to 54 . . . . .	9,000 00	
Water Loan Bonds, Nos. 57 to 65 . . . . .	9,000 00	
Water Loan Bond, No. 278 . . . . .	1,000 00	
	<hr/>	87,000 00
Balance to debit in account 1890 . . . . .		952,500 00
		<hr/>
		<u>\$1,039,500 00</u>

## FIRE DEPARTMENT.

## CREDIT.

Appropriations, amount assessed . . . . .		\$32,000 00
Cash, received of Lorenzo W. Dow, manure . . . . .	\$56 00	
Albion M. Prescott, horse . . . . .	51 50	
Crane & Woods, insurance . . . . .	75 00	
	<hr/>	
<i>Amount carried forward</i> . . . . .	\$182 50	\$32,000 00

<i>Amounts brought forward,</i> . . .	\$182 50	\$32,000 00
E. I. Braddock & Co., old cop- per, etc. . . . .	39 05	
S. A. Mudgett, half cost of fence	10 00	
	<hr/>	231 55
Excess and deficiency balance to debit of account . . . . .		465 10
		<hr/>
		\$32,696 65

## DEBIT.

Cash, paid James R. Hopkins, chief engineer . . . . .	\$1,200 00	
Nathaniel C. Barker, assistant engineer . . . . .	400 00	
Carpenter work . . . . .	1 25	
Steamer engineer . . . . .	1,080 00	
Steamer fireman . . . . .	900 00	
Seven drivers, eight months . . . . .	4,200 00	
Eight drivers, four months . . . . .	2,400 00	
Wm. A. Perry, substitute driver . . . . .	264 68	
Wm. H. Bonner, " " . . . . .	51 37	
George F. Harris, " " . . . . .	48 39	
Sundry call men, special service . . . . .	287 50	
Frank H. Hersey, " " . . . . .	7 50	
Edward Bakus, substitute driver . . . . .	80 56	
Steamer Engine Company . . . . .	793 91	
John E. Wool Hose Company . . . . .	825 58	
George H. Foster Hose Company . . . . .	691 00	
Winter Hill Hose Company . . . . .	746 42	
George H. Brastow Hose Company . . . . .	833 50	
R. A. Vinal Hook and Ladder Company . . . . .	1,356 51	
Hose Company No. 5 . . . . .	256 34	
City of Boston, water for hydrants . . . . .	2,408 00	
City of Boston, water for houses . . . . .	105 00	
Cambridge Gas Light Co., gas . . . . .	349 73	
Charlestown Gas Company, gas . . . . .	147 90	
Horatio Wellington & Co., fuel . . . . .	537 70	
	<hr/>	
<i>Amounts carried forward,</i> . . . . .	\$19,972 84	\$32,696 65

<i>Amounts brought forward</i>	\$19.972 84	\$32.696 65
Sturtevant Bros., horses	600 00	
John S. Nason, horse	250 00	
E. H. Bright, labor	5 00	
John Connolly, labor	4 00	
George L. Blackbird, labor	40 00	
James D. Perkins, Jr., labor	2 50	
Fred S. Young, labor	19 00	
John Frizzell, labor	2 50	
Herbert A. Bean, labor	2 50	
Frank S. Brown, labor	2 50	
W. F. Keene, labor	10 00	
Silas D. Carter, refreshments	11 00	
Cambridge Chemical Engine Com- pany No. 1, refreshments	5 00	
Cambridge Engine Co. No. 5, re- freshments	30 00	
Cambridge Engine Co. No. 3, re- freshments	20 00	
Cambridge Engine Co. No. 2, re- freshments	20 00	
Highways account, driveway	102 07	
John L. Crafts, rigging, etc.	488 79	
C. Callahan & Co., hose, etc.	1,188 00	
Thomas Hollis, vitriol, etc.	144 08	
W. H. Swift & Co., vitriol	59 61	
George L. Baxter, lighters	10 00	
A. W. Mitchell, badges	218 46	
Crane & Woods, premium of in- surance	108 75	
Charles S. Robertson, premium of insurance	45 00	
S. H. Libby, premium of insurance	37 50	
J. A. Durell, hardware	3 35	
H. W. Raymond, ..	94 36	
H. C. Folger, ..	1 65	
J. Hinman, ..	175 00	
David W. Crocker, ..	15 20	
<i>Amounts carried forward</i>	\$23.688 66	\$32.696 65

<i>Amounts brought forward,</i>	\$23,688 66	\$32,696 65
George F. Cote.	8 10	
Dupont & Cote,	1 63	
Howe & Flint,	40	
Enoch Robinson.	2 25	
C. F. Robinson & Co.	12 80	
Ames Flour Co.	5 60	
Silsby Manufacturing Co., valves, etc.	14 05	
S. J. Wood, keys	50	
B. M. Boyce, clock	14 00	
Fuller, Dana & Fitz, wire	11 02	
American Fire Hose Co., snaps	17 50	
Murphy, Leavens & Co., dusters	5 44	
Somerville Iron Foundry, castings	8 40	
H. A. Winship, fire-hats	46 00	
D. Cutter, repairing badges	2 50	
A. C. Winning, mason work	8 77	
D. T. Bucknam, " "	18 00	
M. K. Norwood, carpenter work	138 60	
Elijah Walker, " "	75 82	
George R. Boyer, carpenter work	31 95	
F. A. Chandler, " "	31 07	
Pettingell, Andrews & Co., carpen- ter work	1 69	
G. D. B. Robinson, carpenter w'k	14 73	
• George W. Trefrew, carpenter w'k	11 79	
I. H. Brown & Co., carpenter w'k	40 04	
Boston Woven Hose Co., hose etc.,	757 60	
Edwin Rogers & Co., fire alarm apparatus	1,253 95	
A. S. Jackson, trace maps, etc.,	238 50	
Jackson, Caldwell & Co., bedding, etc.,	49 65	
F. A. Rolfe, bedding	9 92	
J. H. Brooks, dry goods	1 35	
L. C. Chase & Co., blankets	31 50	
Warren E. Heath, shades	19 05	
<i>Amounts carried forward,</i>	\$26,572 73	\$32,696 65



<i>Amounts brought forward</i>	\$26,572 83	\$32,696 65
William H. Brine, furniture	203 53	
Edward Kendall & Son, tube	1 00	
John F. Ayer & Co., lumber	2 63	
Plummer & Co., hay	835 71	
A. M. Prescott, hay and straw	125 12	
Fulton O'Brien, hay and straw	48 85	
Nathan Tufts & Sons, grain	493 38	
George W. Dryden, horse food	5 00	
Hall's English Food Co., horse food	9 00	
George H. Cowdin, drugs	6 50	
Charles Bartley, oil, etc.	2 01	
James Bartley, "	9 69	
W. I. Heald, "	12 73	
H. W. Burgess, "	2 35	
William F. Nye, "	4 25	
Le Bosquet Bros., valve	85	
F. Ivers, harness work	21 50	
E. Spaulding, harness work	16 70	
D. J. Bennett, harness work	112 70	
Charles E. Berry, harness work	10 00	
E. W. Carlin, harness work	4 00	
Seward Dodge, blacksmithing	101 32	
Edward O'Brien, horse shoeing	19 62	
Charles L. Underhill, horse shoeing	8 55	
M. Lynch, horse shoeing	12 50	
Timothy O'Brien, horseshoeing	33 15	
W. H. Richardson, "	49 25	
Charles Maguire, "	65 00	
Charles W. Ingalls, "	34 30	
E. Teel & Co., hook-and-ladder truck, hose-wagons and repairs	1,603 45	
Union Square Carriage Co., repairs	77 50	
F. H. Flagg, wheelwright work	1 75	
E. H. Buxton, painting	40 00	
W. S. Walker, "	10 40	
J. C. Dyer, glazing	8 00	
<i>Amounts carried forward</i>	\$30,565 12	\$32,696 65



<i>Amounts brought forward</i>	.	.	\$30,565 12	\$32,696 65
J. Q. Twombly, glazing	.	.	12 92	
Ramsay Clark, "	.	.	1 50	
W. L. Snow, plumbing	.	.	40 60	
Young & Maynard, "	.	.	9 78	
W. F. Bennett, "	.	.	176 74	
C. Sullivan, "	.	.	6 92	
C. W. Callahan, "	.	.	27 46	
McKenney & Waterbury, gas fixtures	.	.	57 35	
Fox, McDormand & Co., repairing ladders	.	.	65 00	
Webster & Dustin, truck	.	.	66 00	
J. M. Burckes, mason work	.	.	5 25	
J. E. Henick, " "	.	.	37 71	
Nicholson, Frost & Co., water cooler	.	.	3 00	
J. A. Buxton, washing	.	.	24 78	
Mrs. Calvert, "	.	.	37 23	
T. H. Daley, "	.	.	27 00	
E. W. Ring, "	.	.	26 58	
Samuel H. Stevens, "	.	.	22 45	
Irving C. Jackson, "	.	.	4 12	
T. Spellman, soap	.	.	28 00	
W. H. Johnson, soap	.	.	4 00	
Knowles Bros., salt, etc.	.	.	4 02	
George F. Ricker, cleaning carpet	.	.	2 52	
Leander Barber, brooms	.	.	4 00	
David Young, repairing roof	.	.	15 63	
L. C. Scavey, " "	.	.	9 22	
H. T. Crocker, hose	.	.	6 60	
S. D. Hicks & Son, copper	.	.	6 14	
Charles A. Holmes, furnace work	.	.	19 92	
H. W. Covell & Co., furnace work	.	.	6 25	
Charles L. Bly, repairing wires	.	.	34 00	
L. W. Manning, repairing telephone	.	.	2 00	
J. H. Hollis, painting	.	.	22 15	
Elias Lathrop, hoof ointment	.	.	2 00	
H. B. Welles, veterinary services	.	.	30 00	
<i>Amounts carried forward</i>	.	.	\$31,413 96	\$32,696 65

<i>Amounts brought forward</i> . . .	\$31,413 96	\$32,696 65
Charles R. Simpson, veterinary services, . . . . .	4 00	
New England Telephone and Telegraph Co., rentals and tolls, . .	89 97	
J. O. Hayden & Co., advertising etc., . . . . .	42 00	
McDonnell Bros., advertising . .	2 50	
Citizen Publishing Co., advertising	2 50	
Thomas Groom & Co., stationery etc. . . . .	58 75	
Charles A. Morgan, concreting . .	50 00	
Walter Bates & Son, " . . . . .	180 00	
Jerh. McCarthy, grading . . . . .	192 25	
A. A. Sanborn, steam heater, etc.	521 52	
Wm. W. Nichols, use of horse . . .	14 00	
E. A. Foster, use of horse . . . . .	16 00	
Frank W. Leavitt, use of carriage	3 00	
Nelson & Thompson, carriage hire	5 00	
L. H. Brown, carriage hire . . . . .	5 00	
P. H. Wellcome, carriage hire . . .	5 00	
Charles E. Farnham, expressing . .	25 60	
George G. Glines, expressing . . . .	1 35	
Barker & Tibbetts, expressing . . .	3 75	
Gilman & Co., expressing . . . . .	7 10	
George T. Day, expressing . . . . .	9 75	
Thorpe's express, expressing . . . .	14 50	
E. R. Perham, expressing etc. . . . .	20 15	
George G. Page Box Co., boxes . . .	9 00	
		<hr/>
		\$32,696 65

## HEALTH DEPARTMENT.

## CREDIT.

Appropriations, amount assessed . . . . .	\$5,500 00
Cash, received of William P. Mitchell, permits to keep swine and goats and collect grease . . . . .	226 00
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<i>Amount carried forward</i> . . . . .	\$5,726 00

*Amount brought forward* . . . \$5,726 00

## DEBIT.

Cash. paid Caleb A. Page, salary as in- specter . . . . .	\$1,000 00
Disbursements . . . . .	50
Henry Gray, collecting offal . . . . .	1,249 95
Jeremiah McCarthy, collecting ashes . . . . .	1,685 68
John P. Downey, collecting ashes . . . . .	830 00
Sundry persons, burying dead ani- mals . . . . .	158 00
James Brotchie, labor . . . . .	100 63
Charles A. Southwick, labor . . . . .	24 50
James Deacon, " . . . . .	4 00
James Lyons, " . . . . .	13 57
N. E. Disinfectant Company, dis- infectant powder . . . . .	15 00
J. M. Corse, rent of postoffice box . . . . .	4 00
Thomas Groom & Co., stationery . . . . .	10 75
Heliotype Printing Co., maps . . . . .	33 00
J. O. Hayden & Co., advertising . . . . .	10 88
West & Jenney, sulphur . . . . .	12 00
Howe & Flint, hardware . . . . .	2 80
Thomas Waterman, vaccine virus . . . . .	11 00
George H. Cowdin, sulphur . . . . .	26 43
Sturtevant Bros., use of horse . . . . .	3 00
A. M. Prescott, " . . . . .	4 00
E. E. Merrill, badge . . . . .	6 00
J. Hiltz, abating nuisance . . . . .	13 00
Charles E. Farnham, expressing . . . . .	85
L. H. Brown, carriage hire . . . . .	4 00
	<hr/>
	\$5,226 54
Excess and deficiency, balance to credit of account . . . . .	499 46
	<hr/>

\$5,726 00

## HIGHWAYS.

## CREDIT.

Appropriations, amount appropriated .		\$42,000 00
Highways steam road roller, transferred		250 00
Cash, Charles W. Norris, sidewalk .	\$21 56	
Heirs, S. P. Langmaid " .	132 33	
Robert Duddy, " .	42 79	
Louisa M. L. Ellis, " .	70 26	
L. J. Sturtevant, " .	39 53	
Joseph H. Clark, " .	21 50	
G. W. Simpson, edgestones .	89 46	
Prospect Hill Cong. society, edge- stones . . . . .	65 23	
Charles Drouet, edgestones . .	74 25	
Thomas Cooney, " . . . .	7 50	
Susan C. Jones, " . . . .	34 27	
Emily H. Sawyer, " . . . .	23 48	
Joseph B. Gould, " . . . .	18 92	
Harriet A. Chamberlain, edgestones	18 19	
Annie B. Stearns, " . . . .	19 11	
Abutters on Chester ave. " .	184 04	
P. M. Crowther, " . . . .	16 87	
W. T. Henderson, " . . . .	3 25	
Henry E. Wright, driveway . .	13 96	
A. W. Bryne, " . . . .	3 00	
Frank W. Leavitt, " . . . .	14 90	
Lewis Stockbridge, " . . . .	9 48	
Samuel Merritt, " . . . .	7 27	
Mary McFarlane, " . . . .	9 47	
L. S. Bridge, " . . . .	19 75	
R. F. Baldwin, " . . . .	2 50	
J. J. Quinlan, " . . . .	10 22	
Boston and Lowell Railroad Co., labor and materials . . . .	126 66	
James McName, wages not called for . . . . .	4 00	
F. H. Flagg, discount from bill .	9 50	
Arther Murley, rent . . . .	64 00	
<i>Amounts carried forward,</i> . . .	\$1,177 25	\$42,250 00

<i>Amounts brought forward,</i> . . .	\$1,177 25	\$42,250 00
Thomas Ormand, rent . . .	72 00	
R. M. Baldwin, rowen . . .	24 00	
H. G. Bean, pasturage . . .	120 00	
Sidewalks account, teaming and materials . . . . .	2,106 52	
Public grounds account, gravel and teaming . . . . .	207 60	
Fire Department account, driveway . . . . .	102 07	
	<hr/>	\$3,809 44
Excess and deficiency balance to debit of account . . . . .		549 51
		<hr/>
		\$46,608 95

## DEBIT.

Cash, paid Frank G. Williams, salary as superintendent . . . . .	1,500 00	
board of horses . . . . .	416 03	
Laborers . . . . .	24,895 26	
C. H. Proctor, grain . . . . .	201 53	
Powers & Co., " . . . . .	226 50	
Fulton O'Brien, " . . . . .	570 96	
R. W. Willey & Co., grain . . . . .	244 19	
Chase & Dutch, " . . . . .	191 75	
Nathan Tufts & Son, " . . . . .	128 50	
James E. Whitaker & Co., hay . . . . .	227 12	
A. M. Prescott, hay . . . . .	466 92	
F. Dooris, blacksmithing . . . . .	109 65	
Chas. L. Underhill, blacksmithing . . . . .	4 00	
Timothy O'Brien, horseshoeing . . . . .	172 13	
Edward O'Brien, " . . . . .	257 14	
Charles W. Ingalls, " . . . . .	9 00	
Charles Maguire, " . . . . .	18 40	
A. Clement, " . . . . .	16 75	
M. Lynch, " . . . . .	25 70	
Seward Dodge, horseshoeing and blacksmithing . . . . .	397 12	
F. H. Flagg, wheelwright work . . . . .	136 50	
James Forgie & Son, harness work, etc. . . . .	186 00	
	<hr/>	
<i>Amounts carried forward.</i> . . . .	\$30,401 15	\$46,608 95



<i>Amounts brought forward,</i> . . .	\$30,401 15	\$46,608 95
E. Spaulding & Son, harness work, etc. . . . .	137 70	
Hill & Langtry, blankets . . .	6 00	
A. Fitch & Co., hay . . . .	166 08	
A. D. Hoitt, grain . . . . .	685 06	
P. H. Dardis, horses . . . . .	500 00	
H. C. Perry, veterinary services . .	19 50	
S. M. Fuller, fuel . . . . .	3 90	
Horatio Wellington & Co., fuel . .	440 52	
H. Mitchell, round stone . . .	1,096 30	
John Hughes, " . . . . .	190 65	
John Quinn, " . . . . .	155 00	
Dennis Shea, " . . . . .	764 15	
Jeremiah McCarthy, stone and sand	1,330 25	
Cambridge Stone Co., stone . . .	15 25	
Albert H. Libbey & Co., resetting edgestones . . . . .	1,263 63	
Sanborn & Hatch, bricks . . . .	735 35	
John Thresher, " . . . . .	155 93	
George H. Sampson, powder and fuse . . . . .	180 28	
William Driscoll, stone . . . . .	148 80	
City of Boston, water . . . . .	49 00	
Town of Medford, half cost of maintaining Middlesex avenue bridge . . . . .	351 79	
Town of Wakefield, taxes . . . .	25 26	
Town of Winchester, " . . . . .	10 88	
City of Waltham, " . . . . .	120 70	
Fitchburg Railroad Co., transport- ing gravel . . . . .	4,752 00	
N. Everett, Fitz & Co., wharfage . .	157 60	
E. H. Buxton, painting signs . . .	6 00	
Charles A. Mongan, laying drain . .	24 00	
N. E. England Telephone & Tele- graph Co., rentals and tolls . . .	77 10	
Charles H. Crane, drugs . . . . .	4 55	
<i>Amounts carried forward</i> . . . .	\$43,974 38	\$46,608 95



<i>Amounts brought forward,</i> . . .	\$43,974 38	\$46,608 95
George S. Cheney & Co., drugs . . .	20 14	
A. D. Brackett, repairing carts . . .	137 00	
David W. Crocker, repairing carts, . . .	127 00	
Henry F. Woods, gravel . . .	77 50	
Charles Booth, weighing hay . . .	2 60	
E. I. Everton. services as referee . . .	2 00	
J. A. Durell, hardware . . .	6 55	
Parker & Wood, " . . .	57 39	
Whitney & Snow, " . . .	164 91	
Howe, Brown & Co., " . . .	19 80	
M. D. Jones & Co., " . . .	17 50	
George Tyler & Co., " . . .	12 00	
H. W. Raymond, " . . .	42 43	
W. I. Heald, " . . .	12	
Howe & Flint, " . . .	1 00	
James F. Davlin, plumbing . . .	4 10	
H. R. Bishop & Co., ladders . . .	14 50	
Cutter & Parker, window frames . . .	6 95	
George H. Mason & Co., lanterns . . .	4 30	
L. C. Seavey, slating . . .	6 18	
Morss & Whyte, screens . . .	8 00	
John F. Ayer, lumber . . .	365 99	
W. E. Jones, carpentering . . .	155 65	
J. Q. Twombly, painting . . .	21 61	
S. J. Wood, filing saws . . .	8 75	
Fred C. Fuller, carpentering . . .	55 60	
George D. Goodrich, drain pipe . . .	22 09	
Osgood & Hart, castings . . .	68 05	
Miller & Shaw, repairing engine . . .	169 67	
W. B. Kneeland, " " . . .	35	
Henry K. Barnes, " " . . .	36 45	
Farrell Foundry and Machine Co., repairing crusher . . .	29 55	
J. F. Jones & Co., oil . . .	3 90	
Samuel Walker & Co., oil . . .	29 14	
F. M. Gregory & Co., oil . . .	1 35	
J. M. Cusker, sledge handles . . .	10 00	
H. F. Crocker, hose, etc. . .	18 55	
<i>Amounts carried forward</i> . . .	<u>\$45,703 05</u>	<u>\$46,608 95</u>

<i>Amounts brought forward</i> . . . . .	\$45,703 05	\$46,608 95
Elisha Pate, land damages . . . . .	150 63	
Sidewalks account, edgestones . . . . .	470 87	
Sewers account, edgestones . . . . .	6 45	
Sidewalk assessment account, side- walk on Putnam street . . . . .	11 48	
Sewer assessment account, sewer on Glen street . . . . .	40 07	
Middlesex Registry of Deeds, re- cording . . . . .	9 30	
W. H. Richardson, horseshoeing . . . . .	3 75	
Holt & Bart, machinery . . . . .	4 00	
R. T. Blackwell, carriage hire . . . . .	4 00	
J. O. Hayden & Co., advertising . . . . .	107 50	
Citizen Publishing Co., " . . . . .	36 00	
Thomas Groom & Co., stationery . . . . .	54 60	
E. R. Perham, expressing . . . . .	5 35	
Gilman & Co., " . . . . .	1 15	
Dolhenty's Express " . . . . .	50	
Barker & Tibbetts, expressing . . . . .	25	
	<hr/>	
	\$46,608 95	

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\$46,608 95

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## HIGHWAYS, STEAM ROAD ROLLER.

### CREDIT.

Appropriations, amount assessed . . . . .	\$5,000 00
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### DEBIT.

Cash, paid Harrisburg Car Company, steam road roller . . . . .	\$4,663 36
Boston & Maine Railroad, freight . . . . .	83 44
Gilman's Express, expressing . . . . .	3 20
	<hr/>
	\$4,750 00
Highways account, transferred . . . . .	250 00

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\$5,000 00

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## HOSE HOUSE, WARD FOUR.

## CREDIT.

Balance from 1888 . . . . .	\$7,486 60
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## DEBIT.

Cash, paid Coon & Hall, on account of contract, etc. . . . .	\$6,943 59	
J. K. Ricker, carpenter work . . . . .	154 62	
E. K. Blaikie, services as architect . . . . .	75 00	
M. D. Jones & Co., hardware . . . . .	70 35	
Enoch Robinson, " . . . . .	34 25	
S. H. Libby, premium of insurance . . . . .	6 25	
Horatio Wellington & Co., fuel . . . . .	11 00	
Fred. S. Young, labor . . . . .	25 00	
	<hr/>	
	\$7,320 06	
Excess and deficiency balance to credit of account . . . . .	166 54	
	<hr/>	
		<u>\$7,486 60</u>

## INDIGENT SOLDIERS AND SAILORS.

## CREDIT.

Appropriations, amount assessed . . . . .	\$600 00
State of Massachusetts, Indigent Soldiers and Sailors, one-half of amount paid in 1889 . . . . .	614 50
Excess and deficiency, balance to debit of account . . . . .	14 50
	<hr/>
	\$1,229 00

## DEBIT.

Cash, paid sundry persons . . . . .	<u>\$1,229 00</u>
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## INTEREST.

## CREDIT.

Appropriations, amount assessed . . . . .	\$30,000 00
Cash received on deposits in banks . . . . .	\$1,259 89
On taxes and assessments . . . . .	6,246 94
Of State Treasurer, national bank tax . . . . .	4,456 73
	<hr/>
<i>Amounts carried forward</i> . . . . .	\$11,963 56
	<hr/>
	\$30,000 00

<i>Amounts brought forward</i> . . . . .	\$11,963 56	\$30,000 00
, Corporation tax . . . . .	7,987 61	
Foreign ships tax . . . . .	664 78	
On tax titles released . . . . .	64 74	
Irving A. Evans & Co., premium on bonds . . . . .	7,670 45	
Brewster, Cobb & Estabrook, pre- mium on notes . . . . .	4 00	
	<hr/>	28,355 14
		<hr/>
		\$58,355 14

## DEBIT.

Cash, paid on Funded Debt,		
\$495,000 one year at 4 per cent. . . . .	\$19,800 00	
\$1,000 six months at 4 per cent. . . . .	20 00	
\$345,500 one year at 5 per cent. . . . .	17,275 00	
\$10,000 one year at 5½ per cent. . . . .	550 00	
	<hr/>	
	\$37,645 00	
Less coupon unpaid . . . . .	20 00	
	<hr/>	
	\$37,625 00,	
Sundry persons, coupon unpaid . . . . .	20 00	
	<hr/>	
	\$37,645 00	

## Cash, paid on temporary loans—

Brewster, Cobb & Estabrook, on note of \$30,000, six months at 3¾ per cent. . . . .	\$506 25	
Commonwealth of Massachusetts on note of \$20,000, six months at 4 per cent. . . . .	400 00	
Potter Lovell Co., discount on notes of \$100,000, 8 months at 3 3-16 per cent. . . . .	2,125 00	
Commonwealth of Massachusetts on note of \$50,000, six months at 4 per cent. . . . .	1,000 00	
Commonwealth of Massachusetts on note of \$50,000, six months at 4 per cent. . . . .	1,000 00	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$5,031 25	\$58,355 14

<i>Amounts brought forward,</i> . . .	\$5,031 25	\$58,355 14
Commonwealth of Massachusetts on note of \$20,000, 6 months at 4 per cent. . . . .	400 00	
Potter Lovell Co., discount on note of \$100,000, 5 months at 2½ per cent. . . . .	1,093 74	
Brewster, Cobb & Estabrook, on note of \$30,000, 6 months at 3¼ per cent. . . . .	487 50	
Brewster, Cobb & Estabrook, on note of \$100,000, 4 months, dis- counted at 3½ per cent. . . . .	1,166 67	
	<hr/>	
	\$8,179 16	
On funded debt . . . . .	37,645 00	
On temporary loans . . . . .	8,179 16	
	<hr/>	
	\$45,824 16	
Excess and deficiency, balance to credit of account . . . . .	12,530 98	
	<hr/>	
		<u>\$58,355 14</u>

## MISCELLANEOUS.

## CREDIT.

Appropriations, amount assessed . . . . .		\$4,000 00
Cash, received of sundry persons, costs on property sold and prepared for sale for non-payment of taxes and assessments . . . . .	\$817 91	
On real estate liens, released . . . . .	18 00	
Sundry persons, liquor licenses . . . . .	23 00	
Sundry persons, license to peddle . . . . .	75 00	
Thomas Cunningham, milk in- spectors' fees . . . . .	152 00	
Brine & Norcross, return on bill . . . . .	7 38	
Mark F. Burns, county fees . . . . .	1 00	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$1,094 29	<u>\$4,000 00</u>



<i>Amounts brought forward,</i> . . .	\$1,094 29	\$4,000 00
George I. Vincent, city clerk:—		
Recording mortgages . . . \$326 50		
Marriage certificates . . . 201 00		
Licensing dogs . . . 264 00		
Junk licenses . . . 88 00		
Liquor licenses . . . 23 00		
Auctioneer's licenses . . . 30 00		
Fire works . . . 50 00		
Billiards and pool . . . 10 00		
Intelligence office . . . 6 00		
Copy of record . . . 3 25		
Miscellaneous, . . . 50		
Amusements . . . 63 00		
	<hr/>	
	1,065 25	
	<hr/>	2,159 54
Excess and deficiency, balance to debit of account . . . .		3,213 71
		<hr/>
		\$9,373 25

## DEBIT.

Cash, paid town of Medford, half cost of damages (Homer case) . . .	\$600 00	
Francis J. Baldwin, compensation for damages . . . . .	625 00	
Jerome S. Daniels, compensation for damages . . . . .	26 00	
Cambridge Laundry, compensation for damages . . . . .	6 50	
S. T. Kirk, carpentering . . . . .	631 94	
F. A. Chandler, " . . . .	423 69	
F. C. Fuller, " . . . .	5 25	
H. S. Brackett, " . . . .	90	
Silas D. Carter, horse keeping etc., . . . . .	199 46	
R. T. Blackwell, " . . . .	111 14	
L. H. Brown, carriage hire, . . . . .	23 50	
H. M. Weld & Co., " . . . .	25 00	
Union Square Carriage Co., repair- ing buggy . . . . .	40 70	
	<hr/>	
<i>Amounts carried forward</i> . . . .	\$2,719 08	\$9,373 25



<i>Amounts brought forward</i> . . . . .	\$2,719 08	\$9,373 25
George W. York & Co., repairing buggy . . . . .	40 00	
Charles Maguire, horseshoeing . . . . .	8 50	
Seward Dodge, " . . . . .	16 13	
Jacob Woodbury, blacksmithing . . . . .	11 30	
D. J. Bennett, repairing harness . . . . .	1 00	
E. Spaulding, " " . . . . .	6 20	
Post 139 G. A. R., contribution for observance of Memorial Day . . . . .	300 00	
Commonwealth of Massachusetts, one-fourth of the amount re- ceived for liquor licenses . . . . .	5 75	
Ward officers . . . . .	1,312 00	
James H. Merritt, clerical services . . . . .	6 00	
Charles S. Robertson, " . . . . .	51 00	
Ella F. Elliot, " . . . . .	9 00	
Clara Z. Elliot, " . . . . .	12 00	
E. Florence Crosby, " . . . . .	9 00	
Viola B. Miles, " . . . . .	126 50	
Maizie E. Blaikie, " . . . . .	90 00	
Kate W. Wood, " . . . . .	41 00	
J. W. Johnson, labor . . . . .	8 00	
N. L. Pennock, " . . . . .	6 00	
W. H. Denton, " . . . . .	7 00	
Charles A. Southwick, labor . . . . .	15 50	
W. H. Laskie, " . . . . .	2 00	
W. H. Kelley, " . . . . .	8 00	
B. F. Sheridan, " . . . . .	3 50	
Mrs. Mahoney, " . . . . .	75	
Mrs. Porter, " . . . . .	1 50	
L. M. Maynard, " . . . . .	12 00	
S. A. Coombs, labor . . . . .	6 00	
Stephen Howe, " . . . . .	3 50	
Patrick O'Connell, " . . . . .	23 25	
D. H. Rinn, " . . . . .	4 00	
Jas. L. Whittaker, " . . . . .	6 00	
<i>Amounts carried forward</i> . . . . .	\$4,871 46	\$9,373 25

<i>Amounts brought forward</i> . . . . .	\$4,871 46	\$9,373 25
Thomas R. Roulstone, disbursements . . . . .	2 00	
H. W. Raymond, hardware . . . . .	17 11	
Whitney & Snow, " . . . . .	41 25	
J. A. Durell, " . . . . .	46 83	
Howe & Flint, " . . . . .	20 38	
Ingalls & Kindricken, repairing steam heater . . . . .	21 24	
American Steam Gauge Co., repairs . . . . .	1 00	
M. C. Warren & Co., hardware . . . . .	2 43	
Charles Bartley, supplies . . . . .	1 50	
James Bartley, " . . . . .	8 45	
Buff & Burger, engineer's supplies . . . . .	112 40	
Frost & Adams, " " . . . . .	82 11	
John P. Lovell Arms Co., engineer's supplies . . . . .	2 10	
Bigelow & Dowse, engineers' supplies . . . . .	25 34	
India Alkali Works, savogran . . . . .	2 86	
I. H. Brown & Co., lumber . . . . .	18 10	
Hopkins & Fullerton, furniture . . . . .	7 84	
Jackson Caldwell & Co., " . . . . .	78 03	
Derby & Kilmer Desk Co., desk . . . . .	68 00	
T. Derby & Co., furniture . . . . .	4 50	
S. W. Fuller, lumber . . . . .	78 59	
Davis Manufacturing Co., water cooler . . . . .	14 00	
C. W. Lyman, tables . . . . .	137 70	
John F. Ayer & Co., lumber . . . . .	28 00	
Walter H. Durell & Co., frames . . . . .	3 60	
Franklin Electric Works, repairing ballot box . . . . .	3 80	
Sprague & Hathaway, frame . . . . .	5 00	
L. C. Field, duster . . . . .	1 50	
H. A. Chick & Co., cushions . . . . .	5 00	
F. G. Ray & Son, dry goods . . . . .	6 86	
J. H. Brooks, dry goods . . . . .	1 02	
<i>Amount carried forwards</i> . . . . .	\$5,720 00	\$9,373 25

<i>Amounts brought forward</i> . . . . .	\$5,720 00	\$9,373 25
Brine & Norcross, dry goods . . . . .	14 76	
Young & Maynard, plumbing . . . . .	13 95	
Wm. B. Holmes, plumbing . . . . .	2 19	
S. W. Mann & Son, plumbing . . . . .	65 70	
Wm. H. Pool, plumbing . . . . .	21 04	
Frank S. Norris, painting . . . . .	10 00	
J. Q. Twombly, painting . . . . .	42 05	
D. P. Bucknam, mason work . . . . .	168 07	
F. O. Reed, rent of rifle range . . . . .	150 00	
P. Eberle, rent of polling place . . . . .	37 50	
M. A. Brazillian, rent of polling place . . . . .	20 00	
Edward O'Brien, rent of polling place . . . . .	12 00	
A. W. Mitchell, rubber stamps . . . . .	1 35	
Thomas Groom & Co., stationery . . . . .	29 45	
J. M. Corse, rent of P. O. box . . . . .	4 00	
N. E. Telephone & Telegraph Co., rentals and tolls . . . . .	158 65	
City of Boston, water . . . . .	24 42	
Cambridge Gas Light Co., gas . . . . .	100 09	
Charlestown Gas Co., gas . . . . .	53	
Somerville Electric Light Co., light- ing . . . . .	349 71	
George Cullis, affidavit of posting . . . . .	51 50	
S. H. Libby, services as auctioneer . . . . .	10 50	
W. H. Hitchings, veterinary ser- vices . . . . .	2 00	
J. A. McLane, bill posting . . . . .	189 36	
A. M. Prescott, removing ashes . . . . .	28 00	
Wm. S. Gray, ringing bell . . . . .	8 00	
Fred S. Young, " . . . . .	7 95	
A. M. Sibley, " etc. . . . .	9 00	
J. H. Colbath, " . . . . .	6 00	
T. G. Poland, " . . . . .	6 00	
G. W. Littlefield, " . . . . .	3 00	
Wm. A. Flaherty, return of deaths . . . . .	27 25	
E. H. Marsh, " " . . . . .	24 50	
<i>Amounts carried forward</i> . . . . .	<u>\$7,318 52</u>	<u>\$9,373 25</u>

<i>Amounts brought forward</i>	.	.	\$7,318 52	\$9,373 25
P. H. Rafferty & Co.,	"	"	16 75	
C. H. Lockhart,	"	"	17 25	
Horace D. Runey,	"	"	25 25	
Alfred E. Mann,	"	"	7 50	
John F. Couch, return of births	.	.	50 00	
George W. Mills,	"	"	2 50	
R. L. Lane,	"	"	6 00	
F. W. Taylor,	"	"	1 50	
A. C. Aldrich, return of births	.	.	3 50	
H. B. McIntire,	"	.	75	
W. W. Dow,	"	.	12 00	
George A. Cogan,	"	.	1 25	
William B. Hawes	"	.	96 75	
John M. Schroeder,	"	.	97 00	
J. A. Gregg,	"	.	7 50	
G. W. Bryant,	"	.	1 25	
School Fuel Account, fuel	.	.	31 25	
L. B. Angier,	"	.	1 50	
B. F. Wild & Co.,	"	.	228 75	
Jairus Mann, watching and dis- bursements	.	.	160 39	
Doctor Batchelder, professional services	.	.	25 00	
Engineer's assistants, car fares, etc.	.	.	18 65	
George T. Unwin, drugs	.	.	35	
M. A. Mann, laundrying, etc.	.	.	22 00	
L. D. Miller, polish	.	.	2 15	
S. J. Wood, keys, etc.	.	.	10 95	
Thorpe's Express, expressing	.	.	1 35	
E. R. Perham,	"	.	15 15	
Charles E. Farnham,	"	.	5 45	
F. DeWitt Lapham, premium of insurance	.	.	6 00	
W. A. Greenough, directories	.	.	8 00	
C. M. Blake, newspapers	.	.	6 00	
Sheeran & Houley, turkeys	.	.	59 46	
N. H. Reed,	"	.	4 30	
<i>Amounts carried forward</i>	.	.	\$8,271 97	\$9,373 25

<i>Amounts brought forward</i> . . . . .	\$8,271 97	\$9,373 25
George S. Wilson, turkeys . . . . .	80 74	
M. L. King, " . . . . .	72 93	
James H. Maguire, " . . . . .	3 22	
John D. Collins, " . . . . .	44 51	
F. Q. Harrington, " . . . . .	2 45	
Charles A. Small, " . . . . .	5 25	
F. E. Robie, " . . . . .	5 82	
Russell Brothers, " . . . . .	5 75	
J. B. Eastman, " . . . . .	5 94	
W. P. Blanchard, " . . . . .	1 60	
Ammiel Colman, scaler of weights and measures . . . . .	100 00	
H. D. & W. S. Durgin, ice . . . . .	97 00	
City of Lowell, board of truants . . . . .	408 23	
Bufford's Sons Lithograph Co., printing bonds . . . . .	150 00	
Kern & McLoud, use of transfer book . . . . .	13 01	
Fred Brooks, use of transit . . . . .	26 00	
C. S. Decker, awning . . . . .	5 00	
Leonard & Co., services as appraisers . . . . .	20 00	
Leander Greeley, services as ap- praiser . . . . .	10 00	
S. Z. Bowman, disbursements . . . . .	43 83	
	<hr/>	<u>\$9,373 25</u>

## OVERLAY AND ABATEMENT.

## CREDIT.

Taxes, amount added to the amount of taxes assessed as fractional divi- sions for convenience in apportion- ment, to be applied to abatement on taxes . . . . .	\$6,997 37
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## DEBIT.

Taxes, for amount of abatements on taxes . . . . .	\$2,335 24
Balance to credit in account 1890 . . . . .	4,662 13
	<hr/>
	<u>\$6,997 37</u>

## OVERPLUS ON TAX SALES.

	CREDIT.	
Balance from 1888 . . . . .		\$102 13
	DEBIT.	
Balance to 1890 . . . . .		<u>\$102 13</u>

## PROPERTY AND DEBT BALANCE.

	CREDIT.	
Balance from 1888 . . . . .	\$426,523 44	
Public property acquired during the year		
1889 . . . . .	123,637 42	
Reduction of funded debt . . . . .	38,000 00	
Renewals of funded debt . . . . .	49,000 00	
		\$637,160 86
	DEBIT.	
Appropriations . . . . .	\$179,000 00	
Balance to credit in account 1890 . . . . .	458,160 86	
		<u>\$637,160 86</u>

## PUBLIC PROPERTY.

	CREDIT.	
Balance to 1890 . . . . .		\$1,410,660 86
	DEBIT.	
Balance from 1888 . . . . .	\$1,287,023 44	
Property and debt balance, property		
acquired during the year 1889 . . . . .	123,637 42	
		<u>\$1,410,660 86</u>

## PUBLIC LIBRARY.

	CREDIT.	
Appropriations, amount assessed . . . . .		\$3,000 00
Cash received of county treasurer, re-		
turn on the amount received of		
the city for dog licenses in the		
year 1889 . . . . .	2,382 90	
H. A. Adams, librarian fines . . . . .	293 76	
Catalogues, . . . . .	44 05	
		<u>\$2,720 71</u>
<i>Amounts carried forward</i> . . . . .		<u>\$3,000 00</u>



<i>Amounts brought forward</i> . . .	\$2,720 71	\$3,000 00
L. Prang & Co., amount refunded	15 50	
	<hr/>	\$2,736 21
Excess and deficiency, balance to debit of account . . . .		415 45
		<hr/>
		\$6,151 66

## DEBIT.

Cash, paid Estes & Lauriat, books . . .	\$1,406 40	
Little, Brown & Co., " . . . .	789 77	
George A. Littlefield, " . . . .	142 08	
Laughton, Macdonald & Co., books . . . . .	46 86	
Balch Bros. & Graham, books . . . .	37 87	
Charles B. J. Root, " . . . .	6 00	
Damrell & Upham, " . . . .	2 40	
William Macdonald, " . . . .	7 78	
B. B. Russell, " . . . .	12 00	
Houghton, Mifflin & Co., " . . . .	15 00	
E. H. Haines & Co., " . . . .	2 00	
E. F. Dunbar, " . . . .	8 00	
C. H. Brown, " . . . .	2 25	
Ginn & Co., " . . . .	14 00	
George H. Walker & Co., " . . . .	15 00	
Henry C. Nash, " . . . .	11 40	
Babb & Stephens, printing . . . .	294 75	
Rockwell & Churchill, " . . . .	101 92	
J. G. Roberts & Co., binding books . . . . .	136 45	
Ira Bradley & Co., binding books . . . . .	10 50	
W. A. Greenough & Co., direc- tory . . . . .	2 00	
A. L. Chamberlain & Co., rib- bons . . . . .	3 00	
C. M. Blake, newspapers . . . .	12 00	
B. F. Wild & Co., fuel . . . .	35 15	
Dunning & Underhill, fuel . . . .	197 90	
	<hr/>	
<i>Amounts carried forward</i> , . . . .	\$3,312 48	\$6,151 66

<i>Amounts brought forward</i> . . .	\$3,312 48	\$6,151 66
Cambridge Gas Light Co., gas . . .	182 01	
City of Boston, water . . . . .	29 00	
A. C. Winning, mason work . . . . .	7 13	
L. C. Seavey, slating . . . . .	2 53	
F. A. Chandler, carpenter work . . . . .	13 25	
R. Brown & Co., " . . . . .	225 00	
L. Arnold, " . . . . .	11 50	
H. W. Covell & Co., plumbing . . . . .	1 87	
Young & Maynard, " . . . . .	1 75	
Thomas Groom & Co., stationery . . . . .	10 00	
Paine's Furniture Co., furniture . . . . .	3 75	
Jackson Caldwell & Co., " . . . . .	6 50	
F. G. Ray & Son, towels . . . . .	1 50	
Whitney & Snow, hardware . . . . .	9 66	
H. W. Raymond, " . . . . .	50	
N. W. Turner & Co., globes . . . . .	22 30	
Z. Flemming, double windows . . . . .	96 50	
S. J. Wood, keys, etc. . . . .	2 50	
J. A. Durell, repairing hose . . . . .	1 00	
A. L. Russell, repairing lighter . . . . .	1 25	
H. A. Carney, plants . . . . .	20 00	
Charles E. Farnham, expressing . . . . .	40 70	
E. R. Perham, " . . . . .	45	
C. A. Mongan, labor . . . . .	129 15	
C. A. Southwick, labor . . . . .	2 00	
Crane & Woods, premium of ins. . . . .	33 75	
J. B. Kendall, " . . . . .	45 00	
" " " . . . . .	30 00	
Tay & Bennett " . . . . .	33 75	
H. A. Adams, librarian . . . . .	800 00	
Charlotte I. Hopkins, assistant . . . . .	400 00	
Anna L. Stone, " . . . . .	400 00	
Mary Warren, " . . . . .	168 48	
Edith A. Woodman, " . . . . .	19 20	
W. Cook, " . . . . .	71 10	
H. N. Pillsbury, " . . . . .	16 10	
	<hr/>	\$6,151 66

## PUBLIC GROUNDS.

## CREDIT.

Appropriations, amount assessed . . . . .		\$7,000 00
Cash received of Dennis C. Collins, re- turned on account of contract . . . . .	56 00	
James Foley, wages not called for . . . . .	3 50	
	<hr/>	59 50
Excess and deficiency, balance to debit of account . . . . .		2,109 58
		<hr/>
		\$9,169 08

## DEBIT.

Cash paid laborers . . . . .	\$4,700 27	
Christopher Burke, teaming . . . . .	331 20	
Timothy F. Crimmings, teaming, etc. . . . .	225 27	
A. M. Prescott, " . . . . .	359 50	
E. A. Foster, loam . . . . .	215 65	
John Stackpole, " . . . . .	181 43	
F. O. Reed " . . . . .	144 90	
Highways account, gravel . . . . .	171 60	
Jeremiah McCarthy " . . . . .	416 15	
George H. Goodwin, " . . . . .	44 12	
Henry F. Woods, " . . . . .	43 62	
John Maloy, manure . . . . .	22 47	
Joseph Breck & Son, grass seed, etc. . . . .	41 68	
A. E. Johnson, plants . . . . .	75 00	
George W. Manning, labor on flag staff . . . . .	12 00	
W. A. Mann, repairing flag . . . . .	3 00	
John F. Ayer & Co., lumber . . . . .	45 26	
John M. Woods & Co., " . . . . .	15 50	
C. W. Lyman & Co., " . . . . .	31 75	
Whitney & Snow, hardware . . . . .	61 48	
Osgood & Hart, " . . . . .	21 00	
J. A. Durell, " . . . . .	12 96	
H. W. Raymond, " . . . . .	5 82	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$7,181 63	\$9,169 08

<i>Amounts brought forward.</i>		\$7,181 63	\$9,169 08
Howe & Flint, hardware,		1 56	
M. D. Jones & Co., "		46 00	
H. F. Crocker, hose		64 50	
George McQueston, pole		9 50	
Joseph Young, repairing tools		21 00	
Boston Bolt Co., bolts		1 60	
Horatio Wellington & Co., cement		4 50	
Miller & Shaw, labor and pipe		18 61	
Dennis C. Collins, mason work		56 00	
George D. Goodrich, drain pipe		107 61	
D. F. Griffin, stone cutting		4 00	
S. J. Wood, key		50	
Gilman's Express, expressing		25	
Highways account, use of horse		36 00	
Seward Dodge, blacksmithing		4 95	
E. F. Fales, police services		37 50	
T. E. Herron "		12 50	
Somerville Electric Light Co., light- ing		148 37	
Sewer assessments account, sewers in Chauncy ave. and School st.		1,191 00	
Water services account, service pipe		18 50	
Fortin & Gordon, painting		203 00	
		<hr/>	<hr/>
			\$9,169 08

PRINTING AND STATIONERY.

CREDIT.

Appropriations, amount assessed		\$4,000 00
Excess and deficiency, balance to debit of account		1,189 11
		<hr/>
		\$5,189 11

DEBIT.

Cash paid J. O. Hayden & Co., printing and advertising		\$1,860 09
McDonnell Bros., advertising		122 50
Citizen Publishing Co., advertising		76 50
		<hr/>
<i>Amounts carried forward,</i>		\$2,059 09
		<hr/>
		\$5,189 11

<i>Amounts brought forward,</i> . . . . .	\$2,059 09	\$5,189 11
Cashman, Keating & Co., printing annual reports . . . . .	757 50	
Babb & Stephens, printing . . . . .	117 50	
J. S. Fairbanks & Co., printing . . . . .	8 00	
Newcomb & Gauss, " . . . . .	22 75	
Wright & Potter Printing Co., printing . . . . .	8 50	
Edith L. Morey, type writing . . . . .	8 10	
Thomas Groom & Co., stationery . . . . .	1,966 27	
Heliotype Printing Co., maps . . . . .	202 00	
W. W. White & Co., " . . . . .	19 65	
E. G. Thayer, lettering maps . . . . .	18 75	
H. L. Eaton, rollers . . . . .	1 00	
	<hr/>	<u>\$5,189 11</u>

## POLICE.

## CREDIT.

Appropriations, amount assessed . . . . .	\$31,200 00
Cash received of H. A. Chapin, clerk of court for offi- cers' fees, fines, etc. . . . .	4,886 04
	<hr/>
	\$36,086 04

## DEBIT.

Cash paid M. C. Parkhurst, chief . . . . .	\$1,700 00	
R. R. Perry, captain . . . . .	1,400 00	
Samuel R. Dow, sergeant . . . . .	1,100 00	
C. C. Cavanaugh " . . . . .	1,100 00	
Edward McGarr " . . . . .	1,100 00	
George W. Bean, patrolman . . . . .	1,003 75	
Samuel A. Brown, " . . . . .	1,003 75	
George A. Bodge, " . . . . .	1,003 75	
Edward M. Carter, " . . . . .	1,003 75	
Eugene A. Carter, " . . . . .	1,003 75	
George H. Carleton, " . . . . .	1,003 75	
Charles L. Ellis, " . . . . .	1,003 75	
John E. Fuller " . . . . .	1,003 75	
James F. Foley, " . . . . .	668 25	
	<hr/>	<hr/>
<i>Amounts carried forward</i> . . . . .	\$15,098 25	\$36,086 04

<i>Amounts brought forward,</i>	.	.	\$15,098 25	\$36,086 04
John Hafford,	patrolman	.	1,003 75	
Edward E. Hamblin,	"	.	1,001 00	
John F. Johnson,	"	.	1,003 75	
William H. Johnston,	"	.	1,003 75	
Myron H. Kinsley,	"	.	1,003 75	
Dennis Kelley,	"	.	1,003 75	
Arthur E. Keating,	"	.	860 00	
John G. Knight,	"	.	572 50	
Ivan Laighton,	"	.	750 75	
Herbert H. Miller,	"	.	1,003 75	
Judson W. Oliver,	"	.	1,003 75	
Francis A. Perkins,	"	.	1,003 75	
Phineas W. Skinner,	patrolman	.	1,003 75	
Albion L. Staples,	"	.	1,003 75	
George L. Smith,	"	.	1,003 75	
Stephen J. Smith,	"	.	542 50	
Jacob W. Skinner,	"	.	152 50	
Charles S. Thrasher,	patrolman	.	1,003 75	
Charles E. Woodman,	"	.	992 25	
Michael Buckley,	patrolm'n (special)	.	6 00	
Andrew F. Arnold,	"	.	6 00	
Edward F. Backus,	"	.	30 00	
Davis T. Bucknam,	"	.	3 00	
William R. Cann,	"	.	6 00	
William J. Daykin,	"	.	10 00	
Edd. F. Fales,	"	.	3 00	
George W. Holden,	"	.	6 00	
William H. Kelley,	"	.	6 00	
John McLeod,	"	.	3 00	
L. M. Maynard,	"	.	6 00	
Clarence B. Needham,	"	.	6 00	
Daniel H. Rinn,	"	.	6 00	
Daniel R. Spike,	"	.	6 00	
Peter Savage,	"	.	6 00	
Peter J. Savage,	"	.	6 00	
Joseph Young,	"	.	3 00	
Fred S. Young,	"	.	3 00	
<i>Amounts carried forward</i>	.	.	\$32,135 75	\$36,086 04



<i>Amounts brought forward</i> . . . . .	\$32,135 75	\$36,086 04
T. Edward Herron, patrolman (special) . . . . .	210 00	
Morgan & Meredith, services . . . . .	2 00	
M. C. Parkhurst, lock-up keeper . . . . .	100 00	
Disbursements . . . . .	9 24	
Samuel R. Dow, car fares, etc. . . . .	37 60	
William H. Johnson, " . . . . .	2 00	
Dennis Kelley, " . . . . .	42 98	
New England Telephone and Tele- graph Co., rentals and tolls . . . . .	441 45	
Municipal Signal Co., transmitter . . . . .	137 04	
A. E. Rowe, police signal supplies . . . . .	20 00	
Pettingell, Andrews & Co., signal supplies . . . . .	17 82	
Electric Gas Light Co., signal sup- plies . . . . .	18 45	
Albert L. Russell, signal supplies . . . . .	75 00	
R. T. Blackwell, horse keeping . . . . .	408 31	
Timothy O'Brien, horseshoeing . . . . .	11 50	
Edward O'Brien, " . . . . .	15 13	
L. J. Sturtevant, horse . . . . .	150 00	
E. Spalding, harness work . . . . .	1 10	
Charles E. Berry, harness work . . . . .	46 40	
Union Square Carriage Co., repairs . . . . .	15 25	
A. M. Prescott, hay and grain . . . . .	57 76	
Sturtevant Bros., supplies . . . . .	36 31	
Thomas Hollis, drugs . . . . .	39 96	
Wendall, Fay & Co., service stripes . . . . .	16 25	
M. R. Warren, " " . . . . .	1 25	
Joseph C. Power, badges . . . . .	8 25	
Samuel O. Aborn, trimmings . . . . .	15 50	
Scoville M'f'g Co., buttons . . . . .	8 44	
George W. Simmons & Co., wreaths . . . . .	2 50	
D. Cutter, repairing badges . . . . .	75	
Frederick R. Cutter, badges . . . . .	20 25	
R. R. Perry, grappling irons, etc. . . . .	10 85	
John P. Lovell Arms Co., revolvers . . . . .	33 34	
<i>Amounts carried forward, FEB 1898</i>	<u>\$34,148 43</u>	<u>\$36,086 04</u>

<i>Amounts brought forward</i> . . .	\$34,148 43	\$36,086 04
A. F. Chappell, blankets . . .	2 00	
Jackson Caldwell & Co., furniture . . .	96 92	
F. G. Ray & Son, towels . . .	2 65	
Thomas Groom & Co., stationery . . .	35 35	
J. O. Hayden & Co., printing . . .	2 00	
Little, Brown & Co., law books . . .	13 00	
Frank Shephard, " " . . .	6 00	
M. L. Tobin, directory . . .	2 00	
H. W. Raymond, hardware . . .	97 09	
Howe & Flint, " . . .	2 45	
Richard Dowd, gas fixtures, etc. . .	178 25	
C. Sullivan, plumbing . . .	70	
Enoch Robinson, lathe . . .	25 00	
J. Hubbard & Co., disinfectant . . .	4 00	
Union Glass Co., lanterns . . .	19 00	
A. J. Wilkinson & Co., copper . . .	9 08	
Peat Moss Petroleum Hoof Pack- ing Co., hoof packing . . .	1 80	
L. H. Snow, car fares, etc. . .	10 90	
Lizzie Avery, washing . . .	19 98	
C. B. Cheney, photographs . . .	4 50	
Wm. K. Young, meals . . .	8 25	
S. J. Wood, keys . . .	1 50	
H. D. & W. S. Durgin, ice . . .	40 00	
W. H. Way, veterinary services . . .	8 00	
Philip McGovern, carriage hire . . .	3 00	
L. H. Brown, carriage hire . . .	45 50	
Stephen S. Smith, " " . . .	4 00	
Franklin Electric Works, labor . . .	2 75	
J. Grady, labor . . .	5 00	
Horace S. Gilchrist, labor . . .	5 00	
Joseph E. Power, " . . .	3 45	
M. G. Staples, " . . .	75	
Crane & Woods, premium of in- surance . . .	39 00	
Charles E. Farnham, expressing . . .	3 05	
Thorpe's Express, " . . .	3 30	
<i>Amounts carried forward</i> . . .	<u>\$34,854 15</u>	<u>\$36,086 04</u>

<i>Amounts brought forward</i> . . .	\$34,854 15	\$36,086 04
Police stable, transferred . . .	358 35	
Excess and deficiency, balance to credit of account . . .	873 54	
	<hr/>	<u>\$36,086 04</u>

POLICE STABLE.

CREDIT.

Appropriations, amount assessed . . . . .		\$3,500 00
Police, transferred . . . . .		358 35
		<hr/>
		\$3,858 35

DEBIT.

Cash, paid Charles H. Mead, contract and extras . . . . .	\$3,456 84	
E. K. & W. E. Blaikie, services as architects . . . . .	162 50	
George D. Goodrich, drain pipe . . . . .	27 15	
Maurice Buttimer, drain . . . . .	45 00	
Young & Maynard, plumbing . . . . .	16 80	
Richard Dowd, heating apparatus, etc.. . . . .	74 06	
H. W. Raymond, hardware . . . . .	66 00	
	<hr/>	<u>\$3,858 35</u>

POLICE STATION INCIDENTALS.

CREDIT.

Appropriations, amount assessed . . . . .		\$2,000 00
Cash, received of Commonwealth of Massachusetts, rent of armory . . . . .	\$400 00	
Willard C. Kinsley Post 139, G. A. R., use of hall . . . . .	12 00	
Police Relief Association, use of hall . . . . .	25 00	
Somerville Co-operative Bank, use court room . . . . .	60 00	
Somerville Light Infantry, use of hall . . . . .	40 00	
	<hr/>	<hr/>
<i>Amounts carried forward</i> , . . . . .	\$537 00	\$2,000 00

<i>Amounts brought forward,</i> . . .	\$537 00	\$2,000 00
Unitarian Club, use of hall . . .	12 00	
N. K. Bishop, " " . . .	12 00	
J. O. Hayden, " " . . .	5 00	
Armstrong & Butters, use of hall .	2 00	
	<hr/>	568 00
		<hr/>
		\$2,568 00

## DEBIT.

Cash, paid Wm. D. Hayden, janitor	\$850 00	
Disbursements . . . . .	22 00	
Cambridge Gas Light Co., gas . . .	620 25	
City of Boston, water . . . . .	57 51	
Horatio Wellington & Co., fuel . . .	397 85	
L. Arnold, carpenter work . . . . .	28 74	
S. T. Kirk, " . . . .	28 44	
F. A. Chandler, " . . . .	8 10	
Tucker & Titus, plumbing . . . . .	33 81	
Young & Maynard, " . . . .	4 72	
James F. Davlin, " . . . .	25 00	
Howe & Flint, hardware . . . . .	2 40	
H. W. Raymond, " . . . .	38. 03	
Whitney & Snow, " . . . .	3 50	
Jackson, Caldwell & Co., repairing furniture . . . . .	5 75	
L. C. Field, duster . . . . .	2 50	
George H. Cowdin, drugs . . . . .	10 90	
William L. Fox & Co., star com- pound . . . . .	6 25	
C. A. Southwick, disinfectant . . . .	75	
Sturtevant Bros., soap, etc. . . . .	3 08	
Union Glass Co., globes . . . . .	2 00	
Fred Davis, whitewashing . . . . .	5 50	
E. F. Chappell, cleaning carpet . . .	1 50	
S. Richards, moving building . . . .	70 00	
Crane & Woods, premium of insu- rance, . . . . .	150 00	
I. B. Kendall, premium of insurance	150 00	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$2,528 58	\$2,568 00

<i>Amounts brought forward,</i> . . .	\$2,528 58	\$2,568 00
Excess and deficiency balance to credit of account . . . .	39 42	
	<hr/>	<u>\$2,568 00</u>

## REAL ESTATE LIENS.

## CREDIT.

Cash, received of sundry persons for tax titles released . . . .		\$280 14
Balance to debit in account 1890 .		55 44
		<hr/>
		\$335 58

## DEBIT.

Balance from 1888 . . . . .		\$335 58
		<hr/>

## REDUCTION OF FUNDED DEBT.

## CREDIT.

Appropriations, amount assessed . . . . .		\$38,000 00
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## DEBIT.

Property and debit balance, amount of reduction of funded debt in 1889 . . . . .		\$38,000 00
		<hr/>

## RENEWALS OF FUNDED DEBT.

## CREDIT.

Appropriations, amount authorized by loans . . . . .		\$49,000 00
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## DEBIT.

Property and debt balance, amount of funded debt renewed in 1889 . . . . .		\$49,000 00
		<hr/>

## RELIEF AND BURIAL OF INDIGENT SOLDIERS AND SAILORS.

## CREDIT.

Support of poor account, amount transferred . . . . .		\$500 00
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## DEBIT.

Cash, paid monthly pay-rolls for relief	\$236 00	
Alfred E. Mann, services as undertaker . . . . .	35 00	
	<hr/>	<hr/>
<i>Amounts carried forward,</i> . . . . .	\$271 00	\$500 00



<i>Amounts brought forward</i> . . . . .	\$271 00	\$500 00
Excess and deficiency, balance to credit of account . . . . .	229 00	
	<u>          </u>	<u>\$500 00</u>

## STATE AID.

## CREDIT.

State of Massachusetts, amount paid in 1889, charged to State . . . . .		\$4,513 00
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## DEBIT.

Cash, paid monthly pay-rolls for aid . . . . .		<u>\$4,513 00</u>
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## STATE OF MASSACHUSETTS.

## CREDIT.

Taxes, amount assessed, . . . . .		\$27,560 00
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## DEBIT.

Cash, paid State treasurer, State tax . . . . .		<u>\$27,560 00</u>
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## STATE OF MASSACHUSETTS, STATE AID.

## CREDIT.

Cash, received of State Treasurer, . . . . .		\$3,935 00
Balance, Dec. 31, 1889, due from State Dec. 10, 1890, to debit in account . . . . .		4,380 00
		<u>          </u>

\$8,315 00

## DEBIT.

Balance from 1888 . . . . .	\$3,802 00	
State aid, amount paid in 1889, as per account . . . . .	4,513 00	
	<u>          </u>	<u>\$8,315 00</u>

## STATE OF MASSACHUSETTS, INDIGENT SOLDIERS AND SAILORS.

## CREDIT.

Cash received of State Treasurer . . . . .		\$507 50
Balance, Dec. 31, 1889, due from State, Dec. 10, 1890, to debit in account . . . . .		602 50
		<u>          </u>

<i>Amount carried forward</i> . . . . .		\$1,110 00
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*Amount brought forward* . . . \$1,110 00

## DEBIT.

Balance from 1888 . . . . .	\$495 50	
Indigent soldiers and sailors, one half of amount paid in 1889, as per account . . . . .	614 50	
	<hr/>	\$1,110 00

## SUNDRY PERSONS.

## CREDIT.

Balance from 1888 . . . . .	\$320 10
Interest, coupons due and unpaid . . . . .	20 00
	<hr/>
	\$340 10

## DEBIT.

Cash, paid sundry persons amounts due them . . . . .	\$285 00
Balance to credit in account 1890 . . . . .	55 10
	<hr/>
	\$340 10

## SALARIES.

## CREDIT.

Appropriations, amount appropriated . . . . .	\$25,900 00
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## DEBIT.

