

CITY DOCUMENT, NO. 30.

THIRD INAUGURAL ADDRESS

OF

HON. CLARK JILLSON,

MAYOR, JAN. 3, 1876;

WITH THE

ANNUAL REPORTS

OF THE

COMMISSION OF PUBLIC GROUNDS, CITY MARSHAL, OVERSEERS OF
THE POOR, TRUANT SCHOOL, CITY PHYSICIAN, CITY TREASURER,
AUDITOR, CITY CLERK, FIRE DEPARTMENT, FREE PUBLIC
LIBRARY, SCHOOL DEPARTMENT, ACTING CITY ENGI-
NEER, COMMISSIONER OF HIGHWAYS, COMMITTEE
ON WATER, WATER REGISTRAR, WATER COM-
MISSIONER, CITY HOSPITAL, COMMISSIONERS
OF HOPE CEMETERY, COMMITTEE ON
LIGHTING STREETS, AND SUPERIN-
TENDENT OF PUBLIC BUILDINGS,

OF THE

CITY OF WORCESTER,

FOR THE FINANCIAL YEAR ENDING NOV. 30, 1875.

WORCESTER:

PRINTED BY CHARLES HAMILTON,

CENTRAL EXCHANGE.

1876.

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1875

CITY OF WORCESTER.

IN CITY COUNCIL, January 10, 1876.

Ordered :

That the Committee on Printing be, and they are hereby authorized to cause to be published, 1400 copies of the annual "City Document," to be numbered 30; to contain the Mayor's Inaugural Address, together with the Reports of the several Departments, for the year 1875.

A Copy, Attest:

SAMUEL SMITH,
City Clerk.

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MAYOR'S ADDRESS.

Gentlemen of the City Council :

THE morning of America's centennial year has greeted us with its dawning light.

One hundred years ago the town of Worcester was smaller in point of population than Brookfield, Lancaster, Mendon or Sutton, and contained less than two thousand inhabitants, though it had been incorporated more than half a century. The people were then preparing for their great conflict for freedom from British tyranny, and the most intense excitement prevailed throughout the colonies. The clarion of war had been sounded, the minute-men had left their fields and their shops, at the cry of "To Arms," and taken up the line of march under one of the bravest soldiers of the time, Capt. Timothy Bigelow.

Civil government had been superseded by military power, the judiciary suspended, and the atmosphere seemed to be full of revolution. The spirit of liberty had been aroused in the hearts of the people and became the chief topic of conversation wherever any considerable number were assembled. At a convention held in Worcester about this time, it was resolved "That we abhor the enslaving of any of the human

race," but it required ninety years of progress to bring the nation up to this standard, and even then it was accomplished by executive decree, sustained by loyal bayonets. On the fourteenth day of July, 1776, the Declaration of Independence was received in Worcester, and read from the porch of the Old South meeting-house, by Isaiah Thomas. The sixteenth day of July was first celebrated in Worcester as Independence Day, and the Declaration was then for the second time publicly read.

The trials of those days were borne by the people of Worcester with less complaint than are the trials of the present hour. Each man felt that he was a part of the new republic and willing to sacrifice his life in its defence. With few exceptions, each man and woman were ready to endure privation and even starvation for the sake of liberty. They had an interest in the soil upon which they lived, and loved the institutions they had been instrumental in establishing. Their defence was a success, and we are proud to be their successors, receiving from their hands the untarnished shield of liberty, and a republican form of government.

Under this government, within the limit of a century, the little town with a population of nineteen hundred has become a great railroad centre, an extensive mart of trade, and a city of about fifty thousand inhabitants, filled with the various industries that naturally cluster about an inland New England city. Its rapid growth during the past fifteen years has brought

with it a debt too large for comfort or convenience. The administration of the government for the current year, together with the management of

THE FINANCES

of the city have been transmitted to us by that intelligent class of our fellow citizens who do not consider it a calamity to pay a debt ; and it becomes our duty to adopt such a policy in relation thereto as will be likely to promote the welfare of all.

The management of the finances during the past year has a tendency to show that the debt may be reduced to a reasonable amount while ordinary and needed improvements are going on. The debt ought to be reduced as speedily as practicable, to a sum not exceeding one million dollars ; but while this is being done the rate of taxation should also be reduced each year so as to relieve the people of the burdens they now have to bear. The provisions which have been made during the past year, under the general laws of the Commonwealth relating to municipal indebtedness, make it necessary to provide for the payment of a portion of the debt each year till the whole of the present debt is extinguished ; and any new debt created must be provided for in the same way. A strict compliance with this law and the ordinance just adopted under it will settle all matters in relation to the payment of the debt, and extinguish some portion of it annually. Three able and experienced financiers have

been elected as Commissioners of the Sinking Funds, neither of whom is connected with the City Government.

The most important thing of all is to carry on the affairs of the city and not create a new debt of greater magnitude than the amount of the old one paid. It is supposed by some that prosperity and activity in business consists in having a large number of laborers employed by the city ; and a certain class, apparently, would prefer to have every business man overwhelmed and crippled by taxation, rather than be deprived of the luxury of working for the city.

The policy of running the city into debt for the sake of furnishing work for those who will not labor for an individual if they can help it, and to secure their vote at election, has been carried far enough already to show that the complete gratification of its supporters would convert the city into a stupendous alms-house with the principal business men beggars at its doors. For one I protest against constructing any street or sewer for the purpose of making work, unless the necessity, convenience or health of the city require it ; and when such work is so required it should be done as far as possible by Worcester men. The finances of the city should be managed with the same care and be subject to the same rules of economy, so far as they can be made to apply, as would be exercised and applied by a thorough business man in his private business.

The net debt of the city was

Nov. 30, 1874,	-	-	\$2,984,780.00
“ “ 1875,	-	-	2,589,700.00
Decrease in 12 months,	-		<u>\$395,080.00</u>

The amount transferred to the committee on the reduction of the city debt Nov. 30th, 1875, was \$236,645.59.

When we consider the fact that the city debt has never been decreased the amount of \$15,000 in any one year previous to 1875, and that there was no decrease at all between 1860 and 1875, the above statement ought to be satisfactory.

TAXATION.

Since the year 1870 the Assessors have been furnished from the office of the City Engineer, with four volumes of plans, covering about three-fourths of the land situated in the most thickly settled portion of the city.

These books containing plans of nearly 3800 lots of land, with the number of square feet in each lot, are believed to be substantially correct, although, subject, of course, to constant changes, corresponding with the sub-divisions of lots and the formation of new streets and relocation of old ones.

They are of great service to the Assessors in making a more thorough and equitable valuation of real estate, and with the addition of two more volumes,

for which surveys have been nearly completed, will furnish plans of that section of the city embraced within the mile circle.

1875, rate of taxation \$16.60 per \$1000.

VALUA- TION.	POLLS.	PERSONAL ESTATE.	REAL ESTATE.	TOTAL.
1874,	13,341	\$11,639,994	\$37,545,550	\$49,185,544
1875,	13,013	11,283,581	38,016,200	49,299,781
<hr/>				
Loss of 328 loss, \$356,413 gain, \$470,650 total gain, \$114,237				

Showing a loss in 1875 in the number of polls of 328; also a loss on personal property of \$356,413.00, and a gain in the valuation on real estate of \$470,650.00, making a total net gain on the valuation of \$114,237.00.

The gain on real estate is due to the erection of new, and additions made to old, buildings since May 1, 1874, amounting to about \$650,000.00. Without this gain the total valuation would have been considerably less than in 1874.

The loss on personal estate is mostly due to the depreciation on foreign stocks, bonds, and general merchandise.

The amount of property exempt from taxation is as follows :

Real Estate.....	\$1,739,600 00
Personal	100,500 00
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Total,	\$1,840,100 00

SCHOOLS.

There is one thing lacking in our system of education which might be supplied with very little trouble, to great advantage. We are trying to teach our children history, even modern history, but the events of the passing hour go by unnoticed.

A good knowledge of current events, gathered from reliable sources, is of the utmost importance, but many of the children in our schools are deprived of such knowledge, either by their own neglect, or for want of opportunity to peruse the daily papers and other current publications. If teachers would study what is transpiring about them and make it a part of their duty to impart the knowledge so obtained to their pupils each day, an improvement would be visible at once. When events have passed into solemn history they generally lose, in their transit, the charm of detail and novelty so pleasing to the young mind, and it thereby becomes necessary to study what only need be read or heard at the time when it transpires. It is generally understood that "the world moves," and that there is constant advancement in every department of Art, Literature and Science, so that a thorough knowledge of what is transpiring to-day is more valuable than a knowledge of what transpired yesterday.

There is a disposition on the part of many of our teachers to have a better school than any other of the same grade. This is commendable, provided scholars

are not retained after they ought to be in a grade above. Promotions should not be withheld when the pupil can be benefited thereby even if the teacher is obliged to regret the loss of her best scholar.

An effort was made last year to build two school houses, one near the Adriatic Mills and another in the vicinity of Jamesville and Valley Falls. I am not in favor of building more than one house of this kind in a year unless a more pressing necessity exists than appears at present. I recommend the building of a school house of sufficient size and so located as to accommodate the scholars at Jamesville and Valley Falls, during the present year.

The school houses of this city are poorly ventilated, or not ventilated at all, and delicate children are constantly being exposed to currents of cold air from open windows, and many a life is endangered by carelessness in this respect. A child who can survive the exposure of a Worcester school-room, embellished with a large sized morning-glory stove, red hot, with all the windows down at the top to prevent suffocation, will be likely some day to be classed among the oldest inhabitants.

The expenses of the school department are so large that I desire to call the attention of the committee to the importance of having all unusual expenditures authorized by the full board before they are incurred; and that no money be appropriated for what is useless or merely ornamental. Common sense practical

knowledge is what the children need, and the most direct way to obtain it is the cheapest.

A large amount has been expended every year for desks and other furniture for the various school houses, and a shop has been maintained for the manufacture of the same. This work might be done by contract much cheaper. I also call the attention of the City Council to the enormous amount of coal consumed in heating the school houses on Walnut street.

About two hundred and twenty-five tons are consumed annually for that purpose. I have no doubt that a change might be made in the manner of heating which would save at least one-half of the fuel now consumed.

WATER.

During the early part of the past year it was feared by many that the water supply would fail before the first of November. This apprehension was based upon the fact, that in August, 1874, the reservoir was full, and on the first of February, 1875, there was less than two weeks' supply on hand. On the first of June, 1875, when the dry season had apparently set in, the water was four feet and six inches below the rollway. Notwithstanding all these fears and causes producing them, there has been an ample supply of water up to the present time, with no reason now to fear that it will fail during the winter, the water being now six feet higher than it was a year ago. Various schemes for providing an additional supply of pure water for the

use of the city were promulgated last summer, but the rain-fall being sufficient to give a supply with our present facilities, none of the plans suggested were carried into effect.

It is now pretty well understood that Nature is rather impartial in the distribution of her bounties, and that a diminution in the rain-fall in any one year will most likely be made up during the next. At any rate it is not usual to have a dry spell continue more than one year at a time.

Before a large outlay is made for procuring an additional supply of water from a new source, I would suggest the propriety of ascertaining how much addition can be made to the supply from the present source. It may be well to consider that on the first day of January, 1871, there was only a small amount of water in the reservoir, estimated to be sufficient for thirty days only, it having been previously drawn off for repairs ; yet the city has had a supply all the time since, and 386,000,000 gallons have been wasted, for the reason that the reservoir was not large enough to hold it.

I submit, in case the City Council considers the dam perfectly safe, after careful inspection by experts, that it is the duty of said Council to order the dam raised five feet, so that there shall be no further waste of water at that point. If it should appear, upon inspection, that it would not be prudent to raise the dam, another and smaller one might be constructed above, sufficient to retain a portion of the storm-water

till it could be received into the main reservoir below without loss. If the surplus water had been so retained during the last two years, we would now have an addition of two months' supply to what we now have, and more than the reservoir could now hold. I consider this proposition of sufficient importance to warrant its careful consideration by the City Council. There is also another method by which a large amount of water could be obtained at a reasonable cost, by turning Parsons Brook into the Hunt reservoir.

Another step in the right direction would be to adopt the use of meters, fixing the rates reasonable and uniform. When all this has been accomplished, if a further supply is needed, the storm-water of Kettle Brook might be taken and conveyed into the reservoir. I am not prepared to recommend the taking of Tatnuck Brook at an expense of half a million dollars, until it is shown that such an outlay is justified by actual necessity, and I do not believe it is at present.

HIGHWAYS.

The streets and highways leading to adjoining towns were never in better condition than they now are, and the only cause for complaint has been in relation to streets in the centre of the city. The City Barn has been greatly improved during the past year and is now in excellent condition. But little has been done by way of street construction, as compared with some former years, and there will be but little call for such

work this year. The time will soon come when it will be necessary to extend Edward Street to Mulberry Street; but the expense would be so great that I do not recommend its immediate construction. One of the most unpleasant things connected with street construction is the assessment of betterments. The law under which these assessments have been made, has cost the city a great many thousand dollars for needless improvements.

Orders for the construction of streets are passed under the supposition that the expense will be largely met by assessment, and it often happens that one or two persons are the means of constructing or widening a street at great cost, while a majority of the abutters are opposed to it, but have to pay under the betterment law large sums for the sole benefit of somebody else. Newton and Pratt streets are specimens of this kind. Here is a street eighty feet wide, where there is no trade, laid out and built for the sole benefit of those who desire to drive upon it for pleasure from all parts of the city, and the abutters are called upon to pay an assessment when they claim their estates are not benefited in any way, and that many of them are materially injured. It seems to me that it would be better in the future to wait till it is determined in good faith that the public necessity and convenience require the improvements asked for, and if made, let the public pay for them.

It is true that there may be cases when public improvements ought to be made where certain individuals

would receive far greater benefit than others, and in such cases an assessment might be resorted to; but on the whole the betterment law is not of much practical value to Worcester.

SEWERS.

There has been for several years a seeming necessity for the construction of a main sewer from the present terminus of the Piedmont sewer through the "Island District," so called, to Mill Brook sewer at Cambridge Street. This work would involve an expenditure of not less than \$60,000, and when accomplished would not drain the "Island District," nor could any of the low land in the vicinity be drained into it, as it would have to be built substantially upon the surface of the ground.

Whenever this sewer is properly built, it will have to be commenced below the dam at Quinsigamond, so as to give all the fall that can well be obtained, which will be one foot in one thousand, and pass under the Mill Brook sewer at or near Cambridge Street. This sewer, thus constructed, will cost about \$200,000 exclusive of land damages and water rights, which will not be less than \$50,000 more.

It should be constructed large enough below Cambridge Street to take the dry weather flow of Mill Brook, as well as its own, thus conveying the whole sewage of both below Quinsigamond, except in cases of high water. A work of such magnitude ought not to be accomplished in one year under the present financial condition of the city, and it is for you to determine

whether a necessity actually exists for the commencement of this work this year, and what steps shall be taken in relation to it during your administration. It may be built in sections of one-third each year, and money raised therefor by taxation; or it may be built in a shorter period of time, and a debt created thereby.

All these matters will be at your disposal. It will undoubtedly be necessary to obtain legislation before the work is commenced.

FIRE DEPARTMENT.

The Fire Department deserves credit, as it has for many years, for its promptness and efficiency; and the re-election of its Chief is a complete guarantee that no pains will be spared to make it worthy of encouragement and support.

New apparatus has been furnished during the year, and a new hose carriage, and an additional supply of hose is now needed. Several new alarm boxes should be established at once, and a hose loft is needed at the house in Bigelow Court, upon the top of which should be placed the alarm bell. In justice to the Department I ought to allude to its splendid appearance at the last annual parade, when every man tried to see how well he could perform his part.

POLICE.

The Police Department has merited and received the approbation of the public. Most of the officers are men who have been tried and not found wanting. The

Chief and his assistants deserve great credit for their judicious management of the Department, and for the general good order which has prevailed in all parts of the city both day and night.

The Department has made a clean record, performing its delicate duties with unusual fidelity to all those who have a sufficient self respect to vindicate the law of the land, and uphold good order in the community.

LIBRARY.

The Free Public Library is worthy of liberal support, and the patronage bestowed upon it shows that it is invaluable as an educational institution. It was thought last year that nearly all the available room in the building had been occupied, but it is now found that the entire attic story may be used to advantage, thereby furnishing room for several years to come. Such books as are seldom used may be placed in this part of the building, and thereby greatly relieve the lower rooms. It has been thought that an elevator, operated by hydraulic pressure, would be of great service in removing books from one story to another.

HOSPITAL.

The City Hospital has been enlarged so as to accommodate eight more patients, and so arranged as to remove the operating-room farther from the street.

A new system of ventilation has been applied, which promises to become a success.

The ordinance relating to the City Hospital needs revision, and I would call to it your early attention.

CHARITIES.

The proper management of the pauper department requires care and patience in discriminating between those in distress, and those who deserve no favor from the city.

It is better to be deceived than to allow one person to suffer, who is in any way entitled to aid.

The great source of poverty is intemperance, and yet the law recognizes the traffic in intoxicating liquors as legitimate business, leaving the tempted to the mercy of those who would ruin their fellow-men for gain. If the burden would always fall where it belongs, there would be less reason for complaint ; but innocent women and children unable to provide for their own support, become the unhappy victims of cruel husbands and fathers, while the destroyer of their home and their hope gloats over their misery. This class of unfortunates appeal to our sympathy and our charity in the strongest terms, and it is the duty of the charity department of the city to see that they are not allowed to suffer for want of the necessities of life.

SALARIES.

The equalization of the salaries of the various officers of the city, will probably demand your atten-

tion at an early day. Some may be higher than the times will warrant, and others are too low. It may be good policy to cut down the pay of a first-class servant, as long as he will stand it, but when it is carried to such an extent as to make it necessary to fill vacancies with chronic office-seekers, and such persons as generally find the most fault about the compensation of others, the city will be the loser.

I am aware that you will wisely consider this matter, and make such changes as shall appear to be reasonable and best for the city.

CONCLUSION.

In conclusion, I desire to acknowledge my obligations to the members of the City Government of 1875, for their generous support and co-operation in the transaction of public business ; and also for their honest and candid consideration of such measures as I have thought proper to propose or advocate in behalf of the city. I have had occasion to exercise the veto power but twice during the year, and in each case was sustained by a unanimous vote. I only ask that the new government may succeed as well as the old ; that its energies may be devoted to the welfare of Worcester, irrespective of all other considerations. I shall expect the unqualified support of every member of the City Council so long as I act honorably

and justly towards the people of Worcester, whose interests I am bound to serve.

I shall not fail to support and carry into effect, so far as my authority as chief magistrate will permit, whatever you lawfully and conscientiously direct. The City needs our best efforts, our candid judgment, our impartial action. Let us meet the requirements that duty suggests, united as one man, for the good of all.

ANNUAL REPORT

OF THE COMMISSION OF

PUBLIC GROUNDS.

To The Honorable CITY COUNCIL.

The COMMISSION OF PUBLIC GROUNDS, conforming to the requirements of Section 21 of the Charter of the City, has the honor to submit the following "Report of their Acts and doings, of the condition of the Public Grounds and Shade Trees thereon, and on said Streets and Highways, and an account of receipts and expenditures for the same," during the past financial year.

The Receipts and Expenditures were as follows :

COMMISSION OF PUBLIC GROUNDS

In account with

CITY OF WORCESTER.

Dr.

Unexpended in 1874, (brought forward),	\$ 56 00
Appropriation,	4,000 00
Revenue :	
Circus (Howe & Cushing),	100 00
Circus (Murray's),	100 00
Stephen Harrington (Sale of old Logs),	3 00
Loan of Roller,	75
Grass on Elm Park,	35 00
Earth from Common, (M. McGrath),	24 00
To Credit of Elm Park,	241 40
	<hr/>
	\$4,560 15

Per Contra, Cr.

Paid Account of James Draper, Shrubs, Trees, &c.		\$241 40
Highway Department, old acct. of Dec. 22, 1874,		7 00
Jan.	2, Steven Rowe, labor,	39 38
"	Henry Forney, labor,	24 00
"	Charles Hamilton, printing,	2 25
"	5, David Rowe, labor,	34 30
Feb.	3, Steven Rowe, labor and tools,	44 49
"	Kinnicutt & Co., tools,	9 00
"	William A. Hill, work,	1 50
"	Chas. H. Doe & Co., advertising, "mischief,"	1 50
"	Henry Forney, labor,	37 00
M'ch	2, Steven Rowe, labor and paid for team,	36 74
"	3, Henry Forney, "	33 00
April	3, Steven Rowe, "	41 98
"	Charles Hamilton, printing Annual Report,	42 59
"	Michael McGrath, use of team,	5 00
May	6, John Barnes, labor and manure,	30 50
"	James Downey, manure and hauling,	10 75
"	A. B. Lovell, cement and sand,	3 45
"	William Lee, labor and team,	3 00
"	Benj. C. Jaques, labor, stock, and loam,	91 24
"	David Rowe and help, labor,	49 00
"	Steven Rowe, labor,	43 75
"	C. F. Henry, manure and hauling,	41 25
June	4, Michael McGrath, earth and teaming,	39 49
"	John Dempsey, labor,	15 75
"	Benj. C. Jaques, labor and stock, for tree guards.	43 34
"	Steven Rowe, "	45 50
"	Kinnicutt & Co., lawn mower, &c. &c.,	27 77
"	John D. Lovell, tools &c.,	10 17
"	Wor. Water Works, cement,	1 85
"	John S. Clark & Son, lime,	1 50
"	Highway Department, carting scrapings,	183 00
"	F. C. Thayer, trees,	10 00
"	John D. Baldwin & Co., advertising,	3 50
"	David Rowe, labor,	52 00
July	6, Highway Department, scrapings and labor on Boynton Street,	43 40
"	Benj. C. Jaques, iron, wood, stock and labor,	72 71
"	John Barnes, carting,	7 00
"	Steven Rowe, labor,	42 00
"	Downey Bros., loan,	57 00
"	Water Works Department, labor on Common,	4 20
"	Fred'k H. Hammond, labor on Elm Park,	35 30
"	John D. Baldwin & Co., advertising,	75
"	Wellington Keith, labor as per pay roll,	61 50

July	6,	James Draper, shrubs and trees,	153 70
"		Engineer's Department, $\frac{1}{2}$ mo.	25 00
"		David Rowe, labor,	48 00
"		John D. Lovell,	5 26
"		W. W. Cook, shrubs,	12 00
Aug.	4,	Wellington Keith, labor as per pay roll,	22 50
"		Mason & Lincoln, iron,	12 60
"		Samuel F. Shattuck, pruning,	9 60
"		Gas Light Co., re-location of lamps on Common,	20 20
"		Kinnicutt & Co., tools and sharpening lawn mower,	4 28
"		Geo. T. Sutton, labor and materials, (pumps),	18 50
"		David Rowe and assistant, labor,	63 75
"		Steven Rowe, labor,	42 00
"	5,	J. S. Clark & Son, cement,	1 63
"	6,	Hugh McLaughlin, beach-stones, freight, and paving 678.13 lin. yds. of gutter,	736 40
"		Geo. Percy Daniels, $\frac{7}{10}$ mos. eng.	10 00
"		G. H. Palmer, $\frac{1}{6}$ mo. eng.	10 00
"		O. B. Hadwen, trees and setting,	166 00
"	16,	C. A. Colby, cleansing monument,	15 00
"	24,	M. R. Edwards, manure and teaming,	86 00
Sept.	3,	Charles H. Perry, pruning,	27 84
"	6,	Steven Rowe, labor,	42 87
"		Michael McGrath, labor and teams,	34 62
"		Kinnicutt & Co.,	1 00
"		Fred'k H. Hammond, labor and teams,	54 90
"		Samuel F. Shattuck, pruning trees,	6 00
"		Downey Bros., labor and teams,	28 75
"		Benj. C. Jaques, stock and labor,	74 50
"		David Rowe, labor,	46 50
"		John D. Lovell, seed and tools,	28 45
Oct.	4,	Samuel F. Shattuck, pruning,	34 35
"		David Rowe, labor,	42 00
"		Fred. H. Hammond, labor and teams,	15 30
"		Michael McGrath, labor and teams,	141 87
"		Steven Rowe, labor,	45 50
"		James Draper, trees, &c., &c.,	97 00
"	5,	John Dempsey, labor,	5 26
"	8,	Percy Daniels, eng. grades around Monument, $\frac{1}{6}$ mo.	20 83
"	27,	John Doyle, loam,	77 00
Nov.	5,	Steven Rowe, labor,	43 75
"		David Rowe, labor,	45 50
"		Downey Bros., manure and hauling,	40 50
"		Samuel F. Shattuck, pruning,	4 50
"		John D. Lovell, barrow,	2 75
"		Kinnicutt & Co., tarred rope,	1 13
"		Michael McGrath, labor and teams,	88 50

Dec. 3,	Edw. R. Fiske, paper and printing,	9 50
"	John B. O'Leary, repairs of tools,	1 95
"	J. B. Brooks, manure and hauling,	24 37
"	C. F. Henry, manure and hauling,	41 25
"	O. B. Hadwen, trees and setting,	27 00
"	Steven Rowe, labor,	42 00
"	Downey Bros., loam and teaming,	42 00
"	Michael McGrath, labor and teaming,	110 25
"	Geo. T. Sutton, work on pumps,	5 00
" 4,	J. & J. A. Rice, shovels,	5 20
"	N. M. Hardy, manure and hauling,	16 00
"	David Rowe, labor,	49 50
		<hr/>
		\$4,506 43
Dr.		4,560 15
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Mindful of the present tendency to economy in theory if not practice, the COMMISSION will strive for unwonted brevity. Individual labor and the public patience will be saved thereby, not to enlarge upon the charge for printing.

The work of grading around the Soldiers' Monument, necessarily left incomplete in 1874, was resumed at the earliest possible moment. An open esplanade commended itself as the most feasible mode of disposing of the space: having in view the absolute need of accommodating the vast number of pedestrians, who cannot afford to be impeded; and the tender curiosity of those who love to approach closely and scan the names so durably recorded. Anxious that the work should be permanent, a deep excavation was effected, which was subsequently filled up with that waste material from the Washburn Iron Works, for the gratuitous use of which so many of our citizens have continual cause to be grateful. Listening however to a well-meant suggestion, the COMMISSION went further and fared worse. An offer of marble dust or grit was accepted, which, hauled and spread in profusion upon the more important walks, answered the purpose for a time most admirably. But with the advent of frost and thaw the "soil" upon the Common ceased to be longer "free:" attaching and adhering with more than the fabled closeness of *Pallida Mors* to the defunct African. The rottenness of the Winter at this present time of writing, imposes upon the COMMISSION

an unexpected, but none the less imperative, task. Robbing Peter to pay Paul, they have conveyed frequent and large loads of gravel from *Elm Park*, by the use of which it is believed that the worst nuisance of mud has been effectually suppressed. Yet the suggestion is made to the *Honorable Council* whether the main walks, across and along the *Common*, are not in such incessant and universal use as to justify the employment of some durable material for their pavement. Such the *Commission* do *not* consider concrete, which would be objectionable also because of its baneful effect upon the Shade-Trees. Good brick has every advantage. It should be understood, however, that no estimate has been submitted for pavements; and that an appropriation for that especial purpose would be required, should the suggestion approve itself to the *Honorable Council*.

Opportunity was seized, in the progress of grading around the monument, to widen the more important paths. The gutters were also enlarged and supplied with outlets of increased capacity. When the Railway-tracks are taken up, after the 1st day of June, it will be possible to finish all surface work now contemplated. Those Tracks were availed of however to transport over them, swiftly and cheaply, the amount of Beach-Stone that it was supposed would be wanted hereafter. These will be used to construct gutters along each side of the broad mall that should replace the railways. Such a mall will be a municipal convenience, should a possible economy conclude to locate the City Hall of the future,—whose construction is an inevitable if remote necessity, within the quadrilateral space between Front, Main, and Park Streets, which is now encumbered and not conspicuously adorned by the present Hall and the Meeting House of the First Parish. Ceasing to be unclean would not interfere with the land remaining Common. Perhaps the ridiculous title of Central Park might be officially altered, as it was long since suffered to fall into disuse; and, with an almost precise similarity of situation, we might, like our fellow-citizens of Philadelphia, possess a Centennial Hall fronting upon Centennial Square.

In course of excavation around the Monument, it was discovered that its foundation had been imperfectly constructed; and was such as no competent builder would esteem sufficient for

a decent dwelling-house. This fact, obvious to all passers-by, was communicated to the *Honorable Council* in a note that is copied in this connection, because of harsh language vented upon the Chairman of this *Commission* by some whose vigilant discharge of duty, in the outset, would have saved trouble and expense:—

“COMMISSION OF PUBLIC GROUNDS,

June 28, 1875.

To the Honorable City Council:

The undersigned would respectfully invite the attention of the *Honorable Council* to the character and condition of the foundation of the Soldiers' Monument, as disclosed by the excavations which have been commenced for the purpose of grading and improving the grounds circumjacent.

In many instances the stones have no bearing upon each other; were never bound or tied together; but appear, when laid down, to have been hastily covered up by a screen of coal-ashes which have not tenacity to retain themselves or aught else. The ultimate safety of the Monument appears to require that some remedy for this state of things should be applied immediately.

Probably no more propitious time could be found than the present, when the foundations will be uncovered, with all their imperfections and deficiencies.

Very Respectfully,

EDWARD W. LINCOLN,
Chairman.”

No reflection upon any one was intended, and none was made. The coat fitted however and was voluntarily assumed. The propriety of the appeal was amply vindicated by the prompt action of the *Honorable Council*, through which an effectual and permanent remedy has been applied.

Errors in the inscription upon the Tablets of the Monument were discovered long since; and an order was passed by the *City Council* to have them remedied. This has not yet been done. If the corrections are to be made, it is very desirable that they should be completed before the pavement around the Monument is laid down, in the Spring.

A serious imperfection in the coil of rope held by the Sailor, upon the S. W. angle, is rendering itself disagreeably conspicuous by its effect upon the hewn-stone beneath. The following

note from a gentleman entirely competent to give an opinion in the premises, is herewith presented for your more thorough comprehension.

“WORCESTER, *January 3d*, 1876.

Edward W. Lincoln, Esq.,

Sir :

You ask for the cause and remedy of the stain on the Soldiers' Monument, near the figure of the Sailor. It is evidently being constantly produced by the decomposition and corroding of substances composing the core around which the coil of the heaving-line in the Sailor's hand was cast. This result was perhaps expected by those who furnished the figure, for it will be seen that they drilled a small hole through the bronze metal at the lowest point of the coil.

It might have been avoided by removing the core when cast; and can be stopped by sawing a small section out of one side of the coil and removing the decomposing matter. And the piece can be brazed, or soldered and chased in again firmly; and, if taken from the right place the joints cannot be seen from the ground. Unless this is done, the rust will probably continue as long as the core lasts.

Yours &c.,

B. H. KINNEY."

A single other reference to the Monument and the subject will be dismissed. Viewed fundamentally, the pile itself is an achievement, if not a success. Yet the critical eye beholds its apex with scarcely the satisfaction imagined by Webster when, in a fine frenzy, he contemplated the sun lingering and playing upon that summit on Bunker Hill. Regarded *a posteriori*, as it is most seen, the position of the bronze Goddess appears most unfortunate; the whole figure being dwarfed and the head seeming hunched into the shoulders. Her reversion, or rather torsion, which is perfectly feasible; forcing her to confront the North Star, and leaving the sparrows on the mound at the South to study that most singular aspect which now bewilders Washington Square; would undoubtedly commend itself to public approval.

A general illumination of the City was recently indulged in. It is suggested whether the Treasury is too poor to defray the cost of repairing the old or procuring a new Flag-Staff. Other eminent men may succeed the late Vice-President, in mortuary procession. Besides, in the exuberance of our patriotism, on this

Centennial Year of the Republic, should we not feel some slight degree of mortification, if unable to hoist the Federal Banner upon the Twenty-Second of February, or the Fourth of July.

In its Report for the year 1874, this COMMISSION suggested, in the following language, that :

“Salem Square should not longer be tolerated as a public eyesore. A decent regard should be had for simple appearance and some consideration manifested for the very respectable Religious Societies which have there planted their Houses of Worship. Has not the time come to stop the Wood and Hay,—matters of indispensable necessity but yet susceptible of regulation,—upon the outskirts of the City ; at Lincoln and Webster Squares for instance where facilities for measuring and weighing already exist. *Then*, a sufficient street being left open, the remainder of the Square could be restored to the COMMON, from which it was needlessly wrested ; and the Eastern boundary completed as well as defined by a continuation of the new Ornamental Kerb. A speedy decision of this matter, which cannot be postponed much longer at any rate, would materially facilitate the labor imposed upon this COMMISSION of putting in good order the ground adjacent to the Soldiers' Monument.”

The opinion thus expressed has been confirmed by longer reflection. Section 1, chap. 45, of the City Ordinances, provides that the “Mayor and Aldermen shall appoint a suitable place or places in the Streets and Squares of the City of Worcester as a stand or stands for the measurement, weight, and sale of Hay, Straw, Wood, Bark, and Charcoal ;” &c., &c. Waiving the question why such provision should thus be made more than for cloth, or cattle ; the inquiry arises whether Salem Square is now, if it ever was, a “suitable place” ? It was certainly abstracted from the COMMON. Why not restore it and continue the Ornamental Kerb, along its Eastern boundary, from Park Street to the corner of Front ?

The Urinals, erected upon the COMMON by this COMMISSION, have not been decently used by a portion of the people for whose relief they were designed, and, being converted into a nuisance, will doubtless have to be removed. Yet it seems a pity ; not merely because their cost was considerable, but on account of the notorious fact that they inadequately meet a

necessity, of which no false delicacy should preclude the consideration ; and for which public policy and decency absolutely demand a remedy. It might almost be said, without exaggeration, that the need of a Public Hospital was not more imperative.

Once again :—durable Foot-Paths should be constructed, if slowly yet surely. Two-thirds of our population cross upon them at all hours of the day and night. Why intercept them in their hurried course, with a seemingly-endless pathway of mud ? Compelling them either to violate the rules of this COMMISSION by trampling over the lawns ; or the Commandments, by the use of all kinds of naughty language ?

Then, when the Eastern side of the COMMON has been completed, by the inclosure of a portion of Salem Square within the extended Kerb ; when the Brazen Image confronts Ursa Major ; when the *Jet d'Eau*, heretofore advised, has been constructed in the suitable position already assigned ; we may feel that the best has been accomplished that was possible upon so limited an area.

The acknowledgments of the COMMISSION are due to the accomplished City Engineer, C. H. M. Blake ; as to his Assistant, Gen. Percy Daniels, for much cordial co-operation, and for many valuable and wise suggestions.

The Shade Trees of the City are in their ordinary good condition. Some veterans were necessarily felled upon Main Street ; whence it is anticipated that the removal of all will, sooner or later, be demanded by the real or supposed exigencies of Trade. Yet, in the judgment of this COMMISSION, that will be found a mistaken advantage which, for the sake of glaring light admits torrid heat. It may not be the case in Worcester ; but, almost universally, the shady side of a street is sought for purposes of fashionable traffic. By this is meant the side that is the most sheltered in the afternoons of Summer ; when protection from the fervid rays of the sun is not to be despised, even by those engaged in the merchandise of Ice. The fashionable, by which is intended the Dry Goods, traffic, always has given direction to the business of a City ; and it will doubtless continue to do so. The noble Elms that are still suffered to adorn our principal

thoroughfare ; our sole thoroughfare until PARK AVENUE was substantially opened ; may be ruthlessly sacrificed. But the prediction is ventured, that Owners and Tenants alike will rue the facility with which they solicited, or consented, to such wantonness. This COMMISSION would agree to plant, or replant, the whole length of Main Street with thrifty Elms, engaging that they should live, but for the fatuity, (to call it nothing worse), which has suffered coal-cellars and other similar encroachments to be made by abutters upon the Public Easement. For as the community would have a right to fill the location with Elevated Tramways, in the Heavens above, within the limits of its location, be that four or six rods wide ; so, by parity of logic and law, it cannot be excluded from occupying the earth beneath with Gas or Water-pipes, and Sewers. Individuals, however, have always the advantage of the body-politic in a knowledge of what they want and in the determination to possess it at all risks. Another obstacle to the planting of this thoroughfare is, that no more upon Main Street than elsewhere, would owners of estates, or others, pay the slightest heed to that Municipal Ordinance which prohibits “the fastening of Animals to any Ornamental or Shade Tree, or to any fence or other thing erected for the protection of such Tree.”

It is true that complaint against offenders might be made by this COMMISSION, if it knew them. But then the COMMISSION scrupulously refrains from encroaching upon the functions of other Departments, of whom it might perchance be required by Ordinance “to prosecute all offenders with promptness and effect and use all lawful and proper means to secure convictions ;” also “to enforce and carry into effect all laws and city ordinances, and to be vigilant to detect and punish any breach thereof.”

It has been the aim of the COMMISSION, during the past year, to set out none but good, merchantable trees. The discouragement at seeing their trunks gnawed by horses, within a day or two of planting, may be imagined if not shared.

All vegetable growth must be fostered by stimulating the latent forces of the earth. Manure is not requisite to the Shade

as to the Fruit tree. As long ago as A. D., 1870, this COMMISSION, in its Report, remarked that :

“The entire bulk of Manure from the city stables is now delivered upon the Poor-Farm, being hauled some two (2) miles or more beyond the Common which is starving for lack of it. If the collection of offal were so systematized, as to be rendered available for the support of a Piggery upon that Farm, as it should be, an existing evil would be converted into a source of profit. Sufficient Pork would be gained for the supply of that meagre table, so strenuously insisted upon by the City Fathers, at their annual Dinner : and a portion of the manure from the city-stables might be spared, to stay the complete impoverishment of the Public Grounds.”

Time has made the evil more apparent by intensifying it. From that date to this, not a pound of civic manure has been applied to the PUBLIC GROUNDS,—simply because it was unattainable. Yet this COMMISSION has been compelled to hunt up that supply, from private stables, which should have been theirs by sheer right because the municipality was in possession of it. It is not believed that the city gains anything, in the long run, by smart attempts of one Department to make profit out of another. During the past season, a stock of coarse grass was cut upon the COMMON, and ELM PARK, that had no especial market value. It was presented to the Water Commissioner, at his request, relieving that officer from the necessity of purchasing its equivalent in bulk for purposes of packing. A paper debit and credit might have cut a figure, perhaps, but at what actual gain to the City ?

The Charter provides that the COMMISSION OF PUBLIC GROUNDS

“Shall lay out said Public Grounds, or such part thereof as they shall from time to time judge proper ; and it shall be the duty of said Commissioners, from time to time, as appropriations shall be made therefor by the City Council, to cause all necessary paths and avenues to be constructed therein, and to cause said Public Grounds to be planted and embellished with trees, as they shall think proper” ; &c., &c.

The task of reclaiming ELM PARK, too long deferred in years past, by those who consider it their whole duty to let a large and valuable property lie waste, because its improvement will not work itself out ; or, in other words, that the City gains by burying its talent in a napkin ; was commenced, in earnest, in February,

A. D., 1873, when, under a vote of the HONORABLE COUNCIL, the sum of Two Thousand Dollars (\$2,000.00) was authorized to be expended in affording labor to the unemployed and destitute. During that period of substantial relief to the poor, and of material aid to this COMMISSION, one of the sheets of Ornamental Water, or Pools, contemplated by this COMMISSION, was excavated. A vast amount of material was supplied, in this way, for filling low places ; the very excavation more than answering the expectations of the most sanguine as a means of drainage. It has presented attractions as a sheet of water, to the multitudes who have commenced to throng the PARK, on Holidays and pleasant evenings ; while to their children, of which the West Side is not entirely destitute if fecund to the verge of timidity, the navigation of miniature ships in Summer ; and the exhilaration of skating, conveniently and safely, as now ; are ample compensation.

Its complete success, as an ornament or a means of youthful enjoyment, has prompted the COMMISSION to the early completion of their original design. They work slowly, because the nature of the soil exacts it, and for the additional reason that they respect and share in the popular demand for economy. But the excavation of this second Pool, of different form and dimensions, should ensure that thorough drainage of the Southern section of the PARK, which could be achieved so well in no other way, if at all. The dirt derived therefrom will go far to perfect that gradual slope from the AVENUE which the eye requires for its satisfaction. There are, of course, minor details of plan and accomplishment : as, however they are fully complete within the conception of the COMMISSION, while their elaboration has not even been attempted, a specification of particulars would be worse than idle.

The amount of dirt to be derived from this second excavation was just the subject of reference. A part of it will be needed to replace the gravel that was dug out to put on the walks of the COMMON. The greater portion will supply the deficiency occasioned by the unwillingness or neglect of the Highway Department to deliver the street scrapings upon the terms that were invariable till within the past year. This COMMISSION has been wont to allow a credit of Twenty-Five Cents per load for that

curious conglomeration of animal droppings, back-hair, and hoop-skirts. If it sow the seeds of all ill-favored weeds, it yet served as filling. At a fair estimate, the teams would average ten (10) loads per diem. Assuming then the gross charge to the City, of each team, to be Five Dollars per diem; and they could be and were hired of private contractors, at that rate, throughout the year; it will be seen that the allowance by this COMMISSION covered one-half the whole cost of the team. Bear ever in mind that the City has, and must have, those teams. That, if the streets are cleaned, the scrapings must be carted away. Why, not then transport them to the PUBLIC GROUNDS of the City, where they would answer some purpose; instead of hauling them a mile to be dumped in the Municipal Barn Yard,—awaiting a purchaser; meanwhile festering, and adding another to the savory smells of that section. Why, in fact, any such absolute tomfoolery! Of what net profit to transfer from one pocket to the other? Nay,—unless a fallacy underlies all mechanical principles, would there not be a real, if not evident, loss from friction? And still this COMMISSION is able to dispute its own argument. For, learning that if it would not buy for an unreasonable price, what it ought to get for nothing? it proved itself, as usual, equal to the emergency. It could excavate and maintain a debit and credit account with itself; the beauty of the transaction being, and most likely the sole instance on record, that neither party to it could possibly lose.

But! and the conundrum offers itself to the Board of Trade;—wherefore should not the City of Worcester deliver to itself that which belongs to itself, of which it assumes to be the common carrier, and which should be left (where this COMMISSION will show, as for five years past), in the place to which it must do most good!

As stated in the last Annual Report, Twenty-Five Hundred (2500) lineal yards of Foot paths, or Walks, have been constructed: or One and Forty-Two Hundredths ($1\frac{42}{100}$) Miles. Where not prevented by insuperable obstacles, those Paths were staked out and worked to a width of Twelve (12) Feet. One, not essential to the plan of the COMMISSION, will be obliterated in fact, as already in purpose: and another, that was contemplated from

the outset, will afford a pleasant substitute and just about maintain the measurement. A very large proportion of those Paths that were constructed have been covered with a superior gravel, dug from the upland on the Eastern side of the PARK, where it was doubtless left by the driven waters, with whose deposits the whole Western Valley of the City is everywhere underlain. And a most happy circumstance it has proved. For there can scarcely a limit be put to the cost that would have fallen upon the COMMISSION, had it been obliged to purchase, by the load, that which the labor of two men, otherwise unemployed, sufficed to procure during a few brief weeks of Winter. A plenty remains, where the first was found, to fulfil every reasonable and present wish of the COMMISSION. Properly husbanded, and timely replaced with any substitute whose quality shall suffice; there need be no apprehension of the trouble that is chronic upon the COMMON. The soil will be free enough: *let it be recorded!*

The COMMISSION has been wont to derive an Annual Revenue from the letting of portions of ELM PARK for the uses of the Circus or Menagerie. That source of revenue is lost to it forever. The last Circus was tolerated upon the ground in the early Spring; but the rapid progress of improvement precluded all thought of granting similar permission to another. Upon the absolute refusal of a second application, the Chairman was finally induced to suffer the exhibition to be held upon his own land, with the express condition that the fee for license should be paid to the City Treasury, for the benefit of this COMMISSION. Which so happened. Now the PUBLIC GROUNDS need more money than they are likely to get. The Public Library, which is one form of instruction, receives a generous appropriation and gets, in addition, the Dog-Fund. Yet dogs do more harm upon the PUBLIC GROUNDS, to the sward as well as to the shrubs and trees, in questionable and unmentionable ways, than will ever be repaired by the votaries of mere literature. Is it asking too much then, when this COMMISSION requests that the Fees for Marriage-Licenses and for Births be appropriated to its uses? The injury done to the lawns is chiefly attributable to erosion which, curiously enough, is caused by the devotees of Eros; whose complement it

is although in no sense his denominative. One-half of the court-ing, in the City, is commenced or consummated upon the PUBLIC GROUNDS. The premises conceded, is not the conclusion inevitable! Why should not the profit enure to this COMMISSION of that relation which it has done so much to invite and render charming?

The COMMISSION OF PUBLIC GROUNDS may have transcended its province, in former years: but, if so, the offence was condoned by the People. Partaking in the general prosperity, as sensible of the common depression, its members have, and can have, neither intent nor motive but to promote the better welfare of the community. They have been taunted with being "schemers" by some whose loftiest ambition and sole profession in life, is, to bear false witness for political effect. They may dream dreams and see visions: but, sleeping or waking, their only purpose and exclusive aim has been, as it will continue to be, the further advancement of the Municipality. They may not be old enough to compare notes with that senile profundity which discourses learnedly upon topics, whereof as no knowledge exists no contradiction need be feared; which can trace *Prae-Historia* down through Chaos to the Primeval Man; whose dull omniscience grows even more obscure at the merest allusion to a mythical and submerged Atlantis. In such matters, they agree with the Poet, happy in their ignorance. But they prefer, in this Nineteenth Century, in full accord with the world that breathes and moves around them, to combine Beauty with Utility, alike as private citizens or unsalaried officials. If allowed the choice, they would much rather reside in Athens than Sparta. Their open and unqualified preference is for development:—believing that the world has been continually advancing—never retrograding—from the Age of Iron to that of Gold. Pertinent to which are the subjoined remarks of one who knew whereof he wrote, writing therefore to the point:—

"Cities arise from the necessities of commerce or manufactures, or from being selected as the seats of political power: but their expansion is not limited by these causes. Their population is swollen by persons who are not engaged in buying or selling, or in labor of any kind, or in affairs, but who are influenced in their residence by considerations of a wholly different kind. Chief among them ought to be good laws, good order, the safety of person

and property; and healthiness of location as affected by climate, water supply, and drainage: but it is not certain that men are not quite as much attracted by the pleasures as by the solid advantages of Cities. Paris is believed to owe half its population to its natural and artificial means of enjoyment; although it is in addition one of the best governed cities in the world in all details of municipal administration. In libraries and collections of works of Art American Cities can hardly expect to vie, at present, with those of Europe: but in public parks, gardens and drives they may maintain an easy superiority; and this is an advantage which they are generally turning to account."

Which is all as true as it is admirably stated.

Possessed of similar views, and looking forward to the future growth of Worcester, the COMMISSION OF PUBLIC GROUNDS has, for years past, recommended the construction of a broad AVENUE, which should environ the City, supplying facilities for intercommunication between the extremities, and opening up the contiguous country for settlement or much needed reclamation from briar or swamp; inducing the street loafer to become an independent yeoman, and attracting, by the simple aspect of rural loveliness, the permanent sojourn of the chance wayfarer.

"So broad as to admit of adequate and grateful shade to ample footpaths; so thoroughly built as to be proof alike against autumnal frost or vernal flood; a convenience for the loaded team and an attraction for the pleasure carriage: wooing occupation of hundreds of charming dells and nooks by its ruthless exposure of rustic beauty, thereby benefiting individuals and augmenting the general valuation; a measure which commends itself in proportion as it is considered: one which this Commission will advocate in season and out of season, living or dying, in the hope and faith of its ultimate consummation.

The plan and completion of such Avenue, plainly outlined to this Commission as it has long been, would of course be a work of time. It would aim to take advantage of existing roads, whenever practicable; widening them to an inflexible uniform limit; straightening their course here and introducing sweeping curves there; following the general trend of the foot-hills whose lines of circumvallation describe an irregular quadrilateral, whereof the Military Academy and the City Farm, the Quinsigamond Iron Works and the Davis Cottage should constitute the salient and re-entering angles, Coe's Reservoir and the Lake the *points d'appui et resistance*.

Much of this comprehensive project has been accomplished,

thanks to a happy audacity* that has been unjustly held up to public odium as almost criminal. More remains to be achieved. But the ultimate completion of the whole is as certain as that this energetic and still wealthy community will not always rest supine. Because we have met with loss, shall we also lose hope? Because trade is dull, shall it never recover, after it has sloughed off those whose sole capital was a false pretence! No! the measures,—“schemes” if you prefer, that met with unanimous approval when first suggested, are the same now as then. Men may have altered, although in some cases it required nut-galls to detect the change. Affairs, whether public or private, may not wear so roseate hues. Nevertheless no idea, that is based upon truth and has no other motive than honesty, shall ever die. It is true that what was politic yesterday may not be expedient to-day. Although of the wisdom of finishing the AVENUE as far as Webster Square, (so little remaining to be done), now that it could be accomplished so cheaply, the COMMISSION has the most undoubting conviction.

One thing must not be overlooked. The COMMISSION, in whatever recommendations it made originally, had not the “Betterment Law” in mind. For such forgetfulness it must crave pardon; although had it even been fresh in recollection, these Reports would never have advised the application of a method of extortion so grossly unjust. Almost the worst legacy of those evil times, when everything was rank with a seeming prosperity; when credit was illimitable, and there should be pay-day no more forever! When a man *would take* water if he could get it; *must have* a side-walk; and, as he went home at night, tumbled into an open trench excavated through the ledge, that day, to furnish sewerage for his dwelling. Oh! were not those flush times! No sceptics, denouncing this wild “scheme” or repudiating that unsound measure,—but all voting together; (saving possibly a wretched minority;) all in the same boat, floating with the current;—all economists and—spendthrifts! everything lovely and the goose getting plucked!

* Audacem et tenacem propositi virum.

“Down the river did glide, with wind and with tide,
 A pig with vast celerity;
 And the Devil looked wise as he saw how the while
 It cut it's own throat. ‘There!’ quoth he with a smile,
 ‘Goes England’s (?) commercial prosperity.’”

And so of every other plan of public improvement, suggested by the COMMISSION OF PUBLIC GROUNDS, for the combined purposes of promoting the growth and enhancing the appearance of Worcester: each and all of the arguments in their behalf, yesterday, hold valid to-day and are certain of ultimate realization. Sooner or later, the oarsman upon the LAKE shall row, if he choose, through the series of inverted arches that will pierce the obstructing causeway of the present day; restoring the enjoyment of that beautiful sheet of water, whose lustre, like that of a precious gem, may be defaced but not wholly marred. So may we obtain that WATER-PARK on the East,—assigned to us by nature; but which Man, in his haste and waste, has striven his uttermost to despoil.

“*Après moi le déluge!*” exclaimed the wily Metternich, as the waves of Revolution arose around castle and throne. “The deluge will come, but not in my day.” Nevertheless the Revolution did not await his convenience, but came in its own good time; and the aged statesman, “standing not upon the order of his going, but going at once,” found himself a refugee upon English soil. “The wind bloweth where it listeth:” and some of us who are in the way of experiencing its full force have a keen perception of at least one Scriptural truth. There is a hose carriage at the head of John Street, and a *cul de sac* at its foot. Another hose carriage guards Pleasant Street, with hose enough to reach, perhaps, six hundred (600) feet. But “the wind bloweth where it listeth” and will not hush its hoarse roar at the call of any foreman. The reasons why a Reservoir should occupy (ornamenting) the top of NEWTON HILL are suggested, whenever chimneys are blown clear from a roof, or a flagstaff snaps in twain. Almost before your hose-carriage could pass its threshold, the Fire would be beyond control. For it was not within the thought of this COMMISSION to urge the enlistment of Gravity to fight one of your polite, gentlemanly flames, which blaze up in a calm,

moonlight night, careful not to burn too fiercely for the capacity of a Babcock. But rather of that other kind, controllable only at the start, furious and devastating, "rolling up like a scroll" everything in their path and with which nothing but water, *already delivered on the spot by gravity*, can by any possibility cope. It is the capital destroyed—absolutely, irrevocably blotted from existence—at Portland, Chicago, and Boston, that has caused the paralysis of business, more than any or all other causes. A dead loss; for, at such crises, Insurance fails, and did it not, would simply transfer from the pocket of one man to that of another. That lesson, at least, should be neither new nor strange to the people of Worcester, who can recollect that the People's and Bay State Companies once lived and that the Merchants & Farmers has only not died. But,—“after me the deluge!” We have an “efficient Fire Department,” and — no such destructive conflagration has yet occurred! *Music!*

Economy, whether among individuals or nations, is an exceeding virtue. But to conclude, as other preachers commence, with a text,—What says EDMUND BURKE?

“Parsimony is not economy. Expense, and great expense, may be an essential part in true economy, which is a distributive virtue, and consists not in saving, but in selection. Parsimony requires no providence, no sagacity, no power of combination, no comparison, no judgment. Mere instinct, and that not an instinct of the noblest kind, may produce this false economy in perfection. The other economy has larger views. It demands a discriminating judgment, and a fair, sagacious mind.”

All which is respectfully submitted: for and in behalf of the Commission,

by

EDWARD WINSLOW LINCOLN,

Chairman.

Worcester, Mass., January 27th,
A. D., 1876.

REPORT OF THE CITY MARSHAL.

CITY MARSHAL'S OFFICE,

WORCESTER, MASS., NOV. 30, 1875.

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

GENTLEMEN :—In obedience to the requirements of the City Ordinance, and the practice of former years, I have the honor of again presenting for your consideration, the doings and general condition of the Police Department for the financial year ending Nov. 30th, 1875, together with such remarks and suggestions, as to me seem proper, for maintaining and improving the same.

The force at present consists of fifty men, and in addition to that number, two men have been detailed from the force of "Special Officers" and assigned to regular beats, for the reason that the services of a larger force are imperatively demanded, and I hope and trust that the wisdom of your Honorable Body will recognize the want, and place at least *ten more men* in this department.

The work of the past year has been one of great variety and usefulness, and although fewer arrests have been made than in some of the previous years, yet its labors have been none the less ; and as the City expands, more territory is to be covered by Patrolmen, and this, together with the general stagnation in

all branches of industry, which has turned loose and unemployed so large a number of men, women, and children, has made the Police business a year of uncommon activity.

The force as now organized comprises one City Marshal, two Assistant City Marshals, one Captain of Police, one Detective (detailed as such), and forty-five Patrolmen.

The Office of Captain of Day Police has been discontinued during the year, and the duties devolving upon that officer have been discharged by the Assistant Marshals, thereby giving us one more working man, and as the result has been entirely satisfactory, I would recommend that the same course be continued.

There has been but one change made in the department, and the maximum number has been maintained during the entire year; and as a partial result of our labors, I would respectfully call your attention to the following tables: The whole number of arrests have been Two Thousand, Two Hundred and Ninety-Eight (2298), or Seven Hundred and Sixty-Four less than in 1873, and Sixty-Two less than in 1874.

The following are the arrests made:—

Number of males,	2081	Adults,	1917
Females,	217	Minors,	381
Foreigners,	1568	Residents,	1700
Americans,	730	Non-Residents,	598

Number discharged without Complaint,	4
Number committed to the House of Correction and other Reformatory Institutions,	859
Number reported married,	1015
Number reported single,	1283

The nativity of the above subjects were as follows, viz:

Born in Ireland,	1274	Italy,	8
America,	723	Russia,	3
“ (colored),	50	Sweden,	2
Canada,	89	Belgium,	2
England,	71	Africa,	2
Scotland,	27	Norway,	1
Germany,	21	Wales,	1
British America,	15		
France,	8	Total,	2298

The offences for which the arrests were made, include for

Assault and battery,	187	Highway robbery,	2
Assault on officer,	12	Insane,	19
Assault with dangerous weapon,	4	Interfering with officers,	2
Assault with intent to kill,	1	Indecent language,	2
Assault with intent to ravish,	1	Indecent exposure of person,	1
Assault with intent to rob,	1	Indecent assault,	1
Adultery,	13	Idle and disorderly person,	1
Assuming to be an officer,	1	Keeping liquor without license,	48
Aiding escape from State Prison,	1	Keeping dog without license,	10
Breaking and entering,	11	Keeping house of ill-fame,	1
Burglary,	6	Larceny,	164
Bastardy,	6	Larceny from person,	6
Breaking glass,	6	Larceny from building,	5
Breaking street lanterns,	4	Lewdness,	6
Burning building,	1	Malicious mischief,	8
Bestiality,	1	Manslaughter,	2
Common drunkard,	54	Murder,	1
Contempt of court,	8	Night walker,	2
Cruelty to animals,	6	Noisy and disorderly house,	2
Common railer and brawler,	3	Open shop on Lord's day,	1
Conveying liquor to prisoner,	3	Peddling without license,	4
Common nuisance,	2	Refusing railroad fare,	12
Circulating obscene prints,	2	Run away from Reform School,	6
Carrying concealed weapon,	1	Run away from home,	4
Charging excessive hack fare,	1	Run away from State Alms-	
Drunkenness,	1213	house,	3
Drunkenness, 2d offence,	116	Receiving stolen goods,	3
Disturbing the peace,	90	Rape,	1
Driving away team,	6	Stubborn and disobedient,	9
Doing business on Lord's day,	5	Suspicious persons,	7
Disturbing public school,	4	Single sale of liquor,	5
Defrauding boarding house,	3	Selling mortgaged property,	1
Defrauding hotel,	2	Trespass,	20
Dealing in junk without license,	1	Truancy,	16
Embezzlement,	5	Threatening,	7
Fornication,	20	Vagrancy,	43
False pretence,	8	Violation of City Ordinances,	42
Fast driving,	3	Violation of License Law,	4
Forgery,	1		
Gaming on Lord's day,	15	Total,	2,298

The various trades, professions and occupations of the persons arrested, are as follows, viz :—

Agents,	16	Boot siders,	16
Artist,	1	Boot clicks,	9
Axe maker,	1	Boot treers,	5
Boot makers,	247	Boot crimpers,	3
Boiler makers,	5	Bar tenders,	5
Box makers,	3	Book keepers,	4
Basket maker,	1	Book binder,	1
Blacksmiths,	46	Carpenters,	48
Brakemen,	23	Clerks,	18
Beggars,	19	Cigar makers,	13
Bakers,	18	Courtezans,	11
Barbers,	16	Curriers,	10
Butchers,	13	Carders,	9

Cooks,	5	Masons,	27
Core makers,	5	Merchants,	5
Cabinet makers,	4	Musicians,	5
Chair makers,	3	Manufacturers,	4
Carriage painters,	2	Melters,	3
Card makers,	2	Marble cutters,	3
Contractors,	2	Milliner,	1
Clairvoyants,	2	Night porter,	1
Coachmen,	2	Overseers,	2
Carriage maker,	1	Painters,	81
Collector,	1	Printers,	26
Comb maker,	1	Peddlers,	18
Civil engineer,	1	Plasterers,	11
Domestics,	62	Plumbers,	8
Dyers,	7	Polishers,	5
Doctors,	3	Puddlers,	4
Dress makers,	3	Paper hangers,	3
Druggists,	2	Pawn brokers,	3
Drummers,	2	Photographer,	1
Die sinker,	1	Pickpocket,	1
Detective,	1	Rag pickers,	3
Engineers,	8	Real estate broker,	1
Engravers,	2	Rope maker,	1
Farmers,	72	Rubber maker,	1
File cutters,	6	School boys,	131
Finishers,	5	School girls,	11
Firemen,	4	Saloon keepers,	53
Flagman,	1	Spinners,	20
Fisherman,	1	Stone cutters,	10
Foreman,	1	Stone masons,	8
Gunsmiths,	4	Sailors,	6
Grocers,	2	Slaters,	4
Grinders,	2	Screw cutters,	3
Gardeners,	2	Stable keepers,	2
Gentlemen,	2	Silver plater,	1
Gambler,	1	Saddler,	1
Gas fitter,	1	Switch tender,	1
Housekeepers,	101	Tailors,	27
Hostlers,	30	Truckmen,	19
Hackmen,	10	Tramps,	14
Hod carriers,	7	Thieves,	11
Hotel keepers,	3	Teamsters,	10
Harness makers,	3	Tin smiths,	10
Iron rollers,	8	Tinkers,	3
Junk dealers,	7	Tailoresses,	2
Japanner,	1	Upholsterers,	4
Janitor,	1	Vinegar maker,	1
Laborers,	485	Varnisher,	1
Loafers,	70	Weavers,	12
Lathers,	4	Wire drawers,	10
Last makers,	2	Wood turners,	2
Lamplighter,	1	Waiter girls,	2
Lumber dealer,	1	Wheelwright,	1
Lawyer,	1	Wool sorter,	1
Machinists,	126	Wood carver,	1
Moulders,	47	Watchman,	1

Total,

2,298

The amount of property taken from, and restored to, the above is \$6,511.19.

The total expenses of the Department for the year 1875 have been as follows, viz :—

Salary of Marshal and assistants,	\$5,006 38
Pay roll of Police,	47,535 61
Stationery, telegrams, &c.,	116 06
Brooms, matches, &c.,	17 28
Care of office and cells,	300 00
Cleaning and repairing station,	131 08
Blank books, advertising, &c.	92 80
Food for prisoners and lodgers,	149 50
Cloth, buttons and badges,	973 41
Furniture and repairing same,	66 43
Washing bedding and towels,	18 76
Photographs of prisoners,	6 75
Ice,	12 33
Total,	<hr/> \$54,426 39

The receipts in favor of the Department for the same time are as follows, viz :—

Appropriation,	\$45,000 00
Officers' fees from courts for 1874,	7,299 00
Balance on appropriation for 1874,	1,687 75
Received for cloth,	880 88
Received for extra services of officers,	91 75
Received for use of Lock-up,	3 00
Total,	<hr/> \$54,962 38
Balance on hand December 1, 1875,	\$535 99
Making the net cost of the Department for the year,	\$46,151 76

In showing you the cost of the department, I am proud to exhibit the same in comparison with last year, or any previous years. At the commencement of 1875 the Station House was found to be in the worst possible condition, and a considerable outlay was imposed upon this Administration to put the same in order, as was also the case with the offices. No records for the use of the department, had been provided, as is customary, and this, with stationery, furniture, &c., which was necessary, rendered the bills for the first quarter much in excess of those succeeding.

There has been no suspensions of any part of the force during the year, but on the contrary, two extra men have been employed the greater part of the year, and I would recommend that the appropriation for the next year be such as to enable the use of at least sixty men. I am assured by several of our most prominent men, and heaviest tax-payers, that no fault could be found with this arrangement, but that justice and economy demand as much.

In connection herewith, I will state that the earnings of the department during the year just passed, amounts to \$6,073.15, viz :

Fees on Warrants served by Assistant Marshals,	\$4,566 00
Witness Fees of officers,	1,412 40
Extra Services of Police,	91 75
Received for use of Lock-up,	3 00
Total,	<hr/> \$6,073 15

DRUNKENNESS AND THE LICENSE LAW.

During the year considerable anxiety has been manifested and many discussions had, in relation to the effects of the new license law, and its bearings on the crime of drunkenness.

The following tables will show the number of arrests for each month of the year 1875, the number of arrests for each month for the past three years, and the comparative number of arrests for *drunkenness* for the same time.

	1875.	1874.	1873.
January,	132	145	237
February,	138	153	264
March,	204	191	305
April,	181	175	254
May,	193	199	230
June,	202	194	278
July,	260	195	276
August,	208	283	262
September,	188	237	256
October,	255	263	275
November,	180	182	218
December,	157	157	193
Total,	<hr/> 2,298	<hr/> 2,374	<hr/> 3,048

The arrests for drunkenness alone, during this period, are as follows :

	1873.	1874.	1875.
January,	115	89	83
February,	136	91	71
March,	160	113	110
April,	130	97	109
May,	139	125	123
June,	130	111	104
July,	150	133	121
August,	127	138	88
September,	106	140	84
October,	149	157	116
November,	126	119	89
December,	111	107	84
Total,	1,579	1,420	1,182

Thus it will be seen that the arrests for drunkenness in 1875 were two hundred and thirty-eight less than in 1874, while the number of criminals arrested was only sixty-two less; and in 1874 the arrests for drunkenness were only one hundred and fifty-nine less than in 1873, while the number of criminals arrested was *seven hundred and sixty-four* less than in 1873.

Two of these years were under the Prohibitory law, after it had been in use long enough to be in good working order; the other, under the license law, when it had just become a law, and consequently is not as perfect in its provisions and operations as it may become.

While I profess to be a temperance man, and probably despise the liquor traffic as heartily as any one, I am fully convinced that the only way that the sale and use of intoxicating liquors can be regulated is through the agency of a strict license law, and a *strict enforcement of that law*.

We are at present laboring under difficulties in regard to its operations, for the following reasons: 1st, The Law in itself is very imperfect; 2d, So many worthless and irresponsible persons engaged in the business under the prohibitory law, persons who were willing to come into court about once a month and pay the inevitable "ten dollars and costs," that it must take time to get these weeded out; and, 3d, I find it next to impossible to get the cases through the various channels in a manner

creditable to the welfare of the city, or in a manner tending to suppress the illegal sale or keeping.

The Hon. Hartley Williams, Judge of the Central District Court, has endeavored to make the law a success, so far as confining the sale to parties holding the required license is concerned. He has invariably imposed sentences which *must* stop the business, and could his decisions have been sustained at the Superior Court, much less trouble and fewer cases would have come before us. In punishing offenders of this class, as in all other criminal cases, I believe that even-handed justice should be dealt out. The law is intended to be a terror to evil doers, and its penalties *should* inflexibly follow its violation. The *certainly* of punishment has more to do with the prevention of crime than any other agency, and when open violators of the law know that their sins will be winked at, or their breach be healed by a plaster of "greenbacks," then the flood gates will be found open, and the violation of the laws be a pleasant pastime.

I have yet to learn what object is to be gained, that shall be a lasting good to any community, by trading with crime or criminals; and certainly, a sentence that is no burden to the offender, is no penalty at all, and is not calculated to bring respect for the law or its officers.

But three of the cases, since this law came into effect, have received the same sentence awarded at our District Court, and those where light fines had been imposed. Several of the cases have been defaulted, and there allowed to rest, and the remainder were settled up by paying from one to three hundred dollars less than the original sentences.

In connection herewith, I would say that the proprietors of the Hotels (with one exception), and the respectable class of liquor dealers generally, have very satisfactorily complied with the requirements of the law, and, apparently, co-operate with the officers in the enforcement of the same. Still, there is much dissatisfaction felt among the radical friends of temperance on the one hand, and the radical rum element on the other; one extreme being satisfied with nothing less than the entire extermination of all intoxicants; the other being satisfied with

nothing less than free rum. The good time for either of which, I fear, is a long way ahead; though it should not be forgotten that there is more zeal and energy displayed by those whose source of profit and political power is endangered, than by those who have principle only at stake.

The search and seizure clause of the old law has been very unwisely left out of the present one, thereby giving a most effectual bar to the officers, in the rigid enforcement of the law. An officer should have the right to search wherever he has good reason to believe that the evil exists, and seizing whatever liquors may be found.

It is not hard to detect the places where the article is kept and sold, even though it be in the privacy of the kitchen or bed-room. Yet, as the law now stands, an officer, in attempting to enforce the same, would become a trespasser, and suffer the consequences.

For this reason, the parties holding licenses, of a certain class, are not as guarded as they would otherwise be were they the only ones that could deal in the article.

Much credit is due the patrolmen for the zeal they have manifested in the matter, and the faithful manner in which they have followed to the Courts this class of offenders. I think, as the business now stands, it is as good as could be expected under the experimentings of a new law.

That there is less liquor drank than in former years the facts, as found in the tabular statements of the comparative number of arrests for drunkenness, will demonstrate; and although I am *not* fully satisfied with the doings of *all* the parties holding licenses, I look forward to the completion of their first year's engagement, as being their last; and believe that as this branch of business always has been carried on to a greater or lesser extent, that comparatively honest and decent men can be found to take the places of those of whom I complain.

Should the law be continued in force for one or more years, I would recommend that no person be granted a license whose bar-room and kitchen were under the same roof, or to one who has not that respect for the observance of the Lord's Day that

shall deter him from engaging in his business on that day. This is now done to some extent by unscrupulous parties, who close up their shops, and, through the agency of *spotters*, make their homes and families a disgrace to the neighborhood in which they live.

I would also recommend that a sufficient number of officers be appointed for this business, to look after all licensed places, and be able to report at any time the exact condition of every place licensed.

It would be much more effectually done than by leaving it for every one.

TRAMPS, OR LODGERS.

The whole number of this class of our annual visitors who have been provided with food and lodgings during the year is 4,225; not so large a number as in the two previous years, yet much larger than it should be. And, perhaps, the only way that the deficiency in numbers can be accounted for is by the overcrowded condition of our Houses of Correction and State institutions.