Cash, paid Charles G. Pope, mayor . . . . .	\$1,000 00	
George I. Vincent, city clerk . . . . .	2,500 00	
John F. Cole, city treasurer and collector of taxes . . . . .	3,500 00	
Horace L. Eaton, city engineer . . . . .	2,200 00	
Selwyn Z. Bowman, city solicitor . . . . .	1,200 00	
Thomas M. Durell, city physician . . . . .	43 41	
Alva B. Dearborn, " " . . . . .	906 58	
Douglas Frazar, city auditor . . . . .	337 50	
Charles S. Robertson, auditor . . . . .	112 50	
Charles S. Robertson, clerk of common council . . . . .	200 00	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$11,999 99	\$25,900 00

<i>Amounts brought forward,</i> . . . . .	\$11,999 99	\$25,900 00
William P. Mitchell, clerk of assessors and committees . . . . .	1,500 00	
Albert B. Fales, assistant clerk of assessors and committees . . . . .	1,000 00	
Jairus Mann, city messenger . . . . .	1,200 00	
Thomas R. Roulstone, superintendent of buildings and street lights . . . . .	1,800 00	
James R. Hopkins, inspector of buildings . . . . .	250 00	
Thomas Cunningham, inspector of milk . . . . .	300 00	
George W. Hadley, assessor . . . . .	650 00	
Benjamin F. Thompson, assessor . . . . .	650 00	
Hiram D. Smith, assessor . . . . .	650 00	
George W. Bartlett, assistant assessor . . . . .	250 00	
David A. Sanborn, assistant assessor . . . . .	250 00	
Edgar T. Mayhew, assistant assessor . . . . .	250 00	
Samuel T. Richards, assistant assessor . . . . .	250 00	
William F. Hunt, . . . . .	48 00	
I. Irving Peckham, . . . . .	60 00	
Wm. E. Hutchins, . . . . .	32 00	
Beulah M. Peirce, department clerk	390 00	
Wm. H. Whitcomb, janitor of City Hall and Public Library . . . . .	750 00	
Cromwell G. Rowell, registrar of voters . . . . .	200 00	
William B. Hawes, registrar of voters . . . . .	200 00	
Charles P. Lincoln, registrar of voters . . . . .	200 00	
George I. Vincent, registrar of voters . . . . .	200 00	
<i>Amounts carried forward</i> . . . . .	<u>\$23,079 99</u>	<u>\$25,900 00</u>

<i>Amounts brought forward</i> . . . . .	\$23,079 99	\$25,900 00
Engineer's assistants . . . . .	2,414 92	
	<hr/>	
	\$25,494 91	
Excess and deficiency balance to credit of account . . . . .	450 09	
	<hr/>	\$25,900 00
		<hr/> <hr/>

## STREET LIGHTS.

## CREDIT.

Appropriations, amount assessed . . . . .		\$18,000 00
Cash received of Patrick O'Connell, old metal . . . . .	5 00	
H. K. Bishop & Co., repairing lamp . . . . .	7 60	
	<hr/>	12 60
		<hr/>
		\$18,012 60

## DEBIT.

Cash paid Somerville Electric Light Co., Lighting . . . . .	\$11,059 70	
Charlestown Gas Co., gas . . . . .	1,585 38	
Cambridge Gas Light Co., gas . . . . .	1,696 75	
William H. Archibald, lighting . . . . .	445 40	
Patrick O'Connell, lighting, etc. . . . .	747 65	
Frank Moore, lighting . . . . .	452 20	
James Tevlin, " . . . . .	681 10	
M. G. Staples, teaming . . . . .	1 00	
Thomas Groom & Co., stationery . . . . .	2 50	
Walworth M'f'g Co., plugs, etc. . . . .	4 03	
Samuel Walker & Co., oil . . . . .	108 92	
H. W. Burgess, oil . . . . .	1 20	
J. A. Durell, gas tips, etc. . . . .	31 33	
Howe & Flint, repairs . . . . .	1 05	
Wm. B. Holmes, " . . . . .	22 28	
Jacob Woodbury, " . . . . .	1 75	
H. W. Raymond, chimneys . . . . .	58 12	
Whitney & Snow, hardware . . . . .	45	
W. B. Berry & Co., signs . . . . .	10 70	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$16,911 51	\$18,012 60

<i>Amounts brought forward</i> . . . . .	\$16,911 51	\$18,012 60
H. K. Bishop, ladder . . . . .	2 50	
James Worsely, oil . . . . .	60	
John Fuller, extinguisher . . . . .	1 00	
H. M. Weld & Co., carriage hire . . . . .	12 00	
S. H. Libby, premium of insurance . . . . .	11 11	
F. H. Chandler, carpentering . . . . .	9 45	
T. J. Dean, labor . . . . .	38 00	
	<hr/>	
	\$16,986 17	
Excess and deficiency, balance to credit of account . . . . .	1,026 43	
	<hr/>	
		<u>\$18,012 60</u>

## SIDEWALKS.

## CREDIT.

Appropriations, amount assessed . . . . .	\$8,200 00
Cash, received of highways account, edgestones, labor, etc. . . . .	470 87
Sidewalk assessments, assessments levied . . . . .	8,183 81
	<hr/>
	\$16,854 68

## DEBIT.

Cash, paid laborers . . . . .	\$2,916 03
Jeremiah McCarthy, edgestones . . . . .	5,974 95
A. A. Libby & Co., setting edgestones . . . . .	1,435 08
John Thresher, bricks . . . . .	2,273 41
Sanborn & Hatch, bricks . . . . .	1,920 37
John F. Ayer & Co., lumber . . . . .	15 23
J. O. Hayden & Co., advertising . . . . .	117 00
Citizen Publishing Co., " . . . . .	44 00
McDonnell Bros., " . . . . .	6 00
Highways account, teaming, etc. . . . .	2,106 52
Sewers accounts, catch basin curbs . . . . .	30 11
	<hr/>
	\$16,838 70
Excess and deficiency, balance to credit of account . . . . .	15 98
	<hr/>

\$16,854 68

## SIDEWALK ASSESSMENTS.

## CREDIT.

Cash, received of sundry persons, assessments . . . . .	\$3,421 94	
Balance to debit in account 1890 . . . . .	6,855 04	
	<hr/>	\$10,276 98

## DEBIT.

Balance from 1888 . . . . .	\$2,093 17	
Sidewalks, assessments levied . . . . .	8,183 81	
	<hr/>	<u>\$10,276 98</u>

## SEWERS.

## CREDIT.

Appropriations . . . . .		\$11,000 00
Cash, received of the Massachusetts General Hospital, annual fee for permission to enter Fitchburg street sewer . . . . .	50 00	
W. L. Snow, entering Elmwood street sewer . . . . .	30 00	
Andrew W. Bryne, puddling . . . . .	3 01	
Daniel Nolan, money not called for Highways account, catch basin curbs . . . . .	6 45	
Sidewalk account, catch basin curbs . . . . .	30 11	
	<hr/>	123 57
Sewer assessments, assessments levied . . . . .		18,330 87
Excess and deficiency balance to debit of account . . . . .		4,592 50
		<hr/>
		\$34,046 94

## DEBIT.

Cash, paid laborers . . . . .	\$7,391 82	
George D. Goodrich, drain pipe . . . . .	5,499 68	
Davis & Farnum Manfg. Co., iron pipe . . . . .	72 77	
Gloucester Iron Works, iron pipe . . . . .	156 81	
Horatio Wellington & Co., cement . . . . .	148 10	
Dunning & Underhill, fuel . . . . .	25 36	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$13,294 54	<u>\$34,046 94</u>



<i>Amounts brought forward,</i>	\$13,294 54	\$34,046 94
Sanborn & Hatch, bricks	472 72	
Parry Bros. & Co., "	189 70	
John F. Ayer & Co., lumber	258 13	
I. H. Brown & Co., "	15 25	
S. W. Fuller, "	119 97	
C. W. Lyman, "	1 76	
A. Parker, catch-basin stones	733 00	
Osgood & Hart, covers	91 00	
F. H. Flagg, "	4 00	
W. O. Barbour & Co., traps	95 75	
Boston Lockport Block Co., blocks	3 10	
Miller & Shaw, tools	16 21	
Ira G. Hersey, "	5 54	
Perrin, Seamans & Co., maul	3 00	
Edson Manfg. Co., pump	70 00	
E. R. Cheeney, use of pump	125 50	
Bigelow & Dowse, tools	2 53	
Sylvester & Co., nails	1 30	
Whitney & Snow, hardware, etc.	203 50	
Howe & Flint, "	15 48	
J. A. Durell, "	14 97	
H. W. Raymond, "	100 55	
Thomas Groom & Co., book	6 50	
City of Boston, Water	40 00	
J. O. Hayden & Co., advertising	55 50	
McDonnell Bros., "	22 00	
Citizen Publishing Co., "	7 00	
John Fisher, buckets	9 75	
Levi Boles & Son, window	2 25	
Union Glass Co., reflector	40	
Charles Bartley, salt	50	
Barber & Stockwell, gate	55 00	
Boston Woven Hose Co., hose	31 38	
F. W. Gilbert, rubber boots	52 50	
George W. Trefren, Jr., carpenter work	15 32	
Seward Dodge, blacksmithing	23 66	
<i>Amounts carried forward</i>	\$16,159 26	\$34,046 94



<i>Amounts brought forward</i>	\$16,159 26	\$34,046 94
R. T. Blackwell, carriage hire	5 00	
J. S. Woods, keys	50	
Thorpe's Express, expressing	25	
S. Z. Bowman, disbursements	80 00	
Alfred Pitts, car fares	8 75	
City of Cambridge, five-ninths of expense of cleaning outlet and re- pairing Bridge street sewer	1,455 86	
Dennis C. Collins, teaming	36 75	
Timothy T. Cummings, teaming	10 76	
Jeremiah McCarthy,	81 40	
A. M. Prescott,	775 26	
Water Works extension account, iron pipe and labor	82 32	
Andrew W. Bryne, constructing sewer in Boston street	172 01	
Andrew W. Bryne, constructing sewer in George street	125 00	
Andrew W. Bryne, constructing sewer in Hanson street	441 80	
Andrew W. Bryne, constructing sewer in Heath street	473 04	
Andrew W. Bryne, constructing sewer in Madison and School sts.	929 07	
Andrew W. Bryne, constructing sewer in Munroe street	186 95	
Andrew W. Bryne, constructing sewer in Temple street	291 40	
Christopher Burke, constructing sewer in Albion and Central sts.	408 18	
Christopher Burke, constructing sewer on Chauncey avenue	1,451 44	
Christopher Burke, constructing sewer in Curtis street and Fair- mount avenue	1,997 91	
Maurice Buttimer, constructing sewer in School and Montrose sts.	1,858 70	
<i>Amounts carried forward,</i>	\$27,031 61	\$34,046 94

<i>Amounts brought forward</i> . . . . .	27,031 61	34,046 94
Dennis C. Collins and Maurice Teny, constructing sewer on Highland ave. . . . .	3,926 96	
Richard Falvey, constructing sewer in Chauncey ave. . . . .	199 94	
Charles A. Mongan, constructing sewer in Central street . . . . .	678 25	
Charles A. Mongan, constructing sewer in Glen street . . . . .	257 62	
Charles A. Mongan, constructing sewer in Harding street . . . . .	86 30	
Charles A. Mongan, constructing sewer in Mason ave. . . . .	97 52	
Laying pipe . . . . .	20 00	
Dennis O'Connell, constructing sewer in Laurel street and private lands . . . . .	853 41	
Dennis Ryan, constructing sewer in Medford street . . . . .	178 76	
Sewer assessments, abatements . . . . .	716 57	
	<hr/>	<u>\$34,046 94</u>

SEWER ASSESSMENTS.

CREDIT.

Cash, received of sundry persons, assessments . . . . .	\$8,595 08
Sewers, assessments abated . . . . .	716 57
Balance, to debit in account 1890 . . . . .	15,928 09
	<hr/>
	\$25,239 74

DEBIT.

Balance from 1888 . . . . .	\$6,908 87
Sewers, assessments levied . . . . .	18,330 87
	<hr/>
	<u>\$25,239 74</u>

## SUPPORT OF POOR.

## CREDIT.

Appropriations, amount assessed . . . . .		\$14,000 00
Cash, received for support of paupers : —		
Of city of Boston . . . . .	574 00	
" Cambridge . . . . .	99 15	
" Haverhill . . . . .	18 75	
" Lowell . . . . .	19 85	
" Malden . . . . .	5 55	
" Newton . . . . .	2 05	
" Quincy . . . . .	54 90	
" Salem . . . . .	3 00	
Of town of Arlington . . . . .	34 68	
" Clinton . . . . .	23 50	
" Groton . . . . .	13 00	
" Leominster . . . . .	87 50	
" Methuen . . . . .	23 50	
" Northfield . . . . .	30 25	
" Oakham . . . . .	6 85	
" Stoneham . . . . .	32 00	
State of Massachusetts, support of		
State paupers . . . . .	546 47	
Burial of State paupers . . . . .	10 00	
Albert D. S. Bell, aid to paupers . . . . .	83 10	
Edmund H. Gooding, aid to paupers . . . . .	47 25	
John C. Harris, " " . . . . .	58 96	
O. S. Knapp, guardian, aid to paupers . . . . .	169 46	
Eugene McCarthy, " " . . . . .	17 00	
R. Y. Russell, guardian, aid to paupers . . . . .	169 46	
Frank Shevlin, " " . . . . .	33 00	
L. Roger Wentworth, guardian, aid to paupers . . . . .	53 39	
J. B. Eastman, amount refunded . . . . .	4 00	
Cornelius Kelly, aid to paupers . . . . .	20 00	
	<hr/>	2,240 62
<i>Amount carried forward.</i> . . . .		<hr/> \$16,240 62

*Amount brought forward,* . . . \$16,240 62

## DEBIT.

Cash, paid for support of paupers, viz: —

Commonwealth of Massachusetts . . . . .	\$877 75
Carney Hospital . . . . .	130 72
Danvers Lunatic Hospital . . . . .	1,104 40
Mass. School for the Feeble-minded . . . . .	169 46
Taunton Lunatic Hospital . . . . .	239 09
Worcester Lunatic Hospital . . . . .	1,422 34
Worcester Insane Hospital . . . . .	677 86
Westboro Insane Hospital . . . . .	929 03
City of Boston . . . . .	814 97
" Cambridge . . . . .	62 68
" Chelsea . . . . .	6 90
" Lowell . . . . .	130 36
" Lawrence . . . . .	38 06
" Malden . . . . .	91 00
" Newton . . . . .	30 89
Town of Abington . . . . .	98 50
" Hyde Park . . . . .	26 90
" Peabody . . . . .	295 24
" Revere . . . . .	11 50
Mary Burke, rent . . . . .	72 00
Ira H. Bickford, rent . . . . .	25 00
John D. Collins, " . . . . .	10 00
Julia Casey, " . . . . .	48 00
T. F. Crimmings, " . . . . .	48 00
Ellen Downey, " . . . . .	60 00
Ellen Driscoll, " . . . . .	48 00
E. H. Elliot, " . . . . .	36 00
Martha Fitzgerald, rent . . . . .	60 00
Thomas Fleming, " . . . . .	48 00
Edward Foster, " . . . . .	48 00
Bridget Farrell, " . . . . .	6 00
Ann Gallagher, " . . . . .	60 00
Michael Grady, " . . . . .	24 00
Sarah Gill, " . . . . .	72 00
William E. Knight, " . . . . .	56 00

*Amounts carried forward* . . . \$7,878 65 \$16,240 62

<i>Amounts brought forward</i>	\$7,878 65	\$16,240 62
Margaret McNamara, rent	20 00	
John McGonagle, "	60 00	
John H. McFarlane, "	28 00	
Ellen McCarron, "	8 00	
Daniel Mahoney, "	15 00	
Mary O'Hare, "	48 00	
C. H. O'Neil, "	48 00	
Jose M. Soaves, "	48 00	
George H. Simonds, "	50 00	
Emily E. Rice, rent	60 00	
Maurice Terry, "	60 00	
Chester Williams, "	24 00	
Mary Ash, board	120 00	
Ellen Crowley, board	12 00	
Bradford Clapp, "	4 71	
E. H. Dunbar, "	39 43	
Ellen C. Eagan, "	120 00	
Catherine Earle, "	72 00	
John Earl, "	32 00	
M. A. French, "	62 14	
Sarah J. Hill, "	196 73	
Charles Hutchinson, board	39 00	
Ann Kelley, "	104 30	
Hannah M. Mayo, "	169 45	
Frederick J. Miller, "	60 00	
Ellen M. O'Donnell, "	104 30	
Elizabeth A. Powers, "	21 43	
Data G. Sawin, "	88 72	
Eugene Shea, "	130 33	
Martin Toye, "	39 00	
John Jenkins, "	10 50	
Charles S. Butters, groceries and provisions	5 00	
Charles Bartley, groceries and provisions	9 00	
A. F. Carpenter, groceries and provisions	15 50	
<i>Amounts carried forward</i>	\$9,803 19	\$16,240 62

<i>Amounts brought forward,</i> . . .	\$9,803 19	\$16,240 62
Christopher Bros., groceries and provisions . . . . .	11 50	
J. J. Drummond & Co., groceries and provisions . . . . .	52 50	
J. B. Eastman, groceries and provisions . . . . .	18 50	
George H. Hills & Co., groceries and provisions . . . . .	671 66	
Daniel E. Hennessey, groceries and provisions . . . . .	12 00	
James Harris, groceries and provisions . . . . .	8 00	
Knowles Bros., groceries and provisions . . . . .	142 75	
Lowell Bros., groceries and provisions . . . . .	29 00	
H. Lattimer & Co., groceries and provisions . . . . .	4 50	
A. Munroe, groceries and provisions	78 00	
Charles H. North & Co., groceries and provisions . . . . .	56 50	
Sartwell & Taylor, Trustees, groceries and provisions . . . . .	43 00	
P. T. O'Brien, groceries and provisions . . . . .	31 00	
N. H. Reed, groceries and provisions	41 50	
Sturtevant Bros., groceries and provisions . . . . .	156 50	
Charles A. Small, groceries and provisions . . . . .	100 00	
F. H. Turner & Co., groceries and provisions . . . . .	72 74	
P. H. Wellcome, groceries and provisions . . . . .	8 00	
William S. Ward, groceries and provisions . . . . .	400 95	
A. Fiske, crackers . . . . .	29 91	
<i>Amounts carried forward</i> . . . . .	<u>\$11,771 70</u>	<u>\$16,240 62</u>



<i>Amounts brought forward</i> . . .	\$11,771 70	\$16,240 62
Henry Gray, milk . . .	11 72	
Dunning & Underhill, fuel . . .	269 91	
S. M. Fuller, " . . .	12 40	
Horatio Wellington & Co., fuel . . .	235 64	
Philip Eberle, boots and shoes . . .	78 10	
W. J. Emerson, " " . . .	2 25	
F. W. Gilbert, " " . . .	38 35	
J. H. Mongan, " " . . .	12 25	
Charles F. Brine, dry goods . . .	25 00	
J. H. Brooks, " " . . .	51 00	
City of Cambridge, water . . .	5 00	
Aaron R. Gay & Co., stationery . . .	19 90	
J. O. Hayden & Co., printing . . .	9 50	
M. L. Tobin, directory . . .	2 00	
Allen Bros., rubber stamp . . .	5 00	
Charles A. Holmes, stove work . . .	1 58	
Jackson Caldwell & Co., furniture . . .	13 45	
W. C. Ireland, safe . . .	245 00	
A. T. Chappell, cleaning carpets . . .	3 57	
R. T. Blackwell, carriage hire . . .	4 50	
L. H. Brown, " " . . .	16 00	
H. M. Weld, " " . . .	5 00	
A. Ward Fellett, medical attend- ance . . . . .	10 00	
Emory L. White, medical attend- ance . . . . .	2 00	
A. M. Prescott, expressing . . .	13 50	
Charles E. Farnham, expressing . . .	15	
William A. Flaherty, undertaker . . .	50 00	
Alfred E. Mann, " . . .	10 00	
E. H. Marsh, " . . .	5 00	
Patrick H. Rafferty, " . . .	10 00	
Horace D. Runey, " . . .	27 00	
Charles C. Folsom, salary as agent . . . . .	1,200 00	
Charles C. Folsom, disbursements . . .	153 45	
<i>Amounts carried forward</i> . . .	\$14,319 92	\$16,240 62

<i>Amounts brought forward</i> . . . . .	14,319 92	16,240 62
Frank W. Kaan, salary as secretary . . . . .	250 00	
Frank W. Kaan, extra services . . . . .	35 00	
W. D. Hayden, services . . . . .	6 00	
	<hr/>	
	14,610 92	
Relief and burial of indigent soldiers and sailors transferred . . . . .	500 00	
	<hr/>	
	15,110 92	
Excess and deficiency, balance to credit of account . . . . .	1,129 70	
	<hr/>	
		<u>\$16,240 62</u>

## SCHOOL FUEL.

## CREDIT.

Appropriations, amount assessed . . . . .		\$7,000 00
Miscellaneous account, fuel . . . . .		31 25
		<hr/>
		\$7,031 25

## DEBIT.

Cash, paid B. F. Wild, fuel . . . . .	\$2,041 57	
Horatio Wellington & Co., fuel . . . . .	2,104 29	
Dunning & Underhill . . . . .	1,932 79	
Joseph S. Brown, labor . . . . .	2 50	
	<hr/>	
	6,081 15	
Excess and deficiency, balance to credit of account . . . . .	950 10	
	<hr/>	
		<u>\$7,031 25</u>

## SCHOOL TEACHERS' SALARIES.

## CREDIT.

Appropriations, amount assessed . . . . .		\$40,000 00
City of Boston, water rates transferred . . . . .		51,470 91
Excess and deficiency, balance to debit of account . . . . .		1,594 58
		<hr/>
		93,065 49

## DEBIT.

Cash, paid salaries . . . . .		<u>\$93,065 49</u>
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## SCHOOL CONTINGENT.

## CREDIT.

Appropriations, amount assessed . . . . .		\$18,000 00
Cash, received of Francis Hollis, for tuition of non-resident pupils . . . . .	\$67 50	
W. L. McKenzie, for tuition of non-resident pupils . . . . .	15 00	
William S. Dame, for tuition of non-resident pupils . . . . .	12 50	
C. E. Meleney, injury to books . . . . .	1 60	
Jabez Gott, janitor's salary not paid . . . . .	6 67	
Cambridge Gas Light Co., discount,	91	
	<hr/>	104 18
Excess and deficiency, balance to debit of account . . . . .		2,451 82
		<hr/>
		20,556 00

## DEBIT.

Cash, paid Clarence E. Meleney, salary as superinintendent of schools . . . . .	\$2,500 00	
Disbursements . . . . .	28 20	
Janitors . . . . .	6,448 36	
L. H. Snow, truant officer . . . . .	850 02	
Jairus Mann, truant officer . . . . .	50 00	
D. Appleton & Co., books . . . . .	293 09	
Warren T. Adams, " . . . . .	65 63	
Allyn & Bacon, " . . . . .	69 50	
F. M. Ambrose, " . . . . .	95 25	
A. S. Barnes & Co., " . . . . .	299 11	
E. H. Butler & Co., " . . . . .	58 92	
Bay State Publishing Co., " . . . . .	22 40	
Clark & Maynard, " . . . . .	5 55	
Charles H. Huff, " . . . . .	63 25	
Houghton, Mifflin & Co., " . . . . .	92 96	
Harper & Brothers, " . . . . .	668 67	
Harrison Hume, " . . . . .	480 20	
D. C. Heath & Co., " . . . . .	18 92	
B. A. Fowler & Co., " . . . . .	50 00	
	<hr/>	
<i>Amounts carried forward,</i> . . . . .	12,160 03	\$20,556 00

<i>Amounts brought forward</i>	.	.	\$12,160 03	\$20,556 00
Charles H. Kilborn,	books		5 93	
Ginn & Co.,	"		729 46	
Inter State Publishing Co.,	"		43 60	
J. G. Roberts & Co.,	"		36 37	
Lee & Shephard,	books	.	224 07	
Carl Schoenhoff,	"	.	123 42	
Silver, Burdette & Co.,	books	.	24 35	
Willard Small,	"	.	25 39	
Leach, Shewell & Sanborn,	books	.	403 25	
Charles W. Seaver,	"	.	9 60	
William Ware & Co.,	"	.	189 25	
Boston School Supply Co.,	supplies		303 34	
Thompson, Brown & Co.,	"	.	178 03	
J. L. Hammett,	"	.	122 14	
George F. King & Merrill,	"	.	1,695 61	
Prang Educational Co.,	"	.	1,179 06	
Thorp & Adams M'f'g Co.,	"	.	527 70	
Frost & Adams,	"	.	6 87	
Richard Schwartz,	"	.	7 73	
H. Lattimer & Co.,	"	.	3 67	
Stewart & Co.,	"	.	5 00	
W. O. Morgan,	"	.	2 00	
F. D. Seymour,	"	.	18 00	
Melton, Bradley & Co.,	"	.	3 00	
Wallace Bryant,	"	.	4 95	
E. J. Burt,	"	.	1 50	
Mead, Dodge & Co.,	"	.	9 94	
Paul A. Garey & Co.,	"	.	3 00	
George S. Perry,	"	.	202 58	
M. R. Warren,	"	.	1 60	
A. G. W. Will,	"	.	50	
H. W. Raymond,	"	.	272 50	
W. I. Heald,	"	.	2 70	
D. H. Rinn,	"	.	1 60	
W. H. Kelley,	"	.	1 14	
O. F. Page,	"	.	70	
<i>Amounts carried forward</i>	.	.	\$18,529 58	\$20,556 00

<i>Amounts brought forward</i> . . .	\$18,529 58	\$20,556 00
J. O. Hayden & Co., printing and advertising . . . . .	357 83	
Citizen Publishing Co., printing and advertising . . . . .	10 25	
McDonnell Bros., printing and advertising . . . . .	7 50	
F. A. Chandler, carpenter work . . . . .	4 30	
S. T. Kirk, " " . . . . .	3 90	
J. A. Durell, hardware . . . . .	85	
Richard Thompson, mats . . . . .	60 13	
P. Lyman & Sons, " . . . . .	34 00	
India Alkali Works, savogran . . . . .	3 60	
L. B. Miller, window polish . . . . .	4 00	
Oscar S. Howe, baskets . . . . .	12 12	
Eugene Berry, filling licktograph . . . . .	2 00	
Rand & Byam, soap . . . . .	7 98	
F. A. P. Fiske, stationery . . . . .	3 49	
Holden Book Cover Co., covers . . . . .	189 35	
National Department of the Interior, maps . . . . .	12 50	
A. G. Whitcomb, furniture . . . . .	54 70	
E. S. Tobey, post-office box . . . . .	1 00	
J. M. Corse, post-office box. . . . .	3 00	
New England Telephone and Telegraph Co., rentals and tolls . . . . .	22 90	
Boston Bank Note Co., diplomas . . . . .	104 09	
C. A. French, filling diplomas . . . . .	59 70	
E. S. Daniels, tuning piano . . . . .	6 75	
First M. E. Church, use of church . . . . .	100 00	
Thomas Young, flowers . . . . .	8 13	
L. H. Brown, carriage hire . . . . .	16 00	
R. H. Stearns, ribbon . . . . .	6 63	
John F. Hayes, " . . . . .	4 76	
George L. Baxter, " . . . . .	4 90	
H. L. Morse, " . . . . .	6 10	
M. J. Wendell, " . . . . .	6 47	
Sturtevant Bros., use of horse . . . . .	3 00	
<i>Amounts carried forward</i> . . . . .	<u>\$19,651 51</u>	<u>\$20,556 00</u>

<i>Amounts brought forward</i>	\$19,651 51	\$20,556 00
Barker & Tibbetts, expressing	12 30	
Charles E. Farhnam, "	5 45	
Gilman & Co., "	2 75	
E. R. Perham, "	2 95	
M. G. Staples, "	7 50	
Stelphen & Co., "	3 75	
Thorpe's Express, "	35 02	
A. M. Prescott, "	29 75	
Cambridge Gas Light Co., gas	136 98	
Charlestown Gas Co., gas	46 75	
City of Boston, water	597 29	
City of Cambridge, water	24 00	
	<hr/>	<u>\$20,556 00</u>

## SCHOOL-HOUSE INCIDENTALS.

## CREDIT.

Appropriations, amount assessed	\$13,000 00
Cash received of Crane & Woods, returned premium of insurance	18 75
Excess and deficiency, balance to debit of account	1,225 38
	<hr/>
	\$14,244 13

## DEBIT.

Cash, paid H. S. Brackett, carpenter work	199 05
N. C. Barker, carpenter work	1 65
F. A. Chandler, "	584 76
G. M. Starbird, "	892 58
Stephen A. Howe, "	158 63
Geo. W. Trefren, Jr., "	101 69
John D. Hills, "	59 06
Fred C. Fuller, "	50 75
S. T. Kirk, "	30 63
L. Arnold, "	26 75
S. & C. H. Williams, "	16 11
M. K. Norwood, "	4 50
	<hr/>
<i>Amounts carried forward</i>	\$2,126 16
	<hr/>
	\$14,244 13



<i>Amounts brought forward</i>	\$2,126 16	\$14,244 13
John Fuller, carpenter work	3 00	
Gordon & Packard, "	2 81	
Mark Loughton, "	2 40	
A. C. Winning, mason work	466 01	
D. P. Bucknam, "	335 05	
J. M. Burckes, "	34 87	
H. W. Covell & Co., plumbing	166 90	
S. W. Mann & Son, "	99 26	
Young & Maynard, "	90 44	
C. A. Legallee, "	17 48	
James F. Davlin, "	28 78	
J. E. Parsons, "	2 68	
C. W. Cahalan, "	2 70	
Dupont & Cote, "	1 00	
J. A. Merrifield, stove and furnace work	136 45	
J. W. Johnson, stove and furnace work	105 05	
H. C. Folger, stove and furnace work	15 53	
A. A. Sanborn, heating and ven- tilating apparatus	3,648 46	
Fuller Warren Company, heating and ventilating apparatus	508 00	
Walworth Manufacturing Com- pany, fittings	45	
Cotter Bros., slating	205 61	
L. C. Seavey, "	156 50	
M. Ryan, "	12 50	
Almeder & Morrison, painting	518 63	
J. H. Hollis, "	113 40	
William Neal, "	67 53	
J. C. Dyer, "	49 20	
Fred A. Norris, "	108 25	
Frank S. Norris, "	59 35	
D. W. McDermott, glazing	10 00	
J. Q. Twombly, "	7 03	
<i>Amounts carried forward</i>	\$9,101 48	\$14,244 13

<i>Amounts brought forward</i> . . . . .	\$9,101 48	\$14,244 13
John A. McDonald, glazing . . . . .	2 60	
S. W. Fuller, lumber . . . . .	634 40	
W. H. Wood, " . . . . .	47 78	
Page & Littlefield, lumber . . . . .	19 98	
I. H. Brown, " . . . . .	2 00	
C. W. Lyman & Co., tables . . . . .	22 00	
Walter Durell, door . . . . .	2 75	
J. L. Hammett, blackboards . . . . .	117 42	
E. T. Reed, papering . . . . .	20 89	
Fred Davis, plastering . . . . .	3 00	
Thomas Groom & Co., stationery . . . . .	4 50	
J. E. Bell, slated paper . . . . .	44 18	
Sarah E. Kilmer, furniture . . . . .	18 10	
A. G. Whitcomb, " . . . . .	129 48	
Jackson Caldwell & Co., repairs . . . . .	2 10	
H. A. Hartley & Co., carpets . . . . .	42 80	
Wm. H. Brine, shades . . . . .	11 10	
T. Derby & Co., chairs . . . . .	6 00	
Fred A. Cutter, clock . . . . .	6 50	
Daniel Crocker, clock and repairs . . . . .	67 50	
H. C. Manning, repairing clocks . . . . .	2 50	
John S. Hayes, desk . . . . .	30 00	
J. A. Durell, hardware . . . . .	409 66	
Charles A. Holmes, hardware . . . . .	282 03	
Howe & Flint, hardware . . . . .	139 14	
W. L. Snow, " . . . . .	72 15	
H. W. Raymond, " . . . . .	50 55	
Whitney & Snow, " . . . . .	16 81	
Z. Flemming, " . . . . .	21 26	
W. I. Heald, " . . . . .	7 62	
Warren E. Heath, " . . . . .	1 00	
H. R. Bishop & Co., ladders . . . . .	11 20	
M. C. Warren & Co., chair tips . . . . .	9 50	
Henry F. Crocker, hose, . . . . .	19 20	
Henry Burrage & Co., windows . . . . .	43 00	
William B. Berry & Co., ash barrels . . . . .	28 88	
<i>Amounts carried forward</i> . . . . .	\$11,451 06	\$14,244 13

<i>Amounts brought forward</i> . . . . .	\$11,451 06	\$14,244 13
Frank E. Fitts, ash barrels . . . . .	6 00	
B. F. Smith, repairing pump . . . . .	3 00	
S. J. Wood, keys . . . . .	28 25	
Jacob Woodbury, blacksmithing . . . . .	36 22	
Seward Dodge, blacksmithing . . . . .	1 50	
H. M. Weld, carriage hire . . . . .	6 00	
George W. Prichard, teaming . . . . .	50 00	
L. B. Angier, teaming . . . . .	18 00	
Albert B. Franklin, gaskets . . . . .	7 35	
R. M. Johnson, removing soil . . . . .	144 00	
Philip Eberle, rent . . . . .	312 50	
L. B. Jones, " . . . . .	307 10	
G. V. Haskell, agent, rent . . . . .	275 00	
H. Libby & Son, " . . . . .	204 00	
James L. Whitaker, " . . . . .	200 00	
Union Square Baptist Church, rent . . . . .	150 00	
First Baptist Society, rent . . . . .	120 00	
Anthony Haderbolets, " . . . . .	90 00	
P. O'Connell, labor . . . . .	64 44	
Edward O'Brien, labor . . . . .	46 00	
P. O'Brien, " . . . . .	38 00	
O. F. Page, " . . . . .	21 00	
W. H. Kelley, " . . . . .	20 75	
C. A. Southwick, " . . . . .	2 00	
Michael Burns, " . . . . .	17 50	
J. Deacon, " . . . . .	34 70	
G. A. Southworth, paid for cleaning . . . . .	8 63	
E. R. Perham, expressing, . . . . .	5 65	
M. G. Staples, expressing . . . . .	3 75	
Stilpin & Co., " . . . . .	3 00	
Gilman & Co., " . . . . .	25	
I. B. Kendall, premium of insurance . . . . .	138 27	
D. W. Bennett & Co., premium of insurance . . . . .	112 50	
H. W. P. Colsom, premium of insurance . . . . .	90 00	
<i>Amounts carried forward</i> . . . . .	<u>\$14,016 42</u>	<u>\$14,244 13</u>

<i>Amounts brought forward</i> . . . . .	\$14,016 42	\$14,244 13
S. H. Libby, premium of insurance,	90 00	
Crane & Woods, premium of insurance . . . . .	18 75	
Sidewalk assessments at Putnam street . . . . .	4 08	
Sewer assessments account, Glen street . . . . .	114 88	
	<hr/>	<hr/>
		\$14,244 13
		<hr/>

## SCHOOL-HOUSE IN WARD TWO.

## CREDIT.

Appropriations, amount appropriated by borrowing on funded debt account . . . . .	\$25,000 00
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## DEBIT.

Cash, paid Dearborn Bros. & Co., on account of contract and extras . . . . .	\$13,094 40	
J. E. Tobey, services as architect . . . . .	1,000 00	
George W. Prichard, filling . . . . .	542 50	
Patrick O'Connell, grading . . . . .	45 60	
Water service assessments, service pipe . . . . .	44 64	
	<hr/>	
	\$14,727 14	
Balance to credit on account, 1890 . . . . .	10,272 86	
	<hr/>	<hr/>
		\$25,000 00
		<hr/>

## MORSE SCHOOL HOUSE ADDITION.

## CREDIT.

Appropriations, amount appropriated by borrowing on funded debt account . . . . .	\$25,000 00
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## DEBIT.

Cash, paid Dearborn Bros. & Co., on account of contract . . . . .	\$4,320 00	
J. E. Tobey, services as architect, . . . . .	1,000 00	
C. A. Southwick, grading . . . . .	47 00	
	<hr/>	
<i>Amount carried forward,</i> . . . . .	\$5,367 00	\$25,000 00

<i>Amounts brought forward</i> . . . . .	\$5,367 00	\$25,000 00
Patrick O'Connell, grading . . . . .	15 60	
Crane & Woods, premium of insurance . . . . .	18 75	
Globe Newspaper Co., advertising, . . . . .	18 40	
Boston Herald Co., " . . . . .	9 50	
Boston Daily Advertiser " . . . . .	10 63	
	<hr/>	
	\$5,439 88	
Balance to credit on account, 1890 . . . . .	19,560 12	
	<hr/>	
		\$25,000 00

## TEMPORARY LOANS.

## CREDIT.

Balance from 1888 . . . . .		\$170,000 00
Cash, borrowed by authority of the City Council on city notes, as follows, viz:—		
Brewster, Cobb & Estabrook, on six months, at $3\frac{1}{4}$ per cent. . . . .	\$30,000 00	
Potter, Lovell Co., on eight months, at $3\frac{3}{16}$ per cent. . . . .	100,000 00	
Potter, Lovell Co., on five months, at $2\frac{5}{8}$ per cent. . . . .	100,000 00	
Brewster, Cobb & Estabrook, on four months, at $3\frac{1}{2}$ per cent. . . . .	100,000 00	
Commonwealth of Massachusetts, on six months, at $3\frac{1}{2}$ per cent. . . . .	50,000 00	
Commonwealth of Massachusetts, on four months, at 4 per cent., . . . . .	100,000 00	
	<hr/>	
		480,000 00
		<hr/>
		\$650,000 00

## DEBIT.

Cash paid in as follows viz:—		
Brewster, Cobb & Estabrook, note, dated Aug. 4, 1888 . . . . .	\$30,000 00	
Commonwealth of Massachusetts, note, dated Sept. 14, 1888 . . . . .	20,000 00	
Commonwealth of Massachusetts, note, dated Sept. 29, 1888 . . . . .	50,000 00	
	<hr/>	
<i>Amounts carried forward,</i> . . . . .	\$100,000 00	\$650,000 00



<i>Amounts brought forward,</i>	\$100,000 00	\$650,000 00
Commonwealth of Massachusetts, note, dated Dec. 18, 1888	50,000 00	
Commonwealth of Massachusetts, note, dated Dec. 31, 1888	20,000 00	
Brewster, Cobb & Estabrook, note, dated Feb. 14, 1889,	30,000 00	
Potter, Lovell Company, notes, dated March 14, 1889	100,000 00	
Potter, Lovell Company, note, dated June 6, 1889	100,000 00	
Brewster, Cobb & Estabrook, notes, dated Aug. 13, 1889	100,000 00	
	<u>\$500,000 00</u>	
Balance to credit in account 1890	150,000 00	
	<u>                    </u>	<u>\$650,000 00</u>

## TAXES.

## CREDIT.

Cash received for taxes in 1884	14 30	
“ “ “ “ 1885	64 22	
“ “ “ “ 1886	153 94	
“ “ “ “ 1887	38,148 16	
“ “ “ “ 1888	66,321 50	
“ “ “ “ 1889	347,621 00	
	<u>                    </u>	\$448,323 12
Overlay and Abatement:—		
Abatement on taxes for 1884	4 00	
“ “ “ 1885	6 00	
“ “ “ 1886	8 00	
“ “ “ 1887	362 24	
“ “ “ 1888	224 00	
“ “ “ 1889	1,731 00	
	<u>                    </u>	2,335 24
Balance to debit in account, 1890:—		
Being uncollected taxes for 1884	\$3,991 72	
	<u>                    </u>	<u>                    </u>
<i>Amounts carried forward</i>	\$3,991 72	\$450,658 36



<i>Amounts brought forward</i> . . . . .	\$3,991 72	\$450,658 36
Being uncollected taxes for 1885 . . . . .	5,102 82	
“ “ “ “ 1886 . . . . .	5,120 96	
“ “ “ “ 1887 . . . . .	5,445 72	
“ “ “ “ 1888 . . . . .	30,258 50	
“ “ “ “ 1889 . . . . .	90,972 40	
	<hr/>	\$140,892 12
		<hr/>
		\$591,550 48

## DEBIT.

Balance from 1888 . . . . .	\$151,226 08	
Appropriations, amount assessed for current expenses . . . . .	384,400 00	
State of Massachusetts, amount as- sessed for State tax . . . . .	27,560 00	
County of Middlesex, amount assessed for county tax . . . . .	21,367 03	
Overlay and abatement, amount added by assessors . . . . .	6,997 37	
	<hr/>	\$591,550 48
		<hr/>

## WATER MAINTENANCE.

## CREDIT.

Appropriations, amount assessed . . . . .		\$18,000 00
Cash, received of American Tube Works, pipe and fittings . . . . .	29 06	
Somerville Iron Foundry, old iron . . . . .	17 75	
J. P. Flaherty, old iron . . . . .	1 25	
Winchester Water Works, fittings . . . . .	11 62	
Niles Bros., labor, etc. . . . .	6 00	
Lorenzo W. Dow, manure . . . . .	24 00	
Jas. Gallagher, wages not called for . . . . .	4 38	
Andrew Gormley, “ “ . . . . .	1 75	
Patrick Doherty, “ “ . . . . .	1 75	
John Connelly, “ “ . . . . .	3 50	
Water services, transferred . . . . .	458 18	
	<hr/>	559 24
		<hr/>
<i>Amount carried forward</i> . . . . .		\$18,559 24

*Amount brought forward* . . . \$18,559 24

## DEBIT.

Cash, paid laborers . . . . .	\$7,063 72
Nathaniel Dennett, salary as super- intendent . . . . .	1,500 00
Disbursements . . . . .	58 46
Frederick W. Stone, salary as clerk . . . . .	250 00
Disbursements . . . . .	21 66
R. D. Wood & Co., iron pipe . . . . .	4,500 00
George D. Goodrich, drain pipe . . . . .	4 33
Somerville Iron Foundry, castings . . . . .	21 20
Chapman Valve M'f'g Co., gates, etc. . . . .	10 76
Boston Belting Co., rings . . . . .	7 63
Boston Bolt Co., wrenches . . . . .	1 44
Boston Woven Hose Co., conductor . . . . .	3 00
Boston & Lockport Block Co., blocks . . . . .	18 80
Sewall & Day Cordage Co., oakum . . . . .	6 64
Holyoke Hydrant & Iron Works, hydrant . . . . .	36 00
Jaques Bros., pattern work . . . . .	50 60
Chadwick Lead Works, lead . . . . .	78 94
Whittier Machine Co., valves . . . . .	19 50
J. Baker & Co., hooks . . . . .	2 55
Park Bros. & Co., steel . . . . .	1 43
R. K. Carpenter, bar . . . . .	6 00
John O'Brien, ties . . . . .	3 50
H. H. Harvey, tools . . . . .	11 35
A. J. Wilkinson & Co., tools . . . . .	7 60
William T. Wood & Co., " . . . . .	6 50
Perrin, Seamans & Co., tools . . . . .	7.15
H. W. Raymond, hardware, etc. . . . .	98 82
Whitney & Snow, " " . . . . .	83 45
Parker & Wood, " " . . . . .	20 00
W. I. Heald, " " . . . . .	5 75
J. A. Durell, " " . . . . .	1 35

*Amounts carried forward* . . . \$13,908 13 \$18,559 24

<i>Amounts brought forward</i>	\$13,908 13	\$18,559 24
Frank L. Young, oil	49 12	
Samuel Walker & Co., oil	34 97	
Vacuum Oil Co., oil and tank	40 80	
George H. Cowdin, drugs	2 65	
Thomas Hollis, " "	2 00	
Elias Lothrop, hoof ointment	4 00	
Alden Speare's Sons & Co., grease	5 85	
H. Wellington & Co., fuel	121 45	
J. A. Porter & Co., " "	1 25	
Sturtevant Bros., horse	200 00	
George R. Turner, wagon	20 00	
Seward Dodge, blacksmithing	123 53	
H. G. Collins, " "	43 73	
Charles Maguire, " "	29 80	
Jacob Woodbury " "	50	
Edward O'Brien, horseshoeing	32 25	
Timothy O'Brien, " "	23 75	
Proctor Brothers, grain	188 49	
Fulton O'Brien, " "	140 19	
A. D. Hoitt, " "	40 00	
A. M. Prescott, " "	21 13	
G. H. Hills & Co., oat meal	12 48	
James Bartley, " "	1 98	
P. H. Wellcome, " "	50	
E. Spalding, harness work	133 20	
H. Whittington & Co., harness work	11 63	
D. J. Bennett, enamel cloth	7 30	
Joseph Cogan, collar	6 00	
Hill & Cutler, waste	10 26	
Miller & Shaw, repairing gate	8 21	
Andrew J. Morse & Son, repairs	2 75	
Cotter Bros., repairing roof	14 56	
Fox, McDormand & Co., ladder	3 60	
Edson Manfg. Co., diaphragm	10 29	
Union Glass Co., reflector	8 25	
R. Warner & Co., brooms	2 00	
Jackson Caldwell & Co., furniture	4 25	
<i>Amounts carried forward</i>	\$15,270 85	\$18,559 24

<i>Amounts brought forward</i>	\$15,270 85	\$18,559 24
J. H. Brooks, dry goods	88	
S. W. Fuller, lumber	60 42	
John P. Downes, piles	6 75	
Richard Dowd, ventilator, etc.	78 20	
J. M. Burckes, mason work	82 63	
Amos Haynes, hogsheads	2 00	
Globe Gas Light Co., lanterns	11 00	
W. C. Ireland & Co., safe	275 00	
Boston & Lowell R. R. Co., freight	1 19	
J. O. Hayden & Co., advertising	11 00	
Thomas Groom & Co., stationery	49 95	
Fred W. Barry, " "	3 95	
George W. Trefren, Jr., carpenter work	72 28	
C. P. Peirce, plumbing	8 60	
R. Walsh, painting	21 50	
Charles A. Mongan, blasting	66 00	
S. J. Wood, filing saws	7 80	
D. Cutter, moving clock	1 00	
J. A. Lamkin, derrick	16 00	
Brown & Call, repairing wagon	23 30	
F. H. Flagg, " "	5 00	
John Linton, teaming	9 00	
L. H. Brown, carriage hire	13 00	
R. T. Blackwell, " "	5 00	
R. M. Johnson, removing soil	8 00	
N. E. Telephone & Telegraph Co., rentals and tolls	102 95	
West End Street Railway Co., labor	7 71	
Barker & Tibbetts, expressing	4 75	
Thorpe's Express, " "	2 15	
Crane & Woods, premium of in- surance	80 00	
City of Boston, water	15 00	
Cambridge Gas Light Co., gas	49 95	
Sundry persons, reporting leaks	7 00	
<i>Amounts brought forward</i>	<u>\$16,379 81</u>	<u>\$18,559 24</u>

<i>Amounts brought forward</i> . . . . .	\$16,379 81	\$18,559 24
Mary O'Brien, compensation for damages . . . . .	25 00	
Dominick Riley, compensation for damages . . . . .	10 00	
Estate of Samuel Littlefield, compensation for damages . . . . .	62 54	
George Watson, compensation for damages . . . . .	50 00	
J. O'Connell, compensation for running pipe through private land . . . . .	15 00	
	<hr/>	
	\$16,542 35	
Excess and deficiency, balance to credit of account . . . . .	2,016 89	
	<hr/>	
		\$18,559 24

## WATER WORKS EXTENSION.

## CREDIT.

Balance from 1888 . . . . .		\$5,661 11
Appropriations, amount appropriated by borrowing on funded debt account . . . . .		80,000 00
Cash received of S. Blaikie, blasting . . . . .	62 00	
Winchester Water Works, fittings . . . . .	14 01	
Patrick Hopkins, wages not called for . . . . .	1 75	
Nicholas Murphy, wages not called for . . . . .	1 75	
Sewers account, pipe, labor, etc. . . . .	82 32	
	<hr/>	
		161 83
		<hr/>
		\$85,822 94

## DEBIT.

Cash paid laborers . . . . .	\$21,577 86	
Cunningham Iron Works, constructing stand pipe . . . . .	5,844 00	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$27,421 86	\$85,822 94



<i>Amounts brought forward</i> . . . . .	\$27,421 86	\$85,822 94
Coon & Hall, on account of contract for constructing pumping station . . . . .	4,194 00	
Fessenden & Libby, on account of contract for constructing chimney for pumping station . . . . .	1,000 00	
Samuel D. Kelley, services as architect . . . . .	200 00	
M. M. Tidd, services as expert engineer . . . . .	200 00	
E. D. Leavitt, services as expert engineer . . . . .	50 00	
McNeal Pipe and Foundry Co., iron pipe . . . . .	15,772 83	
R. D. Wood & Co., iron pipe . . . . .	6,726 29	
Davis & Farnham, Mfg. Co., castings . . . . .	2,316 85	
Builders' Iron Foundry Company, castings . . . . .	2,145 65	
Somerville Iron Foundry, castings . . . . .	680 24	
Osgood & Hart, castings . . . . .	566 85	
Chapman Valve Mfg. Co., gates . . . . .	1,746 24	
Whittier Machine Co., gates . . . . .	486 00	
Walworth Mfg. Co., gate boxes . . . . .	62 90	
Jaques Brothers, patterns . . . . .	824 85	
Holyoke Hydrant and Iron Works, hydrants . . . . .	1,621 08	
Boston Lead Mfg. Co., lead . . . . .	1,508 31	
Chadwick Lead Works, lead . . . . .	226 12	
H. H. Harvey, steel . . . . .	21 44	
Gilmore & Eustis, rails . . . . .	6 23	
J. Baker & Co., spikes . . . . .	10 05	
Guptill & Steeres, machine work . . . . .	39 72	
Charlestown Chain Works, chain . . . . .	5 60	
City of Boston, offset . . . . .	10 29	
Sewall & Day Cordage Co., packing . . . . .	101 49	
<i>Amounts carried forward,</i> . . . . .	<u>\$67,944 89</u>	<u>\$85,822 94</u>



<i>Amounts brought forward</i>	\$67,944 89	\$85,822 94
Boston Belting Co., packing	4 40	
George H. Sampson, forcite	75 67	
Repanio Chemical Co., powder	15 60	
Charles A. Mongan, blasting	25 00	
Jeremiah McCarthy, excavating	124 58	
A. C. Richmond, use of derrick	219 00	
D. H. Smith, canvas	19 50	
George T. Goodrich, drain pipe	55 14	
Richard Dowd, heater, etc.	62 30	
George W. Trefren, Jr., carpenter work	45 02	
George T. Willoughby, carpenter work	18 32	
S. W. Fuller, lumber	321 39	
John F. Ayer, lumber	6 87	
H. W. Raymond, hardware	61 77	
E. Spaulding, harness work	9 10	
F. Dooris, blacksmithing	124 26	
Seward Dodge, blacksmithing	81 81	
George M. Winslow & Co., cement	165 00	
Walter M. Hadley, cement	123 15	
Waldo Brothers, cement	65 50	
Cambridge Gas Light Co., coke	16 39	
Horatio Wellington & Co., fuel	1 25	
J. A. Porter & Co., fuel	2 50	
J. J. Watkins, salt hay	25 10	
Samuel Walker & Co., oil	4 21	
J. O. Hayden, paid for freight	868 92	
N. E. Fitts & Co., wharfage	212 49	
William A. Bertsch, stone work	1,445 51	
Frank Buttimer, stone	189 75	
S. & L. R. Lombard, stone	199 64	
A. Parker, " "	77 50	
D. F. Griffin, stone-cutting	190 57	
Sanborn & Hatch, bricks	100 60	
Wood & Lee, mason work	1,056 50	
E. Horn, " "	19 50	
<i>Amounts carried forward</i>	\$73,978 70	\$85,822 94

<i>Amounts brought forward</i> . . . . .	\$73,978 70	\$85,822 94
Charlestown Gas Co., repairing pipe . . . . .	249 10	
Boston & Maine Railroad, freight	499 02	
George Patterson, compensation for damages . . . . .	5 00	
Nathaniel Dennett, disbursements	85 32	
Selwyn Z. Bowman, " . . . .	13 67	
Horace L. Eaton, " . . . .	14 97	
Owen Cunningham, teaming, etc. .	1,425 32	
Timothy F. Crimmings, teaming, etc. . . . .	738 31	
James Hoar, teaming, etc. . . . .	175 50	
George McKenna, teaming, etc. . .	153 50	
J. Manning & Son, " . . . .	288 80	
John Walsh, " . . . .	247 50	
Henry Gray, " . . . .	89 00	
Charles Booth, " . . . .	63 75	
John P. Downey, " . . . .	51 38	
Edward Fitzgerald, " . . . .	65 50	
John F. Elkins, " . . . .	85 00	
Daniel Hoar, " . . . .	28 75	
M. G. Staples, " . . . .	22 31	
Christopher Burke, " . . . .	10 00	
Paul Kelley, " . . . .	5 00	
Steele & Webster, " . . . .	4 46	
George H. Rogers, land on Bel- mont street . . . . .	2,327 50	
Benjamin R. Hafford, land on Lowell street . . . . .	865 70	
J. Walter Christie, land on Lowell street . . . . .	786 20	
	<hr/>	
	\$82,279 26	
Balance to credit of account, 1890	3,543 68	
	<hr/>	
		<u>\$85,822 94</u>

## WATER SERVICES.

## CREDIT.

Cash, received of American Tube Works, service pipe, etc. . . . .	\$16 02
Charles H. Bradshaw, service pipe, etc. . . . .	25 20
Hannah Crowley, service pipe, etc.	5 00
H. W. Covell, " . . . .	13 50
Francis Flint, " . . . .	78 79
N. Everett Fitz, " . . . .	12 30
Estate William C. High, service pipe, etc. . . . .	11 00
C. G. Kidder, service pipe, etc. .	10 15
Jonathan P. Lovering, service pipe, etc. . . . .	8 55
Middlesex Bleachery and Dye Works, service pipe, etc. . . . .	4 75
Patrick Mahoney, service pipe, etc.	7 20
William A. Muzzey, service pipe, etc. . . . .	9 89
McLean Asylum, service pipe, etc.	7 00
Thomas F. McGann, service pipe, etc. . . . .	17 25
L. Q. Niles, service pipe, etc. . .	27 62
Oren Ray, " . . . .	11 00
Adolph Reiner. " . . . .	12 30
Frank A. Titus, " . . . .	6 00
Walworth M'f'g Co., lining pipe .	19 60
A. W. Bryne, repairing service pipe . . . . .	9 33
J. J. Meany, wages not called for	2 19
Patrick S. McGlath, wages not called for . . . . .	4 00
Watering streets account, repair- ing stand pipes . . . . .	150 60
Public Grounds account, service pipe . . . . .	18 50
<i>Amount carried forward</i> . . . . .	<u>\$487 74</u>

<i>Amount brought forward</i> . . .	\$487 74	
Water service assessments, pipes laid, cost of services . . . . .	8,409 39	
	<hr/>	\$8,897 13

## DEBIT.

Cash, paid laborers . . . . .	\$3,361 93	
Boston Lead M'f'g Co., lead pipe	108 89	
Boston Bolt Co., bolts, etc. . . . .	41 00	
Boston Belting Co., washers . . . . .	2 95	
J. G. Marston & Co., washers . . . . .	6 56	
Somerville Iron Foundry, castings	701 74	
Davis & Farnham, castings . . . . .	98 10	
Chapman Valve Mfg. Co., valves	33 12	
Walworth Mfg. Co., pipe, tools, etc. . . . .	433 11	
Henry McShane & Co., fittings, etc. . . . .	517 68	
Sumner & Goodwin, fittings, etc.	1,274 18	
George K. Paul & Co., pipe, fit- tings, etc. . . . .	389 25	
Fred H. Holton & Co., fittings, etc.	538 56	
Braman, Dow & Co., pipe, fittings, etc. . . . .	306 03	
Dalton & Ingersoll, fittings . . . . .	20 00	
Andrew J. Morse & Son, fittings . . . . .	2 00	
Gilchrist & Gorham, fittings . . . . .	4 69	
Chadwick Lead Works, lead pipe . . . . .	95 84	
Guptill & Steer, mould, etc. . . . .	15 59	
John McCarthy, charcoal . . . . .	16 70	
Globe Gas Light Co., furnace . . . . .	11 25	
Samuel Walker & Co., naphtha . . . . .	1 00	
John Hallahan, files . . . . .	6 40	
A. A. Reed, tools . . . . .	4 00	
George O. Sanderson, torch . . . . .	5 00	
Jaques Brothers, patterns . . . . .	32 60	
Miller & Shaw, machine work . . . . .	50	
J. M. Burckes, mason work . . . . .	14 05	
	<hr/>	
<i>Amounts carried forward</i> . . . . .	\$8,042 72	\$8,897 13

<i>Amounts brought forward,</i> . . .	\$8,042 72	\$8,897 13.
A. J. Wilkinson & Co., hardware	8 61	
J. T. Guthrie, " .	9 00	
Charles A. Holmes, " .	4 75	
Dupont & Cote, " .	1 80	
Howe & Flint, " .	36	
W. I. Heald, " .	20	
J. A. Durell, " .	33	
H. W. Raymond, " .	1 35	
Sturtevant Bros., horse . . .	200 00	
Brown & Call, wagon . . .	92 25	
E. Teel & Co., wagon top . . .	45 00	
W. W. Winship, bag . . .	4 50	
David W. Crocker, repairs . . .	21 35	
W. F. Bennett, plumbing . . .	3 68	
Thorpe's Express, expressing . . .	2 10	
Barker & Tibbetts " . . .	70	
George T. Day, expressing . . .	25	
	<hr/>	
	\$8,438 95	
Water maintenance, balance trans- ferred . . . . .	458 18	
	<hr/>	
		<u>\$8,897 13</u>

## WATER SERVICE ASSESSMENTS.

## CREDIT.

Cash, received of sundry persons, water services . . . . .	\$8,052 62	
Balance to debit in account, 1890 . . .	2,102 79	
	<hr/>	
		\$10,155 41

## DEBIT.

Balance from 1888 . . . . .	\$1,746 02	
Water services, service pipes laid in 1889 . . . . .	8,409 39	
	<hr/>	
		<u>\$10,155 41</u>

## WATERING STREETS.

## CREDIT.

Appropriations, amount assessed . . . . .	\$3,500 00
Cash, received of abutters . . . . .	5,478 32
Excess and deficiency, balance to debit of account . . . . .	249 96
	<hr/>
	\$9,228 28

## DEBIT.

Cash, paid Nathaniel C. Barker, over- seeing . . . . .	272 00
Robert Farrell, overseeing . . . . .	142 00
Christopher Burke, watering . . . . .	345 15
Frank Buttimer, " . . . . .	345 15
T. F. Crimmings " . . . . .	360 00
Owen Cunningham, " . . . . .	334 80
J. F. Elkins, " . . . . .	358 65
Charles Faulkner, " . . . . .	409 50
Martin Gill, " . . . . .	431 10
Henry Gray, " . . . . .	347 40
Henry McAvoy, " . . . . .	377 55
George McKenna, " . . . . .	438 75
A. M. Prescott, " . . . . .	438 75
John Walsh, " . . . . .	437 40
John Downey, " . . . . .	202 50
City of Boston, water . . . . .	2,658 16
Studebaker Bros. Mfg. Co., water- ing cart . . . . .	400 00
Emery & Blaisdell, painting carts . . . . .	110 00
Seward Dodge, repairing carts . . . . .	380 03
L. A. Wright, " " . . . . .	28 75
F. H. Flag, " " . . . . .	94 20
C. W. Ingalls, " " . . . . .	4 50
Fred H. Holton & Co., " . . . . .	6 94
Andrew J. Morse & Son, couplings . . . . .	30 00
Boston Woven Hose Co., hose . . . . .	49 50
Abbott, Downing & Co., hose . . . . .	3 00
	<hr/>
<i>Amounts carried forward</i> . . . . .	\$9,005 78
	<hr/>
	\$9,228 28



<i>Amounts brought forward</i> . . . . .	\$9,005 78	\$9,228 28
Old Colony Railroad Co., freight . . . . .	15 00	
E. Spalding, strap . . . . .	90	
Crane & Woods, premium of insurance . . . . .	40 00	
Water service account, stand pipes . . . . .	150 60	
J. O. Hayden & Co., advertising . . . . .	8 00	
McDonnell Bros., " . . . . .	4 50	
Citizen Publishing Co., " . . . . .	3 50	
	<hr/>	<hr/>
		\$9,228 28

## TABLE D.

## BALANCES DECEMBER 31, 1889.

Cash . . . . .	\$21,002 02	
City of Boston . . . . .	1,329 08	
Real estate liens . . . . .	55 44	
State of Massachusetts, State aid . . . . .	4,380 00	
State of Massachusetts, indigent soldiers and sailors . . . . .	602 50	
Sidewalk assessments . . . . .	6,855 04	
Sewer assessments . . . . .	15,928 09	
Taxes . . . . .	140,892 12	
Water service assessments . . . . .	2,102 79	
Public property . . . . .	1,410,660 86	
Excess and deficiency . . . . .		4,951 06
Funded debt . . . . .		952,500 00
Morse school house addition . . . . .		19,560 12
Overlay and abatement . . . . .		4,662 13
Overplus on tax sales . . . . .		102 13
Property and debt balance . . . . .		458,160 86
Sundry persons . . . . .		55 10
School-house in Ward Two . . . . .		10,272 86
Temporary loans . . . . .		150,000 00
Water works extension . . . . .		3,543 68
	<hr/>	<hr/>
	\$1,603,807 94	\$1,603,807 94



REPORT  
OF THE  
SUPERINTENDENT OF SCHOOLS.

# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN,  
Jan. 22, 1890.

Referred to the committee on printing, to be printed in the annual reports. Sent down for concurrence.

GEO. I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Jan. 22, 1890.

Referred to the committee on printing, to be printed in the annual reports, in concurrence.

CHAS. S. ROBERTSON, *Clerk.*

# SCHOOL COMMITTEE, 1889.

---

HON. CHARLES G. POPE, Mayor, Chairman, *ex-officio*.

ALBERT W. EDMANDS, President of the Common Council, *ex-officio*.

## MEMBERS,

### WARD ONE.

HORACE C. WHITE, M.D., 147 Perkins Street . . .	Term expires 1889.
H. P. HEMENWAY, M.D., 143 Perkins Street . . .	“ “ 1890.
S. NEWTON CUTLER, 28 Flint Street . . .	“ “ 1891.

### WARD TWO.

JAMES F. BEARD, 17 Prospect Hill Avenue . . .	Term expires 1889.
CHARLES I. SHEPARD, 33 Vinal Avenue . . .	“ “ 1890.
ALPHONZO H. CARVILL, M.D., 18 Bow Street . . .	“ “ 1891.

### WARD THREE.

Q. E. DICKERMAN, Highland Avenue . . .	Term expires 1889.
WILLIAM P. HILL, Sycamore Street . . .	“ “ 1890.
NORMAN W. BINGHAM, 235 School Street . . .	“ “ 1891.

### WARD FOUR.

H. P. MAKECHNIE, M. D., 238 Elm Street . . .	Term expires 1889.
MARTIN W. CARR, Craigie Street . . .	“ “ 1890.
MRS. ADDIE B. UPHAM, 21 Newbury Street . . .	“ “ 1891.

C. E. MELENEY, *Superintendent and Secretary*,  
55 Columbus Avenue.

Office hours, at Public Library, from 4 to 5 P. M., each day that the schools are in session.

## STANDING COMMITTEES, 1889.

---

*High School*—MESSRS. CARVILL, BINGHAM, DICKERMAN, BEARD, CUTLER, MAKECHNIE, WHITE, CARR.

*Schools in East Somerville District*—MESSRS. HEMENWAY, WHITE, CUTLER.

*Schools in Prospect Hill District*—MESSRS. CARVILL, SHEPARD, BEARD, MAYOR POPE.

*Schools in Winter Hill District*—MESSRS. HILL, BINGHAM, DICKERMAN.

*Schools in Spring Hill District*—MESSRS. CARR, MAKECHNIE, EDMANDS.

*Schools in West Somerville District*—DR. MAKECHNIE, MRS. UPHAM, MR. CARR.

*Rules and Regulations*—MESSRS. CUTLER, SHEPARD, HILL, CARR.

*Examination of Teachers*—DR. CARVILL, MRS. UPHAM, DR. HEMENWAY.

*Text-Books*—MESSRS. HILL, CARR, HEMENWAY, BINGHAM, BEARD, WHITE, SHEPARD.

*Music*—MESSRS. MAKECHNIE, BEARD, CUTLER, BINGHAM.

*Evening Schools*—MESSRS. SHEPARD, CUTLER, CARR, DICKERMAN.

*Drawing and Penmanship*—MESSRS. DICKERMAN, CUTLER, SHEPARD, MAKECHNIE.

*Industrial Education*—MESSRS. CARR, CUTLER, SHEPARD, HILL, MAKECHNIE, MRS. UPHAM.

*Approval of Private Schools*—MRS. UPHAM, MESSRS. DICKERMAN, BEARD.

*School Supplies*—MESSRS. WHITE, CARR, HILL, CARVILL.

*Finance*—MESSRS. BINGHAM, CARR, BEARD.

*Salaries*—MESSRS. HEMENWAY, HILL, CARVILL, CARR.

*Repairs and Heating Apparatus*—MESSRS. BEARD, MAKECHNIE, HEMENWAY, HILL.

*Additional School Accommodations*—MAYOR POPE, MESSRS. EDMANDS, CARVILL, WHITE, HILL.

*Fuel*—MESSRS. EDMANDS, MAKECHNIE, CARVILL.

*Examination of Ninth Class*—MESSRS. CARR, BINGHAM, SHEPARD, HEMENWAY.

*Examination of Eighth Class*—MESSRS. MAKECHNIE, CARVILL.

*Examination of Seventh Class*—MESSRS. BEARD, EDMANDS.

*Examination of Sixth Class*—MESSRS. WHITE, MAKECHNIE.

*Examination of Fifth Class*—MESSRS. CUTLER, HILL.

*Examination of Fourth Class*—MR. DICKERMAN, MRS. UPHAM.



# SCHOOL COMMITTEE, 1890.

---

HON. CHARLES G. POPE, Mayor, Chairman, *ex officio*.

CHARLES B. OSGOOD, President of the Common Council, *ex officio*.

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## MEMBERS.

### WARD ONE.

*H. P. HEMENWAY, M. D., 143 Perkins Street,	.	.	Term expires 1890.
S. NEWTON CUTLER, 28 Flint Street,	.	.	" " 1891.
HORACE C. WHITE, M. D., 149 Perkins Street,	.	.	" " 1892.

### WARD TWO.

CHARLES I. SHEPARD, 33 Vinal Avenue . . .	.	.	Term expires 1890.
ALPHONZO H. CARVILL, 18 Bow Street . . .	.	.	" " 1891.
JAMES F. BEARD, 17 Prospect Hill Avenue . . .	.	.	" " 1892.

### WARD THREE.

WILLIAM P. HILL, Sycamore Street . . .	.	.	Term expires 1890.
NORMAN W. BINGHAM, 235 School Street . . .	.	.	" " 1891.
Q. E. DICKERMAN, Highland Avenue . . .	.	.	" " 1892.

### WARD FOUR.

MARTIN W. CARR, Craigie Street . . .	.	.	Term expires 1890.
MRS. ADDIE B. UPHAM, 21 Newbury Street . . .	.	.	" " 1891.
GILES W. BRYANT, M. D., 396 Highland Ave. . .	.	.	" " 1892.

---

C. E. MELENEY, Superintendent and Secretary, 40 Greenville Street.

Office, 4 Walnut Street, corner of Bow street, Union Square. Office hours, from 4 to 5 P. M., each day that the schools are in session.

\* Deceased.

# STANDING COMMITTEES.

---

*High School.*—MESSRS. CARVILL, BINGHAM, DICKERMAN, BEARD, CUTLER,  
WHITE, CARR, HEMENWAY.

*On Schools in East Somerville District.*—MESSRS. WHITE, CUTLER, HEMENWAY.

*On Schools in Prospect Hill District.*—MESSRS. SHEPARD, BEARD, MAYOR POPE,  
CARVILL.

*On Schools in Winter Hill District.*—MESSRS. BINGHAM, DICKERMAN, OSGOOD,  
HILL.

*On Schools in Spring Hill District.*—MR. CARR, MRS. UPHAM, DR. BRYANT.

*On Schools in West Somerville District.*—DR. BRYANT, MRS. UPHAM, MR. CARR.

*On Rules and Regulations*—MESSRS. SHEPARD, CUTLER, HILL.

*On Examination of Teachers*—MRS. UPHAM, MESSRS. WHITE, DICKERMAN.

*On Text-Books*—MESSRS. BEARD, DICKERMAN, HEMENWAY, CARR, BINGHAM,  
WHITE, SHEPARD.

*On Music*—MESSRS. BEARD, CUTLER, BINGHAM, BRYANT.

*On Evening Schools*—MESSRS. DICKERMAN, CARR, CUTLER, SHEPARD.

*On Drawing and Penmanship*—MESSRS. DICKERMAN, CUTLER, SHEPARD, BEARD.

*On Industrial Education*—MESSRS. CUTLER, SHEPARD, CARVILL, MRS. UPHAM,  
MESSRS. HILL, CARR.

*On Approval of Private Schools*—MESSRS. OSGOOD, BEARD, MRS. UPHAM.

*On School Supplies*—MESSRS. CARR, HEMENWAY, CARVILL, WHITE.

*On Finance*—MESSRS. WHITE, BEARD, OSGOOD.

*On Salaries*—MESSRS. BINGHAM, SHEPARD, BRYANT, CUTLER.

*On Repairs and Heating Apparatus*—MESSRS. HEMENWAY, CARR, CARVILL,  
CUTLER.

*On Additional School Accommodations*—MAYOR POPE, MESSRS. CARR, BRYANT,  
CARVILL, OSGOOD.

*On Fuel*—MESSRS. HILL, CARVILL, OSGOOD.

*On Examination of Ninth Class*—MRS. UPHAM, MESSRS. BINGHAM, SHEPARD,  
HEMENWAY.

*On Examination of Eighth Class*—MESSRS. CARVILL, BRYANT.

*On Examination of the Seventh Class*—MESSRS. BEARD, OSGOOD.

*On Examination of Sixth Class*—MESSRS. WHITE, CARR.

*On Examination of Fifth Class*—MESSRS. CUTLER, HILL.

*On Examination of Fourth Class*—MESSRS. DICKERMAN, SHEPARD.

## SUPERINTENDENT'S REPORT.

*To the School Committee of the City of Somerville :—*

GENTLEMEN AND LADIES,—In conformity with established customs, and in compliance with your request, I have the honor to submit my second annual report upon the condition of the public schools for the year 1889, together with some educational problems, which it may be within your province to consider.

In presenting the report of the progress of education in our city during the past year, I am moved at the outset to express my appreciation of the spirit manifested in our schools; the cordial relations existing between the teachers and pupils, as I have had the opportunity of seeing it from day to day in my visits; the lively interest in the various departments of study, and the readiness with which the work has been taken up by all. I feel gratified for much that has been done; and yet I am not unmindful of the fact that I have fallen far short of what I hoped to do. I am more and more impressed with the limitations of human possibilities, and realize that without the encouragement, co-operation and support of my fellow-workers my usefulness would have been of little consequence.

The usual statistics, in detail, will be found in the appendix, a summary of which is as follows :—

Population of the city, United States census, 1885,	29,992
“      “      “      1889 (approximately) .	
Number of persons in the city between five and fifteen years of age in May last, as ascertained by the truant officer . . . . .	6,135
In East Somerville District . . . . .	1,173
“ Prospect Hill “ . . . . .	2,402
“ Winter Hill “ . . . . .	948
“ Spring Hill “ . . . . .	930
“ West Somerville “ . . . . .	682
Number between eight and fourteen years of age .	3,746

	High School.	Grammar and Primary Schools.	Total.
Whole number registered during the year . . . . .	420	7,337	7,757
Average whole number belonging . . . . .	388	5,568	6,956
Average attendance . . . . .	371	5,214	5,585

## VALUATION.

Valuation of the city, May 1, 1889 . . . . .	\$30,004,600
Real estate . . . . .	\$27,830,700
Personal estate . . . . .	2,173,900
Rate of taxation . . . . .	.014
Estimated value of school property . . . . .	448,721

## DWELLINGS.

Number of dwellings in the city, May 1, 1889 . . . . .	6,366
Number of dwellings constructed during the year, or in process of construction . . . . .	425

I had hoped that the Board would appoint a committee to prepare a report for the year, as it did in 1888, and leave the Superintendent to present the educational work from the teacher's side, with such comments as might seem necessary. By such a plan, which is followed in most cities, both would be free to present to the citizens the work and administration of the schools from all standpoints. The Superintendent is necessarily constrained in trying to present his own views, and, at the same time, fittingly represent the sentiments of the Board.

I have arranged this report so that the difficulty may be, in a measure, avoided by dividing it into three sections: 1. A Review of the Proceedings; 2. Our School System; 3. Educational Progress. The appendix contains statistics.

## SECTION I.

## REVIEW OF THE PROCEEDINGS.

The year 1889 opened with three changes in the School Board. The two *ex-officio* members, Mayor Burns and President Proctor, gave way to Mayor Pope and President Edwards, and Professor Brown, one of the oldest members of the Board, retired in favor of Mrs. Upham, of West Somerville. The resolutions passed by the School Committee of 1888, fittingly testify to the valuable services rendered the city and the schools by these retiring members.



## BUILDINGS.

*School Accommodations.*—Jan. 14, it was voted that all requests for additional school accommodations should be referred to the standing committee on that subject. One of the first matters of consideration by the School Board, was the condition of our school buildings, and the need of increased accommodations and better sanitary conditions.

Feb. 5, a very important special meeting was called for the purpose of formulating recommendations to be sent to the city government, and accordingly it was voted to ask the City Council to build a twelve-room building on or near the present Prospect Hill School lot for a new grammar school; an eight-room building at Concord square to further relieve Ward 2, and a twelve-room building on the high land of Spring Hill. At the same time, it was recommended that improved systems of heating and ventilating be adopted for all new buildings and for old ones as soon as possible. The Edgerly school building was especially mentioned in this request. In the meantime, it was found necessary to have temporary rooms for the relief of the Prospect Hill District.

Oct. 5, the Committee on High School recommended that a new building be erected on Central Hill for the English High School, which should be furnished with all the appliances, laboratories, etc., for science and manual training. This was referred to the Committee on Additional School Accommodations.

At the April meeting, the superintendent presented a report of his visit to Worcester, Springfield, Newark, Brooklyn, and Washington, which contained his observations and suggestions about school-house construction, ventilation, and sanitation. He described the Smead system and others, giving illustrations and reporting tests made. The following paragraphs of the report are here reproduced, as follows:—

“I have been investigating the subject of ventilation for a good many years, and have long been convinced that the proper heating and ventilating of our school-houses is one of the first considerations, proper physical and hygienic conditions being absolutely essential to education.

“The following facts are agreed upon by all authorities on sanitation:—

Ventilation implies the constant supply of fresh air sufficient to promptly remove the impure air resulting from exhalation.

Exhaled air is composed chiefly of watery vapor, carbonic acid, and organic matter.

The lungs produce an extremely active poison, which is thrown off by the exhaled breath. This renders confined air dangerous. Dr. Parker says, "It may be assumed that the quantity of air supplied to every inhabited room, should be great enough to remove all sensible impurities."

The organic matter which contributes towards vitiating the air, may be determined by the amount of carbonic acid present in a room, as they increase in the same proportion. According to Dr. Parke, a person weighing 160 lbs. gives off .7 cubic ft. of carbonic acid gas per hour; one of 120 lbs. gives off .6 cubic ft.; a child of 80 lbs. .4 cubic ft., which amounts may easily be increased by activity.

If a child exhales .4 cubic ft. of carbonic acid gas per hour, the supply of pure air necessary would be 2000 cubic ft., because that poisonous element becomes perceptible when one part is present in 5000 cubic ft., or .1 part in 500 cubic ft., and .4 part would require at least 2000 cubic feet. That would be  $33\frac{1}{3}$  cubic ft. per minute for each child.

Some authorities maintain a higher rate of fresh air, regarding this as a point when the impure air is perceptible. Others say that 20 cu. ft. is the danger point, and ventilation under these conditions is only "tolerable" and "less than desirable." The authorities agree that new buildings should provide for from 25 to 35 cu. ft.

The grade of school or age of children does not enter in to consideration, for the reason that young, active children consume air faster than larger ones, and have at the same time less physical strength to fight off the evil effects of bad air. Consequently they should be provided with as much pure air as the older ones.

The report concluded with the recommendation that a commission be organized to examine and report upon our school buildings. Dr. White, Dr. Carvill, Mr. Dickerman, and Mr. Carr were appointed a committee with power to organize such a commission.

## MANUAL TRAINING.

This subject has received considerable attention from the Board during the year. At the first regular meeting, Jan. 14th, the superintendent indicated briefly some of the matters which should engage the attention of the School Committee as early as possible, one section of the report being as follows:—

"It was quite generally understood when my election to this office took place that being an advocate of manual training, and



having had some practical experience in establishing certain of its features in the schools over which I had charge, I would endeavor to inaugurate a system here. I was encouraged by finding a strong sentiment in the Board in favor of some such modification of our Somerville course, and I have been very much gratified by the consideration of what I have already presented to the Board and by the support given to the beginnings that have already been made in the direction of *drawing, modeling, sewing, and the kindergarten.*”

“I think it has passed beyond question that the school system should furnish some form of manual training for every boy and girl.” I quote this from Dr. Samuel Eliot, ex-superintendent of schools, Boston, who has the reputation of being a conservative, and one who makes his decisions only after careful investigation and thought.

I. Such a system begins with the kindergarten. The kindergarten is being incorporated into the school system of many cities and towns in the country, and our own State is making good progress in this direction. This year Boston has made a large appropriation for this work. We should open kindergartens in every school district in the city and admit children four years of age. If you will permit me, I would like to quote from the last report of Superintendent Seaver, of Boston, which embraces in a few words all that I could say in support of my suggestion.

“1. On the intellectual side. The effect of kindergarten training as shown in highly quickened powers of observation; in the possession of clear ideas, derived chiefly from systematically guided observation; in the power to express these ideas well in conversation; in the great readiness with which the art of reading is learned; in the very considerable knowledge of numbers and their relations objectively acquired; in some knowledge of forms and colors; in a considerable development and discipline of the active powers, as displayed in the comparative ease with which the manual arts of drawing, writing, and slate work are acquired.

“2. On the moral side. The effects of good kindergarten training are traceable in the first manifestations of a sense of justice, one child learning to recognize the rights of other children as limitations on his own rights; in habitual acts of kindness and generosity, evincing a disposition to yield to others what may gratify them but cannot be demanded by them as a matter of right; in polite manners; in truthfulness, its opposite never being fostered by harsh discipline; in an eager desire to please the teacher; and finally, to refer to a characteristic which may certainly be ranked as a virtue, in personal cleanliness and neatness.”

II. It is important that the *primary schools* should also afford training of the same character. To do this, every teacher should

understand the work of the kindergarten, because the occupations and gifts, as well as the exercises for physical training, constitute what is necessary for such a course. This can be accomplished by a series of lessons given to the primary teachers by someone who has had the training and the experience. This is now being done in Boston, and has been done elsewhere.

III. For the *grammar classes* in addition to the sewing, we should introduce drawing with instruments in the higher classes and construction in suitable material for all classes. The material may be clay, paper, cardboard, box-wood, white-wood, pine, cherry, etc. The tools should be scissors, knives, scroll saws, carving tools, and, possibly, carpenters' tools. I should like to see a room in each district for such work, but think that if one room in the city could be fitted up, we might for the present have classes from all the districts by turn use it, as in New Haven, Springfield, Paterson and many other places. The expense would not be very great.

IV. *For the High School.* I see no way of introducing any new subjects in the High School as it is now constituted and in the present building, but I firmly believe that there should be a manual training course for High School students. Such a course would require another building. We should in September introduce *drawing, freehand and mechanical.* We should have laboratories for Natural Philosophy, Chemistry, and Photography. We should have a laboratory for wood work, including carpentry, carving, turning, pattern-making. Appliances for metal working should be added later. For the girls, lessons in domestic economy, including cookery, should be provided. This would require another room, which should be fitted up with gas-stoves, etc. The present course could be modified to admit this. I have the testimony of the High School teachers that many of the students need such training as this would give them.

Jan. 28. The Committee on Industrial Education reported as follows :

That they have been making inquiries, and are continuing their investigations, to ascertain the expense of introducing some features of manual training. The estimated cost of furnishing a kindergarten, with necessary apparatus and material, is about \$70. We have the equipment for five kindergartens. The salary of the teachers is the same as that of primary teachers. The cost of sew-

ing is practically nothing beyond the salaries of the teachers, now \$1000. The cost of fitting up a room for wood work would be about \$500, a room for cooking, from \$300 to \$400.

To ascertain the sentiments of the High School students, the following circular letter was sent to them in January :

After stating that replies would be optional, that the inquiry was designed to inform the school authorities as to the sentiments, preferences, and needs of the students educationally, and, as far as possible, the wishes and opinions of the parents ; it asked them to state name, residence, class, course, studies now pursued, which studies are least enjoyable, which department of scholastic work is preferred. Also the following :

“ Do you intend to enter a higher institution, or to take a course of studies after graduation? If so, what?

“ What profession or occupation do you think your abilities or talents qualify you to pursue?

“ Have you any taste for drawing? Are you interested in art, architecture, machinery, or other constructive work?

“ Do you possess a ready faculty for construction or handiwork?

“ Have you ever used drawing instruments or tools of any kind? If so, what, and with what success?”

The five following questions were intended for the girls only :

“ What instruction have you had in needle-work? What is your candid judgment of your skill in such work?

“ Do you make any of your own garments?

“ What instruction have you had in preparing food for family use, in the value or cost of the various articles of food?

“ What articles of food can you prepare for table use?”

The following were designed for all :

“ Would you like to receive, or do you feel the need of instruction as a part of the High School course, in any of the branches above suggested? If so, what?

“ So far as you know, would it meet the approval of your parents?”

A summary of the replies to the questions showed in the case of the girls :

Number replying	216
“ in Regular and Classical Courses	143



No. in English Courses . . . . .	73
“ intending to go to college . . . . .	12
“ “ “ teach . . . . .	24
“ who can do some needle-work . . . . .	172
“ “ “ “ “ cooking . . . . .	129
“ “ would like to have manual training in High School . . . . .	187
Number whose parents approve its instruction, — practically all.	
As to the boys :	
Number replying . . . . .	132
“ in Regular and Classical Courses . . . . .	100
“ “ English Courses . . . . .	32
“ intending to go to college . . . . .	36
“ “ “ “ “ Institute of Technology . . . . .	17
“ “ “ teach . . . . .	1
“ who have chosen their profession or business . . . . .	36
“ “ want military drill introduced . . . . .	80
“ “ “ manual training . . . . .	102
“ whose parents approve, — so far as they know, — all.	

Very few had had any instruction in the use of instruments or tools.

Feb. 25. The Board voted to adopt the report of the Committee on Industrial Education, which recommended that sewing be continued in the grammar schools, on the plan pursued during the past year, that a room be fitted up for wood-work for the boys of the High School and some of the grammar grades, and that the Finance Committee include in the estimates for the fiscal year the sum of \$2000, to be expended for manual training.

April 29. The superintendent read a report of visits to several cities, a part of which was devoted to the subject of manual training. Descriptions were given of the work in drawing in the Worcester and Springfield schools; of the manual training school in Springfield, and of the construction and sewing in the grammar schools; of the Pratt Institute, Brooklyn; of the form study and drawing in Newark; and the kindergartens, drawing, sewing, and manual training work in Washington, D. C. In Washington, the kindergartens are a part of the primary schools, and no separate appropriation is made for their support. Drawing is progressing under the same system as used here, and at the other places visited. Sewing is

taught to all the girls of the grammar schools by six sewing teachers. There are *eight* cooking schools for grammar and high school girls. There are *nine* shops for wood and metal work for grammar and high school boys. Manual training in Washington has passed beyond the experimental stage.

## SALARIES.

Mar. 25. The truant officer's salary was fixed at \$900 per annum.

May 27. The Committee on Salaries reported a new schedule of teachers' salaries which was adopted. The schedule will be found under the subject of "Rules."

Oct. 28. The Board adopted a new schedule of salaries for janitors, in consideration of the extra work that has been required of them by the change of rules, viz. :

Joseph Young,	High School,	\$600 and rent and fuel.
W. H. Kelly,	Prescott School,	660
W. H. Denton,	Edgerly "	290
N. L. Pennock,	Davis "	220
" "	Brastow "	110
J. L. Whitaker,	Forster "	660 and annex \$60.
P. T. O'Brien,	Bingham "	250
A. M. Porter,	Cedar St. "	60
D. H. Rinn,	L. V. Bell "	715
E. T. Peterson,	Prospect Hill School,	330
A. Shiner,	Bennett "	220 less rent & fuel, \$140.
John Battles,	Jackson "	220 " " "
B. F. Sheridan,	Webster "	220 " " "
" "	Union "	60
James Deacon,	Cummings "	220
W. H. Laskey,	Morse "	400 for the present.
" "	" "	" when completed \$55 per room.
M. E. Bosworth,	Beech St. "	\$110
" "	Spring Hill "	60
H. A. Hills,	Franklin "	220
F. A. Hersey,	Burns "	250
F. B. Ashley,	Harvard "	60
W. H. Dennis,	Highland "	440
Stephen A. Howe,	Elm St. "	100 ten months.
O. F. Page,	Lincoln "	250

E. F. Reed,	Eberle Hall	“	50	ten months.
J. R. Gott,	Indep'ent Hall	“	50	“
Margt. F. Sullivan,	Som. Ave. Bg.	“	50	“
A. O. Taylor,	Bow St.	“	80	“

### TEXT BOOKS, ETC.

April 29th. It was voted to buy reference books for the High School as follows:—

- Brewer's Hand-Book of Biography and Literature.
- Gow's Companion to the Classics.
- Great Cities of the Ancient World.
- Richardson's American Literature.
- Lippincott's Biographical Dictionary.
- Fifteen Decisive Battles of the World.
- Chamber's Encyclopedia of English Literature.
- White's Herodotus.
- Stories of the Nations.
- Chamber's Science Manuals.

Also reference books for grammar teachers.

- Frye's Child and Nature.
- Parker's How to Study Geography.
- King's Methods and Aids in Geography.

May 27th. It was voted to buy copies of the following text-books for reference, and to supply them to the classes of the eighth grade, viz: Barnes', Butler's, Swinton's and Warren's Geographies; also for the high school, one set of the International Encyclopedia.

Oct. 5th. The following list of "Speakers" was recommended, and adopted at the next meeting, Oct. 28th.

- The Franklin Speaker.
- Columbia Speaker.
- Young American Speaker.
- Forbes' Five Minute Declamations.
- Forbes' Five Minute Readings.
- Carrington's Patriotic Speaker.
- Hoitt's Excellent Quotations.

It was also voted to supply each primary teacher with a copy of Wentworth's Primary Arithmetic.



## TEACHERS.

The appointment of teachers during the year was as follows by schools:—

Forster School: Annie L. Bennett, Clara A. Jordan.

Bingham School: Laura C. Duddy.

Edgerly School: Charles E. Brainard, principal, Gertrude L. Gardner.

Davis School: Annie J. Richardson.

Prospect Hill School: Lillian B. Wellington, Clara M. Smith.  
Lucia Alger, Nellie S. Dickey.

Eberle Hall: Mary S. Rinn.

Webster School: Clara B. Parkhurst, principal.

Burns School: Florence M. Hamlin.

Lincoln School: Carrie E. Fay.

## RESIGNATIONS.

Laura E. Giddings, High School.

Leila V. Colby, Forster School.

Cora Foster, Bingham School.

Edgar L. Raub, principal Edgerly School.

Florence A. Robinson, Davis School.

Nellie A. Hamblin, L. V. Bell School.

Augutas M. Houghton, Morse School.

Nelly W. French, Beach Street School.

Pauline A. Osgood, Lincoln School.

Hattie A. P. Roth, principal Lincoln School.

## GRANTED LEAVE OF ABSENCE.

Horatio D. Newton, principal Morse School.

Annie C. Thayer, Lincoln School.

Mary A. Osborn, Bingham School.

Josephine H. Short, High School.

## TRANSFERS.

Lizzie W. Parkhurst, Prospect Hill School to Brastow School.

Maria Miller, Brastow School to Prospect Hill School.

Charlotte I. Houghton, Prospect Hill School to Morse School.

Carrie E. Cobb, Webster School to L. V. Bell School.

Lucia Alger, Jackson School to Prospect Hill School.

Nellie S. Dickey, L. V. Bell School to Prospect Hill School.

## PHYSICAL TRAINING.

Jan. 14. At the first meeting of the Board, in an outline of the coming year's work, the Superintendent treated this subject as follows: "Physical training should constitute a part of the High and Grammar School curriculum. We are fortunate in having as members of the Board several medical men, who are the proper persons to organize a complete system of physical culture on scientific principles. I consider this as important as the intellectual training in our schools, because it is the body upon which the mind depends for all its acquisition and powers of expression. The development of physical education under the inspiration of Dr. Sargent, of Harvard, shows how important it is to conduct such a training from the physician's standpoint, or rather the physiologist's standpoint. The system should be graded to meet the wants of the growing child, just as our mental training has to be graded to correspond with mental growth. Other cities have advanced in this department of education, and I hope we may soon follow their example.

"I may be pardoned for just a word in support of my demands for more training, though much has already been said. Our work has been too largely *instruction* and too little *training*. When we consider that the chief business of the school is to fit young people for the activities, trials and duties of life, we see how important is training that develops power and endurance, as well as skill. It is not only a well-furnished mind, but a steady brain and a rugged body that a person needs to cope with the world. The training should develop the nervous system and the muscular system. A boy or girl should go out of our schools so strong that the change of duties, hours, and countless details of every work, the worry, the anxieties, the adversities, etc., could not break down the health or the spirits. The longer pupils stay in school, the greater the need of such training. A young lad gets his training in the rough and tumble of life: the youth never gets this experience, because he is above it when he goes out. Physical training and manual training will furnish the requisite experience, and our school system should embrace them both."

The Superintendent received invitations, which he extended to the Board, to attend an exhibition of the work at the Allen Gymnasium; and a lecture by Baron Posse on the Ling system of gymnastics.

The Committee on Physical Training have in consideration the adoption of a system for our schools, and the members have inspected work being done in other places. Their recommendations this evening are referred to the next School Committee.

## EXAMINATIONS AND PROMOTIONS.

Oct 28. The special committee presented a report, which was received and referred to the Committee on Rules and Regulations to be incorporated. As finally adopted, December 30, Chapter V. of the Rules is to be found under the following subject.

## RULES AND REGULATIONS.

Several important changes in the Rules and Regulations have been made during the year.

March 25. The following was adopted, amendment to Chap. I., Sec. 6 :—

“ All amendments to the Rules and Regulations must be proposed in writing, referred to the Committee on Rules and Regulations, and reported upon at a subsequent meeting of the Board. A majority vote of all the members of the Board shall be requisite for the repeal or amendment of any Standing Rule of the Board, or of any General Regulation of the Public Schools. Any rule or regulation of the Board may be suspended by a vote of two-thirds of the members present.”

Chap. IV., Sec. 7, was amended by substituting the word “ all ” for “ the ” in the third line. It now reads, “ The Committee on Additional School Accommodations and the Location of New Buildings shall, as frequently as necessary, consider and report upon all demands for new school buildings and recommend to the School Board suitable sites for the same.”

June 24. An amendment to Chap. VI., Sec. 4, was adopted, substituting for the first paragraph thereof the following :—

“ The schedule of salaries shall be as follows for the grammar and primary grades :

For the first year of teaching,	\$300
“ second “ “	350
“ third “ “	400
“ fourth “ “	500
“ fifth and subsequent years	the maximum.

The maximum salary for Principal's assistants shall be \$675 ; for all others, \$600."

On the same date, Chap. VI., of the Regulations, "Duties of Janitors" was changed.

Sec. 1 amended, by adding, "No sweeping shall be done during school hours."

Sec. 2, substitute the following: "To dust the furniture daily; the windows, blinds, walls, and ceilings as frequently as directed by the Principal.

Sec. 3 amended, to require the windows to be cleaned five times each year instead of twice.

Dec. 30. Amendments to Chap. V., of the Rules, were adopted, so that it now reads as follows:—

## CHAPTER V.

### EXAMINATIONS, EXHIBITIONS AND PROMOTIONS.

SECTION 1. Public exhibitions or examinations of all the schools may take place in June, under the direction of their respective Sub-committees.

SEC. 2. Regular class promotions shall be made in the Primary and Grammar Schools at the end of the school year. Individual promotions may be made whenever, in the judgment of the teacher, the District Committee, and the Superintendent, the interests of the pupils require them.

No promotions shall be made to the High School from the Grammar Schools except at the beginning of each school year, in September; but pupils may be admitted to advanced standing at other times, if they are qualified to join existing classes.

SEC. 3. Promotions in the Primary Schools shall be made by the teachers and the District Committee.

SEC. 4. (A) In the High and Grammar Schools, the teachers shall record at least once each month their estimate of the oral and written recitations of each pupil in each study and also of those qualities that mark the diligent, faithful scholar.

(B) These estimates shall be indicated by one of the following terms:

Excellent,	E.	or	1 ;
Good,	G.	"	2 ;
Fair,	F.	"	3 ;



Poor,	P.	“	4;
Very Poor,	V. P	“	5.

SEC. 5. (A) All pupils recommended by their teachers and the Principal of the school to which they belong, as having been dutiful, diligent, and faithful during the year, as shown by the record, and as being qualified to do the work of the next grade shall be promoted.

(B) The question of the promotion of the pupils not recommended by their teachers shall be decided by the sub-committee, the Superintendent and the Principal; the age, character, capacity, and best interest of the pupil being considered, as well as the records of the teacher.

SEC. 6. Written test examinations may be given by the teacher, the Principal or the Superintendent, not as a basis of promotion, but for the purpose of showing results or indicating lines of instruction; no test in the Grammar grades to occupy more than one hour.

SEC. 7. (A) All pupils who have honorably completed the full course of study prescribed for the Grammar Schools, shall be entitled to admission to the High School on presentation of certificates to that effect signed by the Principals of the respective schools.

(B) The question of the admission of pupils to the High School who have not received certificates shall be decided by a committee consisting of the chairman of the High School Committee, the Principal of the High School, the Superintendent, and the Principal of the Grammar School of which the applicants were members; the age, character, capacity and best interests of the pupils being considered, as well as the records of the teachers.

(C) At the beginning of the school year there shall be an examination by the Chairman of the High School Committee, the Principal of the High School and the Superintendent, of such applicants for admission to the High School as have not been previously admitted.

SEC. 8. (A) Pupils in the High School who have honorably completed any of the regular courses of study to the satisfaction of the Principal, the Superintendent and the High School Committee, shall receive diplomas of graduation.

(B) Pupils who have honorably completed the Grammar School course to the satisfaction of the Principal of the school, the Superintendent and the District Committee, shall receive diplomas of graduation.



## SECTION II.

- I. School Accommodations.
- II. Courses of Instruction.
  - 1. High School.
  - 2. Grammar and Primary Schools.
  - 3. Drawing and the use of material. Report of Drawing Teachers.
  - 4. Construction.
  - 5. Sewing. Reports of Sewing Teachers.
- III. Manual Training for Boys.
- IV. Sloyd.
- V. Kindergartens.
- VI. Vacation Schools.
- VII. Training of Teachers.
- VIII. Methods of Teaching.
- IX. Physical Culture.
- X. High School Commencement.
- XI. Graduation Exercises of Grammar Schools.
- XII. Evening Schools.

In this section I have taken a departure from traditional customs of school reports, and have omitted to dilate upon the statistics, which can speak for themselves, the merits of our schools, the excellence of the instruction and discipline, the faithfulness of our teachers — all of which is appreciated by the Board and the citizens — and the method of teaching the several subjects. I have also avoided dissertations upon the educational subjects as far as possible, and have taken the time to present what concerns Somerville now, and what, I think, should be done for the larger Somerville, which is in the near future. My way of looking at things is from the whole to its parts. I must comprehend the system in its entirety before I can make the proper adjustments and arrange the requisite details.

With a sense of the magnitude of the educational work to be accomplished, I have approached the subject as from an elevation, when the whole is spread out like a landscape. I am impressed with

the necessity of taking up the subject of education here as a great undertaking or grand campaign, of viewing it as a whole, a scheme which is to be worked out during a series of years, something which cannot be accomplished by one School Board, but which should be all mapped out according to a system, and established as a public policy. From such a view it will be a simple matter to do the details year by year as the means will allow. Everything done should be done with reference to the whole, and not as an isolated transaction, having no bearing upon the entire work. What I shall present in this section I may never see accomplished. It is not necessary that any one Superintendent should, provided the work is generally accepted. I do not suggest that it should be done at once, and probably it would not be best, even if it were possible.

I know something of the resources of the city and the temper of our people in view of any great work, and these two elements may not be equal to each other. I do not hesitate to present these views, because I know that the wisdom of the Board may be depended upon to undertake what can well be done, and that it is the part of wisdom to look at everything full in the face and on all sides.

I shall include incidentally brief statements of some of the features of our work as it is being done at present, in order to show the trend of the present system, and I have invited the special teachers to contribute reports of their work with this end in view.

### SCHOOL ACCOMMODATIONS.

We are beginning to realize, as never before, that Somerville is a city in every sense of the word. The situation, unsurpassed for its availability, its prospect, and its sanitary and healthy conditions, the administration of its affairs, its reputation for temperance and morality, and its advantages for the education of our children, have attracted, in large numbers, people seeking new homes. It becomes a wise people to so administer affairs as to meet the conditions incident to rapid and permanent growth, that all, old residents as well as new comers, may enjoy ample facilities and conveniences for complete living. The retiring City Government is justly to be commended for many wise enactments looking to the permanent improvement and attractiveness of our city. This is not the place to speak of the waterworks, highways, fire department, street lighting.

etc., etc. All these things increase the importance and dignity of the municipality and add to our responsibilities. But it is for the School Board to treat of school buildings and appliances. Two buildings are now in process of erection, one of eight rooms in Concord Square, in Ward Two, the other, an addition of six new rooms to the Morse School, on Spring Hill, in Ward Four. These will greatly relieve these two sections of the city.

In my last annual report I advocated the establishment of a new grammar-school district, the consolidation of small schools into fewer large ones, and the relief of the High School. It will be out of place to formulate again my reasons for these recommendations. Suffice it to say the conditions will not be materially changed by what has been done this year. Provision for a new grammar-school district has not yet been made, nor the increased demands of the High School met, and the necessity is just as great as it was last year. In planning for the erection of new school buildings, the needs of the whole city should be taken into account. It would be well for the School Board to formulate a general plan by which this can be done, taking a broad view of the situation as it exists, and considering the growth and continually-increasing needs of the school system. Such a scheme might be laid out as would settle the whole question of schoolhouses for many years to come, and each year's work would simply be a part of the general plan. Heretofore, schools have been established with reference only to the needs of the immediate vicinity, and the consequence is that we now have twenty-eight different buildings, some of them rented, when fifteen, or sixteen at the most, would answer the purpose admirably. The geography of the city presents important centres and outlying districts. These centres are now provided with large grammar schools, and the outlying districts are full of little isolated schools, which are so related to the central ones as to require constant interchange of classes, while they are deprived of many of the best advantages that the large schools possess.

In establishing the proposed general plan, it will be necessary to decide upon new centres and to consolidate the isolated schools. The map of the city may be laid out and the schoolhouses located. I would not alter very much the plan suggested last year. The Prescott, Bell, Forster, Morse, and Highland Schools are the grammar-school centres. The first three are large enough. The Morse is being enlarged, and will, when completed, absorb the Beech street



and Spring Hill Schools, thus filling it. The Highland building should be enlarged by the addition of four rooms to provide for the increasing demands of the district. These five grammar schools will be ample for their several districts. The purchase of a lot for the new Prospect Hill building is the first step toward the establishment of another grammar school, the importance of which has been frequently and forcibly set forth and fully realized by the Board and the community. This new school should include all the pupils who remain in the Prospect Hill School after the Concord-square school opens, the pupils of the Brastow and Jackson, with pupils from the Bell in the seventh, eighth, and ninth grades who reside in these districts.

The next consideration will be to provide for the increase of population in Ward Three. The land between East Somerville and Winter Hill is fast building up, and additional accommodations are already needed. If there were now no school between the Prescott and Forster, a point between Cross and Walnut streets would seem to be a central location for the establishment of a school, but the Edgerly School is so near that centre, and its immediate vicinity is being so rapidly built up, that the most feasible plan seems to be the enlargement of the Edgerly building by raising it one story, and adding four rooms. When this improvement is made, the necessary renovation of the warming and ventilating system can be effected. This looks toward the establishment of the Edgerly as a grammar school and would provide for the lower part of Winter Hill. But the erection of a new building north of Broadway will soon be necessary. We should also look forward to the enlargement of the Bingham School and the discontinuance of the Cedar-street, thus providing for the rapid growth of the upper part of Ward Three. The Burns, Cummings, and Davis Schools can be enlarged when occasion demands. The Concord-square School will probably become a grammar school in time, as it is a natural centre for pupils on that side of the Fitchburg Railroad. There should be no other new school buildings erected except to replace old ones, and these should be large enough to absorb the small schools in the vicinity. The school system by this plan would be organized in fifteen buildings. This would save expense, insure better grading, facilitate supervision, secure better discipline, improve the quality of the teaching, and provide better surroundings and appliances for the schools.

A whole chapter might be written to show the advantages of consolidation in these respects. In some towns, where the districts are thinly settled, it has been found economical to concentrate the school system in one or more large, well-organized schools, and transport the pupils daily to and from their homes. I have a personal knowledge of this plan, and know that it saves expense and improves the advantages of the pupils. It is much more desirable when the schools are near enough to their homes for the children to walk to and from school, as is the case in our city. My recommendation is that this or some specific plan be considered and adopted by the school board, presented to the public for consideration, promulgated and advocated as the policy of the city, and then be acted upon in future by the city government when school buildings may be needed. The other part of this scheme of organization pertains to the High School. In another section of this report will be found the account of the deliberations and reports of the committee on High School, touching this subject. The establishment of an English High School seems to be only a matter of time, and the board has begun the consideration of the plan none too soon. It is of such importance that much deliberation will be necessary, and the maturing of plans will require careful investigation and thought. The needs of the High School have been set forth in former reports, and each year makes the matter more urgent.

### COURSES OF INSTRUCTION.

So much for districts and buildings. The next consideration concerns the system of instruction.

#### HIGH SCHOOL.

The advantages of an English High School are to afford special training and instruction to pupils who do not expect to pursue a collegiate course, many of whom would be likely to take up some line of occupation immediately after leaving school. To such pupils several avenues are open; namely commercial pursuits, industrial occupations, scientific investigations, or technical institutions. This was so carefully and concisely treated in the last report of the School Committee that no space need be taken for argument at this time. In both the classical and the English schools a system of physical training should be established to complete the course in the



Grammar Schools, and military drill should be open to the boys. A liberal share of the time should be devoted to drawing and construction. Rooms and appliances should be furnished for all necessary forms of manual instruction and for research and experiment.

The course, covering three years, should embrace three lines of study, viz., literature, history, and mathematics, which might occupy twelve hours a week, or about half the time; work on wood or metal with tool instruction six hours, or two hours three days of each week; drawing, freehand and mechanical, four hours, two hours on two days of each week; military drill, two hours, and gymnastics one hour of each week. A special committee has been appointed to work up the details of this course, which need not be anticipated in this report. The rooms required would be physical, chemical, and botanical laboratories, a room for each of the following subjects: wood work, metal work, freehand drawing and modelling, mechanical drawing, domestic economy, history, and English language and literature, these last two requiring libraries also for their most effective and successful study.

Besides these there should also be a general library and art collection, a hall for gymnastics and drill, rooms for the principal and teachers, wardrobes, depositories, etc. The teachers required would be a principal (graduate of a scientific school), and special teachers of science, mathematics, history, English, mechanical and freehand drawing, and one all-round teacher; in all, four men and five ladies. If the English school should be located in a building near the present school, or if it were an addition to the present building, many of the appliances for laboratory work and drill could be available to the students of the classical school. The course in the classical school would follow the lines pursued at present, in which it excels as a fitting school. Much better work could be done if it were unencumbered with the English students. Every study room should be furnished with a library for reference, containing works on the subject pursued in said room. The value of this to the school would be inestimable. In connection with this should be good maps, plans, and illustrations to aid in the study of history.

The methods of teaching should require the maximum of work by the student and the minimum by the teacher. The fullest opportunities should be given for expression. In the High School the students are of an age when they are becoming somewhat reserved.

They are reluctant to express their ideas for fear of criticism ; there is likely to be an excessive modesty. The danger lies in the liability of the teacher to do too much reciting and of the pupil to acquiesce in the arrangement. This reserve should not be indulged, but rather the whole power of the student should be exercised in expression. Progress is being steadily made in developing this faculty in the students. To this end voice, culture and expression are occupying a more prominent part of the course. The value of reading as a means of expression was never better appreciated by all educators than it is at the present time. The foundation lies in the thought power of the speaker. The development of the thinking and feeling is the mainspring.

As another means of expression, drawing has been introduced this year. The lack of training in the elementary schools makes progress here slow, but a very good beginning has been made, which in the future will show good returns. The lessons in free-hand outline drawings are in connection with and based upon the study of *form*. The instrumental drawing is done by the students in connection with their geometry. Both are fundamental. All these lines of work must be continued and amplified.

#### GRAMMAR AND PRIMARY SCHOOLS.

In the Grammar and Primary Schools the greatest need is to reduce the number of pupils to a teacher. This will require careful consideration. It involves system of promotions by which the best pupils may advance more rapidly, a provision for the special instruction of backward and delinquent pupils, and possibly the organization in each school of an ungraded class. The presence of so many children over the average age in our lower classes is a very serious evil, and demands a remedy, both for the sake of the pupils and the teachers. The rooms are too large. Most of them contain seats for fifty-six pupils. There should not be over forty-two. Rooms large enough for that number would be ample. The course of study for these grades should be continued with only such modification as improved methods demand. We should improve and increase the facilities for drawing and kindred work, such as involves construction from material.

#### DRAWING.

Drawing, which has to do with the representation, the interpretation, the designing, and the adaptation of form, can only be taught

by the aid of studies of form in their various elements and applications, and by the use of material with which to create the realities which the drawing represents.

I invite your attention to the report of the Teacher of Drawing, which sets forth the work better than I could do.

#### REPORT OF MISS L. A. HERRICK, DRAWING TEACHER.

We began our actual work in form study and drawing in December of last year. From the beginning the work has been based upon the study of models and objects. The purpose has been to cultivate the observing powers of the learner, with the proper training of the hand to express what has been seen. This power of the hand to obey the eye will be found of the greatest value in all walks of life. The study of form and drawing is not to entertain the pupils, but to educate them, to make them better fitted to fulfil their post in the work of the world, to make them more useful, and therefore more valuable, men and women. It is not the children who have what is called a taste for drawing who are most benefited by the study of drawing, but rather those who have no taste in this direction, for these have most need of the training. One of the teachers, in a school where the children have but little done for them at home, said that as she watched the little hands trying to manage the scissors in a lesson on paper cutting, she was strongly impressed with the fact that school was the only place for these children to learn lessons of neatness and carefulness.

As we could not build without first laying a foundation, the work in form study in the three lowest grades had to be the same. The little ones begin with the three forms which seem to lie at the foundation of all form, the sphere, cube, and cylinder. Having studied a perfect sphere, the child goes on to make a sphere as nearly perfect as he is able, expressing his idea by means of clay, a medium especially adapted to the purpose. He is then taught to tell what he has seen and what he has done, using that universal means of expression — language. The child is learning his first lessons in accuracy and truth, truthfulness in seeing, in thinking, in doing, and in speaking. Then the little student in form learns to compare familiar objects with these type forms. “A chicken’s heart is like an ovoid,” triumphantly announced a small observer one Monday morning, after having watched the preparations for the Sunday’s dinner. It is the



old difference between eyes and no eyes in favor of the child who sees more, knows more, and is therefore happier. We cannot see the fruit of this training until those who are now primary children reach the high school.

In arranging the work for the grammar schools, it seemed best to make it substantially the same for the three lower classes, treating the three higher classes in the same way, only giving them, after the beginning, more advanced lessons. This year we have been able to grade the work more closely. We have endeavored to have the drawing always the expression of an idea. This makes it necessary to see before we draw. Many of our most valuable drawing lessons, so called, have been lessons in seeing. The drawing, the expression of the thought, should be free, not cramped nor labored. It has been with this end in view that we have had exercises in pencil-holding and arm-movement.

If we could accomplish what we wish, we would have every grammar school graduate able to make and read a working drawing of any ordinary object, and also able to make a representation of the appearance of this object. He should have an elementary knowledge of industrial design, which would imply knowing something of geometry, of harmony of color, and of historic ornament.

A beginning in drawing has been made at the High School. The classes are voluntary, formed of pupils who entered the school this year. We are doing what is really grammar school work. From this we hope to go on, advancing surely, if slowly.

Drawing should not usurp the place of other studies, but should help the other studies, making a harmonious whole of the development and education of the child.

The success of the work in this city, so far, has been due to the interest the Superintendent has taken in the subject, to his cordial support, and to the earnest, faithful work of the regular teachers. Too much cannot be said in praise of the spirit with which the teachers have taken up, if not a new subject, at least a new way of treating it, and I cannot close this report without expressing my grateful sense of the help and kindness which, from the first, they have freely given me.

L. A. HERRICK.

*Teacher of Drawing.*

## SCIENCE.

The elementary studies which are begun as observation lessons and culminate for the most part in the study of geography, need equally supplies of objects and materials for construction. The use of all these materials not only increases knowledge but exercises the faculties and develops skill. It elevates realism and retires formalism as exemplified in the old text-book methods. The place that this feature of educational work is to occupy in the elementary school is of growing importance. Its value as a means of instruction and training is little realized, and it is looked upon by laymen and by some pedagogues with skepticism. We are simply making a beginning, and no endeavors are made to force its introductions. It must have a natural growth. The use of material and the methods of teaching in the elementary schools follow naturally from the occupations of the kindergarten. Superintendent McAlister of Philadelphia, says in this connection, "While furnishing a system of educational training perfectly adapted to the conditions of childhood, its fundamental principles contain the root of a philosophy of education now truly in accordance with human nature, more complete, more practical than any system which has ever been devised. The kindergarten methods, which are not involved in the special process appropriate to little children, are applicable to schools of every grade; and it will be a happy day when these methods have forced their way into the primary schools, grammar schools, high schools and normal schools of the country. . . . I am sure that every department of our schools will by and by feel the inspiring influence which will flow from the presence of the kindergarten. The methods of instruction and discipline now followed cannot fail to be largely modified by its principles. No thinking mind, no intelligent instructor, can withstand the witness which the kindergarten bears against formalism and tradition and in favor of freedom and progress in education. May we not all hope that the kindergarten will prove the leaven that is to leaven the whole lump and help to raise our education to a higher plane of power and usefulness."

## CONSTRUCTION.

The occupations of the elementary school, including drawing, can be done in the ordinary class-room, since the materials used in construction do not necessitate the use of tools. It would be a very



good plan, however, to have a spare room in each school fitted up for the work in clay, and I hope at no distant day to be able to institute a course in modelling for all the grades of the grammar schools, and to have the facilities for its execution. If this could not be done, some rooms might be fitted up in a central location, where children could come from the several grammar schools once or twice a week.

#### SEWING.

Sewing is now taught to all the girls of the grammar school. The course is growing and developing. We are able to do more this year than last and we hope to have something to show in June that will convince the Board, if that is necessary, of the value of the work. Two sewing teachers are employed, who give all the instruction.

Our schools are so scattered that every hour in the week is occupied by both; one lesson being given to each class. The question has been asked whether this work cannot be entrusted to the regular teachers. While I do not wish to imply that our teachers do not know how to sew, or that they would not be willing to take up this new subject if asked to do so, yet I am firmly of the opinion that for the present at least the methods established and the results expected, can be better carried out by specialists who are wholly absorbed in the work than by a hundred teachers who never attempted such instruction in their lives. Sewing has been introduced into the schools of many cities, and in every case, so far as I have been able to ascertain, it is taught by special teachers. Experience has shown that this is the safest plan. I hope no change may be made in our present system until a careful investigation can be made. The work is arranged in a very carefully and well graded course, the result of a great deal of investigation, observation, consultation and study. The methods of teaching, though peculiar to the subject, are based upon the fundamental principles of education; they follow two lines of work, instruction and execution. The child must first form the clear idea of what is to be done, and then give expression to the idea in the work. It is accompanied by drawing, as any other construction is. Its aims are educational as well as practical. Its effect will be intellectual and moral culture, as well as deftness of fingers. On these points we may be able to report more fully in the future. I invite your attention to the reports of the sewing teachers.

## REPORT OF MRS. C. M. COFFIN, TEACHER OF SEWING.

Sewing was introduced to the schools of Somerville in October, 1888. We began with no definite system, simply requiring each child to furnish materials for a calico bag. The making of these bags eventually became uninteresting and tedious both to pupil and teacher. The instruction was not uniform, for the work was in all stages of progression. In November we adopted our present system which was recommended to us by the Superintendent. Through his efforts, instruction books were obtained, which have served as a guide, but modified more or less according to the judgment of the teacher. The work is necessarily slow from the short time allowed to each class—fifty minutes each week—and the large classes; but the need of instruction is great, the progress steady and the results at the close of the school year, in 1889, beyond the most sanguine hopes. The work of the year was confined to teaching the stitches that occur in the every-day sewing of a family. All preparing of the material and basting of the work is done by the pupils themselves, thus training the child to a clear mental conception of the object, as well as mechanical skill. Our method of teaching not only gives the pupil the ability to prepare the work and sew correctly and easily, but also secures attentive habits, thoughtfulness, accuracy and neatness. The work has been graded in the same manner as the regular school work, apportioning certain stitches to each year. It is so well systematized at this time that the results of the present school year can be confidently stated. The Fourth Grade learn the proper use of the needle and thimble, correct position of body, hands and work, and four or five different stitches, making at the close of the year a simple article without gathers. Grades Five and Six are taught enough additional stitches to make a garment with gathers, qualifying them to make nearly all articles of underwear with a little oversight. Grades Seven and Eight add to the previous work instruction in darning and patching, herring-bone stitch and button holes. Owing to the recent introduction of sewing to our schools, the present Ninth Grade will receive less than two years' instruction previous to their graduation, therefore, it has been deemed advisable not to confine these scholars to the work specially assigned for the grades, but to advance them as rapidly as is consistent with thoroughness, the work from September to January, including button

holes, setting a gusset, herring-bone stitch, sewing on a button properly and cutting one simple garment from measurement. This is all difficult work and in a crude state as yet, but will be perfected before the close of the school year. Every new subject is presented to the class as a whole, and the class instruction is continued until individual attention becomes necessary. When all the stitches combined in any one are learned that article is made in miniature. The sewing has certainly proved a success. The parents, many of whom were lukewarm or opposed, are strong advocates of it, and the scholars look forward to the sewing hour with pleasure, lamenting any curtailing of their time as a personal loss.

C. M. COFFIN,  
*Teacher of Sewing.*

#### REPORT OF MISS M. L. BOYD, TEACHER OF SEWING.

“Sewing was made a regular branch of instruction in September, 1888, was introduced into the fourth grade, and carried through the fifth, sixth, and seventh, each grade receiving a lesson of one hour per week. In January, 1889, it was carried into the eighth grade.

A graded system of work was commenced in November, 1888, all the classes beginning at the first stage and going on in practice together.

The pupils furnished, at their own expense, one half yard of cotton cloth, three spools of cotton, a thimble, and a paper of needles.”

I will omit the details of the course, which is almost identical with Mrs. Coffin's. Miss Boyd continues :

“Particular attention is given to the attitude of the pupil and the proper position of the hand and fingers while sewing; also the motion drill for each stitch, fastening end of thread and beginning of new, question on all class work, and the stitches used in making different articles of wearing apparel. They are also taught to make drawings of the different stitches.

The great advantage of having a graded course in sewing is that it gives each child the opportunity to learn every variety of stitch, which could be done less readily by bringing miscellaneous work from home.



It is not merely fine sewing that is wanted in our Public Schools, but a thoroughly practical knowledge of the uses of the needle and, that when a pupil has finished the course, she will be fitted to cut out and neatly make her own clothes and to keep them in good repair, thus training her to habits of order and neatness, enabling her to be of real assistance at home, to help to lighten her mother's cares, and fit herself to take charge of a home of her own.

Perhaps one of the most popular and successful departures in this branch of instruction has been the Evening Sewing Classes, held two evenings each week, in both the Luther V. Bell and Prescott Schools. The opening night was Nov. 11, at the L. V. Bell School. There have been about twenty-five girls registered at each building, and the number attending each night has ranged from twelve to twenty-one. The same course of instruction has been pursued as is used in the day classes, only it has not been generally given to the class as a whole, more individual instruction having been required to meet the needs of the pupils, some progressing much more rapidly than others, according to their previous knowledge of sewing. As soon as a pupil completes her set of stitches, she brings work from home, cut out and ready to make, or the material for a garment, and is taught to cut it out and put it together herself.

Darning and patching have been taught with success, as will be seen by the following :

A lesson in patching was given one evening, and a few nights later a pupil came to the teacher and said, "I am so glad I have learned how to patch, for to-day I took my little brother's trousers and patched them for him to wear out coasting, so he can save his good suit to look well to wear to school." The same pupil, who is only fourteen years old, keeps house for her father and two little brothers, and has been a regular attendant at the evening class since its opening. The girls are all interested in their work, and most of them are real earnest workers, anxious for the continuance of the class through January and perhaps February.

Respectfully submitted,

MARY L. BOYD.

*Teacher of Sewing.*

## MANUAL WORK FOR BOYS.

Ever since the introduction of sewing, there have been very urgent requests for some system of manual training for the boys, which may occupy them during the hour when the girls are sewing. This is a problem which has been solved in some cities and remains unsolved in others. Having observed quite widely and having had some practical experience in the matter, I think it would be comparatively easy to arrange a course that would be at once educative and practical. The only difficulties are in providing the rooms and meeting the expense. The course might include clay modeling, form construction from pasteboard or soft wood, bracket saw-work, and some features of sloyd.

## SLOYD.

This word, anglicized from the Swedish word "slojd," means hand-skill or handicraft. In Sweden it stands for every phase of manual training, but as adapted to the elementary schools for boys of 12 to 14 years, it is confined to work on wood with elementary tools. Classes in sloyd are taught regularly in the Industrial Schools and several of the grammar schools in Boston. Through the munificence of the Association that sustains the Industrial Schools in Boston, classes of teachers are being instructed regularly in this work. At the North Bennett Street School, two classes of Somerville teachers, male and female, receive instruction each week. The interest in it is very great, and all realize its educational value as never before. A brief explanation of the course, and the principles upon which it is based, may not be out of place here.

It embraces a series of models or objects to be made, in the construction of which the child learns the proper use of the tools employed and acquires strength and skill of hands. The series of models progresses from the easy to the difficult, from the simple to the complex, so that each new model grows out of the preceding. They are so simple that the child can make them unaided; the teacher is not allowed to put hand to a pupil's work. As they advance, more complex manipulations will be required and other tools may be employed. The models are to cultivate the pupils' sense of form and beauty. They are objects that can be made entirely of



wood and finished by the pupil. They must include articles that can be used at home. It is not necessary to enumerate them, as the lists vary in different schools.

Some of the principles upon which the course is based are thus stated by Dr. Solomon, Principal of the Normal School at Naas, Sweden. The work must fulfil the following conditions :

1. It must be useful, but not include articles of luxury.
2. It must afford variety ; must be real work and not play.
3. It must correspond with the capabilities of the pupils, and be capable of being carried out by the pupils unaided and with exactness.
4. It must admit of neatness and cleanliness, and become the property of the pupil.
5. It must assist in developing the ideas of form and of beauty ; must exercise the thinking powers, and not be purely mechanical.
6. It must strengthen and develop the bodily powers and allow the use of numerous manipulations and various tools, having for its practical aim the acquisition of general dexterity of the hands.

The education which sloyd has in view aims principally at instilling a taste for, and love of, work in general ; inspiring respect for rough, honest bodily labor ; training in habits of order, exactness, cleanliness, and neatness ; accustoming to attention, industry, and perseverance ; promoting the development of the physical power ; training the eye and sense of form.

As an exercise or occupation of school training, the advocates of sloyd instruction claim that it strengthens the muscles, affords relief from long-continued sitting and bad positions in school, promotes orderliness and exactness, cultivates attention and close application, trains to habits of industry and perseverance, accustoms the pupils to independence and self-reliance, and arouses the desire to work, and gives them something interesting and useful to work at.

This does not differ from the results claimed by other systems of manual training, nor are the principles upon which it is founded different in any essential particulars, except, possibly, in the fact that more account is made of the products of the work which, if carried too far, would enhance the value of the object to the disparagement of the training, and thus the product might become superior to the producer. Sloyd instruction seems to fill the gap between the application of kindergarten occupations in connection with form

study and drawing in the elementary school and the manual training-school proper, which takes boys of the highest grammar grades or of the High School.

Several of the Grammar principals have expressed a wish that a room might be fitted up for sloyd classes in their respective buildings. If this could not be done this year, one room might be furnished in a central locality, to which classes might be sent from the several grammar districts. Next year another school might be provided, and so on, till all are supplied. The cost for a class of 25 boys would be about \$350. Ten classes or 250 boys could use this room each week at a cost of \$1.40 per capita. There would be added to this the cost of instruction and material, amounting to about \$1000 or \$1200 more, say \$4.80 per capita; total first year, \$6.20 per capita. To this subject I respectfully invite the attention of the Committee on Industrial Education.

### KINDERGARTENS.

I wish to renew my recommendation in regard to the establishment of the kindergarten as a feature of our school system, by the admission of children under five years of age. The laws of the Commonwealth do not limit the school age to five years. This is only a rule of our Board, which may be amended in the usual way. There may not now be room enough for all children who would avail themselves of this opportunity, but they could be received in some of the schools. I would therefore recommend that the admission of such children be left to the discretion of the District Committees. This seems to me one of the most important steps, to be taken as soon as possible. There are districts in the city which need this provision more than others. Many people are obliged to leave their little ones in the care of school children or other incompetent persons, while they are engaged in work at home or elsewhere. Though we do not propose to convert our schools into day-nurseries, yet, for a year at least before entering the primary schools, these children should be receiving instruction suitable to their needs. Many of these children will be obliged to leave school at an early age to earn a living; the most of their education is obtained before reaching the higher grammar grades; if we can add the opportunity of a year's schooling where their minds and hearts may be cultivated as well as

their bodies cared for, we shall be doing a grand thing for them. On this subject, Supt. MacAlister has this to say: "The chief argument in favor of the kindergarten is that it enlarges the privileges of the schools where the greatest number can avail themselves of these benefits. It increases, by just so much, the possibilities of elementary education for the very large number of young children who now receive the smallest benefit from the schools. It is plain, therefore, that the kindergartens, while not organized exclusively in behalf of the poor, will inure chiefly to their benefit. They will provide educational opportunities that are immediately within their reach, and thus, while ministering directly to their good, cannot fail to exercise a salutary influence upon the well-being of the entire community. . . . The intrinsic merit of the training which is given to the child is the great consideration which should always be put foremost in discussing the claims of the kindergarten as a part of any system of education. . . . It is true that the kindergarten plants itself firmly upon the spontaneous activities of childhood, and recognizes the tendency to play as one of the strongest of these; but this is simply the starting point of the system. From this, as a postulate, it goes on to lay down a scheme of training which aims at the harmonious development of every power and faculty of man's being. Froebel, the philosopher of childhood, from whose fertile brain and glowing heart the kindergarten proceeded, was not the first to advance this large view of human education. Pestalozzi, following in the steps of the great line of educational reformers, which begins with Comenius, had proclaimed the true doctrine of human culture to consist in developing and training the physical, intellectual, and moral elements of man's nature, each in its relations to the others, into power and use. But it is the glory of Froebel that he, first of all, taught that this complete and symmetrical training must begin with the earliest days of childhood. The secret of the kindergarten is that it never loses sight of the fact that it is dealing with the undeveloped, untrained powers of a little child. It develops the body, it cultivates the senses, it strengthens the receptive, and calls into operation the active faculties of the mind; it trains the social feelings and makes each member of the little society feel that its happiness depends not upon itself alone, but is bound up with that of all its members. And all this is done by treating the child, not as a machine to be set in motion by the



teacher, but as a living, spiritual organism, which grows by the free use of its own powers, which gathers force from every effort that it puts forth, and which passes by insensible degrees from the spontaneous play of feelings and desires, to the conscious exercise of faculties that find expression in creating and doing, in the production of forms that are alike useful and beautiful, in the performance of acts that are inspired by love and duty.”

### VACATION SCHOOLS.

There is another problem that is worthy of the attention of the Committee, one which has been solved by some cities, and which must, sooner or later, find solution here. That is, some provision for the hundreds of children who are obliged to run our streets during the long summer vacation. It is well known to all that the vacation is a great burden to many mothers and children who are unable to find rest and recreation away from the noise and bustle of the busy streets of our city. There are the same arguments for maintaining vacation schools that there are for kindergartens, with this addition — that the pupils, being older, are nearer the age when school days are drawing to a close and every opportunity is precious. Besides, the physical condition would better conduce to comfort and moral improvement in a school than in the streets. I would suggest that voluntary schools be opened in the Franklin, Webster, and Jackson buildings, and possibly the Bingham and Cedar street. I would have two-hour sessions in the forenoon and afternoon of a term of six weeks.

The course of study should comprise largely object lessons, drawing and construction, reading and language, including spelling and writing, sewing for the girls, and some other form of manual training for the boys, with as little text-book work as possible, in fact, with no information study from text-books. It may not be possible to take up this work at present, but I suggest it for the Committee to think of for the future. At that time, or at any time, I shall be pleased to elaborate my views and plans for more definite action. I have only a word or two further on the subject at this time. I do not wish it to be understood that I would lengthen the school year. The present calendar has been established from the experience of many years and of many cities and countries. The rest periods are

absolutely necessary for teachers and pupils. I would be the last one to advocate depriving children of the opportunity for physical rest, for recreation, and growth to be enjoyed at country or seashore retreats, but for those less fortunate, who have to spend the long, hot weeks in city streets, kind mercy pleads for shelter and healthful occupation. The summer school should differ from the regular day school in the character of the occupations, and consequently in the faculties exercised.

From necessity, our regular work taxes the memory in the acquisition of knowledge from books. The vacation school should, on the other hand, relieve the memory of its usual labor, and exercise chiefly the observation and constructive faculties. It would be a great mistake to continue the regular work of our course of study, not only because it would disorganize the grading, but because it would be an overstrain upon those who continued the summer work, and, in fact, it is doubtful if a voluntary school could be maintained upon the same programme. Rest is change of occupation, and not the absence of all activity. Overworked faculties can be restored by the activity of other faculties. Elementary science, and manual training, and kindred work, with readings of nature, etc., should constitute the course in such a school. In the city of Newark, N. J., such schools have been maintained for four years. In 1887, the enrollment was 1482. That year Superintendent Barringer said: "The children were well, contented, industrious, and happy. The manual work in the line of sewing was, if possible, more interesting and satisfactory than in '86. There is here an excellent opportunity to give a large amount of hand training in modeling, drawing, writing, object handling, manipulation, etc. I would recommend that ample opportunity and means be afforded next season for greatly increased work in this direction." In 1888 the enrollment increased to 1849, of which number 1521 attended public school all the year, 291 came from private schools, and 37 had never been to school before. The Superintendent says, "No measure adopted by the Board of Education has given more complete satisfaction than the organization of these schools, three years ago, in those sections of the city where the families largely remain at home during the long summer vacation. It was a matter of great surprise to many to see the hundreds of children willingly and gladly crowding into these schools within one week after the close of the regular term in June.



It is taken for granted that children dislike generally to go to school. These summer schools seem to contradict this assumption. Children, almost without exception, when properly employed and instructed, love to be there, and will go from choice."

This is a subject for the consideration of the Committee.

### TRAINING OF TEACHERS.

There remains one other subject to be spoken of in this connection to complete, for the present, the general view of our school system as it looms up before us, a subject which must be considered at some time and is even now pressing itself upon our attention.

Forty per cent. of our teachers are graduates of Normal or training schools, seven are college graduates. Of the remaining number the majority were appointed after experience elsewhere. The others have become teachers without much preparation, except what could be gained by observation and practice as substitutes, and some of these are among our best teachers. In such cases they have had to learn by practice and experiment through varied and doubtful experience what they might have learned in a training school in less time and at less cost to the pupils experimented upon. With every graduating class the number of young ladies who wish to teach increases. I have advised all who come to me to take a course in some State Normal school or good city training school. Some have done so, while others are not able. There are now several graduates of this year visiting in the schools under my direction. We have no opportunity to give them instruction, but they pick up something. After several years' experience with training classes I can appreciate the value of such training and the painful and hopeless waste of time suffered by those who try to pick up what they can by visiting. I am in favor of appointing only trained teachers. I have been an ardent advocate of professional preparation for teaching for many years and have yet seen no reason to change my ground. This I know to be the sentiment of this Board.

We shall doubtless be able to secure experienced teachers to fill all our vacancies and may not have to resort to the establishment of a training school to supply our needs, as many cities do; nor am I prepared to advocate such a school here to give our High School graduates a technical education. It is sometimes argued that since a young lady has spent so many years in our schools the city is under

obligations to compensate her for that time by further fitting her to teach and giving her a position. It does not occur to her that she is under obligations to the city which has been to the expense of educating her in its schools.

There are, however, some considerations in favor of providing some training for our graduates who wish to teach and who cannot go from home to attend a normal school.

1. We are constantly in need of substitutes; the demand sometimes exceeds the supply. We are obliged to call in young ladies who may be waiting for such work and who have had no training. The result to the schools for the time, and often for longer, is demoralizing. It would be a great advantage to have substitutes at hand competent to take up the teacher's work.

2. Many of these graduates are naturally endowed for teaching; they are good material, of whom we ought to take advantage, and might be lost to the profession and to the city if we should not train and employ them. It is thus a method of procuring valuable teachers at less expense.

3. As the methods of teaching vary greatly throughout the State and in the several Normal Schools, we are constantly adding to our force those who do not work as we do and who may have to spend some time getting familiar with our system. If, on the other hand, we trained some of our own teachers, we could thus easily impress our principles and methods. This point is urged by many educators; but, in my judgment, has its limitations. It is always of great importance to bring in to the city teachers of valuable experience from abroad, with ideas fresh from other fields. A school system cannot progress that draws no sustenance from outside of itself, but reproduces only its own kind.

4. Inasmuch as the Normal Schools cannot supply teachers to meet the demand, it is argued that cities should aid the State by establishing training schools, as only in this way can we expect to furnish the whole State with trained teachers. Whether our city is ready to engage in such a public spirited undertaking, it is for her to say.

The state of the case is this — that graduates of our High School are constantly finding employment as substitutes, and gradually working into our schools as teachers, without the necessary preparation. The question is, can we afford it? This will continue unless we do something to fit them for the work.

It is for the Committee to say whether a class shall be organized. There are training schools or classes in the following places in Massachusetts: Adams, No. Adams, Cambridge, Chelsea, Gloucester, Haverhill, Lawrence, Leominster, Lowell, Pittsfield, Quincy, Springfield, and Weymouth. The best plan is to assign one of the regular schools as a training school, provide it with model teachers, supervised by a critic teacher or principal, and arrange a course of study and practice for the students. The course of study would embrace lectures and reading on educational subjects, including the history, principles, and methods of teaching. The practice would include observation and teaching under supervision. Such an institution may be remote, but the subject will bear thinking of. When it does come, a thorough investigation of the subject should be made and the experience of other cities obtained.

There are now several young ladies, some of them graduates of Normal Schools, who have been assigned to certain schools as visitors. I think it would be well to authorize the Superintendent to prepare some plan of systematic visitation, to be accompanied by a course of reading and a series of meetings. This should not be dignified by the name of a training class, but may do some good in a modest way. I invite your attention to the report of Mr. Walton in the Fifty-second Annual Report of the State Board of Education.

### METHODS OF TEACHING.

I have not taken up the various subjects of instruction pursued in the schools, because it would only lengthen the report and add little to its value. The methods of teaching have not materially changed except as new light has been brought to bear upon them and experience has taught improvement.

During the year much attention has been given to Observation Lessons, Reading, Language, Geography and Arithmetic, besides the special subjects mentioned elsewhere. Several grade meetings have been devoted to these subjects in which the teachers have taken part in the discussions. I have issued supplementary instructions on the methods and details of the work — by means of circulars on all these subjects. Extracts from these circulars I would like to have printed at some time and thus be in a convenient form for the teachers. Great interest has been taken in the meetings of the Teachers' Association, and we believe that happy results will follow



this institution. On these occasions aside from what we have had to say the teachers have heard from Hon. J. W. Dickinson, LL. D., Secretary of the Board of Education; Prof. Henry T. Bailey, State Agent for Drawing; Dr. C. W. Emerson, President of the Monroe College of Oratory; Mr. R. C. Metcalf, Supervisor of the Boston Schools; Mr. Charles F. King, Principal of the Dearborn School, and Mr. W. S. Parker, Master of the Everett School in Boston. It would give the teachers and the Superintendent pleasure to see more of the members of the Board present at their meetings.

The drawing teacher has had grade meetings to present the work and the methods in that subject, and has issued a series of circulars of instruction on the course and the use of the books and material. I am convinced that the teachers throughout the city are teaching this subject intelligently and effectively. I see a great interest in the work on the part of teachers and pupils, and the results we expect to show you at no distant day. The progress made in drawing and sewing is sufficient to convince us that the selection of teachers to conduct these important branches was very fortunate.

### PHYSICAL CULTURE.

As previously stated, this subject has been presented to the attention of the Board and has been assigned to a special committee for consideration. It has been brought to particular attention by the experiments going on in Boston through the generosity of Mrs. Mary Hemenway, who has established the Boston School of Gymnastics on the Ling system, by the public exhibitions at the Allen Gymnasium, by the exhibition at the Y. M. C. A. Hall in our own city, by the complete and conclusive report on the subject by the Boston Supervisors, and especially by the most successful educational conference ever held in the country on any one topic, the meetings in Huntington Hall, Boston, on Friday and Saturday of Thanksgiving week. This subject is of vital importance, as upon its disposition depends much of the future results of our educational progress. This is not too broad a statement when we consider that education comprehends and necessitates the harmonious development of the child physically, intellectually and morally, and that the education of the whole being is impossible without the proportionate education of the parts. Educators from the time of Solon to the present day have maintained this principle, and fortunate are we if even at this late day we may

realize its importance. On the other hand, there are men now living who consider it sufficient to let a child run wild to afford him all the physical development he needs.

Nature brings into the world beings physically and mentally perfect, endowed with instinct and intuition to enable them to begin a career of self-preservation and development. Nature surrounds this being with all the influences necessary for the beginning of that development. The instinct of play and the objects to play with develop the physical growth in natural ways, while it affords equal opportunities for the acquirement of knowledge and the development of the faculty of perception. As the child grows these advantages enlarge, and the necessity for directing the energy and providing the means increases. The history of the human race is the history of the development of the physical, mental and moral man, but the history of education is mainly the history of the development of the intellectual powers. The accumulated experience of all mothers in the training of their children would show that from the first dawning of consciousness the use of materials has been directed to the training of the mental faculties, while very little has been done to train the physical powers except possibly the use of the limbs in walking; in all other respects the child is left to nature.

We have no statistics to show the consequences of the neglect of physical training, that is, results that are chargeable to that cause, though much is made of the ignorance resulting from neglect of intellectual training. It is impossible to state what might be the results, both intellectually and physically, of proper physical training equal to that expended in mental development. The amount of physical degeneracy and death among children is more appalling than the consequences of the neglect of intellectual training. It remains a serious consideration whether the loss of health, lack of vitality and physical perfection, would not be greatly lessened by a systematic and scientific care and education of the physical being from infancy. One of the aims of education is to teach man how to continue his intellectual progress and develop a love for learning, yet few people either know how to preserve health or care enough about the acquirement of physical strength, proportion and efficiency to devote the smallest portion of their time to that end. I wish to call your attention to an admirable report on this subject, made by a special committee of the Massachusetts Medical Society, and pub-



lished in the Fifty-second Annual Report of the State Board of Education, from which I take the following paragraphs: "No child will achieve his best usefulness whose moral and physical powers are left uncultivated. It is not alone mental strength which is needed for successfully wrestling with the world. For the children who receive their only preparation for life in the Public Schools, it is true that much besides what is learned from books is necessary for success in life. Manual training has only of late begun to find a place in our school-rooms. It should be welcomed by physicians as well as by sociologists. Apart from the direct utility of sewing and cooking for girls, or of the use of tools for boys, there is a physical advantage in the training of groups of muscles to co-ordinated action; and disciplined muscular action is itself no slight stimulus to the brain. The time has come for further extension of this principle. Not only the brain, but the eye and hand, and not only these, but the whole muscular system should receive a training which will make the individual efficient in whatever field he elects to work."

A comparison of our children with those from across the sea indicates a lack of bodily strength and vigor, self-possession and self-control on the part of American children. I have had the opportunity of observing this during the last eight years, where I have come in contact with children of many European countries. Dr. E. M. Hartwell, of Johns Hopkins University, having spent some time in Scandinavia, said, recently, "In Norway and Sweden, school and military gymnastics have long been fully organized, and are obligatory. The teachers of school gymnastics in Sweden are, as a class, superior to those in Germany, being more thoroughly trained for their business. Accordingly, the effects of gymnastic training in the schools are more clearly discernible in the grace, vigor, and erectness of the Swedish school children."

The importance of physical culture has been recognized by educators in all times, especially in those ages when the value of education has been recognized as essential to the integrity of the State. In Athens the State took the direction of physical training, while the intellectual was left to private instructors. Education in Rome was physical and moral. The training was not for perfect physical condition for its own sake or for intellectual or moral results, but for practical purposes; the highest type of a soldier or a citizen must be strong and robust of figure, courageous, obedient, and devoted.

On the other hand, during the first century of the Christian Era, the body was regarded as the enemy of the soul, and was subjected to all manner of degradation, even to fasting and uncleanness. But with the Renaissance, the care of bodily health and the attention to development of strength and manly beauty was again established.

In the next century John Locke may be regarded as one of the foremost educators and advocates of physical training. No matter how radical may have been some of his notions on education in certain directions, his views of the importance of the laws of health, diet, clothing, simple habits of life, abundance of sleep, temperance, and little or no medicine, at the same time exercise in the open air, commend his thoughts to careful consideration. The influence of Locke's works may be seen to-day in the robust and athletic figure, the erect and dignified bearing, the fresh, healthy countenances of the Englishmen, especially the English gentlemen and the English ladies. To him also is due much credit for the place out-door sports occupy in England.

No educator more fully realized the nature of a child than Froebel, and none more strenuously advocated the establishment of a harmonious education. His system provided for the development of all the human powers, physical as well as intellectual and moral. Self-activity for developing all the bodily powers and for the acquiring of knowledge was one of his cardinal principles. Not only was the body to be exercised for its own growth, but for the acquirement of skill and dexterity; to this end the games were instituted.

About the beginning of the present century Pehr Ling originated the Swedish system of gymnastics, which has been developed and perfected by his followers, and which is the foundation of the systems used in Germany and other countries at the present day, and is being introduced into England, France, and America.

A report on Physical Training prepared by Mr. Ellis Peterson, of the Boston Board of Supervisors, which has been placed in your hands, sets forth the requisite characteristics of a system that would meet the wants of the present generation. It is needless to quote at length from that report. The recommendation is made that "the Ling system be the authorized system of physical training in the public schools, and that it be introduced into them as soon as teachers are prepared to conduct the exercises."