During the session of our last Legislature, a law was passed providing that tramps might be made to work until eleven o'clock in the forenoon of the day following their application for food and lodgings. In this City, it has been found to be entirely impracticable on account of having no business for them. The Street Commissioner would not allow them to be employed upon the highways, claiming that what work he had should be done by the citizens who belong here; and in order to put them at any other employment would require a Police detail to keep them at work, greater than our entire force. Some plan has yet to be devised before we shall be rid of this nuisance, for *nuisance* it is, when so many stout, able-bodied men prefer to get a living in this manner, rather than follow some honorable calling! And this much is certain, that *three-fourths* of the class known as "tramps" are tramps from choice,

of no particular race or color, but all of one creed, viz., *haters of work*. They are an army of shiftless vagabonds, who, apparently, having heard that the world owes them a living, are going in search of it. They usually hail from Boston, New York, or some other large city, and spend their time in traveling between these points. It not unfrequently happens that memorandums are found upon their persons, giving the names of cities and towns where the sympathy of the inhabitants overcome their good judgment, and, consequently, deal with them better than they deserve. These records are probably used in their conventions for the good of the fraternity generally.

As this City has for some time been considering the plan of introducing Water from Lake Quinsigamond, I would suggest that a Tread-Mill, capable of operating a pump of sufficient capacity to supply the City with Water from the Lake, be put in operation, and thus give us the benefit of the Tramp Law; or, as 19 out of every 20 are able-bodied men under the age of 40 years, why not open a recruiting office and enlist them to fight the Indians; and, if they *won't fight*, leave them to their tender care.

I know that there are many who sympathize with this class, as well as criminals, but where there is one deserving the same there are ten who have forfeited all such claims; and, here, I will say that it is easy to draw the dividing line between the two. The simon-pure tramp is he who voluntarily leaves home rather than earn the bread necessary to keep him alive, and the more effectually to hide his identity, changes his name as often as his residence.

It is to be hoped that our incoming Legislature will devise some method of regulating this evil; for very many of our deserving poor shrink from the thought of these associates, and live on and suffer in silence rather than ask for charity, simply because the authorities are imposed upon by this class of sturdy beggars.

FOOD FOR LODGERS.

Some four years ago, by some arrangement, the entire expense of providing food for lodgers, as well as criminals, was

transferred from the Pauper account to that of the Police; but why, or by whose authority, I am not able to ascertain. I see no reason why this custom should exist, or the item of expenditure for furniture for the Station House, as an appropriation is annually made for these under the head of "Appropriations for the City Hall building"; and, if necessary, I would ask that an order be passed placing these expenses where they properly belong.

THE DOG LAW.

Much uneasiness is manifest in regard to the number of dogs running at large in our streets, and although no harm has been done to persons or property on account of the same, yet the surplus of dogs is a nuisance, and should be abated. On the 8th of July last, His Honor the Mayor, served upon me a warrant in conformity with the Dog Law, and as a result I have to report sixty-seven dogs killed and buried, and ten prosecutions for keeping unlicensed dogs. It would be a great help to the officers in the discharge of this duty, if the law should be changed so as to correspond with that in Suffolk County. In the City of Boston the dogs are licensed from the office of the Chief of Police, and consequently the number of dogs, their owners, &c., &c., are more readily found than can be the case here. I have been unable to obtain a list of licensed dogs for this, or previous years, and consequently several complaints made against parties for keeping, in violation of the law, have fell through, by finding after the person was in court, that the dog had been licensed in the name of some child or other member of the family.

NEWS-BOYS, ETC.

I would also recommend the licensing of all News-boys, and Boot-blacks, and assigning them places for their business. This practice has been found to be necessary in Boston and

other places, and is here recommended for the following reasons : That the street corners and entrances to our public buildings can be freed from the annoyance of a crowd of these boys, who, instead of quietly pursuing their avocations, collect in squads, and with their youthful pranks and incessant cries, are anything but pleasant. Again, the licensing of these boys would place them more completely under the control of the Police and Truant officers. The only qualification necessary for the above favor, being that of attending to their business in decency and in order.

MISCELLANEOUS DUTIES.

When we see announced in the papers that the several notices from the offices of the City Treasurer, Water Registrar, City Clerk, &c., have been committed to the hands of the police for distribution, that is usually all that is thought about the matter ; but should we step into those offices and see that those notices were counted by the thousands, a better realization of the matter would be had. Again, but few persons are aware of the care and fidelity with which the most of the officers discharge their duties, working while others are sleeping, and caring for the lives and property of persons who themselves carelessly expose and endanger the same. For instance, during the months of September and October, sixty-four stores were found unlocked ; and not unfrequently, valuable goods, displayed as samples during the day, are forgotten by their owners, and are conveyed to a place of safety by the officers ; and as will be shown by the accompanying statement, that various matters of more or less importance are receiving their constant attention.

No. of Disturbances suppressed,	286
“ Defective streets reported,	44
“ Defective sidewalks reported,	29
“ Defective water pipes reported,	13
“ Dogs destroyed,	67
“ Fire alarms given,	15
“ Fires extinguished without alarm,	5

Value of Goods found exposed and restored,	\$946 00
No. of Intoxicated persons sent home,	127
“ Injured persons cared for,	17
“ Lost children restored to friends,	78
“ Street lights not burning at 9 P. M.,	162
“ Lights hung in dangerous places,	50
“ Nuisances reported,	15
“ Notices served,	17,481
“ Stores found open,	265
“ Stores found broken open,	3
“ Teams put up and cared for,	79
Value of stolen property recovered,	\$8,599 00

In regard to the recovery of stolen property much credit is due to officer Ezra Churchill, whose sagacity and energy is fast placing him among the best Detective Officers of the day. Not only at home but abroad is his ability recognized, and the City is to be congratulated upon having this man in her Police Department.

In conclusion I would say that the force have worked together in a manner that deserves your approbation. No jealousies have at any time arisen, but as one man their aim has been the public good.

His Honor the Mayor has, as in the past, been keenly alive to the welfare of this department, and for his wise counsels and generous support I am under the deepest obligations. To Assistant Marshals Dyson and McFarland, and to Capt. Atkinson, I am under obligations which words cannot express. Their long experience and apt qualifications for their business, have made them invaluable to the city. These, in connection with the rank and file of the department, who have so generously given me their support, and have, in season and out of season, promptly responded to every call, and cheerfully complied with all orders given, has made the business of the year one which I shall be pleased to compare with previous years, and the standing of the force I consider superior to any which I have known. Although it has been a year of uncommon activity in our line, we have experienced no serious outbreaks of violence or disorder, neither have we suffered at the hands of the burglar or assassin,

but the persons and property of our entire community have been so guarded that the crimes and atrocities, which have filled our papers with sensational articles, and the hearts of many with fear and dread, have been to us only stories to be read.

Hoping and trusting that the general usefulness and importance of the Worcester Police Department will continue to be recognized and appreciated, I respectfully submit this, my second annual report of the same.

W. ANSEL WASHBURN,

City Marshal.

ANNUAL REPORT

OF THE

BOARD OF OVERSEERS OF THE POOR.

Gentlemen of the City Council:—

IN accordance with the requirements of the City Ordinances, we present the Annual Report of this Board, and respectfully call your attention to the growing importance of this Department of our municipal obligations, in which you will not only observe that the poor are always with us, but that at the present time we have them in increased numbers. This may be accounted for by the general stagnation of business, which makes the only resource of the poor man—his labor—without demand; and the act of the Legislature, at the session of 1874, being the most important alteration of the settlement laws which has been made for many years, by which nearly all who had been State Paupers were settled on the cities and towns where they at that time had their domicile.

The number so settled in this City, who have made application and received aid during the past year, is ninety-six families, consisting of three hundred and eighty members, of whom one hundred and eighty-four were males and one hundred and ninety-six females.

The second section of this law, which gives a settlement to any woman of the age of twenty-one years, who resides in any place for five consecutive years, without receiving aid, presents a difficulty

in administration not easily understood by those unacquainted with the Pauper Laws, as a large number of the applicants are so uneducated that it is nearly impossible, where they reside in the cities or large towns, to trace them for that length of time with any degree of certainty, and they themselves are frequently unable to decide within a year or two how long they have lived in any place, being so accustomed to move about.

The act also, to a certain extent, defeats its own object, by depriving many who should be best entitled to them, of its advantages; as any respectable poor widow or other lone woman who has filled its requirements, by living five or more years in any place, but who has during that time been aided to a small amount, is thereby cut off from gaining a settlement; while those who have led a vicious, wanton or drunken life, if they have only been able to provide for themselves for the five years, have the full benefit of the law, and are entitled to be supported by the Municipality wherein they reside, while, in the first mentioned case, if they cannot support themselves, they must be sent away to the State Alms-House; and as there are no municipal records whereby it can be shown for a certainty how long females have lived in any town, it is likely to be a fruitful source of litigation in many instances between different towns, and make more difficult of adjustment the Pauper Laws of this State, which were far from satisfactory before.

Another law was passed in 1875, by which the annual reports of the Overseers of the Poor of the several cities and towns to the State Board, which have heretofore been made in the month of October, shall hereafter be made on the 31st day of March.

This will reduce the labor of the overseers of all the towns, as their annual town and State reports will then be the same, thereby ensuring greater accuracy; but the cities where the greater portion of paupers are congregated, will by the same cause have their labors augmented, as they are compelled to divide their reports, one part being for one-half of one year, and the other, half of another year.

The law in relation to vagrants or tramps passed last year, owing to its coming more particularly under the control of the

Police Force than of the Poor Department, has not been put in force to any extent in this City, and we have not learned that it has accomplished what was anticipated from it in other places; but loud complaints have reached us from other towns of the intolerable nuisance and burden which they are compelled to bear from these pests of society, which seem to swarm upon us yearly in larger numbers, and the inquiry still is, "What shall we do with them?"

The number lodged at our Police Station during the past year has been four thousand, two hundred and ninety-five, at a cost of one hundred dollars for crackers, upon which they have been fed.

The whole number of families who have applied for and received temporary aid during the year is five hundred and sixty-two, comprising nine hundred and twenty-eight males and nine hundred and seventy-four females; or, nineteen hundred and two persons. Of these, two hundred and fifty-four families, consisting of five hundred and two males and five hundred and fifty-five females, or ten hundred and fifty-seven persons, have legal pauper settlements; and three hundred and eight families, consisting of two hundred and twenty-six males and four hundred and nineteen females, or eight hundred and forty-five persons (or nearly one-half of all the applicants), were State paupers, and consists of those persons who move from place to place continually, and are always in a suffering condition wherever they reside, as they are ever on the move, and in trying to better their condition exhaust all their own means and the charity of those places where they for the time being may happen to locate.

The whole number having a legal pauper settlement, who have received full support for the whole or part of the year, is one hundred and eighteen, and is nearly one-quarter more than last year.

The number provided for at the Insane Hospital during the year has been nineteen; a very expensive burden on the City, which is yearly increasing, and has been largely augmented by the law of 1874.

Seventy-two persons and families brought into the State by the various lines of communication with other States, have been returned on the various roads by which they came, in accordance with chapter lxxi., sec. 25, of the General Statutes.

Eighty-one State paupers have been sent to the State Alms-House, at Tewksbury, after having been aided here to a greater or less extent; and we find that the report of the gentlemen who composed the committee who visited that institution last year has, to a large extent, satisfied the minds of those who are sent there from this City that they will be kindly received and fairly treated if they conduct themselves with propriety while there.

Seventy-five heads of families (forty-two males and thirty-three females), having a legal settlement in other cities and towns, but residing here, have been aided, to a greater or less extent, during the year, in accordance with the wishes or expressed instructions of the Overseers of the Poor of the several places where they have their settlements.

In providing for the cases above mentioned, by the Department for Temporary Aid, at the office of the Clerk of the Board, who acts as their almoner, there have been drawn two thousand and sixty-one orders on various persons for the following necessities:—

In Cash allowances	\$407 13
“ Fuel	1,762 83
“ Groceries	2,312 45
“ Furniture and clothing	80 97
“ Medical attendance and medicine	332 71
“ Burial expenses	356 00
“ Transportation of paupers	244 75
“ Insane Hospital bills	2,685 89
“ Aid to Worcester Poor in other towns	710 04
“ Reform School bills	685 69
“ Books, stationery, stamps, &c.	233 45
“ Miscellaneous expenses	203 33
Total	<hr/> \$10,015 24

For the monthly expenditures of the same, you are referred to the table attached to this section of the report.

The salary of the City Physician and that of the Clerk of the Board are also charged to the expense of the City Relief Department, and are as follows :—

City Physician	\$800 00
Clerk of the Board	1,500 00
Disbursements	10,015 24
<hr/>	
Total expenditure in City Department	\$12,315 24

The Resources have been as follows :—

Unexpended balance of 1874	\$210 05
Appropriation by City Council	9,600 00
Received from the State, and from towns	3,329 59
<hr/>	
Total receipts	\$13,139 64
Total expenditures	12,315 24
<hr/>	
Unexpended balance	\$824 40

Making the net expense of this Department for the year \$8,985 65

CITY RELIEF DEPARTMENT.

Monthly Accounts of 1875.	No. of Orders Drawn.	Paid in Cash Allow- ances.	Cost of Fuel.	Cost of Groceries.	Furniture and Cloth- ing.	Medicine, Attendance and Nursing.	Cost of Burials.	Transportation of Paupers.	Insane Hospital Bills.	Reform School Bills.	Paid other Towns.	Books, Stationery, Postage and Printing.	Miscellaneous Ex- penses.	Total.
1874. December, 1875.	227	\$ 74 25	\$ 224 03	\$ 229 12	\$ 6 80	\$ 57 55	\$ 25 00	\$ 2 25	\$ 604 75			\$ 7 00	\$ 42 50	\$ 1273 25
January,	315	47 30	322 63	318 50	26 75	33 20	55 00	46 20		\$ 163 91	\$ 21 25	39 00	10 00	1083 74
February,	308	14 00	437 03	342 50	3 50	24 50	8 00				272 53	116 65	6 00	1224 71
March,	389	59 55	407 13	419 00		67 70	62 00	5 30	493 85		5 24	6 55		1526 32
April,	212	12 50	133 00	248 00	16 52	28 77	33 00	16 60	36 50	151 06		5 00		680 95
May,	98	34 00	42 76	143 75		16 64	31 00	26 30	11 75	99 21		3 90	5 00	414 31
June,	70	55 00		128 33		12 80		3 30	514 08		62 35	5 00		780 86
July,	65	37 38		129 00		11 25	53 00	20 55	274 00	149 97	139 12	10 00		824 27
August,	75	6 00		71 00		24 15	23 00	35 95			10 00	9 50	90 00	279 60
September,	74	34 50	24 00	107 25	6 90	15 35	23 00		750 96					961 96
October,	79	6 85	62 60	112 00	16 00	13 55	17 00	22 75		121 54	155 55	15 60		543 44
November,	149	25 80	109 65	64 00	4 50	17 25	26 00	65 55			44 00	15 25	49 83	421 83
	2061	\$407 13	\$1762 83	\$2312 45	\$ 80 97	\$ 332 71	\$ 356 00	\$ 244 75	\$2685 89	\$ 685 69	\$ 710 04	\$233 45	\$203 33	\$ 10015 24

List of Paupers aided in Worcester, but settled in other Towns :

NAMES OF APPLICANTS.	PLACE OF SETTLEMENT.	NAMES OF APPLICANTS.	PLACE OF SETTLEMENT.
Patrick Olden . . .	Northampton.	Andrew P. Clark . .	Cambridge.
Lucy Moreton . . .	Shrewsbury.	Mary A. Putney . .	"
Asa A. Walker . . .	"	Fenton Murphy . .	Braintree.
Edward Stanley . .	Spencer.	Betsey Bonzey . . .	Millbury.
Hiram D. Hines . .	Athol.	Catharine Bonzey . .	"
Lydia Bowen	Brookfield.	Thomas Farren . . .	"
C. S. Barber	Fitchburg.	Edward Tyrrell . .	"
Chas. G. Nutting . .	"	Robinson Hopwood .	"
Augusta Colburn . .	Ashland.	Ellen Kelley	"
Mary Crowe	West Boylston.	Mary Lee	Oxford.
Mary Cunningham .	Boylston.	John H. Kendall . .	Burlington.
Joseph Malhoit . .	Sutton.	Michael Larvin . . .	Marlboro'.
John Remmick . . .	"	Milanese Goodreau .	"
Gilbert Parker . . .	Holden.	Mary A. Brock . . .	Hudson.
Michael Murphy . .	"	Noel Douglas	Douglas.
Alice F. Tidd	New Braintree.	Helen Osborne . . .	N. Brookfield.
Margaret Martin . .	Natick.	Mary Edwards	"
Celia Fay	Taunton.	Ann Kelley	Auburn.
Patrick Behan . . .	Lowell.	James Finnegin . .	"
John Martin	Grafton.	Rose McFarland . .	Boston.
Julius Rivers	"	John McIntire . . .	"
Elizabeth Jennings .	"	Lydia J. Duffy . . .	"
Horace Day	"	Peter R. Laws . . .	"
Louis B. Pratt . . .	"	Sarah Morgan	Charlton.
Mary Sheehe	Milford.	Dexter O. Whitney .	Webster.
Julia McCarty . . .	"	Joseph G. Ware . . .	Chelmsford.
Sarah Tiernon	"	John Butler	Paxton.
Patrick Flynn	"	Mary McDermott . .	Westminster.
Wm. Masterton . . .	Lawrence.	John Rice	Westboro.
Sarah J. Aldrich . .	Uxbridge.	Bridget Curtain . .	"
Albert Lee	"	Bridget Britt	West Boylston.
Patrick Owens . . .	Palmer.	John Walsh	Shelburne.
Owen Cunningham .	"	Wm. W. Phillips . .	Duxbury.
Maria Bell	Winchendon.	Almira Glazier . . .	Northboro.
Johanna Glynn . . .	Framingham.	Henry D. Newell . .	Franklin.
Dennis Kearns . . .	Leicester.	Mary Falvey	Blackstone.
Wm. O'Niel	"	Honora Shea	"
Mary Callaghan . . .	"	Francis M. Sylvester	Brockton.

List of Insane persons who have a legal pauper settlement in this city, and who have received full support at the Insane Hospital during the year 1875.

REGISTERED NO.	NAMES.	AGE.	PLACE OF BIRTH.
860	Samuel S. Barnes	56	Westminster.
85	Harriet N. Crosby	54	Brewster.
857	James Conlon	25	Ireland.
676	Richard Everett	49	England.
970	Bernard Fuller		Weston, Vt.
759	Michael Goulding	21	Worcester.
950	Michael Hayes		Ireland.
518	Barbara Kohl	32	Germany.
760	Roxana Lennon	43	Ireland.
951	Nora Leary	40	"
594	Mary Mayhew		Canada.
742	Maria McCarty		Ireland.
1012	Mary McGrath	38	"
959	Michael Mullens	70	"
757	Honora T. Murphy	24	"
925	Charlotte Piper	42	Leicester.
568	Edwin A. Robie	44	Cambridge.
961	Lawrence Rice		Ireland.
948	Ellen Sullivan	19	"

On Thursday, Nov. 19, 1875, the several members of the Board of Overseers of the Poor, assisted by the Board of Assessors, met at the City Alms-House for the purpose of making the annual appraisal, and reported as follows:—

96 Acres of cleared land	\$7,680 00
100 " of wood and sprout	7,500 00
26 " Harlow pasture	1,040 00
50 " Davidson pasture	1,280 00
24 " Bond meadow	600 00
8 " Curtis lot	2,400 00

Total value of land	\$20,500 00
Alms-House building	\$20,000 00
Small Brick House and Corn barn	1,000 00
Small-Pox Hospital Building	500 00
New Farm Barn	7,000 00
New Horse Stable	5,000 00
Swine House	5,000 00

Total value of buildings	\$38,500 00
Total value of real estate	\$59,000 00
Farm stock, tools, vehicles, &c.	7,151 60
Stores, furniture, household utensils	3,705 91
Appurtenances of Truant School	380 25
Appurtenances of Scavenger Department	7,552 00

Total valuation	\$77,789 76
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The number of paupers at the Alms-House at this time is fifty. Last year we reported thirty-seven as being the largest number we had ever had ; so it will be observed that our family has considerably increased.

The institution was visited and inspected by the Board of Overseers of the Poor, assisted by several of the past and present members of the City Government, on Thursday, October 28th, and found to be in the usual good condition ; and the Superintendent and Matron were again complimented by all the visitors for the care and fidelity with which they had discharged their arduous duties during the long number of years that they have had the management of the place.

The buildings remain the same as last year, all in first-class condition, and the whole institution may be shown with pride to any one as a model establishment of its kind.

The farm shows the quickening effect of the bountiful dressing it has received since the establishment of the Scavenger Department, and we hope may, in a few years, lose the distinctive appellation it has so long possessed, of being in every sense "A Poor Farm."

A descriptive list of the persons provided for at the Institution during the year, with their age and place of birth,—as also one of the Insane Worcester Paupers provided for during the year, and one of Paupers living in Worcester, but settled in other towns, who have received aid here,—is shown in this report.

List of Paupers who have been fully supported at the Alms-House in this City for the year 1875 :—

Registered Pauper No.	NAMES.	AGE.	PLACE OF BIRTH.	PERIOD OF SUPPORT.		REMARKS.
				Began.	Ended.	
1	Lucy Barber,	58	Worcester,	Nov. 29, '39	Sept. 8, '75	Died.
3	David Kimball,	42	"	Jan. 1, '57	Continues.	Idiotic.
4	Allen Cummings,	38	"	April 20, '57	"	"
21	Miranda P. Smith,	63	Ware,	April 10, '57	"	Insane.
32	Henry Monroe,	43	Worcester,	Oct. 21, '65	Jan. 11, '75	Died.
56	Benj. Baldwin,	50	Brookfield,	Mar. 9, '67	Continues.	
83	Chas. A. Parkhurst	67	Boston,	June 15, '68	"	
84	Emeline Parkhurst	64	Oakham,	"	"	
87	Thomas Croley,	56	Ireland,	July 28, '68	"	
100	Sallie Gates,	78	Worcester,	Feb. 6, '69	June 3, '75	
132	Reuben Titus,	63	New Hamp.,	May 16, '70	Mar. 24, '75	Died.
134	William Jones,	68	Salem,	July 1, '70	Continues.	
154	Elsie Adams,	51	Unknown,	Mar. 24, '70	"	Insane.
191	Morris Moriarty,	67	Ireland,	Nov. 6, '71	"	
243	Gilman Scott,	59	New Hamp.,	Feb. 1, '61	Sept. 20, '75	
244	Samuel Willard,	75	R. Island,	Feb. 4, '73	Mar. 28, '75	Died.
245	John Luby,	48	Ireland,	Feb. 6, '73	Continues.	Insane.
259	Patrick Luby,	13	Worcester,	Mar. 19, '73	"	
271	William Collins,	18	"	April 5, '73	"	Idiotic.
274	J. J. O'Leary,	49	Ireland,	Aug. 1, '73	"	Insane.
313	Albert Parker,	43	Vermont,	April 14, '74	Nov. 13, '75	Died.
332	Mary Connell,	38	Ireland,	June 11, '74	April 29, '75	
333	Richard Connell,	13	Worcester,	"	"	
334	Josie Connell,	8	"	"	"	
340	Chas. H. Holton,	47	Northfield,	June 18, '73	Nov. 1, '75	Blind.
346	Josie E. Sargent,	21	Shrewsbury	Sept. 16, '74	Continues.	
347	A. E. Whittemore,	1	Worcester,	"	"	
348	Margaret Wren,	30	Ireland,	Sept. 19, '75	April 2, '75	
349	John Gilchrist,	1	Worcester,	"	"	
351	Michael Flemming,	19	"	Oct. 17, '74	Continues.	Idiotic.
356	Hiram F. Ward,	65	Penn.,	Oct. 30, '74	May 16, '75	
357	Mary Fitzgerald,	26	Charlston,	Nov. 16, '74	Continues.	
358	Geo. B. Williams,	—	Worcester,	"	April 7, '75	
360	Cath'ne Fitzgerald,	6	"	Nov. 21, '74	Continues.	
361	Frederick Chambo	—	Canada,	Dec. 1, '74	April 26, '75	
362	Johanna Morrissey,	38	Ireland,	Dec. 11, '74	Dec. 24, '74	
363	Ann Callahan,	45	"	Dec. 19, '74	Feb. 16, '75	Died.
364	Barney Fallon,	60	"	"	Continues.	
365	James Carney,	62	"	"	May 24, '75	
366	Catherine Mackin,	68	"	Dec. 23, '74	Continues.	
367	Ellen Garvin,	20	Canada,	Dec. 29, '74	April 2, '75	
368	Hosea J. Brimhall,	46	Hardwick,	Dec. 30, '74	Jan. 28, '75	
369	W. H. Wheelock,	39	Worcester,	Dec. 31, '74	Continues.	
370	James Curran,	8	Princeton,	Dec. 10, '74	Jan. 6, '74	
371	Mary Ann Curran,	6	Oakdale,	"	"	
372	Katie Curran,	4	Clinton,	"	"	
373	Joseph G. Ware,	24	Worcester,	Jan. 8, '75	Mar. 24, '75	Died.
374	James Mackin,	68	Ireland,	Jan. 16, '75	May 10, '75	
375	John T. Huggard,	30	"	Feb. 1, '75	Feb. 26, '75	
376	Jane Huggard,	--	"	"	"	

LIST OF PAUPERS.—Continued.

Registered Pauper No.	NAMES.	AGE.	PLACE OF BIRTH.	PERIOD OF SUPPORT.		REMARKS.
				Began.	Ended.	
377	James Huggard,	—	Ireland,	Feb. 1, '75	Feb. 26, '75	Blind.
378	Patrick Coffee,	69	"	Feb. 4, '75	Continues.	
379	Timothy Coffee,	6	Worcester,	" "	"	
380	Marg't Rockwood,	—	Ireland,	Feb. 13, '75	May 13, '75	
381	Edward Rockwood	2	Worcester,	" "	Feb. 17, '75	
382	Mary A. Hanlon,	1	"	" "	April 2, '75	
383	Edward Stanley,	30	New York,	Mar. 20, '75	Mar. 24, '75	
384	Mary A. Callahan,	21	Worcester,	April 24, '75	April 30, '75	
385	Margaret Kilday,	22	Ireland,	May 7, '75	Aug. 13, '75	
386	Elizabeth Kilday,	Inf.	Worcester,	" "	" "	
387	Ellen Burke,	—	Ireland,	May 18, '75	Continues.	
388	James Burke,	14	Worcester,	" "	Sept. 23, '75	
389	John Burke,	10	"	" "	Sept. 13, '75	
390	Margaret Burke,	7	"	" "	Continues.	
391	Mary Burke,	2	"	" "	"	
392	Edward J. Laverty	18	"	June 21, '75	Aug. 27, '75	
393	Wm. W. Phillips,	45	Duxbury,	" "	July 5, '75	
394	Ansel J. Elder,	47	Worcester,	June 23, '75	Continues.	
395	James Mackin,	68	Ireland,	June 29, '75	"	
396	Nora Leary,	38	"	July 3, '75	July 20, '75	
397	Mary Adams,	70	Scotland,	July 6, '75	Continues.	
398	Geo. B. Williams,	—	Worcester,	July 7, '75	"	
399	Peter Lynch,	32	Ireland,	July 20, '75	Aug. 17, '75	
400	Dexter W. Jones,	78	Unknown,	July 21, '75	Continues.	
401	Henry Hoyle,	30	Grafton,	" "	"	
402	Geo. Matthewson,	54	R. Island,	Sept. 1, '75	"	
403	Thos. O'Neil,	67	Ireland,	Sept. 4, '75	Sept. 8, '75	
404	Nellie E. Dawes,	22	Fitchburg,	" "	" "	
405	Cora Dawes,	3	Lancaster,	" "	" "	
406	John A. Hill,	56	Worcester,	Sept. 15, '75	Sept. 18, '75	
407	Owen Cunningham	44	Ireland,	Sept. 25, '75	Oct. 28, '75	Died.
408	John Terry,	—	"	Oct. 7, '75	Dec. 2, '75	
409	Fannie Cole,	21	Virginia,	Oct. 10, '75	Oct. 14, '75	
410	Maria Cole,	Inf.	Bridgewater	" "	" "	
411	William Hines,	12	Worcester,	Oct. 12, '75	Continues.	
412	Margaret Conlin,	38	Ireland,	" "	"	
413	Ellen Cahill,	30	"	Oct. 14, '75	"	
414	Margaret Cahill,	3	Worcester,	" "	"	
415	John Cahill,	1	"	" "	"	
416	Johanna Loughlin,	35	Ireland,	Oct. 21, '75	"	
417	Stephen Loughlin,	$\frac{1}{2}$	Worcester,	" "	"	Died.
418	Timothy O'Hara,	15	Ireland,	Oct. 27, '75	"	
419	Bradish Braman,	75	"	Nov. 2, '75	Nov. 9, '75	
420	Henry D. Newell,	32	R. Island,	Nov. 3, '75	Nov. 16, '75	
421	Katie E. Newell,	25	Conn.	" "	" "	
422	Mabel Newell,	$\frac{1}{4}$	Worcester,	" "	" "	
423	Isabella Newell,	$\frac{1}{4}$	"	" "	" "	
424	Nora Leary,	38	Ireland,	" "	Continues.	
425	Chas. H. Holton,	47	Northfield,	Nov. 9, '75	"	
426	Daniel O'Connell,	22	Worcester,	Nov. 11, '75	Nov. 14, '75	Blind.
427	Michael Hayes,	—	Ireland,	Nov. 27, '75	Continues.	

CITY ALMS-HOUSE DEPARTMENT.

Monthly Accounts.	No. of Paupers.	Total Expenditures.	Total Receipts.	Net Expenses.	Receipts above Expenditures.
1874.					
December,	46	\$520 90	\$234 92	\$285 98	
1875.					
January,	42	541 17	226 96	314 21	
February,	50	811 52	533 50	278 02	
March,	45	622 24	373 67	248 57	
April,	41	351 48	204 95	146 53	
May,	39	374 46	294 09	80 37	
June,	37	560 51	720 39		\$159 88
July,	42	486 30	251 68	234 62	
August,	40	669 33	345 37	323 96	
September,	42	556 39	282 30	274 09	
October,	44	601 21	704 01		102 80
November,	50	924 29	386 17	538 12	
		\$7019 80	\$4558 01	\$2724 47	\$262 68
				262 68	
				\$2461 79	

The accounts of the Scavenger Department have been kept separate from the others during the year, in order that we might be able to determine what it cost, and the annexed table will show the monthly expenditures and receipts, and the net cost for the year. It will be found in the schedule of the estate, that the swine house and horse stable connected with it, are set down in the valuation at ten thousand dollars, and the personal property at seven thousand five hundred and fifty-two dollars, and the net expense for the year has been five thousand six hundred and eighty-seven dollars and sixty-one cents.

CITY SCAVENGER DEPARTMENT.

MONTHLY ACCOUNTS.	AMOUNT EXPENDED.	AMOUNT OF RECEIPTS.	NET COST.	RECEIPTS ABOVE EXPENDITURES.
1874.				
December,	\$772 36	\$394 69	\$377 67	
1875.				
January,	739 09	247 20	491 89	
February,	767 04	148 63	618 41	
March,	725 00	359 70	365 30	
April,	735 73	324 62	411 11	
May,	745 21	123 00	622 21	
June,	695 59	106 20	589 39	
July,	707 80	71 25	636 55	
August,	681 48	83 75	597 73	
September,	802 97	233 00	569 97	
October,	835 24	404 76	430 48	
November,	701 15	1,123 71		\$422 56
	\$8,908 66	\$3,620 51	\$5,710 17	
			422 66	
			\$5,287 61	
	Salary of Superintendent,		400 00	
	Net Cost,		\$5,687 61	

The total expenditures at the Farm for both Pauper and Scavenger Departments, including the salary of the Superintendent, and amount paid out for hired labor, amounts to \$15,125.14.

The resources have been :—

Appropriation	\$11,000 00.
Sale of products	5,880 87
Total receipts	\$16,880 87
Expenditures	15,125 14
Unexpended balance	\$1,755 73

The number of Scholars at the Truant School at the present time is thirteen, which is more than double what it was a year since. During the year, several applications have been made from other places for us to board their truants, but it has not been thought advisable to do so.

The accounts of this Department during the past year are, as usual, shown in the table of monthly reports; and this Department, unlike that of the Scavenger Department, which is made under one head as for the Farm, has a separate appropriation, which was cut down in the estimates of last year, and was not sufficient, with the overlaying of the previous year, to cover its expenses, and a transfer of four hundred dollars was made from the resources of the City Relief Department; and will be shown as follows :—

Unexpended balance of 1874	\$1,406 79
Appropriation	500 00
Transferred from City Relief	400 00
Total resources	\$2,306 79
Cost of board	\$1,428 17
Clothing and other expenses	356 03
Teaching and supervision	500 00
Total expenditure	\$2,284 20
Value of labor on the Farm	58 00
Net Expense	\$2,226 20
Resources	\$2,306 79
Unexpended balance	\$80 59

An appraisal of the property belonging to the School at the present time shows it to be \$380.25.

TRUANT SCHOOL DEPARTMENT.

Monthly Accounts.	No. of Scholars.	Cost of Board.	Clothing and other Expenses.	Teaching and Supervision.	Value of Labor.
1874.					
December,	7	\$81 25		\$41 66	\$2 00
1875.					
January,	7	88 75	\$17 95	41 67	2 00
February,	8	83 00		41 67	2 00
March,	8	89 75	61 70	41 66	2 00
April,	9	117 85	21 00	41 67	3 00
May,	10	133 85	44 13	41 66	5 00
June,	10	158 98		41 67	10 00
July,	9	121 70	37 27	41 66	10 00
August,	9	121 70		41 67	10 00
September,	9	120 20	19 23	41 67	5 00
October,	13	146 14	118 10	41 67	5 00
November,	13	165 00	36 65	41 67	2 00
		\$1,428 17	\$356 03	\$500 00	\$58 00
		Clothing and other expenses,		356 03	
		Cost of board,		1,428 17	
		Total expenditure,		\$2,284 20	
		Value of labor deducted,		58 00	
		Net cost,		\$2,226 20	

A report on the Truant School will be made by the Superintendent of Schools, who is an *ex-officio* member of this Board and Chairman of the Committee on the School.

There has been no unusual sickness in the Department for the year, and the City Physician has been called upon only for the ordinary occurrences at the City Farm, and, occasionally, from

the office of the Clerk ; but, as he has been several times unable to attend to his duties, owing to personal afflictions, his patients have on such occasions been turned over to other hands, and this has caused considerable complaint from some ; whether with, or without, cause we are unable to say ; but he will make his own report, to which you are respectfully referred.

All of which is respectfully submitted.

GEORGE W. GALE, *Clerk.*

CLARK JILLSON,
W. ANSEL WASHBURN,
ALBERT P. MARBLE,
GEORGE W. GALE,
GEORGE GEER,
CALVIN HARTSHORN,
JAMES DRAPER,
EDWARD KENDALL,
JOHN J. O'GORMAN,

Overseers of the Poor of the City of Worcester.

BY-LAWS

OF THE BOARD OF

OVERSEERS OF THE POOR.

SECTION 1. The mayor shall be Chairman, and as such shall exercise the rights and perform the duties of the presiding officer of the Board, governed by parliamentary law; and in his absence the Board shall appoint a chairman *pro tem*. For transaction of business five members shall constitute a quorum.

SECT. 2. At the first meeting of the Board in January, when the new members take their seats, and before the transaction of any other business, they shall be qualified, according to law, by taking the oath of office, which shall be administered by the chairman. The Board shall then choose a clerk as prescribed by the City Ordinance, who shall perform such duties as shall be prescribed by said City Ordinances and the rules of this Board; he shall keep a full and impartial record of all meetings of this Board, and full accounts of all expenditures of the department, and an intelligible record of all persons aided, either temporarily or permanently, recording all facts in connection with each case that may come to his knowledge by reasonable inquiry and investigation, and reporting all new cases at the next succeeding meeting.

SECT. 3. There shall be appointed at this first meeting of the Board by the Chair, four standing committees, of three members each; one on Finance, one on the Farm, one on Relief, and one on Truant School.

SECT. 4. The Finance Committee shall examine all bills, and if found correct, shall audit the same.

SECT. 5. The Committee on Farm shall have charge of the farm and the inmates of the Institution. Under the direction of the Board they shall make, advise, or order all purchases and supplies for the same, and examine and approve all bills contracted therefor. They shall visit the institution monthly, and make to the Board at each monthly meeting a report of the condition of the same.

SECT. 6. The Committee on Relief shall direct no aid to be allowed unless the case has been fully examined and a proper record made of all the facts connected therewith. In cases of doubt they shall examine with the clerk all new applicants for relief, who, if found entitled thereto, shall then receive temporary aid. The Committee shall examine all bills for aid authorized by the clerk, and shall audit the same if found correct.

SECT. 7. The Committee on the School shall have control of all matters relating to the interests of the Truant School. They shall furnish the requisite books and apparatus, employ the teacher, and in cases of difficulty decide questions of discipline.

SECT. 8. The regular meetings of the Board shall be held in the Aldermen's room on the first Friday of each month, and the chairman may call special meetings whenever it may be necessary.

SECT. 9. These By-laws may be altered or amended at any regular meeting of the Board, provided the alteration has been proposed at a previous regular meeting, and the subject laid over one month.

February 8, 1867. Adopted by unanimous vote of Board.

GEORGE W. GALE, *Clerk.*

RULES AND REGULATIONS

AT THE

ALMS-HOUSE AND FARM.

1st. The whole establishment shall be under the general supervision of the Board of Overseers of the Poor.

2d. The immediate direction of the Institution shall be under the supervision of a Superintendent and Matron.

3d. It shall be the duty of the Superintendent and Matron to see that the inmates labor in such a way, and at such times, as they may direct, and that no one shall be permitted to lead an idle life.

4th. The Superintendent shall see that the industrious and deserving are rewarded, and the idle and dissolute are punished.

5th. It shall be the duty of the Superintendent to make a monthly report to the Board of Overseers at their monthly meetings, of any information he may be possessed of relating to the interests of the Institution.

6th. No person shall be allowed to visit the Institution on the Sabbath without a permit from some member of the Board of Overseers or the Superintendent.

7th. No person shall be allowed to converse or have intercourse with any prisoner sent to the Institution by the Police or any other Court, without permission of the Superintendent, or some member of the Board of Overseers.

8th. It shall be the duty of the Superintendent to see that all sentences imposed upon persons sent by any Court, are strictly enforced.

9th. The Superintendent and Matron shall in no instance whatever, leave the Institution at the same time, without permission from some member of the Committee on the farm, and not then until some suitable person shall be obtained by them to take charge of the Institution during their absence.

10th. The Superintendent is expressly directed to prohibit all persons from bringing or drinking *Ardent Spirits* upon the premises, without direction of the attending physician.

11th. It shall be the duty of the Superintendent and Matron to see that all the inmates of the Institution bathe as often as once a week, unless otherwise directed by the attending physician.

12th. No pauper shall leave the Alms-House without permission from the Superintendent.

13th. The Superintendent is hereby directed to report to the Board of Overseers, any inmate who shall refuse to comply with the foregoing regulations relating to their discipline and government.

WORCESTER, February 8, 1867. Adopted by unanimous vote of the Board.

GEORGE W. GALE, *Clerk.*

REGULATIONS

FOR THE GOVERNMENT OF THE

TRUANT SCHOOL OF THE CITY OF WORCESTER.

SECTION I.

ARTICLE 1. The School shall be under the general direction of the Committee on the Truant School, which shall be appointed by the Mayor, from the Board of Overseers of the Poor.

SECTION II.

ARTICLE 1. The Superintendent of the Alms-House shall keep a separate book of accounts for the Truant School, in which he shall credit all appropriations for its support, and all the labor of the boys at a price fixed by the Board of Overseers of the Poor, and he shall charge against the school all the expenses incurred for its support, including the cost of the clothing and the board of the boys, and the salary and board of the teacher.

ART. 2. It shall be the duty of the Superintendent to aid the teacher to secure prompt attendance in the school, ready obedience, good deportment and faithfulness to study.

SECTION III.

ARTICLE 1. It shall be the duty of the teacher of the Truant School to keep a register of attendance, in which shall be noted the date, cause and length of, and authority for, every case of tardiness or absence from the school. The teacher shall also keep a faithful record of the deportment of each scholar, with the reason for, nature and extent of, every punishment inflicted, either personally or by the Superintendent.

ART. 2. The Teacher shall make a quarterly report of the above and other matters pertaining to the interests of the School, to the Board of Overseers of the Poor, at their meeting next succeeding the close of the quarter.

ART. 3. The Teacher shall labor to inspire the pupils with self-respect, and, to this end, shall insist on cleanliness of person; and shall strive to inculcate principles of morality and justice.

ART. 4. The teacher shall assemble them every Sunday forenoon, and spend an hour with them in the reading and study of the New Testament, but shall strictly abstain from all sectarian comment.

ART. 5. Vacations of two weeks each, in the Spring, Summer, Autumn and Winter, *may* be allowed at a time fixed by the Committee. And the regular exercises of the school *may* be omitted on Saturdays.

ART. 6. It shall be the duty of the teacher to assemble and meet the pupils at other times than the hours of School, and especially on Saturdays and Sundays, that she may acquaint herself with their character and needs, in order thereby the better to effect their reform.

ART. 7. It shall be the duty of the Superintendent to see that all regulations of the school are faithfully enforced.

GENERAL REGULATIONS

FOR THE

TRUANT SCHOOL.

ARTICLE 1. From the 1st of April to the 1st of October there shall be only one session of the Truant School each day, which shall invariably begin at 8 A. M., and close at 12 M. No boy shall be kept out of the school for any purpose whatever, except in cases of emergency in the busy farming season, and every such case shall be recorded as provided in Sec. 3, Article 1, and reported by the Superintendent at the next meeting of the Board of Overseers of the Poor. It shall also enter in the next quarterly report of the teacher. From the 1st of October to the 1st of April, there shall be two daily sessions of the school, from 9 A. M. to 12 M., and from 2 to 4 P. M.; and on no account shall a boy be taken from the school during this season, except by permission previously obtained from the Mayor or some member of the Committee on the Truant School.

ART. 2. The use of tobacco, in any form, by the boys is prohibited, and both the Superintendent and Teacher are held responsible for the enforcement of this prohibition.

ART. 3. The teacher shall be employed and the salary fixed by the Committee on the School, subject to the approval of the Board; but no teacher shall be engaged without previously passing a satisfactory examination, according to the laws of the Commonwealth and the rules of the School Committee of the City of Worcester.

ART. 4. Each pupil, whose deportment and scholarship have been satisfactory for one month, shall be entitled to some privilege or reward not otherwise granted; and continuous good-conduct shall be rewarded by a recommendation for pardon one month or more before the expiration of the sentence.

These regulations shall be made known to each boy when he enters the school.

ART. 5. The rate of board per week to be charged by the Superintendent against the teacher and pupils of the truant school shall be fixed annually by the Overseers of the Poor at their regular meeting in January, but they may change it at any time they deem it necessary by a vote of a majority of the members of the Board. The price per hour of the services of the boys shall also be fixed at the same time and in the same manner, subject likewise to the same condition of change.

GEORGE W. GALE, *Clerk.*

Reported with the new Pauper Law of 1874.

Commonwealth of Massachusetts.

HOUSE OF REPRESENTATIVES, April 30, 1874.

The Committee on Public Charitable Institutions, to whom was recommit-
ted the bill for the more efficient relief of the poor, have carefully reviewed
the whole subject, and sought such additional information as seemed desira-
ble.

They find that any scheme for the relief of the poor, or any radical change
in the laws of settlement, is beset with great difficulties, and is likely to be
productive of more harm than good to those whom it is sought to benefit.
They believe that it is safe to make haste slowly, and to test by experience
the effect of moderate changes. If these prove successful further legislation
can readily be had in the direction they indicate.

We therefore report a bill, in a new draft, which we explain as follows,
premising that the main object thereof, in accordance with the prayer of the
petitioners, is to make better provision for the unsettled poor :

First. It does not change existing settlements. Every settled person is to
remain where he now belongs, until that settlement is defeated and a new one
gained in the ordinary course of law.

Second. It does not interrupt or defeat any settlement in process of acqui-
sition. This is to be completed, as before, under existing laws.

Third. It does not change the principles underlying the present laws, but
merely adapts them to the exigencies of the present day, by shortening the
time and lessening the number of taxes required for settlement.

Fourth. It gives all settled persons a fair and equal start, by allowing them
to commence now to gain a new settlement under its provisions.

Fifth. It provides liberally for the unsettled by giving all a settlement who
can show a continuous residence of five years and the payment of three taxes
within that time, whether the residence and taxation be wholly before, or
wholly after, or partly before and partly after its enactment.

Sixth. It relieves the most pressing claim brought to the attention of the
legislature, by giving women a settlement of five years' residence, providing
within that time they have been neither paupers nor criminals.

And finally, it exempts from its benefits the present state pauper inmates of
the public institutions—to the end that no injustice may be done to any city
or town.

It will be seen that the bill bears alike upon all the municipalities, by main-
taining, as nearly as possible, the same proportion of residence and taxation
as at present, and that the provisions of its third section obviate the danger
of confusion, and the objections that would arise as between the towns on
account of any sudden change.

The Committee deem it proper to add that the bill as reported has the
unanimous sanction of the Board of State Charities, who agree that no fur-
ther change is at present desirable.

For the Committee,

L. J. COLE.

Commonwealth of Massachusetts.

In the Year One Thousand Eight Hundred and Seventy-Four.

AN ACT

For the more efficient Relief of the Poor.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

SECT. 1. Any person of the age of twenty-one years, who resides in any place within this State for five years together, and pays all state, county, city or town taxes duly assessed on his poll or estate for any three years within that time, shall thereby gain a settlement in such place.

SECT. 2. Any woman of the age of twenty-one years, who resides in any place within this state for five years together, without receiving relief as a pauper, shall thereby gain a settlement in such place. The first section of the three hundred and ninety-second chapter of the acts of eighteen hundred and seventy is hereby repealed.

SECT. 3. No existing settlement shall be changed by any provision of this act, unless the entire residence and taxation herein required shall have accrued after its passage; but any unsettled person shall gain a settlement upon the completion of the residence and taxation herein required, though the whole or a part of the same may have accrued before the passage of this act.

SECT. 4. The provisions of this act shall not apply to any person who at the date of its passage shall be an inmate of either of the state lunatic hospitals, the asylum for insane and the state almshouse at Tewksbury, the state workhouse, or the state primary school, until such person shall have been duly discharged from said institution. [*Approved, May 28, 1874.*]

OPINION OF THE ATTORNEY GENERAL ON THE NEW PAUPER LAW OF 1874.

The Board of State Charities asked the Attorney General of the Commonwealth for an interpretation of the first clause of the second section of this law. His response was as follows :

ATTORNEY GENERAL'S OFFICE,
BOSTON, September 19, 1874.

To the Board of State Charities :

Prior to Acts of 1870, chapter 392, an unmarried woman could obtain a settlement only under the provisions of the General Statutes, chapter 69. By

the Act of 1870, "any unmarried woman" obtained a settlement by a residence of ten years together, in any place, under certain conditions. By chapter 274, section 2, of the Acts of 1874, section 1 of chapter 392, Acts of 1870, is repealed, and a new provision substituted. The substitute changes the law of 1870 in three particulars; the effect of one only is material for me to consider under the question submitted by your Board for my opinion. In the Act of 1874, the word "unmarried" is omitted. The plain and obvious intention of the Legislature by this change of the law, is to so arrange the law of settlement as that women shall have the same rights irrespective of any condition of marriage. The language of the Act, taken in connection with the Act repealed, does not allow of any other construction, and the intention of the Legislature, if it can be ascertained, is to govern. In the present instance, the omission of the word "unmarried," and the use of the word "woman" only, makes it appear manifestly to have been the intention of the Legislature to use the word "woman" in the Act, so as not to be affected or modified by the condition of marriage; and in my opinion, no other construction can be given the act. The intention of the Legislature being manifest, no consideration of presumption can arise.

Yours very respectfully,

CHARLES R. TRAIN.

CLARK JILLSON, Mayor.
W. A. WASHBURN, City Marshal.
ALBERT P. MARBLE, Supt. of Schools.
GEORGE W. GALE, Clerk.
GEORGE GEER.
CALVIN L. HARTSHORN.
JAMES DRAPER.
EDWARD KENDALL.
JOHN J. O'GORMAN.

Overseers of the Poor of the City of Worcester for 1875.

REPORT

OF THE

COMMITTEE ON THE TRUANT SCHOOL.

Gentlemen of the City Council:—

THE Committee on the Truant School respectfully submit the following report for the year ending Nov. 30, 1875.

The laws under which this school was established, and the Rules and Regulations governing it may be found in the report of your Committee for the year 1872; and the observations of that report on the practical aims and workings of the school still hold good. Truancy from school, and idleness among boys in a city, are the fruitful parents of crime. What is expended in preventing this evil will save many times the amount in punishing criminals a few years later. There can be no reasonable doubt that the Truant Officers and this school—by both its direct and its indirect influence—do as much, or more, for the public peace as ten policemen and a jail. It must be borne in mind that of thousands who are caught playing truant only tens go on far enough in the downward course to reach a conviction and sentence to this reformatory school. The influence of the school is therefore not confined to the tens; it reaches each one of the thousands.

It is sad to notice that parents themselves are chiefly at fault when children go astray. In nearly every instance a little judicious care from the parents would prevent the evil with which this school has to deal. In some cases the parents themselves are morally delinquent; in other cases they are merely weak.

The long history of a boy in school before he reaches the Truant School always shows numerous points at which parental authority could easily have arrested the progress in evil. In some cases the defence of a child from some fancied grievance in school has opened the way, which lands the child in this school.

The object of this school is purely reformatory. No disgrace attaches to it, as to a prison. Every boy who graduates here may be proud of his school if only he has reaped the full benefit it is designed to give and has been made studious and industrious. A majority of those who leave here, it is believed, show this character; and no good teacher who receives one of them back into school will turn the cold shoulder to him or look upon him with any suspicion. He will rather be treated like the lost sheep found.

To show how necessary such a school is—and when it is smallest then it is strongest, having best accomplished its preventive mission—the following statistics are introduced :—

WORK OF THE TRUANT OFFICERS FOR THE YEAR.

Number of cases reported by teachers	2,775
Number returned to school	1,160
Out with good excuse	1,615
Taken to school from street	124
Visits to buildings	2,276
Sent to Truant School	14
Runaways returned	6
Found and returned to parents	4
Boys arrested for disturbing school	4
Arrested for larceny	3

Besides this, these officers have visited the manufacturing establishments in the city where children are employed, and found :—

Children under 15 years of age	116
Of these, were sent to school	81
Not in school for one year previous	14
Not in school for eighteen months previous	3
Not in school for two years previous	2

The number of pupils in the school 13, or, double the number last year. This is doubtless owing partly to the depression in

business. Several applications have been made from other towns to allow their truants to be sentenced to this school; these were refused, because there is no room for more than may be sent from our own city.

For this school a separate appropriation has always been made till the year just closed. There was a balance left from the previous year; a transfer had to be made from a department of the accounts of the Overseers of the Poor. This school, though located at the City Farm, is no part of the pauper establishment, and should not be chargeable to it. We recommend for the present year an appropriation for the expenses of this school of \$2,500.

The yearly financial statement is as follows:—

RESOURCES.

Unexpended balance, 1874	\$1,406 79
Appropriation, 1875	500 00
Transfer from City Relief	400 00
Total	<u>\$2,306 79</u>

EXPENDITURES.

Board of pupils and teacher	\$1,428 17
Clothing and other expenses	356 03
Teaching and supervision	500 00
Gross expense	<u>\$2,284 20</u>
Value of boys' labor on the farm	58 00
Net cost	<u>\$2,226 20</u>
Unexpended balance	80 59
	<u>\$2,306 79</u>
Property of the school	\$380 25

All which is most respectfully submitted.

A. P. MARBLE, Sup't of Schools.
W. ANSEL WASHBURN, City Marshal,
JAMES DRAPER, Chairman Com. on Farm,

Committee on the Truant School.

REPORT OF THE CITY PHYSICIAN.

To the City Council of the City of Worcester:

GENTLEMEN :—In accordance with the ordinance relating thereto, I herewith respectfully submit my Report as City Physician for the year 1875.

Owing to causes consequent upon general business depression, necessary idleness, and the evils resulting, the number of calls for my services has been large, although there has been no serious epidemic.

There has been one case of small-pox. After conference with the Board of Health, the patient, with his family of wife and one child, was removed, within a few hours, to the Small-Pox Hospital. The other inmates of the house were vaccinated, and the usual hygienic measures resorted to. The patient recovered, and no further cases followed. The disease was evidently imported from Montreal, where, a fortnight before, the patient had superintended the burial of a brother dead of small-pox.

At the Alms-House there has been little acute disease. Some of the oldest residents have died of chronic complaints.

During the year, the regular office hours for the vaccination of school children have been held twice weekly, at the office of the Superintendent of Schools.

The number of professional visits made has been six hundred and sixty-three (663). Of these, forty-one (41) were at the Alms-House, fourteen (14) at the Police Office. Ten (10) were cases of accouchement. Eighty three (83) office consultations have been given.

At the Alms-House and elsewhere there have been fifteen (15) deaths under my care as City Physician, as follows :—

Feb. 9, Julia Clifford,	aged 75 years,	Heart Disease.
Feb. 21, Mary Matthews,	" 35 "	Consumption.
Mar. 24, Joseph G. Ware,	" 42 "	Suicide.
Mar. 24, Reuben Titus,	" 62 "	Paralysis.
Mar. 31, Michael Britt,	" 3 "	Tubercular Meningitis.
April 4, Samuel Willard,	" 75 "	Heart Disease.
May 20, William Griffin,	" 15 "	" "
May 22, Philip Whalen,	" 40 "	Consumption.
May 24, John Barry,	" 22 "	Scarlet Fever.
May 26, Margaret Sullivan,	" 19 "	Consumption.
July 31, Bridget O'Brien,	" 1 "	Cholera Infantum.
Aug. 7, Mrs. Hines,	" 47 "	Cancer.
Sept. 8, Lucy Barber,	" 57 "	Consumption.
Nov. 13, Albert Parker,	" 44 "	Typhoid Fever.
Dec. 11, Morris Flynn,	" 25 "	Pneumonia.

The City Hospital has been a great blessing to many destitute and friendless patients, though it has too often happened that applications for admission have been necessarily refused for lack of room, and I find cause for congratulation, therefore, in the additions now being made there.

My thanks are publicly due Dr. Ball and Dr. Peabody, for friendly assistance rendered me in the duties of my office during my recent illness.

Respectfully submitted.

LEONARD WHEELER,

City Physician.

REPORT OF THE CITY TREASURER.

WORCESTER, MASS., JAN. 3, 1876.

To the Honorable City Council :—

GENTLEMEN: I herewith present the Annual Account of Receipts and Payments in the Treasury Department, for the year ending November 30, 1875, from which it appears that the

Cash in the Treasury, Dec. 1, 1874, was	\$444,635 94	
Received during the year,	1,942,753 70	
	<hr/>	
Total,	\$2,387,389 64	
Paid during the year,	2,112,342 73	
	<hr/>	
Balance, being the Cash in the Treasury, November 30, 1875,	\$275,046 91	
From which deduct unpaid drafts,	62,951 65	
	<hr/>	
Leaving a balance, as per Auditor's Statement, of		\$212,095 26

The several items comprised in above amounts, unpaid drafts excepted, appear in the accompanying account current.

I also present the following statement, showing the par value of the several Trust Funds, in my charge, Nov. 30, 1875, viz:

GREEN LIBRARY FUND.

Invested,	\$35,724 23	
Cash on deposit, Book Account,	2,022 56	
	<hr/>	\$37,746 79

JAQUES HOSPITAL FUND.

Invested,		\$17,007 85
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HOPE CEMETERY FUND.

Invested,	\$3,500 00	
Cash on deposit,	1,073 27	
	<hr/>	\$4,573 27

BULLOCK HIGH SCHOOL FUND.

Invested,		\$1,239 51
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DAVIS HOSPITAL FUND.

Invested,		\$1,165 85
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Total,	<hr/>	\$61,733 27
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Respectfully submitted,

WM. S. BARTON, *City Treasurer.*

Dr. CITY OF WORCESTER, in account current from Dec. 1, 1874, to

To authorized payments charged to City Accounts, as follows :

NO.

1. Abatements and Discount,	\$52,167 32	
2. Armory,	16,504 92	
3. City Hall,	5,251 29	
4. City Hospital,	8,720 77	
5. Collector's Sales, " Surplus Acc't,"	5 33	
6. Committee on Reduction City Debt,	52,044 26	
7. Elm Park,	338 40	
8. Fire Department,	48,509 81	
9. Free Public Library,	14,573 24	
10. Highway Department,	66,369 64	
11. Incidental Expenses,	42,095 43	
12. Interest,	141,833 66	
13. " on Sewer Loan,	21,774 00	
14. " " Water Loan,	33,541 00	
15. Lighting Streets,	28,171 42	
16. Loans, Funded City,	6,000 00	
17. " " Sewer,	20,000 00	
18. " " Water,	133,800 00	
19. " Temporary,	877,324 26	
20. Pauper Department, " City Relief,"	12,540 59	
21. " " " Farm,"	15,377 07	
22. " " " Truant School,"	2,252 28	
23. Police Department,	51,216 87	
24. Real Estate, " Lien Acc't,"	2,153 60	
25. Salaries,	22,891 64	
26. School Department,	152,932 20	
27. School Houses,	24 04	
28. Sewer Assessment, old acc't,	26 52	
29. Sewers, " Construction Acc't,"	16,878 06	
30. " " Maintenance Acc't,"	10,185 13	
31. Shade Trees and Public Grounds,	4,173 33	
32. State Aid,	12,889 25	
33. Street Construction,	32,741 89	
34. Taxes, 1874, County,	25,152 28	
35. " " Nat'l Bank, " State Acc't,"	26,331 83	
36. " " State,	51,020 00	
37. " 1875, County,	20,960 23	
38. Water, Construction,	54,577 49	
39. " Maintenance,	25,993 68	
		\$2,112,342 73
Balance, Cash in Treasury, Nov. 30, 1875,		275,046 91
		<hr/> \$2,387,389 64

Nov. 30, 1875, with WM. S. BARTON, *City Treasurer.**Cr.*

By cash received and credited to City Accounts, as follows :

NO.		
1.	Bills Receivable,	\$19,000 00
2.	City Hall,	1,501 00
3.	“ Hospital,	861 74
4.	Collector's Sales, “ Surplus Acc't,”	4 36
5.	Committee on Reduction of City Debt,	53,393 92
6.	Fire Department,	2,169 71
7.	Free Public Library,	3,019 53
8.	Highway Department,	18,105 76
9.	Incidental Expenses,	37,667 61
10.	Interest,	17,989 19
11.	Lighting Streets,	50 40
12.	Loans, Temporary,	642,044 26
13.	Pauper Department, “ City Relief,”	3,329 59
14.	“ “ “ Farm,”	5,880 77
15.	Police Department,	8,274 63
16.	Real Estate, “ Lien Acc't,”	1,601 56
17.	“ “ “ Sales,”	36 00
18.	School Department,	717 36
19.	Sewer Assessment, “ Old Acc't,”	42,188 53
20.	“ “ “ New Acc't,”	34,656 42
21.	Sewers, “ Construction,”	17,287 19
22.	“ “ Maintenance,”	22 85
23.	Shade Trees and Public Grounds,	262 75
24.	State Aid,	12,604 99
25.	Street Construction,	17,486 72
26.	Taxes, 1872,	19 48
27.	“ 1873,	580 46
28.	“ 1874, “ Corporation,”	46,744 74
29.	“ “ Nat'l Bank, “ State Acc't,”	7,095 12
30.	“ “	28,824 99
31.	“ 1875,	821,741 57
32.	Water Works, “ Construction Acc't,”	18,543 98
33.	“ “ “ Maintenance Acc't,”	79,046 42
	Cash in Treasury, December 1, 1874,	\$1,942,753 70
		444,635 94
		\$2,387,389 64

WM. S. BARTON,

City Treasurer.

WORCESTER, MASS., January 3, 1876.

MAYOR'S DRAFTS AND TREASURER'S PAYMENTS COMPARED.

The column of Differences, November 30, 1875, in the following Statement, shows the amount drawn for and charged to City Accounts in the Auditor's office, but not paid by the City Treasurer at that date.

NO.	ACCOUNT.	Differences, Nov. 30, 1874.	Mayor's Drafts.	TOTAL.	Treasurer's Payments.	Differences, Nov. 30, 1875.
1.	Abatements and Discount.....		\$52,167 32	\$52,167 32	\$52,167 32	
2.	Armory	\$2,504 92	14,000 00	16,504 92	16,504 92	
3.	City Hall.....	514 85	5,149 87	5,664 72	5,251 29	\$ 413 43
4.	City Hospital	852 30	8,725 29	9,577 59	8,720 77	856 82
5.	Collector's Sale, (Surplus Account),		5 33	5 33	5 33	
6.	Committee on Reduct'n City Debt,.		52,044 26	52,044 26	52,044 26	
7.	Elm Park.....	97 00	241 40	338 40	338 40	
8.	Fire Department.....	11,829 45	49,191 11	61,020 56	48,509 81	12,510 75
9.	Free Public Library.....	1,035 77	15,190 85	16,226 62	14,573 24	1,653 38
10.	Hlghway Department.....	8,544 41	63,776 81	72,321 22	66,369 64	5,951 58
11.	Incidental Expenses.....	559 98	43,307 00	43,866 98	42,095 43	1,771 55
12.	Interest		141,833 66	141,833 66	141,833 66	
13.	Interest on Funded Sewer Loan....		21,774 00	21,774 00	21,774 00	
14.	Interest on Funded Water Loan....		33,541 00	33,541 00	33,541 00	
15.	Lighting Streets.....	2,852 16	28,269 65	31,121 81	28,171 42	2,950 39
16.	Loans, Funded City		6,000 00	6,000 00	6,000 00	
17.	Loans, Funded Sewer		20,000 00	20,000 00	20,000 00	
18.	Loans, Funded Water.....		133,800 00	133,800 00	133,800 00	
19.	Loans, Temporary.....		877,324 26	877,324 26	877,324 26	
20.	Pauper Department, (City Relief)..	789 00	12,315 24	13,104 24	12,540 59	563 65
21.	Pauper Department, (Farm).....	1,455 37	15,125 14	16,580 51	15,377 07	1,203 44
22.	Pauper Depart'nt, (Truant School)..	81 71	2,226 20	2,307 91	2,252 28	55 63
23.	Police Department.....	4,291 68	54,426 39	58,718 07	54,216 87	4,501 20
24.	Real Estate, Lien Account.....		2,153 60	2,153 60	2,153,60	
25.	Salaries	1,869 41	22,849 59	24,719 00	22,891 64	1,827 36
26.	School Department.....	13,345 87	153,210 57	166,556 44	152,932 20	13,624 24
27.	School Houses		1,601 24	1,601 24	24 04	1,577 20
28.	Sewer Assessment, (Old Acc't).....		26 52	26 52	26 52	
29.	Sewers, (Construction).....	783 50	23,720 96	24,504 46	16,878 06	7,626 40
30.	Sewers, (Maintenance).....	913 41	10,502 01	11,415 42	10,185 13	1,230 29
31.	Shade Trees and Public Grounds ...	279 32	4,265 03	4,544 35	4,173 33	371 02
32.	State Aid.....		12,889 25	12,889 25	12,889 25	
33.	Street Construction.	1,339 10	32,869 34	34,208 44	32,741 89	1,466 55
34.	Taxes, 1874, County.....		25,152 28	25,152 28	25,152 28	
35.	Taxes, Nat'l Bank, (State Acc't)....		26,331 83	26,331 83	26,331 83	
36.	Taxes, 1874, State.....		51,020 00	51,020 00	51,020 00	
37.	Taxes, 1875, County.....		20,960 23	20,960 23	20,960 23	
38.	Water Works, Construction.....	4,675 75	51,233 09	55,908 84	54,577 49	1,331 35
39.	Water Works, Maintenance.....	1,138 12	26,320 98	27,459 10	25,993 68	1,465 42
			\$59,573 08	\$2,115,541 30	\$2,175,294 38	\$2,112,342 73
						\$62,951 65

REPORT OF THE AUDITOR.

CITY OF WORCESTER,

AUDITOR'S OFFICE, JANUARY 1, 1876.

To the Honorable City Council :

GENTLEMEN :—In conformity with the requirements of Section 16 of the "Ordinance relating to Finance and establishing Sinking Funds," the undersigned presents herewith, his Annual *Report of the Receipts, and Expenses* of the City of Worcester, exhibiting the same as classified in the several Department Accounts, in connection with the Appropriations for the financial year, ending November 30, 1875, and showing the *Balances unexpended* at that date, the *Liabilities* and *Cash Assets* then existing, and a Schedule of the *City Property*.

Respectfully submitted.

HENRY GRIFFIN,

Auditor.

RECEIPTS.

The Receipts for the year ending November 30, 1875, are shown in the aggregates, as credited in the following accounts:—

No. of Acct.

1. Bills Receivable,	\$19,000 00
2. City Hall,	1,501 00
3. City Hospital,	861 74
4. Collector's Sale, (Surplus Acc't),	4 36
5. Com. on Reduction of City Debt,	53,393 92
6. Fire Department,	2,169 71
7. Free Public Library,	3,019 53
8. Highway Department,	18,105 76
9. Incidental Expenses,	37,667 61
10. Interest,	17,989 19
11. Lighting Streets,	50 40
12. Loans, Temporary,	642,044 26
13. Pauper Dep't, City Relief Acc't,	3,329 59
14. Pauper Department, Farm Acc't,	5,880 87
15. Police Department,	8,274 63
16. Real Estate, Lien Account,	1,601 56
17. Real Estate, Sales,	36 00
18. School Department,	717 36
19. Sewer Assessment, (Old Acc't),	42,188 53
20. Sewer Assessment, (New Acc't),	34,656 42
21. Sewers, Construction Account,	17,287 19
22. Sewers, Maintenance Account,	22 85
23. Shade Trees and Public Grounds,	262 75
24. State Aid,	12,604 99
25. Street Construction,	17,486 72
26. Taxes, 1872,	19 48
27. Taxes, 1873,	580 46
28. Taxes, 1874, Corporation,	46,744 74
29. Taxes, 1874, Nat'l B'k, (State Acc't),	7,095 12
30. Taxes, 1874,	28,824 99
31. Taxes, 1875,	821,741 57
32. Water Works, Construction Acc't,	18,543 98
33. Water Works, Maintenance Acc't,	79,046 42

Total Receipts,

\$1,942,753 70

EXPENSES.

The claims for the year ending November 30, 1875, as approved and drawn for in the Auditor's Office, are shown in the aggregates, as charged to the following accounts:

No. of Acct.

1. Abatement and Discount,	\$52,167 32
2. Armory,	14,000 00
3. City Hall,	5,149 87
4. City Hospital,	8,725 29
5. Collector's Sale, (Surplus Acc't),	5 33
6. Com. on Reduction of City Debt,	52,044 26
7. Elm Park,	241 40
8. Fire Department,	49,191 11
9. Free Public Library,	15,190 85
10. Highway Department,	63,776 81
11. Incidental Expenses,	43,307 00
12. Interest,	141,833 66
13. Interest on Sewer Loan,	21,774 00
14. Interest on Water Loan,	33,541 00
15. Lighting Streets,	28,269 65
16. Loans, Funded City,	6,000 00
17. Loans, Funded Sewer,	20,000 00
18. Loans, Funded Water,	133,800 00
19. Loans, Temporary,	877,324 26
20. Pauper Dep't, City Relief Acc't,	12,315 24
21. Pauper Dep't, Farm Account,	15,125 14
22. Pauper Dep't, Truant School Acc't,	2,226 20
23. Police Department,	54,426 39
24. Real Estate, Lien Account,	2,153 60
25. Salaries,	22,849 59
26. School Department,	153,210 57
27. School Houses,	1,601 24
28. Sewer Assessment, Old Account,	26 52
29. Sewers, Construction Account,	23,720 96
30. Sewers, Maintenance Account,	10,502 01
31. Shade Trees and Public Grounds,	4,265 03
32. State Aid,	12,889 25
33. Street Construction,	32,869 34
34. Taxes, 1874, County,	25,152 28
35. Taxes, Nat'l Bank, (State Acc't),	26,331 83
36. Taxes, 1874, State,	51,020 00
37. Taxes, 1875, County,	20,960 23
38. Water Works, Construction Acc't,	51,233 09
39. Water Works, Maintenance Acc't,	26,320 98

Total Expenses,

\$2,115,541 30

AUDITOR'S REPORT.

SHOWING the Appropriations for each City Account; the Receipts and Expenses for the year ending November 30, 1875; and the balances unexpended at that date.

ABATEMENTS AND DISCOUNT.