All so-called systems of Physical Training seem to be based upon

common principles. The objects are to preserve and maintain bodily health, to develop proportion and symmetry of body, to train the powers so that they will readily and accurately respond to the will; to stimulate activity and facilitate expression; to cultivate self-possession, equipoise, and courage. All maintain that a good foundation for the whole system must first be laid; the source of life, the blood-making organs, must work perfectly; the nervous system upon which all activity depends, must be sound; the muscular system from the body outwards to the extremities must be developed. Upon this point Dr. Pose says: "In judging of the effect of an exercise, we think the least of the muscular development produced. But we think all the more of the effect produced on nerves, vessels, etc., in other words, the exercises have been made to harmonize with the laws of physiology. Health, symmetry, and harmony are results aimed at."

Dr. Dudley A. Sargent says, "The exercises of the young should bring about the co-operation and co-ordination of the muscles. Full contraction of the muscles is necessary to the generation of animal heat and aids to force the warm blood through the tissues and back to the heart; in order to secure harmonious development, weak parts must first be made strong; sufficient muscles should be called into action at one time to stimulate the action of the heart and lungs and increase the circulation and respiration."

The Ling, or Swedish system, which has many advocates and is recommended by the Boston Board of Supervisors, has all the characteristics of a complete system and could be very easily established for elementary and grammar schools. Some modifications might be made as circumstances should require. The exercises resemble the best light gymnastics practised in our schools somewhat, but are performed without music, at word of command. In the high departments apparatus not differing essentially from that used in the German Turnverein and the American gymnasiums is employed. There are also excellent exercises practised by other schools of physical culture that might be added to increase interest and cultivate graceful movement and gesture.

The games of the kindergarten are admirably adapted to the children in the first primary years. Out of door games and sports should be encouraged as much as possible. Military drill for the boys of the High School should be provided, and the establishment of classes



for manual training would furnish opportunities for vigorous exercise and for the training of the hand and fingers to skill and handicraft.

Dr. Sargent says, "What America most needs is the happy combination which the European nations are trying to effect, the strength giving qualities of the German gymnasium, the active and energetic properties of the English sports, the grace and suppleness acquired from the French calisthenics, and the mechanical precision of the Swedish free movements, all regulated, systematized and adapted to our peculiar needs and institutions."

Dr. Hartwell, of Johns Hopkins University, Baltimore, says, "The system which is to become common in this country will be an eclectic system. It will take from the different systems the parts which are best suited for the school or college where they are to be used, but they must all recognize the fundamental truth of gradual development. The Ling system," he says, "takes up in turn the muscles which come in order under the control of a child and seeks to give the pupil erect carriage of the body, strength in the back, in the chest, in the arms, the legs, and so on, seeking all the time not performance of special feats, but the establishment of a good foundation of the whole muscular system."

On another occasion Dr. Hartwell said in reference to the Ling system, "On some accounts the Swedish school gymnastics seem to me to be, perhaps, better adapted than the German for the bodily education of the younger classes, and I should say that a Swedish gymnasium would cost less than a similar building in Germany. The Swedish gymnastics are now taught in the boarding schools of London, Leeds and Bristol, and in a large number of British schools and colleges for girls." Again, "The time is coming, is possibly near at hand, when our educational authorities will be confronted by the same problems regarding the place and value of physical training in its various branches with which European educators have been so long engaged and have done so much to solve. I am far from thinking that such problems can be satisfactorily solved by the attempted introduction of any unmodified foreign system of gymnastics or athletics. But I am firmly convinced that whoever may be impelled or compelled to provide a remedy for the present lack of genuine physical training in American schools and colleges can readily save time, money and trouble if they will only study the German and Swedish systems of school gymnastics."

## WHAT HAS BEEN DONE IN THE WEST.

“On October, 1885, light gymnastics were made obligatory throughout all grades of the public schools of Kansas City. Chicago soon followed the example set by Kansas City. In Chicago, 14 special teachers, trained according to the methods of the Turnerbund, give instruction in the High and Grammar Schools and oversee the instruction given by the teachers of the primary schools to their own classes. The salaries paid to the Chicago teachers of gymnastics range from \$750 to \$1800 a year. In Omaha, Neb., St. Joseph, Mo., Canton, O., Denver, Col., and Louisville, Ky., the Chicago plan of having special teachers has been adopted. While the Kansas City plan of having a director of physical training, through whose instruction the teachers in the schools are enabled to give gymnastic instruction to their classes has been followed in Milwaukee, Cleveland, Pittsburgh, McKeesport, Pa., Davenport and Keokuk, Ia., Rock Island, Cairo, Ill., and a long list of smaller towns in Kansas, Iowa, Missouri and Indiana. German gymnastics, according to one or the other of the above-mentioned plans are now taught in the schools of towns and cities in the West whose school population amounts to nearly 400,000. This is a showing which the school boards and teachers of the East cannot afford to ignore or affect to minimize.”

In the East, the colleges only have advanced in physical education. The Common Schools are devoted to intellectual education. In some of the High Schools in our State, the subject has received attention by the introduction of light gymnastics and military drill. But it seems to me that the place for such training is in the elementary schools. It is too late to begin physical culture after the bodies of the young have become mis-shapen or degenerate. “As the twig is bent, the tree is inclined.” A visit to any of our schools will show most unmistakably the necessity of this training for the young. Another consideration is the universal one that essential training as well as instruction should be given when and where it will reach the greatest number. This we all know is in the schools where the children are under twelve or fourteen years of age. The majority of the children are in these elementary schools, and if they are to have any physical education at all it must come before the High School.



So much has been written on this subject of late that it is needless to lengthen this report. I have in my possession an abundance of material on this subject, and having been appointed on the general committee to consider and report upon the best mode of introducing physical training in Public Schools at the conference held in Huntington Hall, I shall probably very soon have much more information, all of which is at the disposal of our Committee.

To introduce a system of physical culture in our schools, it would be necessary to employ an expert — a special teacher of the subject — whose duty it would be to prepare a course of training for all grades from the Primary to the High School, to meet the class teachers and give a course of training to prepare them for work with their several grades, and to inspect all the schools to see that the system is carried out properly. The time required for such work would be at least two days each week, and twice as much could be spent to advantage. The time devoted to physical exercises should not average less than thirty minutes each day.

I would recommend that steps be taken as early as possible to secure the services of a person competent to do the work above described.

Any system of physical training should be conducted on physiological principles, and the work done by the pupils should be with reference to health and development. On this account, a system of inspection should be inaugurated to determine the condition of each individual and to classify the pupils according to their physical condition. This should be done by competent medical inspectors. In the primary classes it would not have to be critical, while in the High School, measurements, weight, etc., might be recorded on the plan used by Dr. Anderson at the Adelphi Academy, Brooklyn, or something of the sort. This idea is carried out in the schools of Sweden, and is one of the important elements of their system.

One of the most important conditions under which this work must be carried on relates to the hygienic and sanitary arrangements of the building. It is absolutely necessary that the rooms where the pupils work, and the exercises are to be carried on, should be constantly supplied with fresh air of a proper temperature. The ventilation question is inseparable from the question of physical training, but enough has been said on that subject.

The remark was made to me by a prominent educator, at the conference on physical training, that "every advocate for this feature

of education, who had spoken, strengthened the arguments for manual training." This conference, though called for another purpose, has done more for the cause of manual training than any one effort ever made in this country. In fact, it is difficult to comprehend how an advocate of physical culture can fail to realize the value of manual training as a feature of education, whether it be related to the training of the hand and brain, or to the development of the strength of body and limb.

### HIGH SCHOOL COMMENCEMENT.

The thirty-seventh Annual Commencement of the Somerville High School took place as usual in the First M. E. Church, Union Square, on Tuesday, June 25th, in the forenoon. The whole program was executed in a masterly manner, and as usual was greatly enjoyed by the friends of the scholars as well as the graduates. The musical parts, which were of a high order, were performed by the graduating class accompanied by Hadley's Orchestra. Two pieces deserve mention for their merit and were highly enjoyed because of their being the production of one our boys, Mr. Henry K. Hadley. To say that they were not out of place on a program which contained the names of Buck and Costa is paying them as high a compliment as I can frame. The speaking and reading were unusually good and reflected great credit upon the teacher of elocution. It showed not only fine teaching, but good students to work upon.

The program was as follows:—

#### THIRTY-SEVENTH ANNUAL EXHIBITION OF THE SOMERVILLE HIGH SCHOOL, JUNE 25, 1889.

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##### ORDER OF EXERCISES.

PRAYER . . . . .	REV. H. C. HITCHCOCK.
SINGING.*—FESTIVA HYMN. (With orchestra and organ,)	<i>Buck.</i>
1. SALUTATORY IN LATIN.	EDWARD S. TOWNSEND.
2. ESSAY. " <i>In my day.</i> "	BERTHA L. HUTCHINS.
3. READING. THE CHILDREN OF THE BONNET ROUGE.	<i>Hugo.</i>
	LENA W. BRIGGS.
SINGING.—VOCAL MARCH.	<i>H. K. Hadley.</i>
(Arranged for orchestra by the author.)	

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\* Singing accompanied by Hadley's Orchestra.

4. READING. QUEEN VASHTI'S DETHRONEMENT. *J. R. Dorr.*  
ANNIE W. BRADLEY.
5. Das englische Kranzchen.  
LOUISE EVANS, MARY M. SHEDD,  
SARAH E. JOUETT, ADDIE C. TEELE,  
EDNA L. RICHARDS, GRACE M. WHITE,  
FREDERICK W. PEIRCE.
6. READING. LILY SERVOSSE'S RIDE. *A. W. Tourgee.*  
EULA M. BYRNS.  
SINGING. — DOUBLE OCTET: "There is a river." From 46th Psalm.  
(With orchestra.) [*Buck.*]
7. ESSAY. *What we read.* GEORGE P. WINSHIP.
8. READING. AN ENCOUNTER WITH AN INTERVIEWER. *Clemens.*  
CHARLES N. CARLETON.
9. SCENE FROM FROM SHAKSPERE. Original Version in Greek.  
JOHN L. S. CONNOLLY, HENRIETTA N. BROWN,  
ANDREW C. MCKENZIE, CHRISTINE E. JANSSON,  
FREDERICK E. SEARS, CLARA A. LAYCOCK,  
GEORGE A. WHIPPLE.
- RECESS.
- MUSIC. — WALZER: Schlummer Liedchen. *H. K. H.*  
SINGING. — DAMASCUS. From "Naaman." *Costa.*  
(With orchestra and organ.)
10. ESSAY. *Every-day Manners.* ANNIE J. REED
11. La fuite du general Boulanger.  
ANNIE L. COLGATE, EDWARD D. DENSMORE,  
NETTIE M. ORNE, EDWARD J. FLYNN,  
MARTHA M. POWER, NELSON H. GROVER,  
DAISY RAND, CHARLES A. OWEN,  
JESSIE B. UNDERHILL.
12. READING. THE PARSON'S HORSE-RACE. *Stowe.*  
MARY A. THOMPSON.
13. POEM. GRACE E. DUSTIN.  
SINGING. — GLEE: Little Jack Horner. (Humorous). *Caldicott.*  
(With orchestration by S. Henry Hadley.)
14. DECLAMATION. ROME AND CARTHAGE. *Hugo.*  
FREDERIC C. McLAUGHLIN.
15. PROPHECIES. FRANKLIN G. ASHTON.
16. VALEDICTORY. MARY P. HITCHCOCK.
17. PRESENTATION OF DIPLOMAS. BY HIS HONOR MAYOR POPE.
18. PARTING HYMN.

## MEMBERS OF THE GRADUATING CLASS.

Carrie Howland Allen.  
 Caroline Ellen Bardwell.  
 Minnie Barter.  
 Bertha Emily Bingham.  
 Lena Blanche Blaikie.  
 Maizie Etta Blaikie.  
 Annie Winnefred Bradley.  
 Lena Walker Briggs.  
 Emma Burckes.  
 Mary Lavinia Buskirk.  
 Eula Mae Byrns.  
 Laura Stoughton Clark.  
 Annie Louise Colgate.  
 Helen Pearson Conant.  
 Harriet Louise Crosby.  
 Mabel Annette Daniels.  
 Louise Evans.  
 Mary Wade Fitz.  
 Nellie Thurston Gaskill.  
 Mary Prescott Hitchcock.  
 Edith Coolidge Homer.  
 Bertha Louise Hutchins.  
 Blanche Estelle Hutchinson.  
 Agnes Mary James.  
 Sarah Emery Jouett.  
 Marion Rebecca Knapp.  
 Mary Ellen Lacy.  
 Eda Adele Merrill.  
 Nettie Mabel Orne.  
 Martha Magdeline Power.  
 Mabel Clarke Proctor.  
 Daisy Rand.  
 Annie Josephine Reed.  
 Edna Louise Richards.  
 Mary Helen Sargent.  
 Mary Maud Shedd.

Addie Carrie Teele.  
 Jessie Blanche Underhill.  
 Adeline Belinda Warren.  
 Grace May White.  
 Emily Thomas Wilcox.  
 Franklin George Ashton.  
 Charles Nicholas Carleton.  
 Edward Dana Densmore.  
 John Joseph Falvey.  
 Edward James Flynn.  
 Nelson Howard Grover.  
 Charles Albert Owen.  
 Frederick Watson Peirce.  
 Tracy Cole Pope.  
 Albert Olliver Thayer.  
 Henry Tyler Woods.

**Course Preparatory to College.**

John Lawrence S. Connolly.  
 Andrew Comstock McKenzie.  
 Frederic Charles McLaughlin.  
 Frederic Edmund Sears.  
 Edward Sands Townsend.  
 George Albert Whipple.  
 George Parker Winship.  
 Florence Emma Baxter.  
 Henrietta Noble Brown.  
 Grace Elizabeth Dustin.  
 Grace Maud Hardy.  
 Christine Evelyn Jansson.  
 Clara Agnes Laycock.  
 Mary Alexander Thompson.  
 Alice Carroll van Riper.



## GRADUATION.

The graduating exercises of the Grammar Schools took place in the First M. E. Church, Union Square, on Thursday, June 27, and were, as usual, very creditable to the schools, and in every way satisfactory to the parents whose children took part. The addresses were made by His Excellency, Lieutenant-Governor J. Q. A. Brackett and Rev. E. H. Capen, D. D., President of Tufts College. His Honor, Mayor Chas. G. Pope, presided and made an appropriate opening address. The diplomas were bestowed by the Superintendent of Schools. The program was as follows:

## PROGRAMME.

## PART I.

- |    |           |  |           |                         |               |
|----|-----------|--|-----------|-------------------------|---------------|
| 1. | OVERTURE. | "Zampa."                                 | - - - - - | - - - - -               | <i>Herold</i> |
| 2. | PRAYER.   | - - - - -                                | - - - - - | - - - - -               |               |
|    |           |  |           | REV. C. A. SKINNER.     |               |
| 3. | *SINGING. | "Lord, how great thy love and goodness." | -         | -                       | <i>Flotow</i> |
|    |           | COMBINED GRAMMAR CLASSES.                |           |                         |               |
|    |           | (Accompanied by orchestra and organ.)    |           |                         |               |
| 4. | ADDRESS.  | - - - - -                                | - - - - - | - - - - -               |               |
|    |           |  |           | HON. J. Q. A. BRACKETT. |               |
| 5. | SINGING.  | "Pilgrim's Chorus."                      | - - - - - | - - - - -               | <i>Verdi</i>  |
|    |           | (With orchestra.)                        |           |                         |               |

## PART II.

- |    |                         |                              |                            |                            |                    |
|----|-------------------------|------------------------------|----------------------------|----------------------------|--------------------|
| 6. | ADDRESS.                | - - - - -                    | - - - - -                  | - - - - -                  |                    |
|    |                         |                              |                            | REV. ELMER H. CAPEN, D. D. |                    |
| 7. | SINGING.                | {                            | a. The Welcome Spring.     | - - -                      | <i>Mendelssohn</i> |
|    |                         |                              | b. Vacation Song. (Girls). | - - -                      |                    |
| 8. | CONFERRING OF DIPLOMAS. | - - - - -                    | - - - - -                  | - - - - -                  |                    |
|    |                         |                              |                            | SUPT. C. E. MELENEY.       |                    |
| 9. | SINGING.                | UNISON SOLO: The Lost Chord. | - - -                      | - - -                      | <i>Sullivan</i>    |
|    |                         | (With orchestra and organ).  |                            |                            |                    |

\*Director.—S. HENRY HADLEY, Teacher of Music.



## FORSTER SCHOOL.

## DISTRICT COMMITTEE.

WILLIAM P. HILL.

NORMAN W. BINGHAM.

QUINCY E. DICKERMAN.

*Principal*, JOHN S. HAYES.*Assistant*, MARY E. NORTHUP.A. S. HILL, *Substitute*.

## GRADUATES.

E. Benjamin Bryan.

Davis B. Chase.

John Coveney.

George H. Desmond.

Daniel J. Donahue.

Daniel A. Dorey.

John Stetson Edmands.

David W. Flynn.

Amherst Durell Frazar.

Bartholomew Edward Grady.

Arthur B. Harlow.

Willis B. Hodgkins.

Francis J. Kelley.

Charles W. Krueger.

Walter Lumbert Nickerson.

William Foster Nelson.

James William O'Brien.

Leonard H. Pote.

Arthur P. Stone.

Ulysses T. Sullivan.

Herbert J. Sullivan.

Fannie Billings Allan.

Amy L. Baxter.

Mabel E. Bowman.

Grace A. Winifred Brewster.

Mertie J. Bryan.

Nellie Maria Burnham.

Grace May Chase.

Caroline M. Davis.

Florence Elizabeth Delano.

Emma Parker Felch.

Louise I. Freeman.

Esther Louise Gage.

Josie A. Godbold.

Gertrude F. Hall.

Bertha H. Hamlet.

Sophia Atkins Lombard.

Mabel Louise Marston.

Eva Gertrude Marston.

Esther M. Mayhew.

Nina C. Nelson.

Emma Estelle Norcross.

Carrie Moseley Potter.

Gertrude A. Ring.

Carrie B. Wayland.

Goldie E. Whipple.

H. Belle White.

Lizzie Adelaide White.

## PRESCOTT SCHOOL.

## DISTRICT COMMITTEE.

H. P. HEMENWAY.

HORACE C. WHITE.

S. NEWTON CUTLER.

*Principal*, G. A. SOUTHWORTH.*Assistant*, ANNA M. BATES.

## GRADUATES.

Arthur E. Atwood.

Clifford M. Babson.

Isabel F. Baker.

Sadie A. Battelle.

George F. Barnard.  
 Frank H. Burrows.  
 William T. Buxton.  
 John E. Chatman.  
 Edmund F. Clark.  
 Frank C. Clement.  
 Charles H. Colgate, Jr.  
 Arthur B. Davis.  
 George F. Fortier.  
 Charles F. Grimes.  
 William R. Hammond.  
 Arthur A. Higgins.  
 Arthur A. Hodgman.  
 Frederic C. Hosmer.  
 William W. Kennard.  
 Willard E. Martin.  
 Nathaniel N. C. Mills.  
 George W. Morris.  
 Edward W. Myers.  
 Edward W. Nason.  
 Elmer S. Olmsted.  
 Charles B. Palmer.  
 Charles L. Peirce.  
 Wilbur L. Pierce.  
 Arthur W. Reed.  
 George E. Reynolds.  
 Harry F. Sears.

Helen M. Bearse.  
 Alice M. Brackett.  
 Nellie M. Briggs.  
 Fanny Ethel Coffin.  
 Mattie J. Connolly.  
 Catherine G. Daley.  
 Julia A. Downey.  
 Lina R. Harris.  
 Florence I. Hopkins.  
 Nellie Knowles.  
 Maude E. Libbey.  
 Lavinia K. Lombard.  
 Lottie E. Lownds.  
 Annie V. Lund.  
 Teresa E. Mannix.  
 Ella C. McCarthy.  
 Georgie C. Meady.  
 Lizzie W. Nason.  
 C. Etta Newcomb.  
 Angeline S. Norton.  
 Jennie E. Parker.  
 Emma A. Rice.  
 Eva F. Robinson.  
 Susie A. Shepard.  
 Clara B. Soule.  
 Maude L. Soule.  
 Flora M. White.  
 Mabel I. Young.

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### LUTHER V. BELL SCHOOL.

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#### DISTRICT COMMITTEE.

ALPHONZO H. CARVILL.

CHARLES I. SHEPARD.  
 MAYOR POPE.

JAMES F. BEARD.

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*Principal*, HERBERT L. MORSE. *Assistants*, ABBIE C. HUNT, MAY E. BERRY.  
 NELLIE S. DICKEY, *Substitute*.

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#### GRADUATES.

Alvin H. Allen.  
 Charles T. Ames.  
 Harry H. Ashton.  
 Daniel H. Bradley.  
 George H. Bucknam.

Annie L. Austin.  
 Lillian M. Baker.  
 Ethel T. Bartlett.  
 Mabel L. Blake.  
 Jessie E. Bradford.

Elwell R. Butterworth.  
Henry E. Buxton.  
George R. Clark.  
Walter E. Clinton.  
Washington Cook.  
William E. Copithorne.  
James A. Corkum.  
Clarence A. Daniels.  
Forest E. Dearborn.  
John L. Dias.  
Frank E. Draper.  
Ernest C. Farland.  
J. Robert Fenelon.  
Philip J. Fitzpatrick.  
Le B. Richard Foster.  
George H. Galpin.  
Dudley M. Hanson.  
Fred C. Harlow.  
James H. Hartshorn.  
Waldron W. Hodsdon.  
J. Wesley Hopkins.  
Frederick A. Horne.  
Arthur B. Howe.  
Frederick G. Jones.  
William E. Kent.  
Frank H. Leslie.  
Michael C. McCue.  
Everett L. Moore.  
Frederick C. Morrison.  
Fred K. North.  
Paul H. Provandie.  
Philip C. Provandie.  
Arthur Ray.  
Daniel H. Ryan.  
James A. Smith.  
Thomas F. Smith.  
Frank E. Spelman.  
Morton A. Stevens.  
Charles H. Tozier.  
Nathaniel J. K. Wood.  
Francis P. Young.  
Ella M. Bragg.  
Harriet G. Brazier.  
Emma L. Brine.  
Flora M. Burgess.  
Carrie A. Butters.  
Addie B. Byam.  
Loretta E. Byam.  
Sarah J. Carson.  
Lillian E. Clark.  
Isabella M. Daly.  
Clara E. Davis.  
Clara J. Fitzgerald.  
Katharine A. Flynn.  
Caroline Gray.  
Nellie M. Guild.  
Elizabeth J. Harvey.  
Leura J. Higgins.  
Mabel B. Hills.  
Orianna J. Holbrook.  
Mary F. Horne.  
Martha E. Howes.  
Louisa Hunt.  
Alice M. Hutchinson.  
Alice E. LeGallee.  
Lizzie J. Legallee.  
Christena M. Lord.  
Clara A. McCorrison.  
M. Ellen McIntosh.  
Jennie L. Nelson.  
Sallie P. Nickerson.  
Alice M. Niles.  
Ethel C. Pinkham.  
Mabel L. Pratt.  
Florence A. Robson.  
Ida M. Savary.  
Fannie W. Shepard.  
Mary F. Staniford.  
Annie J. Sullivan.  
Margaret H. Webb.  
Mary M. Wiley.

## MORSE SCHOOL.

## DISTRICT COMMITTEE.

MARTIN W. CARR.

HORACE P. MAKECHNIE.

A. W. EDMANDS.

*\*Principal*, HORATIO D. NEWTON.*Assistant*. MINA J. WENDELL.

## GRADUATES:

Harold Colburn Bailey.  
 Walter S. Bezanson.  
 Charles E. Bliss.  
 George E. Bruorton.  
 Edward Davenport.  
 Harry L. Deacon.  
 G. Ellis Densmore.  
 Walter C. Dow.  
 Cornelius H. Downs.  
 William A. Hardy,  
 Chester R. Jennings.  
 Frank D. Johnson.  
 Horace M. Kennedy.  
 Edward L. O'Brien.  
 James J. O'Brein.  
 Rudolph P. Pauly.  
 Herman Reiner.  
 Edgar D. Sewall.  
 Leonard F. Teifer.  
 Frederick W. Yelland.  
 Dora Albonetta Bailey.

Millie S. Bancroft.  
 Flora A. Chabot.  
 Melissa C. Davenport.  
 Alice B. Edmands.  
 Agnes Gertrude Fenton.  
 Lena S. Fredrikson.  
 Lydia J. Gibby.  
 Nellie J. Gilchrist.  
 Lula M. Goodwin.  
 Elizabeth A. Hamann.  
 Ida B. Holmes.  
 Gertrude E. Hutchinson.  
 Emma A. Murray.  
 Lillian M. Pearson.  
 Josephine A. Quick.  
 Ida S. Rice.  
 Maud S. Richards.  
 H. Maude Sexton.  
 M. Genevieve Smith.  
 Caroline Winslow.  
 Clara C. Zoeller.

\* Principal on leave of absence.

## HIGHLAND SCHOOL.

## DISTRICT COMMITTEE.

HORACE P. MAKECHNIE.

MARTIN W. CARR.

MRS. ADDIE B. UPHAM.

*Principal*, GEORGE E. NICHOLS.*Assistant*, M. ALICE PAUL.

## GRADUATES.

Harry B. Bovey.  
 Edwin F. Burroughs.  
 William A. Colcord.  
 Luther W. Dudley.  
 Milton E. Fish.

Afra E. Cameron.  
 Laura M. Cameron.  
 Ella C. Carleton.  
 Winifred M. Chase.  
 Virginia S. Creighton.

Fred. B. Foster.	Ida M. Fisher.
Clifton D. Gray.	Mary L. Fisher.
Harry P. Kingman.	Bessie M. Gordon.
Arthur W. Littlefield.	Jennie L. Gordon.
Ernest E. Muzzey.	Emma C. Graham.
William G. Nash.	Mary G. Goodwin.
Norval P. Nichols.	Grace P. Harris.
James Robertson Pillsbury.	Bertha E. Holden.
Fred O. Plumb.	L. Edith McBain.
Howard I. Russell.	Nellie L. Mahan.
Albert E. Shipman.	Nellie M. Pierce.
Charles B. Stebbins.	Jennie C. Rand.
Herbert L. Taylor.	Annie B. Russell.
George H. Wilder.	Madella A. Stevens.
Herbert P. Yeaton.	Clementine E. Tibbetts.
	Annie L. Young.

The whole number of graduates was 281—38 more than last year: boys, 136; girls, 145.

From the Forster School	. . . 48	21 boys,	27 girls.
“ “ Prescott “	. . . 59	29 “	30 “
“ “ L. V. Bell “	. . . 91	46 “	45 “
“ “ Morse “	. . . 42	20 “	22 “
“ “ Highland “	. . . 41	20 “	21 “

One hundred and sixty-nine of the graduates from the grammar schools entered the High School in September: boys, 73; girls, 96.

From the Forster School	. . . 26	10 boys,	16 girls.
“ “ Prescott “	. . . 39	19 “	20 “
“ “ L. V. Bell “	. . . 52	23 “	29 “
“ “ Morse “	. . . 25	9 “	16 “
“ “ Highland “	. . . 27	12 “	15 “

### EVENING SCHOOLS.

This department of our work has been a great improvement over that of last year. In place of one evening school for grammar work we have had three, the Prescott, L. V. Bell and Highland schools. The attendance has been well sustained, the interest has been maintained throughout the session, and the results correspondingly good. The marked feature of the schools was the number of advanced pupils attending, many graduates of our grammar schools being enrolled. Good progress has been made in book-keeping and kindred subjects. Lectures have been given by the principal and others,



which have been of great practical benefit. At the request of a number of the girls, the superintendent suggested to the committee the idea of giving instruction in sewing; power was given by the Board and the work was instituted in the Bell and Prescott schools two evenings each week in each school. Miss Boyd was the teacher.

Two evening drawing schools have been sustained similar to last year's classes. They have not been as large because pupils of the grammar schools were excluded, they having instruction in that branch in their own schools. The class in mechanical drawing has made excellent progress, many of the students having been members of last year's class. The free-hand class has done well, but was composed largely of beginners. The advance class in light and shade work though small will have fine sheets to show at the end of the course. We may not look for improved schools in this department till the city furnishes better rooms for the work. Until then our numbers and results will continue as at present.

In the appendix will be found the names of teachers, statistics, etc.

### SECTION III.

In this section of the report I wish to bring to your attention some of the prominent and important features of educational work accomplished in other places, to enable you to see what progress is being made and compare it with our own, to enlist your interest in the various measures being taken to improve educational work, and if necessary to convince you that education is progressing and developing as a science, and that educators are alive to the magnitude of their work and to the great interests that are at stake in our development as a nation, much of which depends upon the education of our children. I wish also to call your attention to some valuable reports on education and direct you to sources of information upon educational subjects. I shall endeavor to secure copies of valuable reports for the members of the Board, and place at your disposal those that have come to the office in exchange.

To give you an idea of the subjects being considered by the various cities, I selected 28 reports from a large number in the office, representing New England and six other states, and found that 19 contain very interesting chapters on drawing; 14 advocate manual training or describe its workings; 9 treat of sewing, as a feature of their schools; 5 describe their cooking schools; 9 devote time to

kindergarten ; 6 are agitating physical training ; 17 report on music ; 10 take up promotions and examinations ; 10 consider the training of teachers, and all treat of various other subjects. Many of them contain special reports by committees or directors, who have the supervision of these subjects as well as the reports of the superintendents.

I have sent to you the report of the Board of Supervisors of the Boston schools on the subject of *Physical Training* which I consider of great value to us at this time and which has relieved me of making an extended report on the subject. This evening I have the pleasure of putting into your hands the last report of Superintendent MacAlister, of Philadelphia, which I regard one of the most important educational documents ever issued. I invite your attention to it, because of the many subjects contained in it of special interest to us at this time. I have a list of other reports which I hope to be able to obtain at an early day.

I regard it of great importance to members of School Boards to take and read the current educational periodicals, as these contain the best thoughts on education and the most recent account of improved methods and facilities and of valuable experiments. In this connection allow me to mention the monographs and leaflets issued week by week by the College for the Training of Teachers in New York.

#### EDUCATIONAL PROGRESS.

The year has seen great progress in education, not only in our own state and country, but also in foreign lands. Among some of the important educational events and measures I would mention the following, beginning near at home :

BOSTON AND VICINITY. — The incorporation of Mrs. Shaw's Kindergartens into the School Systems of Boston and Cambridge. The establishment of the Boston School of Gymnastics and the advent of the Ling System. The great conference on Physical Training at Mass. Institute of Technology. The great movement to preserve the integrity of the Public School System against political and sectarian influences. The movement for patriotism and raising of the flag of our country. The adoption of plans for a Manual Training School in Boston. The building of the English High

School in Cambridge, and the opening of the Rindge Manual Training School.

Clark University has been instituted in Worcester.

The State of New York has chartered a college for the training of teachers in New York City.

The University of the City of New York has established a School of Pedagogy, and Columbia College has founded a similar department.

The State of New York has elevated the grade of the Albany State Normal School to that of a professional school.

Mr. Williamson, a philanthropist, has given \$3,000,000 to found a school of Mechanic Arts in Philadelphia.

Dr. William T. Harris, of Massachusetts, has been appointed United States Commissioner of Education; a recognition of the profession.

Gen. Thos. J. Morgan, appointed Commissioner of Industrial Education, has organized a system of education for the Indians on the principles of the Public School System.

Important educational exhibits have been held in connection with the National Teachers' Association. Various State Teachers' Associations, which have greatly stimulated educational work, and especially manual training.

There have been some excellent exhibits of drawing and industrial work in several cities in New England; notably, Lawrence, Springfield, Providence, New Haven, and in Washington, D. C.

The most notable event abroad, educationally, was the school exhibit at the Paris Exhibition.

There has been a great movement in England towards the adoption of a Free Public School System.

The world moves; if we wish to keep up with it we must keep moving.

## CONCLUSION.

In concluding this report I wish to assure the Board that I appreciate the consideration they have given to all the matters I have submitted and the allowances they have so generously made for my shortcomings. I wish to express my confidence in the corps of principals and teachers and my high estimate of their ability and my acknowledgement of the valuable services they have rendered and the important part they have performed in accomplishing the re-

sults we have seen. The special teachers have been equally zealous, painstaking, and faithful, and have taken a great burden of responsibility from the Superintendent. I am pleased with the attitude of the press on the subject of education, and I appreciate the aid and encouragement it has been in this important work. We are especially fortunate in having communities who sustain and encourage the teachers; without their co-operation our work could not succeed. To all I extend my hearty thanks, and I hope to see in the near future greater cause for congratulation than we do to-day.

Respectfully submitted,

C. E. MELENEY,  
*Superintendent of Schools.*

SOMERVILLE, MASS., Dec. 30, 1889.



## APPROPRIATIONS AND EXPENDITURES.

	Estimated.	Expended.	Deficit.	Balance.
Salaries of teachers . . . . .	\$89,250	\$93,065.49	\$3,815.49*	
Salary of superintendent . . . . .		2,500.00		
Salaries of truant officers . . . . .	10,450	900.02		\$601.62
Salaries of janitors . . . . .		6,448.36		
Water and gas . . . . .	1,000	805.02		194.98
Text-books, . . . . .	3,500	3,912.83	412.83	
Writing and drawing books . . . . .	1,000	1,327.11	327.11	
Stationery and supplies . . . . .	1,800	3,079.66	1,279.66	
Printing . . . . .	300	359.58	59.58	
Miscellaneous . . . . .	2,700	1,223.42		1,476.58
Total . . . . .	\$110,000	\$113,621.49	\$5,894.67	\$2,273.18
Total deficit . . . . .			3,621.49	

\*Owing to increase of salaries, as per schedule.

Amount received for tuition of non-resident pupils . . . . . \$100.50

TABLE SHOWING THE NUMBER OF SCHOOLS AND TEACHERS IN THE SEVERAL DISTRICTS, THE NUMBER OF PUPILS IN ATTENDANCE IN DECEMBER, THE NUMBER IN THE NINTH CLASS, AND THE AVERAGE NUMBER TO A SCHOOL.

DISTRICTS.	No. of Schools	No. of Teachers.	No. of Pupils.	No. in Ninth Class.	Average No. to a School.
East Somerville . . . . .	23	24	1183	64	51.4
Prospect Hill . . . . .	42	43	2128	108	50.7
Winter Hill . . . . .	18	19	914	48	50.8
Spring Hill . . . . .	19	20	932	57	49.0
West Somerville . . . . .	14	15	656	58	46.9
	116	121	5813	335	50.1



TABLE SHOWING THE NAME, LOCATION, DATE OF ERECTION, ESTIMATED VALUE, CAPACITY, ETC., OF THE SEVERAL SCHOOL BUILDINGS.

DISTRICTS.	SCHOOLS.	LOCATION.	When built.	No. Feet in Lot.	Estimated Value.	No. of Rooms.	No. of Classes.	No. of Gram. Classes.	No. of Primary Classes.
East Somerville.	High	Highland Avenue.	1871	.....	44,000	10	4	..	..
"	Prescott	Myrtle Street	1867	21,444	42,000	12	11	7	4
"	Elderly	Cross Street.	1871	26,428	43,100	8	8	5	3
Prospect Hill.	Davis	Tufts Street.	1884	29,584	18,333	4	4	1	3
"	L. V. Bell.	Vinal Avenue.	1874	22,262	43,000	13	13	12	1
"	Independent Hall.	Union Square.	....	.....	.....	1	1	1	..
"	Eberle Hall.	"	....	.....	.....	1	1	..	..
"	Bow Street School.	"	....	.....	.....	1	1	..	..
"	Prospect Hill.	Washington Street.	1848	25,313	20,600	6	6	3	3
"	Cummings	School Street.	1884	11,300	15,357	4	4	1	3
"	Braslow.	Medford Street	1861	10,019	6,250	2	2	1	1
"	Bennett.	Joy Street.	1868	20,560	8,300	4	4	2	2
"	Jackson.	Poplar Street.	1861	11,212	8,300	4	4	1	3
"	Som. Av. Kg.	Som. Ave. (The Irving)	....	.....	.....	..	1	..	1
"	Webster.	Webster Avenue.	1868	11,050	8,300	4	4	1	3
"	Union.	Prospect Street.	1842	9,360	2,600	1	1	..	1
Winter Hill.	Forster.	Sycamore Street.	1866	32,693	39,422	12	12	8	4
"	Chapel.	.....	....	.....	.....	1	1	..	1
"	Bingham	Lowell Street.	1886	20,896	15,105	4	4	1	3
"	Cedar Street.	Cedar Street	1843	.....	800	2	1	..	1
Spring Hill.	Morse.	Summer Street.	1869	29,109	26,000	8	8	6	2
"	Beech Street.	Beech Street.	1872	6,000	4,750	2	2	..	2
"	Spring Hill	Beech Street.	1850	4,991	1,700	1	1	..	1
"	Franklin	Somerville Avenue.	1846	33,017	14,300	4	4	2	2
"	Harvard	Beacon Street.	1851	9,810	2,600	1	1	..	1
"	*Burns.	Cherry Street.	1886	16,080	15,250	4	4	2	2
West Somerville	Highland.	Highland Avenue.	1880	23,260	33,000	8	8	6	2
"	Elm Street.	Elm Street.	....	.....	.....	2	2	..	2
"	Lincoln	Broadway, Clarendon Hill.	1885	17,662	15,487	4	4	2	2
						128	121	62	55

\* Receives pupils from both the Spring Hill and the West Somerville Districts.

TEACHERS.

Number of teachers (including 7 assistants)	142
Male, 11 ; female 131.	
Number of teachers in high school	10
Male, 3 ; female, 7.	
Number of teachers in the grammar grades	65
Male, 7 ; female, 58.	
Number of teachers in the primary grades (including 7 assistants)	63
Teacher of music	1
Teacher of drawing	1
Teachers of sewing	2
	— 142

SCHOOLS AND TEACHERS.

SCHOOLS.	TEACHERS.	WHERE EDUCATED.	Salaries.	When Elected.
High . . .	George L. Baxter . . .	Harvard College . . .	\$2,400	1867
" . . .	Frank M. Hawes . . .	Tufts College . . .	1,800	1879
" . . .	Charles T. Murray . . .	Dartmouth College . . .	1,400	1887
" . . .	Sarah W. Fox . . .	High School, Taunton. Instruction in classics and German, abroad . . .	1,200	1868
" . . .	Sarah F. Litchfield . . .	Lawrence Academy, Gro- ton. Private instruc- tion in Latin, French and German . . .	850	1880
" . . .	Fannie W. Kaan . . .	Somerville High School and Salem Normal School . . .	850	1882
" . . .	Eudora Morey . . .	Malden High and Bridge- water Normal School . . .	800	1882
" . . .	Bessie R. White . . .	Colby University . . .	700	1887
" . . .	*Josephine H. Short . . .	Boston University . . .	700	1887
" . . .	†Mabel S. Clark . . .	Boston University . . .	700	
" . . .	†Lilia E. Smith . . .	Monroe College . . .	700	
Prescott . . .	G. A. Southworth . . .	Chicago, Ill., and Lowell, Mass., High School . . .	1,900	1873
" . . .	Anna M. Bates . . .	Salem High and Normal Schools . . .	700	1874
" . . .	Adelaide Reed . . .	Bridgew'r Nor'l School . . .	650	1877
" . . .	Abbie A. Anderson . . .	Stoughton High School and Canton Training School . . .	600	1878
" . . .	Emma M. Cate . . .	High School, Winchester	600	1882

\* On leave of absence.

† Substitutes.

SCHOOLS AND TEACHERS — *Continued.*

SCHOOLS.	TEACHERS.	WHERE EDUCATED.	Sala- ries.	When Elected.
Prescott . .	Amelia I. Sears . .	Westfield Normal School	600	1873
" . .	Catherine T. Brown .	Somerville High School	600	1868
" . .	Clara Taylor . . .	" " "	600	1871
" . .	Sarah E. Pratt . . .	Bridgew'r Nor'l School .	600	1877
" . .	Elgina M. Plummer .	High School, Boston . .	600	1877
" . .	Florence M. Morton .	Somerville High School	600	1882
" . .	Ada Cowles . . .	" " "	600	1875
" . .	*Louise E. Pratt . .	" " "	400	1889
Edgerly . .	Charles E. Brainard .	High School, Danielson- ville, Conn. . . . .	1,000	1889
" . .	Amy C. Hudson . . .	Somerville High School	600	1885
" . .	Lilla J. Pike . . .	High School and Acade- my, Salmon Falls, N. H.	600	1887
" . .	C. E. Cunningham . .	Salem Normal School . .	600	1888
" . .	Gertrude L. Gardner .	R. I. State Normal . . .	600	1889
" . .	Mary B. Currier . . .	Somerville High School	600	1873
" . .	Lillian Nealley . . .	Salem Normal School . .	600	1882
" . .	Clara M. Bagley . . .	Somerville High School	600	1873
Davis . . .	Lucretia A. Burns . .	Framingham Nor'l Sch'l	650	1882
" . . .	Gertrude A. Earle . .	Bridgew'r Nor'l School .	600	1884
" . . .	Annie J. Richardson .	Winchester High School .	500	1889
" . . .	Priscilla A. Merritt .	Salem Normal School . .	600	1885
L. V. Bell .	Herbert L. Morse . . .	Bridgew'r Nor'l School .	1,700	1885
" . . .	Abbie C. Hunt . . .	Ipswich Fem. Seminary	675	1873
" . . .	May E. Berry . . .	Somerville High School	675	1880
" . . .	Joanna A. Barry . . .	Bridgew'r Nor'l School .	600	1886
" . . .	Sarah S. Waterman . .	" " "	600	1888
" . . .	Nellie A. Knowlton . .	Salem Normal School . .	600	1887
" . . .	Emma F. Schuh . . .	Somerville High School .	600	1874
" . . .	Rubie M. Stetson . . .	High School and Acad- emy, Hanover, Mass. . .	600	1888
" . . .	Alice I. Norcross . . .	High School . . . . .	600	1885
" . . .	Fannie A. Wilder . . .	High Sch' and Academy,	600	1874
" . . .	Carrie E. Cobb . . .	High School, Taunton, Mass. . . . .	600	1887
" . . .	Gertrude E. Robbins,	Bridgw'r Nor'l School . .	500	1888
" . . .	Mary A. Bradford . . .	" " " " " " " " " "	600	1888
" . . .	†Eliza L. Schuh . . .	Somerville High School,		1882
" . . .	Abbie A. Gurney . . .	Brid'water Normal " "	600	1888
" . . .	Abbie A. Hayward . . .	Salem Normal School . .	600	1888
" . . .	Mary S. Rinn . . . .	Somerville High School .	400	1889
" . . .	Mrs. J. S. Soper . . .	Cambridge Kg. Trg. School . . . . .	600	1889
Prospect Hill,	Helen Tincker . . . .	Mt. Holyoke Seminary and Salem Nor'al Sch'l,	700	1872
" . . .	Sarah A. Tuttle . . .	Somerville High School,	600	1886
" . . .	Ellen Ledyard . . . .	" " "	600	1874

\*Assistant.

†On leave of absence.

## SCHOOLS AND TEACHERS—Continued.

SCHOOLS.	TEACHERS.	WHERE EDUCATED.	Salaries.	When Elected.
Prospect Hill,	Maria Miller . . . .	Somerville High School	\$600	1889
"	Nellie S. Dickey . . .	Quincy Drawing School	600	1875
"	Lillian A. Wellington,	Boston Normal School .	500	1889
"	†Clara M. Smith . . .	Somerville High School,	350	1889
"	Lucia Alger . . . .	Brid'water Normal	600	1889
Cummings . .	Lydia J. Page . . . .	Somerville High	650	1869
"	Addie M. Brown . . .	" "	600	1886
"	Ida F. Fillebrown . .	" "	500	1888
"	Annie Coffin . . . .	" "	600	1884
Brastow . . .	Lizzie W. Parkhurst,	Gloucester High and		
"	Lillian C. Albee . . .	Training Schools . . .	625	1885
"		High School, No. Attle-		
"		boro' . . . . .	600	1888
Bennett . . .	Mary B. Smith . . . .	Me. Wes. Seminary . . .	650	1885
"	Florence O. Bean . . .	Fram'ham Normal Sch'l,	500	1888
"	Annie E. Sheridan . . .	Salem Normal School . .	500	1886
"	Isadore E. Taylor . . .	Somerville High School,	600	1883
Jackson . . .	Annie E. McCarty . . .	Somerville High School,	650	1880
"	Fannie L. Gwynn . . .	Salem Normal School . .	600	1886
"	Lena G. Allen . . . .	Somerville High School,	600	1884
"	Annie E. Crimmings . .	" " "	600	1884
Som. Av. Kg.,	Mary M. Burnham . . .	Framingham Normal . . .	400	
Webster . . .	Clara B. Parkhurst . . .	Salem Normal . . . . .	650	1889
"	Nellie F. Sheridan . . .	Somerville High School,	350	1888
"	Annie L. Savage . . . .	Salem Normal School . . .	600	1873
Union . . . .	Annie E. Robinson . . .	Somerville High School,	600	1876
Forster . . .	John S. Hayes . . . .	Phillips Exeter Academy	1,800	1878
"	Mary E. Northup . . .	High School, Centreville,	675	1878
"	Mary E. Stiles . . . .	Training School, Farm-		
"		ington, Me. . . . .	600	1883
"	Marietta S. Murch . . .	Gorham Normal School,		
"		Me. . . . .	600	1887
"	Minna L. Wentworth . .	High School, Salmon		
"		Falls, N. H. . . . .	600	1885
"	Frances M. Guptill . . .	Training Department of		
"		Eliot Academy, Leb-		
"		anon, Me. . . . .	600	1869
"	Lizzie F. Clement . . .	Tilton, N. H., Seminary,	600	1884
"	Alice A. Batchelor . . .	High School, Northboro,		
"		Mass. . . . .	600	1877
"	Addie S. Winnek . . . .	Salem Normal School . . .	600	1883
"	Martha H. Pennock . . .	Somerville High School,	600	1873
"	Annie L. Bennett . . . .	Gorham Normal	600	1889
"	Annie S. Gage . . . .	Somerville High	600	1883
"	Harriet A. Brown . . . .	Westfield Normal	600	1890
"	Clara A. Jordan . . . .	Gorham Normal School .	600	1889
Bingham . . .	Mary A. Osborne . . . .	High and Training Sch'l,		
"		Quincy . . . . .	650	1885

† Assistant.



SCHOOLS AND TEACHERS—*Continued.*

SCHOOLS.	TEACHERS.	WHERE EDUCATED.	Sala- ries.	When Elected.
Bingham . .	Alice Simpson . . .	High and Nor'l School, Newburyport . . .	600	1872
" . .	Nora F. Byard . . .	Somerville High School	600	1884
" . .	Laura C. Duddy . . .	Salem Normal School .	350	1889
Cedar Street .	Alice M. Porter . . .	" " "	600	1880
Morse . . .	Horatio D. Newton,	Bridgewater Normal Sch.	1,700	1886
" . . .	Minna J. Wendell . . .	High and Training Sch'ls, Woburn . . . . .	675	1882
" . . .	Stella Hall . . . . .	Salem Normal School .	600	1884
" . . .	Pauline S. Downes . .	Cooper Union, New York City . . . . .	600	1872
" . . .	Ella F. Gould . . . . .	Lowell and Nashua . . .	600	1882
" . . .	Anna E. Sawyer . . . .	Somerville High School	600	1873
" . . .	Mary A. Haley . . . . .	Boston " "	600	1868
" . . .	Charlotte I. Houghton	Somerville " "	600	1875
" . . .	Anna Pushee . . . . .	Bridge'w'r Normal Sch'l	400	1888
Beech Street .	Mary E. Bosworth . . .	State Nor'l School, N. H.	650	1882
" " . .	Ella P. McLeod . . . .	Boston High School . .	600	1888
Franklin . .	Hattie A. Hills . . . .	Somerville High School	650	1874
" . . .	E. C. Sumnerhayes . . .	High School, Nantucket,		
" . . .	Anna C. Damon . . . .	Worcester State Normal School . . . . .	600	1879
" . . .	Caroline S. Plimpton	Southbridge, Mass. . . .	600	1859
Harvard . .	Florence B. Ashley . . .	Somerville High School	600	1887
Burns . . .	Laura J. Brooks . . . .	Providence . . . . .	650	1883
" . . .	Minnie S. Turner . . . .	Somerville High School	600	1885
" . . .	Annie L. Brown . . . . .	Cambridge " "	600	1885
" . . .	Florence M. Hamlin . .	Somerville High School	550	1889
Highland . .	George E. Nichols . . . .	Dartmouth College . . .	1,800	1877
" . . .	M. Alice Paul . . . . .	Somerville High School	675	1879
" . . .	Harriet B. Sargent . . .	Worcester Nor'l School	600	1887
" . . .	S. Adelaide Blood . . . .	Salem Normal School .	600	1882
" . . .	Annie R. Cox . . . . .	State Nor'l School, N. H.	600	1883
" . . .	Jennie C. Frazier . . . .	Boston Normal School .	600	1887
" . . .	Sarah E. Pray . . . . .	Somerville High School	600	1878
" . . .	Lilias M. Bryden . . . .	Quincy Training School	600	1888
" . . .	Jennie M. Horner . . . .	Somerville High School	400	1888
Elm Street .	Mary Winslow . . . . .	Boston " "	400	
" . . .	Lucretia C. Sanborn . .	N. H. Normal School and Kindergarten . . . . .	600	1888
Lincoln . .	H. F. Hathaway . . . .	Bridgewater Normal Sch.	650	
" . . .	Carrie E. Fay . . . . .	" " " " " " " " " "	600	1889
" . . .	Charlotte F. Mott . . . .	Private School, Wad- dington, N. Y. . . . .	600	1886
" . . .	Annie C. Thayer . . . . .	Boston Normal School .	600	1885
Music . . .	S. Henry Hadley . . . . .	" " " " " " " " " "	1,333	1868
Drawing . .	L. A. Herrick . . . . .	Mass. Nor'l Art School	1,200	1888
Sewing . . .	Mrs. C. M. Coffin . . . .	Nantucket High " "	500	1888
" . . .	Mary L. Boyd . . . . .	" " " " " " " " " "	500	1888



## PUPILS.

Number of persons in the city on the first day of May last, between  
 five and fifteen years of age . . . . . 6,135  
 Number between eight and fourteen years of age . . . . . 4,446

	High School.	Grammar and Prim. Schools.	Total.
Whole number registered during the year . . . . .	420.	7,337.	7,757.
Average whole number . . . . .	387.6	5,568.1	5,955.7
Average attendance . . . . .	371.5	5,213.9	5,585.4
Per cent. of attendance . . . . .	95.8	93.6	93.8
Number cases of tardiness . . . . .	218.	2,562.	2,780.
Number cases of dismissal . . . . .	787.	2,306.	3,093.
Number cases of punishment . . . . .	..	922.	922.
Number pupils in attendance in January . . . . .	394.	5,642.	6,036.
Number pupils in attendance in December . . . . .	423.	5,813.	6,236.
Average number of pupils to a school . . . . .	..	50.1	..
Number pupils over fifteen years of age . . . . .	357.	239.	596.
Number pupils between 8 and 14 years of age . . . . .	..	4,001.	..

TABLE OF PUPILS BY GRADES.

Grades.	Class.	No. of Teachers.	Boys.	Girls.	Total.	No. Promoted to Higher Grade in June.
High . . . .	Fourth year	10	25	38	63	....
" . . . .	Third "		35	42	77	....
" . . . .	Second "		41	69	110	....
" . . . .	First "		77.	96	173	....
			178	245	423	
Grammar . .	Ninth . . . .	6	149	186	335	281
" . . . .	Eighth . . . .	7	189	183	372	322
" . . . .	Seventh . . . .	8	239	219	458	343
" . . . .	Sixth . . . .	12	322	267	589	437
" . . . .	Fifth . . . .	13	348	306	654	548
" . . . .	Fourth . . . .	14	379	330	709	630
		60	1,626	1,491	3,117	2,561
Primary . .	Third . . . .	15	401	336	737	547
" . . . .	Second . . . .	17	430	328	758	653
" . . . .	First . . . .	31	667	534	1,201	731
		*63	1,498	1,198	2,696	1,931
Total . . .		133	3,302	2,934	6,236	4,492

\* Including seven assistants.

EXHIBIT OF THE PUBLIC SCHOOLS.

SCHOOLS.	Whole number registered during the year.	Average whole number.	Average attendance.	Per cent. of attendance.	Number cases of tardiness.	Number cases of dismissal.	Number cases of punishment.	Number pupils in attendance in January.	Number pupils in attendance in December.	Average number of pupils to a school.	Number pupils over 15 years of age.	Number pupils between 8 and 14 years of age.
High School .....	420	387.6	371.5	95.8	218	787	....	394	423	.....	357	....
Prescott School.....	713	542.	517.4	95.5	90	109	58	579	565	51.4	41	419
Edgerly School .....	498	390.9	373.	95.4	41	91	27	411	411	51.4	13	302
Davis School.....	293	201.3	187.3	93.	61	63	43	231	207	51.8	1	155
Forster School .....	783	637.	602.	94.5	86	131	26	607	682	52.4	49	485
Bingham School .....	260	185.	176.7	95.5	46	58	3	184	193	48.2	....	134
Cedar Street School.	70	44.7	39.7	89.	51	25	11	44	39	39.	....	44
L. V. Bell School ...	1,004	780.7	729.5	93.4	272	613	94	771	822	51.4	65	552
Prospect Hill School	416	340.	311.	91.5	151	104	25	360	380	63.3	2	269
Cummings School. .	260	204.	194.	95.	75	52	42	221	214	53.5	....	107
Brastow School.....	123	82.4	77.9	94.	53	35	7	87	91	45.5	....	55
Bennett School.....	236	176.	160.	90.9	265	121	199	191	191	48	....	143
Jackson.....	290	180	168.8	93.7	276	64	116	207	217	54.2	1	129
Somerville Ave. Kindergarten.....	94	35.4	27.	79.	80	40	....	39	35	35.	....	....
Webster School.....	209	141.2	130.	92.	192	69	88	128	139	34.7	2	63
Union School .....	79	40.	37.5	94.	31	15	1	43	39	39.	....	1
Morse School .....	478	374.7	353.4	94.	137	137	35	377	322	40.3	33	303
Beech St. and Spring Hill School.....	165	138.	129.	93.	58	36	11	134	150	50.	....	63
Franklin School.....	250	216.	202.	91.5	111	66	42	189	180	45.	1	168
Harvard School.....	82	43.6	37.2	91.2	66	10	12	47	36	36.	....	....
Burns School .....	265	204.	189.	93.7	77	75	14	171	244	48.8	....	174
Highland School....	491	419.7	393.2	94.2	183	330	49	437	454	50.4	29	315
Elm Street Kindergarten School.....	74	27.2	23.2	83.6	105	28	....	30	27	27.	....	1
Lincoln School.....	204	164.3	155.1	94.4	55	34	19	154	175	43.7	2	114
Total.....	7,757	5,955.7	5,585.4	93.8	2,780	3,093	922	6,036	6,236	50.1	596	4,001

## ADDITIONAL STATISTICS OF THE HIGH SCHOOL.

Whole number of different pupils during the year	589
Largest number at one time	444
Number admitted during the year,	192
" from our Grammar Schools	169
" from other schools	23
" graduated	67
" of graduates who entered college	14
" " " " Institute of Technology and Scientific Schools	6
" who have left during the year, exclusive of graduates	99
Whole number at the present time, Dec. 1889	423
Average number to a teacher	42.3
Number over 15 years of age	357
" in course preparatory to college	127
" pursuing the regular course	247
" " " English course	66
" in the first class when it entered the school	140
" " " " at the present time	63
" " second class when it entered the school	149
" " " " at the present time	77
" " third class when it entered school	175
" " " " at the present time	110
" " fourth class when it entered the school	187
" " " " at the present time	173

## REPORT OF TRUANT OFFICER.

Number of visits to schools	738
" absences investigated	619
" cases of truancy	137
" truants arrested	8
" sent to House of Reformation	3

STATISTICS OF EVENING SCHOOLS.

	No. Enrolled.	Average Attendance.	No. of Teachers.	No. of Sessions	Cost of Instruction.	Cost of Janitor's Services.
Prescott School.....	94	35.4	4	45	\$281.00	\$47.00
L. V. Bell.....	98	41	5	45	300.50	47.00
Highland.....	49	23	2	45	208.50	47.00
Drawing School, Freehand..	56	39.6	2	32	281.00	34.00
"    "    Mechanical	69	39	2	32	264.00	34.00
Sewing School.....			1	39	58.50	16.00
Total....	366	178	16		\$1,393.50	\$225.00

Cost of instruction	\$1,393.50
"    supplies	225.08
"    janitors	225.00
Total cost	\$1,843.58

TIME TABLE OF SEWING TEACHERS.

	MRS. COFFIN.	MISS BOYD.
Monday . . . .	L. V. Bell School . . . . .	Forster School.
Tuesday, A. M. .	Independent Hall and Cum- ings School . . . . .	Edgerly " "
"    P. M. . .	L. V. Bell School . . . . .	" " "
Wednesday, A. M.,	Morse School . . . . .	Prescott " "
"    P. M.,	Franklin and Burns Schools .	" " "
Thursday, A. M. .	" " " " . . . . .	Prospect Hill.
"    P. M. . .	Lincoln School . . . . .	Bennett and Jackson Schools.
Friday, A. M. . .	Highland School . . . . .	Davis and Bingham Schools.
"    P. M. . .	" " . . . . .	Forster School.

PROGRAMME OF VISITS OF MISS HERRICK, DRAWING TEACHER.

	DAYS.	A. M.	P. M.
For the weeks beginning Sept. 23, Oct. 21, Nov. 18, Dec. 16, Jan. 27, March 3, March 31, April 28, June 2.	Monday.....	Burns School.....	Beech Street School.
	Tuesday.....	High School.....	Supplementary work.
	Wednesday.....	Forster School.....	“
	Thursday.....	Franklin School.....	Edgerly School.
	Friday.....	Morse School.....	Prospect Hill School.
For the weeks beginning Sept. 30, Oct. 28, Nov. 25, Jan. 6, Feb. 3, March 10, April 7, May 12, June 9.	Monday.....	Bingham School and Annex.....	Cedar Street School.
	Tuesday.....	High School.....	Supplementary work.
	Wednesday.....	Bell School.....	Webster School.
	Thursday.....	Highland School.....	Brastow and Cummings.
	Friday.....	Prescott School.....	Elm Street School.
For the weeks beginning Oct. 7, Nov. 4, Dec. 2, Jan. 13, Feb. 10, March 17, April 14, May 19, June 16.	Monday.....	Jackson and Somerville Avenue Kg.....	Cummings.
	Tuesday.....	High School.....	Supplementary work.
	Wednesday.....	Forster School.....	Bennett School.
	Thursday.....	Edgerly School.....	Prospect Hill District.
	Friday.....	Morse School.....	Prospect Hill School.
For the weeks beginning Oct. 14, Nov. 11, Dec. 9, Jan. 20, Feb. 17, March 24, April 21, May 26, June 23.	Monday.....	Lincoln School.....	Union and Eberle and Ind. Halls.
	Tuesday.....	High School.....	Supplementary work.
	Wednesday.....	Bell School.....	Bell, Bow St. and Harvard.
	Thursday.....	Highland School.....	Davis School.
	Friday.....	Prescott School.....	Supplementary work.



REPORT  
OF THE  
SOMERVILLE MYSTIC WATER BOARD.

# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN,

Jan. 22, 1890.

Referred to the committee on printing, to be printed in the annual reports. Sent down for concurrence.

GEO. I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Jan. 22, 1890.

Referred to the committee on printing, to be printed in the annual reports, in concurrence.

CHAS. S. ROBERTSON, *Clerk.*

## CITY OF SOMERVILLE.

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*To His Honor the Mayor, and the City Council:*

GENTLEMEN,—The Somerville Mystic Water Board has been kept constantly busy during 1889. The most important work of the year has been the introduction of the high service system, which was provided for by an order of the City Council, adopted early in June. In accordance with the directions of this order the Water Board has purchased land on Belmont Street, Spring Hill, and has erected thereon a water tower of iron, 30 feet in diameter, and 100 feet high, with a capacity of about 528,000 gallons. A pumping station and a chimney have been erected on the city farm, on land set apart for that purpose by the City Council. The building is of brick, with brown stone trimmings, and is a plain, substantial structure, well adapted for the purposes for which it will be used. A Worthington compound duplex pump, with boiler and attachments, has been bought and is now being put in position. It will be able to supply 2,000,000 gallons of water every twenty-four hours. The mains required for the high service system have been laid in accordance with the directions of the order, excepting that on account of the prospective rebuilding of the Central street bridge over the Lowell railroad, the Water Board was obliged to reach the stand-pipe by way of Cedar street and Highland avenue. This made it necessary to lay a main that was not provided for in the order of the City Council, at a cost of \$7,777.13. This amount has had to be expended without especial authority; but the Cedar street main was included in the plans made by the city engineer, and would have had to be laid in any case before long, so that the Water Board has only been compelled to anticipate a future expense. The Central street main has been laid to the bridge, on both sides, and a connection can be made whenever the railroad shall rebuild the bridge.

The work of introducing the high service system has been pushed as rapidly as possible, but it has taken longer than was anticipated by the board. After the order was adopted, specifications had to be

prepared, and bids solicited on the pipe, the water tower, the pumping machinery, and the pumping station and chimney. It was nearly September when the pipes were received, and after they had arrived, a long wet, rainy season delayed the work in all its branches. The work has all been done in the most thorough manner. The trenching and pipe-laying have been done by the day, as has the work of laying the foundations for the water tower, the pumping station and the chimney. In this way the expense has been made somewhat greater than if the work had been let out by contract, but the board has believed that economy in this respect would have been unwise, since it is essential that permanent works of this kind should be constructed in the most thorough manner. The members of the Water Board have given their most careful and constant attention to the work, and hardly a day has passed that each member has not given some time to its advancement. Many obstacles have had to be overcome as the work progressed. The appropriation for the high service system was \$62,000. The land for the stand pipe, for which \$3,978.74 was appropriated, has cost \$3,988.25. The stand pipe, for which \$14,000 was appropriated, has cost \$13,044.22. The pump, boiler and fittings, for which \$8,500 was appropriated, have cost \$9,102.92. The pumping station and chimney, for which \$10,000 was appropriated, have cost \$9,987.88. The force main, with gates and connections, for which \$20,000 was appropriated, has cost \$23,831.66. The Cedar street suction main, for which \$1,400 was appropriated, has cost \$1,682.07. The force main through Cedar street and Highland avenue, for which no appropriation was made, has cost \$7,777.13, and necessary teaming and filling for the pumping station lot cost \$800. Without the expenditure for the Cedar street main, the Water Board has expended on the work \$62,537.10, the total appropriation having been \$62,000. The department has on hand materials bought and charged to high service account, consisting of pipes, gates, hydrants and special fittings, to the value of \$6,330. These can all be used in the regular system of the city, so that, deducting their value from the total expenditure, it will be seen that the Water Board has kept \$5,793.90 within the appropriation made for the work. The system is now approaching completion, and will be in use at an early date, and credit should be given to those who have planned and constructed the high service system. The plans and specifications for the water tower were

drawn by City Engineer Horace L. Eaton, and the tower was built by the Cunningham Iron Works, of Charlestown, under the supervision of Hon. C. E. Rymes. The pumping station was designed by Samuel D. Kelly, of Somerville, and Messrs. Coon & Hall, also of Somerville, were the builders. The chimney was built by Messrs. Fessenden & Libby, the drawings having been made and the work inspected by Hon. C. E. Rymes. The specifications for the pump, boiler and pipings, were drawn by City Engineer Eaton, and the contract was awarded to the Worthington Company.

The work of the department during the year has been important. On the high service system there has been laid 12,044 feet of pipe, including 3,620 feet not included in the order of the City Council. Besides this, there has been laid 11,550 feet of new pipe in extension of mains to accommodate new buildings. Of the old cement pipe, 4,266 feet have been replaced by new iron pipe. This work has greatly improved the condition of the system, and as a result there have been but 44 bursts as compared with 79 in 1888. Several of these bursts, however, were disastrous, and while the number of breaks has been reduced, the damage has been much larger than in any preceding year. A large amount of relaying should be done in 1890. The danger from these worn-out pipes is serious and imminent, and now that the high service has been provided for, they should be replaced as soon as possible. The eight-inch main in Washington street, from Myrtle to Prospect street, should be replaced the coming season with ten-inch pipe. This is the principal connection between the thirty-inch main in Pearl street and Union square. The pipe is in bad condition, and is insufficient in size for so important a main. When this has been done, Union square and vicinity will have a reliable and ample supply of water, and in case of a large fire, there need be no fear of lack of water or breaking of the main. The distance is 3,400 feet, and the cost would be nearly \$6,000. The extension of the system during the year has accommodated many new neighborhoods, and there have been 475 new services put in, compared with 414 in 1888. This is the largest number of new services ever put in in a single year.

The Water Board has two recommendations to make to the City Council. There are now 7,051 feet of pipe in Somerville streets near the Cambridge line, owned by Cambridge, and 247 houses on these mains are supplied with water by the Cambridge department.



The amount paid in rates to Cambridge by these water takers amounts to \$5,000 a year. The Cambridge pipes are small and in bad condition, and the pressure is inadequate to give a satisfactory supply. These pipes could be replaced by the Somerville department at an expense of from \$7,000 to \$10,000. Allowing that the cost would be \$10,000, under the present contract with Boston our city could get \$2,500 a year of the water rates, so that the whole cost of the improvement would be repaid in four years, and the investment would grow steadily more profitable each year as vacant lots are built upon. The Water Board recommends, therefore, that an appropriation be made to do this work during the coming year.

Another question that is worthy of consideration is, whether it would not be well for Somerville to purchase the Mystic Water System outright. The interest of the Boston Water Board in this supply seems to be growing less as the Cochituate system is extended and improved, and it is believed that Boston would like to dispose of the Mystic system, and supply its whole territory from the Cochituate sources. The Mystic water has been severely criticised, but the fact remains that it is the only available supply for Somerville at present, and the Water Board believes that it can be improved so that there will be no objection to it. If the system can be secured at a low price, Somerville will do well to acquire it. The profit from it would be very great, and if the system were wholly controlled by the city which it chiefly serves, better care could be taken of it, and the supply could be greatly improved.

In closing its report, the Water Board desires to express its appreciation of the services rendered by City Engineer Horace L. Eaton, and by Hon. C. E. Rymes, in connection with the high service system. A detailed statement of the workings of the department for the year is given in the appended report of Superintendent Dennett, which is commended to the consideration of the City Council.

J. O. HAYDEN.

RICHARD DOWD.

ADNA C. WINNING.

WALTER C. MENTZER.

SAMUEL W. HOLT.

## SUPERINTENDENT'S REPORT.

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*To the Somerville Mystic Water Board:*

GENTLEMEN,—I present a detailed report of the work of the Somerville Mystic Water Works, performed under my supervision during the year ending Dec. 31, 1889. An inventory of tools, appliances and stock on hand, is included.

### DISTRIBUTION MAINS.

These were extended 13,777 feet, making the present total in the city, 56 miles 4,161 feet. There were relaid 4,493 feet of cast-iron pipe, in place of an equal amount of cement-lined pipe. The breaks on mains numbered 41, and 125 feet of pipe were used in their repair. Of these breaks, 23 occurred on 4-inch, 10 on 6-inch, 7 on 8-inch, and 1 on 10-inch mains.

### EXTENSION OF MAIN PIPE.

Alpine street, to a dead end, 685 feet of 6-inch.

Arthur street, to a dead end, 464 feet of 6-inch.

Belmont street, from stand-pipe, and connecting with Summer street, 227 feet of 14-inch.

Belmont place, to a dead end, 198 feet of 1½-inch.

Bowdoin street, to a dead end, 361 feet of 6-inch.