Balances unexpended, November 30, 1874,	
brought forward,	\$ 550 24
Appropriation,	55,000 00
	<hr/> \$55,550 24

EXPENDED.

For Abatement allowed R. Spaulding, per	
order of City Council,	\$ 17 10
Abatements allowed by Assessors,	3,741 61
Discount allowed for prompt payment,	48,408 61
	<hr/>
Total as per item No. 1 of Expenses,	\$52,167 32
	<hr/>
Balance unexpended, transferred to Sinking Fund,	\$3,382 92

ARMORY.

Appropriation,	\$14,000 00
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EXPENDED.

For Gun racks,	\$475 00
J. Murphy, balance of Contract,	11,498 49
R. N. Start, one-half Sewer, as per	
agreement,	85 00
R. N. Start, for expense of legal papers,	8 00
Plans, Specifications and superintend-	
ence,	441 79
Service pipe,	3 00

For Curb stone,	66 72	
Moving gravel,	125 80	
Painting and whitening,	42 35	
Insurance,	21 00	
Paving,	236 00	
Grading,	25 88	
Furniture,	452 50	
Gas Fixtures,	518 47	
	<hr/>	
Total as per item No. 2 of Expenses,		\$14,000 00

BILLS RECEIVABLE.

Received for Note of D. S. Messinger, as per item No. 1 of Receipts,	\$19,000 00
Amount transferred to Sinking Fund,	19,000 00

CITY HALL.

Balance unexpended, November 30, 1874, brought forward,	\$1,689 63	
Appropriation,	3,500 00	
	<hr/>	\$5,189 63

RECEIVED.

For Rent of Court Room,	\$1,500 00	
Materials sold,	1 00	
	<hr/>	
Total as per item No. 2 of Receipts,		\$1,501 00
		<hr/>
		\$6,690 63

EXPENDED.

For Furniture and Fixtures,	\$1,027 90
Repairs,	652 97
Brooms, brushes, matches, &c.,	115 10
Fuel,	1,198 74
Ice,	25 61
Care of Heating Apparatus, &c.,	300 00
Gas,	1,770 65
Stationery,	4 40

For Gas Governor,	50 00	
Carting ashes,	4 50	
	<hr/>	
Total as per item No. 3 of Expenses,		\$5,149 87
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$1,540 76

CITY HOSPITAL.

Balance unexpended, November 30, 1874, brought forward,	\$1,579 57	
Appropriation,	10,500 00	
	<hr/>	\$12,079 57

RECEIVED.

For Board of Patients,	\$830 03	
Care of Paupers from Commonwealth,	31 71	
	<hr/>	
Total as per item No. 3 of Receipts,		\$861 74
		<hr/>
		\$12,941 31

EXPENDED.

For Salary of Physician and Sup't,	\$6,00 00
Services of Nurses and others,	2,645 44
Groceries and provisions,	2,441 45
Carpets, bedding, table linen, &c.,	171 42
Repairs,	133 90
Fuel,	426 71
Surgical instruments,	145 70
Medicines,	492 58
Gas,	210 43
Crockery, tin ware, &c.,	128 58
Stationery, postage, express, &c.,	44 34
Printing,	60 45
Furniture and fixtures,	110 40
Ice,	13 83
Trucking,	20 80
Hay and grain,	140 05
Advertising,	25 00
Cow and Swine,	200 00
Green-house frame and sashes,	40 00
Boots and shoes,	6 04

For Manure,	86 62	
Cooking-range,	103 25	
Fowls,	13 50	
Seeds,	20 30	
Hack hire,	47 77	
Tools,	9 20	
T. L. Nelson (legal services),	379 53	
Engineering,	8 00	
	<hr/>	
Total as per item No. 4 of Expenses,		\$8,725 29
		<hr/>
Balance unexpended,		\$4,216 02

COLLECTOR'S SALES: SURPLUS ACCOUNT.

RECEIVED.

Balance unexpended, November 30, 1874, brought forward,	0 97	
From Sale of Estates in excess of taxes and costs, as per item No. 4 of Receipts,	4 36	
	<hr/>	\$5 33

EXPENDED.

Amount in excess of taxes and costs repaid in settlement, as per item No. 5 of Expenses,		\$5 33
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COMMITTEE ON REDUCTION OF CITY DEBT.

Amount in hands of Committee, November 30, 1875, as per item No. 5 of Receipts,	\$53,393 92
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EXPENDED.

Amount paid for Bonds (matured June and July), as per item No. 6 of Ex- penses,	\$52,044 26	
	<hr/>	
Balance unexpended transferred to Sinking Fund,		\$1,349 66

ELM PARK.

Balance unexpended, November 30, 1874, brought forward,	\$241 40
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EXPENDED.

For Trees and Shrubberty, as per item No. 7 of Expenses,	\$241 40
---	----------

FIRE DEPARTMENT.

Balance unexpended, November 30, 1874, brought forward,	\$1,805 33	
Appropriation,	\$50,000 00	
	<hr/>	\$51,805 33

RECEIVED.

For Labor of men and teams,	\$1,423 75	
Gas furnished Engineers (Thomas St.),	16 70	
Manure sold,	175 75	
Water used on Front Street,	8 87	
Use of Steamer,	4 00	
School Street Engine House, from Merchants' & Farmers' Mutual In- surance Co.,	350 00	
Hose sold,	33 23	
Flag stone sold,	85 00	
Old copper "	72 41	
	<hr/>	
Total as per item No. 6 of Receipts,		\$2,169 71
		<hr/>
		\$53,975 04

EXPENDED.

For Salary of S. E. Combs, chief engineer,	\$1,200 00
" Wm. Brophy, ass't "	1,200 00
" Wm. Knowles, " "	200 00
" J. W. Loring, " "	200 00
" Samuel H. Day, " and clerk,	250 00

For Pay roll of men, Steamer No. 1,	1,530 00
“ “ “ 2,	1,530 00
“ “ “ 3,	1,530 00
“ “ “ 4.	1,570 00
“ “ City Hose Co., No. 1,	1,105 00
“ “ Ocean “ “ 2,	1,105 00
“ “ Eagle “ “ 3,	1,071 64
“ “ Niagara, “ 4,	1,104 99
“ “ Yankee “ 5,	1,105 00
“ “ Tiger “ 6,	919 17
“ “ Protector, “ 7,	1,021 66
“ “ Hook and Ladder Co., No 1,	2,055 00
“ “ Hook and Ladder Co., No. 2,	2,018 33
“ “ Babcock Extinguisher,	665 00
Services of stewards and drivers,	4,104 17
New apparatus,	3,146 89
Repairs of apparatus,	1,641 68
“ “ Houses,	1,557 60
“ on School St. Engine House,	1,465 73
“ “ Exchange St. “ “	962 32
J. W. Doon, balance contract, John Street Engine House,	2,112 00
Extra work on John St. Engine House,	124 55
Building drain, “ “ “	88 00
“ Sewer, Carlton St. Engine House,	61 18
Repairs of stable on Davis Court,	250 00
Grading Winslow Street,	100 00
Alarms of fire,	77 00
Hardware and tools,	147 34
Oil, soap, brushes, &c.,	384 38
Materials for, and repair of telegraph,	629 62
Hay, grain and straw,	2,152 81
Horses,	475 00
Horse hire and board of horses,	1,722 50
Fuel,	1,399 05
Belts, straps and badges,	27 00
Advertising,	6 14
Blacksmith labor,	230 87
Freight and trucking,	29 13
Furniture and fixtures,	751 45
Printing,	145 16
Harnesses, blankets, and repairing same,	294 04
Stationery,	25 62
Gas,	596 55
Washing of bedding,	203 13
Hose,	1,853 53

For Rent of barn,	25 00	
C. Dyer, for moving wall and grapery,	113 77	
Gas governor,	35 00	
Medicine and attendance for horses,	5 50	
Use of carts, (Highway Department),	60 50	
Hose Stuffing,	89 70	
Express, stamps, &c.,	51 37	
Gongs,	462 50	
Bedding,	13 56	
Refreshments at fire,	44 40	
Traveling Expenses of engineers,	18 00	
Bands for muster, &c.,	120 00	
Ice,	6 58	
		<hr/>
Total as per item No. 8 of Expenses,		\$49,191 11
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$4,783 93

FREE PUBLIC LIBRARY.

Balance unexpended, Nov. 30, 1874, brought forward,	\$1,183 37	
Appropriation,	11,000 00	
		<hr/>
		\$12,183 37

RECEIVED.

For Dog Fund from County Treasurer, as per item No. 7 of Receipts,	\$3,019 53	
		<hr/>
		\$15,202 90

EXPENDED.

For Salary of S. S. Green, Librarian,	\$2,500 00	
“ Asst. Librarians,	2,978 50	
“ Janitor,	225 00	
Books and Stationery,	5,586 36	
Furniture and fixtures,	170 10	
Repairs,	325 71	
Fuel,	512 60	
Printing,	247 00	
Brooms, dusters, matches, &c.,	13 80	
Gas,	950 38	

For Binding books,	971 85	
Water,	2 60	
Stamps, express, and Post Office charges, &c.,	328 45	
Looking up lost books,	159 75	
Trucking,	18 75	
Expense of Reading room,	200 00	
	<hr/>	
Total as per item No. 9 of Expenses,		\$15,190 85
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$12 05

HIGHWAY DEPARTMENT.

Balance unexpended, Nov. 30, 1874, brought forward,	\$2,316 02	
Appropriations for Highways and Sidewalks,	50,000 00	
	<hr/>	
		\$52,316 02

RECEIVED.

For Construction of Sidewalks, &c., as per item No. 8 of Receipts,	\$18,105 76	
	<hr/>	
		\$70,421 78

EXPENDED.

For Salary of Rufus Carter, Commissioner,	\$2,200 00
Labor of men, as per pay rolls,	29,085 66
Extra labor of men and teams,	3,387 84
Shoeing, repairs of tools, &c.,	1,129 62
Brick,	2,886 40
Lumber and carpenter work,	580 60
Cobble stone,	268 01
Flagstone,	962 93
Curbstone,	2,040 07
Paving,	2,777 98
Paving blocks,	78 20
Stone and fittings,	75 24
Stone posts, wall stone, setting and laying same,	314 20

For Gravel,	635 20
Lime and cement,	8 40
Hardware and tools,	262 22
Engineering,	1,912 41
Harnesses, and repairing same,	422 37
Carts, wagons, sleighs, and repair of same,	972 64
Horses and oxen,	1,400 00
Medicine for horses,	73 25
Hay, grain, and straw,	4,186 73
Freight and trucking,	589 12
Clerical labor,	325 00
Blank book,	3 50
Printing,	74 31
Advertising,	43 62
Oil, lanterns, brooms, &c.,	97 98
Fuel,	26 00
Gas,	66 19
Drain pipe,	214 98
Repairs, &c., on barn,	1,091 55
Powder and fuse,	17 86
Supplying watering troughs, and repairs of same,	47 80
Rent of land for storage,	25 00
Insurance on stable,	75 00
Painting fence at Hospital,	25 00
Breaking roads,	124 50
Traveling expenses of Commissioner and express charges,	17 29
Building wall near City Stable,	168 60
Lettering Street signs,	4 00
Horse hire and keeping,	45 75
Henry N. Stone, for Street Sweeper,	350 00
Almira Newton, injury to person,	300 00
Leo Roberts, injury to person and sleigh,	2,050 00
Josiah Rice, injury to person,	196 39
Bridget Fitmore, injury to person,	300 00
John O. Sullivan, injury to person,	50 00
Catharine Kneeland, injury to person,	25 00
F. T. Burr, injury to carriage,	100 00
Geo. W. Gale, injury to carriage,	100 00
Jane Woodward, legal charges,	100 15
Albert Curtis, damage to estate,	287 50
E. Banister and others, referees in Curtis case,	30 00
Brigham Converse, retaining wall on Belmont street,	200 00

Abbie R. Dunnawen, damage to estate on Chandler street,	460 90	
Michael McGrath, damage to estate on Hammond street,	6 00	
Theron E. Hall, retaining wall on Dix street,	50 00	
Legal costs, Chapin case,	15 00	
Excavating rock, Plantation street,	400 50	
Water and water pipe, labor on same,	12 10	
Total as per item No. 10 of Expenses,		\$63,776 81
Balance unexpended, transferred to Sinking Fund,		\$6,644 97

INCIDENTAL EXPENSES.

Balance unexpended, Nov. 30, 1874, brought forward,	\$1,656 97	
Appropriation,	13,000 00	
		\$14,656 97

RECEIVED.

For Office Fees from City Clerk,	\$1,781 00	
Licenses from " "	1,154 00	
" for sale of liquor,	30,500 00	
" Barnum's Hippodrome,	200 00	
Summonses,	281 00	
Costs on Taxes, 1873,	\$70 62	
" " 1874,	538 20	
" Tax deed, canceled,	3 82	
" Real Estate, Lien account,	10 35	
Licenses of dogs,	1,191 00	
Rent of Armories from Common- wealth,	1,075 00	
Costs on collecting Sewer Assess- ments,	45 13	
Costs on collecting Street Better- ments,	180 48	
One-half of fees for weighing on City Scales,	577 01	
Witness fees in Hunter case,	60 00	
Total as per item No. 9 of Receipts,		\$37,667 61
		\$52,324 58

EXPENDED.

For Advertising,	\$688 17
Printing,	2,299 68
Services of Engineers, Instruments and repairs of same,	2,663 67
Blank books, stationery, stamps, &c.,	717 60
Trucking,	8 90
Fuel,	49 51
Return of deaths by Undertakers,	256 25
Collecting births,	186 60
Directories,	108 00
Care of Clocks,	87 50
Hack hire,	45 90
Analysis of milk,	15 00
Numbering streets,	4 00
Memorial day expenses,	500 00
Fourth of July celebration,	483 00
Reception of Portland guests,	685 25
Repairing Liberty pole,	7 12
Examining records,	46 95
Wilson obsequies expense,	247 80
Rent, furniture, and heating Ward rooms,	215 68
Services of Ward Clerks,	51 00
Legal assistance, witness fees, &c.,	318 43
Committee on Division of County,	4,949 40
Taking Census for Ward lines,	28 75
Clerk pro tem. of Common Council,	75 00
Costs of perambulating Holden bounds,	82 00
Distributing Tax summonses,	243 24
Killing dogs,	61 00
Ringin bell,	1 50
Sale of old buildings (Auctioneer's charges),	9 37
Repairing Old South Clock,	50 00
Carpenter work on Band Stand,	27 52
Sprinkling around public buildings,	100 00
County Treasurer, legal costs,	9 35
T. S. Johnson, " "	15 90
Hartley Williams, " "	38 50
Edwin McArthur, injury to person, firing salute,	750 00
Legal expenses in Petroleum cases,	348 56
Commonwealth of Massachusetts, one- fourth of Liquor licenses,	7,500 00
Liquor license refunded,	100 00
Repairing Hay Scales,	83 70

For Posting Tax notices,	13 00	
Tax refunded (Valentine),	7 25	
Rent for Armory,	890 30	
Gas for Armory,	185 66	
Repairs and fixtures for Armory,	182 02	
Janitor for Armory,	79 50	
Fuel for Armory,	3 20	
Stoves and Stove furniture for Armory,	260 00	
Green Library, refunded Bank Tax,	120 40	
Repairs in Engineer's office, &c., on School street,	25 45	
Repairs on Shop, School street,	95 05	
Thos. Harrington, services under So- licitor,	68 00	
Furniture for Office of Sup't of Pub- lic Buildings,	115 48	
Traveling expenses of Sup't of Pub- lic Buildings,	6 49	
Gas and lamp for Sup't of Public Buildings,	5 63	
Care of room for Sup't of Public Buildings,	5 00	
Stationery, stamps, and fuel for Sup't of Public Buildings,	12 02	
Horse hire for Sup't of Public Build- ings,	52 50	
Page to Common Council,	20 25	
Amount transferred to Sewer Con- struction, per order of City Coun- cil,	17,000 00	
Total as per item No. 11 of Expenses,		\$43,307 00
Balance unexpended transferred to Sinking Fund,		\$9,017 58

INTEREST.

Balance unexpended, November 30, 1874, brought forward,	\$ 2,192 58	
Appropriation,	135,400 00	
		\$137,592 58

RECEIVED.

For Interest on Deposits,	\$5,858 76
“ “ “ Sewer Account,	
1875,	243 23

For Interest on Assessments for Street Bet-		
terments,	815 47	
“ “ Sewer Assessment (old		
account),	8,406 78	
“ “ Sewer Assessment (new		
account),	108 26	
“ “ Taxes, 1872,	3 00	
“ “ “ 1873,	58 53	
“ “ “ 1874,	1,150 08	
“ “ “ 1875,	31 71	
“ “ Bills receivable,	1,282 75	
“ “ Lien Account, deeds cancelled,	30 62	
	<hr/>	
Total as per item No. 10 of Receipts,		\$17,989 19
		<hr/>
		\$155,581 77

EXPENDED.

For Interest on Funded City and Tempo-		
rary Loans, as per item No. 12 of		
Expenses,		\$141,833 66
		<hr/>
Balance unexpended transferred to		
Sinking Fund,		\$13,748 11

INTEREST ON SEWER LOAN.

Balance unexpended, November 30, 1874,		
brought forward,	\$192 00	
Appropriation,	21,600 00	
	<hr/>	
		\$21,792 00

EXPENDED.

For Interest on Funded Sewer Loan, as		
per item No. 13 of Expenses,	\$21,774 00	
	<hr/>	
Balance unexpended transferred to Sinking Fund,		\$18 00

INTEREST ON WATER LOAN.

Receipts for Water Rates, transferred from		
Water Works, Maintenance Account,		\$33,541 00

EXPENDED.

For Interest on Funded Water Loan, as per item No. 14 of Expenses,	\$33,541 00
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LIGHTING STREETS.

Balance unexpended, November 30, 1874, brought forward,	\$455 32	
Appropriation,	30,000 00	
	<hr/>	\$30,455 32

RECEIVED.

For Lanterns, lamp-posts, &c., as per item No. 11 of Receipts,	\$50 40
	<hr/>
	\$30,505 72

EXPENDED.

For Gas, Worcester Gas Light Co.,	\$12,643 18	
Lighting and care of lamps,	5,133 74	
Lighting, &c., by New England Gas Light Co.,	8,286 46	
Lanterns and lamps,	929 15	
Lamp posts and frames,	355 78	
Re-setting and repair of lamps,	701 25	
Chas. A. Hill, for non-fulfillment of contract for oil,	150 00	
Lettering lanterns,	31 45	
Advertising,	3 00	
Oil, &c.,	5 46	
Express, stamps, &c.,	2 00	
Ladder,	2 00	
Repair of building,	26 18	
	<hr/>	
Total as per item No. 15 of Expenses,		\$28,269 65
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$2,236 07

LOANS: FUNDED CITY.

Amount, November 30, 1874,	\$1,711,000 00
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EXPENDED.

For City Bonds and Certificates of Indebtedness payable in 1875, as per item No. 16 of Expenses,	\$6,000 00
Amount, November 30, 1875,	<u>\$1,705,000 00</u>

LOANS: FUNDED SEWER.

Amount, November 30, 1874,	\$369,400 00
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EXPENDED.

For City Bonds and Certificates of Indebtedness payable in 1875, as per item No. 17 of Expenses,	\$20,000 00
Amount, November 30, 1875,	<u>\$349,000 00</u>

LOANS: FUNDED WATER.

Amount, November 30, 1874,	\$559,100 00
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EXPENDED.

For Funded Debt payable in 1875, as per item No. 18 of Expenses,	\$133,800 00
Amount, November 30, 1875,	<u>\$425,300 00</u>

LOANS: TEMPORARY.

Amount, November 30, 1874,	\$345,280 00
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RECEIVED.

For Loans authorized by City Council, as per item No. 12 of Receipts,	\$642,044 26
	<u>\$987,324 26</u>

EXPENDED.

For City Notes cancelled, as per item No. 19 of Expenses,	\$877,324 26
Amount, November 30, 1875,	<u>\$110,000 00</u>

PAUPER DEPARTMENT: CITY RELIEF ACCOUNT.

Balance unexpended, November 30, 1874, brought forward,	\$210,05	
Appropriation,	\$10,000 00	
Less amount transferred to Pauper Dep'tment, Truant School,	400 00	
	<u>9,600 00</u>	\$9,810 05

RECEIVED.

From Commonwealth, for Support of State Paupers, &c.,	\$502 73	
County, Cities, Towns and Individu- als, for aid to their Poor,	2,718 86	
State, for amount allowed on account of contagious diseases,	108 00	
Total as per item No. 13 of Receipts,	<u>\$3,329 59</u>	\$13,139 64

EXPENDED.

Paid Geo. W. Gale (salary), Clerk,	\$1,500 00
L. Wheeler, " City Physician,	722 22
F. J. McNulty, bal., " "	77 78
Wor. Lunatic Hospital, for care of Insane,	1,862 67
Commonwealth, for care of Insane,	828 43
Hospital for Insane, for care of Insane,	210 47
City of Boston, for aid to sundry persons,	247 03
" " Lynn, " " "	77 87
" " New Bedford, " " "	5 24
" " Newburyport, " " "	41 49

Paid Town of Natick, for aid to sundry persons,	6 00	
“ “ Webster, “ “	19 50	
“ “ Southbridge, “ “	31 00	
“ “ Millbury, “ “	82 50	
“ “ Dedham, “ “	67 95	
County of Essex, “ “	5 86	
Transportation and office expenses,	620 13	
State Industrial School, for board of girls,	99 21	
State Reform School, for board of boys,	586 48	
Board of aged and sick poor,	174 00	
Groceries and provisions,	2,312 45	
Fuel,	1,762 83	
Medicines,	229 50	
Medical consultations,	81 00	
Burials,	356 00	
Hack Hire,	25 00	
Blank books and stationery,	21 20	
Boots, shoes and clothing,	80 97	
Printing,	148 25	
Vaccine virus,	32 21	
	<hr/>	
Amount as per item No. 20 of Expenses,		\$12,315 24
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$824 40

PAUPER DEPARTMENT: FARM ACCOUNT.

Appropriation, \$11,000 00

RECEIVED.

For Produce of Farm sold,	\$4,500 70	
Board of Teacher and Scholars in Truant School,	1,370 17	
Windlass wheel and rope sold,	10 00	
	<hr/>	
	5,880 87	
	<hr/>	
		\$16,880 87

EXPENDED.

For Salary of John Farwell, Superintendent,	\$1,200 00
Groceries and provisions,	2,009 05
Grass seed, grain and feed,	787 34

For Medicine and medical consultation,	114 41
Boots and shoes,	217 60
Fuel,	349 48
Burials,	8 00
Dry goods, bedding, &c.,	373 75
Clothing,	387 12
Extra labor,	667 54
Hardware and tools,	241 32
Repairs on buildings,	152 46
Lumber and carpenter work,	57 62
Blacksmith work,	79 96
Crockery,	59 11
Furniture,	97 71
Oil, paints, &c.,	59 11
Books and stationery,	10 35
Horses, oxen and other stock,	482 00
Wagons, and repairing same,	102 40
Harnesses, &c.,	52 05
Fertilizers, manure and trees,	66 96
Town of Shrewsbury, for taxes,	76 03
Daily Spy,	12 00
Worcester Palladium,	2 00
Powder,	3 04
	<hr/>
Total for Farm,	\$7,668 41

For Scavenger Department :

For Collecting swill,	\$5,947 00
Rent of land for swill depot,	187 50
Extra labor,	735 21
Repair of buildings,	80 61
Swine,	80 00
Wagons, and repairing same,	172 48
Harnesses " " "	52 17
Blacksmith work,	108 56
Lumber and carpenter work,	9 12
Hardware, tools, buckets, &c.,	22 58
Grain,	17 50
Shavings,	44 00
	<hr/>
	\$7,456 73

Total amount as per item No. 21 of Expenses,	\$15,125 14
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Balance unexpended transferred to Sinking Fund,	\$1,755 73
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PAUPER DEPARTMENT: TRUANT SCHOOL ACCOUNT.

Balance unexpended, Nov. 30, 1874, brought forward,		\$1,406 79
Appropriation,	\$500 00	
Transferred from Appropriation Pauper Dep't to City Relief,	400 00	
	<hr/>	900 00
		<hr/>
		\$2,306 79

EXPENDED.

Paid John Farwell, Superintendent,	\$200 00	
Emma J. Parker, Teacher,	300 00	
For Boots and shoes,	56 95	
Clothing, dry goods, &c.,	287 67	
Books,	8 96	
Repairing stove,	2 45	
Board of Scholars,	1,370 17	
	<hr/>	
Total as per item No. 22 of Expenses,		\$2,226 20
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$80 59

POLICE DEPARTMENT.

Balance unexpended, November 30, 1874, brought forward,	\$1,687 55	
Appropriation,	45,000 00	
	<hr/>	
		\$46,687 55

RECEIVED.

For Cloth furnished Policeman,	\$880 88	
Use of Lock-up,	3 00	
Extra pay of Police,	91 75	
Officers' fees from Clerk of Court,	7,299 00	
	<hr/>	
Total as per item No. 15 of Receipts,		\$8,274 63
		<hr/>
		\$54,962 18

EXPENDED.

Paid A. D. Pratt, (balance), City Marshal,	\$190 68	
W. A. Washburn, " "	1,816 65	
H. W. Conklin, (balance), Assistant Marshal,	136 83	
J. M. Dyson, Assistant Marshal,	1,362 22	
E. D. McFarland, " "	1,500 00	
Policemen, as per pay rolls,	47,535 61	
Care of Office and cells,	300 00	
Cloth, buttons and badges,	973 41	
Telegrams, stationery, &c.,	116 06	
Brooms, lamps, matches, &c.,	17 28	
Repairs and cleaning cells,	131 08	
Provisions for prisoners,	149 50	
Furniture and repairs,	66 43	
Advertising,	13 50	
Printing,	63 30	
Washing of bedding, &c.,	18 76	
Photographs of prisoners,	6 75	
Ice,	12 33	
Atlas of United States,	16 00	
Total as per item No. 23 of Expenses,		<u>\$54,426 39</u>
Balance unexpended transferred to Sinking Fund,		<u>\$535 79</u>

REAL ESTATE.—LIEN ACCOUNT.

Balance, Nov. 30, 1874, brought forward,	\$1,609 94
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EXPENDED.

For Real Estate sold for Taxes and purchased by Collector as per item No. 24 of Expenses,	<u>\$2,153 60</u>	
		\$3,763 54

RECEIVED.

For Amount of Taxes and charges in Redemption of Property, as per item No. 16 of Receipts,	<u>\$1,601 56</u>
Balance,	\$2,161 98

REAL ESTATE SALES.

Received for sale of old buildings on Union street, as per item No. 17 of Re- ceipts,	\$36 00	
Amount transferred to Sinking Fund,		36 00

SALARIES.

Balance unexpended, November 30, 1874, brought forward,	\$1,386 81	
Appropriation,	25,000 00	
		\$26,386 81

EXPENDED.

Paid E. L. Davis, Mayor, bal. Salary,	\$145 83
Clark Jillson, Mayor, Salary,	1,362 50
W. A. Williams, City Solicitor, bal- ance Salary,	194 45
F. T. Blackmer, City Solicitor, Salary,	1,805 55
Wm. S. Barton, City Treasurer and Collector,	2,500 00
Sam'l Smith, City Clerk,	2,000 00
Henry Griffin, Auditor,	1,500 00
C. H. M. Blake, Acting Engineer,	1,125 00
W. E. Mills, balance,	499 98
W. L. Clark, Assessor,	1,600 00
J. P. Houghton, "	1,400 00
E. H. Towne, "	803 21
Levi Barker, (bal.) Assessor,	291 65
C. H. Marvin, Messenger,	1,100 00
Walter Gates, (bal.) Bookkeeper,	550 58
C. B. Damon, Bookkeeper,	791 67
C. H. Peck, Sup't of Public Buildings,	1,250 00
H. L. Shumway, Clerk of Common Council,	300 00
R. R. Shepard, Scaler of Weights and Measures,	360 00
R. R. Shepard, Milk Inspector,	50 00
Assistant Assessors,	486 00
Salary of Page to Common Council,	10 36
Clerk hire for Treasurer,	1,328 34

Paid Clerk hire for City Clerk,	649 23	
Clerk hire for Auditor,	47 17	
Clerk hire for Assessors,	698 07	
	<hr/>	
Total as per item No. 25 of Expenses,		\$22,849 59
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$3,537 22

SCHOOL DEPARTMENT.

Balance unexpended, November 30, 1874,		
brought forward,	\$4,645 22	
Appropriation,	\$140,000 00	
Appropriation transferred from		
School Houses,	9,800 00	
	<hr/>	
	\$149,800 00	
	<hr/>	
		\$154,445 22

RECEIVED.

For School Books sold and exchanged,	\$464 43	
Salaries overpaid,	77 13	
Wages not claimed by Teacher,	5 00	
Labor and materials,	11 36	
Old desks sold,	43 00	
Stove sold,	50 00	
Old iron sold,	66 44	
	<hr/>	
Total as per item No. 18 of Receipts,		\$717 36
		<hr/>
		\$155,162 58

EXPENDED.

Paid A. P. Marble, Superintendent,	\$3,000 00	
S. V. Stone, Sec'y of School Board,		
balance,	474 99	
Teachers, as per pay rolls,	112,178 80	
Janitors, as per pay rolls,	5,585 55	
Horse hire,	506 63	
Express charges, stamps, &c.,	133 20	
Miscellaneous repairs,	6,858 92	
Furniture and fixtures,	5,457 26	
Fuel,	7,816 04	

For Stoves and stove furniture,	634 45
Repair of stoves,	1,367 44
For labor of cleaning school houses,	463 93
School for sewing,	50 00
Clerical labor,	592 26
School books and stationery,	3,306 81
Brooms, mats, dusters, soap, &c.,	176 37
Grading and paving,	273 93
Printing,	1,112 28
Advertising,	83 13
Trucking,	477 84
Tuning pianos,	93 10
Clocks and repairing same,	260 05
Rent of storeroom,	125 00
Rent of Superintendent's room,	896 80
Setting Fountains at High School house,	203 95
Traveling Expenses of Sup't,	73 05
Painting signs,	26 67
Gas,	472 27
Rent of Schoolroom,	50 01
Insurance,	50 25
Apparatus and repairing same,	57 18
Chemicals for High School,	12 50
Worcester Felting Co.,	7 00
Truant officers,	333 32

Total as per item No. 26 of Expenses,	<u>\$153,210 57</u>
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Balance unexpended transferred to Sinking Fund,	\$1,952 01
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SCHOOL HOUSES.

Appropriation,	\$15,000 00
Less amount transferred to School Department as per order of City Council,	<u>9,800 00</u>

\$5,200 00

EXPENDED.

For Engineering on Ledge street,	\$24 04
Building fence on " "	539 09
Retaining wall on " "	465 96
Grading " "	<u>572 15</u>

Total as per item No. 27 of Expenses,	<u>\$1,601 24</u>
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Balance unexpended transferred to Sinking Fund,	\$3,598 76
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SEWER ASSESSMENT.—OLD ACCOUNT.

Balance uncollected November 30, 1874,	\$105,001 61	
Amount abated since “ “ “	7,231 64	
	<hr/>	
	\$97,769 97	
Amount re-assessed since Nov. 30, 1874,	93 75	
	<hr/>	\$97,863 72

RECEIVED.

From Sundry persons, as per item No. 19 of Receipts,	\$42,188 53
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EXPENDED.

Amount refunded as per item No. 28 of Expenses,	26 52	
	<hr/>	
Transferred to Sinking Fund,		\$42,162 01
		<hr/>
Balance uncollected November 30, 1875,		\$55,701 71

SEWER ASSESSMENT.—NEW ACCOUNT.

Assessed since May 27, 1875,	\$69,553 79	
Abated since,	1,010 29	
	<hr/>	\$68,543 50

RECEIVED.

From Sundry persons, as per item No. 20 of Receipts, and transferred to Sinking Fund,	\$34,656 42
	<hr/>
Balance uncollected November 30, 1875,	\$33,887 08

SEWERS.—CONSTRUCTION ACCOUNT.

Appropriation,	\$15,000 00
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RECEIVED.

For Error,	\$2 56	
Blocking timber sold,	15 00	
Labor and materials,	268 63	
Use of tools,	1 00	
Transfer from Incidental Expenses account, as per order of City Council,	17,000 00	
Total as per item No. 21 of Receipts,		\$17,287 19
		<u>32,287 19</u>

EXPENDED.

For Pay Roll of laborers,	\$666 84	
Freight and teaming,	217 13	
Flag stone and stone inlets,	346 65	
Engineering,	1,745 00	
Casting man-holes, &c.,	209 95	
Brick, sand, cement, drain-pipe, &c.,	1,649 08	
Horse hire,	6 00	
Advertising,	68 12	
Printing,	83 30	
Paving,	6 50	
Tools, iron and steel,	35 99	
Blacksmith work,	30 40	
Oil, &c.,	7 75	
Lumber,	7 06	
Clerical labor,	652 00	
Legal services in sewer suits,	639 70	
Witness fees,	30 70	
Benjamin F. Thomas (legal services),	1,557 65	
C. O. Thompson, analyzing water,	301 00	
Legal expenses in Josiah Rice's case,	189 66	
M. R. Edwards contract,	2,532 67	
Highway Department, carting gravel,	76 95	
Powder and fuse, cordage and packing,	2 60	
Amos Pike (contract, Mill Brook sewer),	10,099 00	
Edward Earle & Pratt, land taken for Mill Brook sewer,	2,057 29	
Thomas Wharton, damage in con- struction of Mill Brook sewer,	98 22	
Engineering " " "	403 75	
Total as per item No. 29 of Expenses,		\$23,720 96
Unexpended balance transferred to Sinking Fund,		<u>\$8,566 23</u>

SEWERS.—MAINTENANCE ACCOUNT.

Balance unexpended, November 30, 1874,		
brought forward,	\$1,519 11	
Appropriation,	10,000 00	
	<hr/>	\$11,519 11

RECEIVED.

For Sewer soil,	\$17 55	
Cleaning cesspool,	3 65	
Labor,	1 65	
	<hr/>	
Total as per item No. 22 of Receipts,		\$22 85
		<hr/>
		\$11,541 96

EXPENDED.

For Pay roll of laborers,	\$6,871 88	
Paid R. H. Chamberlain, for services,	1,500 00	
Horse hire,	332 00	
Rubber goods,	53 00	
Teaming and freight,	1,165 23	
Hardware and tools,	38 95	
Cordage,	6 98	
Stationery, stamps, &c.,	31 15	
Rent,	100 00	
Lumber,	63	
Lanterns,	9 95	
Blacksmith work,	10 58	
Repairing hose,	27 50	
Engineering,	190 00	
Sewer pipe, cement and sand,	95 96	
Catch basin covers,	49 20	
Brick,	19 00	
	<hr/>	
Total as per item No. 30 of Expenses,		\$10,502 01
		<hr/>
Unexpended balance transferred to Sinking Fund,		\$1,039 95

SHADE TREES AND PUBLIC GROUNDS.

Balance unexpended, November 30, 1874,		
brought forward,	\$ 56 00	
Appropriation,	4,000 00	
	<hr/>	\$4,056 00

RECEIVED.

For Circus license,	\$200 00	
Materials sold,	3 00	
Soil, “	24 00	
Hay, “	35 00	
Use of roller,	75	
	<hr/>	
Total as per item No. 23 of Receipts,		\$262 75
		<hr/>
		\$4,318 75

EXPENDED.

For Plants, planting trees, trimming, &c.,	\$525 15	
Grading and other labor,	1,796 24	
Grass seed and fertilizers,	83 00	
Loam and manure,	452 07	
Street scrapings,	226 40	
Paving gutters,	736 40	
Hardware and tools,	82 56	
Lumber and carpenter work,	205 34	
Plumbing,	23 50	
Cement and sand,	8 45	
Engineering,	65 83	
Printing,	54 34	
Advertising,	5 75	
	<hr/>	
Total as per item 31 of Expenses,		\$4,265 03
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$53 72

SINKING FUND.

Appropriation,	\$30,000 00	
Balance unexpended of Sundry accounts		
transferred as per order of City Council,	\$206,645 59	
	<hr/>	
Total,		\$236,645 59

STATE AID.

Balance November 30, 1874, brought forward,	\$31,872 15
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EXPENDED.

Paid Soldiers and Families in Dec., 1874,	\$1,289 00
" " " Jan., 1875,	954 00
" " " Feb., "	1,029 50
" " " March, "	1,140 00
" " " April, "	1,080 00
" " " May, "	1,037 50
" " " June, "	1,067 50
" " " July, "	1,071 75
" " " August, "	978 00
" " " Sept., "	1,108 00
" " " Oct., "	1,064 50
" " " Nov., "	1,069 50
	<hr/>
Total as per item No. 32 of Expenses,	\$12,889 25
	<hr/>
	\$44,761 40

RECEIVED.

For Amount allowed by State Auditor,	\$12,592 99
Amount charged in 1874, not called for,	12 00
	<hr/>
Total as per item No. 24 of Receipts,	\$12,604 99
	<hr/>
Balance due from the State,	\$32,156 41

STATE MILITIA.

Balance of account, November 30, 1874, due the State,	284 74
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STREET CONSTRUCTION.

Appropriation,	\$25,000 00
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RECEIVED.

For Assessments for Betterments on Austin St.,	\$70 74
“ “ Auburn “	841 71
“ “ Bowdoin “	270 32
“ “ Cedar “	258 79
“ “ Coral “	106 38
“ “ Front “	2,662 89
“ “ Hanover “	366 19
“ “ Lafayette “	1,931 83
“ “ Mechanic “	300 00
“ “ N. Newton “	718 00
“ “ Pond “	1,298 75
“ “ Prescott “	18 67
“ “ Pratt “	7,186 79
“ “ Wash'n “	12 50
“ “ Wilmot “	136 23
“ “ Woodl'd “	1,141 09
Rent of Building on Union street,	145 84
Lot of Stone sold,	20 00

Total as per item No. 25 of Receipts,	<u>\$17,486 72</u>
	<u>\$42,486 72</u>

EXPENDED.

FOR BOWDOIN STREET.

Paid H. F. Loomis, for land,	\$490 74
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FOR CHANDLER STREET.

Paid John Flynn, damage to estate,	\$200 00
Minot Rice, “ “	366 15
Witness fees in case of Minot Rice,	14 60

\$580 75

FOR CANTERBURY STREET.

Paid C. L. Stockwell, additional allowed for land, &c.,	\$150 00
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Paid Thomas M. Rogers, for land,	26 50	
John Moran, "	25 00	
Wm. Dolan, "	10 00	
John Feehan, "	368 09	
Patrick O'Connell, "	424 00	
William Collins, "	1,136 00	
Ivory Damon, "	376 00	
Catharine Hallowell, "	53 15	
Marion A. Richmond, "	54 00	
Bridget Cotter, "	75 00	
Christian Herrmann, "	92 40	
Sarah Wall, "	25 00	
John Mahoney, "	29 50	
John Whalon, "	79 00	
	<hr/>	
		\$2,923 55

FOR CURTIS STREET.

Paid Eliza D. Goodwin, for land,	\$150 00
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FOR ENDICOTT STREET.

Paid for grading by Highway Department,	\$1,723 42	
For Engineering,	107 39	
	<hr/>	
		\$1,830 81

FOR FORBES STREET.

Paid Sophia S. Prentiss, for land, &c.,	\$5,253 76	
Legal expenses in Prentiss case,	74 10	
	<hr/>	
		\$5,327 86

FOR GRAFTON STREET.

Paid Boston & Albany Railroad, damage allowed for land,	\$3,087 00
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FOR HIGHLAND STREET.

Paid F. W. Cherrington, for land,	\$1,329 50	
Grading by Highway Department,	649 45	
Engineering,	13 00	
	<hr/>	
		\$1,991 95

FOR LAFAYETTE STREET.

Paid E. K. Rice, allowed damage to estate,	\$89 30
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FOR LAMARTINE STREET.

Paid Thomas Halay for damage to land,	\$50 00
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FOR LEICESTER STREET.

Paid Amanda E. Thompson, for land and damage,	\$202 00
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FOR LINCOLN STREET.

Paid for grading,	\$778 20	
Horse hire,	1 50	
Engineering,	40 94	
	<hr/>	\$820 64

FOR NEWTON STREET.

Paid Gideon Davis, for land,	\$410 40	
Goggin & Barnes, for land,	286 50	
E. K. Rice, "	1,085 79	
Edmund Converse, "	538 90	
Arthur E. Gray, "	550 00	
A. Shaughnessey, "	250 00	
G. A. Kimball, "	26 88	
Chas. N. Prouty, Ad'r, "	19 40	
	<hr/>	\$3,167 87

FOR NORTH NEWTON STREET.

Paid J. H. Wall & Belcher, for land,	\$471 33	
S. W. Phettyplace, "	1,760 58	
Hack hire,	7 00	
Witness fees,	26 10	
	<hr/>	\$2,265 01

FOR POND STREET.

Paid Martha Woodward, for land,	\$1,409 20	
Michael Fallon, " &c.,	700 00	
Trustees, Fox heirs, "	2,687 50	
Service pipe,	6 04	
Grading by Highway Department,	143 65	
Engineering,	3 63	
	<hr/>	\$4,950 02

FOR SUFFOLK STREET.

Paid for lowering Water Pipes,	\$1,312 04
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FOR WARD STREET.

Paid John Conlin, for land,	\$43 40	
E. Fisher, " "	11 70	
Grading and building wall,	1,020 00	
Grading by Highway Department,	8 50	
Engineering,	51 90	
	<hr/>	\$1,135 50

FOR WASHINGTON STREET.

Paid Catharine McNamara, for damage grading,	\$400 00
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FOR WELLINGTON STREET.

Paid E. I. Comins, damage to Estate,	\$100 00	
L. C. Whitehouse, damage to Estate,	200 00	
Grading by Highway Department,	499 90	
	<hr/>	\$799 90

FOR SUNDRY STREETS.

Paid Susan H. Purrington, for land on Linwood Place,	\$58 00	
John Ager, damage to Estate on Woodland Street,	20 00	
Witness Fees in John S. Clark case,	70 00	
Legal expenses, Phettyplace suit,	135 00	
Clerical labor,	308 00	
Engineering,	525 33	
Lumber,	112 90	
Advertising,	22 65	
Printing, Stationery, &c.,	32 52	
Hack hire,	10 00	
	<hr/>	\$ 1,294 40
Total as per item No. 33 of Expenses,		32,869 34
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$9,617 38

TAXES FOR 1872.

Balance uncollected November 30, 1874, \$6,914 87

RECEIVED.

From Sundry persons since November 30,
1874, as per item No. 26 of Re-
ceipts, 19 48

Balance uncollected November 30, 1875, \$6,895 39

TAXES FOR 1872.—CORPORATION.

Balance November 30, 1873, due from the
State, \$88 18

EXPENDED.

For amount refunded to the State, as per
item No. 33 of Expenses (Old Ac-
count), \$5 76

TAXES FOR 1873.

Balance uncollected November 30, 1874,	\$6,820 97
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RECEIVED.

From Sundry persons as per item No. 27 of Receipts,	\$580 46
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Balance uncollected November 30, 1875,	\$6,240 51
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TAXES FOR 1873.—CORPORATION.

Balance Nov. 30, 1874, due from the State,	\$7 85
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TAXES FOR 1874.—CORPORATION.

Amount assessed by the State,	\$46,744 74
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RECEIVED.

From the Commonwealth, as per item No. 28 of Receipts,	\$46,744 74
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TAXES FOR 1874.—COUNTY.

Balance due County November 30, 1874,	\$25,152 28
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EXPENDED.

Amount paid to County Treasurer, as per item No. 34 of Expenses,	\$25,152 28
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TAXES FOR 1874.—NATIONAL BANK. (State Account).

Received from Commonwealth, as per item No. 29 of Receipts,	\$7,095 12
--	------------

EXPENDED.

Amount paid to State Treasurer, as per item No. 35 of Expenses,	\$26,331 83
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TAXES FOR 1874.—STATE.

Amount assessed for State Tax,	\$51,020 00
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EXPENDED.

Amount paid to State Treasurer, as per item No. 36 of Expenses,	\$51,020 00
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TAXES FOR 1874.

Balance uncollected Nov. 30, 1874,	\$35,923 35
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RECEIVED.

From Sundry persons, as per item No. 30 of Receipts,	\$28,824 99
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Balance uncollected November 30, 1875,	\$7,098 36
--	------------

TAXES FOR 1875.

Amount assessed for State Tax,	\$51,020 00
“ “ “ County Tax,	41,920 46
“ “ “ City and National Bank Taxes,	780,039 95

\$872,980 41

RECEIVED.

From Sundry persons, as per item No. 31 of Receipts,	\$821,741 57
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Balance uncollected November 30, 1875,	\$51,238 84
--	-------------

TAXES FOR 1875.—COUNTY.

Amount assessed,	\$41,920 46
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EXPENDED.

Amount paid to County Treasurer, as per item No. 37 of Expenses,	\$20,960 23
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Balance due the County,	\$20,960 23
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WATER WORKS.—CONSTRUCTION ACCOUNT.

Appropriation,	\$50,000 00
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RECEIVED.

For Service pipes, meters, labor, &c., as per item No. 32 of Receipts,	\$18,543 98	
	<hr/>	\$68,543 98

EXPENDED.

For Salary of F. E. Hall (part),	\$125 00
Labor of men, as per pay rolls,	13,696 95
Hydrants, water gates and pipe,	4,118 50
Castings,	2,474 86
Iron water pipe,	11,611 42
Union Meter Co., for meters, couplings, &c.,	9,788 15
Pipe and fittings,	1,126 03
Freight and trucking,	2,012 83
Engineering,	1,072 77
Lumber and carpenter work,	493 88
Blacksmith work,	317 59
Hardware and tools,	208 58
Brick, drain pipe and sand,	93 71
Clerical labor,	301 66
Cement,	536 95
Extra labor,	222 79
Rubber goods,	8 97
Abatement on bills,	34 91
Powder and fuse,	193 18
Fuel,	30 00
Plumbing,	144 07
Oil and lanterns,	15 75
Blank books and stationery,	4 55
Horse hire,	261 00
Lead,	200 03
Car tickets,	26 40
J. Henry Hill (legal services),	20 00
Sundry expenses in legal suits,	450 72
Bacon, Hopkins & Bacon, for legal services,	275 00
Appraising Lynde estate,	34 00
L. M. Houghton (damages),	75 00
Insurance assessment,	6 23

For Lead pipe,	71 93	
Cordage,	11 65	
Furnace,	47 98	
Repairing sidewalks,	17 25	
Threading machine,	150 00	
Measuring water at Henshaw Pond,	106 75	
Iron and steel,	79 70	
National Meter Co.,	35 50	
Repairing shop,	30 85	
	<hr/>	
Total as per item No. 38 of Expenses,		\$51,233 09
		<hr/>
Balance unexpended transferred to Sinking Fund,		\$17,310 82

WATER WORKS.—MAINTENANCE ACCOUNT.

RECEIVED.

For Assessment of water in 1874,	\$16,576 79	
“ “ “ “ 1875,	62,469 63.	
	<hr/>	
Total as per item No. 33 of Receipts,	\$79,046 42	
Less amount transferred to interest on Water Loan,	33,541 00	
	<hr/>	
		\$45,505 42

EXPENDED.

Paid F. E. Hall, salary as Commissioner (part),		\$1,645 83
G. D. Davis, salary as Registrar (part),		183 87
J. Stewart Brown, salary as Registrar,	1,016 67	
Labor of men, as per pay rolls,	12,293 08	
Horse Hire,	1,040 50	
Rent,	100 00	
Duck, cordage and packing materials,	187 07	
Blacksmith work,	750 51	
Hardware and tools,	141 24	
Lumber and carpenter work,	484 31	
Salt,	2 90	

For Rubber goods,	161 88
Blank books, stationery and stamps,	200 23
Sundry fittings and repairs,	422 84
Plumbing,	264 21
Extra labor,	233 67
Care of reservoir and measuring water,	371 65
Fuel,	189 16
Oil, lanterns, &c.,	156 07
Printing,	334 06
Advertising,	41 25
Abatement on water rates,	1,457 56
Gas,	17 35
Trucking and freight,	432 19
Clerical labor (canvassing),	375 99
" " (writing),	267 48
Brick, cement and gravel,	28 52
Lead,	67 75
Furniture for room (Thomas street),	91 17
Examining records,	6 00
Desk,	38 25
Repairing wagons and harnesses,	35 75
Water pipe,	29 46
Painting shop and repairing,	105 68
Cutting grass,	44 50
Repairing water gates,	21 65
L. J. Knowles, for force pump and re- pairs,	550 00
Stewart & Allen, for steam boiler and repairs,	162 76
National Meter Co.,	1,366 50
Town of Leicester, for taxes,	53 50
J. Sullivan (damage from water),	100 00
Mrs. C. Flynn, " " "	65 00
John Carroll, " " "	6 00
John Kirby, " " "	12 00
Michael Rourke, " " "	10 00
Moses Carlton, " " "	37 00
Geo. Dorman, " " "	15 00
Daniel Doyle, " " "	667 92
Legal expenses,	35 00

Total as per item No. 39 of Expenses,	<u>\$26,320 98</u>
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Balance unexpended transferred to Sinking Fund,	<u>\$19,184 43</u>
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CITY DEBT.—NOVEMBER 30, 1875.

FUNDED CITY LOAN.

Due June 1, 1876, (interest 5 per cent.),	\$8,000 00	
“ “ 1877, “ “ “	2,000 00	
“ “ 1878, “ “ “	6,000 00	
“ “ 1879, “ “ “	4,000 00	
“ “ 1880, “ “ “	8,000 00	
“ “ 1881, “ “ “	4,000 00	
“ “ 1882, “ “ “	6,000 00	
“ “ 1883, “ “ “	10,000 00	
“ “ 1884, “ “ “	5,000 00	
	<hr/>	\$53,000 00
Due January 1, 1881, (interest 6 per ct.),	\$500,000 00	
June “ “ “ “ “	12,000 00	
April 1, 1892, “ “ “	800,000 00	
	<hr/>	\$1,312,000 00
Due April 1, 1878, (interest 7 per cent.),	\$170,000 00	
“ “ 1879, “ “ “	170,000 00	
	<hr/>	\$340,000 00
Total,		<hr/> \$1,705,000 00

FUNDED SEWER LOAN.

Due June 15, 1877, (interest 6 per cent.),	\$87,600 00	
“ 15, 1878, “ “	33,600 00	
“ 15, 1879, “ “	16,300 00	
“ 1, 1880, “ “	40,000 00	
“ 15, 1880, “ “	3,000 00	
July 1, 1880, “ “	100,000 00	
June 15, 1881, “ “	1,000 00	
July 1, 1881, “ “	67,900 00	
	<hr/>	
Total,		\$349,400 00

FUNDED WATER LOAN.

Due June 1, 1879, (interest 5 per cent.),		\$500 00
" 1, 1876, " 6 per cent.),	\$69,400 00	
July 1, 1876, " "	10,000 00	
June 1, 1877, " "	18,500 00	
" 1, 1878, " "	27,500 00	
" 1, 1879, " "	14,000 00	
" 1, 1880, " "	11,100 00	
" 1, 1881, " "	1,000 00	
July 1, 1881, " "	2,000 00	
June 1, 1882, " "	12,000 00	
" 1, 1885, " "	5,000 00	
July 1, 1885, " "	100,000 00	
June 1, 1886, " "	26,000 00	
July 1, 1886, " "	50,000 00	
June 1, 1887, " "	23,000 00	
" 1, 1888, " "	3,000 00	
Dec. 1, 1890, " "	50,000 00	
June 1, 1891, " "	2,300 00	
	<hr/>	\$424,800 00
Total,		<hr/> \$425,300 00

TEMPORARY LOAN.

Due June 4, 1876, (interest 6 per cent.),	
Total,	\$110,000 00

RECAPITULATION.

Funded City Loan,	\$1,705,000 00
" Sewer "	349,400 00
" Water "	425,300 00
	<hr/>
Temporary Loan,	\$2,479,700 00
	\$110,000 00
	<hr/>
Total,	\$2,589,700 00

LIABILITIES.

NOVEMBER 30, 1875.

Funded Loans,	\$2,479,000 00	
Temporary Loan,	110,000 00	
	<hr/>	\$2,589,700 00
One-half of County Tax for 1875,		20,960 23
Due the Commonwealth:		
For part of National Bank Tax,	\$19,754 07	
State Tax in 1875,	51,020 00	
Balance State Militia account,	284 74	
	<hr/>	71,058 81
		<hr/>
		\$2,681,719 04

CASH ASSETS.

NOVEMBER 30, 1875.

Cash in Treasury after paying audited bills to date,	\$212,095 26	
John Corliss' note, due on demand,	750 00	
2,622 shares B., B. & G. R. R. Co., par value,	262,200 00	
Due from Commonwealth for State Aid,	32,156 41	
" " Corporation Taxes,	44,283 90	
From Worcester Street Railway Co.,	2,560 53	
Taxes of 1872, uncollected,	6,895 39	
" " 1873, "	6,240 51	
" " 1874, "	7,098 36	
" " 1875, "	51,238 84	
Amount of Lien upon real estate sold for Taxes,	2,161 98	
Sewer Assessments of 1872, uncollected,	55,701 71	
" " " 1875, "	33,887 08	
Assessment for street betterments "	14,687 94	
" " sidewalks (old account),	1,040 16	
" " " (new account),	1,755 79	
" " highways, uncollected,	4,268 09	
Due on Fire Department account,	12 00	
Free Public Library "	5 75	
Pauper Department, City Relief,	2,419 57	
School " account,	314 09	
Sewers, Construction "	32 57	
" Maintenance "	9 75	
Water Works, Construction account,	5,439 70	
" " Maintenance "	17,131 79	
	<hr/>	\$764,387 17
Liabilities over cash assets,		<hr/>
		\$1,917,331 87

LEDGER BALANCES.

	DR.	CR.
Bills Receivable,	\$750 00	
Boston, Barre and Gardner Railroad Stock,	262,200 00	
City Treasury,	212,095 26	
City of Worcester,	2,303,183 51	
Loans: Funded City,		\$1,705,000 00
" " Sewer,		349,400 00
" " Water,		425,300 00
" Temporary,		110,000 00
Real Estate (Lien Account),	2,161 98	
Sewer Assessment (Old Account) 1872,		316,687 42
State Aid,	32,156 41	
State Militia,		284 74
Taxes, 1872,	6,895 39	
" 1873,	6,240 51	
" 1874,	7,098 36	
" 1875,	51,238 84	
Corporation Tax,	44,283 90	
County Tax,		20,960 23
State Tax,		51,020 00
War Bounties,	46,526 73	
War Contingents,	1,260 97	
Worcester Street Railway,	2,560 53	
	<hr/>	<hr/>
	\$2,978,652 39	\$2,978,652,39

SCHEDULE OF CITY PROPERTY.

DECEMBER 1, 1875.

In Charge of the following Persons and Departments:

CITY ENGINEER:

Personal Property,	\$700 00
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COMMISSIONERS OF PUBLIC GROUNDS:

Personal Property,	\$600 00
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COMMITTEE ON LIGHTING STREETS:

642 Gas Lanterns, 484 Oil Lamps, with Building and Fixtures,	\$20,517 90
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DIRECTORS OF FREE PUBLIC LIBRARY:

Library Building,	\$26,000 00	
9,902 feet of land,	19,804 00	
	<u>\$45,804 00</u>	
Personal Property,	21,000 00	
	<u>\$66,804 00</u>	

FIRE DEPARTMENT:

Beacon Street.

8,000 feet land at 40 cts. per foot,	\$3,200 00	
Engine House,	6,000 00	
	<u>\$9,200 00</u>	

Bigelow Court.

5,310 feet of land at \$2.00,	\$10,620 00	
Engine House,	10,500 00	
	<u>\$21,120 00</u>	

House on Bloomingdale Road,	800 00
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Carlton Street.

1,270 feet of Land at \$1.25,	\$1,587 50	
Engine House,	2,000 00	
	<u>\$3,587 50</u>	

Exchange Street.

500 feet of Land at \$2.50,	\$1,250 00	
Engine House,	2,000 00	
	<hr/>	\$3,250 00

Lamartine Street.

8,400 feet of land at 20c.,	\$1,680 00	
Engine House,	9,500 00	
	<hr/>	\$11,180 00

Myrtle Street.

1,277 feet of Land at \$1.00,	\$1,277 00	
Engine House,	3,000 00	
	<hr/>	\$4,277 00

New Worcester.

Land,	\$500 00	
Engine House,	800 00	
	<hr/>	\$1,300 00

Pleasant Street.

6,106 feet of Land at 15c.,	\$915 90	
Engine House,	9,000 00	
	<hr/>	\$9,915 90

School Street.

7,688 feet of Land at 75c.,	\$5,766 00	
Engine House,	5,000 00	
	<hr/>	\$10,766 00

Thomas Street.

Land,	\$7,000 00	
Engine House,	5,000 00	
	<hr/>	\$12,000 00

John Street.

1,836 feet of Land at 50c.,	\$918 00	
Engine House,	4,500 00	
	<hr/>	\$5,418 00

Five Steamers,	\$17,500 00
Thirteen Hose Carriages,	6,000 00
Three Ladder Trucks,	4,500 00
Other Personal Property, including Fire Alarm Telegraph,	<hr/> 61,000 00

Total Fire Department Personal Property,	\$89,000 00
Total Fire Department Real Estate,	<hr/> 92,814 40

Total,

\$181,814 40

HIGHWAY DEPARTMENT.

50,331 feet land on Salem Street at 33 $\frac{1}{2}$ c.,	\$16,777 00	
Stable and Sheds,	7,000 00	
Land (1 acre),	150 00	
Gravel Pit near Paxton,	100 00	
Personal Property,	12,125 50	
	<hr/>	\$36,152 50

PAUPER DEPARTMENT.

Real Estate,	\$59,000 00	
Stock and Tools at the Farm,	7,151 60	
Household Goods,	4,086 16	
Buildings, Stock, &c., in Scavenger Department,	7,552 00	
	<hr/>	\$77,789 76

SCHOOL DEPARTMENT.

Land and Houses,	\$821,000 00	
Personal Property,	73,000 00	
	<hr/>	\$894,000 00

SEWER DEPARTMENT.

Personal Property,	\$430 00
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CITY HOSPITAL.

Furniture, Surgical Instruments, &c.,	\$3,500 00
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MISCELLANEOUS:

Central Park, 7 acres.	
Hope Cemetery, 56 acres.	
Cemetery on Mechanic St., 67,620 feet.	
Elm Park, 28 Acres.	
90,624 feet of Land, Pine Court, at 50c.,	\$45,312 00
38,696 feet of Land, Lamartine St., 17c.,	6,578 32
7,660 feet of Land, Union St., 50c.,	3,830 00
23,250 feet of Land, Summer St., 90c.,	20,925 00
	<hr/>
	\$76,645 32
City Hall Building,	\$20,000 00
Furniture, &c., in City Hall,	4,500 00
City Scales, Lincoln Square,	300 00
City Scales, New Worcester,	300 00
City Scales, Salem Square,	400 00
	<hr/>
	\$25,500 00

WATER DEPARTMENT.—CONSTRUCTION:

Real Estate in Leicester, at Bell Pond and on Thomas Street, together with the Reservoirs, Pipes, Hydrants, Fixtures and Tools, costing,	\$1,213,025 86
Total,	\$2,597,479 74

THE following Table shows the Expenditure for Fuel, Gas and Printing, in the various Departments of the City, during the Financial Year ending November 30th, 1875:—

FUEL.

City Hall,	\$1,198 74	
Armory,	3 20	
City Hospital,	426 71	
Fire Department,	1,399 05	
Free Public Library,	512 60	
Highway Department,	26 00	
Incidental expenses (scales, &c.),	52 71	
Pauper Department (City Relief),	1,762 83	
“ “ (Farm),	285 39	
School Department,	7,816 04	
Water Works (Construction),	25 00	
“ “ (Maintenance),	189 16	
		\$13,697 43

GAS.

LIGHTING STREETS, &c.

Armory,	\$ 168 96	
City Hall,	1,770 65	
City Hospital,	210 43	
Free Public Library,	950 38	
Highway Department,	66 19	
Streets,	20,929 64	
School Department,	478 27	
Water Works (Maintenance),	17 35	
Superintendent Public Buildings,	1 90	
Thomas Street Engineers' Office,	16 70	
Fire Department,	596 65	
		\$25,207 12

PRINTING.

City Hospital,	\$ 60 45	
Fire Department,	188 66	
Free Public Library,	247 00	
Highway Department,	74 31	
Incidental expenses,	2,299 68	
Pauper Department (City Relief),	148 25	
Police Department,	63 30	
School “	1,112 28	
Sewers (Construction),	83 30	
Shade Trees and Public Grounds,	44 84	
Water Works (Maintenance),	334 06	
		<u>\$4,656 13</u>

ADVERTISING.

Total,	\$976 18
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APPROXIMATE VALUE OF DWELLING HOUSES, INCLUDING HOTELS,

May 1, 1875.

The number not exceeding	\$1,000 is	2,246
“ “ over \$1,000, and not exceeding	2,000 “	2,007
“ “ “ 2,000, “ “ “	3,000 “	846
“ “ “ 3,000, “ “ “	4,000 “	385
“ “ “ 4,000, “ “ “	5,000 “	173
“ “ “ 5,000, “ “ “	6,000 “	92
“ “ “ 6,000, “ “ “	7,000 “	75
“ “ “ 7,000, “ “ “	8,000 “	43
“ “ “ 8,000, “ “ “	9,000 “	17
“ “ “ 9,000, “ “ “	10,000 “	13
“ “ “ 10,000, “ “ “	11,000 “	6
“ “ “ 11,000, “ “ “	12,000 “	1
“ “ “ 12,000, “ “ “	13,000 “	4
“ “ “ 13,000, “ “ “	14,000 “	3
“ “ “ 14,000, “ “ “	15,000 “	2
“ “ “ 15,000, “ “ “	16,000 “	0
“ “ “ 16,000, “ “ “	17,000 “	2
	At 20,000 “	2
	“ 25,000 “	2
	“ 36,000 “	1
	“ 40,000 “	1
		<u>5,921</u>

T A B L E

SHOWING THE NUMBER OF POLLS, REAL AND PERSONAL ESTATE OF THE CITY, AMOUNT OF TAX, RATE PER CENT., APPROPRIATIONS, &C., FOR TWENTY YEARS.

A. D.	Polls.	Real Estate.	Personal.	Total.	City, State and County Tax.	Rate.	Appropriations.	Houses.
1855 . .	5,842	11,785,250 00	\$ 6,270,700 00	\$18,058,950 00	\$136,636 15	\$ 7 00	\$110,500 00	. . .
1856 . .	5,852	12,596,800 00	6,319,200 00	18,916,000 00	156,186 80	7 70	125,810 00	. . .
1857 . .	5,604	12,374,600 00	6,098,600 00	18,473,200 00	158,999 60	8 00	121,000 00	. . .
1858 . .	5,360	10,990,950 00	5,395,200 00	16,386,150 00	123,776 55	7 00	98,950 00	. . .
1859 . .	5,784	11,122,950 00	5,693,480 00	16,816,430 00	126,391 01	7 00	100,000 00	. . .
1860 . .	6,327	10,600,900 00	5,806,000 00	16,406,900 00	140,745 70	8 00	116,500 00	. . .
1861 . .	6,245	10,470,900 00	5,759,700 00	16,230,600 00	139,212 30	8 00	108,000 00	2,975
1862 . .	6,513	10,469,100 00	5,662,000 00	16,131,100 00	206,603 20	12 00	143,250 00	2,869
1863 . .	6,949	10,677,200 00	6,021,550 00	16,698,750 00	214,283 00	12 00	140,370 00	3,011
1864 . .	7,290	11,246,450 00	5,136,350 00	16,382,800 00	219,088 44	13 00	156,500 00	3,029
1865 . .	7,851	11,862,650 00	7,075,250 00	18,937,900 00	321,598 79	17 00	217,700 00	3,140
1866 . .	7,892	14,198,550 00	8,401,300 00	22,599,850 00	362,016 16	16 00	282,300 00	3,292
1867 . .	8,541	15,508,950 00	8,427,950 00	23,936,900 00	419,276 16	17 50	298,700 00	3,542
1868 . .	9,137	17,420,350 00	8,799,850 00	26,220,200 00	338,609 52	12 85	280,475 00	3,849
1869 . .	9,967	21,608,800 00	9,642,550 00	31,251,350 00	450,607 69	14 40	376,500 00	4,253
1870 . .	10,651	24,169,050 00	9,849,400 00	34,018,450 00	595,214 23	17 40	516,500 00	4,679
1871 . .	11,638	28,039,150 00	10,102,100 00	38,141,250 00	674,214 23	17 40	640,500 00	5,100
1872 . .	13,055	30,844,600 00	11,397,950 00	42,242,550 00	761,130 37	17 40	655,300 00	5,446
1873 . .	13,077	36,400,050 00	9,637,050 00	46,034,200 00	833,217 96	17 40	775,900 00	5,723
1874 . .	13,341	37,545,550 00	11,639,994 00	49,185,544 00	852,501 94	16 80	774,700 00	5,864
1875 . .	13,003	38,016,200 00	11,283,581 00	49,299,781 00	844,382 36	16 60	774,500 00	5,921

T A B L E

SHOWING THE DEBT AND INTEREST PAID, EACH YEAR, SINCE THE FIRST INAUGURATION OF THE
CITY GOVERNMENT, IN 1848.

DATE.	CITY DEBT.	INTEREST.	DATE.	CITY DEBT.	INTEREST.
March 31, 1849, . .	\$ 95,630 20	\$	January 5, 1863, . .	\$ 208,414 55	\$ 8,607 54
“ “ 1850, . .	96,996 07	. . . . .	“ 4, 1864, . .	214,759 70	11,818 93
April 7, 1851, . .	98,741 88	3,655 98	“ 2, 1865, . .	364,459 70	14,758 65
January 5, 1852, . .	101,829 89	2,651 07	“ 1, 1866, . .	424,418 59	25,360 84
“ 3, 1853, . .	108,758 40	6,245 72	“ 7, 1867, . .	458,305 14	28,445 85
“ 2, 1854, . .	98,567 70	5,747 77	“ 6, 1868, . .	619,949 85	29,014 75
“ 1, 1855, . .	98,435 33	6,182 04	“ 4, 1869, . .	773,290 00	46,251 85
“ 7, 1856, . .	118,955 48	6,585 05	“ 3, 1870, . .	1,185,718 65	59,465 36
“ 5, 1857, . .	103,993 65	6,949 37	“ 2, 1871, . .	1,899,808 04	101,244 58
“ 4, 1858, . .	100,188 80	6,781 81	“ 1, 1872, . .	2,456,788 72	106,465 35
“ 3, 1859, . .	99,533 95	8,017 18	Nov. 30, 1872, . .	2,687,910 55	136,259 70
“ 2, 1860, . .	99,429 10	4,646 02	“ “ 1873, . .	2,941,227 31	186,776 30
“ 7, 1861, . .	102,324 25	6,055 10	“ “ 1874, . .	2,984,780 00	209,897 62
“ 6, 1862, . .	129,319 40	6,334 16	“ “ 1875, . .	2,589,700 00	197,148 66

REPORT OF THE CITY CLERK.

CITY OF WORCESTER,

CLERK'S OFFICE, *January 3, 1876.*

To the Honorable City Council :

IN accordance with the requirements of Chapter IX. of the City Ordinances, the City Clerk submits the following statement of the moneys received by him as fees or otherwise, during the year ending November 30, 1875, viz :—

From Licensed Amusements,	\$789 00
“ “ Billiard Tables and Bowling Alleys,	280 00
“ “ Hackmen,	180 00
“ “ Junk Dealers,	75 00
“ “ Pawnbrokers,	40 00
“ “ 1,677 Dogs,	1,691 00
Office Fees received in Cash,	1,471 00
Other Fees earned in Office,	\$500 00
Amounting to	<hr/> \$4,526 00

which sum I have paid over to the City Treasurer, and hold his receipts therefor.

I have also received for Dog Licenses the sum of 3,541⁸⁰/₁₀₀ dollars, and paid the amount to Charles A. Chase, the County Treasurer, as required by law.

Respectfully submitted,

SAMUEL SMITH,

City Clerk.

ANNUAL REPORT
OF THE
CHIEF ENGINEER
OF THE FIRE DEPARTMENT.

CHIEF ENGINEER'S OFFICE, }
WORCESTER, JANUARY 1st, 1876. }

To the Honorable the Mayor and City Council :

GENTLEMEN :—Herewith in accordance with the requirements of the Ordinance relative to the Fire Department, we submit the annual report of the Department for the year ending December 1st, 1875, containing a statement and condition of the same, together with the cost of maintaining it, the number of fires and alarms during the year, with the losses and amount of insurance as near as possible to obtain them ; also a list of the officers and members, with the salaries paid them for their services, the number and location of hydrants, also the numbers and location of fire alarm boxes and signal stations, an inventory of property belonging to the city in charge of the Department, and such other information as may be of interest to your Honorable Body and the citizens of Worcester, hoping it will enable you to properly understand the condition, and judge of the necessities of this organization, whose services can be commanded at all times, and under all circumstances, to protect the property of our citizens from fire. We sometimes think these services are lightly esteemed, and never fully appreciated, when the risk of life and injury to health are concerned. The Board are pleased to say

that your assistance has been cheerfully given the interests of the Department the past year, for which we desire to return our sincere thanks.