Cross street, to a dead end, 48 feet of 4-inch.

Dana street, to a dead end, 318 feet of 6-inch.

Derby street, to a dead end, 220 feet of 6-inch.

Edmonds street, to a dead end, 286 feet of 6-inch.

Elm street, to a dead end, 176 feet of 6 inch.

Gibbons street, to a dead end, 689 feet of 6-inch.

Gorham street, to a dead end, 349 feet of 6-inch.

Granite street, to a dead end, 103 feet of 6-inch.

Grant street, to a dead end, 603 feet of 6-inch.

Green street, to a dead end, 327 feet of 6-inch.

Greenville street, connecting with Monroe street, 39 feet of 6-inch.

Harrison street, connecting with Mondamin court, 315 feet of 6-inch.

Highland avenue, connecting with high service, 4,118 feet of 10-inch.

Ivaloo street, connecting with Harrison street, 350 feet of 6-inch.  
James street, to a dead end, 113 feet of 6-inch.

Monroe street, connecting with Greenville street, 26 feet of 6-inch.

Montrose street, connecting with Sycamore street, 35 feet of 6-inch.

Paine court, to a dead end, 169 feet of 1½-inch.

Partridge avenue, connecting with Medford and Vernon streets, 1,035 feet of 6-inch.

Pearl street, to a dead end, 190 feet of 6-inch.

Rossmore street, to a dead end, 447 feet of 6-inch.

Skehan street, to a dead end, 248 feet of 2½-inch.

Summit street, to a dead end, 254 feet of 6-inch.

Sycamore street, to a dead end, 148 feet of 6-inch.

Ware street, to a dead end, 245 feet of 6-inch.

Wesley street, to a dead end, 170 feet of 6-inch.

West street, to a dead end, 250 feet of 1¼-inch.

Williams street, to a dead end, 190 feet of 6-inch.

Wyatt street, to a dead end, 391 feet of 6-inch. Total, 13,777 feet.

### HIGH SERVICE.

There was used in constructing the high service :

364 feet of 6-inch pipe.

1,603 feet of 10-inch pipe.

1,877 feet of 12-inch pipe.

8,172 feet of 14-inch pipe.

520 feet of 18-inch pipe.

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12,536 feet.

The above statement includes the pipe laid in Broadway, from Cedar street to Central street; Central street, from Broadway to Highland avenue; Highland avenue, from Central street to Cedar street; Belmont street, from Highland avenue to Summer street; Cedar street, from Highland avenue to Broadway. It also includes the pipe used in setting the different hydrants, and that employed for six blow-offs, viz: 1 on Highland avenue, 1 on Belmont street, and 4 at entrance to pumping station. For crossing Cedar-street bridge, 105 feet 8 inches of steel pipe were required.

## STREETS RELAID.

Cedar Street, 50 feet of 12-inch in place of 6-inch.

Central Street, 52 feet of 12-inch in place of 12-inch.

Florence Street, 424½ feet of 6-inch in place of 4-inch.

Franklin Street, 511 feet of 8-inch in place of 6-inch.

London Street, 390 feet of 4-inch in place of 4-inch

Medford Street, 939 feet of 8-inch in place of 8-inch.

Medford Street, 65½ feet of 12-inch in place of 12-inch.

Myrtle Street, 494 feet of 8-inch in place of 8-inch.

Pearl Street, 257 feet of 8-inch in place of 8-inch.

Perkins Street, 194 feet of 8-inch in place of 6-inch.

Somerville Avenue, 439 feet of 10-inch in place of 8-inch.

Washington Street, 600 feet of 10-inch in place of 8-inch.

Willow Avenue, 77 feet of 12-inch in place of 6-inch.

Total, 4493 feet.

There still remain in service about ten miles of old, contract pipe, all of which is in a weak condition and liable to burst at any time. The pipe made by the city prior to 1877 is also unreliable, many breaks having occurred on it within the last two years.

The condition of the cement-lined pipe in the following named streets is such that I recommend the substitution therefor of cast-iron pipe, to the amounts and of the sizes specified, during the coming year :—

Bow street, from Somerville avenue, 760 feet of 8-inch.

Warren avenue, from Bow street to Columbus avenue, 716 feet of 8-inch.

Medford street, from Somerville avenue to Cambridge line, 1,570 feet of 8-inch.

Cross street, from Everett avenue to Flint street, 700 feet of 6-inch.

Oliver street, from Franklin to Cross street, 1,100 feet of 6-inch.

Washington street, from Myrtle street to Prospect street, 3,400 feet of 10-inch.

Marshall street, from Medford street to Broadway, 1,750 feet of 8-inch.

Dane street, from Somerville avenue to Washington street, 1,400 feet of 6-inch.



## GATES.

The following named gates were set in connection with the high service, to Dec. 31, 1889 :—

- 1 18-inch on Cedar street, South Broadway line.
- 1 14-inch on Cedar street, South Broadway line.
- 1 14-inch on Broadway, near Cedar street.
- 1 14-inch on Broadway, near Central street.
- 1 14-inch on Central street, near Broadway.
- 1 14-inch on Central street, N. side of bridge.
- 1 14-inch on Central street, S. side of bridge.
- 1 14-inch on Central street, N. of Highland avenue.
- 1 14-inch on Highland avenue, W. of Central street.
- 1 14-inch on Highland avenue, E. of Belmont street.
- 1 14-inch on Belmont street, S. of Highland avenue.
- 1 14-inch on Belmont street, near stand pipe.
- 1 14-inch on Belmont street, at stand-pipe.
- 1 14-inch on Belmont street, north side Summer street.
- 1 12-inch, on Cedar street, S. Broadway.
- 1 12-inch on Broadway, E. Central.
- 1 12-inch on Cedar street, opposite pumping station.
- 1 12-inch on Cedar street, opposite pumping station.
- 1 12-inch on Cedar street, opposite pumping station.
- 1 12-inch on Cedar street, near Murdock street.
- 1 12-inch on Cedar street, near railroad crossing.
- 1 12-inch on Cedar street, N. Highland avenue.
- 1 12-inch on Broadway, near 30-inch main.
- 1 10-inch on Highland avenue, W. Belmont street.
- 1 6-inch on Highland avenue, W. Belmont street (blow-off).
- 1 6-inch on Highland avenue, W. Belmont street (blow-off).
- 1 6-inch at pumping station, blow-off on 12-inch.
- 1 6-inch at pumping station, blow-off on 12-inch.
- 1 6-inch at pumping station, blow-off on 14-inch.
- 1 6-inch at pumping station, blow-off on 18-inch.

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30

Gates were set as follows, on mains extended during the year :

West street, N. line Hathorn, 1 1-inch.

Dana street, N. line Pearl, 1 6-inch.

Wesley street, N. line Bow, 1 6-inch.



Skehan street, S. line Hanson, 1 3-inch.

Gibbens street, W. line Central, 1 6-inch.

Summit street, E. line Elm, 1 6-inch.

Bowdoin street, S. line Washington, 1 6-inch.

Wyatt street, S. line Washington, 1 6-inch.

Montrose street, E. line Sycamore, 1 6-inch.

Belmont place, E. line Belmont, 1 1½-inch.

Villa avenue, near line Elm court, 1 4-inch.

Grant street, N. line Broadway, 1 6-inch.

Grant street, S. line Jaques, 1 6-inch.

Highland avenue, W. line Willow avenue, 1 10-inch.

Highland avenue, E. line Willow avenue, 1 10-inch.

Highland avenue, W. line Cedar street, 1 10-inch.

Highland avenue, E. line Cedar street, 1 10-inch.

Highland avenue, E. line Grove street, 1 10-inch.

Highland avenue, W. line Belmont street, 1 10-inch.

Highland avenue, W. line Belmont street (blow-off), 1 6-inch.

Partridge avenue, S. line Medford, 1 6-inch.

Partridge avenue, N. line Vernon, 1 6-inch.

Ivaloo street, W. line Park, 1 6-inch.

Harrison street, N. line Mondamin court, 1 6-inch.

Derby street, E. line Temple, 1 6-inch.

Edmonds street, S. line Broadway, 1 6-inch.

Arthur street, S. line Broadway, 1 6-inch.

Spring street, N. line Beech, 1 4-inch.

Washington street, W. Bonner avenue, 1 8-inch.

Cross street, N. line Broadway, 1 4-inch.

Rossmore street, N. line Somerville avenue, 1 6-inch.

Alpine street, E. line Cedar, 1 6-inch.

Willow avenue, N. line Highland avenue, 1 12-inch.

Willow avenue, S. line Highland avenue, 1 12-inch.

Cedar street, S. line Highland avenue, 1 12-inch.

Making a total of 565 gates in the city, to date, exclusive of those on the high service.

The re-laying of larger mains made the following-named changes in gates necessary :

Florence street, 4-inch gate replaced by 6-inch.

Franklin street, 6-inch gate replaced by 8-inch.

Washington street. 8-inch gate replaced by 10-inch.

Somerville avenue, 8-inch gate replaced by 10-inch.

Sixty-nine gates, found leaking, were packed; 185 gate boxes were cleaned of refuse; 36 gate boxes were replaced by new ones, and 69 were brought to grade of street.

### HYDRANTS.

Twenty-nine hydrants were set, the locations of which are:

Belmont street, near stand-pipe on high service.

Belmont street, foot of hill, toward Highland avenue.

Bowdoin street, near dead end.

Broadway, opposite Cedar street, on high service.

Broadway, 500 feet E. of Cedar street.

Buckingham street, corner Garden street.

Cedar street, corner Murdock street.

Cedar street, corner Albion street.

Cedar street, near railroad.

Cedar street, opposite pumping station.

Franklin street, near Pearl street.

Gibbens street, near dead end.

Gibbens street, near Central street.

Highland avenue, opposite West street.

Highland avenue, corner Willow avenue.

Highland avenue, corner Fanning avenue.

Highland avenue, opposite Eastman place.

Highland avenue, between Porter and Belmont streets.

Highland avenue, opposite Belmont street, on high service.

James street, near dead end.

Madison street, midway between School and Sycamore streets.

Medford street, near Jackson street.

Medford street, near Washington street.

Partridge avenue, corner Vernon street.

Partridge avenue, between Medford and Vernon streets.

Partridge avenue, near Medford street.

Sanborn avenue, 100 feet E. of Walnut street.

School street, near Montrose street.

Warren avenue, between Bow street and Sanborn avenue.

The total number of hydrants in the city is now 401. Nine were removed and new ones substituted; 36 were dug up and had their wastes repaired, new valves put in, etc., and 10 were thoroughly

overhauled and repaired in the department shops. These hydrants were discontinued :—

One on Cameron street, near Cambridge line.

“ in Union Square, easterly side.

“ on Somerville avenue, corner Bow street.

“ on Washington street, corner Hawkins street.

All the hydrants were kept in repair and received constant attention.

The two Lowry hydrants formerly connected with the cement-lined mains in Union Square, were removed when those mains were re-laid with cast-iron pipe. They will be re-set in other localities hereafter to be decided upon.

### SERVICES.

There were laid 475 services, at an average cost of \$17.70 each, making the total number 5885, and giving a total length of 38 miles, 3,402 feet. For various reasons 40 services were put in to re-place old ones.

There were 79 leaks, of which 30 were occasioned by broken leads, 10 by settling of earth, 12 by picks, 13 by defective couplings, 14 by defective soldering. Twenty-five services had such repairs as new stop and waste cocks, washers, etc. ; 2 were lowered in Bowdoin street, to allow passage of sewer, and 3 were lowered to prevent freezing ; 39 were dug up and tapped at corporation ; 49 old wooden service boxes were replaced by iron ones.

Water was turned off for repairs in 154 instances.

### STAND PIPES.

One new stand pipe was located on Medford street, near Broadway. Those on Elm street, opposite Morrison street, Broadway, near Montgomery avenue, and in Cutter Square were re-set. One was removed from Elm street, near railroad crossing. Twenty were packed and oiled, and 13 received general repairs. All had the best of care.

### DRINKING FOUNTAINS.

These all received the customary attention and supplies of dippers, chains, etc. The one in front of the Hill Building, Union Square, has been thoroughly repaired and is now in good order.

## MISCELLANEOUS.

In the shop the iron pipe for the services was lined, cut and fitted, and the lead pipe connections were made. The usual repairs on gates and hydrants were made, and gate boxes made and fitted.

## STOCK AVAILABLE FOR FUTURE USE JAN. 1, 1890.

Cast-iron pipe . . . . .	\$6,069 73
Special castings . . . . .	2,436 84
Gates and hydrants . . . . .	1,301 44
Service pipe and material . . . . .	379 56
Sundry material . . . . .	83 80
	<hr/>
	\$10,271,37

## TOOLS AND FURNITURE.

Special patterns . . . . .	\$1,000 00
Tools and machinery for water-works . . . . .	1,054 40
Tools for water services. . . . .	430 75
Stable department, . . . . .	1,421 50
Office furniture, . . . . .	520 00

NATHANIEL DENNETT,

*Superintendent.*

REPORT  
OF THE  
OVERSEERS OF THE POOR.



## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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Concurred in.

IN COMMON COUNCIL, Feb. 13, 1890.

CHARLES S. ROBERTSON, *Clerk.*

## BOARD OF OVERSEERS OF THE POOR.

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HON. CHARLES G. POPE, <i>Chairman ex-officio.</i>	
COL. HERBERT E. HILL . . . . .	Ward One.
MR. EDWARD B. WEST . . . . .	Ward Two.
MR. DANIEL C. STILLSON . . . . .	Ward Three.
MR. CHARLES G. BRETT, <i>President</i> . . . . .	Ward Four.

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### COMMITTEES:

<i>On Investigation and Relief</i> . . . . .	MESSRS. BRETT AND WEST.
<i>On Finance</i> . . . . .	MESSRS. HILL AND STILLSON.
	CHARLES C. FOLSOM, <i>General Agent.</i>
	FRANK W. KAAH, <i>Secretary.</i>

## CITY OF SOMERVILLE.

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*To the Honorable the City Council of Somerville:*

GENTLEMEN,—At the request of the Overseers of the Poor, the General Agent has submitted to them his report of the work of this department for the year 1889. This report, together with the accompanying tables, they adopt as their official report.

CHARLES G. POPE, *Chairman.*

CHARLES G. BRETT, *President.*

HERBERT E. HILL.

EDWARD B. WEST.

DANIEL C. STILLSON.

## REPORT OF THE GENERAL AGENT.

### *Overseers of the Poor, City of Somerville:*

GENTLEMEN,—I have the honor to submit to you my report for the year ending December 31, 1889.

The work has been carried on with the same end in view as in the year 1888, viz., to encourage self-reliance, to assist the destitute, to provide for those who are in distress, and to prevent suffering as much as possible, every case being treated according to its merits, and at the same time the expenses of the department being kept as low as practicable under the circumstances.

The appropriation was \$14,000. Of this amount, \$500 was transferred to the account of "Indigent Soldiers and Sailors." The total expenditure for the year was \$14,610.92, as against \$13,375.98 in the year 1888. The increase of \$1,234.94 in the expenses was due to the following reasons: First, the exchange of a small safe for a large fire-proof safe, suitable for protecting the books and records from fire if one should occur; second, an increase in the expenses for the insane. In the year 1888 there was paid public institutions for the care of the insane, \$4,542.38; in the year 1889, \$5,548.65, an increase of \$1,006.27. This includes a bill from the Commonwealth for the support, during several years, of Mary Doughty, an insane woman, whose settlement was not determined until last spring, she giving no account of herself during her confinement in the Taunton Insane Hospital. This bill amounted to \$495. The whole matter was referred to the City Solicitor, and upon his advice the bill was paid.

There has been a controversy with the city of Cambridge in regard to a bill of about \$80 for board and treatment of a pauper in Carney Hospital, the question in dispute being whether his settlement was in Somerville. This matter has been referred to the city solicitors of the two cities, and may be decided finally by the Supreme Court.

During the past year 207 families, comprising 696 persons, have been aided in their homes; 875 orders have been given on different stores for groceries, amounting to \$2,009.73; 254 orders for fuel on

Horatio Wellington & Co., and Dunning & Underhill, amounting to \$517.95; orders for clothing and boots and shoes, amounting to \$206.95; orders to pay in whole or in part the burial of 11 persons, at an expense of \$97.

There has been paid other cities and towns \$1,609 for partial or full support of paupers having a settlement in this city.

In January, 1889, the number of families being assisted by the payment of rent was 22; in December, only 18; a decrease of 4 during the year. I shall ask the Board to stop paying rent for 3 or 4 others in the spring. In January, 1890, there were 22 sane and 28 insane persons for whose support the city was paying in full; in December, 23 sane and 32 insane. The city is reimbursed for 2 of these through guardians. These 55 persons are in insane hospitals, in almshouses of the State and of other towns and cities, and in private families. Of these there have died during the year 1 sane and 3 insane persons; 1 other sane person disappeared last November.

Full board has been paid temporarily for several sane and insane persons, most of them being sick and after recovery being able to take care of themselves. During the year 8 persons were committed to the State Almshouse at Tewksbury; 40 applicants were refused aid for various good reasons.

For further information I will refer you to the tables prepared by the Secretary.

Thanking you for your courtesy and co-operation during the year,

I am, very respectfully yours,

C. C. FOLSOM.

TABLE NO. 1.

PARTIAL SUPPORT (OUT-DOOR RELIEF).

Families aided during the year	. . . . .	207
Persons " " " "	. . . . .	696
Persons having a settlement in Somerville	. . . . .	332
" " " " " other cities and towns	. . . . .	193
" " no settlement, chargeable in part to the State	. . . . .	171
Persons aided in other cities and towns chargeable to Somerville	. . . . .	76



TABLE NO. 2.

## FULL SUPPORT.

During the whole year, sane . . . . .	19
“ “ “ “ insane . . . . .	25
“ part of the year, sane . . . . .	24
“ “ “ “ “ insane . . . . .	18
In almshouses . . . . .	10
In private families . . . . .	24
In Boston hospitals . . . . .	14
Total number aided during the whole or part of the year . . . . .	86

TABLE No. 3.

PAY ROLLS FOR	1884.	1885.	1886.	1887.	1888.	1889.
January .....	\$2,913 20	\$2,578 43	\$3,296 01	\$2,769 44	\$3,139 51	\$2,881 88
February .....	980 45	1,198 38	965 30	834 62	852 68	777 66
March.....	1,487 43	2,293 47	908 12	1,296 90	1,245 99	1,792 66
April.....	1,716 54	1,400 97	1,805 75	1,073 43	1,035 71	696 96
May.....	718 23	639 81	662 41	691 49	523 61	602 42
June .....	1,750 43	1,211 58	972 22	927 13	1,480 64	1,627 10
July.....	1,415 09	2,373 39	1,663 89	1,500 01	883 96	1,212 09
August.....	1,231 11	710 83	590 00	510 11	755 07	503 27
September .....	2,072 35	898 50	774 84	1,431 86	1,571 43	1,599 93
October ....	1,023 72	1,773 42	1,395 11	725 01	678 14	1,356 86
November.....	928 79	434 94	669 28	696 69	727 12	715 27
December.....	1,135 18	916 60	638 90	974 20	478 12	844 82
Total.....	\$17,272 52	\$16,430 32	\$14,341 83	\$13,430 89	\$13,375 98	\$14,610 92

TABLE No. 4.  
EXPENDITURES FOR THE YEAR 1889.

	Rent.	Board.	Groceries.	Towns and Cities.	Public Institutions.	Boots and Shoes.	Dry Goods.	Burials.	Salaries.	Fuel.	Sundries.	Totals.
January .	\$99 00	\$101 75	\$283 05	\$790 87	\$1,214 03	\$42 35	\$6 00	\$10 00	\$120 83	\$169 85	\$44 15	\$2,881 88
February .	103 00	88 00	218 51	22 39	77 57	7 60	18 75	—	120 83	100 06	20 95	777 66
March . .	99 00	141 75	226 05	31 09	1,031 00	13 00	—	5 00	120 84	102 88	22 05	1,792 66
April . .	105 00	86 78	123 70	62 57	162 80	13 25	—	—	120 83	—	22 03	696 96
May . . .	123 00	88 18	233 60	—	—	9 00	—	—	120 83	—	27 81	602 42
June . . .	109 00	171 78	79 50	11 50	1,087 82	2 50	—	10 00	120 84	3 15	31 01	1,627 10
July . . .	92 00	96 18	194 00	511 14	138 15	—	11 50	17 00	120 83	17 60	13 69	1,212 09
August . .	92 00	103 04	117 30	8 50	—	11 50	19 00	—	120 83	—	31 10	503.27
September .	92 00	189 92	196 77	36 59	908 81	6 75	—	35 00	120 84	—	13 25	1,599 93
October . .	102 00	126 33	156 00	122 35	428 18	18 25	20 75	5 00	120 83	—	257 17	1,356 86
November .	87 00	113 43	159 75	12 00	6 29	5 25	—	15 00	120 83	124 41	71 31	715 27
December .	87 00	106 90	21 50	—	494 00	1 50	—	—	120 84	—	13 08	844 82
Totals . .	\$1190 00	\$1414 04	\$2,009 73	\$1609 00	\$5,548 65	\$130 95	76 00	\$97 00	\$1450 00	\$517 95	\$567 60	\$14,610 92

TABLE NO. 5.

RECEIPTS FROM VARIOUS SOURCES.

Commonwealth of Massachusetts . . . . .	\$556 47
City of Boston . . . . .	574 00
“ Cambridge . . . . .	99 15
“ Lowell . . . . .	19 85
“ Salem . . . . .	3 00
“ Quincy . . . . .	54 90
“ Haverhill . . . . .	18 75
“ Malden . . . . .	5 55
“ Newton . . . . .	2 05
Town of Clinton . . . . .	23 50
“ Groton . . . . .	13 00
“ Arlington . . . . .	34 68
“ Leominster . . . . .	87 50
“ Oakland . . . . .	6 85
“ Methuen . . . . .	23 50
“ Stoneham . . . . .	32 00
“ Northfield . . . . .	30 25
Guardians and relatives of paupers and insane persons . . . . .	651 62
J. B. Eastman, return of overpayment on a bill for groceries . . . . .	4 00
	<hr/>
Total . . . . .	\$2,240 62

TABLE NO. 6.

RECAPITULATION.

Received from the Commonwealth, cities, towns, and individuals . . . . .	\$2,240 62	
Appropriation . . . . .	14,000 00	
Total receipts . . . . .		\$16,240 62
Total expenditures . . . . .	14,610 92	
Transferred to account of “Indigent Soldiers and Sailors” . . . . .	500 00	15,110 92
Balance . . . . .		\$1,129 70
Net expenditures . . . . .		12,370 30



REPORT OF THE BOARD OF HEALTH.



## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHAS. S. ROBERTSON, *Clerk.*

## CITY OF SOMERVILLE.

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OFFICE OF THE BOARD OF HEALTH, CITY HALL,  
SOMERVILLE, MASS, Jan. 22, 1890.

*To His Honor the Mayor and the City Council.*

GENTLEMEN,—Agreeably with law and usage, the Board of Health presents herewith its twelfth annual report, consisting of a condensed statement of the sanitary conditions of Somerville and the doings of the Board during the year ending Dec. 31, 1889.

### MEMBERSHIP.

Mr. Charles H. Crane was appointed to the Board, April 25, 1888 for two years. Alvah B. Dearborn, M. D., was appointed City Physician by the Mayor and Aldermen, Jan. 16, 1889, for three years, and became, *ex-officio*, a member of the Board. Mr. J. Frank Wellington was appointed Jan 23, 1889, by the Mayor and Aldermen, for two years.

### ORGANIZATION.

The Board organized Feb. 5, by electing officers as follows:—

*Chairman*, J. FRANK WELLINGTON.

*Clerk*, WILLIAM P MITCHELL.

*Inspector*, CALEB A. PAGE.

### NUISANCES.

The tabulated method of reporting nuisances abated is continued in this report; the arrangement being by the months when the complaints were received.

## NUISANCES ABATED IN THE YEAR 1889.

	January.*	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Cellar damp.....	8	4	5	1	1	3	1	1	1	1	-	-	26
Cesspool offensive.....	1	-	-	-	1	-	-	-	-	-	-	-	2
" overflowing.....	1	-	-	1	1	-	-	1	-	-	-	-	4
Connections of drainage pipes defective.....	4	1	1	-	1	1	2	1	-	1	-	-	12
Drainage defective.....	5	1	-	-	-	2	2	2	-	-	-	-	10
" emptying into cellar.	1	-	-	-	1	2	3	-	-	-	-	-	7
Drainage emptying on surface.	3	-	-	1	1	2	2	4	1	1	-	-	15
Drainage not ventilated.....	11	7	3	-	-	-	2	1	-	2	-	-	26
Drain-pipe defective.....	4	2	1	2	1	1	-	1	-	-	-	-	12
Fish carts dirty and offensive..	-	-	-	-	-	-	-	1	-	-	-	-	1
Hennery offensive.....	1	-	-	-	-	-	-	-	1	1	-	-	3
Hens kept in cellar.....	-	1	1	-	-	-	-	-	-	-	-	-	2
Manure exposed and offensive.	3	-	1	1	3	-	3	2	2	-	-	-	15
Offal on land.....	-	1	3	-	2	-	3	1	-	1	-	-	11
Offensive odor in and about dwellings.....	1	8	1	2	-	3	-	1	-	-	-	-	16
Opening in drain-pipe in cellar.	1	-	-	-	-	-	-	-	-	-	-	-	1
Premises filthy.....	-	-	-	1	-	-	-	-	2	-	-	-	3
" untidy.....	5	1	1	1	-	-	4	1	1	-	-	-	14
Privy-vault defective.....	5	1	6	6	6	3	5	3	4	1	-	-	40
" full.....	4	1	7	8	8	20	10	4	9	1	-	-	72
" offensive.....	16	-	6	7	10	21	10	4	11	1	-	-	86
Rubbish in cellar.....	1	-	-	1	-	1	-	-	1	-	-	-	4
Slops thrown on surface.....	1	-	-	-	-	-	-	-	1	-	-	-	2
Stable and stable premises filthy and offensive.....	1	-	-	-	-	-	1	-	1	1	-	-	4
Stagnant water in house cellar.	2	-	-	-	-	-	-	-	-	-	-	-	2
Stagnant water on surface.....	5	-	5	-	1	3	1	3	2	-	-	-	20
Waste-pipe defective.....	8	1	2	1	1	-	-	1	-	2	-	-	16
" not trapped.....	7	1	4	1	2	2	2	1	-	1	-	-	21
Water-closet defective.....	3	1	2	-	-	3	3	2	1	2	-	-	17
" insufficiently supplied with water.....	6	8	1	1	-	1	-	1	-	1	-	-	19
Water-closet offensive.....	6	2	-	1	-	1	3	2	-	-	-	-	15
Wooden waste-pipes and drains.....	1	-	-	-	-	-	-	-	-	-	-	-	1
Total.....	115	41	50	36	40	69	55	38	38	17	-	-	499

\* Including nuisances referred to us by the Board of 1888.

Number of nuisances abated	499
" referred to the Board of 1890	32
" complained of	531
" complaints (many covering more than one nuisance)	229
" tenements ordered vacated	3
" same since made habitable	3
" notices mailed	164
" served by constables	3
Letters written	5

Verbal notices from the inspector have, in many cases, led to the abatement of nuisances without further action.

**PRIVATE STREETS.**—In our last report we called attention to the bad sanitary condition of some of the private streets in the city. Owing to the lack of any concerted action of the abutters on such streets, some of them are in constant need of attention; and although the city is not responsible for the maintenance of private streets, yet we recommend that the Highway Department adopt a policy which will, at the expense of a small amount of labor and such surplus materials, of little value, as may be at hand, keep their surfaces level and free from pools of stagnant water. Chestnut street, Delaware street, Franklin avenue, Madison street, Montrose street, Runey street and South street, may be mentioned as particularly in need of repairs at the present time.

#### PERMITS.

Applications for permits to keep cows, swine and goats, and to collect grease, have been disposed of as follows:

**Cows.**—Applications have been received from eighteen parties for permits to keep eighty-three cows, but the board delayed action until so late in the season, awaiting the result of pending legislation which would have, if completed, extended the powers of the Board in dealing with the matter of keeping cows as a business, that finally no permits were granted.

**SWINE.**—Applications received for 197; permits granted for 187 and refused for 10. Fee, \$1 for each swine.

**GOATS.**—Applications received for 21; permits granted for 21. Fee, \$1 for each goat.

**GREASE.**—Number of applications received, 7, all of which have been granted. One of the applicants is a resident of Boston, and all of the others of Somerville. The fee for permission to collect grease is \$2.

#### PEDLERS.

In pursuance of Ordinance No. 40, entitled "Hawkers and Pedlers," 154 certificates of record have been issued to pedlers of goods in our streets. This number is in addition to 239 certificates previously issued, making a total of 393 certificates issued by this Board, but many of the recipients of the same have given up the business.

A monthly inspection is made at the police building, to see that the name and number are properly painted on the wagon, and that the wagon is kept clean.

### ASHES.

The contract with John P. Downey for the removal of ashes, expired April 29th. In response to solicitations published in the *Somerville Journal* of April 6th and 13th, and mailed to various parties, proposals to remove ashes during the fourteen months commencing April 30th, 1889, were received as follows: From

Martin Gill . . . . .	\$3,850
John P. Downey . . . . .	4,000
Jeremiah McCarthy . . . . .	2,950

And the contract was awarded to Jeremiah McCarthy at the sum named in his proposal, he furnishing a bond, with sureties, in the sum of three thousand dollars.

The city has been districted for the removal of ashes in the same manner as stated in our last annual report, which is as follows:

**DISTRICT 1.** Beginning at the Boston line and bounded by the northerly line of Washington street, the westerly line of Prospect street, the northerly line of Concord avenue extended across Beacon street to the Cambridge line, and by the Cambridge and Boston lines.

**DISTRICT 2.** Beginning at the Boston line, and bounded by the northerly line of Washington street, the easterly lines of Medford and Cross streets (the latter prolonged to the Mystic river), Mystic river and the Boston line.

**DISTRICT 3.** Beginning at the junction of Cross and Medford streets, and bounded by the easterly line of Medford street, the northerly line of Highland avenue, the easterly line of Cedar street prolonged to the Medford line, the Medford line, Mystic river, and the easterly line of Cross street prolonged to the river.

**DISTRICT 4.** Beginning at the intersection of Medford and Washington streets, and bounded by the northerly line of Washington street, the westerly line of Prospect street, the northerly line of Somerville avenue, the easterly lines of Mossland and Cedar streets, the northerly line of Highland avenue, and the easterly line of Medford street.

**DISTRICT 5.** Beginning at the intersection of Prospect street and



Somerville avenue, and bounded by the westerly line of Prospect street, the northerly line of Concord avenue prolonged to the Cambridge line, the Cambridge line (extending westwardly) and the northerly line of Somerville avenue.

DISTRICT 6. All of that portion of the city lying west of the easterly lines of Cedar and Mossland streets.

It will be seen by these descriptions that the side lines of streets are used as boundaries, and not the middle lines; so that ashes are removed from the sidewalks on both sides of the street on the same day.

The collections are made on the following-named days:

Monday in District 1.

Tuesday in District 2.

Wednesday in District 3.

Thursday in District 4.

Friday in District 5.

Saturday in District 6.

The collector is required to remove all *ashes, rubbish, and house dirt* (free from filth and offal), that is placed in barrels or boxes on the outer edge of the sidewalk before 8 o'clock A. M. of the day for collection.

#### HOUSE OFFAL.

The three years' contract of Henry Gray for the collection of house, offal expired June 26, 1889, and in response to solicitations published in the *Somerville Journal* of April 6th and 13th, proposals were received for the collection of house offal in the city for a term of three years, commencing June 26, 1889, as follows:

Henry Gray . . . . .	Price for one year, \$1,600
John McMeanly . . . . .	“ “ 1,500
Christopher Burke . . . . .	“ “ 1,300

And the contract was awarded to Henry Gray at \$1,600 a year.

The contractor is required to make collections at least once every week in December, January, February and March; twice a week in April, October and November; and three times a week in the five remaining months.

Mr. Gray informs us that he has collected about 450 cords of house offal during the year 1889.

## NIGHT SOIL.

Night soil has been removed during the year by Mr. R. M. Johnson of Arlington; his contract, which expired Feb. 1, 1888, having been renewed for three years. Orders are taken at the Police Station on Bow street, and at Knowles Bros.' grocery store on the corner of Perkins and Franklin streets. The removal is made by the "odorless" process, and the price is four dollars for every load, or part of a load, of eighty cubic feet.

We are informed by the contractor that 598 loads have been removed in 1889.

## SEWERS.

The Board is glad to be able to report that sewers have been laid in Madison and Montrose streets, as has been recommended in its last three annual reports.

We would renew our recommendation that Kent court and Woodbine street be provided with sewers, the reasons for which recommendation are stated in our last annual report.

It is very desirable that the extension of our sewerage system should keep pace with the rapid growth of the city; and we note with satisfaction that the aggregate length of sewers laid in 1889 is much in excess of that in 1888.

## DEATHS.

The number of deaths in the city in 1889 was 598, and there were 45 still-births.

## MORTALITY IN SOMERVILLE IN 1889.

	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
<b>ZYMOTIC DISEASES.</b>													
<i>Miasmatic.</i>													
Scarlet fever.....	..	1	1	..	..	1	1	..	..	1	2	..	7
Diphtheria.....	1	..	4	2	6	4	1	1	1	2	1	5	28
Croup.....	..	..	1	1	..	1	..	..	..	3	..	1	7
Typhoid fever.....	..	..	..	1	..	1	..	2	2	1	..	..	7
Erysipelas.....	1	1	..	..	..	..	..	..	..	..	..	..	2
Diarrhœa.....	..	..	..	..	..	..	4	2	..	..	..	..	6
Cholera infantum.....	..	1	..	..	..	1	13	2	3	1	..	1	28
Septicæmia.....	..	..	1	..	..	1	..	..	..	..	..	1	3
Pyæmia.....	..	..	..	..	..	..	1	..	..	..	..	..	1



# MAP OF SOMERVILLE

1890

SCALE  
0 100 200 300 400 500 600 700 800 900 1000 2000 3000 4000 5000  
1 MILE

SHOWING HEALTH DISTRICTS.



Sewers shown thus: - - - - -





MORTALITY IN SOMERVILLE IN 1889.—Continued.

	January.	February.	March.	April.	May.	June.	July.	August	September.	October.	November	December.	Total,
<b>ZYMOTIC DISEASES.</b>													
<i>Miasmatic.</i>													
Whooping cough.....	1	..	3	1	1	..	1	..	..	..	..	..	7
Measles.....	..	..	..	..	..	1	..	..	..	..	..	..	1
Dysentery.....	..	..	..	..	..	..	1	..	1	..	..	..	2
Malarial poison.....	..	..	..	..	..	..	..	1	..	..	..	..	1
Rheumatism.....	1	..	..	..	1	..	1	1	..	..	..	..	4
<b>CONSTITUTIONAL DISEASES.</b>													
<i>Diathetic.</i>													
Cancer.....	..	2	4	2	..	2	1	2	3	1	1	1	19
Tumor.....	..	..	1	..	..	..	..	..	..	1	..	1	3
<i>Tubercular.</i>													
Tuberculosis....	..	..	..	..	..	..	..	..	..	..	1	1	2
<b>LOCAL DISEASES.</b>													
<i>Nervous System.</i>													
Apoplexy.....	2	1	..	..	..	..	2	..	3	2	3	1	14
Paralysis.....	1	..	..	3	1	1	..	1	..	2	2	3	14
Insanity.....	1	2	1	1	1	1	..	..	..	..	1	..	8
Brain disease....	..	1	2	..	..	1	7	..	1	1	..	..	13
Meningitis.....	..	3	1	2	4	4	3	2	1	3	1	3	27
Convulsions..	..	..	2	1	..	2	3	2	2	..	..	2	14
Tetanus.....	..	..	..	..	..	..	1	..	..	..	..	..	1
Spinal disease....	1	..	..	..	..	..	..	1	..	..	1	..	3
Epilepsy.....	1	..	..	..	..	..	..	1	..	..	..	..	2
<i>Organs of Circulation.</i>													
Heart disease.....	6	2	2	4	2	5	3	1	2	5	4	8	44
<i>Respiratory Organs.</i>													
Pneumonia.....	2	9	7	4	11	1	3	2	3	3	5	8	58
Bronchitis.....	1	2	3	..	..	1	..	2	1	2	..	5	17
Hemorrhage.....	..	..	1	..	..	..	..	..	2	1	..	..	4
Phthisis pulmonalis.....	4	6	13	3	7	10	11	8	6	3	7	7	85
Pleurisy.....	..	1	..	..	..	1	..	..	..	..	..	..	2
Asthma.....	..	..	..	..	..	..	..	..	..	..	..	1	1
Empyema.....	..	..	..	..	..	..	..	..	..	..	..	1	1
Tonsilitis.....	..	..	..	..	..	1	..	..	..	..	..	..	1
<i>Digestive Organs.</i>													
Gastritis.....	..	..	..	..	..	1	1	1	..	..	..	2	5
Peritonitis.....	..	1	..	..	1	..	..	..	..	..	..	1	3
Liver disease.....	..	1	1	1	..	1	..	1	2	..	1	1	9
Obstruction of bowels.....	1	..	1	..	..	..	2	1	..	..	1	..	6
Inflammation of bowels.....	..	..	..	1	..	1	1	..	..	1	2	1	7
<i>Genito-Urinary Organs.</i>													
Bright's disease.....	-	-	1	2	4	-	1	3	-	1	1	1	14
Diabetes.....	-	1	1	-	-	1	-	1	-	-	1	-	5
Cystitis.....	-	-	-	-	-	1	-	-	-	-	2	-	3
Nephritis.....	1	2	1	4	1	1	-	-	1	-	-	1	12
Puerperal Phebitis.....	-	-	-	1	-	-	-	-	-	-	-	-	1
Uræmia.....	-	-	-	-	2	1	1	-	1	-	-	1	6
Menorrhagia.....	-	-	-	-	-	-	-	-	-	-	-	1	1
Childbirth.....	-	-	-	-	-	-	-	-	1	-	-	1	2



MORTALITY IN SOMERVILLE IN 1889. — *Concluded.*

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
<b>DEVELOPMENTAL DISEASES.</b>													
<i>Of Children.</i>													
Marasmus.....	-	1	-	4	2	2	3	1	4	2	1	1	21
Premature birth and infantile debility.....	2	2	3	2	1	3	2	2	3	3	1	3	27
<i>Of Old People.</i>													
Old age.....	4	-	-	1	1	3	2	2	2	1	2	4	22
General debility.....	-	-	-	-	-	-	1	-	-	-	1	-	2
Congenital debility.....	-	-	-	1	-	-	-	-	-	-	-	-	1
<b>VIOLENT DEATHS.</b>													
Railroad.....	-	1	1	-	-	-	-	-	1	-	-	-	3
Burn.....	-	-	-	-	-	-	-	-	-	1	-	-	1
Asphyxia.....	-	-	-	-	-	-	-	-	-	-	1	-	1
Suicide.....	-	-	-	1	1	-	-	-	-	-	-	-	2
Murder.....	-	-	-	-	-	-	2	-	-	-	-	-	2
Unknown.....	2	-	-	-	-	-	1	-	-	-	-	2	5
Total.....	33	41	56	43	47	55	74	49	46	41	43	70	598
Still-born.....	3	3	4	1	4	3	2	5	5	5	4	6	45

Population (estimated) ..... 38,846

Death rate per thousand..... 15

## DISEASES DANGEROUS TO PUBLIC HEALTH.

Of the diseases classified by this Board as dangerous to public health, scarlet fever, diphtheria and typhoid fever are the only ones reported to us during the year.

**SCARLET FEVER.**—This disease has been more prevalent during 1889 than in 1888, there being 123 cases reported in the latter year and 192 cases in the former. It has, however, been of a mild type, 7 cases only terminating fatally as against 15 in 1888.

Warning cards are placed on the houses and the premises fumigated after the termination of the disease.

**DIPHTHERIA.**—A remarkable increase of this disease will be noted over the year 1888, there being 130 cases and 28 deaths in 1889, as compared with 75 cases and 21 deaths in 1888.

We use warning cards and fumigation in dealing with this disease, the same as with scarlet fever, and we also have the sanitary condition of the premises investigated.

TYPHOID FEVER.—There have been 61 cases and 7 deaths from this disease in 1889, as compared with 63 cases and 17 deaths in 1888, from which it will be seen that the number of cases have not differed materially from last year, while the death rate is considerably less.

We examine the sanitary condition of the premises, but do not use a warning card or fumigation.

SCARLET FEVER, DIPHTHERIA, AND TYPHOID FEVER REPORTED IN 1889.

MONTHS.	SCARLET FEVER.			DIPHTHERIA.			TYPHOID FEVER.		
	Cases Reported.	Number of deaths.	Percentage of deaths.	Cases reported.	Number of deaths.	Percentage of deaths.	Cases reported.	Number of deaths.	Percentage of deaths.
January . . . . .	17	0	0	12	1	8	4	0	0
February . . . . .	8	1	12	3	0	0	3	0	0
March . . . . .	14	1	7	4	4	57	1	0	0
April . . . . .	16	0	0	14	2	14	2	1	50
May . . . . .	6	0	0	26	6	23	1	0	0
June . . . . .	15	1	7	13	4	23	2	1	50
July . . . . .	14	1	7	4	1	25	4	0	0
August . . . . .	2	0	0	3	1	33	15	2	13
September . . . . .	16	0	0	3	1	33	19	2	10
October . . . . .	20	1	5	9	2	22	6	1	16
November . . . . .	29	2	3	11	1	9	3	0	66
December . . . . .	35	0	0	20	5	25	1	0	0
Total . . . . .	192	7	4	130	28	22	61	7	11

DEATHS FROM SCARLET FEVER, DIPHTHERIA, AND TYPHOID FEVER IN THE LAST TEN YEARS.

MONTHS.	SCARLET FEVER.										DIPHTHERIA.										TYPHOID FEVER.										
	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	
January . . . . .	2	..	..	2	..	2	..	1	5	..	7	7	11	2	1	2	1	2	1	1	..	..	..	1	2	1	2	..	..	3	..
February . . . . .	1	..	1	..	..	1	..	..	3	1	..	4	5	3	..	2	2	1	3	..	..	1	..	1	1	1	..	..	..	..	..
March . . . . .	1	..	..	1	..	1	1	1	4	1	..	7	7	3	3	1	..	..	4	..	..	2	1	..	..	..	..	2	..	..	..
April . . . . .	..	..	..	1	..	5	..	..	1	..	1	2	8	6	1	2	1	1	3	2	..	..	1	..	..	..	..	..	1	..	1
May . . . . .	..	1	..	..	..	..	2	1	1	..	..	3	5	1	2	2	4	..	1	6	..	..	..	1	1	1	..	1	..	..	..
June . . . . .	..	..	..	1	..	1	..	1	1	1	..	3	2	3	1	2	2	..	1	4	1	..	1	1	1	1	..	..	..	1	1
July . . . . .	..	..	..	..	2	..	..	..	1	..	..	2	1	3	2	2	1	..	2	1	1	..	1	1	1	1	1	1	2	..	2
August . . . . .	..	..	1	..	..	..	..	..	..	..	..	3	..	1	..	2	..	..	1	1	1	..	..	1	1	1	1	2	..	2	2
September . . . . .	2	..	..	1	1	1	..	..	..	..	..	2	1	1	4	3	2	1	1	1	..	1	3	2	2	3	..	1	4	2	2
October . . . . .	..	..	..	..	1	..	6	..	1	..	..	6	1	2	2	1	2	3	4	2	2	2	1	3	..	1	2	1	3	1	1
November . . . . .	..	..	..	..	3	2	..	11	..	2	1	2	7	1	4	5	2	1	4	1	1	1	..	..	2	1	1	2	3	..	..
December . . . . .	..	2	..	1	1	..	10	..	..	..	8	3	4	5	1	4	3	2	1	5	1	1	..	1	1	..	..	2	..	..	..
Total . . . . .	6	1	4	6	8	14	3	31	15	7	19	44	52	31	21	28	20	11	21	28	7	8	8	13	8	11	3	11	17	7	7

## DISTRICTS.

The several tabulated statistics of mortality, dangerous diseases, and nuisances in the ten health districts into which the city was divided by the Board of Health of 1878, as shown by the accompanying map, are continued in this report. The map also shows the location of sewers. The increase in population is assumed to have been the same, relatively, as the increase in the number of assessed polls, and to have been substantially uniform in the several districts.

TABLE OF DEATHS IN EACH DISTRICT DURING THE LAST TEN YEARS, EXCLUSIVE OF DEATHS IN THE MCLEAN ASYLUM

Districts . . . . .	I.		II.		III.		IV.		V.		VI.		VII.		VIII.		IX.		X.		Entire City.	
	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.
Area . . . . .	337 A.		107 A.		93 A.		171 A.		361 A.		285 A.		194 A.		482 A.		174 A.		456 A.		2,660 A.	
Population . . . . .	7,079		6,906		2,677		4,750		7,424		1,641		4,055		1,205		2,157		952		38,846	
	1,023		959		455		731		1,133		415		659		291		439		251		6,366	
Average in each dwelling.	6.7		7.2		5.8		6.5		6.3		3.9		6.1		4.1		4.9		4.4		6.1	
YEAR.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.	No. of Deaths.	Rate per 1,000.
1880 . . . . .	104	23	56	13	34	20	55	18	70	15	30	28	32	12	19	24	12	10	11	423	17	
1881 . . . . .	111	23	64	14	41	23	48	15	62	12	36	32	38	14	18	22	19	13	8	445	17	
1882 . . . . .	119	24	57	12	42	22	58	17	72	14	32	27	43	15	17	13	17	11	9	464	17	
1883 . . . . .	138	26	59	12	49	25	60	17	76	14	40	33	51	17	19	19	28	18	13	527	18	
1884 . . . . .	148	27	55	10	42	20	52	14	69	12	32	25	35	11	14	15	27	16	8	482	16	
1885 . . . . .	152	28	56	11	40	19	72	20	78	14	31	24	33	17	13	14	25	15	11	531	18	
1886 . . . . .	115	20	51	9	38	17	59	15	85	14	37	28	44	13	11	11	20	11	19	479	15	
1887 . . . . .	182	29	54	9	45	19	81	19	87	13	37	25	62	17	20	19	26	14	12	606	18	
1888 . . . . .	148	23	68	11	44	18	62	14	117	18	33	22	50	13	16	14	28	14	13	579	16	
1889 . . . . .	125	16	67	9	48	17	85	17	105	14	28	17	62	15	19	15	26	12	17	582	15	
Average death rate for 10 years.	24		10		20		17		14		26		14		17		13		16		17	

In 1889.



TABLE SHOWING THE FIVE PRINCIPAL CAUSES OF DEATH IN SOMERVILLE  
IN 1889, WITH THE NUMBER AND RATE IN EACH DISTRICT.

DISTRICTS.	CONSUMPTION.		PNEUMONIA.		HEART DISEASE.		CHOLERA INFANTUM.		DIPHTHERIA.	
	Number of deaths.	Number per 1,000 of pop.	Number of deaths.	Number per 1,000 of pop.	Number of deaths.	Number per 1,000 of pop.	Number of deaths.	Number per 1,000 of pop.	Number of deaths.	Number per 1,000 of pop.
I. . . . .	14	1.97	15	2.11	6	0.84	12	1.69	6	0.84
II. . . . .	11	1.59	5	0.72	7	1.01	12	0.28	3	1.01
III. . . . .	9	3.40	4	1.49	4	1.49	3	1.11	-	-
IV. . . . .	17	3.58	11	2.31	2	1.68	2	0.42	3	0.63
V. . . . .	14	1.87	9	1.21	7	0.94	12	0.27	7	0.13
VI. . . . .	5	3.04	3	1.83	3	1.83	3	1.83	-	-
VII. . . . .	8	1.97	5	1.23	4	0.98	1	0.24	4	0.98
VIII. . . . .	1	0.83	2	1.66	3	2.49	-	-	1	0.83
IX. . . . .	3	1.39	3	1.39	1	0.46	2	0.92	-	-
X. . . . .	3	3.15	1	1.05	1	1.05	1	1.05	4	4.20
Total . . . . .	85	2.19	58	1.49	44	1.13	28	0.72	28	0.72

TABLE OF SCARLET FEVER, DIPHTHERIA, AND TYPHOID FEVER IN EACH  
DISTRICT IN 1889.

DISTRICTS.	SCARLET FEVER.				DIPHTHERIA.				TYPHOID FEVER.			
	Cases reported.	Deaths.	Cases per 1,000 of pop.	Deaths per 1,000 of pop.	Cases reported.	Deaths.	Cases per 1,000 of pop.	Deaths per 1,000 of pop.	Cases reported.	Deaths.	Cases per 1,000 of pop.	Deaths per 1,000 of pop.
I. . . . .	30	2	4.24	.28	23	6	3.24	.84	22	3	3.11	.42
II. . . . .	16	-	2.32	-	15	3	2.17	.43	7	2	1.01	.29
III. . . . .	32	1	1.19	.34	3	-	1.11	-	11	-	4.11	-
IV. . . . .	59	4	1.24	.82	12	3	2.52	.63	4	1	0.84	.21
V. . . . .	30	-	4.04	-	34	7	4.58	.94	1	1	0.95	.13
VI. . . . .	6	-	3.65	-	1	-	0.61	-	4	-	2.43	-
VII. . . . .	14	-	3.45	-	19	4	4.68	.98	2	-	0.41	-
VIII. . . . .	3	-	2.49	-	5	1	4.14	.83	-	-	-	-
IX. . . . .	-	-	-	-	10	-	4.63	-	4	-	1.85	-
X. . . . .	2	-	2.10	-	8	4	3.40	4.20	-	-	-	-
Total . . . . .	192	7	4.94	.18	130	28	3.34	.72	61	7	1.57	.18



RATES PER THOUSAND OF POPULATION OF CASES OF SCARLET FEVER, DIPHTHERIA, AND TYPHOID FEVER REPORTED, AND OF DEATHS FROM THE SAME, IN THE LAST SEVEN YEARS.

DISTRICTS	1883.			1884.			1885.			1886.			1887.			1888.			1889.			Average for Seven Years.			
	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	{ Cases. { Deaths.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	
I.	1.91 0.38	11.35 5.55	5.76 1.26	1.26 0.18	1.83 0.55	2.25 0.52	2.59 0.52	0.86 0.17	10.48 2.10	1.45 0.32	2.74 0.64	2.44 1.07	2.29 0.46	4.21 0.28	3.24 0.84	3.41 0.97	3.41 0.42	5.77 0.61	3.41 0.97	3.41 0.42	3.41 0.42	5.77 0.61	3.41 0.97	3.41 0.42	3.41 0.42
II.	3.53 0.20	2.10 ...	1.11 0.37	1.66 0.19	2.63 0.19	1.77 ...	2.12 0.35	0.89 ...	1.82 ...	0.66 ...	1.16 0.17	0.91 0.31	0.78 0.31	2.32 ...	2.17 0.43	1.83 0.40	1.01 0.29	2.65 0.12	2.65 0.12	2.65 0.12	2.65 0.12	2.65 0.12	2.65 0.12	2.65 0.12	2.65 0.12
III.	3.04 ...	10.90 0.95	4.76 0.48	1.91 ...	8.70 0.97	5.03 0.46	0.46 ...	...	3.81 1.71	0.85 0.43	0.85 0.43	2.43 0.40	2.43 1.21	1.19 0.37	1.11 ...	2.52 ...	4.11 ...	4.78 0.69	2.52 0.51	2.52 0.51	4.11 ...	4.78 0.69	2.52 0.51	2.52 0.51	
IV.	0.29 ...	8.86 ...	2.15 0.27	0.51 0.51	9.51 0.55	4.38 0.26	0.77 0.26	0.77 0.26	3.85 0.96	2.16 1.20	1.20 0.48	2.72 1.14	1.71 0.45	1.24 0.88	2.52 0.63	2.48 0.69	0.84 0.21	4.21 0.38	2.48 0.69	2.48 0.69	0.84 0.21	4.21 0.38	2.48 0.69	2.48 0.69	
V.	2.74 ...	2.58 ...	3.43 0.52	1.20 0.34	6.98 0.17	3.46 ...	4.78 1.65	0.33 ...	4.06 0.62	1.54 0.31	0.93 0.31	2.89 0.15	1.59 0.45	4.04 ...	4.58 0.94	3.98 0.74	0.95 0.13	3.69 0.13	3.98 0.74	3.98 0.74	0.95 0.13	3.69 0.13	3.98 0.74	3.98 0.74	
VI.	13.22 0.83	26.44 1.56	12.44 4.67	...	10.27 ...	2.99 0.75	1.49 ...	...	6.96 0.70	1.39 ...	2.08 ...	1.98 0.66	1.32 ...	3.65 ...	0.61 ...	2.43 ...	...	9.45 0.55	5.87 1.45	5.87 1.45	2.43 ...	9.45 0.55	5.87 1.45	5.87 1.45	
VII.	3.68 0.67	10.06 ...	3.11 0.31	0.63 ...	7.34 1.60	5.43 ...	4.22 0.30	0.60 0.30	8.45 0.56	0.85 0.28	1.41 0.28	1.07 0.53	1.07 ...	3.45 ...	4.68 0.98	4.41 ...	...	6.28 0.41	3.26 0.76	3.26 0.76	4.41 ...	6.28 0.41	3.26 0.76	3.26 0.76	
VIII.	3.37 ...	17.95 1.06	3.17 ...	2.11 1.06	7.51 1.07	1.01 ...	...	...	17.05 1.89	...	3.79 ...	...	4.52 0.88	2.49 ...	4.14 0.83	...	...	8.08 0.67	3.23 0.10	3.23 0.10	4.14 ...	8.08 0.67	3.23 0.10	3.23 0.10	
IX.	2.51 ...	7.09 ...	3.55 ...	1.18 0.59	22.81 ...	6.24 ...	3.97 0.57	1.70 ...	5.82 0.53	0.53 ...	1.06 ...	3.00 0.50	2.00 1.00	...	...	...	...	7.42 0.29	3.65 0.51	3.65 0.51	...	7.42 0.29	3.65 0.51	3.65 0.51	
X.	...	10.74 ...	...	1.34 ...	9.55 1.36	5.15 ...	10.30 1.29	...	8.40 ...	4.80 ...	...	...	3.40 1.13	2.10 ...	8.40 4.20	...	...	5.78 0.19	4.67 0.94	4.67 0.94	...	5.78 0.19	4.67 0.94	4.67 0.94	
City.	2.33 0.21	8.21 0.26	3.61 0.69	1.18 0.26	7.54 0.47	3.47 0.09	2.87 0.63	0.63 0.09	5.91 0.91	1.29 0.32	1.20 0.32	2.09 0.59	1.75 0.48	4.94 0.18	3.34 0.72	3.19 0.71	1.57 0.18	5.21 0.36	3.19 0.71	3.19 0.71	1.57 0.18	5.21 0.36	3.19 0.71	3.19 0.71	

## NUISANCES ABATED IN EACH DISTRICT IN 1889.

DISTRICT. Population (estimated).	I. 7,079	II. 6,906	III. 2,677	IV. 4,750	V. 7,424	VI. 1,641	VII. 4,055	VIII. 1,205	IX. 2,157	X. 952	Total. 38,846
Cellar damp . . . . .	2	6	3	2	7	..	2	2	1	1	26
Cesspool offensive . . . . .	..	..	..	..	..	1	..	..	..	1	2
“ overflowing . . . . .	..	..	..	..	..	1	1	1	..	1	4
Con'ction of drainage pipes defective . . . . .	..	2	..	1	4	..	2	2	1	..	12
Drainage defective . . . . .	1	4	1	1	2	..	1	..	..	..	10
“ emptying in cellar, “ on surface, “ not ventilated . . . . .	1	2	..	..	1	..	..	2	..	1	7
“ “ “ . . . . .	1	5	2	..	2	2	3	..	..	..	15
“ “ “ . . . . .	..	8	2	3	7	..	2	1	3	..	26
Drain pipe defective . . . . .	..	5	1	1	1	..	2	..	2	..	12
Fish-carts dirty and offen- sive . . . . .	..	..	..	1	..	..	..	..	..	..	1
Hennery offensive . . . . .	..	..	..	1	1	..	1	..	..	..	3
Hens kept in cellar . . . . .	1	..	..	1	..	..	..	..	..	..	2
Manure exposed and offen- sive . . . . .	5	..	..	2	4	..	1	1	..	2	15
Offal on land . . . . .	6	..	..	2	..	..	2	1	..	..	11
Offensive odor in and about dwellings . . . . .	1	7	2	3	1	..	..	1	1	..	16
Opening in drain-pipe in cellar . . . . .	..	..	..	1	..	..	..	..	..	..	1
Premises filthy . . . . .	..	1	..	..	2	..	..	..	..	..	3
“ untidy . . . . .	6	1	1	1	3	..	..	2	..	..	14
Privy-vault defective . . . . .	13	4	4	5	3	6	3	2	..	..	40
“ full . . . . .	16	8	5	7	7	21	4	4	..	..	72
“ offensive . . . . .	25	6	4	12	9	22	3	5	..	..	86
Rubbish in cellar . . . . .	1	..	..	1	..	..	1	1	..	..	4
Slops thrown on surface . . . . .	1	..	..	..	1	..	..	..	..	..	2
Stable and stable premises filthy and offensive . . . . .	1	1	..	..	2	..	..	..	..	..	4
Stagnant water in house- cellar . . . . .	..	..	..	..	..	..	..	1	1	..	2
Stagnant water on surface . . . . .	7	1	2	1	4	1	2	2	..	..	20
Waste-pipe defective . . . . .	1	2	..	4	4	2	2	..	1	..	16
“ not trapped . . . . .	3	7	..	2	3	..	1	4	1	..	21
Water-closet defective . . . . .	1	1	4	..	9	1	..	1	..	..	17
“ insufficiently supplied with water . . . . .	..	8	..	2	3	..	3	2	1	..	19
Water-closet offensive . . . . .	1	..	2	1	5	1	1	3	..	1	15
Wooden waste-pipes and drains . . . . .	1	..	..	..	..	..	..	..	..	..	1
Total . . . . .	95	79	33	55	85	58	37	38	12	7	499

APPROPRIATION FOR HEALTH DEPARTMENT AND  
EXPENDITURES THEREFROM, 1889.

Appropriation . . . . .	\$5,500 00
Receipts for permits to keep swine and goats and collect grease . . . . .	226 00
	\$5,726 00
Total credit . . . . .	
Expenditures : —	
For inspector's salary . . . . .	\$1,000 00
“ collecting ashes . . . . .	2,515 68
“ “ offal . . . . .	1,249 95
“ burying dead animals . . . . .	168 50
“ vaccine virus . . . . .	11 00
“ fumigating (sulphur, pans, &c.) . . . . .	17 48
“ disinfectants . . . . .	15 50
“ badge for inspector . . . . .	6 00
“ care of ash dumps . . . . .	145 20
“ expressing . . . . .	85
“ oil of peppermint . . . . .	25 00
“ books, stationery, printing, &c. . . . .	53 38
“ carriage hire . . . . .	14 00
“ rent of post-office box . . . . .	4 00
	\$5,226 54
Total debit . . . . .	\$5,226 54
Balance unexpended . . . . .	\$499 46

J. FRANK WELLINGTON,  
CHARLES H. CRANE,  
ALVAH B. DEARBORN.

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REPORT OF THE CITY PHYSICIAN.



## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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Concurred in.

IN COMMON COUNCIL, Feb. 13, 1890.

CHARLES S. ROBERTSON, *Clerk.*

## CITY OF SOMERVILLE.

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*To His Honor the Mayor and the City Council:*

I hereby present my report as City Physician for the year ending December 31, 1889.

Nine hundred and twenty-three visits have been made upon 334 different persons. Of that number, 149 are foreign born, and of the 185 native born, more than two-thirds are of foreign-born parentage.

There have been 16 deaths, 1 each of the following diseases: Bronchitis, apoplexy, pneumonia, typhoid fever, diphtheria, meningitis, fistula, scarlet fever; 6 of consumption, 2 of heart disease. Eight certificates of death have been given where persons died unattended by a physician. Eight women have been attended in childbirth.

Thirty-two visits have been made at the police station in attendance on 20 persons,—18 men and 2 women.

Ten persons have been examined for the police force under the civil service law.

Sixty-four children have been vaccinated.

Thirteen persons have been examined for insanity, and the same committed to the asylum.

Respectfully submitted,

ALVAH B. DEARBORN,  
*City Physician.*



REPORT  
OF THE  
TRUSTEES OF THE PUBLIC LIBRARY.

## CITY OF SOMERVILLE.

---

IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

---

IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHAS. S. ROBERTSON, *Clerk.*



## CITY OF SOMERVILLE.

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*To the City Council of Somerville*

In presenting their annual report, the trustees do not hesitate to express no small degree of pride in the prosperous condition of the Public Library. By this we mean that the immediate custodians have been constant and faithful in the discharge of their duties, and assiduous in their attention to the wants of the public; the actual demand for reading matter has largely increased; the purchase of books has been made with careful discrimination; improved conveniences made, and the general usefulness of the institution as a whole, strengthened.

It is perhaps needless to say, that the appropriation for the last year has been entirely expended in providing the ordinary wants of a library in our fast growing city. Indeed, the trustees were obliged to resist the purchase of many books of value and importance from the want of funds. And it seems to them, that the annual appropriations must be enlarged rather than lessened, or the public must otherwise forego many of the most valuable of the new publications, voluminous as they are.

The librarian in her report has given many important statistics, which render it unnecessary to go into any details here, and her report is respectfully submitted herewith, for further information than is here given.

CHAS. S. LINCOLN,  
*Chairman.*

## LIBRARIAN'S REPORT.

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*To the Trustees of the Somerville Public Library:*

GENTLEMEN,—In accordance with the regulations of the library, my seventeenth annual report is herewith respectfully submitted.

### ACCESSIONS.

We have now in the library 17,045 volumes. Of this number, 1162 have been added during the past year. Three new magazines have been placed in the reading room. "Political Science Quarterly," "New England Magazine," and "Chautauquan," making with this addition fifty periodicals, magazines, and reviews. Twelve books have been given by a friend of the library, and the "Somerville Journal," and "Somerville Citizen" have each presented us with a file of their papers from the beginning.

For our reference room some valuable books have been purchased. Each year a few books are added, and thus, slowly, without any special appropriation, it is becoming more and more useful. In the department of "Natural History" several illustrated works have been entered, such as "Birds of Europe," "Nests and Eggs of British Birds," "Parrots in Captivity," "British Fishes," also the "Indian Tribes of North America," "Dictionary of Gardening," "Cyclopedia of Music and Musicians," "Cyclopedia of Painters and Paintings," and a full set of "Harper's Weekly," bound in thirty-one volumes.

There has also been an attempt made to collect a complete history of the "Massachusetts Regiments." These are becoming valuable and are already difficult to obtain. Our list is, however, nearly complete; only two are wanting.

### IMPROVEMENTS.

The grounds have received unusual care this year, and have well repaid the attention. The shelving of the round room, in the second story, has been completed, and government documents placed there.

Our small room can now be used for patent office reports, and official gazettes, which are fast accumulating.

Space is thus obtained in the lower room, where the shelves are gradually filling up.

### CIRCULATION.

The circulation for 305 library days has been 88,381. Of this number, 87,581 were for home use and 800 for reference in the building. The busiest week was in March, when 2,108 were given out. The largest on any day was 780.

We have had 332 books bound, a larger number than ever before. Many of these were juvenile books, which, being not strongly bound at first, could not stand the constant wear. Some of our best books soon show loose leaves; and it is one of the things insisted upon, that every book as it comes in shall be examined, as ill-usage in this way is soon discovered. A large number have been withdrawn, completely worn out.

The work in this department has gone on smoothly and harmoniously, and on an average 1200 books a month have been covered. This does not include books of history, biography, essays, or books of travel, which circulate without the paper covers.

We lose with regret the services of Miss Hopkins, on account of ill-health. She has been with us five years.

### REGISTRATION.

One thousand four hundred and thirty new names have been registered this year, which is rather more than usual; and indeed in every department the work gradually grows more extensive, as it should in a growing library. People are not content now to read what some favorite author says on a particular subject, but ask for all that we have on both sides of the subject, and take the conflicting materials away with them to form in their own minds an unprejudiced opinion.

This is one of the best uses of a public library, which knows no sect in religion or politics, but grants a fair chance to every reliable author fully to speak his own mind. All the schools are now supplied with our catalogues, and we always welcome the suggestions of the teachers with regard to the purchase of such books as they may find useful in their work.

We have not had as many applications from this source as usual. This may be owing to the fact that their wants had been in part anticipated by us.

Works on electricity and photography have been in demand, also works on mechanical drawing and engraving. A man going "West" is anxious to read about "Colorado"; another wants all we have about "Florida."

"Can you give me something about the 'Game Laws'?" says one, while another wishes to know about "Sheep farming."

"Where can I read about Halloween?" inquires one; or "I would like a book about Arbor Day," or "Can you find me any description of our National Park?" Then the history of the "Great Fire of Chicago" is wanted, or the "Commerce of England" is to be looked up, or the oldest account of "Yucatan."

"I want to know about the 'Tides,'" says a school girl; another wanted to read about "Day and Night." The essay, "Each and All," was looked for, which proved to be a *poem*.

The "Roads of Middlesex County" was wanted by a bicyclist. "We are intending to build in the spring," says another, "and wish to see the best books on the subject."

One little girl wanted to read about "Sarah." (Sarah Crewe was what she wanted.) Another said she was writing a composition, and wanted a book about "praise." "Find something humorous for my sick wife, if you please; I want to see her smile," said one of our readers recently.

Bright, cheerful books, like cheerful people, are always welcome. At our Library Conference at St. Louis, Mr. Cutter, of the Boston Athenæum Library, said: "There are three causes for the rejection of a book—inaccuracy in science, evil intent, and *dullness*. For the book which will mislead the reader there is an antidote in the book written on the other side, but for the book that will send one to sleep there is no remedy." It is always a pleasure to find for any one the desired book or the important essay, and we are always disappointed if the search proves unsuccessful; but in a small library like ours there is never more than enough material to supply the first comers for particular subjects under discussion at the various reading clubs and associations of the city.

HARRIET A. ADAMS, *Librarian*.

FINANCIAL STATEMENT OF CITY TREASURER.

	CR.	
Appropriation . . . . .		\$3,000 00
Dog-licenses . . . . .		2,382 90
Fines . . . . .		293 76
Catalogues . . . . .		44 05
Books . . . . .		15 50
Expended in excess of appropriation . . . . .		415 45
		\$6,151 66
	DR.	
Salaries . . . . .	\$1,874 88	
Books . . . . .	2,520 81	
Printing and stationery . . . . .	406 67	
Binding . . . . .	146 95	
Newspapers . . . . .	12 00	
Gas . . . . .	182 01	
Fuel . . . . .	233 05	
Water . . . . .	29 00	
Repairs . . . . .	382 83	
Labor . . . . .	131 15	
Expressing . . . . .	41 15	
Incidentals . . . . .	48 66	
Insurance . . . . .	142 50	
	\$6,151 66	





REPORT  
OF THE  
COMMITTEE ON HIGHWAYS.

## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 3, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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Concurred in.

IN COMMON COUNCIL, Jan. 3, 1890.

CHARLES S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

IN COMMITTEE ON HIGHWAYS, Dec. 31, 1889.