MANUAL FORCE AND CONDITION OF THE DEPARTMENT.

The manual force of the Department consists of a Chief Engineer and four (4) Assistants, fifty (50) members of Steamer Companies, including drivers; sixty-eight (68) hosemen of Hose Companies—four (4) less than last year. Hose Companies No. 6 and 7 have been reduced two (2) men each, as their carriages are drawn by a horse, and a permanent driver with each carriage enables these companies to do duty with less men. The Board reduced these companies for experiment, and it has proved satisfactory. Thirty-six (36) members of Hook and Ladder Companies, including driver. This arm of our service has been reduced five (5) men. Hook and Ladder No. 2 is a much lighter truck than No. 1, consequently No. 2 has been reduced in number by five (5) men; there are seven (7) members attached to the Babcock Extinguisher, including the driver. It is contemplated by this Board to reduce this number to five (5), with one permanent man besides the driver, making a total of one hundred and sixty-three (163) men. In addition to the regular force of the Department, there is a volunteer Hose Company at Grant Square that takes great interest in the Department, and respond, in all cases of a general alarm, and have done good service the past year, for which this Board and the citizens should be grateful. It is a matter of satisfaction to the Board of Engineers to know that our citizens unhesitatingly express the pride they feel in the Department, and it must be greatly enhanced when they know that throughout the union the opinions of those most competent to pass judgment on such matters are universally given in terms of high praise of the equipment, efficiency and discipline of our organization. While we willingly concede that the Departments of other cities are valuable and efficient organizations, the record of our own warrants us in saying that it is not surpassed. It is composed of active and experienced men, whose prompt performance of the arduous and perilous duties devolving upon them, and the results of their labors

prove most conclusively that they are entitled to the highest consideration of our citizens. Quite a number of its officers and members have been connected with the Department for more than a quarter of a century, and nearly all that period have been in active service, and have shown themselves to be most skillful and competent men. The permanent employees are all men of intelligence and fully qualified for their respective positions; they manifest an interest in everything pertaining to the Department, and most cheerfully obey any and all orders emanating from the Board of Engineers. The horses and stables are models of neatness and good order, and the apparatus in their charge is always in splendid condition, and ready for service whenever required. Visitors from abroad, after inspecting our houses, stables, and apparatus universally accord the highest praise; and it promises, under the intelligent care of your Honorable Board to afford the citizens of Worcester every protection from the ravages of fire, which can possibly be expected of any fire department of similar strength. In a word, the Board believe that the Department as now organized is one every way creditable to the city, and a force more reliable and better able than ever before to give that protection to property which may justly be expected from it.

APPARATUS.

The Apparatus at present consists of five (5) steam fire engines—four (4) in service and one (1) in reserve; one (1) Babcock extinguisher, eleven (11) hose carriages—one (1) in reserve; three (3) hook and ladder carriages—two (2) in service and one (1) in reserve. It seems to us to be an imperative duty on the part of the city authorities to take every precaution that human forethought can suggest. To keep the Department equipped to the highest degree of efficiency, we should have at least two (2) reserve steamers and hose carriages, with good, reliable hose; also trucks and necessary equipments in case of a large fire. All this extra working machinery could be brought into service, as there is a helping hand in all cases of emergency of this kind. All they would want is the material to work with. There would be no additional cost to the city, except the first cost of the

apparatus and hose. No extra horses would be required, the teams drawing the regular engines and trucks could readily be dispatched for the reserves, if circumstances required it. Each engine company, as at present organized, has an engineer and an assistant. The assistant must be competent to take charge of, and run the engine, if it should be required. By this arrangement, there would be no necessity of appointing extra officers or men, and would virtually give us a force sufficient to afford protection to all parts of the city.

Quite extensive repairs have been required during the year to keep in good condition the entire apparatus, both that in service and that in reserve. The boiler of engine No. 3 was found in very bad condition, and has been thoroughly repaired. The old Governor Lincoln steamer has been rebuilt and a new boiler attached. This engine is held for reserve, and is now a first-class engine.

The apparatus is at present in good order, and will probably require during the ensuing year only the usual amount of small repairs, unless serious accidents should occur. Reckless or too rapid driving is forbidden by the rules of the Department. The important thing is to have the apparatus reach the fire in a serviceable condition, and it is clearly of more consequence to ensure that than to run the risk of having an engine disabled in order to make a possible gain of a few seconds. At the same time, promptness in reaching the fire is impressed upon all the members of the Department as their most important duty.

The new apparatus bought during the past year consists of a hook and ladder truck and one hose carriage, and another hose carriage rebuilt. The results of the new apparatus have been very satisfactory. It would facilitate the working of the Department by adding one or more of Edward B. Leverich's 75-foot extension ladders the coming year, by which we may reach the tops of our large buildings.

LADDERS AND FIRE ESCAPES.

Hook and Ladder duty. That very important branch of the service, for the last few years, has been neglected. The Board

have again and again urged upon the City Council the importance of procuring new ladders, the ladders not being up to the requirements of the Department. The fire in Taylor's building, the 28th of last May, demonstrated to the Committee on Fire Department that more ladders should be purchased immediately. Accordingly, a contract was made for one of E. B. Leverich's patent 75-foot extension ladders and truck, carrying 375 feet of ladders, which we have now in service; and another of the same kind would be a great improvement, rendered necessary by the erection of so many high buildings in our city.

No branch of the Fire Department is more important to the service than the ladders, for, no matter how freely water may run it can do but little good in extinguishing fire, unless it be seasonably and directly applied. Even when the most powerful engines are in service, the use of ladders is necessary in reaching the Mansards and upper stories of high buildings. In fact, there can hardly be an effective Department without extension ladders and efficient men to handle them; for, to put up a single or double-spliced ladder requires a plenty of trained muscle and good judgment. If they are not active, strong, experienced men they can not do the work. The hook and ladder men are the sappers and miners of the Department, and are as necessary as in an army. Without them the devouring element would produce many more surprises and often steal a march. But yet the ladder system is not perfect, and there is still room for improvement in the construction of ladders, for only a few combine the essential requisites of length, strength and lightness. We do not like to leave this subject without asking the City Council to consider the propriety of the passage of an ordinance compelling the owners of hotels, manufacturing establishments, or work-shops where men or women are employed in the upper stories, to erect and maintain permanent fire escapes from their respective buildings; said escapes to be approved by some proper officer. It would also be of great assistance to the Department in case of fire. There must be responsibility somewhere. We forbid the building of frame structures in our city. We maintain a Fire Department. We cover the roofs of our city with a network of telegraph wires

that summon, at an instant's warning, the distant engine to the scene of a conflagration. We take every precaution against the destruction of property by fire, yet we take none against the destruction of human life through the same instrumentality. We lay these facts before your Honorable Board for your consideration.

HOSE OF THE DEPARTMENT.

There is now in the Department 4,000 feet of carbolized rubber hose, in good condition; 8,000 feet of leather, and 1,000 feet of rubber-lined linen, in poor condition; and 1,000 feet of unlined linen, which is new and in good order. It has always been the aim of this Board to purchase the first quality of hose, as well as all other fire apparatus for the use of the Department, knowing full well that the best is the cheapest. Durable hose, in time of a threatening conflagration, is invaluable, when, if a poor quality is used, property worth millions of dollars may be destroyed. The question of providing Fire Departments with a serviceable quality of hose has become an important one with manufacturers of this form of fire equipment. The experience of firemen in the use of hose differs very much, and instead of there being unanimity of opinion as to the best kind of hose, the reverse is the case. Rubber, leather, cotton and linen hose, each have their advocates. This subject, of all others, is of the utmost importance to our Fire Department. While, in almost all other lines of goods, our manufacturers aim to get the highest standard goods possible, it has seemed to us for a long time that a great deficiency was apparent in so important an article as hose. We are all aware the best of engines that can be procured are worthless, or nearly so, when furnished with material that is, literally, weaker than water. While we know that our laws are defective on this point—compelling our cities to buy of the lowest bidder, thereby putting a premium on poor work—we are satisfied that the time has come when we should have laws to put this matter right, and rid us of such impositions as have been practiced the last few years in this particular. We believe we should be so situated as not only to encourage our

manufacturers, but to offer even propositions for the best quality in every respect. Poor hose neutralizes the value of all efforts of the firemen and their apparatus, however costly and well appointed. It will be seen, therefore, that everything depends upon good hose, and without it fire extinction is always in doubt, and often a dangerous delusion; so that it is of vital importance that our Department be furnished with the best hose that can be obtained; and the Board deem it not only advisable but necessary that quite a quantity should be purchased the coming season.

CHEMICAL ENGINES.

Our Chemical Engine has worked exceedingly well, and has been of great service; it should be located in the business centre and run to all points that could be reached by it in five or ten minutes from the receipt of an alarm; it would be excellent for the extinguishment of fires in their incipency, besides saving the wear and tear of the heavier apparatus, and prevent the great loss that so frequently occurs by water.

The claims for this engine are, that it dispenses with complex machinery, experienced engineers, reservoirs and steam. Carbonic acid gas is both the working and extinguishing agent, no fire to be kindled, no steam to be raised, no hose to be laid, and no large company to be mustered. The chemicals are kept in place and the gas generated the instant wanted. Mere water inadequately applied feeds the fire, but Carbonic acid gas never; bulk for bulk it is thirty times as effective as water, the seventy gallons of the two small cylinders being equal to twenty-one hundred gallons of water, besides it uses the only agent that will extinguish burning tar, oil, and other combustible fluids and vapors; one cylinder can be re-charged while the other is working, thus keeping up a continuous stream. Four or five men can manage it. Its small dimensions require but a small area either for work or storage; a hundred feet or more of its small hose can be carried on a man's arm up any number of stairs inside a building, or up a ladder; it smothers but does not deluge; it costs but about one-fourth as much as a steam fire engine, and the chemicals for each

charge cost about one dollar and a half. In reports of fires it is often found that water used to extinguish them has occasioned more damage to stock than the flames, and that fires frequently reappear after steamers have been playing for hours on the *debris*, owing to ignition caused by sparks falling on the charred and splintered wood work; now by the employment of Carbonic acid gas, these evils are overcome; in the first place it is the gas that extinguishes the fire by absorbing the oxygen upon which it feeds, the water being used simply as a means of conveyance, thus preventing the useless dissemination of the gas before it reaches the flames; the flames once deprived of oxygen become extinct: the philosophy of the operation consists in the fact that Carbonic acid gas is heavier than the atmosphere; fire is combustion by means of oxygen, and cannot burn a second without it. The contents of the extinguisher—a solution in water of a gas much denser than air—shuts off the supply of oxygen and smothers the fire, for fire goes out instantly in an atmosphere containing about ten per cent. of Carbonic acid gas.

WATER AND HYDRANTS.

As this Board is responsible for the success of the Department, they are exceedingly anxious that all proper facilities be afforded them. One of the main necessities is water, and when that is wanting the work of the firemen cannot be expected to be successful; as we urged in our last report, the necessity of more water on Main street, we are happy to say that our wishes have been complied with, greatly relieving the fire risk in that locality: a sixteen inch pipe has been laid the entire length of that street.

We again most respectfully call your attention to the necessity of increasing the number of Hydrants; they should be doubled, particularly in the business centres; we certainly believe it would be much cheaper, and render the Department more efficient if the hydrants were placed nearer together: in case of a large fire the engines would be concentrated in a smaller space, and be under more efficient control of the officers; there is no section of the city at this time where the entire Department could be put in

service effectually ; a few companies would get positions within a reasonable distance of a large fire, but the rest would have to force water through 800 or 1,000 feet of hose, or it may be a still greater distance ; it is also more destructive to hose, as the longer the line the more pressure it has to sustain, and the more liability to burst ; and there is nothing that tends more to delay the operations of firemen, or causes more annoyance than the changing of a length of hose, just at the time, perhaps, when the men are most in need of a good supply of water.

To place a hydrant on any water main, costs about 35 or 40 dollars ; one hundred feet of hose costs from 120 to 150 dollars ; the hydrants require but few repairs, while the hose has to be renewed about every three years ; so that we are of opinion that it would be of great advantage, and would save many thousands of dollars if hydrants were placed at every corner of the streets in our business centres.

FIRES AND ALARMS.

During the past year, there has been 38 alarms of fire, a decrease of 20 from the previous year. Attention is especially called to the fact that during the year the City has, with the exception of the fire on the night of May 28, been free from any large and disastrous fires.

It is with regret that we are obliged to call your honors' special attention to the greatly increased number of incendiary and suspicious fires of the past year, which, we think, can be mainly accounted for by the great pecuniary embarrassment of the times. The distress among the laboring classes, occasioned by the stoppage of our mills and workshops, and the shrinkage in value in real estate and merchandise generally, these causes, we think, often suggested and induced those who are over or fully insured to conclude that it was a good time to sell out to the insurance companies. The over insurance often arising from the depreciation of value since the insurance was taken, and sometimes by the neglect of the underwriters or their agents. The underwriter should never forget that to the dishonest man, "insurance" is but another name for the privilege of converting

his house or goods into current funds at will. It often means escape from bankruptcy or the successful concealment of fraud, which, if detected, would result in certain ruin. Over insurance is the key-note to eight out of ten incendiary or suspicious fires. Considering the immense destruction of property by fire every year, the satisfactory explanation of the origin of every one becomes a matter of general and particular importance. If a fire is the result of design, it is important to know the offender, that he may be dealt with as his sins may deserve, and put under lock and key, out of temptation to repeat his villainy. If it has been caused by carelessness or ignorance of the laws of spontaneous combustion, we need to know it, so as to be on our guard against a repetition of similar calamity. We empty our ashes into wooden boxes and place them under the stairs. We leave rubbish in basements and attics to cause spontaneous combustion. Defective flues are the cause of many fires. Look in whatever direction you may, you see chimneys partially or completely honey-combed from the action of coal gases; and their tops out of line so as to jeopardize, in windy weather, the lives and limbs of pedestrians. It would seem almost incredible that such a manifest disregard for life and property could exist, but such is the fact.

In calling your attention to the numerous causes of fire, we desire to show your honorable body that the Fire Department, with their facilities, have been efficient during the past year. It is not a reasonable supposition that a Fire Department can prevent the start of a fire, no matter how well equipped and organized; but their efficiency is shown in controlling and extinguishing it after the alarm is given. Taking into consideration the location and the headway the fire has gained on the arrival of the Department, it is a well-established fact that the gaining of time is the most essential feature in a struggle for the mastery over a conflagration once in progress. Five minutes gained during the incipency of a fire often decides the fate of thousands of dollars worth of property. Eighty per cent. of the fires that occur are discovered when they could be easily extinguished with a few pails of water. Give them ten minutes longer and you reduce your chances sixty per cent. Give them fifteen

and your chances are not one in ten of extinguishing them before the building in which it originates is consumed and the surrounding property endangered.

In this connection, we would like to call your attention to the feasibility of appointing a few men, to be permanently employed. With additions of this kind, we can safely say that our hose would be laid at any fire within the fire limits in less than five minutes from the time the alarm was given, and our fire losses reduced at least fifty per cent. These additions would, of course, increase the expenses of the Department, but, taking into consideration the benefits derived, it would prove a very economical measure.

After a serious conflagration, the citizens and authorities, wise, and sometimes otherwise, will have a scape-goat upon whom to attach all blame ; and the best and most ready one is the Chief Engineer. At such times almost every one stands ready to condemn the officers of the Department. But we must say that the burlesque and most ridiculous side of it is when we have sidewalk loafers and petty officials telling what should have been done, when not one of them understands the first principles of a fire, or the discipline of a volunteer fire company.

For the complete and accurate statement of losses by fire, and the amount of insurance, we refer you to the tabular statement accompanying this report.

HORSES.

The Department is at present well equipped with horses. The number in the Department is 12. Three are attached to steamer No. 1, three to steamer No. 2, one to steamer No. 3 hose carriage, two on hook and ladder No. 1, one on hose 6, one on hose 7, and one on the extinguisher. One has been purchased the past year, and one has been exchanged in consequence of his getting disabled last season in going to a fire in Leicester. Their general health has been excellent, and in the absence of any prevalent disease the good condition of the horses is mainly due to the good care on the part of those having them in charge.

Horses employed in fire departments should have qualities not particularly necessary for them to have in other kinds of work, and it is oftentimes difficult to select creatures that are docile and strong, and favored with speed. Perhaps there is no kind of work in which horses are engaged which require so many good traits that are necessary in horses used in fire departments. Their work comes suddenly upon them—in sunshine or storm, in daylight or darkness,—and they must start off with a dash and speed which most horses would revolt against or sink under. The excellent treatment at the hands of careful drivers has made the horses of this Department docile and faithful creatures, and it has only been requisite to make changes when physical disability has prevented the prompt response to duty. A horse which could work in a cart or wagon, requiring but a slow rate of speed, could not work in the Fire Department, where a quick response would be the saving of thousands of dollars worth of property. This important branch of the Department receives, as it deserves, constant attention.

HOUSES.

The houses, generally, are in good repair, although a moderate outlay will be required during the coming year to keep them in good condition. It is the intention of the Board to detail the permanent men of the Department to make all needed repairs, when it can be done without weakening their efficiency in their several stations. It is but right that the city should have the benefit of their skill when occasion requires. The head-quarters of the Department is in good repair. The stone floor has been removed the past year and a good plank one substituted, giving the house a more cheerful appearance, and it will be much better for the apparatus stored there.

This house is occupied by the Board of Engineers, the battery and machinery of the Fire Alarm Telegraph; the Governor Lincoln Steamer No. 1, and Hook and Ladder No. 1, and the horses for drawing the same. The building is warmed by steam, from

a boiler in the cellar. In addition, it contains a work and store-room, bed rooms and bath-rooms, furnished for the men occupying them.

The house of S. E. Combs Steamer Co. No. 2 is in good condition. The bath-room has been piped for hot water the past year, making it comfortable for the men sleeping there. This house contains 3 bed rooms, and 5 stalls for the horses, all in good condition.

The house of A. B. Lovell Steamer Co. No. 3 has, the past year, been greatly improved. The stone floor has been removed and a good plank one substituted. A bed room and bath-room has been added and piped for hot water. These remarks apply also to City Hose Co. No. 1, which has been supplied with the same additions, much to the satisfaction of both companies. The addition of a stable should be made at an early day, as their house is in a central locality.

The house of Hose Co. No. 4 has received the attention that was very much needed. The stone floor has been removed and one story added to the building, for the purpose of making more room for a hall and bath-room. The bath-room is piped for hot water, and it will not require any extensive repairs for some time to come.

The houses of Hose 2 and 5 should be so altered as to give better sleeping accommodations. They should also be supplied with bath-rooms. The houses of Hose 7 and the Babcock Extinguisher have been piped for hot water for their bathing-rooms. Every engine house in the city should be supplied with bathing-rooms. Some of our citizens may charge this as extravagance on the part of the officers of the Department. We will state that the city furnishes good beds and chairs, and a cheap carpet for their sleeping-rooms; and if the company desire a better outfit they make up an additional sum, either by the liberality of their friends or, as some have done, by giving a public entertainment, the profits of which are added to the amount furnished by the city.

No thoughtful citizen will object to the expense necessary to make comfortable the homes of these constant guardians of our lives and property. Day and night are these faithful men

required to be at their post, and at the tap of the bell fearlessly expose themselves to the danger of personal injury after battling for hours against the devouring element, in Winter with their clothing frequently frozen to their persons, it is no more than humanity and justice demands that, when they return from their arduous duties, they have comfortable quarters, where they can enjoy the luxury of a bath and much-needed rest.

THE FIREMEN'S RELIEF ASSOCIATION.

This association, composed of members of the Fire Department, was organized in June, 1874, for the purpose of affording relief to such members as shall receive injuries while in the discharge of their duties, or become sick from the exposure incident to such fatiguing labor. The association has received contributions from kind-hearted citizens, and has been enabled to render relief to its members. The funds of the Association are deposited in the People's Savings Bank. The number of accidents during the past year has been small. No lives have been lost at any fire, though the men have exposed themselves freely when occasion required. The officers of the association are as follows: President, S. E. Combs; Vice-President, Wm. Brophy; Secretary, Samuel H. Day; Treasurer, J. W. Loring; Trustees, William Knowles, Charles Allen, M. C. Viall, John Jacques, Edwin Fisher, G. N. Rawson, H. Williamson, C. A. Humes, Samuel F. Shepard, Geo. S. Coleman, George F. McKnight, P. M. Church, Jeremiah Hennessy and George Hartwell.

No feature of a Fire Department is more worthy of commendation than a properly conducted and well endowed charitable association; and the Board of Engineers, in behalf of its members, return their thanks to those citizens who have aided them, and would commend the association to the favorable consideration of all.

FIRE ALARM TELEGRAPH.

The Fire Alarm has worked satisfactorily the past year, and

is in thorough working order, and, under its efficient superintendent, has performed its important part to our entire satisfaction, and added no little to the dispatch of the Department to the scene of action. In cities where an electric fire alarm is maintained it is noticeable that firemen aspire to a higher standard than in communities not possessed of such advantages. The fact that each company and every citizen has instantaneous notice of the breaking out of a fire and of its positive location, is of itself a guarantee that one whose duty it is to assist in staying the destroyer, will exert himself with all possible expedition ; and herein is exemplified the beauty of a system which, by its perfect adaptation to the labor required of it, saves millions of dollars of property annually. This prompt means of knowing the exact location of a fire cannot be over-estimated. The people who are assessed for the general expenditures of the city demand that their property be protected ; and it would seem that all localities should receive the same benefits and protection it affords. We would, therefore, recommend that additional alarm boxes be purchased and put up in any neighborhood where it may appear absolutely requisite. They should be placed—corner of Cambridge and Millbury Streets ; at Valley Falls ; corner of Woodland and Chandler Streets ; near the Highland Military School ; corner of North and Prescott Streets, and at the corner of Bloomingdale and Suffolk Streets.

Mr. Joseph Bird having made the remarkable discovery that a small fire does not require a large quantity of water to quench, is sanguine in the opinion that small force pumps are handy to have around whenever miniature conflagrations are liable to occur. So wonderful does the discovery seem to him, and so strong is his faith in little pumps, that he has written many communications to the newspapers, and has, of course, obtained the endorsement of his friends for his pet notion. While nobody doubts the efficiency of his plan for putting out “ sparks,” yet there are some people who can but smile at the gentleman’s enthusiasm in behalf of his little pumps. The idea of having fires extinguished before they get under much headway is a good one, and Mr. Bird may be worthy of immortality for his

brilliant conception. Why did he not, while he was about it, evolve from his brain the fact that it would be better still not to have any fires at all, and thus do away with the necessity for fire apparatus. The fires which trouble cities and towns are those which get well a-going, not little “catches,” which may be pinched out. Pocket force pumps and extinguishers are better to talk about than for actual service. In one of the communications above referred to, Mr. Bird endeavored to hold up to ridicule what he termed the “Worcester idea.” There is but one particle of truth in it, and that is that it is a “Worcester idea,” and we have no reason as yet to feel ashamed of it.

While we have reason to feel that we have met with a fair amount of success in the extinguishment of fires, and hope for a continuance of the same, yet we feel it to be our duty to provide for any possible contingency that may arise. In a former report, the attention of the City Council was called to the fact that, in case of a conflagration with which this Department would be unable to cope successfully, the towns in this vicinity could render us very little, if any, aid, without greatly exposing their own property during the absence of the force that might be sent to our assistance; consequently, we must look to cities like Boston, Providence and Springfield for help should such a misfortune overtake us. Springfield has, on several occasions, called upon us for assistance, to all of which, with one exception, a prompt response has been given. This exception was on the 30th of last May, when a fire broke out which spread so rapidly as to get beyond the control of the Fire Department, and it became necessary to send for assistance.

Dispatches were sent to Hartford, Worcester, and other places, but no response obtained—and hardly expected,—it being Sunday and the offices closed. The only alternative left them was to fire up and send to Hartford (twenty-eight miles distant), a locomotive for help. The fire broke out soon after noon, and it was not known here until late in the evening, when the following dispatch was received from Chief Engineer Leshure:—

“The fire is under control. Shall not need you.”

The plan by which we propose to prevent the recurrence of the above, in either city, is to connect the Fire Alarm Office here with the one in Springfield, during the hours when the telegraph offices are closed for business; using, for that purpose, the Western Union or Franklin line, provided an arrangement can be made with either of those companies.

Mr. Bird seems to view the proposed arrangement with considerable alarm, and does not hesitate to make some very wild statements about it. He professes to believe this is the first step towards placing all the principal cities in the country in one grand circuit. Then if, for instance, a fire breaks out here, a dispatch is to be sent out to which all the fire departments in the country, with their steamers, are to respond, we, in the meantime, to do nothing until their arrival, when, if the fire has not consumed everything, a grand attack is to be made on it by the assembled hosts.

The best answer we can make to the above is to point to the record of this Department, believing it to be the best assurance that we can give to Mr. Bird that, so far as this city is concerned, his fears are groundless.

The policy of attacking fires at the earliest possible moment after their discovery, of which he claims to be the sole originator, has been followed here for years by men who were so unfortunate as not even to know of the existence of such a person as Mr. Joseph Bird, and he can rest assured that we are not going to discard that which has already proved so successful.

INSURANCE FIRE PATROL.

During the year just closed, the Fire Patrol, supported by the insurance companies, was organized, the permanent members being elected from Hose 3. The permanent and call men are old and tried firemen, and no doubt they will prove a most valuable auxiliary to our Department. An entire harmony of feeling and action exists between it and the members of the Department.

Their duty is to attend fires and, so far as possible, protect goods from damage by water, and, in case of necessity, to remove them from burning buildings. The brigade consists of eight men, duly officered—four permanent and four call men. When an alarm is given, away go the members speedily to the designated spot, and, if the fire be in the upper story of the building, with the probability of being confined there by the firemen, the furniture in the lower stories is immediately placed in the centre of the room and covered with waterproofs. The goods and stocks in stores are removed from the shelves and heaped upon the counters, where they are also carefully covered. With dippers, the water is removed as fast as it collects, and the floors are kept comparatively free from water with brooms and mops. And, if “worst comes to worst,” and the whole building is likely to submit to the embrace of the “ash-makers,” the men carefully remove the goods and convey them to safe quarters. This brigade, though independent of the fire companies, works systematically and harmoniously with them.

In this connection we will state that there is also a Mutual Fire Protecting Society, of fifty members. Under its present management, it promises to become a valuable organization in our fire service. Details from the force have been made for the several kinds of duty required, that will furnish us with a large fire police, as also a sufficient number to remove and protect such property as the Board in their judgment may determine. The expense to the city is trifling, and the service which the society can render is valuable.

The equipments of the Insurance Patrol consist of a wagon, 11 feet long, 2 feet deep and $5\frac{1}{2}$ feet wide, divided into compartments, with a space of 18 inches running through the length of the wagon. The lids of the compartments furnish seats for the men. The whole vehicle is beautifully moulded and ornamented; is light, yet strong, and carries two Babcock Extinguishers, 7,000 square feet of rubber covering, besides other necessary articles for their peculiar service. The two horses to draw it are also a part of the establishment, and are always kept in readiness for service.

The usefulness of the Insurance Patrol has been fully established in other cities, and it deserves success and encouragement, and it is to be congratulated for all it will accomplish.

EXPENSES OF THE DEPARTMENT.

Previous to the commencement of the financial year, the Board and Committee on Fire Department made an estimate, which they thought would be necessary to carry on the Department, and the City Council made an appropriation in accordance therewith. This estimate was based upon the expenses of the year just ending, with such additions as the changes in the organization of the Department would make necessary.

In the expenditure of the money appropriated, the actual need of the Department, without reference to what has been done heretofore, has governed the action of the Committee and Board, and they close the year with an unexpended balance of \$4,783.93. They deem it proper to state that immediate attention to the requirements of the Department, and no necessary expenditure has been delayed to make a show of economy, or put off to affect favorably the condition of the appropriation. The apparatus and hose have been kept all the time in good order, and their present condition will bear comparison with any other period in the history of the Department. No special appropriation was asked for or made for the purchase of new apparatus, but needful additions have been made to the extent of \$4,650, and paid for out of the amount saved from the appropriation for repairs. For a detailed statement of the receipts and expenditures, we refer you to a tabular statement accompanying this report.

CONCLUSION.

In conclusion, the Board would avail themselves of this opportunity to express their thanks to the officers and members of the companies composing the Department. Too much praise cannot be awarded for the faithful manner in which they have

discharged their arduous and dangerous duties. During the year, our citizens have frequently witnessed their heroic efforts to save their property from destruction; and, on several occasions, they were enthusiastic in their commendation of the intrepidity shown by them. We should be remiss, indeed, if we failed to acknowledge our obligations to them for the services they have rendered, when we consider that their compensation is of a merely nominal nature. They feel that they are recompensed in some degree, at least, by the unreserved approbation of those they serve, and we congratulate them that they have so continually achieved success, and established so enviable a reputation for the Department of which they are honored members.

It is also a pleasant duty we perform in acknowledging our obligation to the officers of the Police Department for their hearty co-operation with the firemen in saving and protecting the property of our citizens. It is exceedingly gratifying to know that the most perfect harmony exists between the two departments, and that nothing has occurred to mar the amicable and cordial relations so productive of good to the public. Worcester has just cause for pride in her Police, so ably managed and judiciously governed.

Finally, the Board desire to acknowledge their gratitude to his Honor the Mayor, and Board of Aldermen and gentlemen of the City Council, for the confidence reposed in us, and for their prompt approval of every suggestion tending to advance the interest and increase the efficiency of the Department intrusted to our management. We herewith submit to you the record of our work for the year just terminated.

Respectfully submitted,

S. E. COMBS,

Chief Engineer.

EXPENSES.

For Salary of S. E. Combs, Chief Engineer	\$1,200 00
“ “ “ Wm. Brophy, Assistant Engineer	1,200 00
“ “ “ Wm. Knowles, “ “	200 00
“ “ “ Samuel H. Day, “ “ and Clerk	250 00
“ “ “ J. W. Loring, “ “	200 00
Pay Roll of Steamer No. 1	1,530 00
“ “ “ “ “ 2	1,530 00
“ “ “ “ “ 3	1,530 00
“ “ “ “ “ 4	1,570 00
“ “ “ City Hose No. 1	1,105 00
“ “ “ Ocean “ “ 2	1,105 00
“ “ “ Eagle “ “ 3	1,071 64
“ “ “ Niagara “ “ 4	1,104 99
“ “ “ Yankee “ “ 5	1,105 00
“ “ “ Tiger “ “ 6	919 17
“ “ “ Protector “ “ 7	1,021 66
“ “ “ Hook and Ladder No. 1	2,055 00
“ “ “ “ “ “ “ 2	2,018 33
“ “ “ Babcock Extinguisher	665 00
Services of Stewards and Drivers	4,104 17
Repairs of Apparatus	1,641 68
Alarms of Fires	77 00
Hardware and Tools	147 34
Repairs of Houses	1,557 60
Oil, soap and brushes	384 38
Material and Repairs of Telegraph	629 62
Hay, grain and straw	2,152 81
Coal and wood	1,399 05
Belts, straps and badges	27 00
Advertising	6 14
Horse hire and board of horses	1,722 50
Blacksmith's labor	230 87
Freight and trucking	29 13
Furniture and Fixtures	751 45
New Apparatus	3,146 89
Printing	145 16
Harnesses, blankets and repairs	294 04
Stationery	25 62

Gas	596 55
Horses	475 00
Washing bedding	203 13
Hose	1,853 53
J. W. Doon, on contract	2,112 00
C. Dyer, for moving a wall	113 77
Rent of Barn	25 00
Gas Governor	35 00
Medicine for horses	5 50
Highway Department, for use of cart	60 50
Hose oil	89 70
Ice	6 58
Expenses, stamps, &c.	51 37
Gongs	462 50
Bedding	13 56
Building Drain (John Street Engine House)	88 00
Repairs on House on School Street	1,465 73
Refreshments at Fire	44 40
Addition to Exchange Street Engine House	962 32
Building Sewer (Lamartine Street)	61 18
Traveling Expenses	18 00
Bands for Muster	120 00
H. S. Pike, for grading Winslow Street	100 00
Balance of Contract (John Street Engine House)	124 55
Repairing Stable (Davis Court)	250 00
	<hr/>
	49,191 11

R E V E N U E.

For Labor of Men	\$ 73 50
“ “ “ “ and Teams	1,350 25
Gas furnished Engineers' Department, Thomas Street	16 70
Manure	175 75
Water used in John Street	8 87
Cleaning Steamer	4 00
Insurance on Policy of Engine Houses (School Street)	350 00
Old Hose	33 23
Flag Stone	85 00
Copper	72 41
	<hr/>
	\$2,169 71
Appropriation	51,805 33
	<hr/>
	\$53,975 04
Expenses	49,191 11
	<hr/>
Unexpended Balance	\$4,783 93

ALARMS OF FIRE FOR 1875.

DATE.	BOX.	DESCRIPTION AND LOCATION.	LOSS.	INSURANCE,
Jan.	7, 4,	Reed's Stove Store, Pleasant st.	\$ 200 00	Insured.
"	19, 4,	Spy Building, Main st.	2,300 00	"
"	21, 31,	Methodist Church, Webster square	12,000 00	"
"	28, 71,	Millinery Store, Main st.	337 00	"
March	19, 23,	Barn, Blackstone st.	600 00	"
"	19, 23,	Dwelling house, Summer st.	100 00	"
"	30, 45,	" " Shrewsbury st.	800 00	"
"	31, 45,	False.		
April	14, 25,	Wire Mill, Grove st.	26,000 00	"
"	22, 32,	House, Charles st.	No loss.	
"	22, 63,	Bradley's Car Shop	Slight.	
"	24, 26,	Shoe Shop, Southbridge st.	10 00	"
May	3, 57,	Dwelling House, Jackson st.	100 00	"
"	11, 17,	Stockwell's Stable, Foster st.	150 00	"
"	17, 14,	Engine House, School st.	350 00	"
"	21, 23,	Dry House, Union st.	50 00	No Ins.
"	28, 4,	Taylor's Building, Main st.	149,000 00	124,000 00
"	29, 24,	Dwelling House, Southbridge st.	300 00	Insured.
June	5, 17,	Barnard & Sumner's, Main st.	100 00	"
July	9, 65,	Barn, Elm st.	No loss.	
"	9, 7,	Bakery, Lodi st.	50 00	"
Aug.	10, 45,	Dwelling House, Shrewsbury st.	No loss.	
"	11, 45,	Straw Bed, " "	"	
"	12, 32,	Chimney, Howard st.	"	
"	14, 4,	Gazette Office, Main st.	"	
"	23, 7,	Barn, Lunelle st.	75 00	Insured.
Sept.	7, 5,	Plumbing Shop, Green st.	No loss.	
"	8, 45,	Straw in Cellar, Shrewsbury st.	"	
"	13, 6,	Barn in rear of Gold st.	Trifling.	
"	16, 17,	False.		
"	18, 24,	Tenement Building, Adriatic Mills	No loss.	
Oct.	1, 16,	Sash and Blind Shop, Sargent st.	Trifling.	
"	2, 46,	Straw Bed, Winter st.	No loss.	
"	4, 24,	Barn on College st.	1,000 00	875 00
"	30, 4,	Waldo House Stables	5,500 00	Insured.
Nov.	3, 64,	Slaughter House, Plantation st.	5,000 00	"
"	18, 45,	Barn, Pine Meadow	400 00	300 00
Dec.	18, 7,	Tenement Block, Sargent st.	1,600 00	Insured.

BOARD OF ENGINEERS

OF THE

CITY OF WORCESTER, MASS.,

FOR 1876.

OFFICE, No. 80 FRONT STREET.

CHIEF ENGINEER.

SIMON E. COMBS.

Age 49. Residence, 17 School St. No. of Badge, 1.

1st Assistant, WILLIAM BROPHY.

Age 39. Residence, 18 Wilmot St. No. of Badge, 2.

2d Assistant, J. W. LORING.

Age 45. Residence, Kendall St. No. of Badge, 3.

3d Assistant and Clerk, SAMUEL H. DAY.

Age 38. Residence 46 Hermon St. No. of Badge, 4.

4th Assistant, G. N. RAWSON.

Age 39. Residence, Shelby St. No. of Badge, 5.

Superintendent of Fire Alarm Telegraph, and Inspector of Petroleum
WILLIAM BROPHY.

STEAMERS.

GOV. LINCOLN STEAM FIRE ENGINE No. 1.

Located at Bigelow Court. This engine was built by the Amoskeag Manufacturing Co., Manchester, N. H., and delivered to this Department in February, 1873. It is a double reciprocating, vertical engine, with two steam cylinders, $7\frac{1}{2}$ inches diameter, and 8 inch stroke; pump $4\frac{1}{2}$ inches diameter, and 8 inch stroke. At a fair working speed it will deliver 600 gallons of water per minute. The boiler is vertical, 32 inches diameter, 66 inches long, and contains 301 brass tubes 18 inches long and $1\frac{1}{4}$ inches diameter. Weight, when drawn to a fire, 8,000 pounds. With this machine there is a four-wheeled hose carriage, carrying 700 feet of hose, and all the necessary equipments. This carriage was built by Albert Tolman & Co., of this City, and is in good condition. Three horses are in the house, owned by the City, with permanent driver. Four hosemen occupy beds in the house, also the driver. Company, when full, is thirteen men, including driver.

The inventory of property in charge of this company, including one-half of the engine house, lot, horses and equipments, is \$20,528.17.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Charles Allen,	30.	Salem street,	8.
Asst. " E. L. Vaughn,	32.	Washington street,	9.
Clerk, Franklin Reynolds,	35.	Orange street,	10.
Engineer, Eli Clements,	42.	Salem street,	11.
Asst. " Wm R. Shaw,	31.	Plymouth street,	12.
Warren Hooker,	29.	Chatham street,	13.
D. P. Allen,	21.	Engine House,	14.
Francis Hoyle,	36.	Ash street,	15.
Geo. B. Sampson,	25.	Franklin street,	16.
J. W. Champlin,	29.	Front street,	17.
Hosea R. Tillison,	22.	Engine House,	18.
Abraham Putford,	28.	Engine House,	19.
Driver, Stephen Allen,	46.	Engine House.	

S. E. COMBS STEAM FIRE ENGINE No 2.

Situated on Beacon street. This engine was built by H. C. Silsby & Co., Seneca Falls, N. Y. This machine was delivered to this Department in August last, in exchange for the steamer Col. Davis, which was found to be in an unsafe condition and very much worn, upon the recommendation of the Board of Engineers and the Committee on Fire Department.

This engine has given perfect satisfaction; in fact, her working powers excel her beauty and symmetry, which are declared by good judges to be almost faultless. It is one of the finest pieces of mechanism in a steam fire engine that we have in this City, if not in the State. It will throw about 550 gallons of water per minute, at a fair working pressure, and weighs, when going to a fire, about 8,400 pounds.

With this engine there is a four-wheeled hose carriage, built by Corbett & Willard, of this City, in September last, which we consider the best carriage in the Department; it will carry 800 feet of hose. Permanent horses are kept for the steamer and hose carriage, with permanent driver. The engineer, fireman and two hosemen occupy beds in the engine house. The company when full has thirteen men, including driver.

The inventory of property in charge of this company, including engine house, lot, horses and equipments, is \$19,511.05.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, M. C. Viall,	30.	Jackson street,	20.
Asst. " O. H. Wallace,	33.	Jackson street,	21.
Clerk, A. W. McKeeby,	24.	Engine House,	25.
Engineer, J. A. Merritt,	41.	Engine House,	23.
Asst. " C. E. Noyes,	32.	Beacon street,	24.
Wm. C. Wallace,	24.	Hawley street,	29.
E. P. Taft,	32.	Main street,	22.
S. T. Coe,	33.	Main street,	31.
Geo. W. Anthony,	32.	Engine House,	27.
Jas. Morris,	38.	Southbridge street,	28.
Wm. Westcott,	34.	Southbridge street,	26.
Wm. G. Burnham,	21.	Engine House,	30.
Driver, C. H. Shippee,	26.	Engine House.	

A. B. LOVELL STEAM FIRE ENGINE No. 3.

This engine is located on School street, and was built by H. C. Silsby & Co., Seneca Falls, N. Y., in 1865. It has Holly's rotary engine and pump, a decided improvement over the first made for this City by the above firm, having cost scarcely anything for repairs since its introduction here; in fact, it has given the fullest satisfaction. It will throw about 500 gallons of water per minute at a fair working pressure, and weighs, when going to a fire, 7,200 pounds.

With this engine there is a four-wheeled horse hose carriage, built by Albert Tolman & Co., of this City, and is in good condition, carrying 750 feet of hose. A permanent horse is kept for this carriage; the steamer is drawn by hire; two drivers occupy beds in the house. Company when full, twelve men.

The inventory of property in charge of this company, including one-half of the engine house, lot, horse and equipments, is \$12,300.01.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Edwin Fisher,	43.	Austin street,	32.
Asst. " Edwin J. Watson,	29.	Main street,	33.
Clerk, Chas. M. Mills,	25.	School street,	38.
Engineer, A. Burlingame,	34.	Arch street,	43.
Asst. " Geo. P. Blake,	33.	Shelby street,	42.
Wm. A. Sheldon,	31.	Reservoir street,	41.
Levi Dakin, Jr.,	31.	Orchard street,	36.
John H. Dorr,	30.	Central street,	35.
Chas. W. Johnson,	31.	Denny street,	34.
Wm. A. Rand,	33.	Prospect street,	39.
Thos. Keirnan,	22.	Engine House,	37.
Wm. Luchay,	25.	Belmont street,	40.

RAPID STEAM FIRE ENGINE No. 4.

This engine was built by H. C. Silsby & Co., of Seneca Falls, N. Y., in 1873. The engine and pumps are Holly's direct acting rotary, with steel shafts and bronze metal bearings, mounted on a wrought iron frame, the pumps having discharge gates for two streams. A donkey engine is attached to the machine by which the boiler can be fed with water, independent of both the main and feed pumps, and with which the boiler can be continually fed when the engine is not running. The boiler is the improved circulating tubular, 30 inches in diameter, and 68 inches high; this engine is third class in size, and is capable of throwing 500 gallons of water per minute, at a fair working speed. Weight of engine when drawn to a fire, 6,500 pounds. With this engine there is a two-horse four-wheeled hose carriage, carrying 700 feet of hose, and was built by Albert Tolman & Co., of Worcester. This steamer and hose carriage are drawn by hire; the company when full, 12 men. Inventory of property in charge of this Company, including engine house and lot, and equipments is \$6,223.79.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Geo. W. Dickinson,	30.	Stafford street,	134.
Asst. " Wm. W. Lombard,	31.	Buffum street,	135.
Clerk. L. A. Whitcomb,	34.	Main street,	139.
Engineer, C. S. Bottomly,	35.	Webster street,	138.
Asst. " Chas. Bruso,	38.	Cambridge street,	140.
F. L. Jenks,	26.	Mill street,	160.
John Jaques,	30.	Webster street,	141.
U. D. Rose,	33.	Webster street,	145.
Wm. Hoyle,	47.	Webster street,	156.
James L. Morse,	50.	Webster street,	137.
John H. Wheeler,	34.	Webster street,	159.
Fred. A. Thomas,	33.	Tirrell street,	143

HOSE COMPANIES.

CITY HOSE No. 1.

Located on School Street. This is a four-wheeled hand hose carriage, built by Albert Tolman & Co., of this city, in 1856, one of the first four-wheeled hose carriages used in this city. It was rebuilt in 1867, and is now in good condition, carrying 600 feet of hose. This carriage is drawn by hire; 4 men occupy beds in the house. Company, when full, 10 men. Inventory of property in charge of this Company, including one-half of the engine house and lot, and equipments, \$6,841.90.

MEMBERS.

Names.	Age.	Residence.	No. of Badge,
Foreman, Henry E. Robbins,	25	Thomas street,	44.
Asst. " George Hartwell,	23	Summer street,	45.
Clerk, James W. Robbins,	23	Hose House,	53.
J. M. Clough,	31	Thomas street,	47.
G. L. Robbins,	19	Hose House,	50.
Chas. E. Lovejoy,	25	Orchard street,	52.
A. A. Gleason,	25	Thomas street,	51.
Fred. W. Stiles,	21	Hose House,	48.
Herbert A. Stiles,	19	" "	49.
J. G. Cashin,	28	Arch street,	46.

OCEAN HOSE No. 2.

Located on Bloomingdale Street. This is a four-wheeled carriage, built by Albert Tolman & Co., of Worcester, in 1857, carrying 500 feet of hose. This carriage has been rebuilt the last season, at an expense of \$300. It is drawn by hire. Two men occupy beds in the house. The Company, when full, 10 men. Inventory of property in charge of this Company, including engine house and equipments, \$2,822.95.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, David Boland,	33	Salem street,	54.
Asst. " Thomas McDermott,	34	Tremont street,	55.
Clerk, Richard O'Donnell,	29	Summer street,	56.
John O'Keefe,	25	Hose House,	57.
John Holland,	22	" "	58.
Patrick Farrell,	33	Bloomingdale road,	59.
Wm. Geary,	33	Burt street,	60.
Florence Murphy,	37	Cherry street,	61.
James Keegan,	36	Chandler street,	62.
Thomas Mara,	29	Burt street,	63.

EAGLE HOSE NO. 3.

House on Carlton Street. This is a four-wheeled hand carriage, and was built by Albert Tolman & Co., in 1863 ; carries 750 feet of hose, and is in good condition. This carriage is drawn by hire. Four men occupy beds in the house. Company when full, 10 men. Inventory of property in charge of this Company, including engine house, lot and equipments, \$5,996.43.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Edward J. Fogerty,	33	Green street,	64.
Asst. " Joel M. Hunt,	24	Hose House,	65.
Clerk, Wm. Wheelock,	30	Fulton street,	66.
Geo. Bieberbach, Jr.,	24	Hose House,	67.
W. E. Smith,	22	" "	68.
Frank Roberts,	19	" "	69.
Daniel T. Hurd,	25	" "	70.
Chas. S. Weeks,	21	" "	71.
John F. Sampson,	27	Bowdoin street,	72.
Maurice Hacker,	31	Mechanic street,	73.

NIAGARA HOSE No. 4.

Located on Exchange Street.. This Company has a four-wheeled hand hose carriage; carrying 600 feet of hose; and was built by Albert Tolman & Co., of this city, in 1867, and is now in good condition. This carriage is drawn by hire. Four men sleep in the house. Company, when full, 10 men. Inventory of property in charge of this Company, including engine house, lot and equipments, \$7,460.00.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, L. W. Preble,	29	Green street,	74.
Asst. " C. A. Humes,	26	Hose House,	75.
Clerk, W. H. Fisher,	26	Ash street,	77.
G. T. Barker,	26	Hose House,	78.
Geo. J. Page,	34	" "	80.
Geo. Jennison,	40	Lynn street,	76.
Joseph D. Turner,	20	Hose House,	79.
D. A. Mills,	22	" "	81.
J. L. Nichols,	29	Main street,	82.

YANKEE HOSE No. 5.

House on Myrtle Street. This Company have a four-wheeled hand hose carriage, built by Corbett & Willard, of this city, the past year, and it is one of the best carriages in the Department, it being very strong, and tasty in design. This carriage is drawn by hire. Company, when full, 10 men. Four men occupy beds in the house. Inventory of property in charge of this Company, \$7,180.00.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Joseph Bolio,	40	Main street,	84.
Asst. " Jos. H. Dunkerton,	27	Hose House,	85.
Clerk, Samuel F. Shepard,	26	" "	26.
Wm. E. Lewis,	25	Beacon street,	93.
A. A. Hapgood,	26	Southbridge street,	83.
A. T. Kittredge,	37	" "	91.
J. W. Burgess,	22	Hose House,	88.
Charles Spring,	26	Madison street,	92.
Geo. H. Sawin,	26	Goddard street,	87.
Charles F. Allen,	22	Hose House,	89.

TIGER HOSE NO. 6.

House on Pleasant Street. This Company has a four-wheeled horse hose carriage and a permanent driver. The carriage was built by the Amoskeag Manufacturing Company, of Manchester, N. H., in 1873. It carries 700 feet of hose, and is in good condition. Four men sleep in the house. Company, when full, 9 men, including driver. There is also in this house a Relief Hook and Ladder Truck, carrying 296 feet of ladders. Inventory of property in charge of this Company, including house and lot, horse and equipments, \$16,183.25.

MEMBERS.

	Names.	Age.	Residence.	No. of Badge.
Foreman,	Geo. S. Coleman,	34	Clinton street,	148.
Asst. "	Geo. D. Ballou,	30	Pleasant street,	149.
Clerk,	R. L. Jewell,	30	Townsend street,	150.
	Geo. W. Smith,	21	Hose House,	151.
	A. L. Pike,	31	" "	152.
	E. D. Burbank,	21	" "	153.
	H. S. Pike,	29	Townsend street,	154.
	Frank E. Laing,	30	Austin street,	155.
Driver,	W. H. Watkins,	29	Hose House,	158.

PROTECTOR HOSE NO. 7.

Located on Lamartine Street. This company has a four-wheeled horse hose carriage and permanent driver. The carriage was built by the Amoskeag Manufacturing Company, of Manchester, N. H., in 1873; carries 600 feet of hose, and is in good condition. Three hosemen and the driver occupy beds in the house. Company, when full, 11 men, including driver. In this house is a relief steamer, which is in bad condition; she should either be thoroughly repaired or a new one purchased. Inventory of property in charge of this company, including engine house, lot, and equipments, is \$18,200.50.

MEMBERS.

	Names.	Age.	Residence.	No. of Badge.
Foreman,	Samuel H. Barnes,	29	Orange street,	159.
Asst. "	Geo. F. McKnight,	32	Washington street,	160.
Clerk,	Wm. J. Shaw,	20	Engine House,	161.
	K. G. Kendall,	36	Washington street,	163.
	Clarence W. Arnold,	22	Engine House,	166.
	James H. Love,	36	Washington street,	165.
	Frank B. Jones,	22	Engine House,	167.
	Charles Blandon,	21	Salem street,	164.
Driver,	Timothy Sullivan,	25	Engine House,	162.

VOLUNTEER HOSE CO. No. 8.

This Company is located on Catharine Street. The house was built by members of the Company. The City furnished them with a four-wheeled Hose Carriage and 500 feet of Hose. Company, when full, 12 men. Inventory of property in charge of this Company, \$690.00.

MEMBERS.

	Names.	Age.	Residence.
Foreman,	J. H. Townsend,	22	Catharine street.
Asst. "	Geo. E. Ward,	26	Hanover street.
Clerk,	Elmer H. Loring,	23	Kendall street.
	Geo. L. Allen,	22	Windsor street.
	Henry J. Allen,	19	" "
	James Brown,	19	Main street.
	E. L. Ross,	22	Channing street.
	Harry Robinson,	23	Auburn Place.
	Cyrus Holden,	56	Channing street.
	Austin Lovell,	28	" "
	Jacob Schook,	21	Catharine street.
	Hubert Stiles,	19	Harrington Avenue

BABCOCK EXTINGUISHER No. 1.

House on John Street. This company is equipped with a self-acting fire engine, made by the New England Extinguisher Company, Northampton, Mass., in 1873. It has been rebuilt the past year and arranged to be drawn by a horse; it is equipped with a horse and 2 permanent men and 3 call men. Inventory of property in charge of this company, including engine house and lot, horse and equipments, \$10,300.00.

MEMBERS.

Names.	Age.	Residence.	No. of Badge
Foreman, William Flynn,	33.	Engine House,	146.
Asst. " Otis J. Buzzell,	31.	Grove street,	147.
Clerk, Thomas Burton,	43.	North Ashland street,	148.
William E. Barton,	24.	Market street,	151.
Driver, James F. Adams,	21.	Engine House.	

HOOK AND LADDER COMPANIES.

J. W. LORING HOOK AND LADDER No. 1.

This truck was built by Edward B. Leverich of New York, the past year. It is a patent iron trestle side truck with ladders on rollers and platform springs, and carries 365 feet of ladders, including one 75-foot extension ladder. Five men sleep in the house including driver. Company when full, 20 men. Inventory of property in charge of this company, including one-half of the engine house and lot, horses and equipments, \$15,800.97.

MEMBERS.

	Names.	Age.	Residence.	No. of Badge.
Foreman,	P. M. Church,	43.	Harrison street,	94.
Asst. "	Jas. S. Perkins,	43.	Chatham street,	95.
Clerk,	Albert Young,	32.	Central street,	96.
	W. H. Whitman,	28.	Belmont street,	97.
	H. T. Benson,	25.	Front street,	98.
	John F. Sibley,	34.	Ash street,	99.
	John L. Rock,	29.	Union street,	100.
	Henry M. Sorell,	43.	Park street,	101.
	Reuben R. Burr,	26.	Main street,	102.
	E. L. Sibley,	27.	Ash street,	103.
	Robert Gill,	26.	Newbury street,	104.
	George E. Phelps,	30.	Denny street,	105.
	Jas. E. Reeves,	28.	Foster street,	106.
	A. A. Shepardson,	28.	School street,	107.
	Perry Bullard,	32.	Bartlett place,	108.
	J. J. Donelson,	25.	Hook & Ladder House,	109.
	D. C. Aldrich,	25.	Elliott street,	110.
	B. A. Drake,	32.	Harrison street,	111.
	Hiram M. Sorell,	31.	Green street,	112.
	Jas. E. Kennington,	22.	Hook & Ladder House,	113.
Driver,	Albert A. Jones,	27.	Hook & Ladder House.	

HOOK AND LADDER No. 2.

This truck is located on Thomas street, and was built in 1841, and is now in fair condition. It carries 195 feet of ladders. This truck is drawn by hire. Company, when full, 15 men. Inventory of property in charge of this company, including house, lot and equipments, \$10,320.50.

MEMBERS.

Names.	Age.	Residence.	No. of Badge.
Foreman, Jeremiah Hennessy,	31.	Summer street,	114.
Asst. " Jas. B. Murphy,	24.	Pink street,	115.
Clerk, John O'Connell,	27.	Summer street,	116.
Jas. McCann,	24.	Summer street,	117.
John Chaplin,	44.	Thomas street,	118.
John P. Fay,	26.	Exchange street,	119.
John Horgan,	40.	Mechanic street,	123.
John O'Hern,	30.	Summer street,	124.
Chas. L. Preston.	48.	Thomas street,	125.
James Herbert,	28.	Prescott street,	126.
Thomas Fay,	27.	Spruce street,	127.
Owen McGarrell,	36.	Assonet street,	128.
David McGrath.	32.	Gold street,	130.
Maurice Mulcahy,	34.	Market street,	121.
Geo. Chapin,	24.	Thomas street,	122.

INSURANCE FIRE PATROL.

This Apparatus is located in Davis Court, and was built by Abbott, Downing & Co., of Concord, N. H., the past year.

MEMBERS.

PERMANENT.

Names.	Age.	Residence.
Captain, Hiram Williamson,	30	House.
Frank W. Buxton,	23	"
Alfred Lavene,	21	"
William Adams.	21	"

CALL MEN.

James C. Luby,	32	Grafton street.
Frank F. Burbank,	23	House.
John W. Foley,	26	"
John Yatter,	25	"

INVENTORY OF PROPERTY IN POSSESSION OF THE ENTIRE
DEPARTMENT, JANUARY 1, 1876.

Steamer No. 1.	Half Engine house, lot, horses and equipments.	\$20,528 17
Steamer No. 2.	Engine house, lot, horses and equipments . . .	19,511 00
Steamer No. 3.	Half Engine house, lot, horses and equipments .	12,300 00
Steamer No. 4.	Engine house, lot and equipments	6,223 79
Hose No. 1.	Half Engine house, lot and equipments	6,841 90
Hose No. 2.	Engine house and equipments	2,822 95
Hose No. 3.	Engine house, lot and equipments	5,996 43
Hose No. 4.	Engine house, lot and equipments	7,460 00
Hose No. 5.	Engine house, lot and equipments	7,180 00
Hose No. 6.	Engine house, lot, horse and equipments	16,183 25
Hose No. 7.	Engine house, lot, horse and equipments	18,200 50
Hose No. 8.	Equipments	690 00
Babcock Extinguisher.	Engine house, lot, horse and equipments	10,300 00
Hook and Ladder No. 1.	Half Engine house, lot, horses and equipments	15,800 97
Hook and Ladder No. 2.	Engine house, lot and equipments . .	10,320 50
Property in charge of Superintendent Fire Alarm Telegraph . .		27,188 84
Engineer's Office and store-room		1,023 00

\$188,571 30

RUNNING CARD.

No. of Box.	Steamer No. 1.	Steamer No. 2.	Steamer No. 3.	Steamer No. 4.	Hose Co. No. 1.	Hose Co. No. 2.	Hose Co. No. 3.	Hose Co. No. 4.	Hose Co. No. 5.	Hose Co. No. 6.	Hose Co. No. 7.	Babcock No. 1.	Insurance Patrol.	Hook and Ladder No. 1.	Hook and Ladder No. 2.
4—	1	...	3	...	1	2	3	4	5	6	...	1	1	1	...
5—	1	...	...	...	...	2	3	...	5	...	7	1	1	1	...
6—	H	...	...	...	...	2	3	...	5	...	7	1	1	1	...
7—	...	2	...	...	...	...	...	4	5	...	7	1	1	1	...
12—	H	2	...	...	...	...	3	4	5	6	...	1	1	1	...
13—	...	2	...	4	...	...	...	...	...	6	7	1	1	...	2
14—	H	...	3	...	1	2	3	4	...	...	...	1	1	...	2
15—	1	...	3	...	1	2	...	4	...	...	...	1	1	...	2
16—	H	2	...	...	...	...	3	4	5	...	7	1	1	1	...
17—	1	...	3	...	1	...	3	4	5	6	...	1	1	1	2
21—	...	2	...	4	...	...	3	...	5	6	...	1	1	1	...
23—	1	...	3	...	1	2	3	4	5	...	...	1	1	1	2
24—	...	2	...	4	...	...	3	...	5	...	7	1	1	1	...
25—	H	...	3	...	1	...	3	4	...	...	...	1	1	...	2
26—	1	H	...	...	...	2	3	4	5	...	7	1	1	1	...
27—	1	...	3	...	...	...	3	4	5	6	...	1	1	...	2
31—	H	2	...	4	...	...	...	...	...	6	7	1	1	1	...
32—	1	...	3	...	1	2	3	4	5	...	...	1	1	1	2
34—	1	H	...	...	...	2	3	...	5	...	7	1	1	1	...
35—	1	2	...	...	...	2	3	...	...	...	7	1	1	...	2
36—	1	...	3	...	1	2	3	4	...	...	...	1	1	1	...
37—	...	...	3	...	1	...	3	4	...	6	...	1	1	...	2
41—	H	...	3	...	1	2	3	4	...	...	...	1	1	...	2
42—	H	2	...	4	...	2	...	...	5	...	7	...	...	1	...
43—	...	2	...	4	...	2	...	...	...	...	7	...	...	1	...
45—	1	...	H	...	1	2	...	4	...	...	...	1	1	...	2
46—	1	...	H	...	...	2	3	4	...	...	7	1	1	...	2
47—	H	...	3	...	1	2	...	4	...	...	...	1	1	...	2
51—	1	...	3	...	1	2	3	4	...	...	...	1	1	1	2
52—	1	...	3	...	1	2	...	4	...	...	...	1	1	...	2
53—	1	...	...	...	...	2	3	...	5	...	7	1	1	...	2
54—	H	2	...	...	...	...	...	4	5	6	...	1	1	1	...
56—	1	...	3	...	1	...	...	4	...	6	...	1	1	...	2
57—	1	2	...	...	...	...	3	4	5	6	7	1	1	1	2
61—	...	2	...	4	...	2	...	...	5	...	7	1	1	1	...
62—	1	...	3	...	1	2	...	4	...	...	...	1	1	...	2
63—	1	...	3	...	...	2	3	4	5	...	7	1	1	1	2
64—	1	...	3	...	...	2	3	...	...	...	7	1	1	...	2
65—	1	2	...	...	...	...	3	4	...	6	...	1	1	...	2
67—	...	2	...	...	1	...	3	...	...	6	...	1	1	...	2
71—	1	...	3	...	1	...	3	4	5	6	...	1	1	1	2

WORCESTER
FIRE DEPARTMENT.

CHIEF ENGINEER'S OFFICE.

OFFICE HOURS.

Daily—9 to 10 A. M., 2 to 3 P. M.

1. The Companies are ordered to go to alarms of fire given from boxes as indicated in the annexed table.

2. Upon an alarm, all Companies not called to that box will report to their Engine House and remain thirty minutes, unless dismissed by the signal on the bells.

3. Drivers, with their horses, will report the same as other members of the Department. Hose carriages to go in advance of steamers to which they belong, in all cases.

4. Three strokes on the bell will constitute a second alarm; Companies so called will report to an Engineer before commencing work; and all companies are ordered to wait fifteen seconds, to be sure that it is not on alarm from another box.

5. After an alarm has been given, one stroke on the bells will call for the Hook and Ladder remaining in the house.

6. Two strokes on the bells after an alarm has been given, Companies are dismissed.

S. E. COMBS, CHIEF ENGINEER.

Office No. 80 Front Street.

Worcester, Jan., 1876.

RULES AND REGULATIONS

FOR THE GOVERNMENT OF THE

WORCESTER FIRE DEPARTMENT.

ENGINEER'S OFFICE,
WORCESTER, January 25th, 1875. }

ARTICLE 1. Any Engine or Hose Company arriving at a fire, and finding an incomplete line of hose laid out from any steamer or hydrant, shall attach to and lengthen out such line until the fire is reached; and in all cases the Company reaching the fire with their hose are entitled to the pipe.

ARTICLE 2. Any member of the Department who wilfully and maliciously turns a stream of water, or directs or causes it to be done, on any person or persons, shall be liable to be dismissed from the service. No charge will be entertained against any member of the Department unless such charge be made in writing within five days after the act complained of shall have been committed.

ARTICLE 3. Each Driver shall give his entire time to the interests of the Department, and shall always be at or near the engine house where his machine is kept, except when directed by the Chief Engineer to perform other duty, or when allowed to be absent from said house by the Chief Engineer.

ARTICLE 4. All Drivers are strictly forbidden to run their horses to fires, under penalty of expulsion; and they are required to use all due caution, and not drive over a line of hose if it can be avoided.

ARTICLE 5. The several companies will run on first and second alarms of fire, in accordance with tables, from time to time issued by the Board of Engineers.

ARTICLE 6. Each Company, in cases where their apparatus do not respond to the first alarm, shall assemble at their respective stations, and wait thirty minutes, before calling the roll. Should the re-call be sounded within thirty minutes, the roll shall not be called in less than twenty minutes from the first alarm.

ARTICLE 7. All horses in good health must be exercised at least one-half hour every day, except on Sunday or in inclement weather, in the immediate vicinity of the engine house, at no time proceeding faster than a walk, and if in cold weather they shall be blanketed. The hours of exercise shall be from 9 to 10 A. M. Days when the horses are worked on the streets, and in case of fire in the morning, such exercise will be omitted. The drivers shall in no case take their horses beyond calling distance from their respective houses.

ARTICLE 8. No profane or ungentlemanly language or disorderly conduct will be allowed on the part of any member of the Department, when on duty, under penalty of suspension or dismissal; and the citizens will be treated by the members in a civil and gentlemanly manner at all times.

ARTICLE 9. The hose must be changed on the reel at least once in three weeks, for which purpose the Foreman will warn the Steward having charge of the same, and if the Steward neglects to change it the Foreman shall cause it to be done at the expense of the Steward.

ARTICLE 10. It shall be the duty of the Foreman to see that the apparatus, and buildings in which the same are deposited, and all things in or belonging to the same, are kept neat and clean and in order for immediate use; and to see that the house is closed at or before 10 o'clock P. M.

ARTICLE 11. No fireman shall sleep in any engine house or hook and ladder house without the consent of the Chief Engineer or one of his Assistant Engineers, and in no case will permission be given to persons not members of the Department to use or occupy beds in the engine, hose or hook and ladder houses.

ARTICLE 12. The occupant of each bed will be held responsible for the cleanliness of the same, and will be held strictly accountable for any damage to either bed or bed clothing through carelessness. After retiring the occupants will refrain from loud talking, or in any manner disturbing the rest of others, and any member retiring in a state of intoxication shall be reported to the Chief Engineer, whose duty it shall be to recommend such persons for discharge from the Department.

ARTICLE 13. If a charge of intoxication be preferred and proven against any officer or member of the Department, he shall be reprimanded, suspended, or discharged, at the discretion of the Board of Engineers, and it shall be the duty of any member of the Department to report any member violating this rule to the Chief Engineer.

ARTICLE 14. No officer or permanent member shall leave the city without first notifying the Chief Engineer, and procuring a substitute to his acceptance; and every other member expecting to be absent twenty-four hours or more, shall be required to procure a substitute to the approval of his Foreman, failing to do which he shall forfeit one month's pay. No member will be allowed a substitute except in case of sickness or absence from the city, and in no instance for a longer period than one month, except in case of sickness.

ARTICLE 15. No Company will be allowed to take their apparatus away from the engine house, except in case of fire, without the consent of the Chief Engineer.

ARTICLE 16. If by accident or otherwise, the property of any person in the city is damaged by any Company, it shall be the duty of the officer of said Company causing such damage to report the same immediately to the Chief Engineer.

ARTICLE 17. Hose drivers must not permit persons not connected with the Department to ride upon the hose carriage, and not more than two hosemen will be permitted to ride to a fire, the pipemen in all cases to have the preference, and in muddy weather or heavy wheeling, the driver must not permit any one to ride on the carriage when returning from fires.

ARTICLE 18. Any Driver in the Department who carelessly or wilfully comes in collision with a vehicle of any kind, while going to or returning from a fire alarm, shall be held responsible for all damages that may occur.

ARTICLE 19. The Foreman or person in command of each Company when in service, shall remain by his company or apparatus of which he has charge to direct its operations, and all members of the several Companies except when otherwise engaged on special duty, will remain at or about the apparatus to which they are attached; he will also see that the hose is well guarded.

ARTICLE 20. All members arriving early at fires, will assist the first apparatus in getting to work (or until the arrival of their own machine), and no person other than an Engineer or Officer of the Company will be allowed to give any orders when the Foreman is present.

ARTICLE 21. No buildings used by any company in the Fire Department, shall be opened or occupied on Sunday, except in case of alarm of fire. This rule shall not be construed, however, to prevent employes and those detailed to sleep in the house from occupying them, but the doors of said houses must be kept closed on the Sabbath.

ARTICLE 22. No balls, parties or social gatherings of any description, shall be held in any building used by the Fire Department, without the consent of the Chief Engineer.

ARTICLE 23. No subscription papers or books shall be circulated under the auspices of any Company, for the purpose of soliciting money from citizens without the consent of the Board of Engineers.

ARTICLE 24. When a first alarm of fire is given, all Companies not responding will be governed by telegraphic signals, viz: two blows upon the engine house gongs and alarm bells will be understood as proclaiming the fire extinguished, and the Companies in attendance at liberty to answer other alarms. Three strokes will constitute a general alarm, and all Companies will report immediately. After a first alarm is given, and before the re-call signal is struck, should an alarm be given from another box, all unemployed first and second alarm Companies will respond. Should another alarm be given from yet another box previous to the re-call signal being given, all unemployed Companies will respond.

ARTICLE 25. Any violation of these rules and regulations by any member of the Department will be deemed good cause for his discharge.

Per order of the Board of Engineers,

SIMON E. COMBS, *Chief*.
SAML. H. DAY, *Clerk*.

In Board of Aldermen, February 15, 1875.

Approved by the Board,

Attest, SAMUEL SMITH, *City Clerk*.

Approved February 16, 1875.

CLARK JILLSON, *Mayor*.

A Copy,

Attest, SAMUEL SMITH, *City Clerk*.

WORCESTER FIRE ALARM TELEGRAPH.

ESTABLISHED 1871.

NUMBER AND LOCATION OF BOXES.

No. 4. *City Hall.* Key—Police Office.

No. 5. *Trumbull Square.* Keys—McConville's Drug Store; S. D. Harrington's, Nos. 7 and 8, Gates' Block.

No. 6. *Orange Street, opposite Plymouth.* Key—S. V. Stone's, cor. Orange and Plymouth Streets.

No. 7. *Lamartine Street.* Key—Cunningham's store.

No. 12. *Cor. Main and Chandler Streets.* Keys—Alzirus Brown's, corner Main and Madison streets; J. W. Hall's, Chandler street.

No. 13. *New Worcester.* Hoppin's store. Keyes—A. G. Coes' Counting Room; W. A. Tracey's; Hoppin's store.