*To the City Council of Somerville :*

The following is respectfully submitted as the final report of this committee for the year ending Dec. 31, 1889 :

## HIGHWAYS ACCOUNT.

### CREDIT.

Appropriation . . . . .		\$42,000 00
Receipts and credits :		
For labor and materials furnished prior to Jan 1, 1889, the bills for which re- mained uncollected that day . . .	\$370 50	
rent of dwellings at City Farm . . . . .	\$136 00	
less repairs and water rates	21 69	
	114 31	484 81
transfer from Highways Account (steam road-roller) . . . . .		250 00
Value of material on hand Jan. 1, 1889 . . . . .		1,328 51
Value of property on hand Jan. 1, 1889 . . . . .		8,344 60
Net gain on city teams, tools, property and materials . . . . .		3,246 18
		\$55,654 10

### DEBIT.

Expenditures :		
For construction of North street . . . . .		\$699 60
construction of Church street . . . . .		211 83
construction of Lake street . . . . .		587 55
construction of Wesley park . . . . .		49 00
construction of Boston street, from Walnut street to Washington street . . . . .		722 64
		\$2,270 62
<i>Amount carried forward . . . . .</i>		\$2,270 62

<i>Amount brought forward</i> . . . . .		\$2,270 62
street crossings . . . . .		2,097 07
street signs . . . . .		9 98
repairs and improvements of streets, and paving of gutters in connec- tion with the setting of edge- stones :		
Bond street, at Robert Duddy's, pav- ing . . . . .	\$78 47	
Boston street, from Walnut street to Washington street, paving . . . . .	1,873 53	
Broadway, in front of estate of S. P. Langmaid, paving . . . . .	50 95	
Buckingham street, Beacon street to Dimick street, paving . . . . .	210 05	
repairs . . . . .	71 00	
Cedar street, east side, from Elm street to Summer street, paving . . . . .	406 80	
Elm street, from Lowell R. R. to Winslow avenue, paving . . . . .	24 00	
Highland avenue (southwest side) from near Davis square to Grove street, paving . . . . .	106 30	
repairs . . . . .	77 20	
Morgan street, paving . . . . .	204 75	
repairs . . . . .	91 00	
Morrison street, Grove street to Appleton street, paving . . . . .	309 30	
Morrison street, west side, from Grove street to C. A. Colcord's southerly line, paving . . . . .	96 45	
Oliver street, from Cross street to Glen street, paving . . . . .	423 20	
Otis street, from Cross street to Dana street, paving . . . . .	620 17	
repairs . . . . .	187 80	
<i>Amounts carried forward</i> , . . . . .	\$4,830 97	\$4,377 67



<i>Amounts brought forward</i> . . . . .	\$4,830 97	\$4,377 67
Sanborn avenue, north side, from Walnut street to Warren avenue, paving . . . . .	49 90	
repairs . . . . .	101 80	
School Street, from Somerville Ave. to Summer Street, paving . . . . .	314 40	
School Street, Northwest side, from Medford Street to Evergreen Ave. paving . . . . .	236 85	
Thurston Street, from Evergreen Ave. to Broadway, paving . . . . .	523 85	
repairs . . . . .	187 80	
Walnut Street, from Columbus Ave. to Bow Street, paving . . . . .	204 04	
repairs . . . . .	189 21	
	<hr/>	6,638 82
Cost to City of sidewalks, the bricks and edgestones for which were furn- ished by the abutters . . . . .		751 03
Ordinary repairs of streets: —		
Beacon Street from railroad bridge to Sacramento Street . . . . .	1,737 00	
Broadway, from Franklin Street to Boston line . . . . .	435 84	
Bow Street, from Union Square to Summer Street . . . . .	106 10	
Cedar Street, from Summer Street to Elm Street . . . . .	43 00	
Cross Street, from Broadway to Med- ford Street . . . . .	991 20	
Franklin Street, from Washington St. to Oliver Street . . . . .	480 64	
Ivaloo Street, from Beacon Street to Park Street . . . . .	222 02	
Marshall Street, from Broadway to Pearl Street . . . . .	402 85	
	<hr/>	<hr/>
<i>Amounts carried forward</i> . . . . .	\$4,418 65	\$11,767 52

<i>Amounts brought forward</i> . . . . .	\$4,418 65	\$11,767 52
Medford Street, from Washington Street to Walnut Street . . . . .	1,493 02	
Myrtle Street, from Pearl Street to Brow of hill . . . . .	59 80	
Newton Street, from Webster Ave. to Concord Avenue . . . . .	199 33	
Oakland Avenue, from School Street to Marshall Street . . . . .	139 31	
Somerville Avenue, from Cambridge Line to Craigie Street . . . . .	2,656 20	
School Street, from Lowell R. R. to Oxford Street . . . . .	269 70	
Summer Street, from School Street to Bow Street . . . . .	469 60	
Webster Avenue, from Union Square to Cambridge Line . . . . .	706 83	
general repairs . . . . .	11,554 26	
	<hr/>	21,966 70
repairs of stone paving . . . . .		695 75
repairs of brick sidewalks . . . . .		1,689 67
removing snow and ice, and care of slippery sidewalks . . . . .		219 14
cleaning streets . . . . .		4,839 25
clearing and repairing streets after the construction of sewers and catch-basins . . . . .		1,130 21
planting trees, furnished by citizens . . . . .		101 35
trimming trees . . . . .		418 77
removing trees . . . . .		7 40
use of horse at Broadway Park . . . . .		14 40
building shed for steam road roller at city farm . . . . .		185 62
sewer assessment, Glen Street . . . . .		40 07
sidewalk assessment, Oliver Street . . . . .		11 48
repairs of Boston Avenue bridge . . . . .		86 76
advertising notice of hearing, laying out Wellington Avenue . . . . .		6 33
<i>Amount carried forward</i> . . . . .		<hr/> \$43,180 42

<i>Amount brought forward</i> . . . . .	\$43,180 42
advertising notice of hearing, laying out Virginia Street . . . . .	6 00
advertising notice of hearing, laying out Howe Street and land damages . . . . .	156 63
advertising notice of hearing, laying out Montgomery Avenue . . . . .	6 32
advertising notice of hearing, laying out Wheatland Street . . . . .	11 30
advertising notice of hearing, laying out Belmont street . . . . .	11 00
advertising notice of hearing, laying out James street . . . . .	6 50
advertising notice of hearing, laying out Dana street . . . . .	6 75
advertising notice of hearing, laying out Raymond avenue . . . . .	8 50
advertising notice of hearing, laying out St. James avenue . . . . .	10 00
advertising notice of hearing, laying out Sanborn avenue . . . . .	10 00
advertising notice of hearing, laying out Greenville street . . . . .	11 65
advertising notice of hearing, laying out Hawkins street . . . . .	11 00
one-half-cost of maintaining Middle- sex avenue bridge for the year 1888 ; the other half being paid by the town of Medford . . . . .	351 79
superintendent's salary . . . . .	1,500 00
board of superintendent's horses . . . . .	416 03
rent of superintendent's telephone . . . . .	40 10
tax on Wakefield gravel land . . . . .	25 26
tax on Winchester gravel land . . . . .	10 88
tax on Waltham gravel land . . . . . \$120 70	
less received for pasturage 120 00	
	<u>70</u>
<i>Amount carried forward</i> . . . . .	\$45,780 83

<i>Amount brought forward</i> . . . . .		\$45,780 83
repairs of Oliver street shed . . . . .		15 20
sundry small expenses . . . . .		164 05
books, stationery and printing . . . . .		54 60
private work, etc., the bills for which remain uncollected . . . . .		536 22
Value of materials on hand this day . . . . .		1,237 31
Value of property on hand this day :		
horses . . . . .	4,750 00	
carts and implements used with horses . . . . .	1,963 50	
harnesses and horse clothing . . . . .	289 60	
stable utensils and property . . . . .	144 50	
tools, tool chests, etc. . . . .	216 00	
stone crusher, engine and fittings . . . . .	1,051 80	
		<hr/> 8,415 40
Total debit . . . . .		<hr/> \$56,203 61
Amount overdrawn . . . . .		<hr/> <u>\$549 51</u>

Labor and materials have also been furnished, for which payment has been made to the City Treasurer, or credit received as follows: to

Private parties, constructing driveways, side-walks, etc. . . . .		\$729 25
Fire Department account, constructing driveway, Somerville avenue, corner of Lowell street . . . . .		102 07
Public grounds account, gravel for Broadway park . . . . .	171 60	
Use of horse at park . . . . .	36 00	207 60
Total . . . . .		<hr/> \$1,038 92

We have also sold

Hay (rowen) from city farm, for . . . . .	\$24 00
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The profit and loss account on city teams, tools, property and materials, is as follows :

		DR.	
Tools, etc. (depreciation)	. . . . .		\$270 44
Repairs of tools (depreciation)	. . . . .		164 01
Holland Street ledge	. . . . .		932 98
			<hr/>
Total	. . . . .		\$1,367 43
		CR.	
Gravel	. . . . .		\$2,398 77
Crushed stone	. . . . .		1,287 63
City teams	. . . . .		927 21
			<hr/>
Total	. . . . .		\$4,613 61
			<hr/>
Not excess of credit over charges			\$3,246 18

The ledge has been worked during the year the same as in previous years, during the winter and early spring months; the prices charged for the stone delivered at the crusher, was forty-five cents per single load, and for ballast delivered on the street 10 cents per load; at the above named prices the ledge shows a profit for the year of \$932.98; there remained on hand, December 31st, 300 loads of stone for the crusher, and 100 loads of ballast.

Crushed stone has been charged where it has been used at seventy-five cents per load at the crusher, 700 loads remained on hand, December 31st; this account shows a profit of \$1,287.63, which is due no doubt to the time saved in loading the carts directly from the storage bins, which were built in 1888; previous to that time the carts were loaded by manual labor.

All the gravel used during the year has been taken from the gravel bank, owned by the City in Waltham, and brought here by the Fitchburg Railroad Company; 7920 yards were received at the Dane Street dump, at an expense for transporting of sixty cents per yard, or \$4,752.00 for the entire amount. All the stone taken from the gravel has been sent to the crusher, and credited to the gravel account, after charging this account with the teaming of the stones to the crusher; there is at the present time 150 loads of gravel on hand.

The charges to the city teams account are for;

Horses (depreciation)	. . . . .	\$200 00
Carts and implements, used with horses (depreciation)	. . . . .	68 00
Repairs of same	. . . . .	764 07



Harnesses and horse clothing (depreciation) . . . . .	303 95
Repairs of same . . . . .	106 60
Stable utensils and property (depreciation) . . . . .	101 63
Stable expenses and repairs . . . . .	1,339 93
Grain and feed . . . . .	2,306 46
Hay and straw . . . . .	802 75
Horse shoeing . . . . .	501 42
Horse medicine and doctoring . . . . .	48 19
Cutting hay at City Farm (the same being used in the stable . . . . .)	165 99
 Total . . . . .	<u><u>\$6,762 99</u></u>

The credit to city teams account for earnings has been based at \$1.40 per day for each horse when working, amounting to \$7,690.20, which is a profit of \$927.21.

A pair of horses have been purchased during the year at a cost of \$500.00. There are at present twenty-three horses owned by the city and used in this department, including two used by the Superintendent.

### HIGHWAYS ACCOUNT.

#### STEAM ROAD ROLLER.

##### CREDIT.

Appropriation . . . . .	\$5,000 00
Transfer to Highways Account . . . . .	250 00

Net credit . . . . .	<u>4,750 00</u>
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##### DEBIT.

Steam road roller . . . . .	<u>4,750 00</u>
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### SIDEWALKS ACCOUNT.

##### CREDIT.

Appropriation . . . . .	\$8,200 00
Credit: Advertising paid for in 1888 . . . . .	19 40
From Highways Account (on Elm St. sidewalk) . . . . .	15 36

Total credits. . . . .	<u><u>\$8,234 76</u></u>
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*Amount brought forward* . . . . . \$8,234 75

DEBIT.

Expenditures :—

For Boston street sidewalks, Walnut to Washington street . . . . .	2,973 15
Buckingham street sidewalk, Beacon to Dimick street . . . . .	383 50
Cedar street sidewalk, easterly side Elm to Summer street . . . . .	1,358 99
Dartmouth street sidewalks, Broadway to Medford street . . . . .	2,101 13
Elm street sidewalk, easterly side, Boston and Lowell Railroad to Winslow avenue . . . . .	355 50
Highland avenue sidewalk, Davis Square to Grove street . . . . .	468 68
Highland avenue sidewalk, in front of estate of J. E. Cayzer . . . . .	84 77
Morrison street sidewalk, Grove to Appleton street . . . . .	495 83
Morrison street sidewalk, Grove street southerly to southerly line of estate of C. A. Colcord . . . . .	336 24
Morgan street sidewalks, Beacon to Park streets . . . . .	504 22
Oliver street sidewalks, Cross to Glen streets . . . . .	1,458 88
Otis street sidewalks, S. W. side, Cross to Dana streets . . . . .	631 34
Otis street sidewalks, N. E. side, Cross to Dana streets . . . . .	548 59
Putnam street sidewalks, S. E. side Summer street to Highland ave. . . . .	1,001 98
School street sidewalk, Somerville avenue to Summer street . . . . .	644 84
School street sidewalk, Medford street to Evergreen avenue . . . . .	741 82

<i>Amounts carried forward</i>	\$14,089 46	\$14,089 46
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<i>Amounts brought forward</i> . . . . .	\$14,089 46	\$14,089 46
Thurston street sidewalk, Broadway to Evergreen avenue . . . . .	1,039 17	
Walnut street sidewalk, Highland avenue to Bow street . . . . .	1,238 96	—————
Total cost of sidewalks . . . . .		\$16,367 59
Less Assessments . . . . .		8,183 81
		—————
Net cost to city . . . . .		\$8,183 78
Advertising notices of hearing for sidewalk in Broadway, Marshall to School street . . . . .	6 00	
Sidewalk in Elm street, near Linden avenue to Mossland street . . . . .	16 00	
Sidewalk in Medford street, School street to Medford street bridge . . . . .	6 00	
Sidewalk in Prospect street, Somer- ville avenue to Washington street . . . . .	7 00	
Total Debit . . . . .		35 00
		—————
		\$8,218 78
		—————
Balance unexpended . . . . .		\$15 98
		—————

### NEW STREETS AND SIDEWALKS.

Sixteen private ways have been laid out and accepted by the city as public streets during the year, as follows:—

Belmont street, from Highland avenue to Summer street.

Church street, from Somerville avenue to land of N. C. Hawkins and Alice E. Lake.

Dana street, from Pearl street to Everett avenue.

Greenville street, from Medford street to High street.

Hawkins street from Somerville avenue to Washington street.

James street, from Pearl street to Veazie street.

Lake street, from Hawkins street to Church street.

Montgomery avenue, from Broadway to Wellington avenue.

Raymond avenue, from Curtis street to North street.

Sanborn avenue, from Warren avenue to Walnut street.

St. James avenue, from Summer street to Elm street.

Virginia street, from Aldrich street to Jasper street.

Wellington avenue, from Walnut street to the southeasterly line of Montgomery avenue.

Wesley park, from Wesley square to northeast end of said park.

Wheatland street, from Broadway to Jaques street.

Boston street, which was graded and gravelled in 1888, from Prospect Hill avenue, westerly, to a point near Mr. A. T. Kidder's, easterly line, has been graded and gravelled its entire length to Washington Street during the year, and the gutters have been paved, and edgestones set on both sides from Walnut street to Washington street.

Church street, from Somerville avenue to Lake street has been macadanized and graveled.

Dana street has been partly constructed from Pearl street to within about one hundred feet of Everett avenue.

Lake street has been graded and put in good condition.

Montgomery avenue has been partly constructed, and the sidewalks raised to grade.

Sanborn avenue has been graveled and raised to grade.

St. James avenue has been partly constructed and the sidewalks have been raised.

Wellington avenue has been partially constructed and the sidewalks raised to grade.

Wesley park has been graveled, but not finished.

North street, from the Medford Line southerly to the Cook estate, has been put in thorough condition, having been ballasted graveled and stoned; the sidewalk has also been raised to conform to the grade of the street.

#### GENERAL REPAIRS.

The usual amount of repairs on the various streets have received the same attention as in previous years; the sum expended for said repairs amounts to \$11,554.26.

#### STEAM ROAD ROLLER.

A steam road roller has been purchased during the year of the Harrisburg Car Company, of Harrisburg, Penn., at a cost of \$4,750.00. The machine was not received until July, but where it has been used it has given general satisfaction.



SCHEDULES.

Particulars of the work performed may be found in the following schedules :

STREETS ACCEPTED.

Name.	From	To	Length in Feet.
Belmont Street.....	Highland Avenue....	Summer Street.....	946
Church Street.....	Somerville Avenue..	{ Land of N. C. Hawkins and Alice E. Lake }	340
Dana Street.....	Pearl Street.....	Everett Avenue.....	276
Greenville Street....	Medford Street.....	High Street.....	661
Hawkins Street.....	Somerville Avenue..	Washington Street..	331
Howe Street.....	Marshall Street.....	School Street.....	447
James Street.....	Pearl Street.....	Veazie Street.....	318
Lake Street.....	Hawkins Street.....	Church Street.....	820
Montgomery Avenue	Broadway.....	Wellington Ave.....	264
Raymond Avenue....	Curtis Street.....	North Street.....	1,347
Sanborn Avenue....	Walnut Street.....	Warren Avenue. ....	278
St. James Avenue....	Summer Street.....	Elm Street.....	488
Virginia Street.....	Aldrich Street.....	Jasper Street.....	403
Wellington Avenue..	Walnut Street.....	{ S'Ely line of Montgomery Ave }	215
Wesley Park.....	Wesley Square.....	{ N. E. end of said Park..... }	404
Wheatland Street....	Broadway.....	Jaques Street.....	496

STREETS IMPROVED.

Street.	From	To	Improvement.	Feet.
Beacon.....	Railroad Bridge..	Sacramento St....	{ Graded, ballasted and gravelled }	1,600
Broadway.....	Franklin St.....	Boston Line.....	{ Re-macadamized and gravelled }	1,350
Bow....	Union Square....	Summer St.....	{ Re-macadamized and gravelled }	550
Buckingham....	Beacon St.....	Dimick St.....	Macadamized & gravelled	300
Cedar.....	Summer St.....	Elm St.....	Gravelled.....	1,000
Cross.....	Broadway.....	Medford St.....	{ Re-macadamized and gravelled }	2,700
Franklin.....	Washington St....	Oliver St.....	{ Re-macadamized and gravelled }	700
Highland Ave..	Davis Square....	Grove St.....	{ Re-macadamized and gravelled }	500
Ivaloo.....	Beacon St.....	Park St.....	{ Re-macadamized and gravelled }	690
Marshall.....	Broadway.....	Pearl St.....	{ Re-macadamized and gravelled }	1,640
Medford.....	Washington St....	Walnut St.....	{ Re-macadamized and gravelled }	2,250



STREETS IMPROVED.—Continued.

Street.	From.	To	Improvement,	Feet.
Morgan.....	Park.....	Beacon.....	{ Graded, ballasted and gravelled	{ 370
Myrtle.....	Pearl St.....	Brow of Hill....	{ Re-macadamized and gravelled	{ 300
Newton.....	Webster Ave....	Concord Ave.....	{ Re-macadamized and gravelled	{ 700
Oakland Ave....	School St.....	Marshall St.....	Re-gravelled.....	430
Otis.....	Cross St.....	Dana St.....	Macadamized & gravelled	850
Sanborn Ave....	Warren Ave.....	Walnut St.....	" "	280
School.....	Lowell Railroad..	Oxford St.....	{ Re-macadamized and gravelled	{ 800
Somerville Ave..	Cambridge Line..	Craigie St.....	{ Ballasted, re-macadamized and graded	{ 850
Summer.....	School St.....	Bow St.....	{ Re-macadamized and gravelled	{ 1,100
Thurston.....	Evergreen Ave..	Broadway.....	{ Re-macadamized and gravelled	{ 750
Walnut.....	Highland Ave....	Bow St.....	{ Re-macadamized and gravelled	{ 1,660
Webster Ave....	Union Square....	Cambridge Line..	{ Re-macadamized and gravelled	{ 1,970

SIDEWALKS CONSTRUCTED WHERE THE MATERIALS AND LABOR WERE FURNISHED BY THE CITY, AND ONE-HALF OF THE COST WAS ASSESSED UPON THE ABUTTING ESTATES.

STREET.	From	To	Feet of edge-stones.	Yards of brick.	Cost.
Boston, both sides.	Washington St.....	Walnut St.....	3,639.1		\$2,973 15
Buckingham, "	Beacon St.....	Dimick St.....	614.4		383 50
Cedar.....	Elm St.....	Summer St.....	934 4	678.62	1,358 99
Dartmouth, both sides.....	Broadway.....	Medford St.....	—	2,020	2,101 13
Elm.....	B. & L. R. R.....	Winslow Ave....	208.6	275.41	340 10
Highland Ave....	Putnam St.....	60 ft. southeast'ly,	—	73.65	84 77
Highland Ave....	Near Davis Sq....	Grove St.....	303.8	374.97	468 68
Morgan.....	Beacon St.....	Park St.....	769.1		504 22
Morrison.....	Grove St.....	S. E. line of Colcord's estate....	258.4	166.92	336 24
Morrison.....	Opp. Grove St....	Appleton St.....	616.3		495 83
Oliver, both sides..	Cross St.....	Glen St.....	1,078.5	815.16	1,458 86
Otis, S. W. side....	Cross St.....	Dana St.....	841.7		631 34
Otis, N. E. side....	Cross St.....	Dana St.....	721.7		548 59
Putnam.....	Summer St.....	Highland Ave....	—	1,068.35	1,001 98
School.....	Somerville Ave....	Summer St.....	903.4		644 84
School.....	Medford St.....	Evergreen Ave..	909.		741 83
Thurston.....	Broadway.....	Evergreen Ave..	1,442.5		1,039 17
Walnut.....	Highland Ave....	Bow St.....	409.5	1,024.19	1,238 96
Total.....			13,650.4	6,497.27	\$16,352 18

SIDEWALKS CONSTRUCTED WHERE THE EDGESTONES AND  
BRICKS WERE FURNISHED BY THE ABUTTERS.

For	Street.	Feet of edgestones.	Yards of bricks.
Abutters on .....	Chester Ave.....	438.2	—
Sylvester R. Briggs.....	Lincoln.....	—	29
P. W. Crowther .....	Prospect Hill Ave ...	—	29
Joseph H. Clark .....	Chestnut Court .....	51.2	—
Harriet A. Chamberlin .....	Winter .....	43.4	—
Robert Duddy .....	Bond .....	99.5	—
Louisa L. M. Ellis .....	Sanborn Ave. ....	167.4	—
First M. E. Church .....	Wesley Square .....	—	66
Joshua B. Gould.....	Winter .....	45.	—
Susan C. Jones .....	Winter .....	81.5	—
S. P. Langmaid, heirs of....	Broadway.....	75.2	141.5
A. M. Mills.....	Lincoln.....	—	58
Charles W. Norris .....	Lincoln.....	—	29
John C. Pushee.....	Chestnut Court.....	112.5	—
Lindley J. Sturtevant .....	Sanborn Ave. ....	94.1	—
Martha M. Sturtevant .....	Sanborn Ave. ....	126.2	—
Emily H. Sawyer .....	Winter .....	56.	—
Annie B. Stearns.....	Winter .....	45.5	—
		1,435.7	352.5

DRIVEWAYS CONSTRUCTED (AT EXPENSE OF ABUTTERS).

For	Street.
R. F. Baldwin.....	Chapel.....
W. L. Barber.....	Marshall .....
L. S. Bridge.....	Mossland.....
A. W. Bryne.....	Jaques.....
W. L. Clarke.....	Evergreen Ave.....
Edwin Cox.....	Bow.....
J. J. Dorey.....	Temple.....
W. T. Hendersou.....	Elm.....
Hose House.....	Somerville Ave.....
John Manning.....	Linwood.....
Lemuel Merritt.....	Pearl.....
Wm. J. McEleny.....	Linwood.....
Mary McFarlane.....	Bonair.....
J. J. Quinlan.....	Somerville Ave.....
J. W. Roberts.....	Perkins.....
Lewis Stockbridge.....	Franklin.....
Q. A. Vinal and R. H. Sturtevant.....	Union Square.....
Henry E. Wright.....	Perkins.....
James H. Woods.....	Summer.....

## CROSSINGS CONSTRUCTED.

- Bonair street, across Walnut street to Mills street.  
 Boston street, across Walnut street.  
 Boston street, southerly side, across Greenville street.  
 Boston street, southerly side, across Prospect Hill avenue.  
 Boston street, southerly side, across Bigelow street.  
 Broadway, northerly side, from Sycamore street to Horse Railroad track.  
 Central street, at Lowell Railroad bridge to desk factory.  
 Green street, south side, across Summer street.  
 Highland avenue, west side, across to Vinal avenue.  
 Laurel street, north side, across Somerville avenue.  
 Medford street, across Warren street.  
 Pleasant avenue, south side, across Walnut street.  
 Somerville avenue, at junction of Bow street with post-office.  
 Somerville avenue across Rossmore street.  
 Somerville avenue across Mansfield street.  
 Somerville avenue, south side, across Carleton street.  
 Vinal avenue, east side, across Pleasant avenue.  
 Walnut street, east side, across Monroe street.  
 Washington street, north side, across Boston street.  
 Washington street, east side, across Rossmore street.  
 Washington street, east side, across Mansfield street.  
 Washington street, across end of Bonner avenue.

## CULVERTS CONSTRUCTED.

- Albion street, wood, under sidewalk, near Lowell street, 2.  
 College avenue, wood, under sidewalk, near Broadway, 1.  
 Highland avenue; wood, under sidewalk, at Eastman place, 1.  
 Medford street, wood, under sidewalk, near Willow bridge, 2.  
 Medford street, wood, under sidewalk, near Fitchburg R. R., 1.  
 Medford street, wood, under sidewalk, at Lowell R. R. bridge, 1.  
 School street, wood, under sidewalk, at Madison street, 1.  
 School street, wood, under sidewalk, at Montrose street, 1.  
 Willow avenue, wood, under sidewalk, at electric light station, 1.

## DANGER SIGNS ERECTED.

- Belmont street, corner of Highland avenue.  
 Broadway, at city ledge.  
 Cameron avenue, at Cambridge line.

Centre street, at Albion street.  
 Chandler street, at Broadway.  
 Chestnut street, at Joy street.  
 Essex street, at Medford street.  
 Hudson street, at Central street.  
 Madison street, at School street.  
 Madison street, at Sycamore street.  
 Montrose street, at School street.  
 Montrose street, at Sycamore street.  
 Moore street, at Holland street.  
 Richdale avenue, at School street.  
 Sycamore street, at Highland avenue.  
 Vernon street, at Lowell street.  
 Vine street, at Beacon street.  
 Vine street, at Hanson street.  
 Vine street, at Fitchburg railroad crossing.  
 Vine street, at Somerville avenue.  
 Willoughby street, at Central street.

#### STREET SIGNS ERECTED (wooden).

Aldrich Street, at Pearl Street.  
 Boston Street, at Washington Street.  
 Church Street, at Somerville Avenue.  
 Flint Street, at Cross Street.  
 Laurel Street, at Somerville Avenue.  
 Marshall Street, at Broadway.  
 Marshall Street, at Medford Street.  
 Morgan Street, at Beacon Street.  
 Morgan Street, at Park Street.  
 Monroe Street, at Walnut Street.

#### EDGESTONES AND PAVING.

Lineal feet of edgestones set (including 2,500 feet reset), 17,391  
 square yards of brick paving laid (including 1,269 yards relaid);  
 7,862; square yards of stone paving laid (including 833 yards re-  
 laid), 6124.

For the Committee

EDWARD H. BRADSHAW, *Chairman.*  
 WILLIAM P. MITCHELL, *Clerk.*

REPORT OF THE COMMITTEE ON SEWERS.



# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 3, 1890.

Ordered to be filed with the City Clerk for presentation to the next City Council, to be printed in the annual reports. Sent down for concurrence.

GENRGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Jan. 3, 1890.

Concurred in.

CHAS. S. ROBERTSON *Clerk.*

# CITY OF SOMERVILLE.

IN COMMITTEE ON SEWERS, Dec. 31, 1889.

*To the Board of Aldermen of Somerville :*

The committee on sewers presents the following final report for the year 1889 :

## SEWERS ACCOUNT.

### CREDIT.

Appropriation . . . . .		\$11,000 00
Receipts and credits :		
For catch-basin curbs in sidewalks :		
received credit from sidewalks account . . . . .	\$36 56	
fee for drainage of Asylum buildings into Fitchburg street sewer . . . . .	50 00	
labor and materials furnished in 1888. the bills for which remained uncollected Jan. 1, 1889 . . . . .	86 59	
private work, the bill for which remained uncollected Jan. 1, 1889 . . . . .	3 60	
fee for entering sewer, the bill for which remained uncollected Jan. 1, 1889 . . . . .	30 00	
pay for laborers, uncalled for during 1889 . . . . .	4 00	
	210 75	
Value of materials on hand Jan. 1, 1889 . . . . .		229 54
Value of tools and property Jan. 1, 1889 . . . . .		394 14
Unpaid bills of 1889 . . . . .		541 71
		\$12,376 14
Total credit . . . . .		

## DEBIT.

## Expenditures :

For nineteen sewers, as per the accompanying table . . . . .	\$21,852 61	
less assessments . . . . .	18,330 87	
cost to city . . . . .	<u>                    </u>	3,521 74
For thirty-five catch-basins (average cost, \$73.96) . . . . .		\$2,588 76
five-ninths cost removing deposit from mouth of		
Bridge street sewer . . . . .		1,455 86
rebuilding Wheatland street sewer . . . . .		1,188 17
building man-hole in Wheatland street sewer . . . . .		292 51
repairing wooden box-drain, east side of Mystic avenue at Chauncy avenue . . . . .		160 06
building a tool-house at Joy street lot . . . . .		39 51
building a fence at Joy street lot . . . . .		297 73
flushing sewers and filling catch-basins with water . . . . .		370 58
boring for proposed extension of Winthrop avenue sewer . . . . .		53 88
inspection of house drains . . . . .		382 77
cleaning catch-basins . . . . .		2,159 04
cleaning sewers . . . . .		791 97
cleaning ditches . . . . .		124 84
cleaning man-holes . . . . .		104 42
changing lines and grades of catch-basins . . . . .		49 44
changing lines and grades of man-holes . . . . .		51 30
repairing man-holes . . . . .		26 52
examining sewers . . . . .		69 75
repairing sewers and drains . . . . .		479 10
examining catch-basins . . . . .		11 56
repairing catch-basins . . . . .		130 67
cleaning mouths of catch-basins . . . . .		29 50
water . . . . .		40 00
digging to locate old sewers . . . . .		75 37
inspecting sewers built by abutters in Ashland, Bowdoin, Dell, Hammond, Lee, Vernon and Wyatt streets, Richdale avenue, and on land of Tufts heirs . . . . .		126 87
<i>Amount carried forward</i> . . . . .		<u>\$14,621 92</u>

<i>Amount brought forward</i> . . . . .	\$14,621 92
Books, stationery and printing . . . . .	22 00
Repairing tools and property . . . . .	33 94
Removing tools and property to Joy street lot and arranging same . . . . .	51 88
Sundry expenses (including those incurred in con- nection with the Legislative hearings on the Metropolitan Sewerage System). . . . .	95 35
Abatement of common sewer assessments . . . . .	716 57
Labor and materials furnished, the bills for which are to be presented for collection in 1890 . . . . .	471 71
Private work, the bills for which remain uncollected . . . . .	21 67
Depreciation in value of tools, property and ma- terials . . . . .	172 84
Value of materials on hand Dec. 31, 1889 . . . . .	269 98
Value of tools and property on hand Dec. 31, 1889 (including purchases during the year of \$300.58)	490 78
<hr/>	
Total Debit . . . . .	\$16,968 64
Amount overdrawn . . . . .	4,592 50

In addition to the above statement, labor has been furnished for which credit has been received as follows:—

A. W. Bryne, puddling sewer trenches in Heath and Hanson streets . . . . .	3 01
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The sewer in Wheatland street referred to in our last report has been rebuilt in a substantial manner, at a cost of \$1,188.17, and a man-hole has been constructed in the same at an additional cost of \$292.51.

The sewer department now has the exclusive use of the city's Joy street lot for purposes of storage and repairs, and the lot has been fenced and a suitable building provided at a cost of \$337.24.

Thirty-five new catch basins have been constructed during the year, as compared with twenty-two in 1888, and the average cost of the same has been materially reduced, being \$73.96 in 1889, and \$82.25 in 1888.

There has been 11,986.9 feet of sewers built by the city in 1889 as compared with 5,218 in 1888, or more than twice the length built in the former year.

ANNUAL REPORTS.

SEWERS BUILT IN 1889.

Street.	From	To	Length in Feet.	Total Cost.	Assessment.	Cost to City.
Boston.....	High St.....	Northwesterly.....	179.1	\$263 49	\$196 12	\$67 37
Central and Albion.....	{ End of old sewer in } Albion St.	Near Highland Ave.....	535.5	548 42	537 68	10 74
Chauncey Ave.....	Mystic Ave.....	Near Jacques St.....	800.4	1,946 49	1,924 91	20 58
Curtis St. and Fairmount Ave.....	Broadway.....	N. Wly in Fairmount Ave	991.3	2,782 91	2,242 95	539 96
Chauncey Ave.....	End of old sewer.....	Near Broadway.....	219.1	323 95	302 11	21 84
Central St.....	Somerville Ave.....	Near Summer St.....	979.1	1,268 26	1,256 32	11 94
George St.....	End of old sewer.....	Southerly and easterly...	140	228 51	168 74	59 77
Glen St.....	Fountain Ave.....	Near Tufts St.....	345.5	496 83	481 90	14 93
Highland Ave.....	End of old sewer.....	Near Central St.....	2,356.5	5,094 26	3,924 38	1,169 88
Harding St.....	South St.....	Near Cambridge Line.....	96.6	119 10	105 62	13 48
Heath St.....	Bond St.....	Brooks St.....	740.7	964 13	871 79	92 34
Hanson St.....	Ivaloo St.....	Near Mondamin Court...	297.1	855 00	854 65	35
Laurel St. & private lands	Old sewer.....	Near Summer St.....	959	1,334 09	1,111 04	223 05
Medford St.....	Lowell St.....	Near Trull St.....	219.6	224 48	222 77	1 71
Mason Ave.....	Orehard St.....	Near Cambridge Line....	222.1	202 81	200 70	2 11
Munroe St.....	End of old sewer.....	Easterly.....	243.5	345 89	343 76	2 13
School and Madison Sts..	Montrose St.....	Sycamore St.....	1,106.5	1,524 84	1,511 32	13 52
School and Montrose Sts.	Medford St.....	Sycamore St.....	1,379.3	2,940 95	1,689 52	1,251 43
Temple St.....	Sewall St.....	Near Jacques St.....	176	388 20	383 59	4 61
<b>TOTAL,</b>			11,986.9	\$21,852 61	\$18,330 87	\$3,521 74

For the Committee,

CHAS. L. NORTH, *Chairman.*  
WILLIAM P. MITCHELL, *Clerk.*



REPORT OF THE CITY ENGINEER.

## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHAS. S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

OFFICE OF CITY ENGINEER, SOMERVILLE, FEB. 12, 1880.

*To His Honor the Mayor and the City Council :*

In compliance with City Ordinance 9, Section 9, the following report of the City Engineer is respectfully submitted :—

## CITY ENGINEER'S DEPARTMENT.

The number of persons permanently employed in this department during the year 1889 was five. Additional help has been employed as occasion required.

The expenses of the department have been as follows :—

Salary of the City Engineer, including the care and maintenance of horse and carriage . . . . .	\$2,200 00
Salary of assistants . . . . .	2,414 92
Instruments and supplies . . . . .	302 34
Car fares . . . . .	13 80
	\$4,931 06

The items of expenditure for salaries of engineer's assistants are as follows :—

For giving lines and grades for edgestone and sidewalks, examination, titles, and making assessments . . . . .	\$291 44
For all work done for the highway department, including lines and grades for defining street lines, acceptance plans and numbering plans . . . . .	178 17
For making surveys, giving lines and grades, examining titles, making assessment plans and assessments, lines and grades for private sewers, for building catch basins, locating and recording private drains . . . . .	663 73
For giving lines and grades for water pipes, for locating and recording services . . . . .	43 79
<i>Amount carried forward</i> . . . . .	\$1,177 13

<i>Amount brought forward</i> . . . . .	\$1,177 13
For high service surveys, lines, and grades inspection and plans . . . . .	396 02
For city and precinct maps . . . . .	171 74
For city survey and copying plans at registry of deeds	120 98
For surveys, lines and grades for department of public grounds . . . . .	74 21
For all other miscellaneous work, including office rec- ords and work done for other departments . . . . .	474 84
	\$2,414 92

## SEWERS.

Twelve thousand four hundred and forty-four feet, or two and thirty-six one-hundredths miles of sewers have been built by the city during the past year.

The cost of these sewers was \$21,852.61. Of this amount \$18,330.87, was assessed on abutters, and \$3,521.74 assumed by the city. Abatements were made to the amount of \$716.57. Three thousand seven hundred and fifty-nine and five-tenths feet of sewer have been built by private contract under the supervision of this department. The cost of inspection was \$126.87.

The most important work of the year was the construction of the sewers in Highland avenue and School, Madison and Montrose streets.

The Highland avenue sewer was built to provide drainage for the northerly slope of Spring Hill, from Cedar street to Central street; 1,606.1 feet of this sewer is built of brick and 750.4 feet is a pipe sewer. It has been long needed and will provide drainage for a large area of vacant land which is especially favorably situated for first-class residences.

The sewers in School, Mcntrose and Madison streets were built to provide drainage for a section which has been quite extensively built upon and has never been provided with any means of sewerage disposal, except through cesspools. The only outlet available for this sewer is through the sewer in Medford street.

The sewer in Medford street is not of sufficient capacity to provide for the large amount of storm water which falls on the territory which has been drained into it, and there has been considerable doubt as to the expediency of connecting these sewers in School,

Madison and Montrose with it. But the absolute necessity of providing some means of sewerage disposal for this district on the south side of the railroad seemed sufficient to overcome all objections. It must be understood that if the sewer in Medford street is still further burdened with storm water from the district south of the Lowell railroad, it will add to the danger of flooding property on Medford street, and in the near future a larger sewer will be required in Medford and Marshall streets, or a sewer must be built in the Lowell railroad location.

The sewer in that part of School street east of the Lowell railroad and in Madison and Montrose streets, is a twelve inch pipe sewer. At the intersection of Montrose and School streets, the sewer deflects from the centre of the street, and crosses the railroad under the tracks on a line parallel with and about eighteen feet from the east line of the street, by means of a 16-inch cast iron pipe laid at a depth of six feet below the rails. On the north side of the track the 16-inch pipe is reduced to a 12-inch, and is deflected to the northwest until it reaches the centre line of School street, then is continued on the centre line of School street to Medford street.

The sewer in School street north of railroad was reduced from sixteen inches to twelve inches, because it is not intended to provide for storm water from the north side of the railroad. If at any time a sewer be built in the Lowell railroad location, the 16-inch pipe sewer which crosses the railroad location can be connected with such a sewer, and the storm water be provided for.

The sewer in Laurel street and private land was built to provide better drainage than could be afforded by the sewer in Laurel street. The location built upon was adopted to avoid the necessity of lowering the sewer in Laurel street, and consequent excavation of a large amount of rock which would have been found if the sewer in Laurel street had been lowered.

The sewer in Chauncy avenue was laid through marsh land, and was expensive because of the exceptional care required in preparing the foundation, to avoid settlement.

The diameter of the Highland avenue sewer, at Cedar street, is 30 inches. This sewer discharges through a temporary outlet, by a 12-inch pipe, southerly into the sewer in Cedar street. Should it become necessary to build catch-basins on the line of the sewer in Highland avenue, a large amount of storm water will be discharged



into this sewer and a larger outlet will be required. Temporary relief may be obtained by laying a 12-inch pipe sewer in Highland avenue, from Cherry street southeasterly, to connect with the sewer at Cedar street.

If a sewer is to be built in the Lowell railroad location, the outlet of the 30-inch sewer would be more properly through Cedar street northwesterly to the Lowell railroad.

The Board of Health has for several years alluded to the necessity of providing some means of sewage disposal for estates on Woodbine street. The land in this vicinity is in a condition dangerous to public health. The house drainage now runs on the surface of the ground and collects in pools of black, offensive matter, and as the topography is such that there is no way of disposing of surface water, even cesspools are useless. I would recommend that a sewer be built in Lowell street, from Albion street northeasterly to Woodbine street, and in Woodbine street southeasterly to near Centre street.

#### REBUILDING OF WHEATLAND STREET SEWER.

In September work was begun on the rebuilding of a portion of the brick sewer in Wheatland street, from Mystic avenue southwesterly. Beginning at Mystic avenue, about 59 feet was found to be in good condition, and in this section no repairs were made; from this point about 35 feet of the sewer was strengthened by depositing concrete on the sides of the sewer, from about one foot below the spring line of the arch to a point well up on the arch. The thickness of the concrete at the spring line was about 12 inches; from this point about 50 feet of the arch was removed, relaid, and strengthened with concrete, as was done in the last section. The remainder of the section, 133 feet in length, was rebuilt. The old sewer was entirely removed and relaid.

A platform of two-inch spruce plank, resting on four-inch by eight-inch spruce was laid, and the sewer laid thereon; the invert and arch were backed up with concrete in the manner above described. Near Mystic Avenue a manhole seven feet in length was built and furnished with an iron tide gate.

The amount expended on rebuilding was \$1,480.68.

#### REBUILDING LAUREL STREET SEWER.

A section of the sewer in Laurel Street one hundred and forty-three feet in length, from a point about one hundred feet north-

west of Somerville Avenue to Park Place, was taken up and relaid at a lower grade to receive the sewerage from the sewer constructed in Laurel Street, private lands and Green Street. The cost of rebuilding was \$160.12.

#### OUTLET WHEATLAND STREET SEWER.

The wooden outlet at Mystic Avenue has been thoroughly repaired. A length of about fifty feet opposite Chauncey Avenue was entirely rebuilt and in several places the sides of the trench have been braced to prevent displacement of the drain. The cost of repairs was \$160.06.

The tool house and yard have been removed from the city land at Washington and Prospect streets to the city lot on Joy Street.

The Joy Street lot has been graded and fenced and a larger building erected. The cost of moving tools and building and erecting new building, the grading and fencing, was \$337.24.

#### PRIVATE DRAINS.

Five hundred and eight permits have been issued during the past year for laying and repairing private drains. Location of new drains and changes in old work have been recorded in the usual manner. House drains and drainlayers' work have been inspected at a cost of \$382.77.

#### CATCH BASINS.

Thirty-five catch basins have been built during the year at a cost of \$2,588.76. The cost of cleaning catch basins was \$2,159.04.

#### CLEANING SEWERS.

The annual examination of sewers has been made; no large accumulation has been found except in the sewer in Washington Street from Union Square to near Sacramento Street. With one or two slight deposits other than the one above mentioned, the city sewers which are provided with manholes, were never in better condition. The cost of cleaning sewers was \$1,021.23.

Repairs of sewers and catch basins have been made to the amount of \$636.29.

## BRIDGE STREET OUTLET

The work done at this outlet consists in throughly cleansing and flushing the outlet and adjacent flats. The amount expended is as follows:—

Boynton Brothers, dredging 3476 cubic yards at \$0.65	\$2,259 40
Labor . . . . .	241 00
Cambridge Water Works, flushing . . . . .	92 80
Advertising . . . . .	1 88
Teaming . . . . .	3 00
Supplies . . . . .	22 47
Total . . . . .	<u>\$2,620 55</u>

Five-ninths of the amount, \$1,455.86, was paid by the City of Somerville.

## WINTHROP AVENUE SEWER.

In the report for 1888, it was recommended that this sewer be extended to Middlesex Avenue. If in the opinion of the City Council it is inexpedient to extend the Winthrop avenue sewer to Middlesex Avenue, I would recommend that a new culvert be built at once. The condition of the old wooden culvert is so very uncertain that it should be immediately replaced.

The upper and lower sections of this culvert, each about fifteen feet in length, have been repaired during the last season

## EAST SOMERVILLE SEWERAGE.

Excavations have been made on the line of the Broadway sewer and levels and measurements taken from which a profile showing the elevation and depth of this sewer has been made. At the Mt. Pleasant Street intersection the connection is very imperfectly made. A considerable amount of deposit had formed at this point, which effectually dammed the Mt. Pleasant Street sewer. A manhole should be built at this point and the grade of the Mt. Pleasant Street sewer improved. Between Cutter Street and Winthrop Avenue the average depth of the sewer is about six feet. This sewer will have to be lowered in the near future to provide for draining the large area of vacant land on the northeast side of Broadway, known as the "Nunnery Grounds."

If the Broadway sewer is lowered, the sewer in Cutter Street could be connected with the new Broadway sewer. The sewer in Bonair Street could also be connected with the Broadway sewer by building a sewer in Autumn Street.

These sewers in Bonair and Cutter Streets now drain into the Cross Street sewer, and if these sewers could be connected with the Broadway sewer it would relieve the Cross Street sewer of a large amount of storm water and would be a great benefit to the entire system in East Somerville.

When the sewer in Broadway is lowered the entire system in East Somerville should be examined. Many sewers in this district are laid at a depth of not more than five feet and are imperfectly built. Even now these sewers are causing some trouble from the imperfect manner in which they have been constructed.

#### PROPOSED SEWER IN THE LOCATION OF THE BOSTON AND LOWELL RAILROAD.

The attention of the City Council is again called to the necessity of building a trunk sewer in the Boston and Lowell railroad location. The necessity for building this sewer becomes more apparent every year. New streets are being laid out and a demand will soon be made for this sewer from districts which cannot be drained in any other way but by the proposed sewer. As the vacant land is occupied and improved, the quantity of water which the sewers must dispose of is greatly increased and the present trunk sewer will soon be found to be too small. The necessity for building this sewer was more fully stated in the last annual report to which the attention of the City Council is respectfully directed.

A table showing the location, size, cost per foot, assessment, and cost to the city, of sewers built in 1889, may be found in appendix B.

#### WATER WORKS.

##### HIGH SERVICE SUPPLY.

The most important work undertaken by this department during the year was the construction of the high service works.

The summits of Winter, Spring, Central and Prospect Hills are nearly of the same elevation as the Mystic reservoir, so that houses situated above a contour of eighty-seven feet below the surface of the reservoir were not supplied with water in quantity or at a pres-



sure sufficient for the ordinary use ; and in houses on the summits of the hills it very often happened that no water could be obtained. !

The necessity for building the high service supply has been urged for several years and it had finally come to be so evident that some improvement must be made in the supply of water furnished the highlands, that on January 23, 1889, a vote passed the city council authorizing the appointment of a joint special committee to report a plan for a high service system.

April 3, 1889, a report was made by the City Engineer to the joint special committee and was presented to the City Council. The report was accepted and the mayor authorized to employ an expert to verify the report of the City Engineer.

The plan adopted by the city council provided for an iron tank thirty feet in diameter and one hundred feet high, located on the summit of Spring Hill between Belmont and Lowell Streets. A pumping station, seventy-five feet and six inches by thirty-three feet and four inches, located on the city farm ; a two million compound condensing, duplex, pumping engine, and a fourteen-inch force main through Cedar Street, Broadway, Central Street, Highland Avenue and Belmont Street to the tank.

Following the receipt and acceptance of the report of the committee, the water board was authorized to proceed with the construction of the works.

Specifications were prepared by the City Engineer for an iron tank and a contract was executed with the Cunningham Iron Works.

The bottom of the tank is three-fourths of an inch plate-iron, and is connected to the sides by an angle iron six inches by four inches by five-eighths inches double riveted to the side plates and single riveted to the bottom plates. All the bottom plates are single riveted. The side plates are of wrought iron in twenty courses and of the following thickness :

The thickness of the plates was reduced in every second course one-sixteenth of an inch to a height of seventy feet. The thickness of the plates was as follows : the first course three-fourths of an inch, the third course eleven-sixteenths of an inch, fifth course five-eighths of an inch, seventh course nine-sixteenths of an inch, ninth course one-half of an inch, eleventh course seven-sixteenths of an inch, thirteenth and fourteenth courses three-eighths of an inch ; from this course to the top the plates are five-sixteenths of an inch thick.



The vertical seams for fifteen courses are double riveted. All horizontal seams for the lower seven courses are double riveted, all other seams single riveted.

For the first twenty-five feet in height the rivets are seven-eighths of an inch in diameter, the second three-fourths of an inch, the remainder five-eighths of an inch.

A ring of  $3 \times 3 \times \frac{1}{2}$  inch angle iron was riveted around the top inside and a ladder provided on the inside and outside from the top to the bottom.

A gallery has been placed around the top of the tank.

The force main is connected with the tank by a fourteen-inch cast-iron flange pipe riveted to the bottom of the tank and bolted to the force main.

The tank is provided with a man-hole eighteen inches by twenty-five inches.

The cost of the tank erected on a foundation built by the City of Somerville, not including inspector's salary, was \$10,223.07.

The tank has been completed but will not be accepted until it has been tested.

The foundation for the tank was laid by the day and is built of block stone masonry, of Rockport and Deer Island granite, laid in courses of about two feet rise. The diameter of the bottom course is forty feet and the top course thirty-two feet and the depth of the foundation is seven feet.

The cost of the foundation including the excavation was \$2,940.69.

The pumping station is a substantial brick building with freestone trimmings seventy-five feet six inches long by thirty-three feet four inches wide with a roof of six-inch hard pine plank covered with slate.

The engine room is thirty-two feet by thirty-one feet and the boiler room forty feet six inches by thirty-one feet, inside measurements.

A cellar is made under the engine room and the engine room is furnished with a bath room and appointments.

The chimney is built of brick and is ninety-six feet high from the ground line to the top.

The outer shaft is ten feet square at the base and six feet square at the top. The inner shaft is distinct from the outer, is circular in cross section and is three feet three inches in diameter throughout.

The thickness of the outer shaft is sixteen inches at the bottom and eight inches at the top.

The inner shaft is eight inches thick throughout.

The chimney is completed and the engine and boiler house are practically finished.

The plant contracted for at the pumping station includes :

One Worthington Compound, Condensing, Duplex, Pumping Engine.

One Return Tubular Boiler.

One Boiler feed pump.

One Hot well.

One 4-inch Ashton relief valve.

One 14-inch check valve.

All the steam pipe, necessary valves and fittings within the engine house.

All necessary drain, drip, priming and starting pipes and the boiler feed pump and connections.

The engine contracted for is a compound, condensing, duplex, pumping engine of proper power and capacity to deliver two million United States gallons in twenty-four hours against a pressure of eighty pounds per square inch, with a steam pressure of sixty pounds per square inch ; the pump to take water under a pressure of forty-seven pounds to the square inch. The duty of the pump to be not less than fifty million foot pounds to each 100 pounds of coal consumed.

The engine will have two high pressure steam cylinders fourteen inches in diameter, two low pressure steam cylinders twenty-four inches in diameter, two double acting water plungers fourteen inches in diameter ; all of eighteen inches stroke.

The condenser will be in the suction main.

The boiler contracted for is a sixty-inch return tubular boiler sixteen feet two inches long containing seventy-seven tubes three inches in diameter by fifteen feet long. The shell is of steel.

The contract and specifications for the pumping plant were not prepared by the City Engineer.

The contract price for the pumping plant is \$8,700. The pumping plant will probably be ready for the duty trial about April first.

The force main and connections were laid by the day by the Superintendent Nathaniel Dennett.

The engineering work has been done by this department. The

erection of the iron tank, chimney and pumping plant has been done under the direction of Hon. Christopher E. Rymes.

The report of the City Engineer to the Joint Special Committee, with the report of the expert, Mr. M. M. Tidd, will be found in Appendix A of this report.

The work done by the water department on extensions and maintenance has been located and new services located have been accurately recorded.

### HIGHWAYS.

Nineteen thousand and ninety lineal feet of edgestone and sidewalk have been laid and lines and grades have been given.

The cost of this work has been estimated, surveys of the estates benefited have been made, assessments apportioned and returns with the owners names have been made to the Board of Aldermen for assessment. A table showing the location, length and cost of sidewalks laid in 1889 will be found in Appendix C.

### STREETS ACCEPTED.

Fifteen streets have been accepted, plans showing location and profiles have been submitted by the abutters and have been revised and deposited with the City Clerk.

A table showing the location, width and length of streets accepted in 1889, will be found in Appendix D.

### STREETS NUMBERED.

Ten streets have been numbered, surveys have been made, plans prepared and notices issued to owners of buildings on streets numbered. Many new houses have been located and numbers assigned them on streets for which numbering plans were on file.

### LOCATION AND LENGTH OF PUBLIC AND PRIVATE STREETS.

A table showing the location and length of public and private streets will be found in Appendix E.

### BRIDGES.

#### WASHINGTON STREET BRIDGE.

This is an iron-plate girder bridge and is in the same condition as in January 1889. The headroom still remains the same and has never been made to conform to the requirements of the agreement



with the County Commissioners. The northwest sidewalk has been graded and covered with asphalt concrete; a guard fence has been placed on the retaining wall on the west side of the street between the bridge and Tufts Street.

#### CROSS STREET BRIDGE.

The Cross street bridge is in the same condition as in 1889. Plans have been prepared by the Boston & Maine Railroad Company and bids solicited for a new iron bridge to replace the old one; and it is probable that the work of rebuilding will be commenced immediately.

#### WALNUT STREET BRIDGE.

The bridge is in the same condition as reported in 1888. The abutments are badly out of line. The westerly corner of the southerly abutment has moved towards the rails about fifteen inches.

#### MEDFORD STREET BRIDGE.

The deck is in good repair; the iron work should be repainted; the abutments are in good condition.

#### SCHOOL STREET BRIDGE.

The covering plank and floor timbers are sound and in good repair. The wooden approach on the easterly side of the south abutment needs immediate attention. The posts which support the outside of the sidewalk are badly decayed and should be replaced at once. The southerly abutment is out of line and has a bad crack near the westerly end.

#### SYCAMORE STREET BRIDGE.

The bridge appears to be in good condition. The abutments show signs of settlement and movement towards the tracks.

#### CENTRAL STREET BRIDGE.

The stone arch at this bridge is in fair condition but the sidewalks are not safe. The iron girder on the easterly sidewalk is dangerous; the iron in the web has entirely rusted out in places. The Boston and Maine railroad has prepared plans for a new bridge and the work has already begun on the excavation for the new abutments.

#### CEDAR STREET BRIDGE.

This new iron bridge was built by the Boston and Maine Railroad Company in the winter of 1888 and 1889, and is in good condition.

## BROADWAY BRIDGE.

The woodwork is sound and the abutments are in good condition but the floor timbers are not deep enough to make a stiff floor. There is very great vibration even under light loads. This bridge should be rebuilt as soon as possible.

*Bridges over the Fitchburg Railroad.*

The Prospect Street bridge was rebuilt in 1888 and is in good condition. The Washington street and the Beacon street bridges are in good condition.

*Miscellaneous Bridges.*

## BROADWAY BRIDGE OVER ALEWIFE BROOK.

The retaining walls need pointing, otherwise the bridge is in good condition.

## BOSTON AVENUE BRIDGE OVER MYSTIC RIVER.

One-half of this bridge is supported by the City of Somerville. The fences need extensive repairs, otherwise this bridge is in a safe condition.

## MIDDLESEX AVENUE BRIDGE OVER MYSTIC RIVER.

One-half of this bridge is supported by the City of Somerville. The fence rails are somewhat decayed and need considerable patching. The draw piers need replanking. The covering plank at the head of the pier is unsafe and should be replaced. On the draw the trusses are badly out of shape.

The chords have sagged considerably between the centre and shore ends on the Medford end of the draw.

The trusses should be thoroughly examined and needed repairs made as soon as possible.

## PUBLIC GROUNDS.

## BROADWAY PARK.

A large part of the appropriation for Public Grounds has been used in improving the condition of Broadway Park in the immediate vicinity of the pond.

Owing to conditions which existed before the park was constructed that portion northeast of the pond has been gradually settling. This



settlement had left the walks and borders below the level of the curbing around the pond, the water retained by the curbing had killed the grass; the curbing had also settled badly and was very much out of line.

The work done included the raising and aligning the curbing; repaving the bottom of the pond for a width of 10 to 15 feet inside the curbing; the walks and borders were raised to the grade of the curbing; a section of the grass land at the northeasterly end of the park was ploughed, harrowed and seeded and a drain laid to connect with the sewer in Chauncey Avenue to carry off the surface water. The bottom of the pond was thoroughly scraped and the outlet of the pond opened and cleaned and a man-hole built over the outlet to provide for inspecting and cleaning the outlet.

The amount of work done and materials used is as follows:—

#### WORK DONE.

- 1,207 linear feet curbing reset.
- 1,098 square yards paving relaid.
- 2,300 linear feet walks regraded.
- 32,102 square feet sod taken up and relaid.
- 22,400 square feet ploughed, graded and seeded.

#### MATERIAS USED.

- 114 loads dressing.
- 1,106 loads loam.
- 1,088 single loads gravel.
- 503 square feet sod.
- 296 loads dirt removed from pond.

#### EXPENDITURES AT BROADWAY PARK.

Maintenance . . . . .	\$802 69
Repairing outlet of pond . . . . .	123 16
Cleaning pond . . . . .	272 54
Resetting curb . . . . .	568 50
Relaying paving . . . . .	404 81
Taking up and relaying sod . . . . .	1,798 28
Gravelling walks . . . . .	852 89
Cleaning walks . . . . .	49 00
Breaking up and regrading $\frac{1}{2}$ acre piece at easterly end	460 50
<i>Amount carried forward</i> . . . . .	<b>\$5,332.37</b>

<i>Amount brought forward</i> . . . . .	\$5,332 37
Laying surface drain . . . . .	527 74
Painting iron fence and flag pole . . . . .	203 00
Resetting section of iron fence . . . . .	19 03
Repairs on tool house . . . . .	23 32
Electric lighting . . . . .	148 37
Police service . . . . .	50 00
Tools, hardware and sundries . . . . .	91 79
Hose . . . . .	24 00
Raising and lowering top-mast of flag pole . . . . .	12 00
Plants . . . . .	60 00
Sewer assessments (Chauncey Avenue sewer) . . . . .	963 60
New seats . . . . .	44 59
	<hr/>
	\$7,499 81
Less amount due sewer account to be charged to appropriation 1890 . . . . .	99 05
	<hr/>
	<u>\$7,400 76</u>

## CENTRAL HILL PARK.

The new grass land on the top of the hill was top dressed with loam in April and the bare places seeded at the following cost:—

Labor . . . . .	\$130 64
Teams . . . . .	11 70
Loam . . . . .	67 74
Seed . . . . .	16 00
	<hr/>
	\$226 08

In September the material which was left from the grading done in 1888 and which had been deposited in an unsightly dump on the summit of the hill was removed. The refuse material was removed from the hill. The remainder was utilized as loam. About ten thousand five hundred square feet were covered with this loam, top dressed and seeded and the refuse material disposed of at the following cost:—

Labor . . . . .	\$322 99
Teams . . . . .	95 00
Dressing . . . . .	53 75
	<hr/>
<i>Amounts carried forward</i> . . . . .	\$471 74
	<hr/>
	\$226 08

<i>Amounts brought forward</i> . . . . .	\$471 74	\$226 08
Seed . . . . .	4 45	
Lumber . . . . .	19 74	
	<hr/>	\$495. 93

## MAINTENANCE.

Labor (care of grass and walks) . . . . .	277 87	
Tools and hardware . . . . .	18 25	
Electric light pole . . . . .	9 50	
Two catch basins . . . . .	89 25	
Plants . . . . .	15 00	
	<hr/>	\$464 47

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\$1,186 48

Less cost of two catch basins built by sewer dept., to be charged to appropriation for 1890 . . . . .		89 25
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\$1,097 23

## CITY HALL AND LIBRARY GROUNDS.

Care of walks and grass, labor	\$233 12	
Hose . . . . .	40 50	
Tools and sundries . . . . .	7 20	
Sewer assessment, sewer in School street . . . . .	227 40	\$508 22

## HIGH SCHOOL GROUNDS.

Care of walks and grass, labor	\$103 37
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The following estimate of the cost of maintenance and improvements on Public Grounds is respectfully submitted: —

## MAINTENANCE.

City Hall, Public Library and High School Grounds, Central Hill, and Broadway Parks . . . . .	\$1,647 61
Top dressing lawns as above . . . . .	395 14
	<hr/>
<i>Amount carried forward</i> . . . . .	\$2,042 75

*Amount brought forward* . . . . . \$2,042 75

IMPROVEMENTS.

City Hall and Public Library Grounds, paving gutters and resurfacing driveways . . . . .	\$211 77	
High School Grounds, building catch basins, repairing surface drains and resurfacing driveways . . . . .	188 00	
	<hr/>	399 77
Grading, seeding and sodding northerly slope of Central Hill, Walnut Street to the High School building, including loam, manure, tools, signs, etc. . . . .		4,016 00
Concrete walks . . . . .		698 50

BROADWAY PARK.

Laying drain and building catch basins, seeding and sodding, settees, lawn mowers, painting buildings and two electric lights . . . . .		644 00
		<hr/>
		\$7,801 02
Add 10 per cent. for contingencies . . . . .		780 10
		<hr/>
		<u>\$8,581 12</u>

HORACE L. EATON,  
*City Engineer.*

## APPENDIX A.

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### CITY OF SOMERVILLE.

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#### REPORT OF THE CITY ENGINEER ON THE PROPOSED HIGH-SERVICE WATER SUPPLY.

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OFFICE OF CITY ENGINEER, SOMERVILLE, APRIL 8, 1889.

*To the Joint Special Committee of the City Council on the introduction  
of High Service Water Supply :*

GENTLEMEN,—I herewith submit my report on the introduction of a High Service Water Supply, in accordance with a vote of the Joint Special Committee on high water service passed January 30th, 1889, and in accordance with the following order of the city council passed January 23, 1889 :—

“Ordered,—That a joint special committee consisting of two aldermen and three councilmen, be appointed to confer with the Water Board, in relation to a high water service, and to thoroughly investigate the present system of water supply for the highlands of the city, and ascertain the number of dwellings insufficiently supplied, with the cause, and the area of lands where it is impracticable to furnish a proper supply under the present system, and to report the result of such investigation, with a plan for a system of high water service for the city, and an estimate of the cost ; and the said committee is hereby authorized to call upon the city engineer and any other of the officials of the city for such information and aid as may be required.

“ALVANO T. NICKERSON.”

The water supply of the City of Somerville is taken from Mystic Water Works system by the 30-inch and 24-inch mains, which pass through the city and carry a supply to Charlestown, Everett, Chelsea and East Boston. The 30-inch is a wrought iron cement-lined pipe, which is laid from the reservoir on College Hill in Med-



ford, through Medford, to the Medford and Somerville line at Broadway, about 400 feet northwest of Cedar street. It is continued in Somerville territory, through Broadway, Medford, Pearl, Mt. Vernon, and Perkins streets to the Boston or Charlestown line.

The 24-inch is a cast-iron pipe, which is laid from the reservoir to the Medford and Somerville line, at a point about 100 feet east of Main street near Fremont street, and is continued through Heath and Temple streets and Broadway, to the Charlestown line.

A 12-inch main is laid from the reservoir across Tufts College grounds, through Packard avenue to Broadway, where it reduces to 10 inches, and then continues through Broadway, Holland street, and Highland avenue to Grove street.

A 12-inch main is also laid from the 24-inch on Medford street in Medford, through Medford and Central streets, to Somerville avenue.

The two latter mains are used exclusively to supply the City of Somerville.

An 8 inch pipe is laid from the 30-inch main, through Washington street to Union square, and connects at Union square with an 8-inch pipe laid from the 12-inch on Central street, through Somerville avenue.

The distribution is practically divided into two systems, one on the northeast side of the Boston and Lowell R. R., the other on the southwest.

That on the northeast includes Winter Hill and East Somerville; the one on the southwest includes West Somerville, Spring, Central, and Prospect hills, Union square, and territory southwest to the Cambridge line.

The first district mentioned is supplied both from the 30 and 24-inch main, and could be liberally supplied with water, if the district were properly piped.

The second district derives its supply from the 12-inch main leading from the 24-inch through Medford and Central streets to Somerville avenue, and from the 12-inch through Packard avenue and Holland street to Davis square. This main is reduced to a 6-inch east of Davis square, and practically supplies a limited territory; a 6-inch connection extends from the 30-inch in Broadway through Cedar street to Somerville avenue. This pipe is so small that it is practically of little service to the distribution.

In accordance with instructions received from the joint special committee on high service supply, surveys and investigations were begun in January, 1889.

For convenience the high service territory was divided into two districts. The first district includes all of that part of Winter Hill lying between School, Medford, Vernon, Lowell, Broadway, Heath and Temple Streets.

The second district includes all that part of Spring, Central, and Prospect hills lying between Cedar, Elm, Somerville Avenue, School, Summer, Vinal Avenue, Aldersey, Walnut, Munroe, Prospect Hill Avenue, Medford Streets and Highland Avenue.

Every house included within these districts was visited by an inspector, the owner's name, number of consumers, size of service pipe, the water pressure, number of taps used, and information as to the character of the supply, the day of the week, and the time of the day when the supply is deficient, were recorded in convenient form for reference.

Elevations of door sills in both of these districts were obtained from actual surveys and recorded for reference; and the static pressure due to the head of water estimated from high water mark in the reservoir, was computed.

From information thus obtained the exact condition of the water supply of every house visited can be definitely stated. A table has also been prepared showing the number of houses in the high service territory having a pressure less than 10-20-30-40-50 pounds, etc., which will be found on page 318.

To determine the theoretical area of the high service territory to be supplied, it was necessary to fix on a minimum static pressure in pounds, which will be the limit between high and low service.

A pressure of 37 pounds was adopted as this limit. This pressure is equal to a head of about 87 feet, or an elevation of 70 feet above mean low water; and would be defined by a contour or level line run around the hills at an elevation 70 feet above mean low water, and the area enclosed by this contour or level line would be the high service territory or area.

The area included in these high service districts is as follows:—

Winter Hill, . . . . .	136 acres.
Spring, Central and Prospect Hills	242 acres.
Total	378 acres.

These areas are the theoretical areas which are in need of a high service pressure. They are subject to considerable increase by means of local conditions independent of the pressure required to furnish a domestic supply.

1st. The contour line of 70 feet above mean low water intersects street lines in such a manner that, were the theoretical line followed it would be necessary to gate off one-half of the mains in many of the streets, and thereby produce a large number of dead ends. That the water might not become turbid, it would be necessary that blow-offs be placed at these dead ends, and the pipes emptied at regular intervals, to keep the water pure. This work in itself would not be very difficult, but it would be a constant burden to the Superintendent, and a source of trouble to the consumer. The effect would be to prevent circulation in the connecting pipes, and lessen the discharge; if the pipes were connected they would feed from both directions.

2d. The condition of the cement-lined pipes is such that the increased pressure from the high service will cause many breaks; and if these pipes must be relaid it will add but very little to the cost to avoid these dead ends when these mains are relaid.

3d. The present mains in Somerville avenue are entirely too small to provide for an efficient fire protection, and must be relaid with larger pipes.

It is highly probable that land adjoining the Fitchburg railroad will be used for manufacturing purposes entirely, in the near future; and should this be the case a larger amount of water, and consequently mains of very much larger diameter, will be required for fire protection. If the high service system is properly designed, the present low service mains can be used for domestic purposes entirely, and the high service mains used for fire purposes. For these reasons I have avoided dead ends by enlarging the high service districts, and have increased the areas as follows:—

Winter Hill . . . . .	162 acres.
Spring, Central and Prospect Hills . . . . .	355 acres.