No. 14. *Cor. Union and School Streets.* Keys—N. A. Lombard's Counting Room; S. E. Combs', 17 School Street.

No. 15. *Cor. Lincoln and Catharine Streets.* Keys—Geo. G. Burbank's residence; A. Y. Thompson's residence.

No. 16. *Southbridge Street.* Sargent Card Shop; Keys—Sargent's Counting Room; Junction Shop Engine Room.

No. 17. *Cor. Main and Foster Streets.* Keys—W. H. Robinson's store; Waldo House; Foster Street Station; Lincoln House.

No. 21. *Cor. Main and May Streets.* Keys—C. Hill's residence, 7 Hammond Street; F. B. Knowles' residence, 842 Main Street.

No. 23. *Corner Union and Manchester Streets.* Keys—Rice, Barton & Fales's office; C. Baker & Co.'s office.

No. 24. *Southbridge Street.* Chandler & Carr's store. Keys—Chandler and Carr's store; Adriatic Counting Room.

No. 25. *Grove Street.* R. Ball & Co.'s shop. Keys—R. Ball & Co.'s Counting Room; Henry Glazier's residence, Concord Street.

No. 26. *Cor. Portland and Madison Streets.* Keys—Wm. A. Reynolds' Market; Dr. Buxton's office, Portland Street.

No. 27. *Corner Pleasant and West Streets.* Keys—C. G. Parker's store; Gerry Hutchinson's.

No. 31. *Cor. Main and Richard Streets, opposite Beaver.* Keys—E. T. Marble's, Beaver Street; H. J. Howland's, 973 Main Street.

No. 32. *Cor. Exchange and Union Streets.* Keys—D. W. Pond's shop; Merrifield's Engine room.

No. 34. *Green Street.* Fox's Mill. Keys—At the Counting Room; Crompton's Loom Works.

No. 35. *Corner of Winthrop and Vernon Streets.* Keys—Thos. Doon's; and O. L. Hatch's residence.

No. 36. *Corner Front and Spring Streets.* Keys—J. G. Lawton's; Geo. Sessions'.

No. 37. *Cor. Highland and North Ashland Streets.* Key—Charles E. Keyes', corner North Ashland and Highland Streets.

No. 41. *Corner Thomas and Summer Streets.* Keys—Dutton & Austin's store; W. F. Wheeler's Counting Room.

No. 42. *Cor. Cambridge and Southbridge Streets.* Keys—E. J. Forbush's, 504 Southbridge Street; Crompton's Carpet Mill.

No. 43. *Quinsigamond Wire Mill.* Key—At Counting Room.

No. 45. *Corner Shrewsbury and Cross Streets.* Key—Lawrence Henry's store.

No. 46. *Grafton Street.* Earle's Card Factory. Keys—Earle's Counting Room; Office, Rolling Mill; Washburn's Foundry.

No. 47. *Corner Belmont Street and Oak Avenue.* Key—H. Rice, corner Belmont and Liberty Streets.

No. 51. *Lincoln Square.* Salisbury Block. Keys—Harrington & Allen's store; Exchange Hotel.

No. 52. *Prescott Street.* A. P. Richardson's shop. Keys—At Counting Room; Warren Thread Co.'s Office; Ames Plow Co.'s Office.

No. 53. *Corner Providence and Harrison Streets.* Keys—S. A. Arnold's; James McFarland's.

No. 54. *Corner Austin and Newbury Streets.* Keys—S. N. Curtis' store; E. A. Morse's, 111 Austin Street; A. G. Walker's, 130 Austin Street.

No. 56. *Corner William and Chestnut Streets.* Keys—Benj. Walker's; Gen. A. B. R. Sprague's.

No. 57. *Hermon Street.* Taylor & Farley's shop. Keys—Taylor & Farley's; J. S. Wheeler & Co.'s.

No. 61. *Gardner Street.* Tainter's shop. Keys—At Office; John Mahoney's store, Canterbury Street.

No. 62. *Corner Laurel and Edward Streets.* Keys—J. D. Baker's stable; Thomas Baird's.

No. 63. *Washington Square.* Weatherbee's store. Keys—Weatherbee's Drug Store; B. & A. R. R. Station.

No. 64. *Corner Grafton and Barclay Streets.* Keys—Smith & Crockett's store; Avery Davis', 171 Grafton Street.

No. 65. *Elm Street, opposite Linden.* Keys—P. C. Bacon's; Joseph Mason's residence.

No. 67. *Corner Pleasant and Mason Streets.* Keys—Benj. Eames' Store; Jalaam Gates' residence.

No. 71. *Corner Main and Central Streets.* Keys—Charles B. Fellman's; Augustus Marrs' store; Bay State House.

INSTRUCTIONS TO KEY-HOLDERS.

1. Alarms should be given from the box nearest the location of the fire.

2. Upon the discovery or *positive* information of a fire, you will unlock the box, pull down the slide or hook, *once* only, and let go. This gives the desired alarm all over the city, repeating itself four times.

3. Each box contains a small bell, which, if heard before you pull the hook, indicates that the alarm has been previously given from another box: in such cases *do not* pull the hook until you are sure the alarm has been completed.

4. Never signal for a fire seen at a distance; never touch the hook except to give an alarm of fire. Give an alarm for no cause other than actual fire. Be sure and *close the door* on leaving the box.

5. For a fire near box 4, the bells will be struck four times, two and one-half seconds apart; then, after a pause of twenty seconds, four times again, and so on. For a fire near box 45, the bells will give four strokes (for the tens), and after a pause of seven seconds, five strokes, to be repeated at intervals of twenty seconds.

6. Never pull the hook twice for the same fire; if a second alarm is necessary, an engineer will give it.

7. Never let the key go out of your possession unless called for by the Chief Engineer. If you change your residence or place of business where the key is kept, return it to this office.

OFFICE NO. 80 FRONT STREET. Office hours, from .9 to 10 A. M., from 2 to 3 P. M.

LOCATION OF HYDRANTS.

Hydrants have been added to the former number, making the total number in the city at this time 503; thus overcoming the greatest obstacle to efficiency in the efforts of the department to protect the property of our citizens from destruction by fire. The Board of Engineers desire to express their thanks to Mr. Frank E. Hall, Water Commissioner, for the valuable aid rendered at fires, and the careful attention given to the wants of this department.

Abbott st., north-west cor. Chandler st.
Agricultural st., south-west cor. Joe Bill Road.

Arch st., north-east cor. Orchard street.
Ash st., north-west cor. Summit street.
Assonet st., east side, front of No. 16, 100 feet south of Gold street.

Austin st., south side, opp. High street.
" " south-east cor. Irving street.
" " south-east cor. Oxford street.
" " north side, front of No. 88.
" " south side, front of No. 103.
" " south side, opp. Quincy street.
" " south-east cor. Newbury street.
" " south-west cor. Piedmont st.
" " opp. Queen street.
" " south side, opp. No. 172, west of Russell st.
" " cor. Bellevue street.

Barclay st., north-west cor. Harrison st.
Barclay street, north-west cor. Ætna st.
Beach street, west side, opp. Brown st.
Beacon street, south-east cor. Lagrange street, at steamer house.

Bacon street, north-east cor. Oread st.
Benefit street, north side, opp. Mount Pleasant street.

Benefit street, north-east cor. Beacon st.
Benefit court, in centre of court, at south end.

Bellevue street, between Austin and Pleasant streets.

Belmont st., south-west cor. Orchard st.
Belmont street, north-west cor. Oak av.

" " north side, opp. Adams st.
Blackstone st., north-east cor. Charles street.

Blackstone street, north-east cor. Howard street.

Blackstone street, north-east cor. Bridge street.

Bloomington road, in front of Washburn Iron Co.'s Rolling Mill.

Bloomington road, opp. south-east cor. B. & A. freight depot.

Bloomington road, west of Graton & Knight.

Blossom street, north side, front of No. 8.

Bluff street, north-west cor. Bellevue st.

Bowdoin st., north side, opp. Chestnut street.

Bowdoin street, south side, opp. No. 16.

" " south side, front of No. 23.

" " south-east corner North Ashland street.

Boynton street, south-west cor. of Joe Bill road.

Bridge street, south-east cor. Mechanic st.

Cambridge st., north side, opp. Chelsea street.

Canal street, south-west cor. Cherry st.

Carroll street, east side, opp. Arch street.

" " opp. Shelby st.

Castle street, south-east cor. Valley st.

Catharine street, north-west cor. Westminster street.

Catharine street, south-west corner Channing street.

Cedar street, north-west cor. Everett st.

" " north side, between Everett and Oak streets.

" " south-east corner Oak street.

Cedar street, south-east corner Fruit street.

- Central street, north side, south-east cor. Armsby's building.
- Central street, north side, south-east cor. Keyes' moulding shop.
- Chandler street, north-east cor. Irving st.
- " " north-east cor. Oxford street.
- " " north side, opp. Wellington street.
- " " north-east cor. Newbury st.
- " " south-east cor. Piedmont st.
- " " north-east cor. Queen. street.
- " " north-west cor. Mason street.
- " " north side, opp. King street.
- Channing street, west side, opp. Luther Ross' house.
- Charlotte st., north-east cor. Clifton st.
- Chatham st., south-west cor. Houchin av.
- " " south-west cor. Irving st.
- " " south-west cor. Oxford st.
- " " south-west cor. Crown st.
- " " south-east cor. Quincy st.
- Chelsea st., north-west cor. Crompton st.
- Chestnut st., north-east cor. Pearl street.
- " " east side, opp. Cedar street.
- " " south-east cor. Sudbury st.
- " " east side, opp. William st.
- Church st., south-west cor. Mechanic st.
- Clinton street, east side, opposite Park.
- Columbia st., south side, opp. Blake st.
- Congress street, north side, front of S. Bridges' lot, between Crown and Newbury streets.
- Coral st., north-west cor. Waverley street.
- " " north-east cor. Clarkson street.
- Crown st., south-west cor. Congress st.
- Cutler street, south-west cor. Ætna st.
- Dewey st., west side, front of chapel, opp. Austin street.
- Dix st., south-east cor. Wachusett street.
- Dix st., north-west cor. Goulding street.
- Eastern avenue, east side, opp. Shelby st.
- " " north-east cor. Farwell st.
- " " south-west cor. Belmont street.
- East Central street, south side, front of No. 66.
- East Central street, south side, front of No. 94.
- East Worcester street, north-east corner Larkin street.
- East Worcester street, north-east corner Cross street.
- East Worcester street, north-east corner Henry street.
- Edward st., north-west cor. Elliott street.
- " " south-west cor. Glen street.
- " " north-west cor. Newport st.
- " " north-west cor. Palmer st.
- Elizabeth st., west side, opp. Farwell st.
- " " south-west cor. Belmont st.
- Elliott street, north side, front of No. 17.
- Ellsworth st., north side, front of No. 24.
- Elm street, north side, front of Church of the Unity.
- " " north side, front of No. 25.
- " " north-west cor. Chestnut st.
- " " north side, opp. Linden st.
- " " north side, front of D. W. Lincoln's estate.
- " " north-west cor. Oak street.
- " " north-east cor. West street.
- " " north-east cor. Fruit street.
- " " north-west cor. Sever street.
- " " north side, 300 feet west from Sever street.
- " " south-west cor. Hudson st.
- Exchange street, north side, front of Music Hall.
- " " north side, opposite Cypress street.
- " " north-west cor. Union street.
- " " north side, opposite Blackstone street.
- Foster st., north-east cor. Waldo street.
- " " south-west cor. Cypress street.
- Fountain street, east side, between Arch and Belmont streets.
- Franklin st., south side, west of B. & A. railroad.
- " " north side, west of Canal.
- " " south-east cor. Milk street.
- Freeland st., north side, near south-east corner of No. 15.
- Front st., north side, front of Crompton's block, west of railroad track.
- Front st., north-west cor. Carlton street.
- " " north-west cor. Church street.
- " " north side, opp. Trumbull st.
- " " north side, opp. Bartlett pl.
- " " north side, opp. Vine street.
- " " north-west cor. Bridge street.
- " " north side, near south-east cor. stone block.
- " " north-west cor. Summer street.
- Fruit st., south-east cor. Cottage street.
- Garden st., north-east cor. Nashua street.
- " " north side, south-east from B., B. & G. freight house.
- Gardner st., south side, front of Tainter's mill.
- Gardner st., north-west cor. Canterbury street.
- Gates st., north side, 400 feet from Main street.
- Gold st., north side, opp. Summit street.
- Grafton st., south side, front of Bradley's car shop.
- Grafton st., south-west corner Franklin street.
- Grafton st., north side, opp. Coral street.
- " " north side, opp. Penn av.
- " " north side, opp. Mendon st.
- Grafton st., north-west cor. Wall street.

- Grand st., south-west cor. Hollis street.
 Green st., west side, opp. Franklin street.
 Green st., west side, front of Providence freight house.
 Green st., west side, opp. Goddard street.
 " " west side, opp. Winter street.
 " " south-west cor. Plymouth st.
 " " north-west corner Gold street.
 " " north-west corner Ash street.
 " " east side, south of Crompton's driveway.
 Green st., west side, front of Fox Mills.
 Grove st., north east cor. Concord street.
 " " north-east cor. Lexington st.
 " " east side, near south-west cor. of wire mill.
 " " east side, near entrance to Washburn & Moen's ship'ing room.
 Grove street, near centre of Washburn & Moen's wire mill.
 " " near north end of Washburn & Moen's wire mill.
 " " east side, north of entrance to cemetery.
 Hammond st., north side, front of No. 15.
 " " north-west cor. Beacon st.
 " " north side, opp. Canterbury street.
 Hamilton st., north-west corner of Orient street.
 Harrington ave., south-east corner Westminster street.
 Harrington ave., south side, corner Mt. Vernon street.
 Harrington avenue, south-east corner Windsor street.
 Harrison st., north-west cor. Coral street.
 " " north-west cor. Penn. ave.
 " " south east cor. Blake street.
 Harvard st., north-west cor. Sudbury st.
 " " west side, opposite Harvard street court.
 " " south-east cor. George st.
 " " south-west cor. Dix street.
 " " west side, opp. State street.
 Hermon street, north side, opp. Taylor & Farley's.
 Hermon st., north-west cor. Beacon st.
 " " south side, west of railroad, north-east from junction shop.
 High st., north-west cor. Chatham street.
 Highland st., north side, opp. Harvard street.
 Highland st., north side, opp. Lancaster street.
 Highland street, opp. Goulding street.
 " " corner Boynton street.
 Highland street, south-east corner North Ashland street.
 Highland st., north-west cor. West street.
 " " north side, opp. Sever st.
 " " north-west cor. Dover st.
 Home st., north side, opp. Wesby street.
 Houghton st., west side, between Grafton street and Union avenue.
 Hudson st., north-west corner Hudson street court.
 Jackson st., north-east cor. Harris street.
 " " north-east cor. Beacon st.
 " " south side, opp. south-west corner junction shop.
 Jefferson street, corner Columbia street.
 " " " Arlington street.
 John st., north side, at head of alley leading to Wachusett street.
 John st., north-east corner Wesby street.
 Kendall st., south side, opp. Auburn pl.
 " " north-west corner Oak ave.
 King st., north-east corner Queen street.
 " " south-east cor. Woodland street.
 " " west of Shepard street.
 Kingsbury st., north-west cor. Queen st.
 " " west side, opp. Shepard street.
 Lafayette street, corner Lodi street.
 " " " Grosvenor street.
 Lagrange street, north side, between Main and Beacon streets.
 Lake street., east side, opp. Baker street.
 " " south-east cor. Mill street.
 Lamartine st., south side, front of school house.
 Lamartine st., north side, opposite Langdon street.
 Lamartine st., north side, opp. Lodi st.
 " " north side, opp. Grosvenor street.
 Lamartine st., south side, opp. Sargent street.
 Larch st., north-west corner Russell st.
 Laurel st., north-east corner Hanover st.
 " " north-west cor. Carroll street.
 " " " " Edward st.
 " " south side, near Eastern ave.
 Ledge st., north east cor. Waverley st.
 Leicester st., east side, opp. Mill street.
 " " north side, 100 feet west from Lake street.
 Leicester st., front of Hunt's mill.
 " " at Darling's mill, in yard.
 " " " Wright Bottomly's mill, in yard, east of same.
 Leicester st., 3 at Ashworth & Jones' mill.
 Leicester street, 2 at James Smith's mill.
 " " corner of road leading to reservoir.
 Leicester street, front of W. T. Brown's.
 Liberty street, north-west corner Arch st.
 " " " " " Glen st.
 " " west side, opp. Newport street.
 Lincoln st., east side, opp. Worcester & Nashua depot.

- Lincoln st., north-east corner Linwood place.
 Lincoln st., north-east cor. Kendall street.
 " " east side, opp. Garden street.
 " " south-east cor. Harrington av.
 " " north-east cor. Forest ave.
 Linwood place, south side, front of S. J. Brimhall's residence.
 Lunelle st., north-west cor. Lafayette st.
 Lyon street, north-east corner Bates st.
 Main st., east side, corner Lincoln square, north of hay scales.
 Main st., north-east corner of court to Court Mills.
 Main street, east side, front of No. 57.
 " " north-east cor. Market st., front of Exchange Hotel.
 Main st., near north-east cor. School st.
 " " between School and Thomas streets, front of No. 147.
 Main st., east side, north of Thomas st.
 " " east side, front L. R. Hudson's.
 " " " " corner Layard place.
 " " south-east corner Central st.
 " " north-east corner Exchange st.
 " " front of north-west corner of Mechanics Hall.
 Main street, front of south-west corner Union block.
 Main st., north-east corner Foster street.
 " " east side, opposite Elm street.
 " " north-east cor. Mechanic street.
 " " east side, opp. Pleasant street.
 " " east side, opposite north-west corner of Old South Church.
 Main st., north-east corner Park street.
 " " east side, opp. Chatham street.
 " " north-east corner Allen court.
 " " front of south end of Scott's block.
 Main st., north-east corner Myrtle street.
 " " north-east cor. Madison street.
 " " east side, front of No. 674.
 " " north-east corner Charlton st.
 " " north-west cor. Wellington st.
 " " north-east cor. Hermon street.
 " " east side, opp. Piedmont st.
 " " north-east corner Benefit st.
 " " " " corner Allen street.
 " " " " corner Hammond st.
 " " east side, opp. Claremont st.
 " " " " corner Kilby street.
 " " " " opposite Downing st.
 " " " " Beaver st.
 " " north-east corner Tirrell street.
 Main st., east side, at north-east corner of L. Coes' estate.
 Main street, at Webster square.
 Manchester st., south side, opposite C. Baker & Co.'s lumber yard.
 Manchester st., south-west cor. Bridge st., at Russ & Eddy's shop.
 Maple st., west side, near corner Maple place.
 Mason st., west side, opp. school house.
 " " corner Austin street.
 May street, south side, front of No. 19.
 " " south-east cor. Woodland st.
 " " corner Kingsbury street.
 Maywood st., north side, west of Woodland street.
 Mechanic st., south side, front of Crompton's block.
 Mechanic street, north side, in depot platform.
 Mechanic st., south-west corner Carlton street.
 Mechanic st., south side, near steamer house.
 Mechanic st., south-west cor. Church st.
 " " " " Spring st.
 Mendon st., west side, opposite No. 13.
 Merrick st., south-west cor. Larch street.
 Mill st., east side, front of A. G. Coes' barn.
 " " east side, at Newton street.
 Millbury st., north-west corner of Laramie street.
 Millbury st., west side, opp. Foyle street.
 " " north-west corner Lafayette street.
 " " north-west cor. Ellsworth st.
 " " north-west cor. Sigel street.
 " " west side, opposite Worth st.
 Milton st., corner Edgeworth street.
 Mt. Pleasant street, opposite Allen street.
 Mulberry st., south-east corner Mulberry street court.
 " " west side, front of Lunatic Asylum.
 Myrtle street, north side, near south-east corner Stevens' block.
 " " north-west corner Portland street.
 Newbury st., south-east cor. Congress st.
 " " south-east corner Chatham street.
 Newton street, south-east corner Pleasant street.
 " " east side, front of No. 11, between Pleasant and Chandler streets.
 " " north-east corner Chandler street.
 " " north-east cor. Border st.
 Newton st., north-east corner May street.
 " " north-east corner Charlotte street.
 " " in Square front of L. Coes' shop and opp. Beaver st.
 " " east side, opp. Coes street.
 Norfolk st., north-east corner Hawkins st.
 " " south-east corner Ascension street.

- North street, north side, front of No. 45.
 " " north-west corner Milton st.
 North Ashland st., north east corner John street.
 " " " north-east cor. Home street.
 " " " north-east cor. Dix st.
 Orange st., east side, front of No. 28.
 " " north-east corner Plymouth st.
 " " north-east corner Madison st.
 Oread st., north side, at south west cor. Chas. Wood's estate.
 " " north side, east of Beacon st., front of No. 57.
 Orient st., north west cor. Chrome street.
 Park st., south side, front of No. 37.
 " " south-west cor. Salem street.
 " " south-west cor. Orange street.
 " " south side, front of Gates' block.
 Penn ave., north-west cor. Clarkson st.
 " " north-west cor. Aëna street.
 Piedmont street, east side, between Main and Chandler streets.
 " " north-west cor. Larch st.
 Pink street, west side, front of Nos. 16 and 18.
 Pleasant st., north side, front of Rogers' block.
 " " north side, near front of Dr. J. M. Rice's block.
 " " north side, opp. High street.
 " " north side, opp. Universalist church.
 " " north side, opp. Clinton st.
 " " north-west corner Linden st.
 " " north side, between Linden and Ashland streets, front of No. 107.
 " " north-west cor. Ashland st.
 " " north side, opp. Crown st.
 " " north-east cor. West street.
 " " north-east corner Fruit st.
 " " north-east cor. Sever street.
 " " north side, opp. Merrick st.
 " " north-west, corner Russell st.
 " " north side, opp. Bellevue st.
 " " north-east cor. Hudson st.
 " " north side, opp. Abbot st.
 Plymouth street, north side, opposite Assonet street.
 Pond st., north-west corner Beach street.
 " " north-west corner of right angle in Pond street.
 Portland st., east side, front of No. 28.
 " " north-east cor. Madison st.
 Prescott st., north-west cor. Concord st.
 " " north west cor. Lexington st.
 " " east side, opposite south end of Washburn and Moen's.
 " " east side, between Warren Thread Co.'s and Richardson's shop.
 Prescott st., west side, at corner Washburn and Moen's driveway, near bridge.
 " " north-east corner Prescott street place.
 " " north-east corner Redding court.
 " " south east corner North st.
 Prospect st., south side, opposite Hanover street.
 " " south side, opposite No. 33.
 " " south-west corner Mulberry street.
 Providence st., at junction of Providence and Water streets.
 " " west side, north-east cor. S. D. Harding's estate.
 " " north-west cor. Waverley street.
 " " north-west corner Harrison street.
 " " near north-west corner Pattison street.
 " " front of No. 104.
 " " north-west corner Winthrop street.
 " " south-west corner Union avenue.
 Queen st., west side, opp. Davis street.
 Reservoir street, north-west corner Elizabeth street.
 " " north-west cor. Eastern avenue.
 Richards st., west side, 900 feet from Main street.
 " " west side, 1,300 feet from Main st., opposite Cleveland's residence.
 Ripley street, south of J. H. Walker's.
 Salem st., west side, front of No. 23.
 " " west side, front of No. 39.
 " " north-west cor. Myrtle st.
 " " north-west cor. Madison st.
 " " front of City Stable.
 Salisbury street, north side, opp. Boynton street.
 " " north side, opp. West street.
 " " north side, north of Highland Military Academy.
 School street, south side, front of steamer No. 3 house.
 Shelby street, north side, front of No. 33.
 " " opposite Mulberry street.
 Shrewsbury st., north west cor. Mulberry street.
 " " north side, front of Dr. Brackett's.
 " " at junction of Shrewsbury and East Worcester streets.

Shrewsbury st., south-west corner Larkin street.

" " south-east corner Cross street.

" " south-west corner Lyon street.

Sigel street, north side, between Millbury and Lodi streets.

Sigourney street, corner Edgeworth.

Southbridge st., east side, at N. & W. R. R. crossing.

" " south-west cor. Madison street.

" " east side, front of No. 128.

" " south-west cor. of Salem street.

" " east side, between Salem and Hermon streets, front of No. 180.

" " east side, opp. Hermon street.

" " east side, opp. Junction foundry.

" " north-east cor. Lafayette street.

" " north-west corner Hammond street.

" " east side, north from No. 390.

" " east side, opp. Southgate street,

" " east side, front of No. 456.

" " north-east corner Washburn street.

" " north-east corner Colton street.

" " north-west corner Cambridge street.

Southgate street, south-west cor. Grand street.

" " west side, front of school house.

" " front of D. S. Goddard's shop.

" " south side of N. & W. R. R.

South Irving st., west side, opp. Lovell's court.

State street, south-west corner Main st.

Sudbury street, north-east cor. Eden st.

Summer street, east side, south of Belmont street.

" " east side, front of school house.

" " east side, front of Edw'd Earle's residence.

" " north-east cor. Arch st.

" " east side, opp. School st.

" " west side, opp. Laurel st.

" " south-east cor. Laurel st.

Summer street, south-east corner East Central street.

" " east side, opp. Exchange street.

" " east side, between Charles and Howard streets.

" " east side, between Howard and Bridge sts.

" " south-east corner Fulton street.

" " north-west corner Mechanic street.

Sycamore street, north-west cor. Beacon street.

Temple street, south side, front of No. 57.

" " south side, west of Church.

Thomas street, south side, front of No. 9.

" " north side, front of No. 58.

" " north-east cor of Union street.

" " north side, east of R. R.

" " north-east corner Summer street.

Tirrell street, north side, front of No. 11.

Trumbull street, west side, between Front and Park streets.

Union street, at south-west corner Lincoln square.

" " east side, opp. Court Mills.

" " north-west cor. School st.

" " south-west cor. Thomas st.

" " north-west cor. Central st.

" " south-west corner Exchange street.

" " west side, near centre of Merrifield's building.

" " north-west cor. Foster st.

" " west side, opposite Manchester street.

" " under Nashua R. R. bridge.

" " west side, opposite south-west cor. of Rice, Barton & Co.'s shop.

Vernon street, north-east corner Water street.

" " corner Winthrop street.

" " north-east corner Jefferson street.

" " north-east corner Pattison street.

" " north-east cor. Union ave.

Vine street, north-east cor. Cherry street.

" " north-west cor. Foundry st.

Wachusett st., between Dix and Highland streets.

Wall street, south-west cor. Suffolk st.

" " north-west cor. Norfolk st.

Walnut street, south east cor. Maple st.

Ward street, north-west cor. Foyle st.

" " north-west cor. Taylor st.

" " north-west cor. Richland st.

" " north-west cor. Endicott st.

- Washburn street, east side, front of No. 16.
- Washington street, east side, opposite Orange street school house.
- “ “ north-west cor. Plymouth street.
- “ “ south-west cor. Gold street.
- “ “ north-east cor. Spruce street.
- “ “ north-west corner Lafayette street.
- Water street, west side, opposite Ledge street.
- “ “ west side, near north end of stone ware manufactory.
- “ “ west side, opposite Harrison street.
- “ “ west side, near north-east cor. of Hamilton's tape factory.
- “ “ corner Green street.
- Webster street, west side, front of school house.
- “ “ opp. driveway between marble shop and Curtis' mill.
- “ “ west side, opposite Curtis ct., south end of mill.
- “ “ west side, opposite north-west cor. of cemetery.
- Wellington street, north-west cor. South Irving street.
- West street, east side, opposite Cottage street.
- “ “ north-east cor. Cedar street.
- “ “ west side, north of Technical school, front of No. 146.
- William street, north side, opp. Everett street.
- “ “ south side, opp. North Ashland street.
- “ “ north-east cor. West st.
- Winter street, north side, opp. Pond st.
- Woodland street, east side, north of Oberlin street.
- “ “ north-east cor. Loudon street.
- “ “ north-east corner Hawthorn street.
- Wyman street, east side, front of No. 13.
- Allen's Fire Arms Manufactory, in yard rear of shop.
- Ames Plow Co., Salisbury street, stand pipe and hose and Hall's sprinkler.
- Adriatic Mills, two hydrants, east of mill, with hose attached in yard.
- Adriatic Mills, two hydrants, in yard west of mill, with hose attached.
- “ “ two places in mill to attach hose.
- Bay State Shoe Co., Austin st., in yard, pipe and hose on each floor of shop.
- Baker's, Manchester street, pipe with hose attached in centre of building.
- B. & A. R. R. freight house, pipe with hose attached.
- Buttrick & Whipple, Main street, stand pipe and hose.
- Court Mills, corner Union street, one in court, south of mill.
- “ “ four inch, in building, with hose on each floor.
- Crompton's foundry, Mechanic street, hydrant with hose in foundry.
- Crompton's Loom Works, Green street, in yard, west of foundry.
- Coes' Wrench Shop, hydrant with hose attached at boiler house.
- Wm. Dickinson, in yard, hose in building.
- Edward Earle, in yard, south-west of house.
- Ethan Allen's Estate, Main street, in yard, north of house.
- Fox Mills, two hydrants, in yard, force pump pipe connected with city water pipe.
- C. L. Gorham & Co., Main street, stand pipe and hose.
- Gas Works, three hydrants in yard.
- Heald & Britton, hydrant and pipe in foundry with hose attached.
- A. H. Hammond, Claremont street, hose at east end of barn.
- Holy Cross College, hydrant in yard; also, one at barn, hose and stand pipe in building.
- Industrial School, in yard east of building.
- Junction Shop, four hydrants, east of building.
- “ “ five pipes, in building, with hose attached on each floor.
- Keyes' Planing Mill, pipe with hose attached on each floor.
- Merrifield's, hydrant with hose attached in engine room.
- “ Exchange street, pipe in centre of building with hose on each floor.
- “ Cypress street, pipe in centre of building, with hose on each floor.

Merrifield's, Foster street, pipe in west wing, with hose on each floor.

Mechanics Hall, pipe in south stairway, with hose attached, one nozzle above the roof.

New York Steam Engine Co., in yard south side of shop.

D. W. Pond, in yard north side of shop.

Providence Engine House, in yard north-east of house.

Rice, Barton & Co., pipe in building, with hose on each floor.

W. W. Rice, Franklin square, stand pipe and hose.

Russ & Eddy, Manchester street, stand pipe and hose.

State Lunatic Asylum, in yard near south end of building.

State Lunatic Asylum, in yard near north end of building.

D. Tainter, Gardner street, pipe in tower of mill, with hose on each floor.

Taylor's block, Main street, stand pipe and hose.

Union Water Meter Co., pipe on each floor, with hose attached.

Washburn & Moen Wire Works, hydrants with hose attached.

Washburn Iron Co., Rolling Mill, hydrant in mill.

Worcester Academy, Providence street, in yard south of building.

Wood, Light & Co., pipe on each floor, with hose attached.

J. H. Walker, Water street, pipe and hose.

Witherby, Rugg & Richardson, Salisbury street, have hose on each floor.

Worcester & Nashua R. R. freight house, two places with hose attached.

AN ORDINANCE

CONCERNING THE

FIRE DEPARTMENT OF THE CITY OF WORCESTER.

Be it ordained by the Mayor, Aldermen, and Common Council of the City of Worcester, in City Council assembled, as follows:

SEC. 1. The Fire Department of the City of Worcester shall consist of a Chief Engineer, four Assistant Engineers, and of as many engine men, hose men, hook and ladder men, and other persons, to be divided into companies, as the number of engines and the number and quantity of other fire apparatus in service belonging to the City, shall from time to time require.

SEC. 2. The Engineers shall, on or before the first Monday of January, in each year, organize themselves as a board of Engineers by choosing a Clerk by ballot. They shall, at such times as they may by their by-laws determine, hold such meetings as may be necessary for the prompt transaction of all business coming before them, and a majority of the whole Board shall be necessary to constitute a quorum. They may make such rules and orders for their government, as a Board of Engineers, as they may see fit, and make such rules and regulations in addition to this ordinance for the better government, discipline, and good order of the Department and for the extinguishment of fires, as they may from time to time think expedient, the same not being repugnant to the laws of the Commonwealth, or to any ordinance of the city, and being subject to the approval of the Mayor and Aldermen, and to amendment or repeal by said Engineers at any time, subject to such approval.

SEC. 3. It shall be the duty of said Engineers, whenever a fire shall break out in the City, immediately to repair to the place of such fire, and to carry with them a suitable badge of their office; to take proper measures that the several engines and other apparatus be arranged in the most advantageous situations, and duly worked for the effectual extinguishment of the fire; to require and compel assistance from all persons, as well as members of the department, in extinguishing the fire, removing the furniture, goods, or other merchandise from any building on fire, or in danger thereof, and to appoint guards to secure the same; and to suppress all tumults and disorders. It shall also be their duty to cause order to be preserved in going to or returning from fires, and at all times when companies attached to the department are on duty.

SEC. 4. Whenever it shall be adjudged, at any fire, by three or more of the Engineers, of whom the Chief, if he be present, shall be one, to be necessary,

in order to prevent the further spreading of the fire, to pull down or otherwise demolish any building, the same may be done.

SEC. 5. It shall be the duty of the Engineers to inquire for and examine into all shops and other places where shavings or other combustible materials May be collected and deposited, and at all times be vigilant in taking care of the removal of the same, whenever, in the opinion of any two of them, the same may be dangerous to the security of the city from fires, and to direct the tenant or occupant of said shops or other places, to remove the same; and in case such tenant or occupant shall neglect or refuse so to do, to cause the same to be removed at the expense of such tenant or occupant.

SEC. 6. It shall also be the duty of said Engineers to take cognizance of all buildings in the city in which steam engines are used, and of all buildings in the city in process of erection or alteration, and to make a record of such thereof as in their judgment may, from any cause, be dangerous, and report the same to the Mayor and Aldermen forthwith. It shall also be the duty of said Engineers to cause prosecutions to be instituted in all cases of violation of the laws in relation to the erection of wooden buildings, or of any other law or ordinance in relation to the Fire Department, and for the prevention of fire within the limits of the city.

SEC. 7. Engineers upon complaint to them, or upon their knowledge of any defective chimney or hearth, within the city of Worcester, shall cause the same to be examined, and shall order the same either to be repaired or taken down, as they shall deem expedient; and if the owner or owners of any such chimney or hearth shall wilfully neglect to repair or take down the same, after having been notified by the Clerk of the Board of Engineers, it shall be the duty of the Board of Engineers, and they shall have full authority to cause such defective chimney or hearth to be repaired or taken down, and the owner or owners of the same shall pay the whole expense of repairing or taking down such chimney or hearth.

SEC. 8. The Engineers, officers and members of the several companies regularly appointed, shall wear such caps, badges, or insignia of office, when on duty, as the Board of engineers may from time to time direct, and no others, to be furnished at the expense of the city; and no other person or persons shall wear the same at any time, except under such restrictions and regulations as the said Engineers may direct.

SEC. 9. Whenever any fire occurs out of the city it shall be the duty of only such and so many of said Engineers to repair thither as shall have been designated for such purpose by the chief Engineer.

SEC. 10. The Board of Engineers, notwithstanding the provisions herein contained, may with the approval of the Mayor, grant to any officer or member of the Fire Department, if they shall think it compatible with the interests of the Department, a vacation not exceeding two weeks in any one year, upon such terms as they shall think expedient. And the Mayor, with the advice and consent of the Board of Aldermen, may, if he sees fit, whenever any officer or member of the Fire Department shall not by reason of such vacation, or sickness, or otherwise, attend to his duties in the department, appoint a substitute to act in his place during his absence, and such substitute shall be entitled to the pay of the person absent while he shall thus act.

SEC. 11. The Chief Engineer shall have the sole command at fires, over all other Engineers, and all officers and members of the Fire Department, and all other persons who may be present at fires; and shall direct all proper measures for extinguishment of fires, protection of property, preservation of order and observance of laws, ordinances, and regulations respecting fires. And it shall be the duty of said Chief Engineer to examine into the condition of the engines and all other fire apparatus, and of the Engine and other houses, and the reservoirs belonging to the city, and used by the Fire Department, and of the companies attached to the said Department, as often as circumstances may render it expedient, or whenever directed so to do by the Mayor and Aldermen, or by the committee on the Fire Department, and annually to report the same to the City Council, and oftener if requested. Also to cause a full description of the same, together with the names, ages, and residence of the officers and members of the Department, to be published annually, in such a manner as the City Council shall direct; and whenever the engines or other fire apparatus, engine or other houses, used by the Department require alterations, additions, or repairs, the said Chief Engineer, under the direction of the Joint Standing Committee on the Fire Department, shall cause the same to be made. And it shall be, moreover, the duty of the Chief Engineer to place on file all returns of officers, members, and fire apparatus, made by the respective companies, as hereinafter prescribed, and all other communications relating to the affairs of the Fire Department; to keep, or cause to be kept, fair and exact rolls of the respective companies, specifying the time of admission and discharge of each member, and also a record of all accidents by fire, which may happen within the city, with the causes thereof, as well as can be ascertained, and the number and description of the buildings destroyed or injured, the amount of insurance upon the same, together with the names of the owners or occupants, and report the same once in each year, to the City Council. He shall have the superintendence and control of all the engine and other houses used for the purposes of the Fire Department, and of all the furniture and apparatus thereto belonging, and of the horses, engines and all other fire apparatus belonging to the City, and over all the officers and members of the several companies attached to the Fire Department. He shall be responsible for the discipline, good order, and proper conduct of the whole Department, both officers and men, and for the care of all houses, engines, hose carriages, hook and ladder carriages, furniture, and apparatus thereto belonging.

SEC. 12. The Chief Engineer shall have power to suspend any officer or member of the Department for insubordination or disorderly conduct, for such length of time as he may deem proper, *provided*, that such suspension shall be reported by him to the Mayor and Aldermen at their next meeting after said suspension, unless such officer or member shall have been previously reinstated by said Chief Engineer.

SEC. 13. All supplies for the use of the Department shall be drawn on requisition upon the Chief Engineer; and it is hereby made the duty of the Foreman of each and every company to see that all necessary supplies are kept constantly on hand, to secure the proper working of the apparatus in their charge, and all supplies shall be drawn by the Foreman of the several companies.

SEC. 14. It shall be the duty of the Chief Engineer or the Assistant Engineer in command, to order from the ground all fire associations or fire companies not belonging to the Fire Department. And no such fire association or fire company, or any member thereof, shall act in any fire in said city as a fire company or as a fireman. *Provided, however,* that the foregoing provision shall not apply to fire companies belonging to other Fire Departments.

SEC. 15. In the absence of the Chief, the Assistant Engineer next in rank shall act with full powers, and their seniority in rank, and all questions relative thereto, shall be determined by the Mayor and Aldermen.

SEC. 16. The Clerk of the Board of Engineers shall perform such duties as the Mayor and Aldermen or Chief Engineer may from time to time direct; and also such other duties as the Board of Engineers by their rules and orders may from time to time determine. He shall have the care and custody of all books, records, papers and documents belonging to the Board; and he shall deliver the same to his successor in office.

SEC. 17. As many engine, hose, and hook and ladder companies shall from time to time be formed by the Mayor and Aldermen as they shall deem expedient; and each company shall consist of as many officers and members as shall be thus appointed and duly qualified according to the provisions of this ordinance; and vacancies in the Department may be filled at any time by the Mayor and Aldermen; and each company shall meet for general business on the first Monday of each month.

SEC. 18. Every Company using a hand engine, shall have a first, second and third Foreman, and a Clerk; those using a hose carriage or hook and ladder carriage shall have a first and second Foreman, and a Clerk; those using a steamer shall have a first and second Foreman, Clerk, Engineer and an Assistant Engineer. These officers shall be chosen by ballot by their respective companies, together with such other officers as may be necessary, at meetings specially held for that purpose in the month of December, annually, and the Chief Engineer, or some member of the Board of Engineers, to be designated by the Chief Engineer, shall preside at all meetings for the election of officers.

SEC. 19. Every officer and every member of the Fire Department shall sign the following agreement, to be deposited with the Board of Engineers: "*I, A. B., having been appointed as a member of the Worcester Fire Department, do hereby agree to abide by all the ordinances of the City Council, and the rules and regulations of the Mayor and Aldermen and of the Board of Engineers relating thereto.*" And any officer or member who shall neglect or refuse to sign the same shall not be qualified as a member of the Department.

SEC. 20. Whenever any person shall have been elected to any office, as aforesaid, he shall perform all the duties thereof for the year for which he was chosen and until his successor is elected and qualified, unless discharged therefrom, either by death, resignation or otherwise.

SEC. 21. It shall be the duty of the foremen to see that the several engines and other apparatus intrusted to their care, and the several buildings in which the same may be deposited, and all things in or belonging to the same, are kept neat, clean, and in order for immediate use; to preserve order and discipline at all times in their respective companies and houses, and require and

enforce a strict compliance with the city ordinances, the rules and regulations of the Department, and the orders of the Engineers.

SEC. 22. The Clerks of the several companies, before entering upon their duties, shall be sworn to the faithful performance thereof. They shall make quarterly returns to the Chief Engineer of all absences of the members of their respective companies from fires, or fire alarms, or from meetings for the choice of officers, and, if it shall appear that any member has failed to perform his duties satisfactorily to the Board of Engineers, no compensation shall be allowed him for such length of time as he may have been delinquent; and if any Clerk shall make a false report, he shall be expelled from the Department, and any pay that may be due him at the time shall be forfeited to the city. They shall also keep or cause to be kept, by the Clerk of their respective companies, fair and exact rolls specifying the time of admission and discharge of each member, with their age and residence, and accounts of all the city property intrusted to the care of the several members, in a book provided for that purpose by the city, which rolls or record books shall always be subject to the order of the Board of Engineers, the Mayor and Aldermen, or the Committee on the Fire Department. They shall also make or cause to be made to the Chief Engineer, true and accurate returns of all the members and the apparatus intrusted to their care, whenever called upon so to do. They shall have the care and custody of all books, records, papers and documents belonging to the Company, and shall record all the doings of the Company in a book to be furnished by the city; and they shall deliver said books, records, papers and documents to their successors in office.

SEC. 23. For every absence or tardiness at any roll call, there shall be deducted from the pay of the absent or tardy officer or member the sum of twenty-five cents, and at an alarm of fire, one dollar, which amount so deducted shall be paid to meet the incidental expenses of the Company. And if any officer or member shall have been absent or tardy at more than one-third of the fires, or alarms of fire occurring during the year, if more than five, except in case of sickness, such absence or tardiness shall be considered good cause for his discharge from the Department.

SEC. 24. Any officer or member of the Fire Department who shall wilfully neglect or refuse to perform his duty, or shall be guilty of disorderly conduct or disobedience to his superiors in office, shall for such offence, besides being subjected to the penalty hereinafter provided, be dismissed from the Department; and any officer or member of the Fire Department may, at any time be removed or dismissed from the Department, or deposed from any office that he may hold therein by the Mayor.

SEC. 25. In all cases of removal from office, or from the Department by the Mayor, the name of the person removed, with a statement of the reasons therefor, shall be transmitted to the Board of Aldermen at their next regular meeting, and no officer who may have been dismissed or removed from the Fire Department, shall be reinstated therein, unless by a two-thirds vote of the Aldermen.

SEC. 26. It shall be the duty of the officers and members of the several engine, hose and hook and ladder companies, whenever a fire shall break out in the city, to repair forthwith to their respective engines, hose, hook and

ladder carriages, and other apparatus, and to convey them, in as orderly a manner as may be, to or near the place where the fire may be, and, in conformity with the direction of the Chief or other Engineers, to exert themselves in the most orderly manner possible, in working and managing the said engines, hose, and hooks and ladders, and other apparatus; and in performing any duty that they may be called on to do by any Engineer: and, upon permission of the Chief or other Engineers, shall, in an orderly and quiet manner, return the said apparatus to their respective places of deposit. Provided, in the absence of all the Engineers, such direction and permission may be given by their respective Foremen.

SEC. 27. No company shall draw water from the reservoirs, except in case of fire, unless by special permission of the Chief Engineer, nor shall any engine, hose, or hook and ladder be taken to a fire out of the city, without permission of an engineer; nor shall any apparatus of the Fire Department be taken from the city, other than to a fire, without permission from the Mayor and Aldermen.

SEC. 28. No person under the age of eighteen years shall be employed or act as a member of the Fire Department; nor shall any person be so employed or so act unless he is a citizen of the United States.

SEC. 29. There shall be paid to each member of the Department, such sum, in semi-annual payments, as the City Council may from time to time determine; and any member of the Fire Department who shall perform the duties for a less term than one year, shall be paid pro rata, for the number of months he may have been in service; but no compensation shall be allowed for a less term of service than three months.

SEC. 30. The members of the several companies shall not assemble in the houses intrusted to their care on the Sabbath, except for the purpose of taking the engine or apparatus, on an alarm of fire, and of returning the same to the house, and taking the necessary care of said apparatus after its return, and any member violating this regulation herein made, shall be liable to be discharged from the Department by the Mayor and Aldermen. This regulation shall not apply to the officers and stewards of the several companies.

SEC. 31. No person shall bring into, or suffer to remain in, any building occupied by any Company in the Fire Department, any cards, dice or other articles used for gaming, nor shall any intoxicating liquor be kept or used therein, and no person not a member of the Fire Department shall frequent the house of any fire company; nor shall any person under the age of eighteen years, run with any such company.

SEC. 32. No person shall insult, menace, hinder, obstruct, oppose or give an order to any Engineer or fireman while on duty, nor shall any person presume to act as a member of any company belonging to the Fire Department of the City of Worcester until he has been duly appointed and qualified.

SEC. 33. No fire engine, hook and ladder truck, or hose carriage shall, in going to or returning from any fire, or at any other time, be run, driven, wheeled, drawn or placed on any sidewalk, except by the special order of the Chief Engineer, or of an Assistant Engineer.

SEC. 34. In case of an alarm of fire the several bells of the city shall be rung or tolled and the whistles sounded under such rules and regulations as

the Board of Engineers shall from time to time prescribe, and no person shall knowingly give a false alarm of fire, or knowingly proclaim that any fire is extinguished or out when it is not.

SEC. 35. No person shall keep or suffer to be kept in any building or tenement occupied by him within the limits of said city any friction match, or matches, unless the same be kept inclosed and well secured, in a box or vessel of iron, or some other incombustible material.

SEC. 36. No person shall keep ashes in any vessel made of wood; nor shall any person set on fire any straw, shavings, or other combustible materials, in any street, lane, alley, or other place in said city, except between sunrise and sunset.

SEC. 37. No person shall carry fire in or through any street, highway, lane, alley, or public place in said city, except in some covered, secure vessel; nor shall any person have in his possession in any rope-walk, barn or stable in said city, any fire, lighted pipe or segar, nor lighted candle or lamp, except such candle or lamp is kept in a secure lantern.

SEC. 38. No person shall carry into, or use in any barn, stable, hay-loft, or other place in said city in which hay or straw is kept or used, any lighted candle, or lamp, not inclosed in a lantern, nor any lighted pipe or segar.

SEC. 39. No person shall leave any shavings, straw or other combustible matter, in any highway, street, lane, or other public place, or in any other situation in said city, exposed to fire.

SEC. 40. The tenant of each and every workshop in said city, shall, at least once in six days, cause all shavings in such shop to be removed therefrom to some suitable or safe place.

SEC. 41. The municipal year of the Fire Department shall begin on the first Monday of January annually at 6 o'clock P. M.

SEC. 42. Whoever violates any provision of this ordinance shall forfeit and pay to the use of the city of Worcester a sum not exceeding twenty dollars.

SEC. 43. The nineteenth chapter of the Laws and Ordinances of the City of Worcester is hereby repealed; but such repeal shall not affect any act done, or the tenure of office of any person holding office at the time it takes effect.

SEC. 44. This ordinance shall take effect from and after its passage.

FREE PUBLIC LIBRARY.

REPORTS

OF THE

DIRECTORS AND LIBRARIAN.

DIRECTORS IN 1876.

		TERM EXPIRES.
CHARLES O. THOMPSON,	CHARLES H. MORGAN,	Jan. 1, 1877
THOMAS L. NELSON,	THOMAS E. ST. JOHN,	" 1878
CHARLES H. DOE,	JOHN J. POWER,	" 1879
GEORGE E. FRANCIS,	EDWARD EARLE,	" 1880
PETER C. BACON,	EDWARD H. HALL,	" 1881
NATHANIEL PAINE,	J. EVARTS GREENE,	" 1882

ORGANIZATION FOR THE YEAR 1876.

PRESIDENT.
T. L. NELSON.

SECRETARY AND TREASURER.
NATHANIEL PAINE.

COMMITTEE ON THE LIBRARY.

C. O. THOMPSON, T. E. ST. JOHN, G. E. FRANCIS,
P. C. BACON, E. H. HALL.

COMMITTEE ON THE READING ROOM.

CHARLES H. DOE, J. EVARTS GREENE, EDWARD EARLE.

COMMITTEE ON THE BUILDING.

C. H. MORGAN, EDWARD EARLE, J. J. POWER.

COMMITTEE ON FINANCE.

N. PAINE, P. C. BACON, CHARLES H. DOE.

LIBRARIAN.

SAMUEL S. GREEN.

MISS SARAH F. EARLE, Assistant Librarian, Green Library.

MISS JESSIE E. TYLER, Assistant Librarian, Circulating Library.

DIRECTORS' REPORT.

To the Honorable Clark Jillson, Mayor, and the City Council of the City of Worcester:

THE Directors of the Free Public Library respectfully submit their Sixteenth Annual Report.

The Report of Mr. Samuel S. Green, the Librarian, and the reports of the several Standing Committees of the Board, herewith transmitted, contain full information relative to the condition of the Library at the present time, and its management during the year.

The additions to the Library the past year have been as follows: To the Green Library, by gift, 9 books and 2 pamphlets, by purchase from the Green Library Fund 443 books and 36 pamphlets; from other sources 26 books and 26 pamphlets; in all 522. To the Circulating and Intermediate Departments, by gift, 215 books and 299 pamphlets; volumes of magazines and newspapers from the Reading Room bound and placed in the Intermediate Department, 170; purchased for the Circulating and Intermediate Departments, from the City Appropriation, 2,657 books and 72 pamphlets; in all, 3,042 books and 371 pamphlets. The total increase in all the Departments has been 3,955.

The number of volumes in the Library is as follows:

Green Library,	17,407
Intermediate Department,	5,566
Circulating Department,	14,996
Total,	<hr/> 37,969

There has been a most gratifying increase in the use of the Library during the year. The number of books given out in the Circulating Department, has been 122,456, being an increase of 19,881 over the year 1874. The number of persons consulting the Green Reference Library has been 22,833, an increase over the previous year of 2,283. The Sunday use of the Library has also continued to increase. The whole number of persons visiting the Library on Sundays has been 10,142, making an average of 195 persons for each Sunday. The whole increase in the Sunday attendance has been 2,963, and in the average attendance 57, over the previous year.

The Reading Room has been open to the public on every day of the year. Full use of the Reference Department of the Green Library has been allowed every day in the year, except six legal holidays and Memorial Day, and on those days books from this department have been procurable for use in the lower reading room upon application to the assistant in attendance. The Circulating Department has been kept open 306 days and has been closed only on Sundays and holidays.

The losses of the Library during the year have been insignificant, not exceeding 13 volumes.

The Catalogue of the Green Library is now complete.

The Standing Committee on the Library for the last year has consisted of Rev. Wm. R. Huntington, D. D., Prof. C. O. Thompson, Nathaniel Paine, Esq., Rev. T. E. St. John, and Geo. E. Francis, M. D. To them and to the Librarian is committed the duty of preparing the list of books to be submitted to the Board for their approval before purchase, and this most important service has been performed by them with great faithfulness and vigilance.

The Report of the Committee on the Reading Room, C. H. Doe, Esq., Rev. J. J. Power, and Rev. E. H. Hall, exhibits the progress and condition of this most attractive and useful department.

The Report of Nathaniel Paine, Esq., the Treasurer of the

Reading Room Fund, shows that the amount of this fund is now \$10,650, invested as follows ;

City of Worcester Bonds,	\$5,000 00
United States Bonds,	5,650 00
	<hr/>
Total,	\$10,650 00

The amount of the revenue of this Department, and the manner in which it has been appropriated, appears in the Treasurer's Report.

The Report of the Committee on the Library Building, consisting of C. H. Morgan, Esq., Hon. Edward Earle, and Hon. P. C. Bacon, calls attention to the fact that more room is needed for all the departments, within easy reach of the attendants, and that this want can be supplied at a very moderate cost, by making available for this purpose, the unoccupied room in the French roof by means of a Water Pressure Elevator, which will give easy and rapid access to all parts of the building. The attention of the Honorable City Council is respectfully solicited to their recommendations.

The Report of the Committee on Finance, Nathaniel Paine, Esq., T. L. Nelson, and Hon. P. C. Bacon, exhibits in detail the manner in which the City appropriation has been expended. It also shows the condition of the Green Library Fund. The income derived from this fund for the year has been \$2,645.07,—one-fourth of which, \$661.27, has been added to the principal, as required by the will of Dr. Green. The balance, \$1,983.80, has been appropriated for the purchase of books for the Green Library. The fund now amounts to \$35,724.23, and is invested as follows :

Notes secured by mortgage,	\$24,548 50
Bank Stocks (par value),	6,700 00
Deposited in Savings Banks,	4,475 73
	<hr/>
Total,	\$35,724 23

For further information respecting this fund, and for the manner in which the City Appropriation has been expended, reference is made to the Report of the Committee.

The Report of our accomplished Librarian, Mr. Green, exhibits with great minuteness and detail, the condition of the Library, and the operations of its various departments. It is replete with information touching the characteristics of the library and of the additions which have been made to it during the year, both from the fund for which the city is indebted to the munificence of Dr. John Green, as well as from the liberal appropriations which the City Council have placed at the disposal of the Directors.

The Directors have taken great pains that the books added to the Library should be of the highest character, and adapted to the peculiar wants of a community such as ours.

T. L. NELSON,

President.

FREE PUBLIC LIBRARY,
January 31, 1876.

REPORT OF THE LIBRARIAN

OF THE

FREE PUBLIC LIBRARY.

*To Thomas L. Nelson, Esquire, President of the Board of
Directors of the Free Public Library.*

HEREWITH I present my fifth annual report as librarian. The most striking feature in the history of the library during the past year, as in the year before, has been the great increase in its use in all its departments. While dulness prevails everywhere around us, this institution has presented a scene of intense activity, and its resources have been taxed to the utmost to meet the regular demands of users.

With this single introductory remark I proceed to give the statistics which belong to my report, and to state what work has been done in the library during the last year.

NUMBER OF VOLUMES IN THE LIBRARY.

The following figures show the number of volumes in the different departments of the library, and the whole number of volumes belonging to it December 1, 1875 :

Green Library,	17,407
Intermediate Departments,	5,566
Circulating Department,	14,996
Total,	<hr/> 37,969

These figures have been obtained by adding to the results of what I regard as a careful count of the volumes contained in the library July 1, 1875, the number of volumes put into the library between that date and December 1, as shown by the entries in our accessions catalogues.

ADDITIONS

have been made to the library, as follows, during the past year,—that is, from December 1, 1874, to November 30, 1875:

	BOOKS.	PAMPHLETS AND PAPERS.
Gifts to the Green Library,	9	2
Purchases from Green Library Fund,	443	36
Additions to Green Library from other sources,	26	26
	<hr/> 478	<hr/> 64
 Gifts placed in the Intermediate and Circulating Departments,	 215	 299
 Volumes bound and placed in the Intermediate Department:—		
Magazines,	96	
Newspapers,	74	170
 Purchases for the Intermediate and Circulating Departments,	 2,657	 72
	<hr/> 3,042	<hr/> 371

It appears from this statement that a smaller number of books has been added to the library during the past year than in the one preceding. The explanation of this circumstance in the case of the Intermediate and Circulating departments is obvious. Less money was placed at our disposal during the last year than in the year before. Therefore fewer books were bought. A large number of unfilled orders are outstanding for books to be added to the Green library. When these come to hand, they will swell the number of additions to this department. In the year 1873-4, 586 volumes were placed in the Green library,

and 3,626 in the circulating and intermediate departments. During the year 1874-5, 478 and 3,042 books, respectively, were placed in these two divisions of the library.

A list of givers has been prepared, and will be found appended to this report. The United States government, through several of its departments, has given us 70 volumes and 22 pamphlets. Senator Washburn has sent us 32 volumes, and Honorable George F. Hoar, 19 volumes and 44 pamphlets. We are indebted to Professor Alexander Agassiz and the Museum of Comparative Zoology at Cambridge for 6 books and 48 pamphlets. This gift includes a set of the reports of the trustees of the museum, and of the bulletins issued by it, and such portions of the illustrated catalogue of the institution as we needed in completing our set. Especially valuable is the elaborate and profusely illustrated treatise of Professor A. Agassiz himself, entitled *Revision of the Echini*. The American Antiquarian Society, and Mr. Haven, its Librarian, deserve hearty thanks for their generous response to our application for assistance in perfecting our set of the society's Proceedings. We have received from them, in addition to volume 4 of the *Archæologia*, 22 numbers of the Proceedings. Many of these are very rare, some of them hardly procurable. Although charged to us on our exchange account, these rare publications are placed in the account at a price which is only nominal. Emory Banister, Esq., has given us a valuable volume of orations and addresses. Many of these are copies which were sent by the authors to the late Rev. Dr. Austin, and many, too, are of especial interest in this city, because they are productions of our own citizens, or were delivered in Worcester in times which we call olden. The State of Massachusetts has given us 20 volumes and 3 pamphlets; Miss Sarah F. Earle, 6 volumes and 30 pamphlets; and Miss Susan B. Anthony, 3 volumes. Drew, Allis & Co., have, as in previous years, made us a present of 3 directories. Hon. J. Hammond Trumbull has given us one of his valuable monographs on subjects connected with the North American Indians.

Some of our resident authors have kindly remembered us by

sending to the library copies of some of their works. Honorable Alexander H. Bullock has given us a copy of his much prized address, entitled *Intellectual Leadership Illustrated in American History*; and Honorable Stephen Salisbury two copies of his carefully prepared paper on Troy and Homer. Mr. Charles H. Doe has given us an autograph copy of Buffets; and Mr. E. B. Crane, a volume containing his account of the Genealogy of the Rawson Family. From Reverend Henry T. Cheever we have received eight volumes written by him several years ago. They are upon various subjects, but largely devoted to experiences and observations while traveling or residing away from home. We are indebted to our townsman, Hon. Phineas Ball, for a copy of reports made by him in regard to the Springfield Water Works, and to Honorable George F. Hoar for copies of speeches delivered by him in Congress. Mr. C. P. Morrison has presented us four pieces of music composed by him. Among former residents of Worcester who have remembered us during the past year by sending us results of their literary labors, are John K. Tiffany, Esq., of St. Louis, to whom we are indebted for a copy of his extensive bibliographical work called the *Philatelic Library*; Governor Daniel H. Chamberlain of South Carolina, who has sent us a copy of his oration delivered before the Yale Law School "On some of the relations and present duties of the legal profession to our public life and affairs;" Professor Pliny E. Chase, of Philadelphia; and Hamilton A. Hill, Esq., of Boston.

In the last two numbers of the *Proceedings of the Antiquarian Society*, which the Society gives us, I find papers or reports written by Samuel F. Haven, Esquire, and our former distinguished townsman, Judge Benjamin F. Thomas, besides the elaborate paper of Mr. Salisbury, acknowledged above.

In the last report it was stated that a valuable gift of books had been received from the Mayor, aldermen and citizens of Worcester, England. It appears now, that these books, although sent to us through the municipal government of Old Worcester, are really the gift of Alexander Clunes Sherriff, Esquire, Member of Parliament for that city. An acknowledgment of his gift,

you will remember, has been made to Mr Sherriff. The books have also been properly marked so as to show the giver.

No set of books has been *bought* during the past year which stands out conspicuous for its voluminousness or cost. All the books, however, which have been added to the library, are valuable and have been selected with great care. Many of the additions are copies of the choicest works in literature. In the departments of history, biography and travels, the most expensive and one of the most important purchases of the year is the extensive collection of old voyages and travels, issued by the Hakluyt Society of London. Fifty-two volumes have already been published in this serial. In the last report it was announced that we had procured a copy of Michelet's *Histoire de France* in 17 volumes. We have this year bought copies of the histories of France by Sismondi and Martin, the one in 31, and the other in 17 volumes. We have also bought Sismondi's great work on the Italian republics of the middle ages, in 10 volumes, and Napier's *Florentine History* in 6 volumes. A valuable addition is the collection made by Henry Ellis of *Original Letters* illustrative of English history. We have secured a fine copy of the three series of this work in 11 volumes. We have recently received from Germany, a copy of the original German edition of Schlieemann's work on the remains found at the reputed site of Troy. The text of this work is accompanied by a portfolio containing profuse photographic illustrations of the objects discovered. From Paris have come several of Brasseur de Bourbourg's works on the antiquities of America, and among them his elegant folio volume on the old monuments of Mexico. Fine illustrated editions of Froissart's and Monstrelet's *Chronicles*, each in 13 volumes, have been added to the library during the year. We have secured several of the works of George Catlin on the American Indians, including his portfolio of sketches, and have completed our set of Schoolcraft's *Indian Tribes of North America*. Monographs relating to the Concord fight and the battles of Lexington and Bunker Hill, and accounts of recent Centennial celebrations, have been carefully collected.

I cannot speak at further length of the additions to the depart-

ments of history, biography and travels, and will only append the following list of some of them :

Letters and Life of Lord Bacon, by James Spedding ; Bancroft's Native Races of the Pacific States ; William Robertson's works, in 12 volumes ; a series of choice autobiographies in 33 volumes ; Jomini's scarce life of Napoleon ; the new edition of Smiles's Lives of the Engineers ; the volumes issued of the Comte de Paris's history of the civil war in America, both in French and in English ; a duplicate copy of Knight's History of England, 10 volumes ; George Sand's *Histoire de ma vie*, 10 volumes ; Elliot's Debates on the Federal Constitution, 5 volumes ; Theiner's *Acta Genuina SS. Oecumenici Concilii Tridentini* ; a set of Macmillan's Statesman's Year Book ; the two series of French's Historical Collections of Florida and Louisiana ; Lives of Count Cavour and the Mexican Emperor, Maximilian ; Koldewey's German Arctic Expedition ; Asher and Adams's Atlas and Gazetteer of the United States ; the Harvard Book, 2 vols. ; Sanderson's Biography of the Signers of the Declaration of Independence ; Gray's Atlas of the United States, &c. ; Memoirs of Bartholomew Fair, by Henry Morley ; the volumes of the new edition of Prescott's works ; the parts of Smith's Historical Atlas of Ancient Geography that have appeared during the year ; Bertall's Communists of Paris, 1871 ; Smith's Vagabondiana ; Black's Life of Michael Angelo ; Schmid and Stieler's Bavarian Highlands and the Salzkammergut ; Marcoy's Travels in South America ; and George Smith's Assyrian discoveries.

Numerous additions have been made during the past year to the departments which may be grouped under the general heads of the Natural Sciences and the Industrial Arts.

Volumes of Specifications and Drawings of Patents have been sent to us as soon as issued, and the volumes of the General subject matter index of Patents (1790–1873), were promptly procured as they came from the press. It was thought wise to secure also a duplicate set of the Patent Office Reports for the years 1847–1871, and this series has been bought.

A valuable addition to the collection of works placed in the

library with the purpose of aiding the industries of the city, are the volumes of *Le Garde-Meuble*, issued since the beginning of the year 1860. This work is composed of colored plates giving representations of pieces of furniture and of hangings, and is of interest, not only to cabinet makers and upholsterers, but to all of the numerous class of persons who are aiming to furnish their homes tastefully. Among other important and useful books belonging to the departments now under consideration, and which have been added since the last report was written, are the following :

B. F. Isherwood's *Experimental Researches in Steam Engineering* ; Weissenborn's *American Locomotive Engineering* ; the introductory volume of the new edition of *Percy's Metallurgy* ; the volumes that have been issued of *Knight's Mechanical Dictionary* ; *Senefelder's Complete Course of Lithography* ; *Public Health reports and papers* ; *Weinhold's Introduction to Experimental Physics* ; *Beale's How to work with the Microscope* ; *Griffith and Henfrey's Micrographic Dictionary* ; *Wilson and Bonaparte's American Ornithology*, in five volumes, quarto ; two copies of *Emerson's* new edition of his *Report on the trees and shrubs growing naturally in the forests of Massachusetts*, one of the copies with the plates colored ; and *Scammon's Marine Mammals of the Northwestern Coast of North America*. We have also secured during the year, a set of the *Transactions of the Society of Engineers*, which has its headquarters in London.

The most costly addition to the Department of the Fine Arts, is probably the *Musée Royal*, in two folio volumes. This work, it will be remembered, is supplementary to the *Musée Français*, an elegant reproduction in engraving of the finest works of art collected in the Louvre gallery in the time of Napoleon the first. The *Musée Français* has been of great service to persons interested in the study of painting, sculpture and engraving, and has been much used by students. These supplementary volumes will undoubtedly prove as useful and improving as those of the main work. We have procured copies of *Meyrick's Ancient Armour*, in 3 volumes ; of *Flaxman's Compositions from the divine poem of*

Dante ; and of Frederick Overbeck's Illustrations of the Gospels.

It is proper to remark in this connection, that there is no extravagance in the purchase, in times of distress, of expensive works, for this or other departments ; as we have a special fund left us by the founder of the reference department for this very purpose, and are careful not to buy costly books with money appropriated by the city, excepting after mature deliberation, and in such cases as seem to be fully warranted by the demand for the purchase. Few persons, too, are aware what an interest there is in this community in the practice of designing, drawing and painting. This interest has been fostered by the evening schools in drawing established by the city and the Worcester County Mechanics Association. It is due largely, too, to private instruction sought and obtained by many of our citizens here and in other cities, at home and abroad. Now, the library recognizes the fact that it is not an art gallery as well as a library ; but finds that, while keeping strictly within its province, and buying only books and such pictorial representations as are needed for their illustration, it can still do much to gratify and encourage and elevate the wholesome taste for art studies by supplying examples of fine work, and treatises too costly for the average buyer of books, giving practical directions in the different departments of art. It would be necessary in such a library as ours to buy such books as the Musée Royal and Overbeck's Illustrations. It is gratifying to find that in adding them to the library, we do something, if but little, to supply to students the advantages of an art gallery. Among works added with the design of giving technical instruction, are Hulme's series of sketches from nature, of plant form, and other productions of the same author ; Penley's large work on the English school of painting in water colors ; André's Draughtsman's Handbook of Plain and Map Drawing, and Burnet's Treatise on Painting.

The only other works whose titles can be mentioned here are Passavant's Life of Raphael of Urbino ; Street's Brick and Marble in the Middle Ages ; a Schiller Gallery from the original designs of Kaulbach and others ; a copy of the new edition of Kugler's Handbook of the German, Flemish and Dutch Schools

of Painting; Lee's Roman Imperial Profiles; Jerdan's National Portrait Gallery; Houbracken's Heads of Illustrious Persons of Great Britain; and Gruner's Terre-Cotta Architecture of North Italy (12th and 13th centuries).

Many valuable additions have been made during the past year to the department of general literature. We have secured a fine copy of Scott's edition of Dryden's works, in 18 volumes; one of the scarce work of Lord Mahon, containing the letters and works of Philip Dormer Stanhope, Earl of Chesterfield, 5 volumes; and Chalmers's English Poets, in 21 volumes. We have also bought Thomas Hood's Works, in 10 volumes; La Rochefoucauld's Oeuvres; and a copy of a fine library edition of La Fontaine's Oeuvres, in 5 volumes, and such books as a facsimile reproduction of the first edition of Pilgrim's Progress; Samuel Lover's Tales and Legends, in 3 volumes, and Sir John Suckling's Poems, Plays, &c.

In the department of classical literature, we have procured Bosch's Greek anthology, with the Latin version of Grotius in 6 volumes, and a more recent Greek anthology, entitled *Epigrammatum Anthologia Palantina*, in 2 volumes; the scarce first volume of Worsley's translation of the *Odyssey* of Homer; the very scarce work of Gladstone, *Studies on Homer and the Homeric Age*, in three volumes; and the *Corpus Inscriptionum Latinarum*, issued by the Berlin Academy.

Of humorous literature we have bought such works as John Lecch's *Pictures of Life and Character*, and a fac-simile copy of the first edition of Joe Miller's *Jests*.

Considerable additions of dramatic literature have been made to the library. Of these, it is enough to mention Shakespeare's Works, edited by William G. Clark and John Glover, in 9 volumes, which it will be remembered is the scarce Cambridge edition of the great poet; Marlowe's, Chapman's and Dekker's *Dramatic Works*; volumes of Scribe's plays in French, and Hazlitt's new edition of Dodsley's *Collection of Old English Plays*.

In the department of philology we have bought works of which the following must serve as specimens:

Latham's *Elements of Comparative Philology*; Maetzner's

English Grammar, in 3 volumes; Barretti's Italian Dictionary; a new volume of Ellis's Early English Pronunciation; Müller's Sanscrit Grammar for beginners; Bescherelle's Grammaire Nationale; Sanders's Wörterbuch der Deutscher Sprache, 3 volumes; and Du Cange's great work, the Glossarium mediae et infimae Latinitatis, in 7 volumes.

Among works on the subject of education procured during the year which this report covers, is parliamentary matter embracing the work done by the Universities Commission, in 3 volumes, and that done by the Schools Inquiry Commission, in 21 volumes.

The most costly work added to the department of bibliography is Kayser's Bücher Lexicon, in 19 volumes.

The volumes of the American Cyclopedia, of Johnson's new Universal Cyclopedia, and of the Encyclopædia Britannica, issued during the year, have been purchased, and placed on shelves of the library. The official reports of the Vienna Exhibition, also the reports issued by the British government, and those of the state of Massachusetts, on the same subject, have been received, and placed in the library. Among other purchases may be mentioned Descarte's Oeuvres, 11 volumes; H. H. Wilson's works on Indian religions, in several volumes; Select Tracts on Paper Currency; Early Tracts on Commerce; May's Treatise on the Law, Privileges, &c., of Parliament; the Public Laws of the Confederate States of America, and De Tocqueville's *De la Démocratie en Amérique*.

In conclusion, it should be said that the department of theology has not been neglected, but that large additions of books, new and old, have been made to it. Among these are the second volume of the latest edition of Tischendorf's *Novum Testamentum Graece*; a good copy of the famous Tracts for the Times; De Wette's *Die Heilige Schrift des Alten und Neuen Testaments*, and Porter's *Textual Criticism*; commentaries by Gill, Lightfoot, Lange, Delitzsch, Meyer and others; the sermons of Barrow and South; the works of Andrewes and Doddridge, and portions of the works of J. H. Newman and St. Augustine.

It is undoubtedly tedious to read or listen to the reading of such long lists of books as have just been given. It has been

thought wise, however, to prepare them, as has been stated in previous reports, so that citizens may obtain some idea of the character of a portion at least of the additions made to the library, and that we ourselves, in taking a bird's-eye view of the purchases of the year, may be able to judge, in a measure, of the wisdom of the expenditures we are making of the money put at our disposal.

USE OF THE LIBRARY.

During the year covered by the last report, the number of books given out in the circulating department rose to 102,575. This was an increase of 35,720 over the number given out in the previous year. It was thought by some of the friends of the library, that this increase was wholly exceptional, and that the circulation would fall off during the past year. Instead of doing so, however, it has increased nearly 20,000. It should be stated, moreover, that in effecting this increase in the use of the library during the last two years, great care has been taken not to lower in the least the high standard which the library has always followed in the choice of books. It should be stated, also, that no change has been made in the rule which permits users of the library to take out only one volume at a time, and but two books in the course of a week. Exceptions to this rule are seldom made, and generally only to students, and by the chief officer of the library. The number of books given out during the past year in the circulating department is 122,459. As stated above, the number given out in the year previous is 102,575. The books given out during the year just closed were distributed among the several months as follows:—

December, 1874,	10,410	June,	8,354
January, 1875,	11,795	July,	8,465
February,	11,474	August,	8,005
March,	13,378	September,	8,668
April,	11,526	October,	9,609
May,	9,807	November,	10,968
In all numbering			122,459

The circulating department has been kept open 306 days during the year. That is to say, it has only been closed on six legal holidays, one of these, the 17th of June, which, it will be remembered, was made a legal holiday for the single year 1874, Memorial day, and the fifty-two Sundays of the year. The average daily issue of books has been 400, against 334 of the previous year. During the months of June, July and August this daily issue was 322, against 272 the year before. During the months of January, February and March, the number of books given out daily was, in the average, 482, against 404, the record in the last report. The largest number of books issued in any one day is 939, the number given out February 13. The largest number of the year before was 731. This number was given out January 24. The smallest number of books given out in one day is 172, which number is the record of delivery for June 24. Only on three days during the year has a smaller number than 200 books been given out. The number of persons with whom we have opened new accounts during the past year is 2,580. We have no figures with which properly to compare this number in the previous year; for the call upon users of the library in the middle of 1873 to take out new cards had been but partially answered at the beginning of the year 1873-4.

Full use of the reference department, or Green Library, has been allowed every day in the year, excepting the six legal holidays and Memorial day. On these days, also, books from this department have been procurable for use in the lower reading room, upon application to the assistant in attendance there. In the Green library room it appears that 22,833 persons have had books given them, or have helped themselves to books to be used in answering their inquiries, or to give them enjoyment. That is to say, 75 persons, on an average, have been assisted to information or put in the way of enjoyment, or have helped themselves to information or derived enjoyment from the use of books within the library building every day of the 306 secular days during which the library has been freely accessible through the year. 20,550 persons were reported as having received benefit or pleasure from this department during the previous library

year. It will be remembered that in this account no note is made of the use of periodicals or papers in either of the reading-rooms. It will be seen from the statement, that the use of the library for the purposes of reference has largely increased during the year. The figures representing the number of persons who have used bound volumes, or have been referred to sources of information in the reference library during the five years covered by my reports, are, in the order of the years, 7,321, 12,408, 15,672, 20,550, 22,833. This is a gratifying exhibit, and shows that the policy of liberal expenditure for books and in attracting curious persons to the library, and affording aid to unpractised students, young and old, has borne a rich fruitage.

The Sunday use of the reading rooms has continued to increase during the past year. The whole number of persons who have visited them during the hours they have been open, namely, from 2 to 9 P. M., is 10,142. Of this number, 4,490 persons have used the upper room, and 5,652 the lower. The number of persons who used the reading-rooms on Sundays in the year 1872-3, for one Sunday less than the whole year, and yet for 52 Sundays, is 5,706; and for the year 1873-4 is 7,179. Thus, during the last year, 195 persons, on an average, have read in one or the other of the rooms every Sunday. The average attendance every Sunday in 1872-3 was 110, and in 1873-4, 138. The Sunday showing the largest attendance in the year just closed is January 31, when 333 persons used the two rooms—148 the upper, 185 the lower. It is a fact that more persons used the lower room, which contains newspapers the past year, than used the upper; whereas, in both previous years that the reading-rooms have been open Sundays, fewer persons have *appeared* to use the lower room than the upper. The change, however, is largely, if not wholly, in appearance, I think. It is only during the year just ended that an attendant has been kept in the lower room for anything more than an inconsiderable portion of the day, Sundays, and we were careful, in *estimating* the number of persons who used the room, not to exceed the actual number. It now seems certain that, in our anxiety not to exaggerate the results of the experiment of Sunday use, we made the number of

users of the lower room too small the first two years. The whole number of persons supplied with books for reading or study, upon application to the officers of the library during the year, is 2,001, against 1,678 in the previous year, and 1,143 in 1872-3. This is an average of $38\frac{1}{2}$ persons a Sunday. The average number of persons supplied the year before, is 32 a Sunday, and in 1872-3, 22. Of course, it is understood that the reading furnished upon application by the officers of the library, is additional to that which readers help themselves to, from encyclopædias, dictionaries, papers, reviews and magazines.

The following remarks, made in the last report, apply equally to the year just closed :—

“The great mass of readers last year, as the year before, have sought reading of the lighter kinds, but considerable solid work has been engaged in every Sunday. Recognizing the fact that this is the people’s library, we have welcomed heartily all citizens, and aimed to satisfy the humblest tastes, when wholesome.”

LOSSES OF THE LIBRARY.

Our accounts indicate that only six books have been lost during the year, and not paid for by the losers. While the loss has been so insignificant, the circulation has been 122,459 volumes. But the accounts of a library do not represent its losses with perfect exactness. An annual examination of a library exhibits further losses. The annual examination of the circulating department for the past year was made in the Fall. This revealed the fact that seven books besides the six mentioned above are missing. It would seem to the first thought that the whereabouts of every book in the circulating department should be apparent with the aid of our accounts. Thus, every volume belonging to the library, at the beginning of the year, if not on one of the shelves, should, it would seem, be found charged to some user, as at the bindery, or as having been destroyed during the year because worn out. But in practise it is found, in all libraries of any size, that a few volumes disappear every year unaccounted for. This discrepancy is partly to be accounted for by slight inaccuracies in keeping the accounts. Of the seven books found

unaccounted for on the examination of the library, it is probable that two or three will appear in their places during the year. It may be said in regard to the thirteen books which are missing, that they are all of little intrinsic or money value, or are such as can be readily replaced. It should be remembered, that in a city like ours, there is a considerable floating population during seasons of depression in business, and that this circumstance makes it hard to keep sight of all our books and prevent losses to the library.

CATALOGUES.

It has long been my wish to introduce improvements into the card catalogue of the Green Library and the intermediate departments. It has not seemed feasible, however to proceed in the matter until the past year. Towards the middle of the year, we took the matter into careful consideration; and, after collecting the results of experience in cataloguing from some of the best cataloguers, gave much thought to the elaboration of a plan adapted to our uses. As a result of our efforts, we hope to have here a catalogue which will embody many of the features of the best catalogues now in use.

We owe much to C. A. Cutter, Esq., Librarian of the Boston Athenæum, for aid in perfecting our plan. I wish you had been as cognizant as I have been, of Mr. Cutter's sympathy and courtesy in affording us assistance. I should like to have you share with me the gratitude which I feel for the readiness with which aid has been given us, whenever asked. His services to us have been of great value.

Thanks are also due to Mr. Whitney, the Assistant Superintendent and head of the Cataloguing Department of the Boston Public Library, for advice and information.

The plan was decided upon before July 1, and all the books added to the Green Library and the intermediate departments since that date, have been catalogued according to this plan. It is unnecessary to describe the details of the new system. The

catalogue can be examined and studied by any person interested in the construction of catalogues. It is well, however, to state here, that a marked feature of the plan is to make numerous subject entries. Thorough cataloguing requires a great deal of time. In order to obtain time for work in this department I have discontinued some items of work in other departments, which can be given up for the present without injury to the library, and have made some rearrangement of the duties of my assistants and myself.

We have just had a case of drawers made and fitted up with various appliances to hold the new card catalogue.

It is proper to mention under the head of catalogues, that two lists of additions to the circulating department have been issued during the year.

ACCOUNT.

SAMUEL S. GREEN, Librarian, in account with the Directors of the FREE PUBLIC LIBRARY, for the year beginning December 1, 1874, and ending November 30, 1875.

DR.

To Balance, December 1, 1874,	\$127 43
“ Fines collected during the year,	439 25
“ Amount received from sale of Catalogues during the year,	150 94
“ Rent,	60 00
“ Money received for cataloguing,	66 66
“ Sundry receipts,	19 79
	<hr/>
	\$864 07

CR.

By Library Service,	\$804 45
“ Balance to new account,	59 62
	<hr/>
	\$864 07

SAMUEL S. GREEN.

Dec. 23, 1875. The above account of the Librarian has been examined by me and found correct.

NATH'L PAINE,
Chairman Finance Committee.

BUILDING.

We are in pressing need of additional room in which to store books.

Plans for utilizing unused space in the upper portions of the library building, and in the basement, have been presented in the reports of the Building Committee for the last year, and the year just closed.

The plans there made seem to me to have been wisely formed, and I earnestly hope that the City Government will see its way clear to adopt them, and provide, at once, room for the natural growth of the library.

Too much delay in making necessary improvements would put us to serious inconvenience, and interfere materially with the proper discharge of our functions as a library.

CENTENNIAL NOTE.

In an appendix, a few pages of printed matter will be found, which have been prepared by your direction for use at the Centennial Exhibition, to be held in Philadelphia the coming Spring. These record certain facts in the history of the library, and indicate what we judge to be its distinguishing features.

CONCLUSION.

In conclusion, I wish to say a word in regard to economy. This has been our watchword during the past year. Its spirit has animated us, also, in laying out the work to be done here the coming year, and in making calculations in regard to the amount of money which we must have to carry out our plans. But there must be a limit to the reduction which can be made in our expenditures, while the use of the library is increasing at the rate shown in the present and last reports. During the past year we have given out 55,604 more books in the circulating library than were given out two years since, and work has also increased immensely during these two years, in the reference department, and in the reading rooms.

Think for a minute what it means to add to our circulation 55,604 volumes. It means that 182 more volumes, on an average, must be selected and charged, must be received back into the library and discharged, every day the library is open. It means a great wear and tear of the books, and the expenditure of much time in repairing and covering them. The increase in the use of the other departments calls for greater vigilance on the part of officers, and for a large expenditure of time in waiting on persons desiring information. Such an increase in the use of the library makes it necessary to add large numbers of books, and to spend money in replacing the best of those which are worn out. It is gratifying, is it not, to find that citizens are employing their leisure to a larger and larger extent in the use of good books? Should not this disposition be encouraged?

Rigid economy should be demanded in the administration of the affairs of the library. Still the aim should be to supply all legitimate wants. There must be rigid economy in expenditures, but the interest felt in the institution must be retained and increased, and economy must be limited, when it ceases to be true economy, and interferes seriously with the satisfactory administration of so beneficent an institution as a public library. Bear this in mind, also. An institution such as ours can better be curtailed in its resources in seasons of prosperity, than at the time when citizens most need it, in periods of depression in business. These remarks are not made to induce increased expenditure. We must spend as little as possible while taxes are burdensome. It has been my wish simply to show that very serious results may flow from too great reduction in outlay, and the adoption of a penurious policy.

Respectfully submitted.

SAMUEL S. GREEN,

Librarian.

APPENDIX NO. 1.

LIST OF GIVERS.

	Books.	Pamphlets.		Books.	Pamphlets.
Alexander Agassiz,	6	48	Wm. R. Huntington,	1	5
Edward G. Allen,	1		<i>Libraries :</i>		
James A. Ambler & Co.,	1		Astor Library,		2
American Antiquarian Society,	1		Bigelow Free Public Library,	1	
American Institute of Mining			Boston Public Library,		9
Engineers,	1		Chicago Public Library,		1
Amherst College,	1		Chicopee Town Library,	1	
Susan B. Anthony,	3		City Library, Lowell, Mass.,		3
William H. Baldwin,	3		City Library, Manchester, N. H.		2
Phineas Ball,	1		City Library Association,		
Emory Banister,	1		Springfield,		1
Charles H. Birbeck,	1		East St. Louis Public Library,		1
Boston Y. M. C. Union,	1		Exeter Town Library,		1
Bowdoin College,	2		Free Public Library, Concord,	1	
Brown University,	1		“ “ “ Lawrence,		3
Alexander H. Bullock,	1		“ “ “ New Bedford,		1
P. A. Chadbourne,	5		Lancaster Town Library,		1
Daniel H. Chamberlain,	1		Library of Congress,	1	
Talbot W. Chambers,	1		Mass. State Library,		1
Charles A. Chase,	2		Mercantile Library Association,		2
Pliny E. Chase,	1		N. Y.,		
Henry T. Cheever,	8		Mercantile Library Association,		
E. S. Chesbrough,	1		San Francisco,		2
Chipman, Hosmer & Co.,	1		Mercantile Library Company,		
Cobden Club,	1	3	Philadelphia,		2
Jeremiah Colburn,	1		Newton Free Library,		1
Columbia College,	1		New York State Library,	1	
Cornell University,	2		Northboro' Free Library,		1
E. B. Crane,	1		Providence Athenæum,		1
P. Cudmore,	1		Public Library, Fall River,	1	2
M. V. Dahlgren,	1		“ “ Taunton,		1
Dartmouth College,	1		“ “ Waltham,		1
G. Deuerlich,	1		Warren County Library,		
Julius Dexter,	1		Monmouth, Illinois,		1
Charles H. Doe,	1		Watertown Free Public Library,		1
Drew, Allis & Co.,	3		Woburn Town Library,		1
Edward Earle,		2	F. McCrelish & Co.,		1
Pliny Earle,		1	Geo. E. McNeill,		1
Sarah F. Earle,	6	30	Henry A. Marsh,		1
John Eaton, Jr.,	1		Massachusetts, State of	15	
Estate of James Green,	15		Massachusetts : Board of Edu-		
Estes & Lauriat,	1		cation,		2
Stephen S. Foster,	2		Bureau of Statistics of Labor,	1	
Geo. E. Francis,	1		State Board of Health,		2
Andrew H. Green,	1		Massachusetts Board of Agri-		
Samuel S. Green,	2		culture,		1
Hartford Young Men's Institute,	2		Massachusetts State Normal		
S. F. Haven,	1		School, Worcester,		1
Hamilton A. Hill,	1		Samuel May,		2
Historical and Philosophical			C. P. Morrison,		4
Society of Ohio,			Museum of Comparative		
Geo. F. Hoar,	19	44	Zoology,		5
Alexander L. Holley,		3	H. M. Paine,		1
J. W. Holmes,	1		Peabody Institute,		1
Elmer P. Howe,		5	Phillips Exeter Academy,		1
Charles Hudson,	1				

	Books.	Pamphlets.		Books.	Pamphlets.
Lucian Prince,	5		<i>United States :</i>		
Josiah Quincy,		1	Comptroller of Currency,	1	
Rensselaer Polytechnic Institute,		1	Commissioner of Education,		4
Edmund Rice,		1	“ of Patents,	2	
William Rice,		1	Secretary of the Interior,	60	9
Geo. P. Rowell & Co.,	1		“ “ “ Navy,	1	1
W. H. Ruffner,	1		“ “ “ Treasury,	1	1
E. H. Russell,		1	“ “ War,		1
J. Sabin & Sons,	1		Superintendent of the Naval		
T. E. St. John,		1	Observatory,	1	
St. Louis Public School,	1		U. S. Hydrographic Office,	2	6
Stephen Salisbury,	2		U. S. Patent Association,	2	
Stephen Salisbury Jr.,		8	University of Vermont,		1
J. D. Smith,		1	James Vick,		2
Samuel Smith, City Clerk,	1		Waltham, Town of		1
Smithsonian Institution,	2		Wm. B. Washburn,	32	
Arthur M. Stone,		1	T. W. Wellington,		1
Syracuse University,		1	Worcester Co. Free Institute,		1
Leonard V. Thompson,	1		Worcester Co. Musical Associa-		
J. K. Tiffany,		1	tion,		1
Albert Tolman,		1	Yale College,		2
E. H. Towne,	3		Various Friends,		9
J. Hammond Trumbull,		1			
				224	301

APPENDIX NO. 2

TO THE

REPORT OF THE LIBRARIAN

OF THE

FREE PUBLIC LIBRARY

OF THE

CITY OF WORCESTER, MASSACHUSETTS, U. S. A.

THE following paper has been written by the Librarian, in response to a vote of the Board of Directors, requesting him to prepare a brief account of the history and distinctive features of the institution under our charge. It has been prepared for use at the International Exhibition to be held in Philadelphia next Summer.

On the twenty-seventh day of December, Anno Domini, 1859, by a deed of gift, bearing date of that day, the late John Green, M. D., gave to the City of Worcester a library of about 7,000 volumes "in trust for the free use of the citizens and the public forever, as a library of consultation and reference, but to be used only in the library building."

This library had been collected from time to time, during a long professional career, at a cost of not less than \$10,000, with the purpose of sometime devoting it to public uses.

Among the terms and conditions of gift were the following:

"First; The management of the Library, the custody of the books, and the regulations under which they may be used shall be vested in a Board of Directors, who shall be citizens of Worcester, to be chosen by the City Council in a convention of the

two branches thereof, two of whom shall, after the first election, be chosen annually and shall hold their offices six years each.”

* * * * *

“Third ; The City of Worcester shall forever pay the salary of a competent Librarian, to be chosen by the Directors, and shall furnish a suitable Library building for the books to be secure against fire, and to be constructed with reference to the future increase of the Library, and this building shall be kept warmed and lighted at the expense of the city and shall be provided with suitable accommodations for the convenience of those using the books and shall be kept open at all proper hours, according to the regulations of the Directors, for the use of the public.

Fourth ; No plan for a Library building shall be adopted without the concurrence of the Board of Directors.

Fifth ; The foregoing provisions may, during my life, be changed by the joint action of myself and the Directors in any manner which shall not impair the value and public utility of the Library, but they shall not be altered after my decease, nor shall any books, once added to the department established by me, ever be transferred to any other.”

At a special meeting of the Worcester Lyceum and Library Association, holden December 16, 1859, it was voted ; that whereas Dr. John Green has indicated a desire to give his library to the city, that the library of the association also be transferred to the city, provided suitable appropriations and arrangements are made for the reception of the two libraries.

The library offered to the city by the Library Association consisted of about 4,500 volumes. Dr. Green gave his books to the city to be used as a reference library. The Library Association contemplated the use of most of those given by it as the nucleus of a circulating library.

The City Council passed an ordinance, dated December 23, 1859, of which the following is the first section :

“The City of Worcester hereby accept the donations of Dr. John Green and of the Worcester Lyceum and Library Association, and establish the Free Public Library of the City of Worcester.”

The ordinance, as originally adopted and in its subsequent revisions, carries out, in provisions for the whole institution, the

spirit of the conditions which Dr. Green imposed in regard to the library given by him.

In the First Annual Report of the Directors of the Library, presented to the City government in January, 1861, it is stated that "the building is now far advanced in the stages of erection."

It will be noticed that, by the terms in the deed of Dr. Green's gift, the spirit of which was embodied in the city ordinance also, the whole management of the library is placed in the hands of a board of directors, and not interfered with by the city government. This will be regarded as a wise provision, as the members of the board are chosen with reference to their fitness for the especial work to be performed. Sufficient supervision of the city council is implied in the facts that it chooses the directors, and that it has wholly within its control the regulation of the amount of money it will appropriate yearly for the use of the library.

The conditions in the deed of gift require, also, it will be seen, the city to put up a building secure against fire, to keep the rooms frequented by users comfortable, and to pay the salary of the librarian and other running expenses. In inducing the city to make heavy expenditures in carrying out the object he had in view in giving his library to the city, Dr. Green greatly added to the value of his gift. He may properly be regarded, not only as a public benefactor, but also what he is called in the fourth section of the original ordinance, by which he is made an Honorary Life Director, as the "principal founder" of the library.

The board of directors, as constituted by the deed of gift and the city ordinance, is a conservative body. For several years, however, it has been a custom, or rule almost universally observed, that no person shall be eligible to fill a vacancy in the board of directors arising from the expiration of his term of office. The observance of this rule, while aiding to secure a progressive administration of the library, has also been useful in widening the interest of citizens in the institution, by introducing into its board of direction, representatives of various occupations and tastes prevailing in the community for which it was established.

The year 1865 is memorable in the history of the library for the foundation of the Reading-rooms. A fund of between \$10,000 and \$11,000 was raised for their endowment by subscription among the citizens of Worcester, chiefly through the exertions of Honorable George F. Hoar, at that time an influential member of the board of directors. The money thus raised was carefully invested, and the income of the investment has since been spent in furnishing the rooms with American and foreign newspapers and periodicals. This income, a few gifts, and \$200 taken from the city appropriation, now enable us to place in the rooms, current numbers of 189 journals, magazines and reviews. It is proper to remark here, considering the purpose for which this paper is written, that where a reading-room is joined to a library it may be of great benefit to it. Besides the more obvious advantages which accrue from reading-rooms considered by themselves, it is noteworthy, that in combination with libraries, they serve, as do well supplied circulating departments, to bring the institutions with which they are connected into contact with large portions of the community which would not otherwise see that they are getting benefit enough from them to make them willing to contribute liberally towards their support. A public library is dependent upon popular favor for its existence. It must be so administered as to secure this favor. The expenditure of large sums of money, raised by taxation, upon an educational institution, can only be justified by showing that it exerts a wide influence. This does not mean that you must lower the standard of periodicals and books bought. Keep the standard high. Books and papers may be popular without being trashy or immoral.

It may be remarked, for encouragement, that it is comparatively easy to raise money for the establishment of a reading-room.

With the foundation of the reading-rooms, the library came into its present form. The Green or reference library, the Circulating library, and the Reading-rooms, constitute the Free Public Library of the City of Worcester.

Dr. Green died in the fall of 1865. According to the sixth annual report of the directors, he, from time to time, between the

date of the deed of his original gift and that of his death, gave to the library 4,968 volumes, in addition to the 7,000 contributed at the start. He also remembered the library generously in his will. The main provision of this instrument, for the benefit of the library, is described concisely and clearly in the report to which reference has just been made. This report was written by Honorable Stephen Salisbury, the much respected president of the board of directors in the year 1865. I make the following quotation :

“The probate of the last Will and Testament of Dr. Green, has made known his bequest to this City of Thirty thousand dollars, to be paid within one year after his decease, to the officer of the City authorized to receive it, and to be held with its future accumulations as a separate fund, designated in the Books of this City as the ‘Green Library Fund ;’ and the Testator states that he ‘aims not to gratify any personal feeling of his own, but to set apart and designate the Fund in a manner which shall forever keep it distinct from all others,’ and which shall enable the people of Worcester at all times clearly to perceive its amount and condition.’ He requires that the fund shall be kept, and that the income shall be collected by the authorized officer of the city ; and he provides that the investment and management of said Fund shall be under the direction of a Financial Committee of three directors of this Library, annually to be chosen by ballot, and that said Committee shall annually report to the Board of Directors, and their report shall make a part of the annual Report of this Board to the City Council. It is required that three-fourths of the investments shall be made in ‘real estate mortgage securities ;’ and one-fourth in Bank stock ; and in taking landed securities, it is the ‘desire and request’ of the Testator, ‘that in every instance first mortgages shall be taken for no larger loan than one-third of the value’ of the security ; and as to the use and expenditure of the income of said fund, it is directed that one-fourth part of said income shall be added annually to said fund, and that the remaining three-fourths of said income, after repairing any accidental loss that may happen to the principal, shall be expended by said Directors in the purchase of books, to be added to that department of said Free Public Library which was instituted by the Testator, and in repairing and re-binding the books of that department. Provided that when the invested fund shall reach the sum of One Hundred Thousand Dollars, one-fourth part of the income thereof, shall continue to be forever

annually added to the principal, and three-fourths of the income of \$100,000, after replacing any losses of the principal, and neither more nor less, shall be applied to the increase and support of the Department of said Library instituted by the Testator; and the remaining part of the income of said fund, shall be applied and expended by said Directors for the benefit of the whole of said Free Public Library, as well for that part which is kept for circulating or lending, as for that part which was instituted by the testator."

The principal of the Green Library Fund has met with no loss. It has been increased by the addition of a quarter of every year's income. Five hundred and fifty dollars and eighty-five cents, the proceeds of a trust instituted by Dr. Green during his life, has also been added to the fund. This now amounts to thirty-five thousand, seven hundred and twenty-four dollars and twenty-three cents. Fifty shares of bank stock, now held by trustees, will eventually come into the possession of the city, to be applied, besides his other bequests, in accordance with the testator's will, for the benefit of the library.

Honorable George F. Hoar, President of the board of Directors in 1867, in writing the annual report for that year, after reciting provisions of Dr. Green's will in regard to the library, remarks that, "Upon these provisions a grave, and until within a few years what would have been deemed a quite doubtful question of law arose, growing out of the policy of the law which prohibits perpetuities." He then proceeds, in an able argument, to quiet our fears. He speaks of the hesitation of the executors of the will of Dr. Green to pass over his bequest to the city, and narrates the action of the city and board of directors of the library. He compliments the family of Dr. Green for just and honorable conduct in facilitating the carrying of his wishes into effect, and states that the Supreme Judicial Court, upon application, rendered a judgment so far establishing the validity of the will as to order the fund to be paid over to the city. Mr. Hoar then cites two recent decisions of the Supreme Judicial Court of Massachusetts, and after a discussion of the points at issue, announces his belief "that the city may rightfully and lawfully obey the direction of the will until a fund is

accumulated, ample enough to defray all the expenses of the library, and so fulfil the beneficent purpose of the donor." It is well understood that when Mr. Hoar speaks of an ample provision for a library like ours, he does not mean a paltry few hundred thousand dollars, but a much larger sum. It is worthy of remark, before leaving the consideration of Dr. Green's will, that he is careful to reiterate in it the terms and conditions contained in the original deed of his gift to the city, executed in 1859.

Here, then, we have in the city of Worcester a reference library, founded and endowed by Dr. Green. It is important to inquire whether the citizens of Worcester use the library which has been provided for them. Reports of the directors show that it was but little used for several years. They express regret that this was so, and it appears from their fifth annual report that the establishment of the reading-room resulted from a movement to increase the usefulness of the Green Library. It was thought that a reading-room would add to and bring out its value. Many of the newspapers and periodicals taken are bound, and the volumes placed on the shelves of the reference library. They thus add to its value. Readers of magazines and papers have curiosity awakened which they seek to satisfy by the use of atlases, encyclopædias and other works of reference. A taste for reading and the habit of reading are promoted by a reading-room. A desire to study often follows. A reading-room, in this way, brings out the value of a reference library. At the start, the Green Library reading-room was not properly heated. This defect was remedied by the introduction of a steam heating apparatus. The building is now kept well warmed.

A step in the right direction was made by the directors in procuring a large collection of the best dictionaries, encyclopædias, &c. It was impossible for them to do all that they wished, for they could not get money enough in the earlier days of the library, to enable them to carry out their plans. They did what they could with the means at their disposal. Still, the reference library was not much used. About five years ago there came a sudden growth in its use. This use has increased rapidly every succeeding

year. It is now very large. How has this increase been effected? It has been brought about by the use of very simple means. It was thought that the reason why people did not use the library was that they needed assistance in using it. A new librarian was appointed, and he was allowed to render such aid as was desired by frequenters of the library. Then, all persons in the city who had questions to ask to which they might hope to find answers in books were cordially invited to come to the library and propound them. It was made a rule that every body should be received with courtesy and made to feel that he is an owner of the library, and that its officers are bound to give a reasonable amount of time to finding answers to his questions. The youngest school children, the humblest citizens, were to be received cordially, and an impartial courtesy extended to all. The plan has worked admirably. It has been a cardinal principle with us that the officers should manifest a persistent determination not to allow an inquirer to leave the building without getting, if a possible thing to find it, an answer to his question. When books needed in answering questions are not found in the library, efforts are at once made to buy them. If they are expensive and their purchase cannot be afforded, pains are taken to find out whether they do not belong to some other library or to some individual accessible to the questioner. Time is spent in doing such work as this; the time, too, of persons whose service is somewhat costly. But this time is well spent. The personal relations of an accomplished librarian with users of a library are productive of great advantage. Few users of a reference library know what books to go to to get answers to questions which they have to ask. Many need help in finding out and stating the exact question which they wish to have answered. The librarian steps forward and helps them to give a definite shape to their inquiries, and then refers them to some master of the subject to which their inquiries relate. He gives them the best books, and keeps them from the productions of dabblers in knowledge.

When the reading-room of the reference library is not filled with persons who resort to it for instruction, as will often happen certain hours in the day, the entertainment is sometimes offered

to such as desire it in the form of stories and bound volumes of illustrated papers. That our efforts to build up a large use of the reference department have been successful is evidenced by the statistics given in the report. From this, it appears that 7,321, 12,408, 15,672, 20,550, and 22,833 persons, respectively, have had books given them during the last five years, or have helped themselves to books to be used in answering their inquiries, or to give them enjoyment. A very large proportion of these recipients of information and enjoyment have received answers to serious inquiries. While, too, we are careful to supply the wants of humble inquirers, we are equally solicitous not to neglect the demands of more advanced students. While a half hour is readily spent in finding out for a curious boy how dates can be plucked from the top of the tall palm tree, whatever time is needed is cheerfully given to the scholar whose questions require reference to *Philosophical Transactions* or a *Greek Anthology*, or to the public instructor in preparation for a lecture or review article. A reference library that is not used becomes very unpopular. Where such a library is so administered that a large constituency gets advantage from it all will recognize it as a public benefit, and citizens unskilled in the niceties of scholarship will, in consideration of the benefit they themselves derive from the institution, be willing that money should be spent in supplying the wants of scholars.

It will be remembered that among the "terms and conditions" imposed by Dr. Green in the deed by which he transferred his library to the city, is one which provides that the books shall "be used only in the library building." This provision was extended in his will to the use of all books bought with money left by him and placed in the department which bears his name. It has sometimes been thought that the reference library would be more useful if the books in it could be taken to the homes of users. Now, however, the restrictive provision is, I think, generally believed to be a wise one by persons who have thought much about the matter. There was more reason formerly than exists now for anxiety on the part of citizens to have the books put in circulation. In the earlier days of the library the additions

of books made to the circulating department were wholly inadequate to supply reasonable demands of users. The directors knew that this was so, and bought as many books as they could with the money at their command. *Now* the circulating department is generously cared for, and it is very seldom that a citizen feels it a hardship not to be able to take home books belonging to the Green Library. There are two weighty reasons why these books should not be taken away from the library building. First, it is desirable that investigators should always find them at hand for consultation. Second, books which we put in circulation become dirty and mutilated. Mr. Salisbury speaks forcibly on this head in the fifth annual report of the Directors. He says of the measure of allowing books in the Green Library to be taken to the homes of users, that it "would be like killing the goose that laid the golden egg. For a time the use of the books would be stimulated and increased, but when they should become defaced and worn out by use, it would require to keep the library interesting and attractive, a larger expenditure than the majority of citizens would approve and the most liberal givers might hesitate to place valuable books in a heap of rubbish."

The Free Public Library is mainly dependent for its support upon an annual appropriation made by the City Council from money raised by taxation. This appropriation was very small at first. It continued small for several years. The directors saw that it was very important that more money should be placed at their disposal, and persistently urged the claims of the library for liberal support. Their efforts gradually bore fruit. The city began to grow also, and a greater readiness to spend money on improvements to manifest itself. With increased expenditures in other departments of the government, the annual appropriation of the library began to grow. For the few past years, a generous sum of money has been put into the hands of the directors. In no one of the last three years has the appropriation been less than \$11,000 and the Dog fund. This fund amounted last year to \$3,019.53.

It will interest some persons to know that the dog law may be found in the volumes which contain the "Acts and Resolves

passed by the General Court of Massachusetts" in the years 1867 and 1869. The volume for the former year gives, in chapter 130, "An Act concerning Dogs, &c.," and the one for 1869 contains, in chapter 250, "An Act in addition to an Act concerning Dogs." Under the provisions of this law, in all the counties of the state except Suffolk county, the money raised in towns by payments for licenses issued to owners of dogs, after certain deductions have been made to cover the depredations of dogs among sheep and other domestic animals, must be appropriated by the towns to the support either of the common schools or of public libraries. With such appropriations \$4,000 a year can be spent for books. For the purchase of books we have also available, it will be remembered, the income of the Green Library Fund. The income of the Reading room Fund, likewise, swells our resources and gives us the means of buying periodicals and papers.

Worcester has a population of about 50,000. The statement just made shows that it furnishes a good example to hold up to other communities of the same size with itself, for emulation in the support of a public library. These expenditures have proved very beneficial to the inhabitants of the city. The number of volumes taken out from the circulating library has increased, as stated in the report, 55,604, in two years. The reports of the last few years show also, as has been stated before, great growth in the use of the reference department. The growth in the use of these two departments of the library is not owing wholly to increased expenditures upon it, but it is largely owing to this cause.

This library was the first public library in New England to open its doors to visitors on Sunday. It is proper, therefore, in ending this paper to say a single word in regard to our experience respecting this custom. The Reading-rooms of the library are open from two to nine P. M. No books are given out in the circulating department to be taken home. The periodicals and papers can be freely used. Books are procurable also for use within the building from either department of the library. The experiment has now been tried for three years. It appears

from the yearly reports of the librarian, that the number of persons who used the reading-rooms Sundays, in the year 1872-3,—for one Sunday less than the whole year, and yet for fifty-two Sundays,—is 5706, for 1873-4, 7179, and for 1874-5, 10,142. The librarian is present for two hours in the afternoon to render assistance to inquirers seeking information from books. One attendant in summer, and two attendants in winter, remain in the rooms during the hours they are open, to see that they are kept comfortable, to preserve quiet, and to aid readers. These attendants are persons who do not serve the library on secular days, but who come to us only on Sunday. In regard to the character of the reading done Sundays, it may be stated that it is generally of the lighter kinds. Some persons, however, engage in study every Sunday.

I have now stated briefly what I regard the distinctive features of this library, and have mentioned such facts in its history as seem to be of general interest. Having, therefore, performed the duty set me by the Board of Directors, I now close this paper.

SAMUEL S. GREEN,

Librarian.

January 18, 1876.

REPORT

OF THE

COMMITTEE ON THE LIBRARY.

To the Directors of the Free Public Library:

GENTLEMEN:—In the judgment of your Committee, the affairs of the Library, in both of its departments, have been administered during the past year with watchfulness and efficiency. The books are in as good condition as the constant use to which they are subjected makes it reasonable to expect.

The number of volumes lost has been very small, the number added very large. No complaint has reached us of any lack of attention to duty on the part of the Librarian and his Assistants, but on the contrary we have every reason to believe that the wants of the public have been fully and promptly met.

According to the "Rules and Regulations of the Free Public Library," it is the function of this Committee "to attend to the purchase and preservation of books and other property" of the Library, "subject to such votes and appropriations" as the Board of Directors may make.

It is also their prescribed duty to make an annual examination of the Library, and to report its condition to the Board. Since the Library has attained its present dimensions, it has become almost a necessity for the Committee to discharge this latter duty by proxy, upon the legal maxim *facit per alium, facit per se*.

The annual examination is, in point of fact, made by the Librarian and his Assistants, and their report upon the condition of the books is received as adequate to satisfy the spirit if not the letter of the rule.

With respect to the more important duty of attending to the purchase of books, more important because necessarily including the selection and recommendation of the additions made to the Library, your Committee feel themselves less fully warranted in employing deputies. The "Regulations" already quoted provide that the Librarian "shall assist the Library Committee in the selection and purchase of books."

The actual practice, for some years past, has been for the Librarian to prepare and to submit to the Committee a list of such purchases as are in his judgment desirable, including also the titles of books which users of the Library have signified, since the previous meeting, a wish to have procured. This list, after having been supervised by the Committee, and extended or curtailed at their discretion, is laid before the Board at the regular monthly meeting to receive official sanction.

It is greatly to be desired that the Directors, as a body, should share with the Library Committee the responsibility of approving these monthly lists.

Your Committee do not recommend any alteration in the mode of preparing the list. The advantages which the Librarian enjoys for the study of publishers' catalogues, quite apart from his ample literary qualifications, make it eminently fitting that the list of proposed additions should, in the first instance, take shape at his hands. At the same time it must be evident to any one who will give the subject thought that it is quite impossible for any one person, no matter how extended his knowledge of books or how catholic his literary sympathies, to perform the work of selection for so large a library without the aid of friendly criticism. Every man's private library reflects, to a greater or less degree, his own personal and individual tastes. It is unreasonable to expect that this bias, this "personal equation" will be wholly lost in the case of a public Librarian, endeavoring, ever so conscientiously, to minister to the wants of all alike. The same reasoning applies proportionally to a small Committee like this Library Committee. It is therefore most desirable that the collective influence of the whole Board be brought to bear upon the lists that are laid before it from month to month, and that these lists be submitted to the most rigid scrutiny and the freest possible criticism. Until this duty is recognised and assumed by the Board, and this too with a cordial understanding all around that no rights are infringed and no prerogatives compromised by such action, it must inevitably result, so your Committee think, that many books will find their way to our shelves of which we are not greatly in need, and that many will be missing there which it would be our wisdom to possess.

The Committee have held during the year twelve meetings. They have approved bills for books for the Green Library to the amount of \$1,691.33, and for books and binding for the Circulating Department to the amount of \$6,297.46.

In behalf of the Committee on the Library.

WILLIAM R. HUNTINGTON,

Chairman.

R E P O R T

OF THE

COMMITTEE ON THE READING ROOM.

To the President of the Board of Directors of the Free Public Library.

THE Committee on the Reading Room beg leave to present their annual report for the year ending Dec. 1, 1875.

This Committee has in charge not only the newspaper room on the ground floor of the building, but the periodicals at present placed in Green Hall. The latter department is essential to every well appointed popular library ; and the Committee consider also the furnishing of the current news of the day an important adjunct to the institution. The increasing use of the newspaper reading room shows its appreciation by the people, and it is known to be visited by many who have not the habit of giving much time to books. By its means, the library is able to reach and interest a wider clientage, and fill up hours which its present visitors might otherwise waste utterly. Both the newspapers and the periodicals are purchased mainly with the income of a fund generously contributed years ago by public spirited citizens. One or two hundred dollars in addition have been asked in certain years from the Library appropriation, and the Committee consider this amount might be with propriety increased in view of the close relations between the periodical and the circulating departments. At present, however, the sum at the disposal of the Committee is all that it is desirable to ask.

Eventually, the accommodations of the lower reading room, already scarcely adequate to the wants of those who frequent it, must be extended, and there must be a considerable increase in the number of

daily journals, now comparatively few, considering the great field to be covered and the close relations of this city to distant centres of population.

The Committee have few changes to report during the year. The list of periodicals regularly received is believed to be complete and creditable to the Library, and the number of newspapers for which we subscribe has been kept up to the limit imposed by the amount of income at our disposal.

During the year we have added several new periodicals, of a solid character, to the tables in the hall of the Green Library. These are, *The Mining and Scientific Press*, published at San Francisco; *The New England Journal of Education*; *Public Opinion*, an epitome of the leading articles of the press of both continents; *The Telegraphic Journal and Electrical Review*, published in London; and the *Carriage Monthly*, printed at Philadelphia in the interests of carriage-makers. It has been the policy of the Committee, under the sanction of the Board, and aided by the watchfulness of the Librarian, to satisfy any reasonable want, whether of students or artisans, for periodicals bearing on particular pursuits. This does not necessarily involve an increased expense, because more or less magazines and newspapers die or decay every year. Since our last report, the publication of *The Plymouth Pulpit*, and *Beeton's Boy's Own*, a London juvenile, has ceased, and we have stopped the *Washington Weekly Chronicle*, which had become an illustrated paper of no great value in this latitude.

The *College Courant* has been merged, together with several other kindred publications, in the *New England Journal of Education*, to which, as above stated, we have subscribed.

We now take the *Daily Chicago Tribune* instead of the Tri-Weekly. The total number of publications which we receive still falls short of two hundred, but many are preserved and bound, and become valuable and lasting accessions to the Library.

Among the additions to our lists by gift, we may mention first, as an evidence of good will to the City, from the ancient municipality in England, bearing the same name, *Berrow's Worcester Journal*, which is sent free by Mr. Charles H. Birbeck, the proprietor. *Le Travailleur*, a French weekly, published at Worcester, Mass., and Woonsocket, R. I., has been sent from time to time, but now appears to be discontinued. Other new gifts are the *Saint Louis Trade Journal*, *The Vineland Advertiser*, *The American Journal of Education*, published at Saint Louis, *The Laboratory*, published at Boston, by

Messrs. W. W. Bartlett & Co., *Sherman and Hyde's Musical Review*, from San Francisco, and the *The Tufts' Collegian*, published for Tufts' College. The Committee have also to acknowledge the kindness of the Rev. T. E. St. John, in contributing the *Universalist Quarterly* for several years, a gift previously credited by mistake to another source ; and in aiding in the completion of a set of the same publication.

We no longer receive from Rev. H. T. Cheever, the *Boston Daily News*, nor from L. S. Howlett, the *Daily Louisville Commercial*. *The Banner of Light* no longer comes from the publishers.

A half-dozen other periodicals, originally sent by the proprietors, in some instances, probably, in the hope that we should ultimately become subscribers, have also been cut off. We have to acknowledge continued favors from the local papers, from the member in Congress for this district, Mr. Hoar, and from friends in various parts of the country.

For the Committee,

CHARLES H. DOE, *Chairman*.

WORCESTER, Dec. 27, 1875.

REPORT

OF THE

COMMITTEE ON THE BUILDING.

To the President and Directors of the Free Public Library:

THE Committee have to report the building and fixtures in fair condition, the strictest economy in repairs having been observed during the past year.

Experience confirms the opinion expressed in the last annual report of the Librarian, that more room for all departments is needed within easy reach of the attendants. In order to meet this want economically, and to avoid the fatiguing and expensive labor of climbing stairs with heavy books, we repeat the recommendation of our last annual report: to put in a Water Pressure Elevator, which will give easy and rapid access to all parts of the building, from basement to story next the French roof.

By a recent inspection and estimate made by the Superintendent of Public Buildings, Mr. Peck, we have the statement that the French story could be finished, and made ready for shelving, at an expense of twelve hundred dollars (\$1,200). In this story alone, by the use of an elevator, an amount of room can be made available equal to two and one half times the space now in use for books in the circulating department. At present this room is useless, being inaccessible except by ladder and trap door. The possibility of utilizing, in the future, this vast space, even if it should not be wanted for several years, gives us a strong additional reason for putting in the elevator.

The principal items of expenditure for the year, have been for catalogue case, shelving and ordinary repairs, amounting in round numbers, to five hundred and seventy dollars (\$570).

Respectfully submitted,

CHAS. H. MORGAN,

For Committee on Building.

REPORT OF THE FINANCE COMMITTEE.

*To Hon. T. L. Nelson, President of the Board of Directors of the
Free Public Library of Worcester :*

THE Finance Committee submit the following report of the Receipts and Expenditures on account of the Free Public Library, for the year ending November 30, 1875 :

Balance of former appropriation in the Treasury, Dec. 1, 1874,	\$1,183 37
City appropriation for 1875,	11,000 00
Amount of the Dog Fund, appropriated to the Library by vote of City Council,	3,019 53
Total,	<hr/> \$15,202 90

Bills approved and paid as follows :

For Books and Stationery,	\$5,586 36
Printing,	247 00
Binding,	971 85
Gas,	950 38
Salaries and care of Building,	5,703 50
Coal and Wood,	512 60
Furniture and Fixtures,	170 10
Repairs,	325 71
Reading Room,	200 00
Incidental Expenses,	523 35
Balance on hand Dec. 1, 1875,	12 05
	<hr/> \$15,202 90

For the Committee,

NATH'L PAINE, *Chairman.*

THE GREEN LIBRARY FUND.

THE Finance Committee of the Free Public Library submit the following report upon the Green Library Fund, for the year ending November 30, 1875 :

Statement of the Fund, Dec. 1, 1874 :

Notes secured by Mortgage,	\$27,048 50	
Bank Stock (par value),	6,700 00	
Deposited in Savings Bank,	1,314 46	
	<hr/>	\$35,062 96

Statement of the Fund, Dec. 1, 1875 :

Notes secured by Mortgage,	\$24,548 50	
Bank Stock (par value),	6,700 00	
Deposited in Savings Banks,	4,475 73	
	<hr/>	\$35,724 23

Income for the year ending Nov. 30, 1875 :

Interest on Mortgage Notes,	\$1,762 14	
Dividends on Bank Stock,	612 00	
Interest, Saving Bank Deposits,	150 53	
Bank Tax of 1874, refunded,	120 40	
	<hr/>	\$2,645 07

One quarter of income added to Fund,	\$661 27	
Balance of income appropriated for purchase of books,	1,983 80	
	<hr/>	\$2,645 07

BOOK ACCOUNT.

Balance in City Treasurer's hands, Dec. 1, 1874,	\$1,676 47	
Appropriated for purchase of books,	1,983 80	
Interest on Bank Deposit,	53 62	
	<hr/>	\$3,713 89
Expended for Books to Dec. 1, 1875,	\$1,691 33	
Balance, Dec. 1, 1875,	2,022 56	
	<hr/>	\$3,713 89

Respectfully submitted.

NATH'L PAINE,

Chairman Finance Committee.

REPORT

OF THE

TREASURER OF THE READING ROOM FUND.

*Nathaniel Paine, Treasurer, in account with the Reading Room
Fund of the Free Public Library :*

DR.

To Cash balance, Dec. 26, 1874,	\$350 51	
“ Cash, interest on City Bonds,	300 00	
“ Cash, interest on U. S. Bonds,	388 58	
“ Cash from City Appropriation,	200 00	
“ Cash for Books purchased on account of the Library,	21 52	
	\$1,260 61	

CR.

By Cash paid for subscriptions to Newspapers and Periodicals,	\$1,037 97	
“ Cash paid for Books for Library,	21 52	
“ Cash for Postage,	1 47	
“ Balance of Cash, Dec. 23, 1875,	199 65	
	\$1,260 61	

The Reading Room Fund is invested in City of Wor- cester Bonds,	\$5,000 00	
United States Bonds,	5,650 00	
	\$10,650 00	

Respectfully submitted,

NATHANIEL PAINE, *Treasurer.*

I have examined the securities and vouchers in the hands of the Treasurer, and find his accounts and statements correct.

P. C. BACON,
One of the Finance Committee.

REPORT OF THE SCHOOL COMMITTEE.

ORGANIZATION OF THE SCHOOL COMMITTEE

OF THE

CITY OF WORCESTER,

SEPT., 1875.

CLARK JILLSON, PRESIDENT.

ALBERT P. MARBLE, SUPT. AND SECRETARY.

Members whose term expires January, 1878.	Members whose term expires January, 1877.	Members whose term expires January, 1876.
CALEB B. METCALF.	CHAS. O. THOMPSON.	EDWARD H. HALL.
ANNE B. ROGERS.	SARAH B. EARLE.	WILLIAM T. HARLOW.
JASON CHAPIN.	JAMES McMAHON.	TERENCE J. HINES.
FRED. J. McNULTY.	THOS. J. CONATY.	T. EDWARD MURRAY.
JAS. J. McCAFFERTY.	JEREMIAH MURPHY.	CHARLES M. MURRAY.
FRANCIS P. GOULDING.	J. HENRY WALKER.	FRED. A. CLAPP.
EDWIN T. MARBLE.	EMERSON WARNER.	CHARLES BALLARD.
RUFUS WOODWARD.	E. B. STODDARD.	CHARLES A. CHASE.

STANDING COMMITTEES.

ON SCHOOL HOUSES—Mayor and Messrs. Ballard, Hines, Murphy, Chapin and Rogers.

ON BOOKS AND APPARATUS—Messrs. Stoddard, Chase, Goulding, Earle and T. E. Murray.

ON TEACHERS—Superintendent, *ex-officio*, and Messrs. Hall, Metcalf, Warner, Thompson and Conaty.

ON FINANCE—Mayor, Superintendent, and Messrs. Marble, Harlow, Walker, McMahon and McNulty.

ON APPOINTMENTS—Superintendent, *ex-officio*, and Messrs. Ballard, C. M. Murray, Clapp, Woodward and McCafferty.

The Committee of Visitation shall exercise a general supervision over the Schools to which they are severally assigned, and shall visit them according to the provisions of the Statutes, not less than once in four weeks, and generally during the week preceding the monthly meeting of the Board, at which they shall report their true condition.—[Rules, Chap. 3, Sec. 6.

Though each school is assigned to a Special Committee, yet every member of the Board shall deem it his duty to watch over all Public Schools of the city, to attend their examinations, and visit them at other times as his convenience will permit.—[Sec. 7.

VISITING COMMITTEES.

The ROMAN NUMERALS designate the rooms to which members of committees are specially assigned, and the GRADES according to the Course of Study.

CLASSICAL AND ENGLISH HIGH SCHOOL.

COMMITTEE.

Messrs. Hall, Warner, Conaty, Woodward, Marble.

TEACHERS.

Joseph W. Fairbanks, Principal.

Edward H. Rice,	Alfred D. F. Hamlin,	Florence V. Beane,
Nathan H. Dole,	Caro. V. Aldrich,	Mary A. Parkhurst,
Frank P. Shepard,	Ann C. Stewart,	Fanny S. Tucker.

BELMONT STREET.

SPECIAL COMMITTEE.

TEACHERS.

GRADE.

Ballard.	Preston D. Jones, Principal,	IX.
Ballard.	Emma C. McClellan, Asst.	
Ballard.	Mary H. Warren,	VIII.
Ballard.	Sarah L. Phillips,	VII.
Chase,	Tirzah S. Nichols,	VI.
Chase,	Abbie J. Reed,	V.
Chase,	Esther G. Chenery,	IV.
Chapin,	Mary T. Gale,	III.
Chapin,	Carrie P. Townsend,	II.
Chapin,	Mary E. Deane,	I.

DIX STREET.

SPECIAL COMMITTEE.

TEACHERS.

GRADE.

Chase,	George R. Chase, Principal,	IX.
Chase,	Clara Manley, Asst.	
Chase,	Eldora M. Aldrich,	VIII.
Hines,	Josephine M. Wilson,	VII.
Hines,	Minnie Meade,	VI.
Clapp,	Eliza L. Forsyth,	V.
Clapp,	Ellen E. Daniels,	IV.
Clapp,	Susie W. Forbes,	III.
Chase,	Esther B. Smith,	II.
Chase,	Alice W. Giddings,	I.

SCHOOL COMMITTEE.

263

WALNUT STREET.

SPECIAL COMMITTEE.

Stoddard,
Stoddard,
Clapp,
Clapp,

TEACHERS.

Etta A. Rounds, Principal,
Nellie C. Thomas,
Kate A. Meade,
Ella M. McFarland,

GRADE.

VIII.
VII.
VI.
IV.

WOODLAND STREET.

SPECIAL COMMITTEE.

Marble,
Marble,
Marble,
Marble,
Clapp,
Clapp,
Clapp,
Walker,
Walker,
Walker,

TEACHERS.

Edward I. Comins, Principal,
Annie C. Wyman, Asst.
Ann S. Dunton,
Jennie I. Rice,
Mary M. Lawton,
Carrie R. Clements,
Martha T. Wyman,
Maggie I. Melanefy,
Nellie M. Muzzy,
Amanda H. Davie,

GRADE.

IX.

VIII.
VII.
VI.
V.
IV.
III.
II.
I.

LAMARTINE STREET.

SPECIAL COMMITTEE.

Harlow,
Harlow,
Harlow,
McCafferty,
Harlow,
McCafferty,
McCafferty,
McCafferty,
C. M. Murray,
C. M. Murray,
C. M. Murray,
C. M. Murray,

TEACHERS.

Charles T. Haynes, Principal,
Josephine L. Sanborn, Asst.
Persis E. King,
Fannie S. Holman,
M. Ella Spalding,
Louise A. Dawson,
Mary A. Kavanagh,
Susan M. Buttrick,
Ida A. E. Kenney,
Ellen T. Shannon,
Ida A. Tew,
F. Belle Perry,

GRADE.

IX.

VIII.
VII.
VI.
IV.
III.
III.
II.
II.
I.
I.

WASHINGTON STREET.

SPECIAL COMMITTEE.

McCafferty,
Harlow,

TEACHERS.

Janet Martin, Principal,
Mary A. Harrington,

GRADE.

V.
VI.

LEDGE STREET.

SPECIAL COMMITTEE.

T. E. Murray.
T. E. Murray,
T. E. Murray,
T. E. Murray,
McMahon,
McMahon,
McMahon,
Earle,
Earle,
Earle,
Earle,

TEACHERS.

Charles C. Woodman, Principal,
Hannah N. Johnson, Asst.
Margaret M. Geary,
Maria P. Cole,
Eliza E. Cowles,
Hattie E. Clarke,
M. Addie Powers,
Emma L. Cowles,
Mary E. D. King,
Mary V. Callaghan,
Emma C. Maynard,

GRADE.

IX.

VIII.
VII.
VI.
V.
IV.
III.
II.
I.
I.

THOMAS STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Harlow,	Harriet G. Waite, Principal,	VIII.
Harlow,	Emma J. Houghton, Asst.	
Harlow,	Amanda M. Phillips,	VII.
Harlow,	Annie J. Hitchcock,	VI.
Chase,	Abbie C. Souther,	V.
Chase,	Susie M. Everett,	IV.
Chase,	Abbie F. Hemenway,	III.
Earle,	Hattie W. Bliss,	II.
Earle,	Mary E. D. Cavanaugh,	I.
Earle,	L. Ella Hemenway,	I.

SYCAMORE STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Goulding,	Abbie E. Clough, Principal,	VIII.
Goulding,	Minnie F. Whittier,	VII.
Goulding,	Ann E. McCambridge,	VI.
Walker,	Susie A. Partridge,	V.
Walker,	Hattie A. Smith,	IV.
Stoddard,	Sarah W. Clements,	III.
Stoddard,	Emma F. Marsh,	II.
Stoddard,	Eliza J. Day,	I.

EAST WORCESTER.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Woodward,	Ella W. Foskett, Principal,	VI.
Woodward,	Annie Brown,	V.
Woodward,	Tamerson S. Darling,	IV.
McMahon,	Julia A. Bunker,	IV.
McMahon,	Kate C. Cosgrove,	III.
McMahon,	Nellie A. Sprout,	II.
Rogers,	Mary E. Russell,	II.
Rogers,	Aloysia Radcliffe,	I.
Rogers,	Mary J. O'Connor,	I.

PROVIDENCE STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Murphy,	L. Elizabeth King, Principal,	V.
Murphy,	Sarah J. Newton,	IV.
C. M. Murray,	Anna M. Overend,	III.
C. M. Murray,	Evelyn E. Towne,	II.
McMahon,	S. Cornelia Maynard,	I.
McMahon,	Alice G. McMahon,	I.

ASH STREET.

SPECIAL COMMITTEE.	TEACHER.	GRADE.
McNulty,	Mary J. Mack, Principal,	V.
McNulty,	Lottie M. Harrington,	IV.
Rogers,	Sara A. Harrington,	III.
Rogers,	Mattie A. Collins,	II.
McCafferty,	Mary J. Packard,	I.
McCafferty,	Sarah J. Melanefy,	I.

SCHOOL COMMITTEE.

265

SOUTH WORCESTER.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Goulding,	Carrie A. George, Principal,	VIII.
Goulding,	M. Louise Rice,	VI.
Goulding,	Ellen M. Boyden,	V.
Chapin,	Myra J. Denby (temporary),	IV.
Chapin,	Esther E. Travis,	IV.
Chapin,	Abbie N. Hoxie,	III.
T. E. Murray,	Mary S. Eaton,	II.
T. E. Murray,	Mary C. Paige,	I.

PLEASANT STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Metcalf,	Carrie E. Gilbert, Principal,	V.
Metcalf,	Eunie M. Gates,	IV.
McNulty,	Mary L. Norcross,	III.
McNulty,	Mary E. A. Hoyt,	II.
Rogers,	Emma J. Norcross,	I.

SALEM STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Stoddard,	Albert P. Doe, Principal,	VI.
Stoddard,	Mary O. Whitmore,	V-IV.
C. M. Murray,	Emma I. Clafin,	III.
C. M. Murray,	Effie J. Phelps,	I.

EDGEWORTH STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Walker,	Ella E. Roper, Principal,	V-IV.
Walker,	Sarah M. Brigham,	III.
McNulty,	Jennie E. Maloney,	II.
McNulty,	Mary A. Gauren,	I.

NEW WORCESTER.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Marble,	Charlotte H. Munger, Principal,	VIII.
Marble,	S. Lizzie Carter,	VII-VI.
Murphy,	Ella J. Moore,	VI-V.
Murphy,	Belle H. Crowell,	III-II.
Murphy,	Ada L. Sherman,	I.

SUMMER STREET.

SPECIAL COMMITTEE.	TEACHERS.	GRADE.
Chapin,	Abbie A. Wells, Principal,	III.
Hines,	Carrie F. Merriam,	II.
Hines,	Lilla F. Upton,	I.

QUINSIGAMOND.

SPECIAL COMMITTEE.

Hines,
Hines,
Ballard,

TEACHERS.

Sarah F. Carpenter, Principal,
Jennie P. Fiske,
Ella M. Bates,

GRADE.

VII.
V-IV.
III-I.

MASON STREET.

SPECIAL COMMITTEE.

Ballard,
Hines,

TEACHERS.

Julia M. Martin, Principal,
Lucy Lewisson,

GRADE.

III.
I.

ADRIATIC.

SPECIAL COMMITTEE.

Murphy,
Woodward,

TEACHERS.

Amy E. Hopson, Principal,
Sarah J. Morgan,

GRADE.

III.
I.

UNION HILL.

SPECIAL COMMITTEE.

Earle,
Murphy,

TEACHERS.

Mary A. Tyler, Principal,
Etha M. Stowell,

GRADE.

V-IV.
III-I.

SUBURBAN.

COMMITTEE.

McCafferty,
Ballard,
Marble,
Walker,
Rogers,
Clapp,
Earle,
Earle,
McCafferty,
Chase,

SCHOOLS.

NORTHVILLE,
TATNUCK,
VALLEY FALLS,
LEESVILLE,
BLITHEWOOD,
BLOOMINGDALE,
ADAMS SQUARE,
BURNCOAT PLAIN,
NORTH POND,
CHAMBEBLAIN,

TEACHERS.

Eudora A. Dearborn.
Helen H. Welsh.
Sarah A. Bullock.
Eliza J. Seaver.
Anna M. Bemis.
Olive G. Davis.
Kate A. Curtis.
Nellie J. Spurr.
M. Lizzie Vaughan.
Mary F. Barker.

GENERAL ASSISTANT—Caroline H. Metcalf.

TEACHERS OF DRAWING—George E. Gladwin (for High School), Lucius B. Morgan.

MUSIC.

COMMITTEE.

Warner,

McCafferty,

Earle.

TEACHER.

Edwin S. Nason.

SUPERINTENDENT'S REPORT.

To His Honor the Mayor, and the School Board of Worcester :

IN conformity to your regulations, I submit the following as my Eighth Annual Report ; and by these regulations this report which it is the duty of the Superintendent to prepare, becomes the report of the School Board to the public and the school authorities of the State.

ABSTRACT OF STATISTICS, FOR THE YEAR 1875.

I. POPULATION.

Population Census of 1875	49,317
Children between the ages of five and fifteen, May, 1875 . . .	7,988

II. FINANCIAL.

Valuation, May, 1875	\$49,267,081 00
Increase for the year	81,537 00
City Debt, December, 1875	2,589,700 00
State, county, and city tax, 1875	843,761 54
Rate of taxation . . . . .	.0166
Value of school houses and lots	\$824,375 00
Other School property	
	\$73,941 96

*Ordinary expenses of schools	\$138,001 46
Per cent. of same to valuation . . . . .	.0028
Per cent. of same to whole tax . . . . .	.163
Repairs of school houses, furniture and stoves	5,353 59
Permanent improvements to school houses	\$2,841 18
New furniture, patterns, &c.	6,017 78
Rents and insurance	996 56
	<hr/>
	9,855 52
	<hr/>
	\$153,210 57
Less revenue	717 36
	<hr/>
Expended for all purposes	\$152,493 21
Average cost per scholar for all schools, including ordinary repairs	\$20 07
Same last year	\$20 69
Cost of Evening Schools	2,664 93
Average per scholar	\$8 51
Cost of Evening Drawing Schools	1,275 00
Average per scholar	\$8 22
Cost of High School	17,169 15
Decrease	\$1,079 55
Average per scholar	54 68
Decrease	4 38

III. SCHOOL HOUSES.

Number occupied December, 1875	34
Rooms, not including recitation rooms	155
Rooms rented at New Worcester	1
Drawing School rooms, recitation and Evening School rooms, additional	13
Whole number of sittings:	
In High School	382
Additional space for	180
Grammar Schools, Grades IX—VI	1,901
Secondary Schools, Grades V and IV	1,699
Primary Schools, Grades III, II and I	3,786
Suburban Schools	440

IV. SCHOOLS.

High School, ten rooms	1
Grammar rooms, Grades IX—VI	38
Secondary rooms, Grades V, IV	32
Primary rooms, Grades III, II, I	65

* See detailed statement further on.

Suburban Schools	10
Northville, Tatnuck, Valley Falls, Leesville, Blithewood, Bloomingtondale, Adams Square, Burncoat, North Pond, Chamberlain.	
Evening Schools	5
Washington street for boys; Walnut street for girls; Summer street, Cambridge street and New Worcester, for both.	
Free Evening Drawing Schools, both sexes	4

V. TEACHERS.

Male teachers in High School	5
Female teachers in High School	5
Male teachers in Grammar School	6
Female teachers in all grades below the High School	145
Special teacher of Music, male	1
Special teacher of Drawing, male	1
Special teacher of Drawing, High School, male	1
Number of teachers in Day Schools	164
Male teachers in Evening Schools	3
Female teachers in Evening Schools	11
Teachers in Free Evening Drawing Schools, male	4
Whole number of teachers	182

VI. PUPILS.

Number registered in Day Schools	8,896
Decrease	58
In Evening Schools	615
In Free Evening Drawing Schools	155
Number registered in all schools	9,666
Decrease	254
Number over 15 years old	1,338
Increase	266
Estimated number in this city in private schools here	1,200
Pupils in State Normal School, this city	99
Average number belonging to public schools	7,143
Increase	86
Average number belonging to Day Schools	6,705
Increase	184
Average daily attendance in Day Schools	6,204
Increase	141
Average daily absence	501
Decrease	81

Number at close of Fall term, 1874	7,259
At close of Winter term, 1874-75	6,394
Decrease from last year	420
At close of Spring term	6,438
Increase	24
At close of Summer term	6,400
Increase	134
At close of Fall term	7,585
Increase	326
Per cent. of daily attendance to average number belonging	92.5
Decrease	00.6
Number perfect in attendance the whole year	455
Decrease	78
Perfect three terms	567
Perfect two terms	712
Perfect one term	1,768

Number registered in High School	444
Decrease	19
Boys	214
Increase	8
Girls	230
Decrease	27
Number at the close of the year	360
Increase	44
Number of graduates June, 1875	47
Number left the school	37
Decrease	72
Average number belonging	314
Average daily attendance	308
Average daily absence	6
Per cent. of daily attendance to average number belonging . .	98.1
Average age of pupils, December, 1875	16.6
Average number of pupils to a regular teacher	31.4

STATISTICS, WORCESTER SCHOOLS,

ON THE PLAN ADOPTED BY THE

NATIONAL SUPERINTENDENTS' ASSOCIATION,

December 1, 1874, to December 1, 1875.

ESTIMATED SCHOOL POPULATION.

Number between the ages of five and fifteen	9,570
Under six years old	1,756
Over sixteen years old	544
Between six and sixteen years of age	8,000

PUBLIC SCHOOLS.

Number enrolled during the year	9,666
Average daily attendance in day schools	6,204
School rooms, exclusive of those used for recitation only . .	155
School rooms used exclusively for recitations	13
Average duration of school in days	205

SCHOOLS OTHER THAN PUBLIC.

In schools corresponding to public schools below the High School	1,100
In schools corresponding to public High School	100

Teachers in said schools of all grades :

Males	25	
Females	20	
Total		45

Teachers in public schools :

Males	17	
Females	165	
Total		182

Average salary of teachers per month in public schools :

Males	\$169 29
Females	52 20

ANNUAL INCOME.

Local tax	\$152,493 21
From other sources	717 36
Total	\$153,210 57

ANNUAL EXPENDITURES.

Permanent.

Buildings and furniture, etc.	\$9,855 52
---------------------------------------	------------

Current.

Salary of Superintendent	3,000 00
Salary of Secretary and Clerk	1,067 25
Salaries of Teachers	110,345 52
Salaries of Truant Officers	2,016 60

Miscellaneous:

Repairs	\$5,353 59	
Fuel	7,857 69	
Janitors	5,585 55	
Other	8,128 85	
	<hr/>	\$26,925 68

Total	\$153,210 57
-----------------	--------------

Current expenditure, <i>per capita</i> , of school population, five to fifteen	\$14 98
Expenditure, <i>per capita</i> , of pupils enrolled in public schools .	14 83
Expenditure, <i>per capita</i> , of average attendance in public schools	21 72
Expenditure, <i>per capita</i> , of population between six and sixteen	17 92
Expenditure, <i>per capita</i> , of population between six and sixteen including interest on value of all school property at 7 per cent.	25 57

REMARKS ON THESE STATISTICS.

The valuation of school property, which was last year . . .	\$907,650 95
Has been reduced, chiefly by the fall in the price of lands, to .	898,316 96
But the real value of the property for school purposes is no less than before; indeed, it is greater by the amount expended in permanent repairs.	

The ordinary expenses of the schools, exclusive of repairs, is	138,001 46
A reduction from last year of	426 86
Including ordinary repairs, the cost is	143,355 05
A reduction from last year of	2,399 68
The average cost, per scholar, in all the schools, based upon the larger sum, is	20 07
Against a cost the previous year, on the same basis, of . . .	20 69

The rate of decrease is about the same—a little over three per cent.—as that of the salaries at City Hall for the year 1876, excepting the police.