(See page 304.) Total . . . . . 517 acres.

Insufficient supply to the high lands is due to two causes.

1st. The elevation of Spring and Winter Hills is so nearly the same as the elevation of high water at the Mystic reservoir that there



is not sufficient head or pressure to carry the water from the reservoir to these elevations.

The following table shows the elevation of the reservoir, Spring and Winter Hills, the static pressure due to the elevation and the recorded pressure at the house :

Location.	Elevation of Door Sill Above Mean Low Water.	Elevation of Guage at House.	Recorded Pressure. Lbs.	Static Pressure. Lbs.	Loss of Head. Lbs.
Mystic Reservoir.....	157				
Spring Hill.....	145.6	141.6	2	7	5
Winter Hill.....	141.7	145.3	2	5	3

The elevation and pressure given on Winter Hill is not that of the highest door sill, as there was no means of observing the pressure at the highest point. The elevation of the highest door sill on Winter Hill is 148.2.

The loss of head is due to the large consumption in the lower parts of the city.

2nd. The limited capacity of the distribution system. On the Winter Hill system the loss is not so apparent. For although there is but one 8-inch pipe in the district, that on Broadway, the 24 and 30-inch mains are so situated that the pressure is maintained. The average loss of head is two pounds.

The same is true on the Spring Hill district ; except that the whole district is supplied from the 12-inch main on Central street.

The average loss of head on Spring, Central and Prospect Hills is about five pounds.

No experiments have been made to determine the efficiency of the present distribution system in the high service district ; although a strict interpretation of the order might include such an investigation.

It would be necessary to make a large number of experiments with hose streams at the hydrants, before a satisfactory report could be made, and for this reason this part of the work has not been carried out.

In preparing a plan and estimate for a high service supply, the first question to be decided is the quantity of water which may be required.

Water will be required for two purposes.

- 1st. Domestic consumption.
- 2nd. Fire protection.

From measurements made in Boston on the quantity of water used in private houses it was estimated that the average daily consumption was about 25 gallons per inhabitant per day. From records of quantity of water used in other cities it has been estimated that the maximum daily consumption is nearly 100 per cent. larger than the average daily consumption.

From these records I have estimated that the average daily consumption will be 30 gallons and the maximum daily average 60 gallons per inhabitant.

The following table shows the average daily consumption of 13 cities and towns having about 30 gallons daily average consumption :

TABLE SHOWING THE DAILY AVERAGE CONSUMPTION PER INHABITANT OF THIRTEEN CITIES OR TOWNS.

CITY OR Town.	Population in 1885.	Daily Average Consumption in gallons.
Arlington.....	1,785	31
Brookline.....	9,196	71
Cambridge.....	59,658	58
Chelsea.....	25,709	69
Framingham.....	8,275	42
Lowell.....	64,107	59
Lynn.....	45,867	50
Marblehead.....	7,517	29
Milford.....	9,343	32
Natick.....	8,460	33
Newton.....	19,759	36
Springfield.....	33,340	96
Waltham.....	14,609	39

In order to compute the estimated growth in population of the high service districts, a table has been prepared showing the rate of increase in population of various cities and towns; a copy of this table is given below.



TABLE SHOWING THE PERCENTAGE OF INCREASE IN POPULATION IN PERIODS OF FIVE YEARS IN SEVERAL CITIES AND SUBURBAN TOWNS.

TABLE 1.

CITIES.	Popula- tion in 1885.	PERCENTAGE OF INCREASE—FIVE YEARLY PERIODS.							
		1850-55.	1855-60.	1860-65.	1865-70.	1870-75.	1875-80.	1880-85.	Av'ge.
Lynn.....	45,867	10	21	9	36	15	17	20	18
Springfield ..	37,575	17	10	45	21	17	7	13	19
Chelsea. ....	25,709	50	32	8	29	11	5	18	20
Somerville ..	29,971	70	39	16	57	49	14	20	38
Fall River...	56,870	10	11	24	53	69	8	16	27
New Bedford	33,393	24	9	..	2	21	3	24	12
Charlestown.	37,673	26	19	5	7	11	1	13	12
Holyoke.....	27,859	43	8	13	90	51	35	32	39

Average increase for eight cities, 23.

SUBURBAN TOWNS AND CITIES.

TABLE 2.

TOWNS.	Popula- tion in 1885.	FIVE YEARLY PERIODS.							
		1850-55.	1855-60.	1860-65.	1865-70.	1870-75.	1875-80.	1880-85.	Av'ge.
Cambridge. ..	59,658	35	27	12	36	27	10	12	23
Melrose.....	6,101	57	28	13	19	17	14	34	26
Newton.....	19,759	30	24	7	43	25	5	18	22
Watertown ..	6,238	26	..	15	14	18	7	15	16
Brookline....	9,196	48	40	1	26	$\frac{1}{4}$	21	14	21
Quincy.....	12,145	18	14	..	11	23	15	15	16
Malden.....	16,407	30	27	17	8	47	11	37	25
Waltham....	14,609	35	6	8	32	10	17	25	19
Brighton....	8,516	23	18	14	28	25	8	27	21
W. Roxbury..	17,425	..	..	..	..	..	..	..	24

Average increase, 21.

From the above tables it will be evident that an average increase of 25 per cent. in five years would be a fair estimate of a probable increase in population for the next twenty-five years at least.

As a further basis on which to estimate the further growth of the city, a table was prepared showing the population from actual count made in the high service districts, in the winter of 1888-89, and from

this the estimated growth of the city, by a 25 per cent. five yearly increase, to the year 1925.

A copy of this table is given below :

TABLE SHOWING THE POPULATION OF THE HIGH SERVICE DISTRICT FROM ACTUAL COUNT IN 1888, AND A FIVE YEARLY INCREASE OF 25 PER CENT. TO 1925.

TABLE 3.

YEAR	Winter Hill, Southwest of Central Street.	Winter Hill, Northeast of Central Street.	Spring Hill, Southwest of Central Street.	Central and Prospect Hill, Southeast of Central St.
1888	1,189	1,408	1,589	3,116
1890	1,307	1,548	1,747	3,427
1895	1,634	1,910	2,184	4,284
1900	2,042	2,388	2,730	5,355
1905	2,552	2,985	3,412	6,694
1910	3,190	3,731	4,265	8,367
1915	3,987	4,664	5,331	10,459
1920	4,984	5,710	6,664	13,074
1925	6,230	7,137	8,330	16,342

A third table has been prepared showing the estimated population in the high service districts, on the basis of 56.5 population to the acre, estimated from the report of the Somerville Board of Health. (See City Reports for 1887, page 211, Health District No. 2.)

A copy of this table is given below :

POPULATION ESTIMATED ON A BASIS OF 56.5 TO THE ACRE.

TABLE 4.

Winter Hill, Northwest of Central Street.	Winter Hill, Northeast of Central Street.	Spring Hill, Southwest of Central Street.	Spring Hill, Southeast of Central Street.
4,407	4,746	10,622	9,435

By a comparison of tables 3 and 4 it will be seen that in table 3 the population computed for the year 1915 does not materially differ from that given in table 4, except that the figures given in the third column of table 3 are considerably less than in table 4. This difference is accounted for by the fact that a large part of this district is unoccupied.

The figures referred to in tables 3 and 4 are so nearly alike that I have accepted those in table 4 as correct, for purposes of an estimate, and have prepared a table showing the estimated growth for five yearly periods, assuming that the population in 1915 will be equal to a population of 56.5 per acre.

TABLE SHOWING THE POPULATION TO 1915, FOR PERIODS OF FIVE YEARS.

TABLE 5.

Year.	Winter Hill, Northwest of Central Street.	Winter Hill, Northeast of Central Street.	Spring Hill, Southwest of Central Street.	Central & Pros- pect Hills, Southeast of Central Street.	Total.
1890	1,445	1,555	3,480	3,091	9,571
1895	1,806	1,944	4,350	3,864	11,964
1900	2,257	2,430	5,438	4,830	14,369
1905	2,821	3,038	6,798	6,038	19,695
1910	3,526	3,797	8,498	7,548	23,369
1915	4,407	4,746	10,622	9,435	29,210

Upon this basis I have computed the average daily consumption, allowing 30 gallons per inhabitant per day.

TABLE SHOWING THE AVERAGE DAILY CONSUMPTION, ALLOWING THIRTY GALLONS PER INHABITANT PER DAY.

TABLE 6.

YEAR.	Winter Hill, Northwest of Central Street.	Winter Hill, Southeast of Central Street.	Spring Hill, Southwest of Central Street.	Central & Pros- pect Hills, Southeast of Central Street.	Total gals. per minute.
1890	43,350	46,650	104,400	92,730	200
1895	54,180	58,320	130,500	115,920	250
1900	67,710	72,900	163,140	144,900	310
1905	84,630	96,140	203,940	181,140	390
1910	105,780	113,960	254,940	226,440	485
1915	132,210	142,380	318,660	283,050	608

These tables have been prepared, studied, and compared with considerable care, and in my opinion give a fair basis for fixing the sizes of the mains and distribution system and for estimating the cost of the proposed scheme for a high service supply.

In designing this system of works it is necessary to pay particular attention to the second demand for an increased supply.

## FIRE PROTECTION.

This division of the subject has required considerable study to determine just what quantity of water should be furnished for fire service. A maximum quantity of 1400 gallons per minute has been provided for in the distribution for Spring, Central and Prospect Hills, and 600 gallons per minute for Winter Hill. These quantities are equivalent to seven hydrant streams and three hydrant streams respectively.

From these figures and from figures given in table 6, the quantity of water to be provided for in 1915 would be as follows :

	Gallons Per Minute.
For daily average consumption . . . . .	608
For fire service . . . . .	2,000
	<hr/>
	2,608
For maximum daily consumption . . . . .	1,217
For fire service . . . . .	2,000
	<hr/>
Total . . . . .	3,217

As regards the quantity of water used for fire service, it is reported that at the recent fire at Marblehead the estimated quantity of water used was about 50,000 gallons per hour, or 833 gallons per minute; even this quantity was not sufficient for the demand, as it was reported that at some of the hydrants no water could be obtained during the fire. If more water had been delivered more would have been used.

Several plans for a high service supply have been studied and estimated, all essentially the same in the mains and distribution system, but providing for different locations of the pumping stations.

The plan which was found to be most economical and practical is as follows :

A pumping station at the junction of Central and Medford Streets; an iron tank on Spring Hill, 30 feet in diameter and 70 feet high; a 14-inch force main to Spring Hill through Central Street, Highland Avenue and Belmont Street; a 12-inch force main to Winter Hill through Central Street.

The 14-inch force main to Spring Hill is not large enough to supply the quantity of water which the distribution system will deliver;



but it is large enough for the maximum consumption for fifteen years.

When the increased cost of pumping, which would be occasioned by pumping through a small force main, is more than the interest of the cost of laying a 12-inch main parallel with the 14-inch main to the junction of Highland avenue and Central Street, a second force main should be laid.

The proposed buildings at the pumping station will consist of an engine and boiler house, engineer's tenement, coal shed and chimney.

The plan recommended provides for an engine of a capacity of 2,000,000 gallons in 24 hours.

A 2,000,000 engine will furnish the daily average consumption until 1910; at that time it will not be necessary to run the engine more than eight hours a day, and if occasion require it would furnish 1930 gallons a minute for the fire service.

This amount would include the daily average consumption, and if it were necessary to run the engine at its full capacity for fire service it would be done by drawing upon the quantity pumped for domestic use.

In considering the capacity of an engine required for the proposed high service, and especially in comparing our needs with those of other cities where a pumping engine is used in connection with a distributing reservoir (as is the plan adopted for the Chelsea high service supply), it should be remembered that the plans are not at all similar and cannot be compared. In the Chelsea plan the reservoir is probably large enough to hold three days' supply; and if the water in the reservoir is kept approximately near the high water mark, the reservoir would hold a quantity more than sufficient for fire service, and the pumping engine would not be called upon to perform any additional duty in time of fire.

If we could build a reservoir holding 1,000,000 gallons, a smaller engine could be used; for in that case the reservoir could be relied upon in case of fire without relying directly on the pumping engine to maintain the pressure and the supply for fire purposes, and the capacity of the pumping engine would be simply that required to furnish the daily average consumption.

As there is no location on which a reservoir can be built which would furnish the required head a tank must be substituted for the reservoir and the pumping engine must be provided to furnish the maximum quantity required for fire service.



The capacity required depends not on the daily average consumption for a certain period, or even on the maximum consumption, but on the quantity required for the largest number of fire streams that may be needed.

In direct pumping, with an iron tank, the pumping engine is the only source of supply; and if the capacity of the pumps is less than the quantity which may ever be required for fire purposes, the efficiency of the fire department will be limited by just that quantity which the pumps fail to deliver to the fire engines; and in case of a large fire the actual loss from a deficiency in the supply of water would be far in excess of the amount saved by reducing the capacity of the pumps to bring the cost of the pumping plant to the lowest limit.

The tank should be of such dimension as will hold a quantity of water equal to the daily average consumption in 1905. The tank will be 30 feet in diameter and 70 feet high, and will hold about 371,000 gallons.

In fixing the height of the tank it must be remembered that all the water used for domestic consumption must be raised to the elevation of the tanks in the houses on the summits of the hills before it will be available for domestic use. The elevation to which the water must be raised has been assumed at 20 feet above the tops of the hills, equal to an elevation above mean low water of 176.

In addition to this height a quantity for storage must be provided equal to one-half of the daily average consumption in 1905. A tank of 30 feet in diameter must be at least 50 feet high to provide the required storage. The total height of the tank should be 70 feet, and the top should be placed at an elevation of 216 feet above mean low water. This elevation is equivalent to a head of 70 feet on the top of Spring Hill, or a pressure of about 30 pounds. If a tank of a smaller diameter and height were designed, it would be necessary in the near future to run the pumping engine for a longer period than would be considered a day's work for an engineer, and two men would be required at the pumping station instead of one, necessitating an increase of about \$900 a year, equal to the interest on \$22,500 at 4 per cent.

From these figures it is evident that a considerable sum might be expended for a larger tank rather than to increase the cost of the running expenses at the pumping station.

## ESTIMATE OF COST OF PROPOSED HIGH SERVICE.

Buildings, including engineer's tenement, engine and boiler house, chimney and coal shed . . . . .	\$11,500 00
Pumping engine and boilers in place with connections, engine capacity 2,000,000 gallons in 24 hours . . . . .	8,500 00
Land . . . . .	3,500 00
Tank, 30 feet in diameter and 70 feet high . . . . .	10,500 00
Land for tank . . . . .	4,000 00
Fourteen-inch force main to Spring Hill . . . . .	9,375 00
Twelve-inch force main to Winter Hill . . . . .	2,300 00
Distribution system . . . . .	66,600 00
Relaying 100 feet 30-inch cement pipe with iron, connections with sewer, re-arranging present pipes at Central and Medford streets, check valves . . . . .	900 00
Fifty feet 18-inch suction . . . . .	200 00
	<hr/>
	\$117,375 00
Add 10 per cent. for contingencies . . . . .	11,737 50
	<hr/>
Total . . . . .	\$129,112 50

This estimate provides for relaying the large part of the present distribution in the high service districts. But it is not necessary that these changes be made immediately. A certain amount could be done from year to year until the whole scheme is carried out. The essential parts of the works which should be built immediately are the pumping station and pumping plant, tank and force mains. When these essential features are built the present distribution system can be temporarily used by placing a few gates on the street mains to separate the high and low service districts.

For this work an immediate expenditure would be required as follows :

Buildings, engines, etc. . . . .	\$20,000 00
Land for pumping station and tank . . . . .	7,500 00
Tank . . . . .	10,500 00
Force mains to Spring and Winter Hills . . . . .	11,675 00
Connections . . . . .	1,100 00
	<hr/>
	50,775 00
Add 10 per cent. for contingencies . . . . .	5,077 50
	<hr/>
	\$55,852 50

Objections to this scheme may arise from fear that the cost may exceed the estimate; that such a large expenditure would be extravagant; that such a large outlay will increase the funded debt and the tax rate. It may be said that we ought to be contented with our present supply and that an increased fire service is not needed from the fact that we have never had large fires; but does this prove that we may not in the future have a large fire? It may be stated that most of the trouble caused by a lack of pressure is over a small area. But that is not true. An area equal to at least one-sixth of the area of the city is as much entitled to an efficient water service as the other five-sixths.

Our city has not yet been visited by an extensive conflagration; but, should a large fire occur the value of property which might be destroyed would be far in excess of the interest on the cost of the proposed work, and possibly the loss sustained might be in excess of the total cost of the works.

In considering the cost of the proposed works it may be well to consider what may be saved in the cost of maintaining steamers to properly protect these high portions of the city, should the City Council fail to carry out the proposed high service supply on a broad and comprehensive plan.

To afford sufficient protection to Spring and Winter Hills when the districts are compactly built two steamers will be required.

The annual cost of maintainance for two steamers, not including repairs, but simply for salaries and keeping and shoeing horses, is estimated to be \$6200. This amount would capitalize \$155,000 at 4 per cent.; a sum far in excess of the estimate of the cost of the whole improvement.

From the description of the mains and distribution system given on pages 302 and 303 it is evident that the district southwest of the Boston and Lowell Railroad is practically supplied from the 12-inch main in Central street and the 8-inch from Washington Street.

The quantity of water which a 12 and 8-inch pipe can be depended on to deliver at the greatest allowable velocity is about 1400 gallons per minute, without a serious loss of head. The smallest quantity of water which will be required for domestic consumption in this district is about 1000 gallons per minute.

From these figures it is evident that but 400 gallons per minute can be relied upon for fire protection without drawing upon the quantity required for domestic consumption.



This quantity would be sufficient for two hydrant streams or one steam fire engine.

In making the figures I have not estimated on the quantity of water which would be taken from the 8-inch pipe through Washington street by the local demands east of Union square.

The quantity of water above mentioned which a 12 and 8-inch pipe would deliver can be increased somewhat; but it can only be done by a still greater increase in the loss of head, which would be of vital importance in case of fire, as the increased delivery would be more than offset by the loss of head.

An analysis of the distribution might be still further extended and would show that the sizes of pipe over the entire city are all very much smaller than they should be to give an efficient fire protection and provide for the average daily consumption for domestic purposes.

The statements referring to the sizes of present distribution are not strictly called for by the order of the City Council, but are given for information, that the committee and the public may be made aware of the actual condition of the distribution system and of the danger of serious loss to property in case of fire from a deficient water supply.

For the same reason I have not investigated the question of increasing the present distribution, and shall submit no plan. Such an investigation would be of little value without extended experiments on the present distribution, to ascertain the capacity of the present system.

There are large areas north of Central Street and west of Highland Avenue which are not yet occupied for building purposes, for which it does not appear that any provision has been made for water distribution according to any system. There should be a comprehensive plan prepared, showing a system of distribution large enough for all the future demands, and extension could then be made in a systematic manner. Hydrants should also be located systematically to produce the best results, and with a view to the future use when our territory will be more thickly settled.

I would respectfully recommend that these subjects be brought to the attention of the City Council for its consideration. The present distribution was planned for a small town with a scattered population, and was probably large enough for the town at the time the water was introduced. At that time the population was about 15,000.

The quantity of water required for domestic use was small compared with the present demand. The introduction of the modern arrangement of the bath room and water closet, the demand for hot water in the chamber and laundry have more than doubled the average quantity required for domestic use.

The use of water for sprinkling lawns and gardens, and the practice of opening taps in cold weather to prevent freezing in the service pipes, all increase the average daily consumption.

The consumption has been constantly increasing since water was introduced, and the demand has long since outgrown the capacity of our distribution system.

The pipes now are not nearly large enough to furnish even the quantity required for domestic use without greatly reducing the head, as is evident from the observed pressure on Spring Hill.

The whole distribution system should be remodelled, and extensions and relaying in the future should be carried on on a larger scale, and more in keeping with the needs of the people.

The high service works should be designed with a view to a further extension to other parts of the city, for the protection of manufacturing property which will probably be located in the city in the near future.

The cost of public works has often exceeded engineer's estimate. Not wholly from any fault in the engineer, but from the fact that neither the engineer nor the committee or board having charge of the improvements have failed to comprehend what was needed to provide for the future growth of the city. As these needs became apparent the fact that the original plan of the work was defective, in that the future growth of the city was under-estimated, became evident, and the works are finally enlarged at a much greater cost than if the original plan of the works had been sufficiently comprehensive.

The engineer is often required to cut down his estimates and reduce the cost to the lowest possible sum for fear that the whole scheme may fail of being carried out.

Let us not make this mistake, but look at this question in a broad and comprehensive light, and, so far as the work progresses, let it be done in a thorough manner and with a view to the future usefulness of the work and the future needs of the city, rather than to the actual amount which may be added to the funded debt the present year, and to the minimum number of water takers which the works



may be called upon to supply for the next two or three years. The question of fire protection to be obtained by the proposed works should not be lost sight of, for this is really the basis on which the proposed works are planned; and in reality the amount of water required for fire protection is the quantity which fixes the daily power required of the engine, and the size of the pipes in the distribution system.

A smaller engine than the one proposed could not be relied upon to give an efficient fire service in time of need.

TABLE SHOWING NUMBER OF HOUSES AND NUMBER OF CONSUMERS WHERE THE INDICATED PRESSURES WERE LESS THAN 10, 20, 30, 40 AND 50 POUNDS RESPECTIVELY.

WINTER HILL.			SPRING, CENTRAL AND PROSPECT HILLS.		
Pressure in Pounds.	No. of Houses.	No. of Consumers.	Pressure in Pounds.	No. of Houses.	No. of Consumers.
10	22	119	10	46	270
20	79	423	20	231	1,317
30	152	819	30	461	2,466
40	277	1,517	40	661	3,768
50	299	1,636	50	743	4,257

The number of houses located on Spring Hill is 36 where the pressure is under 10 pounds. The number 46 given in the above table includes Spring, Central and Prospect Hills.

Respectfully submitted,

HORACE L. EATON,

*City Engineer.*

BOSTON, May 21, 1889.

HON. CHARLES G. POPE, *Mayor of the City of Somerville, Mass.:*

DEAR SIR:—At your request I have examined your city in relation to the proposed high service water supply. I have examined also the report and plans submitted by your City Engineer and with him have been over the area proposed to be supplied with high pressure and herewith submit the following report:

The plan submitted by Mr. Eaton seems to me to be in the main a good one. It appears that the elevation of Mystic Reservoir is 157 feet above mean low water. Water works levels are usually taken from high tide or marsh level, which is ten feet higher, thus giving about 145 feet head at the marsh level, which is really a light head for fire service. One hundred and fifty to 160 feet head is, in my opinion, a good head for fire service. That head upon a hydrant is probably better than more, and in a level town would be preferable; but there are few New England towns that are level, and therefore heavier pressure must be maintained in the lower portions in order to give any on the summits or to render the average pressure suitable. In your case the average pressure is low, the theoretical head being but 147 feet when the reservoir is full and of this about five feet is lost by friction in the lower portions. This at the marsh level will give a fair pressure for fire purposes, but at any point above that the pressure is reduced.

At the summit of Spring Hill there is only 11.4 feet theoretical head and on Winter Hill 15.3 feet. This is reduced by friction to five feet less and consequently is of little or no value for domestic supply, and of no more use for fire than a reservoir from which to pump a supply.

Your engineer has drawn the line of the high service supply at a contour 70 feet above low tide, which is 87 feet below the full reservoir, except at one or two points where he has very properly gone a little below that point in order to avoid dead ends.

He proposes to place the stand pipe, which is 30 feet in diameter and 70 feet high, on the highest point of Spring Hill, at the level of 145 feet above low tide. This stand pipe, when full, will give to those houses which are on the summit about 30 pounds pressure, and at the level of the 70-foot contour (the bottom of the high service) about 67.5 pounds less the friction, making the mean pressure 48.7 pounds on the high service portion of Spring Hill, and about two pounds less on Winter Hill. It must be understood that this is when the tank is full to the top, which will be only occasionally. There will be many times when it will only be one-third full, therefore it would only be fair to reduce the mean pressure which we may expect in time of a fire (which does not always occur when the tank is full) 8 pounds more, or down to 40.7 pounds, which, in my opinion, is low for fire pressure.

I would therefore suggest that the standpipe be made 100 feet high. This will increase its capacity by 159,055 gallons, making the total capacity 530,000 gallons, and at the same time give much better fire pressure.

As the high portion of the city is confined to two sections, your engineer has very judiciously located the pumping station upon one of them, Winter Hill, and the stand pipe upon Spring Hill, thus arranging for a supply upon each in case of an interruption of the supply between, the water in the stand pipe furnishing Spring Hill and the pumps furnishing Winter Hill until the connection is resumed.

The location of the pumping station at the corner of Medford and Central streets, seems to me to be a very proper one, since it is comparatively central to the service on Winter Hill, the supply being taken easily from the 30-inch main and pumped through the proposed 14-inch main, via Central Street, Highland Avenue and Belmont Street, to the tank on Spring Hill. The pumps will in this case have a back pressure of about 30 pounds, and although the top of the stand-pipe, if it be made 100 feet high, is 163 feet higher than the pump, the assistance given by the back pressure will reduce the load to 75 pounds, which is not excessive.

This location, all considerations being equal, is the one I should select with regard to economy and efficiency, but should it be desired to locate it at some other point, the city farm at the corner of Broadway and Cedar streets would be a very suitable location. From an engineering point of view there are no objections. It would, however, involve the laying of about 800 feet additional of 14-inch pipe at an expense of two dollars per foot, and in the pipe plan of your engineer the substitution of 1300 feet of 14-inch pipe for 12-inch, at an additional expense of 44 cents per foot, the changing of 550 feet of 10-inch to 14-inch at an expense of 75 cents per foot, and 550 feet of 8-inch to 14-inch, at a expense of \$1.21 per foot, the whole entailing an additional expense of \$2249, which may be partially compensated for by the fact of the city's ownership of the property. The supply in this case can be taken from the same 30-inch main. Of course the pump would force the water against a greater head, but the back pressure would be increased in the same proportion, so that load on the pump would still be the same. I am informed by the superintendent of your water works that he proposes to lay immediately a 12-inch cast-iron main from the 30-inch main in Broadway



through Cedar street to Highland avenue ; in that case I would suggest that should the pump station be located on the City Farm, a connection be made with the pumps at that point, in order that at any future time when desired, water can be pumped through that to the standpipe on Spring Hill, thus giving, with all of the above suggestions, three lines of connection between the two areas of high service, when in the future the whole system is completed. I think from an examination of the plan of your city and the rate at which it is growing, that in the near future you will be called upon to extend your pipe system and probably the high service in a northerly direction towards West Somerville, and when this is done a pumping station located here will be fairly central to the high service pipe system.

This location is convenient to the B. & M. R. R., and with a spur track coal may very easily be brought there.

A pumping station can be located at any point in your city that may be desired and made to work successfully. The only considerations are simply those of economy and convenience.

The plan of your engineer includes a station and pumping plant similar to the one at Brookline, which if built and operated like that would be an ornament to any portion of your city. The capacity of the machinery, 2,000,000 gallons in 24 hours, is not too large. If you had a reservoir which would contain several days' supply, you could get along with a smaller pump, as in that case there would be water enough in the reservoir to respond to a sudden demand for the extinguishment of a fire ; but since there cannot at best be over half a million gallons on hand in the standpipe, your pump must furnish the water for fire purposes promptly, although possibly for a short time.

In this connection it must be remembered that the area of the tank of 30 feet diameter is small compared with that of a reservoir of three or four million gallons' capacity, the water in which is about 15 feet deep, and that a draught of 200,000 gallons would reduce the head 50 feet in the standpipe, while in case of the reservoir the loss of head by the same amount of draught would hardly be perceptible.

In nearly every case of the establishment of high service supplies in my experience, the city is immediately called upon to extend the high pressure further over that covered by the low service. The people adjoining the high service limit are always dissatisfied with their pressure while their next neighbor has so much more. This

has been the experience of Boston, and there is every reason to believe it will be so in your case.

For that reason it would be the part of wisdom to anticipate it by making some small and comparatively inexpensive preparations for future extensions. In this direction I would suggest that the pumping station be made large enough to receive an additional pump and boiler at some future time, and also that a 14-inch branch be placed in the force main for future connection with another standpipe on Winter Hill.

It would be well to arrange for the continuation of the 10-inch pipe which Mr. Eaton has located in Lowell street from Vernon street to Highland avenue.

It seems to me that the plan as arranged by the City Engineer is a good one, and with the few suggestions which I have made will give the city a service which will be satisfactory for many years.

Very truly yours,

[Signed.]

M. M. TIDD.







APPENDIX C.

SIDEWALKS.

STREET.	SIDE.	FROM	TO	MATERIALS.	Approx. length of walk in ft.	COST.
Boston.....	Both .....	Washington Street.....	Walnut Street.....	Gravel and Edgestones.....	3,617	\$2,973.15
Buckingham .....	Both .....	Beacon Street.....	Dinick Street.....	Gravel and Edgestones.....	608	383.50
Cedar.....	Southeast.	Elm Street.....	Summer Street....	Bricks and Edgestones.....	980	1,358.99
Dartmouth.....	Both .....	Medford Street.....	Broadway.....	Bricks and Edgestones.....	2,922	2,101.13
Elm.....	East.....	Lexington & Arlington R.R.	Winslow Avenue..	Bricks and Edgestones.....	242	355.50
Highland Avenue.	Southwest.	Grove Street.....	Near Davis Square	Bricks and Edgestones.....	342	468.68
Highland Avenue.	Southwest.	Putnam Street.....	Southeasterly. ...	Bricks.....	68	84.77
Morgan .....	Both .....	Beacon Street.....	Park Street.....	Gravel and Edgestones . . . . .	753	504.22
Morrison .....	Northeast.	Grove Street.....	Appleton Street..	Gravel and Edgestones.....	611	495.83
Morrison .....	Southwest.	Grove Street.....	Southeasterly....	Bricks and Edgestones.....	258	336.24
Oliver .....	Both .....	Cross Street.....	Glen Street.....	Bricks and Edgestones.....	1,173	1,458.88
Otis.....	Northeast.	Near Cross Street.....	Dana Street t. . . . .	Gravel and Edgestones.....	718	548.59
Otis .....	Southwest.	Cross Street.....	Dana Street.....	Gravel and Edgestones.....	866	631.34
Putnam .....	Southwest.	Summer Street.....	Highland Avenue.	Bricks.....	1 238	1,001.98
School.....	Southeast.	Evergreen Avenue.....	Summer Street....	Gravel and Edgestones.....	886	644.84
School.....	Northwest.	Evergreen Avenue.....	Medford Street....	Gravel and Edgestones.....	887	741.82
Thurston.....	Both .....	Broadway.....	Evergreen Avenue	Gravel and Edgestones.....	1,471	1,039.17
Walnut .....	Southeast.	Highland Avenue.....	Bow Street.....	Bricks and Edgestones.....	1,450	1,238.96
Totals.....	.....	.....	.....	.....	19,090	\$16,367.59

APPENDIX D.

STREETS ACCEPTED IN 1889.

NAME OF STREET.	FROM	TO	WIDTH IN FEET.	LENGTH IN FEET.
Belmont . . . . .	Summer Street.. . . .	Highland Avenue . . . . .	40	946
Church . . . . .	Somerville Avenue . . . . .	Lake Street. . . . .	40	340
Dana . . . . .	Pearl Street. . . . .	Everett Avenue. . . . .	40	276
Greenville. . . . .	Medford Street. . . . .	High Street. . . . .	40	661
Hawkins . . . . .	Somerville Avenue . . . . .	Washington Street. . . . .	40	331
Howe . . . . .	School Street. . . . .	Marshall Street. . . . .	40	447
James . . . . .	Pearl Street . . . . .	Veazie Street. . . . .	40	318
Lake. . . . .	Church Street. . . . .	Hawkins Street. . . . .	40	820
Montgomery Avenue. . . . .	Broadway . . . . .	Wellington Avenue . . . . .	40	264
Raymond Avenue . . . . .	Curtis Street. . . . .	North Street. . . . .	40	1,347
Sanborn Avenue . . . . .	Walnut Street. . . . .	Warren Avenue. . . . .	40	278
Virginia . . . . .	Aldrich Street. . . . .	Jasper Street. . . . .	40	403
Wellington Avenue. . . . .	Walnut Street. . . . .	Montgomery Avenue . . . . .	40	215
Wesley Park. . . . .	Bow Street. . . . .	Northwesterly. . . . .	40	404
Wheatland . . . . .	Broadway . . . . .	Jaques Street. . . . .	40	496



APPENDIX E.

TABLE SHOWING THE LOCATION, LENGTH, AND WIDTH OF PUBLIC AND PRIVATE STREETS.

STREET.	From	To	Public or Private.	Width in Feet.	LENGTH.	
					Public.	Private
Adams...	Broadway.....	Medford St..	Public	40	900	....
Adrian.....	Marion St.....	Joseph St.....	Private	40	....	530
Albion.....	Central St.....	Cedar St.....	Private	about 35	....	2,740
Albion.....	Broadway.....	Medford Line.....	Private	50	....	100
Aldersey..	Walnut St.....	Vinal Ave.....	Public	40	508	....
Aldrich.....	Pearl St.....	B. & L. R. R.....	Public	40	611	....
Alfred.....	Broadway.....	Medford Line.....	Private	50	....	50
Allen.....	Somerville Ave.	Charlestown St...	Private	25	....	680
Allen Ct.....	Park St.....	Northwesterly.....	Private	20	....	150
Alpine.....	Cedar St.....	Southeasterly.....	Private	30	....	670
Allston...	Cross St.....	Shawmut Pl.....	Private	40	....	420
Ames.....	Bartlett St.....	Robinson St.....	Private	40	....	515
Appleton.....	Willow Ave....	Clifton St.....	Public	40	510	....
Appleton.....	Clifton St.....	Liberty Ave.....	Private	40	..	120
Arlington...	Franklin St.....	Lincoln St.....	Public	40	440	....
*Arnold.....	Morrison St....	Broadway.....	Private	40	....	1,690
Arthur Court..	Linden St.....	Easterly.....	Private	about 10	....	100
Arthur.....	Broadway.....	Southwesterly.....	Private	40	....	290
Ashland.....	Summer St.....	Chestnut t.....	Private	30	....	470
Asylum Ave..	Washington St..	McLean Asylum..	Private	about 30	....	2,000
Auburn Ave..	Cross St.....	B. & L. R. R.....	Private	30	....	500
Austin.....	Broadway.....	Mystic Ave.....	Public	40	680	....
Autumn.....	Broadway.....	Bonair St.....	Private	20	....	420
Avon.....	School St.....	Northwesterly...	Private	40	....	700
Avon Pl.....	Cross St.....	B. & L. R. R.....	Private	25	....	150
Bartlett.....	Vernon St.....	Broadway.....	Private	40	....	1,550
Bartlett.....	Washington St..	Asylum grounds..	Private	20	....	200
Beach Ave....	Webster Ave....	Columbia St.....	Private	about 20	....	200
Beacon.....	Cambridge Line	Somerville Ave... .	Public	66	6,100	....
Bean's Ct....	Cutter St.....	Southeasterly.. .	Private	16	..	100
Bedford.....	South St.....	Cambridge Line..	Private	30	....	160
Beech.....	Somerville Ave.	Spring St.....	Public	40	800	....
Belmont.....	Somerville Ave.	Highland Ave. ...	Public	40	2,175	....
Belmont Pl...	Belmont St.....	Southeasterly.....	Private	25	....	175
Benedict.....	Union St.....	Austin St.....	Public	40	600	....
Benedict Ave..	Broadway.....	Benedict St.....	Private	20	....	200
Bennett.....	Prospect St.....	Bennett Ct.....	Private	25 & 40	....	400
Bennett Ct	Bennett St.....	Prospect St... ..	Private	10	....	100
Benton Ave....	Summer St.....	Highland Ave.....	Private	40	....	925
Berkeley.....	School St.....	Central St.....	Public	40	1,340	....
Bigelow.....	Boston St.....	Munroe St.....	Private	40	....	203
Billingham...	Broadway.....	William St.....	Private	40	....	563
Bishop's Pl...	Glen St.....	Easterly.....	Private	10	....	75
Blakeley Ave..	Winthrop Ave..	Cross St.....	Private	40	....	630
Bleachery Ct..	Somerville Ave.	Fitchburg R. R....	Private	30	....	450
Bolton.....	Oak St.....	Houghton St... ..	Private	40	....	500
Bonair.....	Cross St.....	Walnut St.....	Public	40	1,470	....
Bond.....	Broadway.....	Jaques St.....	Public	40	640	....
Bonner Ave... .	Washington St..	Columbus Ave.....	Public	40	450	....
Boston.....	Washington St..	Walnut St.....	Public	40	1,880	....

\* Proposed.



Street.	From	To	Public or Private.	Width in Feet.	Length.	
					Public.	Private
Boston Ave...	Medford Line..	Medford Line....	Public	60	910	....
Bow.....	Union Square..	Somerville Ave ...	Public	50 to 60	1,100	....
Bowdoin.....	Washington St..	Southerly.....	Private	40	...	370
Bow St. Pl....	Bow St. ....	Northwesterly....	Private	40	...	300
Bradford Ave.	School Street....	Southeasterly... .	Private	40	....	150
Bradley.....	Pearl Street....	Northeasterly... .	Private	40	....	800
Brastow Ave..	Lowell Street... Porter Street.....		Private	40	....	660
Broadway ...	Charlest'n Line	Arlington Line....	Public	60 to 200	17,000	....
Broadway Pl..	Broadway.....	Southwesterly....	Private	22	....	250
Brook .....	Glen Street.....	Cross Street.....	Public	40	500	....
Brooks.....	Main Street. . .	Meacham St.....	Private	40	....	700
Buckingham...	Beacon Street...	Dimick Street.....	Public	40	300	....
Calvin.....	Washington St.	Beacon Street.....	Private	30 & 40	...	644
Cambria.....	Central Street...	Northwesterly... .	Private	40	....	300
Cameron Ave.	Holland Street..	Cambridge Line... Private	Private	60	..	1,000
Carlton .....	Somerville Ave.	Lake Street.....	Private	40	....	300
Cedar .....	Elm Street.....	Broadway.....	Public	40	4,150	....
Cedar Avenue	Cedar Street....	Linden Avenue....	Private	22	....	290
Cedar St. Pl..	Murdock Street	Southwesterly....	Private	20	....	220
Central.....	Somerville Ave.	Broadway.....	Public	33, 40, 45	4,700	....
Centre.....	Albion Street...	B. & L. R.R.....	Private	35	....	200
Chandler.....	Park Avenue ..	Broadway.....	Private	40	....	1,200
Chapel .....	Elm Street .....	Chandler Street... Private	Public	40	273	....
Chapel Court..	Sycamore Street	Northwesterly... .	Private	12	....	130
Charles .....	Washington St.	Asylum grounds.. Private	Private	30	....	200
Charlestown...	Merriam St.....	Allen Street.....	Private	15	....	440
Chauncey Ave.	Broadway.....	Mystic Avenue ...	Public	50	1,320	....
Cherry .....	Elm Street.....	Highland Avenue. Private	Public	45	1,450	....
Chester .....	Elm Street.....	Cambridge Line... Private	Public	40	850	....
Chester Ave...	Medford Street	Angle.....	Public	about 22	220	....
Chester Ave..	Angle .....	Cross Street.....	Private	20	....	445
Chester Place.	Chester Street..	Northwesterly....	Private	40	....	200
Chestnut .....	Poplar Street..	Southeasterly....	Private	40	....	510
Chestnut Court	Harvard Street	Easterly & west'ly Private	Private	35	....	400
Church .....	Summer Street	Lake Street.....	Public	40	900	....
Church st. Pl.	Church Street..	Northwesterly....	Private	25	....	170
Claremon ..	Holland Street..	Cambridge Line... Private	Private	40	....	560
Clarendon Ave	Broadway.....	Cambridge Line... Private	Private	40	....	1,210
Clark .....	Newton Street..	Northwesterly....	Private	35	..	450
Clifton .....	Appleton Street	Morrison Street..	Public	40	240	....
Clifton .....	Morrison Street	Arlington B. R.R. Private	Private	40	....	220
Clyde.....	Cedar Street....	Murdock Street ... Private	Private	30	....	600
College Ave...	Broadway.....	Medford Line....	Public	50	1,700	....
Columbia.....	Glass House Ct.	Cambridge Line... Private	Private	40	....	550
Columbia Ct...	Columbia Street	Webster Avenue... Private	Private	9	....	150
Columbus Ave.	Land of Clark..	Walnut Street....	Public	40	1,000	....
Concord Ave..	Prospect Street	Leon Street.....	Public	40	1,500	....
Concord Ave..	Leon Street....	Beacon Street.....	Private	30 & 40	....	470
Congress Pl..	Linwood Street	Southwesterly....	Private	16	....	200
Conlon Court..	Columbia Street	Easterly.....	Private	20	....	200
Conwell.....	Highland Ave..	Near Porter.....	Private	35	....	364
Conwell Ave..	Curtis Street... Westernly .....		Private	40	....	600
Cook .....	Wyatt Street... Marion Street.....		Private	40	....	275
Cooney.....	Beacon Street.. Line Street.....		Private	26	....	220
Cottage Ave...	Russell Street.. Chester Street....		Public	40	500	....
Cottage Place.	Washington St	Northwesterly....	Private	about 11	....	150
Craigie .....	Somerville Ave.	Summer Street....	Public	50	1,250	....
Crescent.....	Washington St.	Pearl Street.....	Private	30 to 38	...	650
*Crocker .....	Highland Ave..	Crown Street.....	Private	40	..	530
Cross .....	Mystic Avenue.	Medford Street ...	Public	45	3,750	....
Crown .....	Porter Street... Lowell Street.....		Private	30	....	700
Curtis .....	Broadway.....	Medford Line....	Public	40	2,300	....
Cutter .....	Broadway.....	Webster Street ...	Public	40	740	....

\*Proposed.

Street.	From	To	Public or Private.	Width in Feet.	Length.	
					Public.	Private
Cutter Avenue	Summer Street.	Highland Avenue.	Private	40	....	450
*Cypress .....	Morrison Street	Orange Street.....	Private	40	....	950
*Dale.....	Morrison Street	Orange Street ....	Private	40	....	1,275
Dana .....	Bonair Street...	Pearl Street.....	Public	40	690	....
Dane .....	Somerville Ave.	Washington St....	Public	40	1,270	....
Dane Court .....	Dane Street.....	Easterly .....	Private	30	....	600
Dartmouth....	Medford Street.	Broadway .....	Public	40	1,450	....
Day .....	Elm Street.....	Cambridge Line...	Public	40	940	....
Delaware.....	Aldrich Street...	Pearl Street .....	Private	40	....	450
Dell .....	Glen Street....	Tufts Street.....	Private	40	....	465
Derby .....	Temple Street..	Wheatland Street .	Private	40	....	1,032
Dexter .....	Broadway .....	Medford Line.....	Private	50	....	25
Dickinson....	Springfield St..	Beacon Street....	Private	40	....	650
Dinick .....	Concord Ave...	Calvin Street....	Private	40	....	860
Distillhouse .	South Street....	Cambridge Line...	Private	35	....	150
Dix Place ...	Linwood Street	Southwesterly....	Private	10	....	100
Dover .....	Elm Street .....	Cambridge Line...	Public	40	940	....
Dow .....	North Street...	Easterly .....	Private	40	....	645
Durham.....	Beacon Street..	Hanson Street.....	Private	40	....	450
Earle .....	South Street....	Fitchburg R.R.....	Private	30	....	500
Eastman Place	Highland Ave..	Southwesterly. ...	Private	40	....	300
East Newton .	Prospect Street.	Webster Avenue...	Public	25	470	....
Edmunds.....	Broadway .....	Southwesterly....	Private	40	....	440
Eliot.....	Vine Street.....	Park Street.....	Public	40	260	....
Ellsworth.....	Cross Street ...	Rush Street .....	Public	40	210	....
Elm .....	Somerville Ave.	Medford Line.....	Public	60+	7,700	....
Elm Court ....	Villa Avenue...	Northwesterly ....	Private	18	....	70
Elm Place....	Harvard Street	Easterly & west'ly	Private	30	....	400
Elmwood ....	Holland Street.	Cambridge Line...	Private	40	....	970
Emerson.....	Everett Street .	Newton Street....	Private	30	....	170
Emery .....	Fitchburg R.R..	South Street.....	Private	30	....	530
Endicott Ave..	Broadway .....	Southwesterly....	Private	40	....	800
Essex .....	Medford Street	Richdale Avenue..	Private	40	....	200
Eustis Court ..	Beacon Street..	Cambridge Line ...	Private	30	....	140
Everett.....	Webster Ave ...	Newton Street....	Private	30	....	350
Everett Ave...	Cross Street...	Dana Street.....	Public	40	800	....
Evergreen Ave.	Marshall Street	Sycamore Street...	Public	40	1,320	....
Evergreen Sq..	Porter Street....	southeasterly ...	Private	8	....	200
Fairlee .....	Cherry Street...	Northwesterly ....	Private	30	....	150
Fairmont Ave	Curtis Street ...	Northwesterly....	Private	40	....	700
Fanning Ave..	Highland Ave...	Lexington Ave....	Private	50	....	375
Farragut Ave.	Broadway.....	Southwesterly....	Private	40	....	840
Fiske Avenue	Hinckley Street	Lowell Street.....	Private	20 & 25	....	460
Fitchburg Ct..	Fitchburg St....	Southeasterly ...	Private	10	....	225
Fitchburg .....	Linwood Street	B & L. R.R.....	Private	40	....	400
Fitchburg.....	Linden Street..	Easterly .....	Private	20	....	300
Flint.....	Franklin Street	Cross Street.....	Public	40	1,020	....
Florence .....	Washington St.	Perkins Street....	Public	40	1,280	....
Folger.....	Broadway .....	Fairmount Ave....	Private	40	....	280
Forest .....	Beacon Street..	Cambridge Line...	Public	40	150	....
Forster .....	Sycamore Street	Central Street....	Private	30	....	430
Fountain Ave.	Cross Street....	Glen Street .....	Private	30	....	550
Francesca Ave	Elm Street.....	Liberty Avenue...	Private	40	....	740
Franklin .....	Broadway.....	Washington St....	Public	40+	2,230	....
Franklin Ave..	Washington St	Franklin Street....	Private	20	....	500
Franklin Ct....	Somerville Ave.	B. & L. R.R .....	Private	....	....	200
Franklin Pl....	Franklin Street	Southeasterly.....	Private	15	....	100
Fremont.....	Main Street..	Northeasterly ....	Private	40	....	600
Fremont Ave..	Parker Street..	Easterly & west'ly	Private	30	....	235
Frost Avenue.	Somerville Ave	Dane Street.....	Private	35	....	550

\*Proposed.

Street.	From	To	Public or Private.	Width in Feet.	LENGTH.	
					Public.	Private
Garden Court....	Somerville Ave	Fitchburg R R...	Private	25	....	370
Garfield Ave....	Broadway.....	Mystic Avenue..	Private	40	....	1,150
Garrison Ave....	Broadway.....	Southwesterly...	Private	40	....	850
George... ..	Broadway.....	Lincoln Avenue	Private	40	....	350
Gibbens.....	Central Street..	Benton Avenue..	Private	40	....	400
Giles Place.....	Walnut Street..	Northwesterly...	Private	32.71	...	168
Gill's Court.....	Franklin Street	Westerly.....	Private	10	...	100
Gilman.....	Cross Street...	Walnut Street..	Public	40	1,430	....
Glass Ho'se Ct...	Webster Ave....	Easterly.....	Private	40	....	200
Glen.....	Broadway.....	Tufts Street.....	Public	40	2,300	....
Gorham... ..	Holland Street.	Howard Street..	Private	40	...	760
Grand View Ave	Walnut St.....	Vinal Ave.....	Public	40	470	....
Granite.....	Somerville Ave	Osgood St.....	Private	40	....	400
Grant.....	Broadway.....	Mystic Ave....	Private	40	...	1,350
Greene.....	Summer St.....	Southwesterly...	Private	40	....	300
Greenville.....	Medford St....	High St.....	Public	40	660	....
Grove.....	Elm St.....	Arlington B.R.R.	Public	40	600	....
Grove.....	Arlington B.R.R	Morrison St....	Private	40	....	400
Hadley Ct.....	Franklin St....	Westerly.....	Private	20	....	150
Hall.....	Cedar St.....	Cherry St.....	Private	30	....	350
Hall Ave.....	Elm St.....	Liberty Ave. ...	Private	40	....	910
Hamlet.....	Highland Ave..	Southwesterly ..	Private	30	....	400
Hammond.....	Dickinson St...	Concord Ave....	Private	40	....	273
Hancock.....	Elm Street.....	Summer Street...	Private	40	....	770
Hanson.....	Washington St.	Vine St.....	Private	35	...	750
Harding.....	South St.....	Cambridge Line.	Private	30	....	115
Harris.....	Beacon St.....	Cambridge Line.	Private	35	....	150
Harrison... ..	Ivaloo St.....	Mondamin Ct...	Private	40	....	330
Harrison.....	Elmwood St...	Southeasterly ...	Private	40	....	210
Harvard.....	Summer St.....	Beech St.....	Public	40	650	....
Hathorn.....	Broadway.....	Arlington St....	Public	40	330	....
Hawkins.....	Somerville Ave.	Washington St..	Public	40	330	....
Hawthorn.....	Willow Ave....	Northwesterly...	Private	30	....	700
Heath.....	Temple St.....	Brooks St.....	Private	45	....	1,800
Hennessey Ct...	Medford St....	Fiske Ave.....	Private	20	....	250
Henry Ave.....	Highland Ave..	Lexington Ave..	Private	40	....	290
Herbert.....	Chester St....	Day St.....	Public	40	360	....
Hersey.....	Berkeley St....	Oxford St.....	Private	40	....	230
High.....	Boston St....	Munroe St....	Private	50	...	1,100
Highland Ave...	Medford St....	Davis Square...	Public	60	9,100	....
Hillside Ave...	Pearl St.....	Southwesterly ...	Private	30	....	150
Hillside Park...	Walnut St....	Northwesterly...	Private	40	...	245
Hinckley... ..	Broadway.....	Lawrence St. ...	Private	30	....	430
Hodgdon Pl....	Dane Ct.....	Northeasterly...	Private	about 20	....	150
Holland... ..	Davis Square...	Broadway.....	Public	60	2,650	....
Holt's Ave.....	Oak St.....	Southeasterly...	Private	10	....	100
Homer Square..	Bonner Ave....	Northwesterly...	Private	30+	...	200
Horace.....	South St.....	Fitchburg R. R..	Private	30	....	510
Houghton.....	Prospect St....	Springfield St...	Private	40	....	750
Howard.....	Thornlyke St..	Northwesterly...	Private	40	....	560
Howard.....	Whipple St....	Willow Ave....	Private	30	....	255
Howe.....	Marshall St....	School St.....	Public	40	445	....
Hudson.....	Cedar St.....	Central St.....	Private	40	....	2,700
Hunting.....	South St.....	Cambridge Line.	Private	30	....	125
Irving.....	Holland St.....	Broadway.....	Public	40	1,180	....
Ivaloo.....	Beacon St.....	Park.....	Public	40	650	....
Jackson... ..	Medford St....	Maple St.....	Private	30	...	150
*Jacob.....	Elm St.....	Billingham St...	Private	40	....	322
James.....	Broadway.....	Holland St.....	Private	40	....	775
James.....	Pearl St.....	Veazie St.....	Public	40	320	....
Jaques.....	Chauncey Ave..	Bond St.....	Public	40 & 45	2,250	....

\* Proposed.



Street.	From	To	Public or Private.	Width in Feet.	LENGTH.	
					Public.	Private
Jasper.....	Pearl St.....	Gilman St.....	Private	40	....	300
Jay.....	Holland St.....	Howard St.....	Private	40	....	525
Jenny Lind Ave.	Vernon St.....	Medford St.....	Public	40	910	....
Jenny Lind Ave.	Medford St.....	Broadway.....	Private	40	....	590
Jerome Ct.....	Sycamore St.....	Jerome Street...	Private	10	....	150
Jerome.....	Montrose Street	Jerome Ct.....	Private	20	....	125
Joseph.....	Newton St.....	Northwesterly...	Private	40	....	380
Joy.....	Washington St..	Poplar St.....	Private	30	....	1,150
Joy St. Pl. ....	Joy St.....	Southwesterly...	Private	30	....	175
Kensington Ave.	Broadway.. ...	Blakeley Ave...	Private	40	....	440
Kent.....	Somerville Ave.	Beacon St.....	Private	25 & 40	....	740
Kent Ct.....	Kent St.....	Northerly.....	Private	about 25	....	420
Kidder Ave.....	Elm St.....	Liberty Ave.....	Private	40	....	610
Kingman Ct. ....	Washington St..	Fitchburg R. R..	Private	25	....	400
Knapp.....	School St.....	Granite St.....	Private	40	....	350
Knowlton.....	Oliver St.....	Tufts St.....	Private	40	....	925
Lake.....	Hawkins St....	Church St.....	Public	40	860	....
Lamson Ct.....	Linwood St....	Northeasterly...	Private	20	....	300
Landers.....	School St.....	Westerly.....	Private	40	....	280
Laurel.....	Somerville Ave.	Summer St.....	Public	40	940	....
Lawrence.....	Hinckley St....	B. & L. R. R....	Private	35	....	650
Lee.....	Medford St....	Richdale Ave...	Private	40	....	385
Leland.....	Washington St..	Northeasterly...	Private	40	....	250
Leon.....	Concord Ave....	Dickinson St....	Private	40	....	150
Leonard Pl.....	Joy St.....	Northeasterly...	Private	13+	....	93
Lesley Ave.....	Highland Ave..	Lexington Ave..	Private	40	....	333
Leslie Pl.....	Highland Ave..	Easterly. ....	Private	12	....	75
Lexington Ave..	Willow Ave....	Cedar Street....	Private	50	....	1,360
Liberty Ave....	Appleton St....	Broadway.....	Private	40	....	1,495
Lincoln Ave....	Lincoln Street..	Mt. Vernon St..	Private	40	....	450
Lincoln.....	Broadway.. ...	Perkins St.....	Public	40	550	....
Linden.....	Somerville Ave.	Charlestown St..	Private	30	....	600
Linden Ave....	Elm St.....	Summer St.....	Public	45	1,050	....
Linden Ave....	Summer St.....	Northeasterly...	Private	45	....	250
Linden Pl.....	Linden Ave....	Northwesterly...	Private	20	....	160
Line.....	Washington St..	Cambridge Line.	Private	33	....	1,750
Linehan Ct.....	Linwood St....	Chestnut St....	Private	about 15	....	200
Linwood.....	Somerville Ave.	Washington St..	Public	50	2,050	....
Linwood Pl.....	Linwood St....	Southwesterly...	Private	about 12	....	150
London.....	Linwood St. ...	B & L. R. R. ...	Private	40	....	340
Loring.....	Somerville Ave.	Northeasterly...	Private	40	....	400
Lowell.....	Somerville Ave.	Crown St.....	Private	33+	....	1,600
Lowell.....	B. & L. R. R..	Medford St.....	Private	33+	....	1,150
Madison.....	School St.....	Sycamore St....	Private	40	....	850
Main.....	Broadway.....	Medford Line ...	Public	50	950	....
Malloy Ct.....	Somerville Ave.	Merriam Street..	Private	30 & 15	....	520
Mansfield.....	Somerville Ave.	Washington St..	Private	40	....	730
Maple.....	Poplar St.....	Jackson St.....	Private	30	....	470
Maple Ave.....	School St.....	Southeasterly...	Private	40	....	300
Maple Pl.....	White St.....	Southeasterly...	Private	20	....	200
Marion.....	Concord Ave....	Adrian St.....	Private	40	....	170
Marshall... ..	Broadway.....	Pearl St.....	Public	40	1,650	....
Mason Ave.....	Orchard St....	Cambridge Line.	Private	35	....	220
May Pl.....	Hawkins St....	Easterly.....	Private	12	....	100
McGregor Ave..	Wigglesworth St	Walnut Street...	Private	about 10	....	250
Meacham.....	Orchard St....	Cambridge Line.	Public	40	100	....
Meacham.....	Arlington B.R.R	Orchard St....	Private	40	....	600
Meacham.....	Mt. Vernon Ave	Medford Line...	Private	40	....	800
Mead.....	Cameron Ave...	Moore St.....	Private	40	....	340
Medford.....	Cambridge Line	Medford Line...	Public	50 & 55	10,100	....
Medrose.....	Mystic Ave....	Middlesex Ave..	Private	50	....	2,200
Melvin.....	Bonair St....	Northeasterly...	Private	35	....	150
Merriam.....	Somerville Ave.	Charlestown St..	Private	30	....	500

Street.	From	To	Public or Private.	Width in Feet.	Length.	
					Public.	Private
Middlesex Ave..	Mystic Ave....	Medford Line...	Public	60	3,400	....
Milk St. Pl....	Somerville Ave.	Southwesterly...	Private	about 30	....	100
Miller.....	Sacramento St..	Northwesterly...	Private	33	....	350
Mills.....	Walnut St.....	Sargent Ave.....	Private	40	....	500
Miner.....	Vernon St.....	Ames St.....	Private	40	....	245
Mondamin Ct ..	Ivaloo St.....	Harrison St.....	Private	25	....	250
Montgomery Av	Broadway ....	Wellington Ave..	Public	40	265	....
Montrose.....	School St.....	Sycamore St.....	Private	40	....	850
Moore.....	Holland St.....	Mead St.....	Private	40	....	1,200
Morgan.....	Beacon St.....	Park St.....	Public	40	....	350
Morrison Pl. ..	Morrison St....	North'y & E'ly..	Private	15 & 20	....	370
Morrison.....	Willow Ave....	Elm St.....	Public	40	1,700	....
*Morrison.....	Willow Ave. ....	Cedar St.....	Private	40	....	1,300
Mortimer Pl....	Marshall St....	Southeasterly...	Private	20	....	150
Mossland.....	Somerville Ave.	Elm St.....	Public	40	350	....
Mountain Ave..	Linden Ave. ....	Porter St.....	Private	22	....	310
Mousal Pl.....	North Union St.	B. & M. R. R....	Private	20	....	200
Mt Pleasant....	Broadway.....	Perkins St.....	Public	33	570	....
Mt. Pleasant Ct.	Broadway.....	Southwesterly..	Private	40	....	250
Mt. Pleasant Av	Curtis St.....	Nor hwestery...	Private	40	....	700
Mt. Vernon.....	Washington St.	Broadway.....	Public	40 & 50	1,640	....
Mt. Vernon Ave.	Main Street ....	Meacham Street..	Private	50	....	800
Munroe.....	Walnut Street..	High Street.....	Private	40	....	400
Murdock.....	Cedar Street....	Clyde Street.....	Private	30	....	900
Murray.....	Washington St.	Southerly.....	Private	30	....	250
Museum.....	Beacon Street..	Cambridge Line..	Private	40	....	170
Myrtle.....	Washington St.	Perkins Street ...	Public	40	1,400	....
Myrtle Court ...	Myrtle Street...	Easterly.....	Private	10	....	100
Mystic.....	Washington St.	Scmerville Ave..	Public	40	360	....
Mystic.....	Benedict Street.	Mystic Avenue...	Private	40	....	330
Mystic Avenue.	Charlest'n Line	Medford Line....	Public	60 & 66	7,250	....
Nashua.....	Appleton Street	B. & L. R. R....	Private	35	....	640
Nevada Avenue.	Village Street..	Hanson Street...	Private	20	....	200
Newberne.....	Appleton Street	Morrison Street..	Private	40	....	200
Newbury.....	Holland Street.	Cambridge Line..	Public	40	1,250	....
Newton Place ...	Newton Street..	Easterly.....	Private	about 10	....	100
Newton.....	Webster Ave....	Concord Ave. ....	Public	40+	650	....
Norfolk.....	Webster Ave. ..	Cambridge Line..	Public	40	200	....
North.....	Broadway.....	Medford Line....	Public	40	2,550	....
North Union...	Mystic Avenue.	Northeasterly ...	Private	30	....	600
Norwood Ave...	Broadway. ....	Medford Street...	Private	40	....	350
Oak ..	Prospect Street,	Angle.....	Public	40	670	....
Oak.....	Angle.....	Cambridge Line.	Private	30	....	530
Oak Street Place	Oak Street.....	Northerly.....	Private	4	....	85
Oakland Avenue	Marshall Street,	School Street....	Public	40	440	....
Olive Square....	Lake Street ...	Southerly.....	Private	about 15	....	100
Oliver.....	Franklin Street,	Cross Street ....	Public	40	1,050	....
*Orange.....	Broadway.....	Cedar Street.....	Private	40	....	1,175
Orchard.....	Cambridge Line	Meacham Street ..	Public	40	1,625	....
*Orient.....	Morrison Street	Orange Street ...	Private	40	....	1,240
Osgood.....	Granite Street..	Easterly & west'y	Private	40	....	450
Otis.....	Cross Street...	Wigglesworth St..	Public	40	1,200	....
Oxford.....	chool Street...	Central Street....	Private	30+	....	1,330
Oxford.....	Beacon Street..	Cambridge Line..	Public	50	100	....
Packard Avenue	Broadway.....	Medford Line ....	Private	60	....	2,000
Palmer Avenue.	Franklin Street.	Northwesterly...	Private	20	....	200
Park.....	Somerville Ave.	Beacon Street....	Public	50	1,300	....
Park Avenue ...	Elm Street.....	Wallace Street ...	Public	40	450	....
Park Pl. ....	Laurel Street ..	Easterly.....	Private	30	....	194
Parker... ..	Washington St.,	Fremont Ave. ....	Private	35	....	200
Parker Place ...	Porter Street...	Northwesterly ...	Private	20	....	150
Partridge Ave..	Vernon Street..	Broadway.....	Private	40	....	1,500

\* Proposed.



Street.	From	To	Public or Private.	Width in Feet.	Length.	
					Public.	Private
Patten Court. . .	Cutter Street . . .	Southeasterly . . .	Private	8	....	100
Pearl. . . . .	Crescent Street.	Medford Street. . .	Public	40 & 50	4,750	....
Pearl Street Pl. .	Pearl Street . . .	Northeasterly . . .	Private	20	....	200
Pembroke Ct. . . .	Pembroke St . . .	Southwesterly. . .	Private	25	....	130
Pembroke. . . . .	Central Street. . .	Sycamore Street. . .	Private	40	....	440
Perkins . . . . .	Franklin Street. .	Charlestown Line	Public	40	1,350	....
Perkins Place . .	Perkins Street. . .	Northeasterly . . .	Private	20	....	200
Pinckney . . . . .	Washington St. . .	Perkins Street . . .	Public	40	1,170	....
Pitman. . . . .	Beech Street . . .	Belmont Street . . .	Private	30	....	800
Pleasant Avenue	Walnut Street. . .	Vinal Avenue . . .	Public	40	470	....
Poplar . . . . .	Somerville Ave. . .	Joy Street . . . . .	Private	30 & 35	....	650
Porter. . . . .	Elm Street. . . . .	Summer Street . . .	Public	45	1,150	....
Porter. . . . .	Summer Street . .	Highland Ave . . .	Private	45	....	830
Prescott. . . . .	Summer Street . .	Highland Ave. . . .	Public	50	1,050	....
Preston . . . . .	School Street . . .	Summer Street . . .	Public	40	800	....
Professors' Row	College Avenue. . .	Curtis Street. . . .	Private	40	....	1,000
Prospect . . . . .	Washington St. . .	Cambridge Line. . .	Public	40 & 50	2,050	....
Prospect Hill Av	Medford Street . .	High Street. . . . .	Public	40	450	....
Prospect Place. .	Prospect Street. .	E. Newton Street. .	Private	20	....	130
Putnam . . . . .	Summer Street . .	Highland Ave. . . .	Public	50	1,240	....
Quincy . . . . .	Somerville Ave. . .	Summer Street. . .	Public	40	700	....
*Rand. . . . .	Morrison Street	Orange Street . . .	Private	40	....	1,630
Randolph Pl. . . .	Cross Street . . .	Westerly . . . . .	Private	20	....	244
Raymond Ave. . . .	Curtis Street. . .	North Street. . . . .	Public	40	1,345	....
Record's Place. . .	Broadway. . . . .	Southwesterly . . .	Private	10	....	110
Reed's Court. . . .	Oliver Street . . .	Southwesterly. . .	Private	20	....	105
Remick Court. . . .	Cutter . . . . .	Southeasterly . . .	Private	10	....	100
Richardson. . . . .	Lowell Street. . .	Lawrence Street. .	Private	35	....	480
Richdale Ave. . . .	School street. . .	Sycamore Street. . .	Private	40	....	850
Robinson. . . . .	Central Street. . .	Bartlett Street . . .	Private	40	....	645
Roseland. . . . .	Beacon Street. . .	Cambridge Line. . .	Public	40	100	....
Rossmore . . . . .	Somerville Ave. . .	Washington St. . .	Private	40	....	525
Runey Place. . . .	Runey Street . . .	Northerly. . . . .	Private	40	....	200
Runey. . . . .	Cross Street . . .	Aldrich Street . . .	Private	40	....	760
Rush . . . . .	Broadway. . . . .	Flint Street. . . . .	Public	40	1,400	....
Russell. . . . .	Elm Street. . . . .	Cambridge Line. . .	Public	40	700	....
Sacramento . . . .	Somerville Ave. . .	Cambridge Line. . .	Private	40	....	600
Sanborn Avenue	Warren Avenue	Walnut Street. . . .	Public	40	280	....
Sargent Avenue. . .	Broadway. . . . .	Mills Street. . . . .	Private	40	....	450
Sartwell Ave. . . .	Cedar Street. . . .	Cherry Street. . . .	Private	35	....	400
School Street. . . .	Somerville Ave. . .	Broadway. . . . .	Public	40 & 50	4,370	....
Sellon Court . . . .	Marshall Street. .	Northwesterly . . .	Private	12	....	120
Sewall. . . . .	Grant Street. . . .	Temple Street . . .	Private	40	....	650
Sewall Court. . . .	Sewall Street. . . .	Southwesterly. . .	Private	25	....	190
Shawmut. . . . .	Washington St. . .	Cross Street . . . .	Public	40	550	....
Shawmut Place. . .	Shawmut Street. .	Allston Street . . .	Private	30	....	200
Sherman. . . . .	Somerville Ave. . .	Frost Avenue . . . .	Private	35	....	270
Sibley Court . . . .	Cutter Street . . .	Northwesterly. . .	Private	10	....	100
Sibley Place . . . .	Cutter Street . . .	Northwesterly. . .	Private	10	....	100
Simpson Avenue	Broadway. . . . .	Holland Street . . .	Private	40	....	825
Skehan. . . . .	Dane Street . . . .	Durham Street . . .	Private	30	....	720
Smith Avenue . . . .	Beacon Street. . .	Line Street. . . . .	Private	25+	....	200
Snow Place. . . . .	Belmont Street. . .	Easterly & west'y	Private	25 & 30	....	270
Somerville Ave. . .	E. Camb. Line . . .	N. Camb Line. . . .	Public	70 & 75	11,100	....
South . . . . .	Medford Street. . .	Westerly . . . . .	Private	30	....	940
Spring . . . . .	Somerville Ave. . .	Summer Street. . .	Public	35	1,200	....
Spring Court. . . .	Somerville Ave. . .	Westerly. . . . .	Private	20	....	200
Springfield. . . . .	Concord Ave. . . .	Cambridge Line. . .	Public	40	800	....
Stickney Ave. . . .	Marshall Street. .	School Street . . . .	Private	40	....	450

\*Proposed.