The High School, which is considered an expensive institution, has cost	17,169 15
A reduction from the previous year of	1,079 55
This, divided by the average number belonging to the school, 314, shows a cost per scholar of	54 68

Which is less than the cost last year	4 38
In the cost of tuition the reduction is still greater:—	
Teachers' salaries, Dec. 1, 1874	14,600 00
Number of pupils in school 316	
Tuition per scholar	46 20
Teachers' salaries, Dec. 1, 1875	14,050 00
Number of pupils in school 360	
Tuition per scholar	39 03
Decrease in tuition per scholar	7 17
In a private school of equal pretensions the charges per scholar would not be less than \$40 a term, or per year .	160 00
Against the cost in this school of	54 68

The financial aspect of schools will be discussed at length further on. The number of

SCHOOL HOUSES

is the same as last year; but the number of rooms occupied is greater by seven; and including recitation rooms, by eleven. This includes the rooms finished in the upper stories of several school-houses, and the room hired at New Worcester. It would not only have improved the schools in the neighborhood, but also have been a measure of true economy, to have erected, during the past year, the school house on Southgate street, called for by the School Board. The erection of that house, the removal of the old one to Lamartine street for a primary school, and the alteration of the old house at East Worcester so as to provide four good rooms, are matters now before the City Council by your recommendation; and it is very desirable that these improvements be made the coming year.

When a city has attained its growth, or while it is steadily growing, there is no difficulty in providing necessary school accommodations; but when there is a depression in business, as at present, it is not possible, in all cases, to predict with certainty whether there will be an increase of pupils in a given locality. There is no doubt, however, that an enlargement of the Pleasant street school house will be necessary within a year or two. The population in that neighborhood is liable to less fluctuation than in most parts of the city. The highest grade of school in that

house is the fifth. Pupils from that neighborhood in the higher grades have to be distributed among the surrounding schools; and when they reach the ninth grade there is no permanent school which they can attend nearer than Dix street or Woodland street. By extending the building on the west end, four good rooms and a basement for a playroom, could be built at a small cost; and there could then be in the house a school of each grade.

No change has been made in the

ORGANIZATION OF THE SCHOOLS,

the past year, except the opening of a new ninth grade at Walnut street, and first grade schools at New Worcester, South Worcester, East Worcester and Edgeworth street. There were more than three hundred pupils of the ninth grade at the beginning of the fall term, making an average of more than fifty each for six schools. It is not expected that so many of this grade will be found in school next year, and we shall probably return to the original number of ninth-grade schools. The aggregate

NUMBER OF PUPILS

in all the day schools is fifty-eight less than last year; while including the evening schools and the drawing schools there has been a decrease in the whole number registered of two hundred and fifty-four. On the other hand, the average number belonging to the schools, which is the real number for whom schools and teachers must be provided, has increased eighty-six; and in the day schools, the increase is one hundred and eighty-four; while the average daily attendance has increased one hundred and forty-one—showing a decrease in the daily absence of eighty-one.

This relative increase of the daily attendance to the number belonging, and of the number belonging to the number enrolled, is obviously a hopeful sign. At the close of the Fall term there were in attendance at school three hundred and twenty-six more pupils than at the corresponding time last year. Some of the schools became crowded in consequence; and a few new schools

were opened, by which, of course, the expenses of this department of the city government were unavoidably increased. At the

HIGH SCHOOL

the statistics show two encouraging features : first, an increase in the number of boys ; and second, an increase in the number at the close of the year, though the whole number registered was nineteen less than the year before. Only thirty-seven have dropped out of the school against one hundred and nine, the year before. The average age of pupils in this school is seven months greater than last year. The *second form* of *Statistics* is made for the sake of convenience in making comparison with other cities.

THE PER CENT. OF ATTENDANCE.

The object of statistics of school attendance is, in the first place, to show what amount of absence and tardiness is unavoidable, and what is the consequent loss which the pupils must sustain ; and, in the second place, to furnish a healthy stimulus to avoid further loss. Every parent ought to cause his child to be in school promptly every day when he is well ; he ought also to keep him at home when sick. Unfortunately, in many cases parents are neglectful and indifferent about the punctuality of their children ; and the children, perceiving the low estimate in which regularity of attendance at school is held, in comparison with trifling calls in other directions, come to regard absence and tardiness as of little account, and thus gradually lose their interest in study and in school. The record of attendance shows to what extent this state of things exists ; it would be well to distinguish the necessary from the avoidable absence and tardiness.

It is presumed that the teacher makes use of every influence at his command—ambition, the call of duty, the love of approbation, the hope of reward, the fear of loss and disgrace or even of penalty, all judiciously applied—to secure good attendance among scholars. Then, when all this has been done, the record

is only an exhibit of the facts. But to secure a fine record is not an end in itself; and when a pupil goes home because he is late, preferring to be absent rather than to be tardy, or when he drags himself to school when he is too sick to sit up, in order to avoid a mark on the record book, then the evil is not less than if he remained at home when he ought to be in school; and the teacher will take care that his conception of his duty in respect to attendance is corrected. "Schools are not kept in order to secure perfect attendance; good attendance is sought in order that we may have the best schools."

It will be seen by reference to tables further on that the per cent. of daily attendance to the number belonging to the schools is 92.5. Probably 95 is as large a per cent. as could possibly be obtained in all the grades throughout the city without injury to the pupils; and in almost every school there are a few scholars who, often unnecessarily, reduce the per cent. the other two and a half; but in order to compensate for these it is not wise to urge the others beyond their ability.

In the High School where the pupils are older, a larger per cent. is to be expected; it has reached 98.1. Here as elsewhere, no doubt, a large portion of the absence is chargeable to a few pupils, and much of theirs may have been unnecessary. With the majority, therefore, the attendance is quite as likely to have been more regular than was judicious, as to have been less so. It is certain that, if equally distributed among the pupils, the absence has not been greater than should be expected; for it is not the object of any public school to secure the daily attendance of every pupil regardless of all other considerations.

It would not be just to construe these remarks as favoring in the least any laxity in respect to the punctuality of pupils able to be in school; they only claim a wise indulgence for those who may need it.

In a table further on, showing the absence and tardiness for the last nine years it will be seen that the number of tardinesses for each scholar the past year is less than in any other, and the number of absences less than in any year except 1874.

THE COURSE OF STUDY.

A revised plan of studies in the Grammar and Primary schools was prepared, and proof sheets were placed in the hands of teachers at the beginning of the year. By this plan the ground covered by each grade was definitely marked out and, in most studies, divided by subjects into term and half-term work. It was the design to hold a written examination, uniform for all schools of the same grade, twice a term; but this has been accomplished only in part. At the close of the school year the opinion of each teacher was sought on the practical working of the plan. The general response was that, in one or more studies, the class under consideration had not completed the work assigned, for the reason that the requirements of the previous year as laid down in this plan had not been completed.

The committee to whom the matter was referred decided therefore to defer a further revision till the plan as proposed should continue in operation another year. At the close of the school year, in June, the criticisms of teachers will again be called for and a revised plan will doubtless be adopted, which shall be more in accordance with what is desirable and what is possible.

In the management of schools, next to securing the best teachers, there is nothing of more importance than the wise distribution and order of studies; and on this very question, as well as on others of vital interest to our schools, there is a wide diversity of opinion among those who are presumably the best informed. By the theory of one, stubborn facts only, and for the most part those cognizable by the senses, should, it would seem, be kept before the mind of a child, in order to exorcise those phantoms of the imagination which so often mislead him; by the theory of another, the mere facts and the reasoning upon them, are not appropriate for young children; and the imagination should be cultivated, not suppressed. Between these opposite views there is probably in practice more agreement than appears in the theory; and it is with the practical part that we have chiefly to do, since the best theory is inoperative, if not well applied. What might or should be done in the schools if all the conditions were favorable, is quite a different thing

from what can be done, taking things as they are and must remain. Hence in marking out a course of studies it is quite as important to consider what is feasible as what is theoretically best.

In one of our schools a class in arithmetic have learned all the processes in fractions and can obtain results with surprising correctness and rapidity. It is very doubtful whether they understand thoroughly all the philosophy of these problems; it is somewhat doubtful whether they are capable of fully understanding them. Now the question is whether they ought to have pursued this study without fully mastering its philosophy; and here the doctors differ. Whatever may be best for pupils who are able to begin and continue their education at leisure through all its stages, children who can remain in school but a few years, ought to master the fundamental processes of arithmetic, learn to read, spell, draw and write tolerably, and acquire at least a moderate facility in the correct use of the English language—whatever else they accomplish or neglect.

THE SEWING SCHOOL.

This school, in the Lamartine street school-house, meets every Saturday afternoon for about four months in the year. It is composed of girls, eight to twelve years old, from the public schools, who are supposed to be destitute of instruction in this useful accomplishment at home. The teachers are ladies who give their time for this object, simply for the love of it; and any one who takes the trouble to inspect the work of this school will pronounce the good accomplished not inferior to that of many a more ostentatious kind of benevolence. The school began with 37 pupils and closed with 132. The cost of material was \$117; the number of garments made, 294; and the average cost of each was 30 cents. The whole cost of the school was about \$200; of this sum, \$100 was paid by the city, and the balance was contributed or solicited from others, by the ladies who have so generously carried it on.

The school has been re-opened the present winter with a still larger attendance, and \$200 have been appropriated for its support.

Sewing has also been introduced, on trial, under the efficient control of a lady member of this board, into a school of the second grade, with authority to expend a sum not exceeding \$25 in making the experiment.

FREE EVENING DRAWING CLASSES

have been opened upon substantially the same plan as last year ; the attendance is not so large as in the previous year, and consequently the cost per scholar has been somewhat increased. It should be borne in mind that this school is not a necessary part of the public school system ; it has been opened for the benefit of the manufacturing portion of the community, and is a means of increasing the general prosperity of the city ; the city is required by law to maintain it ; the school board merely carries it on for this purpose ; but it benefits the other schools, especially through the Free-Hand classes, by the instruction of a number of the teachers.

DRAWING NOT A MERELY ORNAMENTAL STUDY.

All the pupils in the public schools pursue the study of drawing, under the direction of a special teacher, because this is a comparatively new study, just as they practice penmanship. Facility in drawing and in perceiving what a drawing represents, is as necessary, for communicating and receiving ideas, as facility in writing and reading what is written. This study was introduced in response to a demand for practical studies, and it is eminently practical, if only for its direct aid to a pupil in learning to write ; but it has a higher value in opening the eyes to a correct perception of forms, and in training the hand accurately to delineate them ; and in the more advanced stages, even in our schools, it has developed, in many a child, the creative power of designing combinations for ornament and beauty, that cannot fail

to be profitable in the manufacturing industries of the city ; not to speak of the satisfaction that a child so educated retains as a constant companion. What secures the market for the manufactures of Great Britain and France ; the fabrics, the machinery, the jewelry, and the countless articles, both useful and ornamental, which we find in our houses ? It often turns upon the artistic design, the element of beauty which those articles have incorporated in them—something about them which catches the eye and pleases the fancy. In many an instance a country has found at an international exhibition, that her manufactured products were falling behind in the competition for the markets of the world, and has sought and found a remedy in the cultivation of taste and the art of design among her people. This principle holds true of a municipality ; especially of one dependant largely, like ours, upon its manufactures.

Not one article in a thousand exposed for sale in our shops and stores is destitute of some element, in shape, in color or in other visible feature, that is not essential to its primary and legitimate use. This element, whatever it may be, has been introduced as a tribute to the universal love of beauty ; and it secures the sale of the merchandise. In every manufactory the same is true. A little scroll on a plow-beam or a mowing-machine, the curve in the leg of a lathe or a loom, where a straight leg would be no less serviceable, the carved figure on a stove plate, the narrow red lines on a picture frame, the gilding and the variety of polished woods in the interior of a railway car, the ornamental painting of furniture,—these are a few of the obvious instances under our own eyes and in our neighbors' factories, where taste and beauty contribute to pecuniary profit ; a little reflection will multiply the instances indefinitely. The workmen who contribute the artistic finish command the highest wages. Who are these men ? Where but little skill is required they may be Americans, though we are more likely to find them foreigners. In such a place as the Print Works at Southbridge we are sure to find a European ; it is safe to assume that no one born in this country makes the patterns for the Crompton Carpet Factory in this city ; and these men must be well paid. Not only for creating producers, but for securing good buyers also this finer sense must be cultivated ; otherwise

a community would soon afford a market for every ugly product, fit for barbarians only.

It would be inexcusable thus to refer again to these oft-repeated considerations, were there not now a class of pseudo-economists seeking to raise a cry against drawing as an "ornamental study," when it alone, of all the studies in our schools, directly affects the chief industries of the city.

The cost of instruction in this branch of study, including the salary of the special teacher and a part of the ordinary expense of the schools proportionate to the time consumed, is between four and five thousand dollars, or considerably less than one dollar for each pupil.

This pecuniary view is the only one which a mercenary people could appreciate; but ability to make money is not the only or the chief consideration. A child is not well brought up who has been merely clothed and fed like a favorite pet animal; it is as bad to starve his mind as to withhold his daily food. In every person there is a sense of the beautiful that craves gratification and needs to be cultivated. All nature has been so contrived as to administer to this want. The graceful foliage of trees and plants, the green fields, the gray rocks, and the blue waters that cover the landscape, the majestic sweep of hills and valleys, and mountains outlined against the sky, and the ever-changing forms of the floating clouds, contribute to the comfort and happiness of man as really as that small portion of the fruits of the earth which he can devour as food, or convert into covering and shelter for his body; and we wisely spend money through the Commission of Shade Trees and Public Grounds to secure this kind of enjoyment.

Statistics show that insanity is increasing at a fearful rate among business men; and the cause is found in the incessant application and ceaseless cares which they are obliged to endure in the hurry for wealth. Europeans, we are told, spend more time in recreation and holidays; and we in this country must do the same, it is said, or go to ruin. Is it better that our people should find recreation in bull-fights and cock-fights like the inhabitants of Spain and Mexico, or even in the exciting and

unnatural scenes of the drama ; or is it better that our children should be so taught that they may see and find rational enjoyment in the beauty which nature has spread about them with lavish hand ? It is not difficult to decide which of these two sorts of recreation will most contribute to the making of good citizens, which it is the object of public schools to produce.

MUSIC

too is one of the studies pursued in our schools objected to as “ ornamental.” A few thousand dollars are expended annually in giving instruction in this branch of study to about one-eighth of our population—from fifty to seventy-five cents apiece reckoning, as in drawing, the cost of the special teacher and a fair proportion of the other expenses of the schools ; and who can doubt that this small outlay is more than justified in the greater capacity for enjoyment among the thousands of children growing up here, and the consequent elevation in the moral tone of the community ? Let any doubter compare, if he is able, the exquisite satisfaction and the humanizing influence of a single performance of Thomas’ Orchestra, which could be appreciated by none but a cultivated community, with the brutal gratification and the demoralizing tendency of the Spanish arena !

No extravagant expenditure, let it be observed, is here advocated for this or any other branch of study ; but it is claimed that the small sum appropriated for instruction in drawing and music, is not applied to a less useful and necessary object than the amount expended in teaching arithmetic and grammar ; even an elegant use of English and scientific accuracy in accounts, might with equal propriety be decried as “ ornamental.” If a sincere desire for liberal culture—and to this these studies tend—had grown up in this country in the place of avarice, men would not have been so often swept onward to forgery and fraud.

THE FINANCIAL ASPECT.

The recent depression in business has called public attention to the heavy municipal and State debts and the burdensome taxes.

In looking for an opportunity to retrench, the eye is at once attracted to the amount spent yearly for schools. The conclusion is natural to those not well informed of the facts, that a reduction should first be made from the largest expenditure. It is our duty to make known the facts.

What created the debts? Not the schools. The amount expended for schools has been paid by taxes each year. If extravagant school houses have been erected, it was not done by the school authorities, but by the towns themselves or the city councils.

In a neighboring city, of seventeen thousand inhabitants, rejoicing in a new charter, water-works have been constructed large enough to supply a city of one hundred thousand people; bridges, halls, streets, sewers, etc., have been built on the same scale. Thus the debt was created. Alarmed at its magnitude, the people first demanded, of course, a large reduction in the cost of schools; but upon investigation it was found that if the other branches of the city government had been conducted like the schools, the present exigency would not have arisen; and they concluded not to cripple the usefulness of the schools to the permanent injury of their children. The same may be true in other cities.

The cost of schools is increased by the very causes that reduce expenses elsewhere. Business is dull; laborers are plenty; wages, low. The markets are glutted; trade is light; merchandise, cheap. All this diminishes the cost of carrying on every other department of public affairs; but children out of work go to school. The attendance was larger by more than three hundred the last term of the present year than for the corresponding term last year; and the demand for teachers is consequently greater instead of less.

The salaries of teachers in this city have always been low in comparison with other cities of its size and wealth, and the work required of them. From time to time those among the best have been called away by larger salaries; and not a few have refused a larger salary elsewhere in order to remain near their friends from either necessity or choice. To make a general

reduction in the salaries would deprive us of some of the best teachers, and work injustice to others.

These salaries are not large in proportion to the wages of other employés. A gentleman here keeps two fine horses, and pays the groom \$600 a year to take care of them. A multitude of men are ready to do the work for \$300, but he dares not trust his fine animals in unskilful or untried hands. On the adjoining lot is a school of fifty children whose training for a year—at the most impressible period of their lives—is intrusted to a teacher whose yearly salary is \$500. This lady has spent years in preparation for her work, either in the High School or Normal School, or in previous teaching. Are these children less dear to their parents than the gentleman's horse is to him? Does their proper training require less skill; is the teacher's salary high in proportion to the pay of the other; and shall the people's agents secure inferior training for the children, when the people themselves will not trust fine horses to inferior grooms? Let the parents make answer.

In the matter of school-houses, it has been suggested, if not in salaries, the school committee may have been extravagant. In the first place, the committee have no discretion on this subject except to point out the need of more accommodations and to approve the plans of the proposed house when submitted to them; with the manner of finishing, whether costly or cheap, they have nothing to do. In the second place, excepting the High School house, which is elegant, no school house in the city is in the least extravagant except for its general cheapness, and the use of stoves to save the cost of furnaces or steam. In the report of our schools for the year 1869 it was remarked, as gentlemen visiting us have observed, that “you will search the country in vain for a city which has, in the space of five years, furnished more numerous, more comfortable, and more inexpensive school sittings, than has this city.”

It is better, as has been done here, to provide good teachers for the children than to furnish elegant houses; but since there is an impression that the houses have perhaps cost too much, a comparison is in order. Passing up Beacon street a stranger

inquired what beautiful school house stood on the corner of La Grange street. He learned that no such fine architecture and finish is to be found in any Grammar school house, as in the house of Fire Engine No. 2. On John street is the house of the Babcock Extinguisher, with its varnished walls, its baths, its hall and other appurtenances, certainly not inferior to those of the Dix street school near by. Nobody would furnish less for the firemen; nobody should object, if the children were cared for as well.

The rate of increase in the cost of schools while the city was growing in wealth and population, from 1850 to 1874, has been much less than in the ordinary expenses of the other departments of the city government, as appears in a table further on. It is as follows:—

From 1850 to 1860, Schools . .	76.	Other City Expenses	106.
“ 1860 to 1870, “ . .	259.	“ “ “	625.
“ 1870 to 1874, “ . .	23.	“ “ “	32.

The actual cost of the schools, including ordinary repairs, was less in 1875 than in 1874, by \$2,399.68, while the number belonging to the schools and the daily attendance was larger.

The total expenditure was greater by \$4,176.26 because nearly nine thousand dollars was expended in permanent repairs and new furniture; about one thousand dollars was paid for rent that properly belongs to the charges for maintaining a City Hall; and sixteen hundred and fifty-two dollars paid in 1874 from the income of the State school fund, by a change in the law was not received in 1875.

Are we spending too much money for schools? No doubt we are, remarked a gentleman whose annual tax is \$1,200. He has not visited one of these schools for ten years; he is not acquainted with a single teacher, and knows nothing of the value of their services; he has never sent a child to the public school. His only daughter was educated in private schools for the twelve years more or less, of her school life, at an average yearly cost of \$200. At this rate the public schools would have cost, the past year, \$1,433,000 instead of one-tenth of that amount. Another

gentleman whose tax is about twice as large, has a daughter who was educated in the public schools at an average yearly cost of about twenty dollars, and while in the High School of fifty-four dollars; there is no evidence that her education is inferior to that of the first gentleman's daughter. Here is a saving of two thousand dollars, a large part of which would have been sent out of the city but for our public schools. There are hundreds of such cases. In one of our schools, a few years since, a dozen pupils could be counted representing more than a million dollars. By maintaining a high degree of excellence in our schools—and this cannot be done by any penny-wise policy—all classes find it for their interest to patronize them, and floods of money are saved. It is possible that close inspection might lead the gentleman quoted above to modify his opinion.

It is by no means certain that any or all of these considerations will affect those men, if such there be, who cannot look beyond the \$143,355.05 which the schools have cost; but we do hope that all good citizens, interested in the real prosperity of the city, may be led to take more interest in these schools, and while encouraging no needless or extravagant expense, that they may give countenance to a wise liberality in the support of a system of schools whose whole aim and influence is so beneficent.

GRADATION OF SALARIES.

Minimum \$500; *Medium* \$550; *Maximum* \$650.

As pointed out in the report for the year 1874, a new rule was adopted in May of that year for fixing salaries of assistant teachers, in schools below the High School, by length of service and real success in teaching, instead of by grades. The effect of the rule, when fully carried out, is not to increase the aggregate of salaries, but to raise those of teachers of superior merit, and to retain at a lower point those of inexperienced or only moderate teachers. The salaries of five teachers have been fixed at the maximum, as appears from the following

REPORT OF THE COMMITTEE ON TEACHERS.

“Under the Rules, Chap. III, Sec. 4, it is made ‘the duty of this committee to inspect the qualifications of any teacher in respect to the following particulars: 1st, Successful experience; 2d, Scholarship; 3d, Ability to interest and instruct pupils; 4th, Executive tact; 5th, Health.’

After this inspection has continued through a period of six months, a report may be made, certifying that the teacher in question has been so examined and is, in the opinion of the committee, worthy of the maximum salary. In case a similar report be made concerning the teacher at least six months after the date of the first, the board may fix the salary at the maximum. In accordance with the provisions of this rule, the committee have thoroughly inspected some of the teachers, and partially inspected a great many others. At the meeting of this board, July 6th, the first report was made relative to eleven of the teachers examined. The second report is now submitted upon five of those eleven; these reports are signed by the several members of this committee who visited the teachers in question, and their salaries may now, under the rule, be fixed at the maximum.

We wish to remark that, of the remaining six from those named in the first report, the inspection has not yet been completed; and of the others, partially examined, in some cases the committee will not recommend them for the maximum; while in other cases the question is still undecided.

The rule was made upon the assumption that teachers ought to be paid according to merit and not by grades; and the further assumption that it is possible for a committee—three of whom are always to be members from the previous year, and who are assigned to this duty only—to decide upon the relative merits of these teachers. Whether this can be done remains to be seen. There are indications that it can be done. The committee has, during the past year, made many hundred visits; the result of each inspection has been reported in the meetings of the committee and carefully recorded. Each member forms an independent opinion; and at the end of the six months the results are compared and a decision is reached in each case. No such thorough examination of the relative merit of teachers could have been made before. Each member of the board is assigned as special committee to some half-a-dozen schools; and though generally changed each year to other schools, he rarely sees any except those to which he is assigned—almost never any considerable part of them. Thus it happened that only the Superintendent was familiar with all the schools. By this rule, if nothing more is gained, a whole committee takes into view the whole corps of teachers. They can help at the annual election in weeding out such as may be incompetent, and in encouraging the excellent.”

This report was adopted early in the year 1876.

The ground here taken, that skill and not grade merely ought to determine the salary of a teacher, is not only eminently reasonable but has the endorsement of the best educators. In his

recently published book on *The True Order of Studies*, Dr. Thomas Hill, late President of Harvard University, says :

“ Nevertheless the education of the first years of life is, in many respects, more important than any which follows. There can be no doubt that early impressions are very deep, and exert great power over the subsequent life, physical, intellectual and moral. Every observer knows the difficulty of correcting the moral habits of a spoiled child. The difficulty of correcting his intellectual habits, although less apparent, is as real. For this reason, I have endeavored to persuade the school committees with which I have been connected, to secure the highest talent and pay the highest wages in schools for the youngest pupils; convinced that this would, in the end, most truly elevate the character of the whole community.”

This opinion is becoming universal among those who have considered the subject.

THE HIGH SCHOOL.

In describing the school system of the city for the year, there is no reason for making special reference to this one of the Common schools, except that standing as it does at the head of the system, its pupils, unlike those of any other school, come from all parts of the city; and here, to quote the late Mayor Blake, is seen the perfect fruit of the educational tree. The custom of thus singling out the High School, and of making for it the special provisions which its rank at the head of the system makes necessary, has led to a wide-spread misapprehension of what such a school is; and even the propriety of maintaining it at the public charge has of late been called in question by an eminent scholar. In the discussion of various questions relating to public schools, also, the common schools and the High School are often loosely spoken of as if the latter were not a part of the former. The term common schools, if it has any specific meaning, must be synonymous with public schools, or those supported by a general tax for the benefit of the whole community.

What then is a High School? It is claimed by some that this is a school of a different order from the others; that it ought to have a high standard of admission, independent of what

may be the course of study and training in the lower schools; that its object should be high culture in distinction from the mere drill expected, as it is assumed, in the schools of lower grade; and that its privileges only pupils of superior ability should enjoy. If this claim be admitted, the next position which the claimants often take is easily carried, viz: that it is not right to maintain this exclusive institution by public tax. The High School is

THE HIGHEST GRADE

in the system of public schools. The rank of these schools, the standard of admission, and what they attempt, is not at all uniform even in this State; much less throughout the country. What may be said of the High School in Boston or Cambridge, may not be true of the one in Worcester or in Grafton. The law of this State does indeed require that

“Every town may, and every town containing five hundred families or householders, shall maintain a school to be kept by a master of competent ability and good morals, who, in addition to the branches of learning before mentioned, shall give instruction in general history, book-keeping, surveying, geometry, natural philosophy, chemistry, botany, the civil polity of this Commonwealth and of the United States, and the Latin language; for the benefit of all the inhabitants of the town. And in every town containing four thousand inhabitants, the teacher shall be competent to give instruction in the Greek and French languages, astronomy, geology, rhetoric, logic, intellectual and moral science and political economy.”

But to what extent pupils will seek this instruction depends almost entirely upon the character of the schools below. Hence in practice the High School is only the upper round in the ladder; and high is only a relative term when applied to a public school.

THIS IS ITS POSITION HISTORICALLY,

as appears in the law of 1647, establishing public schools which has never been repealed except to be re-enacted in a different form:

“And it is further ordered, that where any towne shall increase to the number of 100 families or householders, they shall set up a grammar school, the

master thereof being able to instruct youth so farr as they may be fited for the university; provided, that if any towne neglect the performance hereof above one yearë every such towne shall pay 5^s to the next schoole till they shall perform this order."

WHY ABOLISH THE FREE HIGH SCHOOL

after it has been maintained continuously nearly two hundred and fifty years? The arguments for such an innovation were set forth in the *Atlantic Monthly* for June, 1875. They are these:

It is not unreasonable that the community should bear the whole cost of giving all children that amount of elementary training [reading, writing, arithmetic, geography, etc.] on the ground that so much is necessary to the state. It is by no means necessary to do this. Above this limit education is continued by the voluntary act of the child's parents; and since the benefit accrues partly to the State, and partly to the individual, he should pay a part of the cost. The free school, devised for a homogeneous community, was at its origin, a common want, and was supported by common sacrifices; and this description no longer applies to Massachusetts cities and towns. A large part of the population pays no taxes, casts no votes and makes no contribution whatever to the cost of educating their children, even when that education is carried far above the compulsory limit. There is no distinction in theory between giving all school-children their books [and the higher education] at the public expense, and in giving the children their shoes and their parents soup at the public charge. Bright children of very poor people may be carried further [in their education] at the public charge as a reward of merit.

WHY IT SHOULD NOT BE ABOLISHED.

If there is one thing settled beyond dispute in the history of this country, it is that popular education is a necessity, to be provided for by the State—that is the sovereign people—as really as the police, or any other concern about which the functions of government are exercised. In every period of our history, in the Farewell Address of Washington, and in the National and

State constitutions and the laws, this principle is recognized. The experience of other nations has shown that education "generally diffused among the people" can not be secured in any way but through the action of government; and in more than one country a system of public schools similar to ours has recently been established. It cannot be said, therefore, that elementary education at the public charge is unnecessary, especially in a republic like ours. It is also just as necessary for the prosperity of a community that some of its citizens be well and even highly educated, as that all should be taught something; hence the higher education as well as the elementary, should be secured by public action. Now, it is said that this advanced training is a greater benefit to the individual than to the community. This is doubtful when we contemplate a community entirely destitute of educated men; but if true, the same is not less true of the elementary education; hence the cost of that also ought to be paid by the individual, and free schools abandoned; and this is the conclusion, the Q. E. D., to which the logic of the opponents of high schools leads.

Though the free school system may have been devised for a homogeneous community, it is not less but rather more necessary, in a population very heterogeneous where each male citizen twenty-one years old, has a ballot. It is still a common want and supported by common sacrifices; for there is no considerable portion of the population who pay no taxes, and all aid in the support of schools to a larger or smaller amount, just as all are entitled to vote. Suppose there are those who are honest and too poor to pay any tax; should their children be deprived of all education, or of the higher? If the parents are dishonest, all the more necessity, in the interest of the community, that the children should be well trained. Will any one advocate the doctrine that a man's right to the privileges of education is in proportion to the amount of his taxes, and that a boy has a right to be educated only when his father is rich? So it appears. But such is not the genius of our institutions. The poor boy does not receive his education as a charity, but as a right; if he happens to be bright he is not now pushed forward through the classes as a superior kind of

•pauper; and in our public schools there are none of the demoralizing effects said to flow with public soup.

By law the rights of property are secured; and the same law recognizes the principle that the property of the State should educate the children of the State. The man who has reared a family of honest children, at great expense, is not obliged to see them grow up in ignorance if he will make the sacrifice, which is not inconsiderable, of supporting them while they remain in school; and he has contributed to the welfare of the community not less than his neighbor who has, in the same time, amassed a fortune.

Such being the status of a child with respect to education, why should the higher be denied to all whose parents are not able to pay for it, or who cannot themselves earn it by superior merit? The sentiments quoted above against the higher education, were not entertained by the early presidents of the most venerable institution of learning in our State; and the changes in our population, from immigration and other causes, only render the diffusion of intelligence the more imperative. Nor were those views held by that sturdy old democrat, Thomas Jefferson, as appears in this language of his:—

“* * * whence it becomes expedient for promoting the public happiness, that those persons whom nature hath endowed with genius and virtue should be rendered, by liberal education, worthy to receive, and able to guard the sacred deposit of the rights and liberties of their fellow-citizens, and that they should be called to the charge without regard to wealth, birth, or other accidental condition or circumstance. But the indigence of the greater number, disabling them from so educating at their own expense those of their children whom nature hath fitly formed and disposed to become useful instruments of the public; it is better that such should be sought for and educated at the common expense of all, than that the happiness of all should be confided to the weak or the wicked.”

ELEVATING INFLUENCE ON OTHER GRADES.

Besides the value of the High School in furnishing to all classes of the community the best kind of training—so that those whose means would allow them to send their children to the best institutions, find it both agreeable and profitable, in a majority of

instances, to retain them at home; and others enjoy that which otherwise they could not possibly obtain—it has a most important use in its influence upon the lower grades. The character and tone of every school in the city is elevated by this, as a goal to which every pupil may aspire. This important consideration has been set forth at length in a former report and need not be repeated. To give it force

THE CONNECTION MUST BE INTIMATE.

If it comes to be understood that between the grammar school and the high school there is a broad hiatus, a chasm which one-half or even one-third of those who attempt it with the advice of their teachers, fail to pass, a smaller number will come to the verge each year, and fewer still will attempt to cross over. In this way the school partially fails to accomplish its mission both in the training of those pupils and in drawing on others through the lower schools. This state of things is inevitable unless the teachers of each school are familiar with the work of the other. In order to render the connection close between this and the grammar schools, and the transit easy, the following rule for promotions was adopted and put in practice for the first time this year:—

CHAP. VII. SEC. 4. At the close of the school year there shall be an examination of the scholars of the ninth grade of the grammar schools in the studies of the year—that of each school to be conducted by the teacher of the same—under supervision of the Superintendent and one member of the High School Committee. The three acting together, or a majority of the same, shall sign and give a certificate of graduation to all scholars who pass a satisfactory examination. At the time of such examination, and, in special cases, at other times, scholars other than members of the ninth grade legally entitled to attend school in Worcester, may apply to be examined, and the Superintendent shall assign them for examination in all the studies of the grammar schools, to some one of the grammar masters, under the same supervision as aforesaid; and all such scholars passing a satisfactory examination shall receive a certificate of the fact, signed as aforesaid. Holders of either kind of certificates, and no others, shall be admitted to the High School; but applicants for admission to an advanced position in the High School shall also be examined by the teachers of that school in the studies passed over by the class to which they apply to be admitted.

At the Anniversary of the school the present year the following were the

EXERCISES OF GRADUATION,

Monday Evening, July 5, 1875.

MUSIC.

1. *Singing: Hail Columbia.*
2. *Welcome, with Essay: Higher Education for Girls—*
By Florence Madilla Scofield.

MUSIC.

3. *Poem: The Power of culture—*By Frederick Oscar Downes.
4. *Singing: So merrily over the ocean spray.* *Richards.*
5. *Valedictory, with Essay: The High School for the Many.*
By Arthur Anderson Brooks.
6. *Singing: O vales with sunlight smiling.* *Mendelssohn.*

MUSIC.

7. *Presentation of Diplomas, with Address—*By His Honor, the Mayor.
8. *Class Song.*
9. *Address to the Graduates—*By Hon. Alexander H. Bullock.
10. *Singing: Old Hundred.*

CLASS SONG.

BY ELLEN LOUISE TIFFANY.

MUSIC BY ARTHUR HUDSON HARRINGTON.

I.

Coming on our parting night,
Speaking now to every heart,
Here we find three sisters bright,
Hope, Sweet Mem'ry, and Regret.

II.

Mem'ry points to happy time,
Four glad years filled full with joy;
Sorrow like a mournful chime
Ever sings an undertone.

III.

Hope, the laughing sister fair,
Beckons on to fairy-land,
Hides all sorrows waiting there,
Strews the opening way with flowers.

IV.

Mem'ry, paint the picture oft!
Sorrow, soften its bright tints!
Hope, still point to heights aloft,
Greater blessings to be reached!

GRADUATES.

Walter Melville Anthony.	Jennie Adaline Hammond.
Edward Herbert Atherton.	Arthur Hudson Harrington.
Ward Baldwin.	Charles William Harwood.
Ella Bancroft.	Mary Sutton Hill.
Frank Woodbridge Barbour.	Mary Elizabeth Holbrook.
Lucy Barton.	Annie Beatrice Hopkins.
Addie Jane Booth.	Ida Frances Jackson.
Annie Hall Boynton.	Addie Eliza Kendall.
Arthur Anderson Brooks.	William Alfred Lapoint.
Anna Theresa Cavanaugh.	Eliza Josephine Stella Lawler.
Lizzie Edwina Chapin.	Katie Ann McCarthy.
Josepha Percey Chase.	Armina Lilian Paul.
Jennie Cora Clough.	Ella Eugenia Raymond.
Edwin Merrick Dodd.	Florence Madilla Scofield.
Mary Rebecca Doherty.	Frederic Warren Smith.
Ellen Teresa Dolan.	Lucius William Smith.
William Joseph Dower.	Charles Elliott St. John.
Frederick Oscar Downes.	John Alden Thayer.
Rosie Hannah Fish.	Ellen Louise Tiffany.
Frank Evarts Fitch.	Annie Teresa Timon.
Jennie Kittredge Follansbee.	Ellen Walker.
Katie Anna Follon.	Lucie Emilie Walker.
Henry Goodwin Gale.	Jennie Warriner Woodward.
Gertrude Hakes.	

OBITUARY.

On the 25th of February, 1875, died SAMUEL V. STONE, Secretary of the School Board since January, 1866, and a member of the board for about twenty years. During this long period he was actively identified with the management of the schools, and especially with all their prudential affairs. He was distinguished for fidelity, integrity, impartiality and frankness in the discharge of his duties ; and at his death these excellencies were recognized in appropriate resolutions, and his funeral was attended by the board.

Of his associates in office, those who knew him intimately, most highly valued his substantial worth and his undeceptive friendship.

HISTORY OF THE SCHOOL SYSTEM.

The most successful management of a system of schools requires that the various theories concerning the education of children, should be corrected by experience or tested by practice, before they are generally adopted. Many a plan has been invented for improving schools which appeared excellent until it was tried; and then it failed. A careful study of the records of this board will disclose the fact that several experiments have been tried and abandoned periodically, of course at a great loss. Hence, in order that successive school boards may profit by the experience of their predecessors, it is necessary that the doings of each year should be fully recorded, and that the principles upon which the action was based should be explained.

History repeats itself in other places not less than in school boards; and the history of schools from the first settlement of the town, if commonly understood, might be useful in many ways. Referring to the early days of the eighteenth century, Lincoln's History of Worcester contains the following:—"A fluctuating currency scarcely served for the supply of the necessaries of life. The planters of Worcester, feeling the burden of sustaining elementary education without immediately realizing the resulting benefits, failed to give practical operation to the enlightened views of the founders. In this respect they could have shown the example of elder and more wealthy neighbors in extenuation of the negligence." Yielding to despondency, the friends of education allowed their short-sighted opponents to prevail; and in December, 1726, a vote was passed on the question whether the school should be continued, that "y^e Town will not have a School—it past in y^e Negative." The following year the town having been "presented" for neglecting the instruction of youth, 16£. 8^s. was voted for the support of schools, and 2£. 8^s. 6^d., more than one-eighth of that sum, was appropriated to defray the cost of the prosecution. This experience seems to have satisfied the inhabitants that the wisest and the most economical plan was to support the schools and to provide a "suitable person to be school master;" and they subsequently took care to comply with the law.

A second unsuccessful attempt against the free public schools was directed against the High School, then known by the name of Grammar School; and "In 1766 the representative at the General Court was instructed to endeavor 'that the law requiring a Latin Grammar School be repealed, and that not more than one such school should be kept in a county;' and, in 1767, to use his exertions to relieve the people from the great burden of supporting so many schools of this description, 'whereby they are prevented from attaining such degree of English learning as is necessary to retain the freedom of any state.'"

At the present day, under a similar depression in business and a somewhat similar fluctuation of the currency, the descendants of those old economists who subjected the town to heavy costs, by their parsimony, have come to light. They attack the High School on a similar pretence; if they would not abandon public schools as an unnecessary expense, they would so cripple them by insufficient appropriations that "suitable persons" could not be employed for teachers; and this would amount to the same thing.

To guard against a niggardly policy respecting schools the history of those schools may be useful; to guard against extravagance it may be no less so.

As our forefathers built up a nation in the wilderness and laid the enduring foundations of a government one hundred years ago, and thus earned immortal fame; so within the limits of this city, the people, one hundred and fifty years ago, inaugurated the custom of maintaining free schools, which has been continued without interruption to the present day; and about fifty years ago there was a wonderful revival of interest in the subject, led on by such men as Sam'l M. Burnside, A. Bancroft, Levi Lincoln, Otis Corbett, Jona. Going and Sam'l Jennison, and from this interest grew up our school system in its present form. This system was copied from no other; it grew up out of the necessities of the case and was directed by the inspiration of genius.

The American system of schools, as at present understood, had been introduced in no place, with the possible exceptions of Providence and Boston, earlier than in this town; and the men who gave it to the country are worthy of our gratitude in this centennial year, not less than the originators of our form

of government. To trace the growth of this system would be both interesting and useful. In an appendix to this report will be found the outline of that history.

It is again my pleasant duty, in closing, to thank you, ladies and gentlemen of this board, and the parents, teachers, and pupils of this city, for the support, the courtesy and kind consideration which has rendered it possible for me, even respectably, to perform the delicate and difficult duties of this office.

Respectfully submitted.

ALBERT P. MARBLE,

Superintendent of Public Schools.

464 Main Street,
WORCESTER, Feb., 1876.

SECRETARY'S REPORT.

FINANCIAL STATEMENT.

RESOURCES.

Balance unexpended November 30, 1874	\$4,645 22
Appropriation by City Council	149,800 00
Books sold	464 43
Salaries refunded or not claimed	82 13
Labor and materials	11 36
Old desks sold	43 00
Stove sold	50 00
Old iron	66 44
	<hr/>
	\$155,162 58

EXPENDITURES.

Salaries of Teachers	\$110,345 52
Salary of Superintendent	3,000 00
Salary of Secretary (S. V. Stone in part) and Clerk	1,067 25
Salary of Truant Officers	2,016 60
Fuel	7,857 69
Janitors	5,585 55
Cleaning buildings and yards	1,011 50
School books	3,041 23
Stationery	708 75
Apparatus	374 17
Printing and advertising	1,190 53
Brooms, brushes, mats, etc.	321 41
Miscellaneous	1,481 26
	<hr/>
Ordinary expenses	\$138,001 46
Ordinary repairs of School houses	\$3,249 77
Ordinary repairs of Stoves	1,365 65
Ordinary repairs of Furniture	738 17
	<hr/>
Total for repairs	5,353 59
	<hr/>
	\$143,355 05

EXTRAORDINARY EXPENSE.

PERMANENT REPAIRS.

Sycamore street School-house, slating and snow guard	\$584 92
Summer street, fence	139 50
Thomas street, Iron Cornice and painting roof	217 10
South Worcester:	
New school-room	353 90
Cess-pool	80 40
Introduction of City Water	35 24
New Worcester, fence	70 95
Adams Square, shingling	109 90
Valley Falls, shingling	50 17
Dix street, new school-room	300 02
Ledge street, new school-room	318 76
Edgeworth street, new school-room	174 24
Woodland street, basement and ceiling	143 83
Setting and covering fountains at High School	262 25
	<hr/>
	\$2,841 18

NEW FURNITURE.

New desks	\$3,914 74	
Patterns for desks	542 45	
New stoves	636 28	
Furniture in Supt's Office	874 31	
Stove sold	50 00	
	<hr/>	
		\$6,017 78
Rents		946 31
Insurance		50 25
		<hr/>
		\$7,014 34
Extraordinary expense		<hr/>
		\$9,855 52
Total expenditure		<hr/>
		\$153,210 57
Balance unexpended transferred to sinking fund		<hr/>
		\$1,952 01

STATISTICAL TABLE

SHOWING THE NUMBER, ATTENDANCE, ETC., OF THE PUPILS IN THE PUBLIC SCHOOLS, FOR THE YEAR ENDING DEC. 1ST, 1875.

SCHOOLS.	TEACHERS.	ENGLISH AND CLASSICAL HIGH SCHOOL.															REMARKS.		
		Joseph W. Fairbanks,																	
		444	214	230	313.8	308.1	98.1	394	360	161	152	183	178	174	.56	1322	4.3	16.5	
GRAMMAR SCHOOLS. GRADE IX.																			
Belmont St.	Preston D. Jones,	72	34	38	50.2	49.2	97.8	19	50	33	24	27	27	17	.34	386	7.8	14.8	{ Opened, Sept. 1875.
Dix	George R. Chase,	70	37	33	53.8	50.8	94.6	22	50	21	21	26	16	9	.18	1164	22.7	14.1	
Woodland	Edward I. Comins,	62	21	41	47.3	45.7	96.5	30	48	13	16	21	26	39	.83	616	13.5	15.4	
Lamartine	Charles T. Haynes,	66	40	26	32.9	31.7	96.1	28	54	13	10	16	14	13	.41	463	14.6	14.9	
Ledge	Charles C. Woodman,	72	39	33	46.0	44.0	96.0	44	50	15	12	14	29	68	1.54	772	17.5	15.4	
Walnut	Edward P. Elliot,	54	26	28	50.1	47.0	93.8	33	49				13	18	.38	325	6.9	15.5	
		396	197	199	280.3	268.4	95.8	176	301	95	83	104	123	164	.61	3726	13.9	15.1	
GRAMMAR SCHOOLS. GRADE VIII.																			
Belmont St.	Mary H. Warren,	62	31	31	42.7	41.7	97.6	9	46	22	25	21	16	27	.65	387	9.2	13.1	Sept. 1875.
Thomas	Harriet G. Waite,	49	27	22	38.8	37.3	96.1	7	39	20	20	23	18	43	1.15	579	15.5	13.1	
Dix	Eldora M. Aldrich,	70	38	32	47.6	45.5	95.5	18	53	7	10	8	15	18	.40	811	17.8	14.3	
Walnut	Etta A. Rounds,	51	28	23	42.6	40.1	94.1	12	44			23				312	7.5	14.3	
Sycamore	Abbie E. Clough,	100	53	47	52.5	48.6	92.3	9	39	21	32	18	4	52	1.07	1501	30.9	13.10	
Woodland	Ann S. Dunton,	62	34	28	47.7	46.5	97.5	16	50	22	14	25	28	23	.50	1505	32.6	14.2	
Lamartine	Persis E. King,	92	67	25	30.2	28.2	93.3	16	32	13	8	10	8	50	1.77	786	27.8	14.6	
Ledge	Margaret M. Geary,	57	34	23	39.2	37.6	95.9	8	44	9	13	13	19	63	1.68	614	16.3	14.7	
So. Worcester	Carrie A. George,	47	23	24	31.0	29.7	95.8	6	28	10	10	14	7	34	1.15	503	16.9	13.4	
New Worcester	Charlotte H. Munger,	55	26	29	28.0	26.7	95.2	5	40	9	2	5	14	25	.94	504	18.9	13.9	
		645	361	284	400.3	381.9	95.4	106	415	133	134	137	152	335	.87	7502	19.6	14.0	

GRAMMAR SCHOOLS. GRADE VII.

Belmont	Sarah L. Phillips,	56	32	24	45.3	42.4	93.5	6	42	16	18	16	12	49	1.16	1019	24.0	13.4
Thomas	Amanda M. Phillips,	55	37	18	34.5	32.2	93.3	5	34	10	7	11	18	45	1.39	888	27.6	13.9
Dix	Josephine M. Wilson,	52	33	19	40.3	38.5	95.7	3	44	17	12	16	9	26	.68	695	18.0	13.2
Walnut	Nellie C. Thomas,	50	24	26	42.7	40.6	95.1	0	42	15	19	16	20	9	.22	810	19.9	12.5
Sycamore	Minnie F. Whittier,	43	26	17	40.7	38.7	95.5	13	38	14	12	10	18	33	.85	780	20.1	13.0
Woodland	Jennie I. Rice,	42	26	16	39.0	38.6	98.8	13	36	14	21	25	20	39	1.01	543	14.1	13.8
Lamarine	Fanny S. Holman,	35	26	9	35.0	34.1	89.3	3	36	10	6	3	1	94	2.75	343	10.2	13.3
Ledge	Maria P. Cole,	67	46	21	39.7	37.8	93.2	6	50	9	11	14	20	67	1.77	733	19.4	13.4
Quinsigamond	Sarah F. Carpenter,	40	31	9	30.0	28.0	93.0	3	31	11	9	9	9	28	1.60	768	27.4	12.0
		440	281	159	347.2	330.9	95.3	52	353	116	115	120	127	390	1.17	6579	19.9	13.1

GRAMMAR SCHOOLS. GRADE VI.

Belmont	Tirzah S. Nichols,	63	28	35	46.3	44.4	95.8	0	48	15	19	15	8	20	.45	733	16.5	12.6
Thomas	Anna J. Hitchcock,	51	32	19	35.3	34.3	94.8	5	43	9	19	15	16	39	1.13	386	11.2	12.11
Dix	Minnie Meade,	61	28	33	44.9	40.8	93.2	2	49	14	13	10	21	17	.42	1579	38.7	12.11
Walnut	Kate A. Meade,	65	29	36	44.6	42.0	94.1	2	49	20	26	26	24	26	.62	1003	23.9	11.6
Sycamore	Ann E. McCambridge,	62	26	36	50.0	46.6	93.2	2	55	17	17	19	9	68	1.45	1309	27.9	12.4
Woodland	Mary M. Lawton,	65	41	24	47.4	44.6	93.9	3	49	22	26	18	27	53	1.19	1083	24.2	11.6
Lamarine	M. Ella Spalding,	59	43	16	33.1	30.7	92.8	5	33	8	3	6		120	3.81	926	30.1	12.9
Washington	Mary A. Harrington,	36	25	11	32.3	31.4	97.3	0	33				11	33	1.04	112	8.5	12.2
Ledge	Eliza E. Cowles,	45	36	9	41.3	39.9	96.5	4	34	20	16	16	17	46	1.13	540	13.5	13.0
Salem	Albert P. Doe,	70	46	24	43.0	40.2	93.4	7	50	13	9	7	19	18	1.43	1081	24.3	12.5
New Worcester	S. Lizzie Carter,	60	28	32	33.4	36.3	94.4	0	44	13	7	13	21	50	1.33	817	22.5	12.1
South Worcester	M. Louise Rice,	84	50	34	42.3	39.4	92.8	0	49	15	14	3	10	82	2.03	1122	28.5	11.1
East Worcester	Ella W. Foskett,	67	47	20	43.5	38.6	88.9	5	50	10	6	7	7	303	7.84	1891	49.0	12.11
		788	459	329	542.4	509.2	93.9	35	586	176	175	155	196	1038	2.03	12582	24.1	12.4

Sept. 1875.

SECONDARY SCHOOLS. GRADE V.

Belmont	Abbie J. Reed,	64	35	29	47.2	45.3	95.9	0	50	15	10	16	27	66	1.23	733	16.2	11.9
Thomas	Abbie C. Souther,	63	33	20	42.1	41.0	97.3	1	41	4	12	13	14	89	2.17	425	10.4	13.8
Edgeworth	Ella E. Roper,	58	35	23	39.3	36.2	92.1	0	52	13	6	8	5	75	2.07	1184	32.7	11.9
Dix	Abbie N. Hoxie,	57	35	22	47.2	44.5	93.4	0	48	11	13	16	4	13	.29	1050	23.6	13.2
Pleasant	Ella L. Dwyer,	53	29	24	48.1	45.2	93.9	0	52	16	19	20	8	16	.35	1119	24.7	11.6
Sycamore	Susie A. Partridge,	64	34	30	46.9	43.7	93.3	1	50	10	7	10	13	87	1.76	1248	28.5	11.0
Woodland	Carrie R. Clements,	67	34	33	50.2	47.4	94.5	1	55	18	16	16	23	58	1.22	1081	22.8	11.5

SCHOOLS.	TEACHERS.	SECONDARY SCHOOLS. GRADE V. CONTINUED.													REMARKS.			
		Whole number registered during the year.	Males.	Females.	Average number belonging for the year.	Average attendance.	Per cent. of attendance.	No. over 15 years of age.	Number belonging at the close of the year.	PERFECT IN ATTENDANCE.				Number of cases of tardiness.	Average to each scholar for the year.	No. of ½ days' absence.	Average age Dec. 1st, 1875.	
SECONDARY SCHOOLS. GRADE IV.																		
Ledge	St.	66	38	28	51.8	47.3	93.7	0	49	19	14	19	18	56	1.18	1737	36.7	11.4
Providence	"	59	46	13	40.5	37.5	92.5	0	42	3	6	6	11	72	1.92	1158	30.9	11.3
Salem	"	68	26	42	46.4	43.1	92.7	1	54	11	15	13	19	153	3.55	1274	29.5	11.0
Ash	"	57	35	22	45.4	41.6	91.6	0	47	15	9	14	10	129	3.10	1467	35.3	11.1
Washington	"	67	46	21	44.2	39.1	88.3	2	47	5	7	8	3	137	3.19	1984	57.4	12.4
Union Hill	"	45	20	25	34.3	31.4	91.7	1	43	6	3	7	10	136	4.33	1119	35.6	9.7
Quinsigamond	"	42	24	18	30.7	28.5	93.0	0	36	7	9	6	7	79	2.74	836	29.3	10.4
South Worcester	"	71	37	34	51.2	48.2	94.1	0	54	11	13	20	19	71	1.47	1058	21.9	10.11
East Worcester	"	61	31	30	45.7	42.6	93.2	1	54	3	2	1	9	321	7.52	1197	28.1	11.9
		962	538	424	711.2	662.6	93.3	8	774	167	163	193	200	1558	2.34	18670	28.1	11.8
SECONDARY SCHOOLS. GRADE IV.																		
Belmont	St.	59	27	32	50.0	48.8	97.6	0	49	25	29	28	35	25	.51	464	9.5	10.1
Thomas	"	60	39	21	46.4	42.6	91.8	1	45	19	7	5	10	96	2.23	1467	34.4	10.10
Dix	"	66	28	38	41.5	39.5	93.9	0	50	4	3	4	15	14	.35	772	19.5	9.7
Pleasant	"	54	25	29	47.9	45.0	94.0	2	51	14	17	18	20	28	.62	1119	24.9	9.11
Walnut	"	54	32	22	45.6	41.7	91.2	0	49	9	14	12	27	60	1.26	1505	36.1	10.7
Sycamore	"	60	36	24	49.7	45.0	90.5	0	54	8	8	4	21	77	1.63	2814	62.5	10.4
Woodland	"	71	41	30	53.6	49.9	93.0	0	58	16	20	26	8	92	1.74	1447	28.9	10.2
Lanartine	"	64	48	16	51.8	46.8	89.0	3	47	12	11	19	12	150	3.09	1945	41.5	10.5
Ledge	"	55	37	18	42.9	39.7	92.6	1	47	19	18	8	12	94	2.24	1235	31.1	9.8
Providence	"	58	45	13	41.3	39.3	95.0	1	45	22	18	17	69	1.65	770	19.6	10.9	
Ash	"	54	36	18	44.1	40.4	91.5	0	48	8	7	13	302	7.50	1428	35.3	10.7	
East Worcester	"	57	38	19	45.2	42.5	93.5	0	47	13	7	4	7	230	5.24	1037	24.4	10.2

Lamartine St.	F. Belle Perry,	100	73	27	61.4	52.385.2	0	73	7	9	14	16	195	3.53	3513	67.26.3	
Ledge	Mary V. Callaghan,	51	33	18	39.6	37.795.1	0	43	9	8	30	22	55	1.35	733	19.47.0	
"	Emma C. Maynard,	64	43	21	45.3	41.190.8	0	53	9	6	17	18	81	1.87	1621	39.46.2	
Providence	S. Cornelia Maynard,	55	38	17	46.1	41.289.5	0	40	10	5	19	19	151	3.66	1891	45.97.8	
"	Alice G. McMahon,	71	47	24	50.8	46.691.7	0	57	13	3	18	23	68	1.46	1621	34.85.9	
Ash	Mary J. Packard,	37	28	9	38.0	35.492.9	0	33	6	6	6	4	241	6.70	1004	28.37.4	
"	Sarah J. Melaney,	68	40	28	43.0	40.093.0	1	51	2	1	7	7	334	8.25	1158	28.95.10	
"	Effie J. Phelps,	86	49	37	58.8	52.288.9	0	59	13	7	24	13	172	3.29	2548	48.86.7	
Salem	Mary E. Russell,	54	34	20	57.4	53.893.7	0	47	9	6	19	11	376	6.88	1386	23.97.5	
East Worcester	Aloysia Radcliffe,	75	30	45	84.2	72.986.6	0	45	18	10	22	21	257	3.52	4362	59.86.4	
"	Mary J. O'Connor,	46	30	16	53.5	51.796.6	0	42				20	45	.87	145	2.86.1	Sept. 1875.
"	Ada E. Simonds,	38	23	15	33.4	32.396.7	0	38				5	46	1.42	77	2.35.6	Sept. 1875.
Adriatic	Sarah J. Morgan,	67	30	37	47.6	42.388.8	0	48	6	0	1	7	224	5.31	2062	48.76.8	
South Worcester	Mary C. Paige,	62	32	30	46.9	41.287.8	0	55	3	10	7	6	168	4.08	2206	53.56.9	
"	Alice E. Johnson,	31	13	18	28.0	25.189.7	0	25			18	4	26	1.03	574	22.85.9	
New Worcester	Ada L. Sherman,	51	27	24	40.8	34.083.4	0	47	0	0	3	5	205	6.02	2638	77.67.1	Sept. 1875.
		1756	976	780	1388.3	1243.489.5	1	1384	177	143	354	344	3856		3.10	52705.4	36.3

SUBURBAN SCHOOLS.

Northville	Eudora A. Dearborn,	46	26	20	34.1	30.088.0	2	35	3	2	5	2	116	3.87	1599	53.1	9.6
Tatnuck	Helen H. Welsh,	51	34	17	30.5	28.098.6	12	33	11	5	10	9	84	3.00	983	35.1	10.6
Valley Falls	Sarah A. Bullock,	62	34	28	39.5	37.289.5	2	48	5	3	12	15	224	6.02	904	24.3	10.1
Leesville	Eliza J. Scaver,	33	20	13	17.9	16.491.7	0	21	4	5	9	3	92	5.60	592	36.1	8.6
Bilthewood	Anna M. Bemis,	38	17	21	23.0	22.095.6	5	26	10	0	2	0	111	5.04	380	17.2	11.0
Bloomingtondale	Olive G. Davis,	46	29	17	29.4	26.991.8	0	34	3	4	8	5	86	3.11	980	36.4	9.3
Adams Square	Kate A. Curtis,	40	22	18	35.7	29.883.6	4	30	0	1	0	0	208	6.87	2242	74.5	9.6
Burncoat Plain	Nellie J. Spurr,	54	33	21	31.3	27.688.7	10	39	0	0	2	1	300	10.56	1328	48.0	10.8
North Pond	M. Lizzie Vaughan,	32	14	18	22.0	19.086.3	7	22	0	1	2	3	100	5.06	1188	58.8	10.0
Chamberlain	Mary F. Barker,	14	10	4	11.0	9.284.0	0	12	0	0	2	1	68	7.32	706	75.6	8.2
		416	239	177	274.4	246.189.6	42	300	36	21	52	39	1389	5.64	10902	44.3	9.8

ABSENCE AND TARDINESS.

YEARS.	Average number be- longing.	Number of half- days absence.	Average to each Scholar.	Number of cases of Tardiness.	Average to each Scholar.
1867	5343	189,225	35.6	30,727	6.4
1868	5874	225,284	38.5	29,457	5.6
1869	6097	195,159	32.0	27,422	5.0
1870	6385	216,096	33.7	25,710	4.6
1871	6588	233,852	34.6	23,707	4.0
1872	6238	243,575	39.0	21,608	3.9
1873	6180	184,148	29.8	11,132	2.0
1874	6521	166,591	24.2	15,656	2.6
1875	6705	188,438	28.1	15,648	2.3

STATISTICAL TABLE,

*Showing the Expenditures of the City Government for Schools,
School Houses, Water, Sewers, and other expenses,
from 1850 to 1876.*

Years.	Schools.	School Houses.	Water.	Sewers.	Other Expenses.	Total.
1850	\$ 19,009 11	\$ 12,282 57	. . . . .	. . . . .	\$ 44,012 53	\$ 75,304 20
1851	14,007 65	11,785 91	. . . . .	. . . . .	55,016 77	79,085 25
1852	19,070 00	4,442 56	. . . . .	. . . . .	60,471 54	83,948 10
1853	21,165 55	. . . . .	. . . . .	. . . . .	66,906 32	88,068 32
1854	24,505 62	9,624 36	. . . . .	. . . . .	102,514 89	136,644 89
1855	29,915 59	9,813 44	. . . . .	. . . . .	88,197 30	127,926 30
1856	29,992 00	2,053 47	. . . . .	. . . . .	78,627 76	110,673 23
1857	32,280 90	4,100 00	. . . . .	. . . . .	80,569 19	116,949 19
1858	30,504 09	4,346 09	. . . . .	. . . . .	64,199 93	99,050 51
1859	35,370 98	7,915 98	. . . . .	. . . . .	77,346 87	120,633 61
1860	33,497 00	. . . . .	. . . . .	. . . . .	90,727 51	124,224 51
1861	33,771 00	9,963 74	. . . . .	. . . . .	76,816 46	120,551 20
1862	34,581 00	4,500 00	. . . . .	. . . . .	89,312 99	128,393 99
1863	36,383 00	19,191 34	. . . . .	. . . . .	87,092 14	142,666 48
1864	46,210 00	. . . . .	. . . . .	. . . . .	81,647 19	127,857 19
1865	51,712 00	15,844 27	\$ 81,986 86	. . . . .	137,303 92	286,846 78
1866	71,101 04	26,443 66	107,318 37	\$ 2,118 49	178,908 10	385,889 66
1867	75,857 12	35,043 64	87,814 20	79,745 00	172,390 81	450,852 77
1868	86,424 52	47,482 00	47,448 90	120,754 82	241,256 44	543,366 68
1869	97,651 82	101,351 87	118,673 20	221,793 88	306,451 57	845,922 34
1870	120,438 60	138,997 09	150,463 42	369,746 00	658,592 47	1,438,237 58
1871*	119,715 98	93,524 52	111,282 30	255,657 34	666,354 80	1,245,264 94
1872†	144,352 03	41,349 71	142,085 78	152,916 22	638,416 77	1,120,120 51
1873†	153,003 89	†23,873 87	133,841 93	84,570 58	648,189 39	1,043,479 66
1874	148,455 60	. . . . .	163,549 56	84,226 07	870,684 90	1,166,916 13
1875	143,355 05	9,855 52	111,095 07	55,996 97	567,531 13	887,833 74

* Eleven months. † Auditor's statement.

† Lot on Summer Street, bought by Mayor and Aldermen.

TABLE

*Showing the Nationality of Parents of Scholars in the
Public Schools.*

SCHOOLS.	TEACHERS.	U. S.	Ireland.	Canada.	England.	Germany.	Scotland.	France.	Other Countries.
HIGH.									
Walnut st.,	Joseph W. Fairbanks,	285	64		1	4	2		4
GRAMMAR, GRADE IX.									
Belmont st.,	Preston D. Jones,	41	6		2	1			
Dix st.,	George R. Chase,	44	4		2				
Walnut st.,	Edward P. Elliot,	34	9		2	4			
Woodland st.,	Edward I. Comins,	41	1	2	1				3
Lamartine st.,	Charles T. Haynes,	22	24	1	4	2			1
Ledge st.,	Charles C. Woodman,	19	27	1	3				
		201	71	4	14	7			4
GRAMMAR, GRADE VIII.									
Belmont st.,	Mary H. Warren,	38	4	3	1				
Thomas st.,	Harriet G. Waite,	7	28			3	1		
Dix st.,	Eldora M. Aldrich,	38	8		4	2			1
Walnut st.,	Etta A. Rounds,	39	1	1	2	1			
Sycamore st.,	Abbie E. Clough,	34	2		2	1			
Woodland st.,	Ann S. Dunton,	43	4	2			1		
Lamartine st.,	Persis E. King,	8	16		3	2	2		1
Ledge st.,	Margaret M. Geary,	12	28	1	2		1		
So. Worcester,	Carrie A. George,	8	19		1				
New Worcester,	Charlotte H. Munger,	29	6		5				
		256	116	7	20	9	5		2
GRAMMAR, GRADE VII.									
Belmont st.,	Sarah L. Phillips,	31	7	3	1				
Thomas st.,	Amanda M. Phillips,	8	25					1	
Dix st.,	Josephine M. Wilson,	32	9	1	2				
Walnut st.,	Nellie C. Thomas,	41			1				
Sycamore st.,	Minnie F. Whittier,	27	8		2				1
Woodland st.,	Jennie I. Rice,	29	5	2					
Lamartine st.,	Fannie S. Holman,	11	23	1		1			
Ledge st.,	Maria P. Cole,	20	28		1		1		
Quinsigamond,	Sarah F. Carpenter,	8	18	1	4				
		207	123	8	11	1	1	1	1
GRAMMAR, GRADE VI.									
Belmont st.,	Tirzah S. Nichols,	26	14		1	3	3		1
Thomas st.,	Anna J. Hitchcock,	14	24	2	1	2			
Dix st.,	Minnie Meade,	31	11	3	2	1		1	
Walnut st.,	Kate A. Meade,	44	2			2	1		
Sycamore st.,	Ann E. McCambridge,	39	9	4	1				2
Woodland st.,	Mary M. Lawton,	38	6	1	2		1		1
Lamartine st.,	M. Ella Spalding,	8	16	5	1		2		1
Washington st.,	Mary A. Harrington,	2	26	2	2		1		
Ledge st.,	Eliza E. Cowles,	14	16	2	2				
Salem st.,	Albert P. Doe,	12	30	2	2	1			3

SCHOOLS.	TEACHERS.	U. S.	Ireland.	Canada.	England.	Germany.	Scotland.	France.	Other Countries
New Worcester,	S. Lizzie Carter,	18	12	10	4				
So. Worcester,	M. Louise Rice,	8	34	4	2		1		
E. Worcester,	Ella W. Foskett,		48					1	1
		254	248	35	20	9	9	2	9
SECONDARY, GRADE V.									
Belmont st.,	Abbie J. Reed,	35	10	2	3				
Thomas st.,	Abbie C. Souther,	16	22		1	2			
Edgeworth st.,	Ella E. Roper,	2	45	1		1			3
Dix st.,	Abbie N. Hoxie,	38	8		2				
Pleasant st.,	Ella L. Dwyer,	50	2						
Sycamore st.,	Susie A. Partridge,	34	6	1	4	2	2		1
Woodland st.,	Carrie R. Clements,	41	9	3	2				
Ledge st.,	Hattie E. Clarke,	15	29		2		3		
Providence st.,	L. Elizabeth King,	16	18	3	2	1			2
Salem st.,	Mary O. Whitmore,	26	21	1	1	3	1		1
Ash st.,	Mary J. Mack,	8	32	4	1	2			
Washington st.,	Janet Martin,	7	26	2	4	3	2	1	2
Union Hill,	Mary A. Tyler,	28	10	1		1			3
Quinsigamond,	Jennie P. Fiske,	6	27		3				
So. Worcester,	Ellen M. Boyden,	5	37		10	2			
E. Worcester,	Annie Brown,		54						
		327	356	18	35	17	8	1	12
SECONDARY, GRADE IV.									
Belmont st.,	Esther G. Chenery,	35	7	6			1		
Thomas st.,	S. Lizzie Wedge,	13	22	7		2		1	
Dix st.,	Ellen E. Daniels,	43	4		2				1
Pleasant st.,	Eunie M. Gates,	47		1	1				2
Walnut st.,	Ella M. McFarland,	44		4		1			
Sycamore st.,	Hattie A. Smith,	36	10	1	3	1	2		1
Woodland st.,	Martha T. Wynan,	41	9	1	3		1		3
Lamartine st.,	Louise A. Dawson,	2	32	4		7	1		1
Ledge st.,	M. Addie Powers,	7	33	1	2		2		2
Providence st.,	Sarah J. Newton,	14	21	7		1	1		1
Ash st.,	Lottie M. Harrington,	5	35	2			3	1	2
E. Worcester,	Tamerson S. Darling,		45						2
E. Worcester,	Julia A. Bunker,		44						1
So. Worcester,	Esther E. Travis,	4	22	9	3	1			
So. Worcester,	Myra J. Denby,	5	31	5	4	1			
New Worcester,	Ella J. Moore,	23	10	9	5				2
		319	325	57	23	14	11	2	18
PRIMARY, GRADE III.									
Belmont st.,	Mary T. Gale,	36	12	3	4		1		
Summer st.,	Abbie A. Wells,	7	19	1	1	3	1	1	
Thomas st.,	Abbie F. Hemenway,	16	19	3	1			1	1
Dix st.,	Susie W. Forbes,	34	10	2	5	2			
Edgeworth st.,	Sarah M. Brigham,	3	40		1				1
Pleasant st.,	Mary L. Norcross,	54	2		1				
Mason st.,	Julia M. Martin,	46	4						1
Sycamore st.,	Sarah W. Clements,	43	12		1				2
Woodland st.,	Maggie I. Melanefy,	42	6		1				1

SCHOOLS.	TEACHERS.	U. S.	Ireland.	Canada.	England.	Germany.	Scotland.	France.	Other Countries.
Lamartine st.,	Mary E. Kavanagh,	33	7	3	4				
Lamartine st.,	Susan M. Buttrick,	5 19	9	3	3				
Ledge st.,	Emma L. Cowles,	8 35	1	2	3		2		
Providence st.,	Anna M. Overend,	11 32	12	2				1	
Ash st.,	Sara A. Harrington,	10 27	4				3		
Salem st.,	Emma I. Clafin,	37 21	2	1	1				
E. Worcester,	Kate C. Cosgrove,	8 38			1				2
New Worcester,	Belle H. Crowell,	11 13	4	2					
Union Hill,	Etha M. Stowell,	15 10		1	2				1
Adriatic,	Amy E. Hopson,	11 30	7	2	2				
So. Worcester,	Libbie H. Day,	11 43	1	6					
Quinsigamond,	Ella M. Bates,	15 36	2	6			1		4
		423	461	58	43	21	8	3	13
PRIMARY, GRADE II.									
Belmont st.,	Carrie P. Townsend,	28 8	6				1		3
Summer st.,	Carrie F. Merriam,	16 14	7	5	1				
Thomas st.,	Hattie W. Bliss,	11 34	13		2				
Dix st.,	Esther B. Smith,	35 7	2	8	1				1
Edgeworth st.,	Jennie E. Maloney,	4 41	1		2				1
Pleasant st.,	Mary E. A. Hoyt,	48 2	2	1					
Sycamore st.,	Emma F. Marsh,	39 15		1	1				
Woodland st.,	Nellie M. Muzzy,	46 10	1	1	1	1			1
Lamartine st.,	Ida A. E. Kenney,	3 25	14	2	5			1	2
Lamartine st.,	Ellen T. Shannon,	7 29	11	2	3			1	1
Ledge st.,	Mary E. D. King,	12 27	4	1	2				2
Providence st.,	Evelyn E. Towne,	12 28	7	3					
Ash st.,	Mattie A. Collins,	13 30	5	1	1	1			
E. Worcester,	Nellie A. Sprout,		44	1	3				
So. Worcester,	Mary S. Eaton,	10 38	4	5					
		284	352	74	35	18	5	2	11
PRIMARY, GRADE I.									
Belmont st.,	Mary E. Deane,	38 15	6	3					2
Thomas st.,	Mary E. D. Cavanaugh,	12 28	2	2			1		
Thomas st.,	L. Ella Hemenway,	18 20	3						
Summer st.,	Lilla F. Upton,	24 29	3	3	1			1	2
Dix st.,	Alice W. Giddings,	39 9	2	5	1	3			1
Edgeworth st.,	Mary A. Gauren,	3 32	2	1					2
Edgeworth st.,	Mary McGown,		23		1				4
Pleasant st.,	Emma J. Norcross,	35 5		2	3				1
Pleasant st.,	Martha E. Amidon,	14 2	1	1	1			1	
Mason st.,	Lucy Lewison,	33 7	6	1	1	1			
Sycamore st.,	Eliza J. Day,	42 15		4	1				
Woodland st.,	Amanda H. Davie,	43 7	1						2
Lamartine st.,	Ida A. Tew,	5 29	13	6	1	1	1	1	2
Lamartine st.,	F. Belle Perry,	4 38	21	3	7				
Ledge st.,	Mary V. Callaghan,	14 26			1				2
Ledge st.,	Emma C. Maynard,	10 33	1	5	1	1			2
Providence st.,	S. Cornelia Maynard,	11 19	9	1					
Providence st.,	Alice G. McMahon,	18 25	9	5					
Ash st.,	Mary J. Packard,	6 23	1	1	2				
Ash st.,	Sarah J. Melanefy,	10 29	2	2	6	2			

SCHOOLS.	TEACHERS.	U. S.	Ireland.	Canada.	England.	Germany.	Scotland.	France.	Other Countries.
Salem st.,	Effie J. Phelps,	30	20	3		6			
E. Worcester,	Mary E. Russell,	4	37	4	1				1
E. Worcester,	Aloysia Radcliffe,	3	40	1	1				
E. Worcester,	Mary J. O'Connor,	10	29	1			1		1
E. Worcester,	Ada E. Simonds,	1	32	3	1			1	
So. Worcester,	Mary C. Paige,	11	31	2	10	1			
So. Worcester,	Alice E. Johnson,	4	15		6				
Adriatic,	Sarah J. Morgan,	7	30	7	2	2			
New Worcester,	Ada L. Sherman,	24	9	13		1			
		473	657	116	65	37	10	4	22
SUBURBAN SCHOOLS.									
Northville,	Eudora A. Dearborn,	35							
Tatnuck,	Helen H. Welsh,	27		4	2				
Valley Falls,	Sarah A. Bullock,	13	10	8	14	1	2		
Leesville,	Eliza J. Seaver,	5	1	14	1				
Blithewood,	Anna M. Bemis,	18			8				
Bloomington,	Olive G. Davis,	17	4	9	4				
Adams Square,	Kate A. Curtis,	29					1		
Burncoat Plain,	Nellie J. Spurr,	25	14						
North Pond,	M. Lizzie Vaughan,	22							
Chamberlain,	Mary F. Barker,	12							
		203	29	35	29	1	3		
AGGREGATE.									
High School		285	64		1	4	2		4
Grammar, Grade IX		201	71	4	14	7			4
“ “ VIII		256	116	7	20	9	5		2
“ “ VII		207	123	8	11	1	1	1	1
“ “ VI		254	248	35	20	9	9	2	9
Secondary, “ V		327	356	18	35	17	8	1	12
“ “ IV		319	325	57	23	14	11	2	18
Primary, “ III		423	461	58	43	21	8	3	13
“ “ II		284	352	74	35	18	5	2	11
“ “ I		473	657	116	65	37	10	4	22
Suburban		203	29	35	29	1	3		
		3232	2802	412	296	138	62	15	96

Of those born in other countries, there were born in Nova Scotia 25, Gibraltar 2, West Indies 2, Norway 6, Mexico 2, New Brunswick 10, Sweden 20, Italy 13, Australia 1, Azores 1, Switzerland 4, Cuba 3, Prussia 1, Denmark 5, Austria 1.