Street.	From	To	Public or Private.	Width in Feet.	LENGTH.	
					Public	Private
St. James Ave...	Elm Street.....	Summer Street....	Public	40	488	....
Stone Avenue...	Union Square..	Columbus Ave....	Private	40	....	675
Stone Place....	Stone Avenue..	Southeasterly....	Private	30	....	145
Summer.....	Bow Street....	Elm Street.....	Public	45	7,700	....
Summit Avenue..	Walnut Street..	Vinal Avenue ....	Public	45	470	....
Summit .....	Elm Street.....	Billingham .....	Private	40	....	264
Sunnyside Ave..	Walnut Street..	Wigglesworth St.,	Private	35	....	250
Sycamore .....	Broadway.....	Medford Street...	Public	45	1,250	....
Sycamore .....	Medford Street.	Highland Ave.....	Private	33 & 40	....	1,350
Sydney.....	Wheatland St..	Temple Street ...	Private	40	....	925
Taggard Court..	Beacon Street..	Northeasterly ...	Private	15	....	200
Taylor's Place..	Somerville Ave.	Southerly. ....	Private	15	....	200
Taylor .....	Mystic Avenue..	Sydney Street ...	Private	40	....	310
Temple.....	Broadway.....	Mystic Avenue....	Public	66	1,540	....
Tenney Court...	Mystic Avenue..	Northeasterly ...	Private	30	....	400
Tennyson .....	Foster Street...	Pembroke Street..	Private	40	....	900
Thorndike .....	Holland Street..	Arlington B. R. R.	Private	40	....	460
Thorpe Place ...	Highland Ave..	Southwesterly ...	Private	30	....	450
Thurston.....	Broadway.....	Medford Street...	Public	40	1,350	....
Thurston.....	Broadway.....	Heath Street.....	Private	40	....	340
Thurston.....	Medford Street.	Richdale Ave....	Private	40	....	300
*Tower.....	Crown Street...	Highland Ave....	Private	40	....	550
Tower Court....	Tyler Street....	Northeasterly ...	Private	25	....	150
Tremont Place..	Tremont Street.	Southeasterly ...	Private	about 10	....	75
Tremont .....	Webster Ave.	Cambridge Line..	Private	40	....	450
Trull .....	Vernon Street..	Medford Street...	Private	40	....	1,050
Trull Lane....	Highland Ave..	Oxford Street ...	Private	15	....	200
Tube Works Ct.	Somerville Ave..	Southwesterly....	Private	20	....	150
Tufts.....	Washington St.,	Cross Street.....	Public	40	940	....
Tyler.....	Vine Street.....	Dane Street.....	Private	40	....	400
Union.....	Broadway.....	Mystic Avenue...	Public	40	330	....
Union Place ...	Linwood Street,	Southwesterly ...	Private	10	....	100
Veazie.....	Walnut Street..	Bradley Street....	Private	40	....	650
Vernon .....	Central Street..	Jenny Lind Ave..	Public	40	740	....
Vernon .....	Jenny Lind Ave	Lowell Street ...	Private	30	....	600
Villa Avenue...	Winslow Ave...	Arlington B. R. R.	Private	40	....	200
Village.....	Dane Street....	Vine Street.....	Private	25	....	370
Vinal Avenue...	Summer Street..	Highland Avenue	Public	45	1,400	....
Vine.....	Somerville Ave.	Beacon Street. ...	Private	25 & 40	....	1,400
Virginia.. ..	Aldrich Street..	Jasper Street....	Public	40	405	....
Wade Court....	Cedar Street....	Westerly. ....	Private	20	....	180
Wallace.. ....	Holland Street.	Broadway.....	Public	40	1,350	....
Walnut.....	Bow Street ...	Broadway.....	Public	40	3,830	....
Ward .....	Medford Street.	Earl Street.....	Private	30	....	610
Warren.....	Medford Street.	Cambridge Line .	Private	30	....	100
Warren Avenue.	Union Square..	Columbus Avenue	Public	40	650	....
Warwick.....	Cedar Street....	Southeasterly....	Private	40	....	630
Washington.....	Charlest'n Line.	Cambridge Line..	Public	60 to 100	7,250	....
Washington Ave	Washington St.	Northerly.....	Private	18	....	350
Water.....	South Street....	Northerly.....	Private	25	....	250
Waverly.....	Washington St.	Southerly.....	Private	35	....	200
Ware .....	Curtis Street...	Northwesterly...	Private	40	....	700
Webster.....	Franklin Street.	Cross Street....	Public	40	1,000	....
Webster Avenue	Union Square..	Cambridge Line..	Public	49.5	1,950	....
Wellington Ave.	Walnut Street..	Montgomery Ave	Public	40	215	....
Wellington Ave.	Montgomery Av	Easterly. ....	Private	40	....	85
Wesley.....	Otis Street.....	Southwesterly...	Private	30	....	150
Wesley Park....	Wesley Square..	Northeasterly....	Public	40	405	....
West.....	Broadway .....	Heath Street.....	Private	30	....	250
West.....	Hawthorne St..	Arlington B. R. R.	Private	30	....	590

\* Proposed.

Street.	From	To	Public or Private.	Width in Feet.	LENGTH.	
					Public	Private
Willow Avenue .	Elm Street.....	Broadway.....	Public	50	3,440	....
Willow Place....	Cambridge Line	South Street.....	Private	25	....	150
Wilson Avenue..	Broadway .....	B. & L. R. R.....	Private	20	....	310
Wilton.....	Lowell Street...	Lawrence Street..	Private	35	....	470
Winslow Avenue	Elm Street.....	Grove Street.....	Private	40	....	470
Winter.....	Elm Street.....	Holland Street...	Private	30	....	430
Winthrop Ave...	Broadway.....	Mystic Avenue...	Public	50	1,170	....
Woodbine.....	Centre Street...	Lowell Street....	Private	30	....	600
Wyatt (South) .	Concord Ave. .	Northerly.....	Private	40	....	400
Wyatt (North) ..	Washington St..	Southerly .....	Private	40	....	350
Wyatt Court...	Wyatt Street...	Westerly .....	Private	13	....	200
Weston Avenue.	Clarendon Ave.	Broadway.....	Private	40	....	525
Wheatland .....	Broadway.....	Jaques Street.	Public	40	495	....
Wheatland.....	Jaques Street...	Mystic Avenue....	Private	40	....	855
Whipple.....	Hawthorne St..	Arlington B. R. R.	Private	30	....	575
White .....	Elm Street.....	Cambridge Line..	Private	20	....	300
Wigglesworth .	Bonair Street...	Southwesterly....	Private	40	....	500
William.....	Chandler Street	Elm Street.....	Private	40	....	400
Williams Court.	Porter Street...	Northwesterly...	Private	30	....	150
Willoughby.....	Central Street..	Sycamore Street..	Private	30	....	400
UNNAMED STREETS.						
-----	Broadway.....	Northeasterly.....	Private	25	....	200
-----	Laurel Street..	Easterly.....	Private	40	....	255
-----	Madison Street.	Southerly .....	Private	30	....	150
Total.....	.....	.....	.....	.....	233,185	173,474

Public, 44.16 miles; private, 32.86 miles.



REPORT  
OF THE  
COMMITTEE ON FIRE DEPARTMENT.



# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 3, 1890.

Accepted and referred to the next City Council, to be printed in the annual reports. Sent down for concurrence.

GEO. I. VINCENT, *Clerk.*

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Concurred in

IN COMMON COUNCIL, Jan. 3, 1890.

CHAS. S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

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IN COMMITTEE ON FIRE DEPARTMENT, Jan. 3, 1890.

*To the City Council :*

The following is the final report of the committee on Fire Department for the year ending December 31, 1889 :—

The manual force of the department consists of 73 members, including one chief and one assistant engineer.

The new hose house which was erected under an order of the City Council, approved September 28, 1888, by Messrs. Coon & Hall, situated at the corner of Somerville avenue and Lowell street, has been finished during the year, at a cost of \$9833.46, including the sum of \$2513.40, paid last year ; as will be seen by referring to the report of 1888.

This sum is exclusive of extra grading, moving bell from old tower, steam heating, constructing driveway and cementing cellar, which makes an additional cost to said building of \$1280.22 ; the cost of furniture for the building amounts to \$306.24, and the cost of apparatus, including hose wagon, horses, hose, extinguishers, gong, signal box, etc., was \$2324.70, making a total cost, including building, furniture, and apparatus, of \$13,744.62.

The new ladder truck ordered of Messrs. Teele & Co., of Medford, in 1888, at a cost of \$600, has been finished and placed in the service of the department.

A new hose wagon has also been purchased for Hose 2, in place of the old cumbersome reel carriage ; all the old hose reels have been exchanged for hose wagons, except the steamer hose, and Hose 3, and we recommend that wagons be purchased for each of these houses as it is much more easy to handle hose from wagons than from a reel carriage.

A new horse has been purchased for the chief engineer at a cost of \$275, and the old one sold, formerly used by him for \$125 ; a new horse has also been purchased for Hose 3, at a cost of \$250. and one sold for \$51.50 ; a pair of horses has been purchased for Hose 5, at a cost of \$450.

The price paid for water from the hydrants this year was \$2408, which is an increase over any other year of \$560; this expense for water increases every five years, and is estimated on the increase of population.

We most urgently recommend the placing of a new steam fire engine, and a new chemical engine in the service of the department to keep pace with the largely increasing population and buildings.

We present herewith the annual report of the chief engineer, recommending it be printed with the annual report.

The appropriation, receipts, and expenditures are shown by the following statements:—

### FIRE DEPARTMENT ACCOUNT.

#### CREDIT.

Appropriation . . . . .	\$32,000	00
Receipts for property sold . . . . .	\$146	55
“ one-half of division fence at Hose 1 . . . . .	10	00
“ insurance paid on damage to steam- er house . . . . .	75	00
	231	55
Total Credit . . . . .		\$32,231 55

#### DEBIT.

Expenditures:—		
For salaries of permanent men . . . . .	\$10,180	00
salaries of call men . . . . .	5,503	26
substitute drivers . . . . .	371	94
improvements and repairs of appara- tus and vehicles . . . . .	545	14
improvements and repairs of build- ings and furniture, and new fur- niture . . . . .	2,766	35
new vehicles and apparatus . . . . .	1,706	50
maintenance and extension of fire alarm telegraph . . . . .	1,900	36
	\$22,973	55
<i>Amounts carried forward</i> . . . . .		\$32,231 55

<i>Amounts brought forward</i> . . . . .	\$22,973 55	\$32,231 55
hose and hose pipes and repairing		
same . . . . .	1,764 42	
new horses, one old ones given in		
trade . . . . .	850 00	
grain and feed . . . . .	508 28	
hay and straw . . . . .	958 78	
horse shoeing . . . . .	273 72	
horse doctoring and medicine . . . . .	47 59	
harnesses and repairing same . . . . .	243 57	
fuel . . . . .	538 70	
supplies . . . . .	213 28	
water for hydrants . . . . .	2,408 00	
water for department buildings . . . . .	105 00	
gas . . . . .	483 88	
insurance . . . . .	191 25	
washing and ironing . . . . .	140 56	
maintenance of reservoirs . . . . .	60	
hand fire extinguishers . . . . .	90 00	
maintenance of hand fire extinguishers . . . . .	55 00	
telephone . . . . .	19 05	
incidentals . . . . .	831 42	
	<hr/>	
Total debit . . . . .		\$32,696 65
		<hr/>
Amount overdrawn . . . . .		\$465 10

HOSE HOUSE IN WARD FOUR.

CREDIT.

Appropriation :—

Balance from the year 1888 . . . . .	\$7,486 60
--------------------------------------	------------

DEBIT.

Expenditures :—

To S. H. Libby, mechanics' risk . . . . .	\$ 6 25
Coon & Hall, contractors . . . . .	6,545 75
Coon & Hall, extra work . . . . .	397 84
M. D. Jones & Co., vane, mangers, etc. . . . .	70 35
Enoch Robinson, hardware . . . . .	34 25

<i>Amounts carried forward</i> . . . . .	\$7,054 44	\$7,486 60
--	------------	------------

<i>Amounts brought forward</i> . . . .	\$7,054 44	\$7,486 60
Fred. S. Young, running boiler . . .	25 00	
Horatio Wellington & Co., fuel . . .	11 00	
E. K. Blaikie, plans and specifications	75 00	
J. K. Ricker, carpentering and plumbing ing . . . . .	154 62	
	<hr/>	
Total debit . . . . .		\$7,320 06
		<hr/>
Balance unexpended . . . . .		\$166 54

For the committee.

ROBERT DUDDY, *Chairman.*  
WM. P. MITCHELL, *Clerk.*



REPORT  
OF THE  
CHIEF ENGINEER OF FIRE DEPARTMENT.

# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 3, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Jan. 3, 1890.

Concurred in.

CHAS. S. ROBERTSON, *Clerk.*

## CITY OF SOMERVILLE.

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*To the Committee on Fire Department.*

GENTLEMEN:—In compliance with your desire, I present to you a report of the operations of the Fire Department for the year 1889, the condition of the apparatus, the number of fires, loss and insurance, with such recommendations for an increase in appliances for extinguishing fires, as seem to me reasonable.

The number of fires were :

Bell Alarms . . . . .	52
Still Alarms . . . . .	6
 Total . . . . .	 58
The loss by fire was . . . . .	\$42,145 80
The insurance . . . . .	48,540 00
The insurance paid . . . . .	25,493 21

### CAUSES OF FIRE.

Explosion . . . . .	2
Igniting naphtha gas . . . . .	1
Sparks from tobacco-pipe . . . . .	3
Breaking of lamps . . . . .	3
Children playing with matches . . . . .	4
Chimney fires . . . . .	4
Overturning of oil stove . . . . .	3
Spontaneous igniting of oil rags . . . . .	4
Rats and Matches . . . . .	2
Defective fire-place . . . . .	2
False alarm . . . . .	1
Smoke mistaken for fire . . . . .	1
Accidental . . . . .	2
Kindling-wood near furnace . . . . .	1
Electric light wire . . . . .	4
Drying plastering] . . . . .	1

Defective chimney flue . . . . .	2
Lamp in contact with clothing . . . . .	2
Sparks from locomotive . . . . .	1
Unknown . . . . .	5
Fire in Arlington . . . . .	1
Fire in Boston . . . . .	1
Incendiary . . . . .	4
Grass fires . . . . .	3
Kindling wood near stove . . . . .	1
Total . . . . .	<hr/> 58

### MANUAL FORCE.

The manual force consists of :

One steam fire-engine company . . . . .	12 members.
Five hose companies . . . . .	44 “
One hook and ladder company . . . . .	15 “
Chief engineer . . . . .	1
Assistant engineer . . . . .	1
Total . . . . .	<hr/> 73

If the companies were recruited to the full number allowed by ordinance, the number would be 86.

### APPARATUS.

The apparatus in service consists of one steam fire-engine, two hose carriages, three hose wagons, one combination carriage hose reel, chemical tanks and ladders, one hook and ladder truck. Each wagon is equipped with 900 feet of hose, 43 feet of ladders, and two fire extinguishers. There are in the department 8000 feet of hose.

### BUILDINGS.

The buildings used by the department are in fair condition, all of them being built of brick, excepting Hose House No. 1. This is a wooden building built in 1868, as a hose house for a hand hose carriage ; it is always needing repairs and a new building will soon be a necessity. Before another building is erected, I recommend a change in the location, for the reason that the floor of a building for fire purposes must be nearly on a grade with the street, to get proper

drainage. The sewer must be at least twelve (12) feet below the street grade. The sewer in front of the present building is only eight (8) feet below the grade of the street, and the cellar is often in a filthy and unhealthy condition. Again, the present lot is not large enough, it having a frontage of only 40 feet.

A shed for storage purposes has been erected at Hose House No. 2. The new station (Hose No. 5) has been occupied by an organized company, which has already done efficient service. The stable floors at Hose House No. 4 will have to be rebuilt.

### FIRE-ALARM TELEGRAPH.

The fire-alarm telegraph consists of 44 signal boxes, 6 bell strikers, 6 indicators, 19 gongs and 43 miles of wire. Three signal boxes were placed in circuit this year, namely 332, 334, 46 (duplicate), and eight miles of new wire has been run, most of it to replace old wire. Much work has been done in changing the location of our wires to keep them from interference with the wires of the Electric Light Company, and as provision has been made by the City Council for the employment of a line man, a suitable person will soon be recommended for appointment to this place.

### FIRE PREVENTION.

While the public attention is called by recent events to the ability of a fire department to successfully extinguish fire, would it not be wise to try and prevent fires from starting. The old maxim that an ounce of prevention is worth more than a pound of cure is as true in respect to the element of fire as to any other matter. I therefore ask you, and through you, the Board of Aldermen, not to grant licenses for the sale of fire-works: it may be said that people will buy them elsewhere and burn them here; perhaps so, but I believe that to prohibit their sale will to a large extent curtail their use. And further the city will not be morally responsible for any disaster that may come by granting permission to use them. Any citizen standing on Central Hill on the night of July 4, 1889, could readily see that were it not for the rain which wet the roofs of buildings, fires would be so numerous that the fire department could not attend to some of them before they reached serious dimensions. It will not always rain on holidays, and unless people are more rational in the burning of fire-



works very serious results will occur therefrom. Can any one suggest a more efficient way of setting many fires at the same time than to rain on dry shingle roofs molten fire? The rain has served us the last two years; let us not tempt fate by continuing such an unreasonable way of expressing our patriotism.

### BONFIRES.

Another menace is the building of immense structures for bonfires on the evening preceding July 4th. These structures are sometimes 40 feet in diameter and 30 feet in height, and just far enough from a building to clear the law. They annoy and place in peril the persons and property of those living in the vicinity of the place where they happen to be built.

The statute should be amended so as to prohibit the building of a structure for the purpose of a bonfire within 1000 feet of a building, and a just penalty for its violation. The limit is now 165 feet.

### RECOMMENDATIONS.

Another steam fire engine should be put in service for the following reasons:—

The engine we now have is required to go to all fires. Should a second fire occur during the progress of one, we are in such case dependent on the gravity pressure of water from hydrants. On the high lands this is not effective; where the pressure is at its best the use of many streams at the same time will reduce the pressure so as to make them non-effective.

There are times when all cities and towns are dependent on their neighbors for help in time of fire. It is humiliating to refuse, and we never have refused to promptly respond, but we run a great risk and should be so equipped as not to endanger our own property to a great extent.

A chemical engine would be a valuable auxiliary to the department. I hardly expect that a steamer and chemical engine will both be furnished, but if means could be had to make the alterations necessary to accommodate a chemical engine at the steamer house, it would be very satisfactory. Then again the battery-room of the telegraph must be enlarged and the alterations required for the chemical engine would furnish the required room (up-stairs) for the battery.

Two thousand feet of hose is asked for the coming year, also four new fire-alarm boxes.

### HYDRANTS.

Hydrants in frequent positions and alarm boxes not too remote are a good part of a fire department ; they constitute more than any other two things toward keeping losses by fires small. We need many hydrants. A list of locations will hereafter be furnished.

I closing this report I desire to express my sincere thanks to His Honor the Mayor, the Chairman and members of the Committee on Fire Department for their cordial co-operation in all matters relating to its welfare. To Chief of Police Parkhurst and the officers and members of the force, my thanks are given for efficient service rendered at fires. To the officers and members of the Fire Department I heartily acknowledge my gratitude for the excellent work and intelligent zeal shown in the discharge of their duties as firemen.

Respectfully submitted,

JAMES R. HOPKINS,  
*Chief of the Fire Department.*



REPORT

OF THE

COMMITTEE ON FUEL AND STREET LIGHTS.

## CITY OF SOMERVILLE.

---

IN BOARD OF ALDERMEN, Jan. 3, 1890.

Accepted and referred to the next City Council, to be printed in the annual reports. Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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Concurred in.

IN COMMON COUNCIL, Jan. 3, 1890.

CHARLES S. ROBERTSON, *Clerk.*



# CITY OF SOMERVILLE.

IN COMMITTEE ON FUEL AND STREET LIGHTS,  
January 3, 1890.

*To the City Council of Somerville:*

The following is the final report of the Committee on Fuel and Street Lights for the year ending Dec. 31, 1889: —

## SCHOOL FUEL ACCOUNT.

### CREDIT.

Appropriation . . . . .	\$7,000 00
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### DEBIT.

Expenditures: —

For fuel to Beach street school . . . . .	\$ 62 13
Bell “ . . . . .	467 18
Bennett “ . . . . .	171 60
Bingham “ . . . . .	244 50
Brastow “ . . . . .	62 13
Burns “ . . . . .	188 50
Cedar street “ . . . . .	21 53
Cummings “ . . . . .	207 75
Davis “ . . . . .	346 44
Edgerly “ . . . . .	618 30
Elm street “ . . . . .	40 95
Forster “ . . . . .	538 25
Franklin “ . . . . .	180 25
Harvard “ . . . . .	6 50
High “ . . . . .	524 78
Highland “ . . . . .	617 08
Jackson “ . . . . .	215 82
Lincoln “ . . . . .	369 60
Morse “ . . . . .	104 00
Prescott “ . . . . .	400 00

<i>Amounts carried forward . . . . .</i>	\$5,387 29	\$7,000 00
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<i>Amounts brought forward</i> . . . . .	\$5,387 29	\$7,000 00
Prospect Hill school . . . . .	322 75	
Spring Hill " . . . . .	33 60	
School room, 188 Somerv'e ave. . . . .	36 08	
Sycamore street chapel . . . . .	27 18	
Union school . . . . .	28 00	
Webster school . . . . .	207 00	
Incidentals (fuel, office Supt. of schools) . . . . .	8 00	
	<hr/>	
Total debit . . . . .		\$6,049 90
		<hr/>
Balance unexpended . . . . .		\$950 10
		<hr/> <hr/>

## STREET LIGHTS ACCOUNT.

## CREDIT.

Appropriation . . . . .	\$18,000 00	
Receipts for old copper sold . . . . .	5 00	
posts and lanterns on hands		
Jan. 1 . . . . .	163 25	
	<hr/>	
Total credit . . . . .		\$18,168 25

## DEBIT.

## Expenditures :—

## For gas, —

to Cambridge Gas Light Co. . . . .	\$1,696 75	
to Charlestown Gas Co. . . . .	1,567 82	
lighting and care of gas and oil lamps	2,208 90	
electric lighting . . . . .	11,059 70	
repairs of gas and oil lamps . . . . .	179 43	
supplies (oil, matches, etc.) . . . . .	201 60	
discontinuing gas and oil lamps . . . . .	77 21	
street signs . . . . .	4 70	
incidentals . . . . .	39 56	
posts and lanterns on hand (7 posts and 9 sign lanterns) . . . . .	113 75	
	<hr/>	
Total debit . . . . .		\$17,149 42
		<hr/>
Balance unexpended . . . . .		\$1,018 83
		<hr/> <hr/>

## FUEL.

Under an order dated May 22, proposals were solicited to furnish all fuel that might be required at the various public buildings during the year commencing July 1, and in response, proposals were received to furnish for sixty days only, from L. G. Burnham & Co., Dunning and Underhill, B. F. Wild & Co., and Horatio Wellington & Co., all at the following prices: Furnace coal per ton, \$5.35; egg, \$5.60; and stove coal, \$5.85; hard wood, per cord, \$9.00, and soft wood \$7.50; and Messrs. Dunning & Underhill, B. F. Wild & Co., and Horatio Wellington & Co., furnished the fuel at the prices stated above; the bins were filled during the summer, and since that time no fuel, except for the hired school rooms, has been purchased.

## GAS LIGHTS.

The price paid for gas used in the four-foot burner lamps was \$1.55 per thousand feet; for the thirty-foot burner supplied by the Charlestown Company, the price paid was \$1.55; while for the thirty-foot burner supplied by the Cambridge Company, the price paid was \$1.50; both of these lamps are now discontinued on account of the electric lights.

## ELECTRIC LIGHTS.

Under an order passed by the City Council, dated July 24, a contract was made with the Somerville Electric Light Company for the term of three years, from October 1, 1889, for the furnishing of one hundred and forty arc lights and two hundred and seventy-five incandescent lights, for the sum of \$20,000 per year. There are at present one hundred and forty-five arc lights in operation, four additional lights having been added at no expense to the City, as an offset for any outs that might occur from any cause whereby the lights refuse to burn, the other arc light is a substitute for six incandescent lights.

We have at the present time only one hundred and sixty-two incandescent lights in operation, owing to a portion of the circuit not being in readiness; but in a short time the whole system will be in complete running order.

The contract provides for additional lights as may be ordered by the city from time to time, at the rate of 30 cents per night, per light, for arc lights, and  $6\frac{1}{10}$  cents per night, per light for incandescent lights, payable for those nights during which said lights shall be actually used.

	GAS LAMPS.				Oil Lamps.	Arc Electric Lamps.	Incandescent Lamps.	Total.
	<i>Charles- town.</i>		<i>Cam- bridge.</i>					
	4-foot Burners.	30-foot Burners.	4-foot Burners.	30-foot Burners.				
Lamps in the city Jan. 1, 1889, as per last report. ....	163	1	175	1	76	70		486
Erected during the year partly at the expense of the city. ....						2		2
Erected during the year at the ex- pense of the company. ....						72	162	234
Erected during the year at the ex- pense of the company in place of six incandescent lamps. ....						1		1
	163	1	175	1	76	145	162	723
Discontinued on account of elec- tric lights. ....	118	1	164	1	62			346
Lamps in the city Jan. 1, 1890. ....	45		11		14	145	162	377

For the Committee,

GEORGE A. KIMBALL, *Chairman.*  
WILLIAM P. MITCHELL, *Clerk.*

REPORT  
OF THE  
COMMITTEE ON PUBLIC PROPERTY.



# CITY OF SOMERVILLE.

---

IN BOARD OF ALDERMEN, Jan. 3, 1890.

Accepted and referred to the next City Council, to be printed in the annual reports. Sent down for concurrence.

GEO. I. VINCENT, *Clerk.*

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Concurred in

IN COMMON COUNCIL, Jan. 3, 1890.

CHAS. S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

IN COMMITTEE ON PUBLIC PROPERTY, Jan. 3, 1890.

*To the City Council of Somerville:*

The Committee on Public Property presents the following final report for the year 1889: —

## POLICE STATION INCIDENTALS ACCOUNT.

CREDIT.	
Appropriation . . . . .	\$2,000 00
Receipts for rent of hall . . . . .	553 00
	\$2,553 00
Total credit . . . . .	
DEBIT.	
Expenditures: —	
For janitor's salary . . . . .	\$850 00
janitor's substitute in vacation . . . . .	20 00
gas . . . . .	620 25
fuel . . . . .	397 85
water . . . . .	57 51
insurance . . . . .	300 00
moving building to Glen street . . . . .	70 00
repairs and improvements on build- ings and furniture . . . . .	150 11
incidentals . . . . .	62 86
	\$2,528 58
Total debit . . . . .	\$2,528 58
Balance unexpended . . . . .	\$24 42

## SCHOOL-HOUSE INCIDENTALS ACCOUNT.

CREDIT.	
Appropriation . . . . .	\$13,000 00
<i>Amount carried forward . . . . .</i>	\$13,000 00

*Amount brought forward* . . . . . \$13,000 00

## DEBIT.

## Expenditures :—

For repairs . . . . .	\$4,436 56
improvements . . . . .	6,684 65
furniture . . . . .	594 78
rent . . . . .	1,651 50
insurance . . . . .	430 77
emptying privy vaults . . . . .	132 00
fitting up hired rooms . . . . .	171 66
sewer assessments . . . . .	118 96
account book . . . . .	4 50

Total debit . . . . . 14,225 38

Amount overdrawn . . . . . \$1,225 38

## Expenditures at the different school-houses as follows :—

*Beach Street.*

Repairs . . . . .	\$95 05	
Improvements (ventilator) . . . . .	43 72	
Emptying privy vaults . . . . .	20 00	
	<u>        </u>	\$158 77

*Luther V. Bell.*

Repairs . . . . .	\$253 14	
Sewer assessment . . . . .	4 08	
	<u>        </u>	257 22

*Bennett.*

Repairs . . . . .	\$55 34	
Emptying privy vaults . . . . .	20 00	
	<u>        </u>	75 34

*Bingham.*

Repairs . . . . .	\$91 26	
Improvements (building fence) . . . . .	455 37	
	<u>        </u>	546 63

*Brastow.*

Repairs . . . . .		88 69
		<u>        </u>

*Amount carried forward* . . . . . \$1,126 65

*Amount brought forward* . . . . . \$1,126 65

*Burns.*

Repairs . . . . .	\$64 50	
Improvements (building fence) . . . . .	173 77	
Furniture . . . . .	16 48	
	<hr/>	254 75

*Cedar Street.*

Repairs . . . . .	\$67 70	
Emptying privy vaults . . . . .	12 00	
	<hr/>	79 70

*Cummings.*

Repairs . . . . .	\$63 50	
Insurance . . . . .	202 50	
	<hr/>	266 00

*Davis.*

Repairs . . . . .	\$47 68	
Insurance . . . . .	202 50	
Sewer assessment . . . . .	114 88	
	<hr/>	365 06

*Edgerly.*

Repairs (including furnace work, \$187.94)	\$524 64	
Furniture . . . . .	116 00	
	<hr/>	640 64

*Elm Street.*

Repairs . . . . .	\$35 52	
Furniture . . . . .	40 28	
Rent . . . . .	300 00	
	<hr/>	375 80

*Eberle Building.*

Furniture . . . . .	\$30 00	
Rent . . . . .	312 50	
	<hr/>	342 50

*Forster.*

Repairs . . . . .	\$189 56	
Furniture . . . . .	40 00	
	<hr/>	229 56

*Amount carried forward* . . . . . \$3,680 66

<i>Amount brought forward</i> . . . . .		\$3,680 66
<i>Franklin.</i>		
Repairs . . . . .	\$185 35	
Emptying privy vaults . . . . .	12 00	
	197 35	
<i>Hill Building.</i>		
Rent . . . . .		275 00
<i>Harvard.</i>		
Repairs . . . . .		32 39
<i>High.</i>		
Repairs . . . . .	\$295 60	
Improvements (double windows) . . . . .	43 00	
Furniture . . . . .	59 60	
	398 20	
<i>Highland.</i>		
Repairs (including furnace work, \$92.20) . . . . .	\$178 36	
Furniture . . . . .	11 50	
	189 86	
<i>Jackson.</i>		
Repairs (including stove work, \$55.23) . . . . .	\$203 43	
Furniture . . . . .	10 00	
Emptying privy vaults . . . . .	20 00	
	233 43	
<i>Lincoln.</i>		
Repairs (including furnace work, \$65.40) . . . . .	\$318 36	
Improvement (building fence, \$290.00, bulkheads, \$99.46, and new sanitariums, \$679.00) . . . . .	\$1,068 46	
Furniture . . . . .	9 60	
Emptying privy vaults . . . . .	24 00	
	1,420 42	
<i>Morse.</i>		
Repairs . . . . .	\$130 28	
Furniture . . . . .	6 17	
Insurance . . . . .	25 77	
	162 22	
<i>Amount carried forward</i> . . . . .		\$6,589 53



*Amount brought forward* . . . . . \$6,589 53

*Prescott.*

Repairs . . . . .	\$835 20	
Improvements (ventilation) . . . . .	4,900 33	
Furniture . . . . .	128 80	
	<u>          </u>	5,864 33

*Prospect Hill.*

Repairs (including stove work, \$221.65) . . . . . \$352.35

*188 Somerville Avenue.*

Repairs (including stove work, \$13.95) . . . . .	22 29	
Furniture . . . . .	3 60	
Rent . . . . .	204 00	
	<u>          </u>	229 89

*Spring Hill.*

Repairs (including stove work, \$13.20) . . . . .	\$23 37	
Furniture . . . . .	10 08	
	<u>          </u>	33 45

*Union.*

Repairs (including stove work, \$17.95) . . . . .	\$25 46	
Emptying privy vaults . . . . .	8 00	
	<u>          </u>	\$33 46

*Webster.*

Repairs (including stove work, \$60.08) . . . . .	\$245 51	
Furniture . . . . .	36 23	
Emptying privy vaults . . . . .	16 00	
	<u>          </u>	297 74

*Baptist Chapel, Belmont Street.*

Carpentering (fitting up room) . . . . .	\$59 06	
Rent . . . . .	120 00	
	<u>          </u>	179 06

*Sycamore Street Chapel.*

Carpentering (fitting up room). . . . .	\$95 24	
Furniture . . . . .	31 50	
Stove work . . . . .	12 03	
Rent . . . . .	200 00	
	<u>          </u>	338 77

*Amount carried forward* . . . . . \$13,918 58

<i>Amount brought forward</i>		\$13,918 58
<i>School Room, Bow Street cor. Somerville Avenue.</i>		
Furniture	\$44 94	
Rent	150 00	
		<u>194 94</u>
<i>Superintendent of School's Office.</i>		
Fitting up room	\$17 36	
Rent	90 00	
		<u>107 36</u>
Total		<u>\$14,220 88</u>
Account book		4 50
Total expenditure		<u><u>\$14,225 38</u></u>

## SCHOOL-HOUSE IN WARD TWO ACCOUNT.

## CREDIT.

Appropriation	\$25,000 00
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## DEBIT.

## Expenditures:—

S. Edwin Tobey, architect services	\$1,000 00	
Dearborn Bros. & Co., on account contract	12,960 00	
Dearborn Bros. & Co., extras	134 40	
P. O'Connell, grading	45 60	
Water service (service pipe)	44 64	
George W. Prichard, filling	542 50	
Total expenditure		<u>\$14,727 14</u>
Balance unexpended		<u><u>\$10,272 86</u></u>

## MORSE SCHOOL-HOUSE ADDITION.

Appropriation	\$25,000 00
Less amount transferred to school house on Washington street	<u>16,500 00</u>
Net credit	\$8,500 00

DEBIT.

Expenditures : —

For advertising proposals . . . . .	\$38 53	
insurance (mechanics' risk) . . . . .	18 75	
architect's services . . . . .	1,000 00	
amount paid on account contract . . . . .	4,320 00	
grading . . . . .	62 60	
Total expenditure . . . . .		\$5,439 88
Balance unexpended . . . . .		\$3,060 12

SCHOOL-HOUSE ON WASHINGTON STREET.

CREDIT.

Appropriation : —

By transfer Morse school house addition . . . . .	\$16,500 00

EXPENDITURES BY THIS COMMITTEE ON MISCELLANEOUS ACCOUNT.

City Hall expenses :—

gas . . . . .	\$94 07	
electric lighting . . . . .	349 71	
fuel . . . . .	260 00	
water . . . . .	15 40	
ice . . . . .	47 00	
telephone connections . . . . .	53 65	
repairs and furniture . . . . .	643 96	
incidentals . . . . .	102 44	
		\$1,566 23
Preparing rooms for elections and caucuses . . . . .		1,112 37
Rent of " " " . . . . .		69 50
Repairing ballot-boxes . . . . .		5 00
Distributing and collecting ballot-boxes . . . . .		16 00
Boards for posting check-lists . . . . .		94 00
Preparing hall for inauguration . . . . .		39 13
<i>Amount carried forward</i> . . . . .		\$2,902 23

<i>Amount brought forward</i> . . . . .	\$2,902 23
Ringling bells on holidays . . . . .	10 00
Rental of seven sets telephone instruments in public buildings from Sept. 1, 1889, to Sept. 1, 1890,	105 00
Carriage hire . . . . .	33 00
Fitting up storage shed on city land, Glen street . . . . .	152 65
Ice for Barrett fountain, Union Square . . . . .	50 00
Incidentals . . . . .	23 24
Expenses on Rifle Range:—	
insurance . . . . .	\$6 00
carpentering (repairs) . . . . .	130 25
rent of land one year from Oct. 1, 1888, to Oct. 1, 1889, . . . . .	150 00
	286 25
City Messenger's team:—	
maintenance . . . . .	396 73
	\$3,959 10

#### POLICE STATION INCIDENTAL ACCOUNT.

Nothing has been done at this building during the year except some minor repairs.

The old building in the rear formerly used by the Overseers of the Poor has been removed to the city's lot on Glen street, at a cost of \$70.

#### SCHOOL-HOUSE INCIDENTALS ACCOUNT.

At the Prescott School the wood-work has been thoroughly cleaned and refinished at an expense of \$375.00. The building was formerly heated by direct steam, the pipes having been placed around the rooms; this system has been changed during the year so that now one-half of the system is by indirect heating, and the hot-air pipes are already in position for the heating of the balance of the building by the same process of heating when the city shall deem it advisable to make the change. This change was made in connection with a new system of ventilation which was done by Mr. A. A. Sanborn, at a cost of \$3,561.86, exclusive of carpentering, mason work and painting, which expense is included in the cost of improvements.

At the Beach Street School a ventilator has been placed on the building, connecting with each room, at an expense of \$43.72.

At the Burns School a front fence has been built and the division fence so changed as to give the girls' yard double its former size.

At the Bingham School a fence has been built around the entire lot and the division fence has been changed, giving the girls' yard double its original size.

At the High school the only improvement made was the placing of double windows in one of the new rooms which was formerly used as a part of the hall.

At the Lincoln school a fence has been built on both sides and rear of the lot, and a new bulk-head has also been built, and the Fuller-Warren Company's new sanitariums have been placed in the building. The cost of this change was \$679.00, which is the largest part of the cost of improvements at this building.

At the Morse school, under an order dated September 4, a contract was made with Messrs. Dearborn Bros. & Co., at a cost of \$24,987, for the addition of six rooms, and the alterations of the original building in accordance with plans and specifications made by S. Edwin Tobey, architect. A contract was also made under an order dated July 24, with the Fuller-Warren Company, for the placing of their system of heating, ventilating, and sanitariums, at a cost of \$2,975.00. The walls to the addition are up and the contractors are now placing the roof in position, and a portion of the interior of the original building has been removed in order to make the changes necessary; while this work is being done the baptist chapel on Belmont street has been rented at an expense of \$60 per month, and as many of the scholars as could be accommodated have been sent there, while others are placed in the school buildings in the immediate neighborhood.

A new eight room brick school building is now being erected at Concord square by Messrs. Dearborn Bros. & Co., under an order dated May 22, for \$21,541.87, in accordance with plans and specifications made by S. Edwin Tobey, architect. The Fuller-Warren Co. are also, under an order dated May 8, about to place their system of heating, ventilating, and sanitariums in the building, at a cost of \$2,755.62; this building is now in process of being plastered, but should have been completed by the terms of the contract, December 15; the land for this building was purchased of the Clark heirs in 1888, at a cost of \$4,903.50.



## HIRED SCHOOL ROOMS.

A school room has been hired during the year on Bow street, at the corner of Somerville avenue, at a cost of \$25 a month; also the Sycamore street chapel at a rental of \$25 a month, and the Baptist chapel on Belmont street, at \$60 a month; the amount paid for rental for school rooms during the year, including those hired prior to January 1, 1889, amounted to \$1,651.50.

For the Committee,

GEO. D. WEMYSS, *Chairman.*  
WILLIAM P. MITCHELL, *Clerk.*

REPORT OF THE INSPECTOR OF BUILDINGS.

## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Accepted and referred to the committee on printing, to be printed in the annual reports. Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHAS. S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

OFFICE OF INSPECTOR OF BUILDINGS,  
February 12, 1890.

*To the Honorable the Mayor and the City Council:*

GENTLEMEN,—I respectfully submit the following report for the year 1889. The number of building permits granted was 485, classified as follows:—

Dwelling houses . . . . .	406
Stores . . . . .	15
Family hotels . . . . .	1
Churches . . . . .	1
Factories . . . . .	3
Alteration of buildings . . . . .	7
Sheds for storage . . . . .	13
Stables . . . . .	35
Miscellaneous . . . . .	5
Total . . . . .	486

All of the above permits were granted for the erection of wooden buildings, excepting three, which were brick blocks to be used for stores and dwellings.

A license was refused for the erection of a building for refining petroleum and its products.

As land becomes valuable builders are desirous of using smaller lots, and as a consequence many wooden buildings have been erected too near together.

I recommend that provision be made requiring that when a building is to be erected, if not over two stories high, it should be eight feet from another building; if three stories high twelve feet from the adjoining building; if four stories sixteen feet, and the wall nearest such other building shall be constructed of stone, brick, iron or some other non-inflammable material and the roof covered with slate, iron or asphalt and gravel.

I regard this as an important matter, and if it be dealt with at the present time the building of a compact wooden city, in which any ordinary fire might result in a conflagration, may be prevented.

Respectfully submitted,

JAMES R. HOPKINS,  
*Inspector of Buildings.*



REPORT OF THE INSPECTOR OF MILK.

# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the next City Council, to be printed in the annual reports.  
Sent down for concurrence.

GEO. I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in

CHAS. S. ROBERTSON, *Clerk.*

## CITY OF SOMERVILLE.

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SOMERVILLE, Jan. 2, 1890.

*To His Honor the Mayor and Gentlemen of the City Council:*

I herewith present to you my annual report of receipts as Milk Inspector for the year 1889. I have issued to milkmen and to parties who keep cows during the year 244 licenses to sell milk; 44 registers to those who sell from stores; also 18 licenses to sell oleo-margarine from wagons and stores.

Registers are given to parties for an indefinite period or as long as they remain in the same stores. Licenses must be renewed every year on or after April 30th.

There are now over 200 registers in force in Somerville.

I have found very few poor samples of milk during the year, although on account of the rank vegetation the past season, milk, as a general thing, has not been quite up to the usual quality, particularly for butter. Still, as milk it has proved to be a very fair quality. I have had the same trouble as last year from examinations of dairies for milkmen who bring samples as received from the country. The milkmen are as anxious to distribute good milk as the customers are to receive it.

I have collected 232 samples for examination, and, as before stated, a very small proportion of poor ones.

In all cases the parties have been ready and willing to correct all faults.

Hoping this report may be acceptable and to your satisfaction, gentlemen,  
I am, respectfully,

THOMAS CUNNINGHAM,  
*Milk Inspector.*

Cash paid to the City Treasury, \$153.



REPORT OF THE CITY SOLICITOR.



# CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Referred to the committee on printing, to be printed in the annual reports.  
Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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IN COMMON COUNCIL, Feb. 13, 1890.

Concurred in.

CHARLES S. ROBERTSON, *Clerk.*

# CITY OF SOMERVILLE.

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Feb. 12, 1890.

*To the Honorable the Mayor and City Council :*

I respectfully submit my report, as city solicitor, for the year ending Dec. 31, 1889.

The following are the cases pending in the courts, to which the city of Somerville is a party :

1. *Parker vs. Somerville* — Before Supreme Judicial Court in Middlesex County. Bill in equity to restrain nuisance alleged to be caused by the city upon Mystic flats by a sewer.

2. *Parker vs. Somerville* — Before County Commissioners of Middlesex County. Damages on account of land alleged to have been taken for a sewer by the city.

3. *Squire vs. Somerville* — Before Superior Court in Middlesex County. Damages for conversion of box drain.

4. *Boston & Lowell Railroad Company vs. Somerville* — Before Superior Court in Middlesex County. Petition in regard to repairs and reconstruction of bridges across railroad location in Somerville and assessment of expenses thereof.

5. *Shea vs. Somerville* — Before Superior Court in Middlesex county. Action for personal injuries upon Russell street, Oct. 14, 1885.

6. *Joslin vs. Cole et al* — Before Superior Court in Middlesex County. Action for false arrest and imprisonment.

7. *Knowles vs. Somerville* — Before Superior Court in Middlesex County. Damages on account of land alleged to have been taken for a sewer by the city.

8. *Wanamaker vs. Somerville* — Before Superior Court in Middlesex County. Action for personal injuries upon Broadway, Feb. 6, 1887.

9. *Philbrook vs. Somerville* — Before U. S. Circuit Court. Action for damages for alleged violation of the Knibb's patent for a relief valve on steam fire-engines. This action was commenced May 20, 1887, and similar actions were brought against

other cities. Somerville and the other defendant cities put their cases into the hands of Livermore & Fish, patent solicitors.

At a hearing Nov. 14, 1888, the Court decided for the defendant, and the case is now pending on appeal from that decision.

10. *Grover vs. Somerville* — Before Superior Court in Middlesex County. Action for personal injuries upon Union street.

11. *Lindsay vs. Somerville* — Before Superior Court in Middlesex County. Action for personal injuries upon Highland avenue.

The claim of *Baldwin vs. Somerville* was on account of personal injuries received by plaintiff, by being thrown from his sleigh on account of its coming in contact with a hydrant opposite the “turn-out” of the horse railroad on Cross street. It was settled by payment to its plaintiff, of \$1,250, of which the city paid one-half and the horse railroad company one-half.

In most of the cases which came before the Committee on Claims, the petitioners were given leave to withdraw, and as we have not heard from such cases since, I need not trouble you with a recital of them.

All of which is respectfully submitted.

SELWYN Z. BOWMAN,

*City Solicitor.*

REPORT OF THE CITY CLERK.

## CITY OF SOMERVILLE.

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IN BOARD OF ALDERMEN, Jan. 12, 1890.

Accepted and referred to the committee on printing, to be printed in the annual reports. Sent down for concurrence.

GEORGE I. VINCENT, *Clerk.*

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Concurred in.

IN COMMON COUNCIL, Feb. 13, 1890.

CHARLES S. ROBERTSON, *Clerk.*



# CITY OF SOMERVILLE.

OFFICE OF THE CITY CLERK, Feb. 12, 1890.

*To the Honorable the Mayor and the City Council:*

GENTLEMEN,—The following is respectfully submitted as the Nineteenth Annual Report of the City Clerk of Somerville, and is for the year ending December 31, 1889:—

## CASH.

The receipts and payments were as follows:—

### RECEIPTS:

Balance from year 1888, being for dog licenses issued in December, 1888,—			
8 males at \$2.00	\$16 00		
2 females at 5.00	10 00		
	\$26 00		
Less city clerk's fees paid to the city treasurer in Dec., 1888, 10 at .20		2 00	
		\$24 00	
For dog licenses issued in 1889,			
1181 males at \$2.00	\$2,362 00		
139 females at 5.00	695 00		
		\$3,057 00	
		\$3,081 00	
recording mortgages, assignments, etc.			\$326 50
marriage certificates . . . . . 402 at .50			201 00
licenses to collect junk . . . . . 44 at 2.00			88 00
“ (apothecaries') to sell liquor 23 at 1.00			23 00
“ for billiard and pool tables (two licenses) . . . . . 5 tables at 2.00			10 00
“ to auctioneers . . . . . 15 at 2.00			30 00
“ for intelligence offices . . . . . 3 at 2.00			6 00
			\$684 50
<i>Amount carried forward</i> . . . . .			\$684 50

<i>Amount brought forward</i> . . . . .		\$684 50
licenses to sell fireworks . . . . .	50 at 1.00	50 00
“ for amusements . . . . .	1 at 50.00	
	13 at 1.00	63 00
recording and posting naturalization notice . . . . .		50
furnishing copies of records . . . . .		3 25
		<hr/>
		\$801 25
		<hr/>
Total receipts . . . . .		\$3,882 25

## PAYMENTS.

To Joseph O. Hayden, County Treasurer, June 1 and Dec. 1, dog license fees, 1168 males at 2.00	\$2,336 00	
139 females at 5.00	695 00	
	<hr/>	
	\$3,031 00	
Less city clerk's fees, 1307 at .20 . . . . .	261 40	
	<hr/>	\$2,769 60
To John F. Cole, city treasurer, monthly, City clerk's fees for issuing dog licenses, 1320 at .20	\$264 00	
All of the "receipts" above specified, except for dog licenses . . . . .	801 25	
	<hr/>	\$1,065 25
		<hr/>
Total payments . . . . .		\$3,834 85
Balance January 1, 1890, being for dog licenses issued in December, 21 males at 2.00	\$42 00	
2 females at 5.00	10 00	
	<hr/>	
	\$52 00	
Less city clerk's fees, paid to city treasurer, 23 at .20 . . . . .	4 60	
	<hr/>	\$47 40
		<hr/>

## BIRTHS.

Number of births in Somerville in 1889, registered	891
More than previous year . . . . .	64
Males . . . . .	446
Females . . . . .	445
	<hr/>
	891

Born of American parents . . . . .	374	
“ “ foreign “ . . . . .	345	
“ “ American father and foreign mother . . . . .	86	
“ “ foreign father and American mother . . . . .	84	
“ “ parents of unknown nationality . . . . .	1	
“ “ foreign mother and father of unknown nationality . . . . .	1	
	<hr/>	891
Number of cases of twins . . . . .		9

MARRIAGES.

Number of intention certificates issued . . . . .		403
More than previous year . . . . .		36
Marriages registered . . . . .		424
More than previous year . . . . .		46
Both parties American . . . . .	202	
“ “ foreign . . . . .	114	
American groom and foreign bride . . . . .	70	
Foreign groom and American bride . . . . .	38	
	<hr/>	424 couples.
First marriage of . . . . .	753	
Second “ “ . . . . .	90	
Third “ “ . . . . .	5	
	<hr/>	424 couples.
Oldest groom aged . . . . .		76
“ bride “ . . . . .		61
Youngest groom . . . . .		17
“ bride . . . . .		14
Youngest couple aged :—		
Groom . . . . .		17
Bride . . . . .		16

DEATHS.

Number of deaths in Somerville in 1889 . . . . .		598
Less than previous year . . . . .		3
Males . . . . .	299	
Females . . . . .	299	
	<hr/>	598

Under 10 years of age . . . . .	212	
Between 10 and 20 years of age . . . . .	35	
"    20 " 30 " . . . . .	63	
"    30 " 40 " . . . . .	48	
"    40 " 50 " . . . . .	44	
"    50 " 60 " . . . . .	50	
"    60 " 70 " . . . . .	58	
"    70 " 80 " . . . . .	60	
"    80 " 90 " . . . . .	27	
"    90 " 100 " . . . . .	1	
		598
Age of oldest person deceased . . . . .		90
Born in Somerville . . . . .	204	
"    other places in the United States . . . . .	255	
Of foreign birth . . . . .	138	
Birthplace unknown . . . . .	1	
		598
Number of deaths in January . . . . .	33	
"    "    "    "    February . . . . .	41	
"    "    "    "    March . . . . .	56	
"    "    "    "    April . . . . .	43	
"    "    "    "    May . . . . .	47	
"    "    "    "    June . . . . .	55	
"    "    "    "    July . . . . .	74	
"    "    "    "    August . . . . .	49	
"    "    "    "    September . . . . .	46	
"    "    "    "    October . . . . .	41	
"    "    "    "    November . . . . .	43	
"    "    "    "    December . . . . .	70	
		598

The causes of death may be found in the report of the Board of Health.

VOTERS.  
MEN'S LISTS.

PRECINCT.	On revised lists of Oct. 1.	Added in October.	On lists of Nov. 1.	Voted Nov. 5.
Ward 1—Precinct 1.....	288	33	321	223
“ 2.....	291	31	322	242
“ 3.....	308	35	343	244
“ 4.....	247	69	316	253
	1,134	168	1,302	962
Ward 2—Precinct 1.....	314	68	382	319
“ 2.....	346	57	403	324
“ 3.....	190	58	248	215
“ 4.....	259	49	308	247
“ 5.....	206	65	271	241
	1,315	297	1,612	1,346
Ward 3—Precinct 1.....	312	59	371	290
“ 2.....	243	57	300	249
“ 3.....	318	85	403	350
“ 4.....	154	41	195	168
	1,027	242	1,269	1,057
Ward 4—Precinct 1.....	221	64	285	228
“ 2.....	170	47	217	169
“ 3.....	188	51	239	205
“ 4.....	258	59	317	247
	837	221	1,058	849
Entire City.....	4,313	928	5,241	4,214

PRECINCT.	On lists of Nov. 1.	Added in November.	On lists of Dec. 1.	Voted Dec. 3.
Ward 1—Precinct 1.....	321	0	321	113
“ 2.....	322	3	325	149
“ 3.....	343	0	343	120
“ 4.....	316	3	319	155
	1,302	6	1,308	537
Ward 2—Precinct 1.....	382	3	385	237
“ 2.....	403	4	407	222
“ 3.....	248	0	248	154
“ 4.....	308	5	313	184
“ 5.....	271	1	272	173
	1,612	13	1,625	970
Ward 3—Precinct 1.....	371	2	373	145
“ 2.....	300	3	303	117
“ 3.....	403	0	403	157
“ 4.....	195	5	200	93
	1,269	10	1,279	512
Ward 4—Precinct 1.....	285	3	288	158
“ 2.....	217	2	219	97
“ 3.....	239	6	245	182
“ 4.....	317	5	322	220
	1,058	16	1,074	657
Entire City.....	5,241	45	5,286	2,676



## WOMEN'S LISTS.

PRECINCT.	On Revised lists of Nov. 7.	Added in November.	On lists of Dec. 1.	Voted Dec. 3.
Ward 1—Precinct 1.....	7	7	14	5
“ 2.....	11	8	19	7
“ 3.....	9	7	16	7
“ 4.....	1	2	3	2
	28	24	52	21
Ward 2—Precinct 1.....	20	8	28	10
“ 2.....	17	17	34	12
“ 3.....	1	5	6	5
“ 4.....	3	1	4	3
“ 5.....	2	0	2	0
	43	31	74	30
Ward 3—Precinct 1.....	11	3	14	3
“ 2.....	12	7	19	1
“ 3.....	13	5	18	4
“ 4.....	1	4	5	1
	37	19	56	9
Ward 4—Precinct 1.....	9	1	10	7
“ 2.....	6	0	6	2
“ 3.....	4	3	7	5
“ 4.....	10	10	20	15
	29	14	43	29
Entire City.....	137	88	225	89

GEORGE I. VINCENT,

*City Clerk.*

ORDINANCES.

# CITY OF SOMERVILLE.

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IN BOARD OF MAYOR AND ALDERMEN, Feb. 12, 1890.

*Ordered*:—That the committee on printing be, and is hereby, authorized and instructed to have printed, in the annual reports for the year 1889, all ordinances that have been passed since the publication of the annual reports for the year 1888; the expense to be charged to printing and stationery account.

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IN BOARD OF ALDERMEN, Feb. 12, 1890.

Read twice and adopted. Sent down for concurrence.

GEORGE I. VINCENT, *Clerk*.

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IN COMMON COUNCIL, Feb. 13, 1890.

Read twice and adopted in concurrence.

CHAS. S. ROBERTSON, *Clerk*.

February 14, 1890.

Approved,

CHAS. G. POPE, *Mayor*.

# CITY OF SOMERVILLE.

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## ORDINANCE NO. 45.

### OPERATOR AND REPAIRER OF ELECTRIC LINES AND APPARATUS.

*Be it ordained by the City Council of the City of Somerville, as follows:—*

SECTION 1. — The mayor and aldermen shall, upon the passage of this ordinance, and annually thereafter, as soon after their organization as practicable, appoint a suitable person as operator and repairer of electric lines and apparatus of the city, who shall hold his office until his successor shall be appointed in his stead, subject, however, to removal at any time by the mayor and aldermen.

He shall receive such compensation for his services as the city council shall, from time to time, determine.

He shall, under the direction of the chief engineer of the fire department, and in accordance with such rules as he may establish, have the care and management of the lines of wire and of the batteries, instruments, signal boxes, and other apparatus belonging to the fire alarm telegraph system, and he shall perform such other duties in connection with the fire department as may be required of him by the chief engineer.

He shall, under the direction of the chief of police, and in accordance with such rules as he may establish, have the care and management of all lines, batteries, instruments, signal-boxes, and other apparatus belonging to the police signal system.

He shall, under the direction of the several heads of departments using the same, have the care and management of all the electric apparatus of the city, and shall keep the same in proper condition and repair.

SECTION 2. All ordinances and parts of ordinances inconsistent herewith are hereby repealed. [Passed July 24, and approved July 26, 1889.]

## ORDINANCE NO. 46.

AN ORDINANCE TO AMEND ORDINANCE No. 15, ENTITLED  
"HIGHWAYS."

*Be it ordained by the City Council of the City of Somerville. as follows:—*

SECTION 1. Ordinance No. 15 of the City Ordinances is hereby amended by striking out all of the eighteenth section of said Ordinance and substituting therefor the following :

"SECTION 18. No person owning or having the control of cattle or other grazing animals or swine shall permit or suffer such cattle or other grazing animals or swine to pasture upon or to go at large or loose into or in any street or way in the city, nor shall any sheep, swine or neat cattle be driven through or over the public streets, ways, causeways or bridges within the limits of the city, in droves of more than twenty-five animals each or at less intervals than thirty minutes between any two droves, or except in charge of at least two competent persons." [Passed July 24, and approved July 26, 1889.]

## ORDINANCE NO. 47.

AN ORDINANCE IN RELATION TO THE CARE OF THE PUBLIC  
GROUNDS.

*Be it ordained by the City Council of the City of Somerville. as follows:—*

SECTION 1. The Committee on Public Grounds shall have the direction and control, subject to the orders of the City Council, of Broadway Park, Central Hill Park, and the grounds around the City Hall, Public Library and High School-house, and all such other grounds of the nature of parks or public grounds and not the immediate premises of public buildings under the charge of any of the departments of the city as the city may from time to time lay out or acquire, and of keeping in condition, repairing and using the same ; and the City Engineer, under the direction of the said committee, shall have the immediate supervision and charge of all such public grounds.

SECTION 2. All ordinances and parts of ordinances inconsistent herewith are hereby repealed. [Passed July 24, and approved July 26, 1889.]



GOVERNMENT AND OFFICERS FOR 1890.



CITY GOVERNMENT AND OFFICERS FOR 1890.

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MAYOR.

CHARLES G. POPE.

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BOARD OF ALDERMEN.

CHARLES M. HEMENWAY, *President*.

WARD ONE.

CHARLES M. HEMENWAY . . . . 143 Perkins Street.  
CHARLES B. SANBORN . . . . 4 Austin Street.

WARD TWO.

GEORGE A. KIMBALL . . . . 21 Prospect Hill Avenue.  
ALLEN F. CARPENTER . . . . 10 Park Street.

WARD THREE.

EZRA D. SOUTHER . . . . Pembroke Street.  
ALVANO T. NICKERSON . . . . 334 Broadway.

WARD FOUR.

JOHN W. CONVERSE . . . . 7 Clarendon Avenue.  
ALBERT W. EDMANDS . . . . 155 Summer Street.

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CLERK.

GEORGE I. VINCENT.

## COMMON COUNCIL.

CHARLES B. OSGOOD, *President.*

## WARD ONE.

CLARENCE H. WILLEY . . . .	11 Flint Street.
EDWIN A. WILCOX . . . .	27 Glen Street.
EDRIC ELDRIDGE . . . .	88 Pearl Street.
GEORGE W. PRICHARD . . . .	Mystic Street.

## WARD TWO.

CHARLES S BUTTERS . . . .	19 Church Street.
L. ROGER WENTWORTH . . . .	Munroe Street.
WILLIAM J. MCLEAN . . . .	32 Concord Avenue.
WILLIAM M. ARMSTRONG . . . .	91 Summer Street.

## WARD THREE.

CHARLES B. OSGOOD . . . .	41 Gilman Street.
WILLIAM E. PULSIFER . . . .	262 School Street.
WILLIAM L. BARBER . . . .	36 Marshall Street.
FRANK E. DICKERMAN . . . .	85 Central Street.

## WARD FOUR.

ISAAC R. WEBBER . . . .	24 Wallace Street.
WILLIAM A. HUNNEWELL . . . .	Mason Avenue.
FRANK E. MERRILL . . . .	Fairmount Avenue.
NEWELL F. CASWELL . . . .	43 Cedar Street.

## CLERK.

CHARLES S. ROBERTSON.

## JOINT STANDING COMMITTEES OF THE CITY COUNCIL.

ACCOUNTS.—Aldermen Souther, Edmands; Councilmen Pulsifer, Webber, Armstrong.

CITY ENGINEERING.—Aldermen Kimball, Hemenway; Councilmen Caswell, McLean, Prichard.

CLAIMS.—His Honor the Mayor; Alderman Hemenway; the President of the Common Council; Councilmen Wilcox, Dickerman.

**FINANCE.**—His Honor the Mayor; Aldermen Hemenway, Edmands; the President of the Common Council; Councilmen Wentworth, Wilcox, Pulsifer, Webber.

**FIRE DEPARTMENT.**—Aldermen Converse, Sanborn; Councilmen Merrill, Willey, Dickerman.

**FUEL AND STREET LIGHTS.**—Aldermen Sanborn, Carpenter; Councilmen Webber, Butters, Barber.

**HIGHWAYS.**—Aldermen Kimball, Nickerson; Councilmen Willey, Hunnewell, Barber.

**LEGISLATIVE MATTERS.**—His Honor the Mayor; Alderman Kimball; the President of the Common Council; Councilmen Wentworth, Dickerman.

**ORDINANCES.**—Aldermen Converse, Hemenway; Councilmen Wilcox, Hunnewell, McLean.

**PRINTING.**—Aldermen Souther, Sanborn; Councilmen Pulsifer, Wentworth, Merrill.

**PUBLIC GROUNDS.**—Aldermen Carpenter, Kimball; Councilmen Butters, Pulsifer, Dickerman.

**PUBLIC PROPERTY.**—Aldermen Nickerson, Carpenter; Councilmen Wentworth, Hunnewell, Eldridge.

**SOLDIERS' RELIEF.**—Aldermen Sanborn, Edmands; Councilmen Eldridge, Caswell, Armstrong.

**WATER.**—Aldermen Edmands, Souther; the President of the Common Council; Councilmen, Willey, McLean.

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#### COMMITTEES OF THE BOARD OF ALDERMEN.

##### STANDING COMMITTEES.

**ELECTIONS.**—Aldermen Edmands, Nickerson.

**ENROLLED ORDINANCES.**—Aldermen Souther, Carpenter.

**LICENSES.**—Aldermen Nickerson, Sanborn.

**POLICE.**—His Honor the Mayor; Aldermen Souther, Converse.

**SEWERS.**—Aldermen Hemenway, Souther, Edmands.

**STATE AID.**—Aldermen Carpenter, Hemenway, Nickerson, Converse.

##### SPECIAL COMMITTEE.

**BUILDING PERMITS.**—Aldermen Kimball, Converse.



## STANDING COMMITTEES OF THE COMMON COUNCIL.

ELECTIONS AND RETURNS. — Councilmen Wentworth, Caswell, Eldridge.

ENROLLED ORDINANCES AND RESOLUTIONS. — Councilmen Wilcox, Butters, Prichard.

## SCHOOL COMMITTEE.

CHARLES G. POPE, Mayor, Chairman, *ex officio*.

CHARLES B. OSGOOD, President of the Common Council, *ex officio*.

(Term, three years.)

## WARD ONE.

S. NEWTON CUTLER (elected 1888).

HORACE C. WHITE, M. D. (elected 1889).

HORACE P. HEMENWAY, M. D. (elected 1887).

## WARD TWO.

A. H. CARVILL, M. D. (elected 1888).

JAMES F. BEARD (elected 1889).

CHARLES I. SHEPARD (elected 1887).

## WARD THREE.

NORMAN W. BINGHAM (elected 1888).

QUINCY E. DICKERMAN (elected 1889).

WILLIAM P. HILL (elected 1887).

## WARD FOUR.

GILES W. BRYANT, M. D. (elected 1889).

MARTIN W. CARR (elected 1887).

ADDIE B. UPHAM (elected 1888).

CLARENCE E. MELENEY, *Superintendent and Secretary*.

ASSESSORS.

(Term, three years.)

BENJAMIN F. THOMPSON (elected 1890).

GEORGE W. HADLEY (elected 1888).

HIRAM D. SMITH (elected 1889).

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ASSISTANT ASSESSORS.

(Term, one year.)

WARD ONE.

GEORGE W. BARTLETT.

WARD TWO.

DAVID A. SANBORN.

WARD THREE.

EDGAR T. MAYHEW.

WARD FOUR.

SAMUEL T. RICHARDS.

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BOARD OF HEALTH.

(Term, Physician, three years; other members, two years.)

J. FRANK WELLINGTON (appointed 1889), Chairman.

CHARLES H. CRANE (appointed 1890).

ALVAH B. DEARBORN, M. D. (appointed 1889).

*Clerk*, WILLIAM P. MITCHELL.

*Inspector*, CALEB A. PAGE.

## OVERSEERS OF THE POOR.

CHARLES G. POPE, Mayor, Chairman, *ex officio*.

CHARLES G. BRETT (elected 1889 for 4 years).

HERBERT E. HILL (elected 1886 for 4 years).

EDWARD B. WEST (elected 1888 for unexpired term.)

DANIEL C. STILLSON (elected 1888 for unexpired term.)

*Agent*, CHARLES C. FOLSOM.

*Secretary*, FRANK W. KAAAN.

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## SOMERVILLE MYSTIC WATER BOARD.

(Term, one year.)

ADNA C. WINNING.

WALTER C. MENTZER.

SAMUEL W. HOLT.

FRANK G. LOMBARD.

FRANK A. TITUS.

NATHANIEL DENNETT, *Supt. Water Works*.

FREDERIC W. STONE, *Secretary*.

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## REGISTRARS OF VOTERS.

CROMWELL G. ROWELL (appointed 1886 for unexpired term,  
Chairman.

CHARLES P. LINCOLN (appointed 1889\* for 3 years).

WILLIAM B. HAWES (appointed 1889 for unexpired term).

GEORGE I. VINCENT, *City Clerk*.

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## TRUSTEES OF THE PUBLIC LIBRARY.

(Term, three years.)

GEORGE A. BRUCE (elected 1889).

WILLIAM E. WELD (elected 1890).

JAMES E. WHITAKER (elected 1890).

JOHN B. VIALI (elected 1890).

CHARLES S. LINCOLN (elected 1888).

J. HENRY FLITNER (elected 1889.)

CHRISTOPHER E. RYMES (elected 1888).

ELIJAH C. CLARK (elected 1889).

CHARLES H. BROWN (elected 1889 for unexpired term.)

*Librarian*, HARRIET A. ADAMS.

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CITY CLERK AND CLERK OF BOARD OF ALDERMEN.

GEORGE I. VINCENT.

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CITY TREASURER AND COLLECTOR OF TAXES.

JOHN F. COLE.

---

MESSENGER TO CITY COUNCIL.

JAIRUS MANN.

---

CITY SOLICITOR.

SELWYN Z. BOWMAN.

---

CITY AUDITOR.

CHARLES S. ROBERTSON.

---

CITY ENGINEER.

HORACE L. EATON.

---

SUPERINTENDENT OF STREETS.

THOMAS H. EAMES.

SUPERINTENDENT OF PUBLIC BUILDINGS AND LIGHTS.

THOMAS R. ROULSTONE.

---

CHIEF OF POLICE.

MELVILLE C. PARKHURST.

---

CHIEF ENGINEER OF THE FIRE DEPARTMENT.

JAMES R. HOPKINS.

---

INSPECTOR OF BUILDINGS.

JAMES R. HOPKINS.

---

CITY PHYSICIAN.

ALVAH B. DEARBORN, M. D.

---

INSPECTOR OF MILK AND VINEGAR.

THOMAS CUNNINGHAM.

---

CLERK OF ASSESSORS AND COMMITTEES.

WILLIAM P. MITCHELL.

---

ASSISTANT CLERK OF ASSESSORS AND COMMITTEES.

ALBERT B. FALES.



## MEETINGS.

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### BOARD OF ALDERMEN.

Second and fourth Wednesday evenings of each month.

### COMMON COUNCIL.

Thursday evenings following the second and fourth Wednesdays of each month.

### SCHOOL COMMITTEE.

Last Monday evening of each month.



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