The birth-place of the children in the public schools is as follows:—United States 6,491, Ireland 231, Canada 137, England 114, Germany 8, Scotland 19, France 2, New Brunswick 7, Nova Scotia 4, Prince Edward Isle 1, West Indies 1, Central America 1, South Africa 1, Atlantic Ocean 1, Azores 1, Norway 2, Sweden 21, Denmark 3, Italy 7.

The parentage of children in the Public schools for the last nine years is as follows :

	1867	1868	1869	1870	1871	1872	1873	1874	1875
United States	2448	2617	2742	2704	2862	3028	3017	3075	3232
Canada	224	288	277	387	425	423	448	420	412
Ireland	2509	2547	2800	2888	2763	2920	2702	2744	2802
England	174	209	205	257	250	290	252	257	296
Germany	83	86	97	123	125	140	138	115	138
Scotland	40	46	45	56	68	70	72	60	62
France	10	9	13	9	14	9	17	15	15
Other Countries	6	20	21	30	29	71	42	67	96
Total	5494	5822	6200	6454	6536	6951	6688	6753	7053
United States	2448	2617	2742	2704	2862	3028	3017	3075	3232
Foreign Countries	3046	3205	3458	3750	3674	3923	3671	3678	3821

The above table does not include the scholars in the Evening or Drawing Schools.

TABLE,

Showing the Public Schools of the City, the Grades, the Teachers employed January 1, 1876, and their respective Salaries.

SCHOOLS.	GRADE.	TEACHERS.	SALARY.
	High.	Joseph W. Fairbanks, <i>Prin.</i>	\$3000
	"	Edward H. Rice, <i>Classics.</i>	2300
	"	Nathan H. Dole, <i>Asst. Classics,</i>	1400
	"	Alfred S. Roe, <i>Natl. Science,</i>	1200
	"	Alfred D. F. Hamlin, <i>History,</i>	1000
	"	Caroline V. Aldrich, <i>French,</i>	950
	"	Anne E. Ayers, <i>Asst.</i>	900
	"	Florence V. Beane, <i>Asst.</i>	900
	"	Mary A. Parkhurst, <i>Asst.</i>	900
	"	George E. Gladwin, <i>Drawing,</i>	600
Belmont street,	Grammar IX.	Preston D. Jones, <i>Prin.</i>	2000
"	"	Emma C. McClellan, <i>Asst.</i>	575
Dix street,	"	George R. Chase, <i>Prin.</i>	2000
"	"	Clara Manley, <i>Asst.</i>	575
Woodland street,	"	Edward I. Comins, <i>Prin.</i>	2000
"	"	Annie C. Wyman, <i>Asst.</i>	575
Lamartine street,	"	Charles T. Haynes, <i>Prin.</i>	2000
"	"	Josephine L. Sanborn, <i>Asst.</i>	500
Ledge street,	"	Charles C. Woodman, <i>Prin.</i>	2000
"	"	Hannah N. Johnson, <i>Asst.</i>	500
Walnut street,	"	Edward P. Elliot,	1000
Belmont street,	" VIII.	Mary H. Warren,	575
Thomas street,	"	Harriet G. Waite, <i>Prin.</i>	1350
"	"	Emma J. Houghton, <i>Asst.</i>	575
Dix street,	"	Eldora M. Aldrich,	575
Walnut street,	"	Etta A. Rounds, <i>Prin.</i>	700
Sycamore street,	"	Abbie E. Clough, <i>Prin.</i>	750
Woodland street,	"	Ann S. Dunton,	575
Lamartine street,	"	Persis E. King,	575
Ledge street,	"	Margaret M. Geary,	550
South Worcester,	"	Carrie A. George, <i>Prin.</i>	750
New Worcester,	"	Charlotte H. Munger, <i>Prin.</i>	750
Belmont street,	" VII.	Sarah L. Phillips,	575
Thomas street,	"	Amanda M. Phillips,	575
Dix street,	"	Josephine M. Wilson,	575
Walnut street,	"	Nellie C. Thomas,	575
Sycamore street,	"	Minnie F. Whittier,	575
Woodland street,	"	Jennie I. Rice,	575
Lamartine street,	"	Fanny S. Holman,	550
Ledge street,	"	Maria P. Cole,	575
Quinsigamond,	"	Sarah F. Carpenter, <i>Prin.</i>	600
Belmont street,	" VI.	Tirzah S. Nichols,	575
Thomas street,	"	Anna J. Hitchcock,	575
Dix street,	"	Minnie Meade,	575
Walnut street,	"	Kate A. Meade,	550
Sycamore street,	"	Ann E. McCambridge,	575
Woodland street,	"	Mary M. Lawton,	575
Lamartine street,	"	M. Ella Spalding,	575
Washington street	"	Mary A. Harrington,	575
Ledge street,	"	Eliza E. Cowles,	575

SCHOOLS.	GRADE.	TEACHERS.	SALARY.
Salem street,	Grammar VI.	Albert P. Doe, <i>Prin.</i>	700
New Worcester,	"	S. Lizzie Carter,	575
South Worcester,	"	M. Louise Rice,	550
East Worcester,	"	Ella W. Foskett, <i>Prin.</i>	750
Belmont street,	Secondary V.	Abbie J. Reed,	550
Thomas street,	"	Abbie C. Souther,	550
Edgeworth street,	"	Ella E. Roper, <i>Prin.</i>	575
Dix street,	"	Abbie N. Hoxie,	500
Pleasant street,	"	Carrie E. Gilbert, <i>Prin.</i>	600
Sycamore street,	"	Susie A. Partridge,	550
Woodland street,	"	Carrie R. Clements,	550
Ledge street,	"	Hattie E. Clarke,	550
Providence street,	"	L. Elizabeth King, <i>Prin.</i>	625
Salem street,	"	Mary O. Whitmore,	550
Ash street,	"	Mary J. Mack, <i>Prin.</i>	700
Washington street	"	Janet Martin, <i>Prin.</i>	550
Union Hill,	"	Mary A. Tyler, <i>Prin.</i>	575
Quinsigamond,	"	Jennie P. Fiske,	550
South Worcester,	"	Ellen M. Boyden,	550
East Worcester,	"	Annie Brown,	550
Thomas street,	IV.	S. Lizzie Wedge,	550
Dix street,	"	Ellen E. Daniels,	550
Pleasant street,	"	Eunie M. Gates,	550
Walnut street,	"	Ella M. McFarland,	550
Sycamore street,	"	Hattie A. Smith,	550
Woodland street,	"	Martha T. Wyman,	500
Lamartine street,	"	Louise A. Dawson,	550
Ledge street,	"	M. Addie Powers,	500
Providence street,	"	Sarah J. Newton,	550
Ash street,	"	Lottie M. Harrington,	550
East Worcester,	"	Tamerson S. Darling,	550
South Worcester,	"	Esther E. Travis,	500
"	"	Myra J. Denby,	550
New Worcester,	"	Ella J. Moore,	550
Belmont street,	Primary III.	Mary T. Gale,	550
Summer street,	"	Abbie A. Wells, <i>Prin.</i>	550
Thomas street,	"	Abbie F. Hemenway,	500
Dix street,	"	Susie W. Forbes,	500
Edgeworth street,	"	Sarah M. Brigham,	500
Pleasant street,	"	Mary L. Norcross,	500
Mason street,	"	Julia M. Martin, <i>Prin.</i>	550
Sycamore street,	"	Sarah W. Clements,	550
Woodland street,	"	Maggie I. Melanefy,	500
Lamartine street,	"	Mary E. Kavanagh,	500
"	"	Susan M. Buttrick,	500
Ledge street,	"	Emma L. Cowles,	500
Providence street,	"	Anna M. Overend,	500
Ash street,	"	Sara A. Harrington,	500
Salem street,	"	Emma I. Claffin,	500
East Worcester,	"	Kate C. Cosgrove,	500
New Worcester,	II.	Belle H. Crowell,	500
Belmont street,	"	Carrie P. Townsend,	500
Summer street,	"	Carrie F. Merriam,	500
Thomas street,	"	Hattie W. Bliss,	500
Dix street,	"	Esther B. Smith,	550
Edgeworth street,	"	Jennie E. Maloney,	500
Pleasant street,	"	Mary E. A. Hoyt,	500
Sycamore street,	"	Emma F. Marsh,	500
Woodland street,	"	Nellie M. Muzzy,	500

SCHOOLS.	GRADE.	TEACHERS.	SALARY.
Lamartine street,	Primary II.	Ida A. E. Kenney,	\$ 500
"	"	Ellen T. Shannon,	550
Ledge street,	"	Mary E. D. King,	500
Providence street,	"	Evelyn E. Towne,	500
Ash street,	"	Mattie A. Collins,	500
East Worcester,	"	Nellie A. Sprout,	500
South Worcester,	"	Mary S. Eaton,	500
Belmont street,	" I.	Mary E. Deane,	500
Thomas street,	"	Mary E. D. Cavanough,	500
"	"	L. Ella Hemenway,	500
Summer street,	"	Lilla F. Upton,	500
Dix street,	"	Alice W. Giddings,	500
Edgeworth street,	"	Mary A. Gauren,	500
"	"	Mary McGown,	500
Pleasant street,	"	Emma J. Norcross,	550
Mason street,	"	Lucy Lewisson,	450
Sycamore street,	"	Eliza J. Day,	500
Woodland street,	"	Amanda H. Davie,	500
Lamartine street,	"	Ida A. Tew,	500
"	"	F. Belle Perry,	500
Ledge street,	"	Mary V. Callaghan,	550
"	"	Emma C. Maynard,	500
Providence street,	"	S. Cornelia Maynard,	500
"	"	Alice G. McMahon,	500
Ash street,	"	Mary J. Packard,	500
"	"	Sarah J. Melanefy,	500
Salem street,	"	Effie J. Phelps,	500
East Worcester,	"	Mary E. Russell,	500
"	"	Aloysia Radcliffe,	550
"	"	Mary J. O'Connor,	500
"	"	Ada E. Simonds,	550
South Worcester,	"	Mary C. Paige,	500
"	"	Alice E. Johnson,	450
Adriatic,	"	Sarah J. Morgan,	500
New Worcester,	"	Ada L. Sherman,	500
Northville,	Suburban.	Eudora A. Dearborn,	450
Tatnuck,	"	Helen H. Welsh,	575
Valley Falls,	"	Sarah A. Bullock,	575
Leesville,	"	Eliza J. Seaver,	500
Blithewood,	"	Anna M. Bemis,	500
Bloomingtondale,	"	Olive G. Davis,	550
Adams Square,	"	Kate A. Curtis,	575
Burncoat Plain,	"	Nellie J. Spurr,	500
North Pond,	"	M. Lizzie Vaughan,	500
Chamberlain,	"	Mary F. Barker,	450
	General Assistant.	Caroline H. Metcalf,	600
			Per Ev'g.
Washington street	Evening.	James B. Carroll,	2.00
"	"	Ellen Dolan,	1.00
"	"	Adeliza Perry,	1.00
South Worcester,	"	Henry Mackay,	2.00
"	"	Laura Mackay,	1.00
"	"	Mary E. Fay,	1.00
"	"	Annie Snelling,	1.00
New Worcester,	"	Amelia M. W. Walker,	2.00
"	"	Nellie L. Phetteplace,	1.00
Walnut street,	"	Mary F. Souther,	2.00

SCHOOLS.	GRADE.	TEACHERS.	SALARY.
Walnut street,	Evening.	M. Jennie Barbour,	\$1.00
Summer street,	"	Albert P. Doe,	2.00
"	"	O. M. C. Holman,	1.00
"	"	Sarah A. E. Thompson,	1.00
Walnut street,	Drawing.	George E. Gladwin,	10.00
"	"	Edward F. Tolman,	7.50
"	"	Everett J. Bardwell,	7.50
"	"	Alfred D. F. Hamlin,	6.00
	Music.	Edward S. Nason,	Per Year 1900.00
	Drawing.	Lucius B. Morgan,	1300.00

TABLE

SHOWING THE LOCATION, SIZE AND VALUE OF THE SCHOOL HOUSES AND SCHOOL HOUSE LOTS,
BELONGING TO THE SCHOOL DEPARTMENT.

LOCATION.	Material.	Stories.	Size.	No. of School Rooms.	Condition.	Estimated Value.	Size of Lots, sq. feet.	Estimated value per foot.	Amount.	Total value of Houses and Lots.	REMARKS.
Walnut St.,	Brick	3	130 x 87	14	New,	\$150,000	31,672	\$1 50	\$47,508	\$137,508	New High School Building.
Thomas St.,	"	3	50 x 70	6	Good,	30,000	9,487	1 50	14,210	44,210	" " newly fitted up.
Dix St.,	"	3	75 x 56	10	"	34,500	25,000	75	18,750	38,750	" " "
Woodland St.,	"	3	96 x 60	10	New,	20,000	24,000	25	6,000	40,500	Hall in French roof full size of building.
Ledge St.,	"	2	96 x 60	9	"	28,000	40,000	25	10,000	38,000	" " "
Belmont St.,	"	2	96 x 60	10	"	32,500	40,670	25	10,167	42,667	" " "
Lamarine St.,	"	2	90 x 92	10	"	32,000	31,440	25	7,860	39,860	" " also two sch'l rooms
Sycamore St.,	"	2	96 x 60	12	"	30,000	48,041	20	9,608	39,608	" " three
Providence St.,	"	2	75 x 52	8	Good,	25,000	12,625	1 00	12,625	37,625	Two L's 52x21 feet each.
Pleasant St.,	"	2	62 x 50	8	"	20,000	58,000	50	29,000	49,000	" " "
Salen St.,	"	3	52 x 50	6	"	13,000	17,200	1 25	21,500	34,500	" " "
Ash St.,	"	3	62 x 50	6	"	13,500	12,555	40	5,022	18,522	" " "
East Worcester,	"	3	59 x 51	6	Fair,	13,500	13,400	30	4,020	17,520	" " "
"	"	3	62 x 50	4	Good,	18,000	18,150	40	7,260	25,260	" " "
"	"	3	52 x 30	3	Par.,	5,000	9,060	50	4,080	9,080	" " "
"	"	2	51 x 48	3	"	3,000	18,300	50	9,150	12,150	" " "
Summer St.,	Wood	2	22 x 22	1	"	100	1,517	50	758	858	Not occupied.
Mason St.,	Brick	1	44 x 30	2	Good,	6,000	13,200	15	1,980	7,980	" " "
Orange St.,	"	2	50 x 30	2	"	7,500	7,188	75	5,391	12,891	" " "
Southgate St.,	Wood	2	45 x 30	2	"	3,600	25,000	10	2,500	6,100	" " "
New Worcester,	Brick	2	50 x 36	4	"	10,000	14,900	20	2,980	12,980	" " "
Quinsigamond,	"	2	70 x 32	6	New,	23,000	34,500	5	1,725	24,725	L. 51x33 feet. Hall in French roof
South Worcester,	"	2	73 x 32	8	"	23,000	29,184	10	2,918	25,918	" " Hall and School-Room in [French roof.
Valley Falls,	Wood	2	28 x 22	1	Old,	500	4,988	100	100	600	" " "
Leesville,	"	1	25 x 30	1	"	300	5,050	75	375	875	" " "
Northville,	Brick	1	73 x 30	2	Good,	6,000	34,873	500	6,500	6,500	" " "
Union Hill,	Wood	1	38 x 28	2	"	2,000	11,000	100	1,100	3,100	" " "
Bithewood,	"	1	36 x 28	2	Fair,	1,500	1 acre.	200	1,600	3,100	" " "
Pond District,	Brick	1	32 x 40	1	Good,	3,000	14,000	200	3,200	3,200	" " "
Tatnuck,	"	2	43 x 32	2	"	5,000	11,300	300	3,300	3,300	" " "
Chamberlain,	Wood	1	38 x 22	1	"	1,200	% acre.	100	1,300	1,300	" " "
North Pond,	"	1	40 x 32	1	"	1,600	20,500	300	3,000	3,000	" " "
Burncoat,	Brick	1	31 x 28	1	"	2,500	21,500	300	2,700	3,100	" " "
Adams Square,	"	1	40 x 32	1	Fair,	2,800	22,360	300	3,000	3,000	" " "
Edgeworth St.,	"	2	62 x 50	5	New,	17,000	30,760	5	1,838	18,838	Hall in French roof.
				168		558,600	16 $\frac{1}{2}$ acres.		239,775	824,375	

OTHER SCHOOL PROPERTY.

710 Double desks	\$2,485 00	1363 Erasers	\$204 45
3073 Single desks, old pattern	9,219 00	1056 Slates, small	633 70
2580 Single desks, new pattern	12,900 00	963 Slates, large	770 40
240 Settees in School Houses	1,000 00	51 Numeral Frames	51 00
250 School Chairs	62 50	66 Cube Blocks	16 50
60 Lid Desks	300 00	37 Boxes Form Blocks	74 00
400 High School Desks	2,000 00	73 Pencil Boards	14 60
111 Teachers' Desks	2,220 00	120 Pitch Pipes	24 00
13 Book Cases in School Houses	350 00	2 Boxes Slate Pencils	90
63 Teachers' Tables	315 00	28 Color Charts	35 00
120 Morning Glory Stoves	4,200 00	674 Animal Charts	134 80
5 American Stoves	225 00	141 Clocks	987 00
2 Dauntless "	70 00	47 Bells, large	42 30
1 Lively Times Stove	40 00	149 Bells, table	29 80
2 Silver Moon Stoves	90 00	18 Gongs	108 00
14 Wood Stoves	56 00	148 Thermometers	37 00
13,350 lbs. Stove Pipe	1,068 00	84 Lead Pencils	3 75
360 Elbows	28 80	65 Rubber Erasers	1 30
2600 Feet Chain	104 00	34 Boxes Crayons	5 10
140 Dampers	23 30	4000 Envelopes	6 00
30 Tuttle's Patent Dampers,	24 00	3 1-12 Doz. Class Books	45 75
98 Brooms	29 40	10-12 Doz. Class Books	6 25
157 Floor Brushes	15 70	3 Dozen Square Blank Books	3 00
217 Dust Brushes	54 25	7-12 Dozen Small Blank Books	55
221 Dust Pans	44 20	10 5-12 Doz. Writing Books.	11 25
134 Water Pails	26 80	9 No. 1 Drawing Books.	1 00
315 Dippers	25 20	59 Rulers	2 95
174 Wash Basins	52 20	69 Packages Drawing Paper	8 28
395 Towels	39 50	63 Packages Drawing Paper	5 67
121 Clothes Brooms	12 10	37 Ink Jugs	9 25
155 Mats, large	348 75	83 Ink Fillers	37 35
132 Mats, small	183 00	144 Ink Stands	19 00
119 Coal Hods	95 20	57 Pen Racks	9 50
111 Shovels	30 00	75 Bottles of Colors	7 50
12 Coal Sieves	4 20	12 Palette Knives	1 50
168 Waste Paper Baskets.	84 00	16 Palette Glasses	1 20
792 Chairs	237 60	57 Bibles	14 75
81 Crickets	12 15	92 Testaments	9 20
147 Table Covers	22 00	582 Franklin Primers or 1st	104 76
150 Window Openers	30 00	173 Franklin 2nd Readers.	48 44
27 Balls Soap	1 62	189 Franklin 3rd Readers	83 16
131 Dusters	15 72	175 Franklin 4th Readers	94 50
427 Pointers	46 10	13 Franklin Intermediate Readers	7 40
77 Maps, sets	625 00	93 Franklin 5th Readers	83 70
221 Maps, single	200 00	22 Franklin 6th Readers	23 75
49 Map Stands	147 00	313 Worcester's Primary Spellers	53 20
61 Music Charts	425 00	294 Worcester's Pro. Spellers	158 56
52 Music Stands	104 00	215 Colburn's Mental Arithmetic	62 35
50 Physiological Charts	200 00	322 Eaton's Com. School Arithmetic	161 00
97 Other Charts	30 00	30 Eaton's Elements	9 00
149 Tablets (Reading)	75 00	70 Guyot's Pri. Geography	42 00
149 Tablets (Writing)	20 00	145 Guyot's Int. Geography	145 00
87 Globes	261 00		

72 Guyot's Com. School Geography	\$90 00	37 Hart's Rhetoric	\$37 00
31 Guyot's Gram. School Geography	43 40	5 Bulfinch's Age of Chiv- alry	12 50
12 Guyot's Physical Geog- raphy	14 50	5 Bulfinch's Age of Fable	12 50
113 Kerl's 1st Lessons Grammar	33 90	84 Vols. Reports State Board of Education	84 00
35 Kerl's C. S. Grammar	21 00	2 City Maps, on rollers	4 00
38 Green's Introductory Grammar	11 40	3 Vols. Mann's Report	22 00
46 Kerl's Shorter Course Grammar	16 10	17 Vols. Barnard's Jour- nal of Education	51 00
127 Swinton's Language Primer	35 55	4 Vols. City Documents (bound)	10 00
80 Swinton's Language Lessons	28 00	16 Vols. Mass. Teacher	40 00
32 Swinton's Composition	11 20	24 Vols. Journal American Inst. of Instruction	24 00
40 Anderson United States History	32 00	4 Vols. Annual Encyclo- pædia	15 00
40 Physiology	44 00	1 Vol. Biographical En- cyclopædia	3 00
47 Dictionary, School	18 80	16 Vols. New American Encyclopædia	48 00
19 Dictionary, Academic	30 40	1 Vol. Goodwin's Ency- clopædia	2 75
34 Dictionary, Compre- hensive	42 50	5 Dictionaries, Quarto	40 00
82 Dictionary, Quarto	656 00	1 Anthon Classical Dic- tionary	4 00
52 Gazetteers	260 00	1 Vol. Smith's Art Educ'n	4 00
100 American Encyclopæ- dia, vols.	350 00	1 Vol. History of New England	4 00
48 Chambers' Encyclopædia	189 00	1 Vol. History of Wor- cester	2 00
32 Zell's Encyclopædia, Vols.	320 00	1 American Year Book	2 00
54 Manual Penmanship	16 00	1 Library Atlas	11 50
104 Monroe's Manual	31 00	1 Historical Atlas	1 75
59 Manual of Commerce	59 00	170 Vols. Miscellaneous Books	110 00
94 Sheldon's Manual	94 00	2 Sets Drawing Models	20 00
63 Child's Book of Nature	63 00	Busts and Pictures at Ledge street	25 00
276 1st Music Readers	60 75	24 Pamphlet Cases	12 00
78 2nd Music Readers	22 00	1 Photograph of Wor- cester School Houses	10 00
378 3rd Music Readers	106 00	5 Vols. School Reports (bound)	10 00
34 Int. Music Readers	15 00	Furniture and Gas Fix- tures in Supt.'s Office	930 00
35 Golden Robins	9 00	2 Ink Barrels	3 00
4 Song Wreaths	1 20	1 Ink Tray and Rack	5 00
28 Gow's Morals and Manners	25 00	1 Measure and Tunnel	1 00
42 What to Read	17 00	18 Step Ladders	50 00
45 Wentworth's Examples	22 50	1 Set Models, Drawing	1,500 00
85 Teachers' Guide to Drawing	51 00	1 Set Models, Drawing	150 00
9 Course of Drawing	16 00	100 Drawing Stands	680 00
2000 Drawing Cards and Holders	90 00	200 Chairs, Drawing School	100 00
9 Johnson's Atlas	175 00	100 Drawing Stands	680 00
15 Wickersham's School Economy	15 00	10 Drawing Tables	200 00
36 No. 1 Our World Geog- raphies	24 40	10 Movable Blackboards	20 00
45 No. 2 Our World Geog- raphies	64 50	1 Grand Piano, in High School	1,000 00
20 Higginson's History of United States	20 00	23 Pianos	5,325 00
		3 Organs	225 00

1 Melodeon	\$25 00	10 Feather Dusters	5 00
Piano Covers and Stools . .	50 00	100 Drawing Boards	85 00
1 Set Electrical Clocks in		Busts, Engravings, &c. . . .	150 00
High School	1,000 00	Articles in Janitor's	
1 Bell in High School	1,000 00	Room	15 00
2 Library Tables in High		10 Axes	10 00
School	70 00	1 Window Jack	5 00
8 Teachers' Desks in High		750 Vols. High School Li-	
School	225 00	brary	1,000 00
3 Book Cases in High		250 Vols. Text Books in	
School	300 00	High School	250 00
160 Settees in High School . .	600 00	Philosophical and other	
2 Rocking Chairs	7 00	Apparatus at High	
48 Black Walnut Chairs	120 00	School	3,500 00
18 Oak Chairs	25 00	67 Yards Calico	6 70
86 Common Chairs	43 00	1 Letter Scale	5 00
1 Office Chair	8 00	1 Pair Shears	1 00
2 Blackboards	10 00	1 Letter Press and stand . .	15 00
1 Blackboard Stand	2 00	Ink Stands	1 50
5 Step Ladders	20 00	1 Umbrella Rack	2 00
180 Feet Rubber Hose	20 00	Desks and Lumber in	
2 Carpets	25 00	process of Manufac-	
1 Lounge	25 00	ture at shop	680 00
2 Umbrella Stands	15 00	Tools, &c.	45 00
9 Pen Racks	1 50	575 Tons Coal	4,744 00
1 Speaker's Table	10 00	15 Cords Wood	150 00
9 Mirrors	18 00	300 Bushels Charcoal	50 00
Mugs, Soap Trays,			
Goblets, &c.	2 00		
6 Towel Racks	6 00		

\$73,941 96

ROLL OF HONOR.

The scholars whose names are found in the following list are worthy of Honorable Mention for their constancy and regularity in daily attendance.

The roll is made up, first of those scholars who have been perfect in their attendance at school, that is, not absent, tardy, or dismissed at any session of the school during the entire year. Second, of those who, not having been perfect the entire year, were perfect in their attendance for three terms. Third, of those who, not having been perfect in attendance for the year or three terms, were perfect for two terms. We do not give the names of those perfect in attendance for one term, as it would occupy too much space, the number being 1768.

The number perfect in attendance the entire year, 454.

“ “ “ for three terms, 538.

“ “ “ for two terms, 822.

PERFECT THE WHOLE YEAR.

Atherton Edward H.	Bemis J. Merrick	Bootman Nellie
Allen Charles L.	Barrows Fred. E.	Budding Nellie
Allen Mary H.	Burnham Charles E.	Buxton Iola
Ainsworth Fred.	Blake Charles	Boehmer Willie
Allison Willie	Bennett Minnie F.	Barber George
Andrews George	Burlingame Lillian S.	Burns Willie
Blenus Addie M.	Boehmer Frank	Bowers Freddie L.
Buckley Emma	Bullock Mary A.	Booker Eugene
Burlingame Maria	Bigelow Irving	Burke Eddie
Brown Charles J.	Bigelow Addie	Buxton Frank
Bacon George A.	Baker Mary	Burdett Annie
Ballard Emma R.	Brown Cora	Burns Joseph
Barton Anna	Burnham Wright	Ball Theodore
Baldwin Ward	Brown Conway	Burns Frank
Barton Lucy	Baldwin Mary	Bancroft Cora E.
Brooks Arthur A.	Bigelow Clifford	Cavanough George W.
Babbitt Angell B.	Bolton Carrie	Cheever Charlotte B.
Balcom Ida H.	Blake Edward	Cheever Ellen T.
Blanchard Emma H.	Ball Wilbur L.	Conlin Andrew H.

Currier Ephraim	Drury Freddie	Goddard Alice
Cheever Lizzie	Doherty Katie	Gates Hattie G.
Clapp Florence M.	Diemar Amelia	Griggs Carrie E.
Cooper Imogene	Dee Mary	Griggs Gertrude M.
Converse Ada	Donnovan Mary	Gleason Fred. P.
Cooper Fred.	Drohan Mary	Goddard Wilietta
Cooke Henry	Doyle Jerry	Goddard George D.
Chamberlin Grace	Dolan James	Garland Frank H.
Carroll James	Doran David	Gates Florence A.
Carleton Carrie A.	Duffy James	Green George A.
Collins Timothy	Dodoire Napoleon	Gibson Minnie
Carney Mary	Decelle Joseph	Garvey Frank J.
Clark Fred. M.	Earle Morris	Gates Lilla
Creamer John A.	Eaton Cora	Gill George
Cronin Marcus	Everett Henry	Gallagher John
Cullen James	Eames Fred. T.	Garvey Willie
Cross Stella	Earle Madge C.	Gates Stephen
Clarke Eddie	Edwards Charles	Gates Alice
Cahill Timothy	Elwell Nettie	Gage Minnie
Cooney Willie	Everett Grace	Gill James
Converse Lillian	Estabrook Herbert	Glennan Peter
Cooney Katie	Early Michael	Hakes Gertrude
Chamberlain Willie	Fish Rossie H.	Harrington Arthur H.
Clinton Henry	Fitch Frank E.	Higgins John
Coleman Mary	French Mary L.	Houghton Mary E.
Cree Mary	Fallon Wm. Joseph	Houghton Nellie
Callin Thomas	Flaherty Maggie A.	Hubbard Jennie I.
Conolly Joseph	Field Kate A.	Heald Luella
Cross Joel	Forbush Emma J.	Hope Rosa
Cooper Flora I.	Fuller Gertie	Hobbs Wilber
Crowley John	Fallon Michael	Hardy Nellie
Carney Patrick	Ford Thomas	Hunt Lottie
Corcoran Dannir	Foley Daniel	Hatch Olive
Conlin Andrew	Foley Annie	Heald Sadie
Clark Winthrop	Fitman Willie	Hunt Annie
Crosby Frank	Fogarty Clarence	Hildreth Carrie
Doherty Mary R.	Frye Bertie	Henry Paul
Dudley Mary P.	Farley Charley	Hamell Wilfred
Dryden Euphrasia	Faucett Arthur	Henchman Lida
Daniels Josie	Ford Patrick	Howell Lillian
Davis Minnie A.	Faucett Charles	Hitchcock Charlie
Davis Maud L.	Fuller Eddie	Hacker Louise
Devereaux Willie J.	Flemming Peter J.	Hazelbrook Patrick
Desoe Addie O.	Foley Charles	Hinkle Louis
Donahue Patrick J.	Fleming James	Hefferon Peter
Dryden George W.	Fogerty Charlie	Hoyle Eddie
Doran Eddie	Faron Michael	Hildreth Walter H.
Dodge Eddie	Fee Joseph	Hughes Peter
Donahue Michael	Faron Frank	Ingraham Ella M.
Daily Thomas	Gavin John H.	Jackson Ida F.

Jones Edward	Moore Walter	Pierce Abbie E.
Johnson Lina	Marshall Nellie	Putnam Sarah E.
Johnson Rachel	Millia Willie A.	Parker George
Johnson James	Marble Charles	Prentice Frank
Kenney Katie E.	McDonald Annie	Phetteplace Charles
Kenney Frank M.	Marchessault Eugenie	Perkins Willie
Kettell Jennie	Matthews George	Parker Mary
Knowlton Daniel	Maynard Charles	Phelan Frank
Kessell Joseph	McLoughlin Andrew	Pierce Charlie
Kidd W. Herbert	McHugh John	Prentice Lizzie
Kervin John	McDermott Matthew	Pero Lizzie
Kelly Michael	McGinniss Thomas	Parker Nellie
Kenworthy John	Mellen Walter L.	Parker Annie A.
Kenworthy Mina	Marley Mary	Phair Emily
Kühl Henry	McNiff James	Palmer Eliza
Kelley John	Mahoney James	Pike Luetta
Kendall John	Maginn John	Pierce Scott
Longley Emma E.	McSweeny Daniel	Quinlan Mary A.
Lawler Generva J.	Nutter Ada L.	Quinn Willie
Lynch James A.	Norton John	Quarters Lizzie
Livermore Mabel	Nourse Sarah L.	Richardson Addie A.
Lord Everett	Norton Flora	Riley Effie M.
Lynch John E.	Newton Lucy	Ross Mira V.
Lord Charlie	Norcross Rosa	Riggs Addie
Lawler Thomas B.	Norton Arthur	Russell Edward S.
Lynch Ida	Newcomb George F.	Reed Samuel D.
Lamson Willie	Neiderberger Freddie	Roath Lyneas N.
Largess Salina	Noe Carrie	Ross Hattie M.
Love Harry	Noe Esther	Ryan John
Lawton John	Neylon Michael	Ryan Dennis
Loughlin John	Noe George	Rice Willie
Longley Geraldine B.	Norton Fred.	Robbins Willie
McCarthy Katy A.	Overend Walter E.	Riley Luella F.
McCracken Ella J.	Orr James	Reynolds Frank
Mirrick Hattie L.	O'Dowd James	Russell George
Moore George	Owens Oscar L.	Richards Cora
Moore Edward	O'Connor John J.	Ratigan Frank
Martin Fannie	O'Brien Patrick	Ronayne David
Meggett Frank H.	Orr John	Richer Augusta
Merrifield Henry D.	O'Connor Joanna	Rogerson Etta
Mack Mary A.	O'Connor John	Ronayne Georgie J.
McAuliffe John	Otto Hugo	St. John Charles E.
Mahoney James D.	Olive Annie	Stockwell Lizzie A.
Martel John J. H.	O'Brien Nellie	Safford Myra A.
McAfee Bertha	Perry Alfred D.	Spear William D.
Maynard Marion	Putnam Hattie S.	Sheffield Henry J.
Meggett John	Perry Joseph H.	Snow Florence
Marble Willie	Phelps William E.	Stevens Lizzie C.
Morgan Patrick	Putnam Henry	Sprague Addie E.
Marvin Harry	Pollinger George B.	Smith Effie C.

Sumner George R.	Souton Sophia	Whitney Walter S.
Shaughnessey Lizzie A.	Sweet Joseph	Wood Harry J.
Shute Abbie B.	Sullivan Mary	West William L.
Sawin Lelia G.	Sawyer Bertie	Whitcomb Camilla G.
Sullivan Jerry	Taft Ella	Whitcomb Stella L.
Sawyer Minnie	Tarbell Minnie W.	Whiting Mary A.
Smith Louise	Taylor Jake M.	Whitney Josie H.
Streeter Eddie	Tucker Rena	Whittemore Herbert
Sweetzer Carrie	Thayer Ernest	Woodward Mary E.
Sturtevant Mercia P.	Turner Gertie	Warren Sarah M.
Smith Clarence	Town Lizzie	Ward Fred.
Snow Ida	Thompson Jesse	White Eddie
Shaw Walter	Thayer Grace	Wakefield George
Stewart Charles M.	Taylor Louise	Willson Etta
Seavey Mary	Tatman Alice	Woodruff Ella
Sweet Carrie	Toomey Cornelius	Wyman Marian L.
Sutton Clara	Tateum Fred.	Wareing Maggie
Sullivan Dennis	Thompson Willie A.	Ward Helen
Santon Lucy	Tosi Tillu	Weir Lizzie
Stark Nellie	Taylor Forrest	Williams John
Scott James	Taft Minnie H.	Whitney Maggie
Sheehan Thomas	Taft Henry	Wharton Josephine
Scully John	Tansey Richard	Whitney Minnie
Slocomb Samuel	Tague Alice	Whitcomb Lydia
Stimpson Frank	Thompson Fayette	Whalen Michael
Sumner Eddie P.	Toole Annie	Wesson Herbert S.
Sheehan John	Underwood James	Warner Lewis
Sullivan Michael	Underwood Nettie	White Minnie
Sullivan Michael	Volkmar William A.	Wolfendon Jesse
Sullivan Daniel	Viznia Amil	Whitney Fannie
Scully Annie	Volkmar Annie	Wallace Arthur
Stark Neddie E.	Walker Ellen	Zaeder Julius

PERFECT THREE TERMS.

Allen Edward E.	Brown Mary E.	Blake H. Elmer
Allen Walter	Barber Jennie D.	Burnham Arthur
Andrews Hattie	Barnard George F.	Ball Walter
Alton Cora O.	Bartlett Fred. R.	Bacon Nellie
Adams Frank G.	Blenus Eva T.	Burrough Bertie J.
Aldrich Esther	Barton Charles S.	Barnard Jennie M.
Allison John	Brooks Walter	Burns John
Atkinson Willie	Brothingham Eugene E.	Benson Nellson
Andrews Nellie B.	Barker Hattie A.	Brown Lula A.
Ames Eddie	Brown Willie W.	Bowers George W.
Adams Florence	Briggs Edward	Barber Ida
Anglim John	Ball Elsie	Buckley Louis
Babbitt Harry C.	Buckley Lizzie	Barber Willie
Barber Frank M.	Bullock Lizzie	Burke James
Bancroft Ella	Britt Joseph R.	Bean Fred.
Beane Ruth E.	Brophy Annie E.	Bradford Lewis

Bolton Walter	Clark Maud	Eldridge Jennie
Brady James	Chase Homer	Eidt Julia
Brown Mary	Cannon Frank	Egleston Katie
Blunt Emma L.	Clark Frank	Entwistle Alexander
Bell Edwin	Clancy Mary	Earle Edna W.
Bainbridge Alice	Cronin Nellie	Earle Walter
Barney Eliza	Cooney John	Early Willie
Burns Thomas	Cunningham Maggie	Fallon Katie A.
Burns Michael	Dewey Bertha A.	Fifield Mary L.
Bowers Amy	Davis George E.	Fogerty William C.
Burdett Hemine	Devereaux Maggie A.	Farley John A.
Butler Willie	Doyle Katie A.	Forbush Lizzie A.
Butler James	Desper Willie H.	Fallon John J.
Barnes Ada	Deane Joseph	Fiske Lucy G.
Chandler Jennie	Dunn James	Fallon Theodore P. A.
Clough Jennie C.	Dawson John A.	Fay Nellie
Chapin Charles S.	Durning Willie	Fuller Eddie
Comins Irving E.	Delvey Arthur	Fairbanks George
Chapin Ida	Dean Patrick	Fay Albert
Courtney Mary	Devine Lizzie	Fisher Freddie
Conlin Daniel E.	Deane Frank	Fairbanks Millie
Casey James	Doherty Stephen	Forehand Annie
Conlin John	Delorme Alsedose	Fairbanks Annie M.
Cooney Frank	Dyer John	Frye Sadie C.
Curtis Clarence	DeLand Annie	Fairbanks Harry
Colvin Lewis A.	Dolan Eddie	Flemming Willie
Chamberlain John	Dean Amasa	Fitman John
Cannell John	Davis Florence	Fitzgerald James
Cushino Addie	Deerey John	Forney Michael
Chandler Sarah	Denehy Helena	Flynn Mary
Courtney Thomas	Dunn John	Foster Cora M.
Coombs Zelotes	Doyle Ella	Gibbs Waldo E.
Clark Edith M.	Dean Anna	Gill Carrie
Cooper George	Dodoire Peter	Goulding John H.
Conlin Peter	Downey Patrick	Gafney Patrick
Carson Lucy	Dikeman Albert F.	Goulding Victor
Carson Florence E.	Dason Emma	Goddard Frank
Cumisky Patrick	Dupuis Julius	Goodwin Clara
Crowe John	Downey John	Goddard George
Cumisky Michael	Devlin Mary	Goodwin Frank
Cooke Charles S.	Dayson Carrie	Geer Gertie
Cheney Eddie	Drogan Patrick	Geer Walter
Consin Katie	DeCelle Carrie	Gorman Martin
Courtney Frank	Defoe George	Goslin Cora
Chase Albert V.	Daniels Willie	Garvey James
Chamberlin Willie	Duval George	Gore Elmer
Cosgrove Frank	Dwyer John	Gilbert Peter
Cady Carrie M.	Earle Oliver K.	Graham Patrick
Capen Laura E.	Eldred Marion F.	Goodney Mary
Cady John	Earle Charles A.	Gilrairie Bridget

Grogan Thomas	Jordan Charles D.	Merriam Alice E.
Grogan George	Jenks Frank A.	Moran James T.
Grout Sadie	Jordan Lizzie E.	Marble Hattie A.
Gray Mary	Jillson Frank C.	McCambridge Ida M.
Goffe Walter	Johnson Forrest	Mahoney James
Guilfoyle Maggie	Jankins Marion	Mirick Clarence W.
Girey Mary	Knight Elsie I.	Marshall Cornelia D.
Gaffney Mary	Kelley Frank	McGone Sarah E.
Hammond Jennie A.	Kühl Emma	Meggett John
Holland Willie L.	Knight Albert	Moen Sarah
Hopkins G. Earle	Kelley John	Melanefy Gerty
Harding Mary	Keily Henry P.	Mack Nellie T.
Harrington Charles	Keily Lizzie	McAuliffe Owen
Henry Nellie F.	Kelly John	McNamara Lawrence
Hunt Olive	Kaney Mary	McNamara Thomas
Hapgood Flora	King Grace	Murphy James
Horgan John	Kittredge Walter	McLaughlin John
Hagan Maggie	King Henry	Mason Frank
Harney George	Kelly Frank	Magoun Jennie
Holman Hattie	Kindregan Willie	Morrissey Mary
Hadley Florence	Kelley Anthony	Martin Annie
Hagerty Willie A.	Kiley Maggie	McCracken Jennie
Hayes Joseph	Knowlton Julie A.	Maynihan Daniel
Houghton Carrie	Kelliher Thomas	Mayberger Emma
Howland Frank	Kane Richard	McGady Rosa
Higgins Eddie	Kiley Agnes	Maynard Charles
Hart Charles	Kirby Michael	Mawhinney Annie
Higgins Charles	Kavanagh Georgie	Mayberger Eddie
Horgan Mary	Knibbs Francis	Maloney John
Horgan Nellie	Lynch Thomas	McHugo Mary
Henchman Daniel	Lathe Agnes M.	McCoy James
Holmes H. Willie	Light Alice J.	Monsey John
Henry Michael	Lamb Carrie	Morse Eddie C.
Higgins Maggie	Leonard Etta	Moore John
Hall Walter	Lawson George	McNulty Willie
Higgins Thomas	Looby John	McKeon John
Hacker Emma	La Cross Joseph	McDonagh John
Howe Lillie	Lamb Fred.	Midgley Fred.
Hackett Mary	Lavarty Maria	McLoon Lena
Hardy Willie D.	Livermore Elliott	Mann Annie
Hart John	Lancaster Charles F.	Mann Lena
Hickey Patrick	Lorion Flora	Meehan Thomas
Hoar Joanna	Liberty Xilda	McLaughlin Michael
Higgins James	Lacy John	Murphy John
Higgins Michael	Lonegan Maggie	Morony Frank
Heffern Peter	Leonard Evelyn	Murray Rupert
Ingraham Nellie	Lumberg Bettie	Miller Frank
Johnson Geo. H.	Leary Maggie	McSweeney Julia
Johnson Cora B.	Lançault Celina	McAuliffe Daniel
Johnson Ava L.	Miller Henry L.	McManus John

Marchesseault Henry	Pitts Joseph	Scofield Willie
McHugh Mary	Pitts Flora	Sullivan Michael
Mahan Rosie	Palmer Mary	Sprague Mary C.
Murray Michael	Pero Eddie	Smith Percy D.
Monahan Alice	Perkins Walter	Servey Susie
McNamara Lizzie	Paul Lucius	Stevens Charlie
McGrath Anastasia	Parker Louis	Stevens L. Everett
Marlow Frances	Phelan Lincoln	Sargent Annie
McCarthy Charles	Putnam Fannie S.	Sexton Katie
McDonald Michael	Piper Fred.	Sullivan Cornelius
Moran James	Pierce Willie D.	Sheehan James
Mallett Joseph	Pero Cora	Sibley Linus
Midgley Sarah	Parker Eddie	Smith Thomas
Murray Mary	Perry Bertha	Speirs Robert
Needham M. Annie	Plunkett Walter	Sullivan Dennis
Newton Emma J.	Pierce Charles	Smith Julia
Nichols Alice	Pierce Carrie	Smith Kate
Nevens Estella	Prentiss Addie	Sullivan James
Newland Lizzie	Putnam Sarah E.	Sweeney Maria
Nichols Annie	Quackenboss Eddie	Sweeney Peter
Newton Mabel A.	Quinn Daniel	Sullivan Dennis
Neiderberger Henry	Quarters Henry	Shute Willie
Neille Charles	Russell Mary C.	Stevenson John
Nye Maud	Rawson Minnie	Scully Andrew
Norcross Willie	Robinson Linwood	Smith John
Otto Emma F.	Ranger Nellie M.	Sheedy John
O'Toole Lizzie	Ratigan Willie E.	Stevenson Charles
Overend Thomas	Rochford Timothy E.	Shea Jerry
O'Hara Charles	Reeves Walter	Splaine James
O'Flynn Charles	Roan Thomas	Stott Hannah
O'Connor Mary	Reeves Willie	Taylor Mary L.
O'Rourke Bernard	Robinson Cora E.	Thayer John A.
O'Rourke Charles	Reynolds John	Thayer Nellie O.
O'Leary Timothy	Ryan John	Thwing Charles E.
O'Rourke Nellie	Robinson Squire	Towne Martha E.
Otto Fred.	Rogerson Mabel	Tyler Charles C.
O'Neil John	Ryan James	Tateum William
Phipps Arthur V.	Rourke Frank	Townley Joseph
Palmer Addison F.	Ronayne Sarah	Thompson Carrie L. H.
Phillips Maria	Schofield Florence M.	Trainor Eddie
Perry Arthur C.	Smith Fred. W.	Timon Mary
Parker Lester S.	Sweetser Samuel	Tapley Walter
Prentice Charles H.	Smith Anna T.	Tracy Thomas
Perry Helen D.	Stewart John C.	Touton Henry
Powers Ella H.	Sargent Charles F.	Taft Helen
Putnam Delia	Seavey Rosa L.	Tyler James R.
Power Mary A.	Sanford May E.	Titus Cora
Prichard Arthur	Sanderson Jennie	Troy James
Phetteplace Carrie	Sheehan Annie	Turry John
Poland Elmer E.	Sumner Mary	Vincent Paul

Wakefield Willie H.	White Jennie I.	Wood Sarah E.
Walker Julia R.	Wellington Henry	White Willie W.
Walker Lucie E.	Woodward Ralph	Walker Hope
Wakefield Mamie G.	Ward Mabel	Wood Georgie
Wheeler Fannie T.	Wallis M. Eva	Welch Mary
Wilkinson Frank M.	Williamson Stella M.	Wells Eddie
Wellington Charles	Wesson Walter	Wells Jennie
Waite Anna M.	Whelan Annie	Wilber Bessie
Williams Edgar	Weymouth Fred.	Wilcox Etta
Warren Everett	Weixler Arthur	Williams Charles
Wood Alice	Warren Herbert	Wennerstrom Charles
Wynn Mary	Waite Florence	Zaeder Bennie
Wood Fred.	Willard Freddie	
Whittemore Emily G.	Wallace Nellie	

PERFECT TWO TERMS.

Aldrich Edward D.	Bemis Carrie	Barrett Katie
Austin Hattie	Bigelow Gracie	Bostic Walter
Ames Imogene	Beswick George	Blake George
Ahlstrom Selma	Burt Arthur	Bradford Frank
Auberstein Richard	Burgess Sarah	Brosnihan K. Teresa
Atkinson Sarah	Bresnihan Mary	Beauveir Joseph
Atwood Lillie A.	Burns Peter	Barry John
Adams George	Bates Eddie	Bulger Mary
Abbott Lillie	Brabrook W. Freddie	Chapin Lizzie E.
Andrews Arthur	Burr Eddie	Carroll John A.
Atherton Walter	Baker Gracie	Cronin Joseph J.
Bemis Gilbert C.	Barlow Fred.	Chase Edward I.
Buxton Ella M.	Brahm Carrie	Cooper Hattie B.
Brooks Fred. A.	Barrett Tommie	Cutler Fred. A.
Bailey Ella M.	Burns Mary	Comstock Annie A.
Booth Addie J.	Brophy Frank	Crane Edwin
Baldwin Cora	Bennett George	Carney Stasia
Batchelder George	Brown Everett	Cunningham Kate
Bigelow Charles	Boynton Nellie	Convery Mary E.
Bemis Eddie	Blood Bertie	Croake Dennis
Bigelow Irving	Barber Lillian	Clark Frank E.
Bond Annie	Boyle Thomas	Copeland Avery
Ballard Clara S.	Boles Michael	Combs Carrie
Bassett George	Butler Willie	Curran John
Burns Jeremiah D.	Buxton Frank	Cashell Katie
Bailey George	Burbank Walter	Cudworth Frank
Ballou Willie	Bresnihan Nellie	Charette Ida
Brown John	Blodgett Charlie	Comee Lila
Barney Abbie	Belden Eddie	Carlton Lillie
Brabrook Arthur	Burke Teresa	Cross Sarah
Brown James	Bullard Alpha	Cunningham Willie
Birnbaum Joseph	Bullard Viola	Conlin John
Bean Fred.	Broderick Patrick	Cary Maurice
Barlow Herbert	Brown George	Clancy Kenneth

Cronin John	Deane Eugene A.	Earle George
Congdon John	Dowd James J.	Eldridge Mattie
Clouse George G.	Durnhing James H.	Evans Arthur H.
Childs Thomas S.	Denny Nellie M.	Ellis Bertha
Carrico Walter	Driscoll Michael	Elliot Minnie
Cooke Frank	Deane Delia	Early Bridget
Childs Frank	Davenport Hattie	Eastman Walter
Creighton Daniel	Drohan Mary	Eldridge Susie
Campbell Eddie	Denehy Michael	Flint Charles W.
Cronin John	Doran Michael	Flaherty James J.
Cushino Frank	Dean Henry	Fitzgerald Thomas J.
Coulahan Kate	Deguin Mary	Flynn James E.
Connolly Maggie	Dorsey Hugh	Fallon William James
Coyne James	Dowd Willie	Fairfield Herbert
Cunningham Willie	Drown Emma	Forbes John
Comisky John	Davis Frank	Flynn Thomas F.
Cronin Annie	Dean Willie	Fitzgerald Daniel
Connor Timmie	Donahue Lawrence	Fallon Ellen
Cutter Frank	Daly Joseph	Finnigan Michael
Chamberlin Charles	Donelley James	Fay Edgar
Clark Fannie	Dresser Bertha	Fitzpatrick Phillip
Clark Alice	Dowd Patrick	Fitzgerald Hannah
Condy John	Dewhurst Susie	Fairfield Walter
Cummings John	DuCett Frank M.	Fairbanks Herbert
Courtney Nellie	Doyle John	Foy James
Casey Jennie	Donahue John	Fairbank Lizzie R.
Casey Thomas	Defoe Lizzie	Felton Gertie
Cowan Maggie	Dakin Ernest	Fuller Freddie
Conolly Mary	Davis Paul	Flynn Mary
Crawford Gracie L.	Desper Ernest	Fitman Thomas
Collins Minnie	Daly Joseph	Fuller George H.
Coty Susie	Driscoll Willie	Fitzgerald Johnnie
Carson Freddie	Dewey Emogene	Fitzgerald Eddie
Carr Agnes	Dolan Frank	Fitzgerald Thomas
Curtis Eliza	Dorsey Maggie	Fleming John
Cullen Annie	Davis Georgie A.	Freeman Henry
Coe George	Delany James	Fenton Celia
Collins Willie	Dineen Joseph	Flynn Bridget
Conlin Bartie	Donahue Willie	Fish Mable
Cunningham Thomas	Daly Joanna	Fanning Stephen
Curran Thomas	Daly Phillip	Flynn Hannah
Constant Mary	Dubbs Fred.	Fitzgerald Eddie
Casey Katie	Drohan John	Flynn Peter
Clifford Patrick	Duval Joseph	Flanagan Johnnie
Cooney Winnie	Dakin Cora	Fitzgerald Clara
Crosby Fannie	Emerson Mary J.	Flagg Georgie
Daniels Alice J.	Eddy Belle N.	Fitzgerald Lulu
Drury Ella M.	Earle Nannie H.	Flynn Maggie
Denholm Lizzie	Emerson Carrie	Fisk Lou
Doyle James J.	Everett Bertie	Goddard Harry W.

Green Charles	Holman Arthur	Hickey Willie
Gauren Addie T.	Huntley Bell	Hogan Lizzie
Griggs John	Hoyle Alonzo	Heslin Rosa
Gunther Alex.	Heron James	Houghton Minnie
Guild Flora	Harlow Fred. B.	Healy Mamie
Gosling Ada	Harrington Sadie	Hurley Cornelius
Gardner George	Hubbard Clarence	Holt Sarah
Guild Webster	Holmes Charlena A.	Hart Mary
Gardner Lillie	Haskell Spencer	Hart Katie
Griffin Howell	Houghton Ada	Jones David
Gird Josie	Holbrook Etta	Johnston Lizzie
Greene Willie H.	Harbour John	Joyce Anthony
Gunther Geido	Houston Frank	Johnson Albert
Gordon Albert	Healy Thomas	Johnson Kittie
Gaffney Mary	Holligan James	Jones John
Gledhill Bessie	Hoyt Fannie	Jennison Bennie
Gibbs Hattie	Holland Cora	Johnson Willie
Gallagher John	Harthan Addie	James Frank
Gay Nellie	Hackett Willie	Kendrick Edward H.
Guilfoyle Frank	Houghton Carrie	Kanouse George H.
Gettings France	Ham Annie	King Catherine E.
Gartland Mary	Hopkins Freddie	Keyes David H.
Griggs Margie H.	Hart John	Kinsley F. Josephine
Griffin Maurice	Holly Katie	Keefe John
Gates Charles	Howard Edith	Keany Bartley
Garvey Eugene	Hagan Owen	Kinsley Carrie
Gage Eddie	Hammond John	Kennedy William
Gates Maud M.	Haskins Hattie	Kelley Sarah
Gay Daniel F.	Holman Eddie	Keniry Thomas
Gerrity Martin	Hall Marcus	Kinnier Mary
Gleason Michael	Hart James	Kane Joseph
Graham Willie	Hackett Michael	Kelley John
Gearan Patrick	Havey Thomas	Kennedy Maggie A.
Griffin Josie	Healy Katie M.	Kerwin Nellie
Glennin Tommie	Hair Frank N.	Kneeland Agnes
Gately Mary	Harrington George	Klein Emma
Gorman Maggie	Hoyt Eugenia	King Mabel
Gage Homer	Hobbs Carrie	Keenan Eddie
Goddard Hattie G.	Hackett Martin	Kittredge Charley
Harris Belle H.	Haas Osmer	Kelley Lawrence
Houghton Florence E.	Haggerty Jerry.	Kelley Thomas
Horgan James H.	Heron John	Keegan Kate
Harrington Jennie A.	Howard Minnie	Kerwick Mary
Hill Walter	Harper John	Kidney Alice
Hunt Charles P.	Holly Mary	Kraft Henry
Heywood Frank E.	Hoyt Willie	Kraft Willie
Holland Lincoln	Holman Frank	Kelliher Anastasia
Hartshorn Annie M.	Harbour Louis	Kelley Cecilia T.
Hunt Dora E.	Hartigan Henry	Kane James
Hill Bennie T.	Healy John	Kane Katie

Kinney Henry	Murphy James	Murrill Patrick
Knight Frank	Moore Nellie	Monahan Willie
Knight Jennie	Maloney Maria	McKeon Francis
Lloyd Alfred G.	Mason Nettie	Mulrain John
Lightbourn Hattie	McGee Katie	McQuade Sarah
Lathe Freddie	McGrath Katie	Madans Willie
Lamb Alice	McCarty Eugene	McDonnell Charlie
Lincoln Marston	Meggett Clara	McDevitt Maggie
Lavin Patrick	Morgan Lewis	McQueeney John
Lynch Maggie	Moore Clifford	Mack John
Lee Everett S.	Moore David	McCue Maggie
Lancaster Mabel	Mahoney John	Marchasseault Emma
Long Eva V.	McLoughlin Kate	Manly John
Labarge George	Murdock Isabel	McGrath Allie
Largess Joseph	McPartland John	McNierny James
Lathe Mattie L.	McGrath Mary	Meyer Alex.
Lilley John	McCracken Gertie	Mulrany Mary
Lattime Etta	McGrath John	Morrissey James
LaCross Josie	Murphy James	Murphy James
Lynch Patrick	Murphy Louis	Marlow Joseph
Lamb Alice B.	Murphy Jerry	Marlow Felix
Leland Frank	Marlow Joseph	Marchessault George
Love Robbie	Madans Lizzie	McLane Joseph
Lundi Nelson	McManus Nellie	Murphy Ambrose
Leary John	Morse Willard	McCarthy Sarah
Legasey Samuel	Markey Annie	Moore Lizzie
Lonegan Bridget	McGinnis Delia	McFarland John
Lawler Julia	McCarty Willie	McFarland Ann
Leo Eddie	Moore Frank A.	McAvey James
LaGosse Henry	Mulchahy Thomas	Mallett Isaac
Lucke Fritz	Magoun George F.	Marsden Esther
Lamb Mary	Marble Albert	McAllister Mary
LeMire Annie	McKinley Willie	Mallett George
Morse G. Willie	McGuinness Nellie	Nelson Harry L.
Murray Nettie	McKinley John	Noe Minda
Marshall J. Murray	McTague James	Nye Charles
Messinger Mary G.	McDermott Lizzie	Nollins Alonzo
McCormick Mary E.	Moylan Katie	Norton Clara
Mack Daniel F.	McErey Mary	Noe Delia
Murdock Frank L.	Madley James	Nutt Bertie
Mann Henry E.	McDonald Mary E.	Nours Lena L.
Murray Charles A.	Moran Maggie	O'Gorman Lizzie G.
Malone Maggie E.	Manix Nelia	Overend Thomas
Murray Lura J.	McCormick Sarah	O'Leary James
Mellen Emily K.	Mixter Clarence	O'Neil John
Morse John E.	McCarty Timothy	Olin Clarence
Morse Eddie	Macomber Olie A.	Oberer Lizzie K.
Merrill Ellsworth	Moore Fred.	O'Malley John
McCabe Sarah	McLoon Lucean	Orr George
Murphy John	McGrath Abbie	O'Neil Thomas

O'Connor Joseph	Pike Willie	Souther John I.
O'Neil Teresa	Pearson Charlie	Stearnes Addie L.
O'Sullivan Daniel	Quackenboss Alexander	Swan Helen
O'Leary Minnie	Quinlan Anastasia	Sprague Carrie L.
O'Connell Daniel	Quinn John	Sawyer Lizzie
O'Keefe John	Quinn Mary	Sears Abbie L.
O'Leary Charles	Rugg Edward L.	Sheldon Theo. H.
O'Rourke Hugh	Riley John F.	Shaw Willie B.
O'Connor John	Robinson Mary	Samson M. Ada
Otto Willie	Rourke Dennis	Stone Emma F.
O'Keefe Tommie	Rawson Cora	Spiers John
O'Leary Johnnie	Rowland Jennie	Sexton John
O'Gorman John	Rolfe Susie E.	Smith Louis
Pond Sarah L.	Ranger Anna	Sullivan Maggie
Palmer William J.	Rice Ellie J.	Sylvester Isabel
Parker Charles D.	Reardon John	Sampson Alfred
Phelps Alida	Russell Annie	Smith Alice
Phipps Ralph L.	Russell Gertrude G.	Streeter Ida I.
Plimpton Emma M.	Rafferty James	Scofield Samuel
Park Theresa	Ryan Willie	Sibley Willie D.
Pike Addie L.	Rudy Frank	Scott Julia
Parsons Katie	Riley Timothy	Sprague Abbie
Parson Nettie J.	Reynolds Mary	Sweeny Eddie
Pierce Fannie R.	Rice Harry E.	Stewart Agnes R.
Plaisted Eddie	Roach Nannie	Sullivan Michael
Phelps Alice	Reidy Martin	Sullivan Daniel
Plummer Stella	Reardon Julia	Skinner John P.
Parker Nettie	Ryan Mary	Scanlon Maurice
Perry Cora E.	Redican Patrick	Speirs Thomas
Perry Lucy	Roan Johnnie	Stone Joseph
Piper Charlie	Rice Harry L.	Sullivan Joseph
Patch Florence	Ryan Thomas	Sutton Mabel
Proulx Minnie	Richardson Frank	Smith Frank
Pettis Nellie	Riley Annie	Shea Hannah
Peacock Nellie	Ricker Hattie	Stone Charles H.
Prouty Hattie	Rogers Elliot	Sinclair Annie
Parker Bertie S.	Rich Russell	Southworth Sadie M.
Parker Hattie	Robinson William	Sylvester Benjamin
Pryer Frank	Riley Annie	Smyth Florence
Proulx Georgie	Rivers Eddie	Stott Martha
Parker Gracie	Rollston Sadie	Stevenson Lizzie
Powers Richard	Ryan Hannah	Sullivan Thomas
Potter Herbert	Sweetzer Charles S.	Starkey Nettie
Phelon Belle	Sullivan George S.	Sawtelle Lulie
Power John	Sprout William B.	Sumner Carrie
Phillpot Maggie	Smith Charles W.	Sinclair Isabel
Parker Clair	Sprague Horace E.	Sheehan Katie
Pollinger Eddie	Spear Allen C.	Stearns Clarence
Powers Delia	Stowell Eliza P.	Sheridan Thomas
Powers Thomas	Sheffield Ida G.	Sibley Bertha

Sullivan Patsey	Taylor John S.	Wood Addie
Sullivan Connie	Taylor Lottie E.	Wilson Willie
Sullivan Daniel	Thompson Cora B.	Wright Nettie
Schofield Charles	Thompson George R.	Walsh Maggie
Smith Tommie	Toupin Joseph	White Etta
Sullivan John	Thayer Charles M.	Walker Sarah A.
Snow Wallace	Thompson Lizzie	Wheelan Martin
Severence Walter	Thompson Maggie	West Dora
Sheridan John	Tobin Daglin	Walker Joseph
Small Hugh	Towne Henry H.	Ware Viola
Sullivan Patrick	Timon Jimmie	Wilson Frank
Scully Bridget	Tague Annie	Wynn John
Sullivan Cora	Trott Minna	Walker Ada D.
Scales Peter	Toner Richard	Wheeler Frank L.
Scales Willie	Thayer Henry	White Charles
Sullivan Annie	Turville Henry	Welch Mabel
Santon Clifford	Underwood Joseph	Wheeler May
Shea David	Veriker Patrick	Wunderlich Frank
Sweet Nettie	Vallie Charlie	Whitton Jonnie
Shea Mary	Whitcomb Alonzo W.	Willard Frank
Swift Anna	Walker Mary J.	Walbridge Ernest
Striker George	Winslow Samuel E.	Walker Albert
Sprague Anna S.	White Sarah L.	Wheeler Eugene
Tebbetts Frank M.	Weixler Anna T.	Wyatt Charlie
Tobey William L.	Wardwell Carrie	Warren Susie
Templeton Fannie M.	White Nellie M.	Woodworth Willie
Townsend Dell	Ward John A.	Ward Frank
Townley Bennie	White Alice	Wilson Fred.
Tebbetts Herbert	Wyman Alfred A.	Welch Daniel
Tyler Lizzie	Wilcox Willie	Warner Hattie
Thompson Annie	Ward Frank	Winchester Clara A.
Tyrrell Leila	Whittemore George	Wilcox Etta
Treson George	Whalen Etta T.	Warren John
Toole Daniel	Wynn Thomas	Watkins Charles
Troy John	Walker Arthur	Woolfenden Hester
Tobey Willie	Whitely Sarah	White Richard
Taylor Lewis	Waine Annie	Wood Charles
Taylor Willie	Wardner Susie	Young Arthur
Tatman May	Watson Henry	Yeaton Bertha
Troy Mary E.	Woodward Norman	Zitkor Lena

ORGANIZATION OF THE SCHOOL COMMITTEE

OF THE

CITY OF WORCESTER,

FOR THE YEAR 1876.

CLARK JILLSON, PRESIDENT.

ALBERT P. MARBLE, SUPT. AND SECRETARY.

Members whose term expires January, 1879.	Members whose term expires January, 1878.	Members whose term expires January, 1877.
WILLIAM A. SMITH.	CALEB B. METCALF.	CHAS. O. THOMPSON.
WILLIAM T. HARLOW.	ANNE B. ROGERS.	SARAH B. EARLE.
EUGENE MORIARTY.	JASON CHAPIN.	JAMES McMAHON.
FRANCIS PLUNKETT.	FRED. J. McNULTY.	THOS. J. CONATY.
JOHN TIMON.	JAS. J. McCAFFERTY.	JEREMIAH MURPHY.
ALZIRUS BROWN.	FRANCIS P. GOULDING.	FRANKLIN B. WHITE.
JOSEPH M. BASSETT.	EDWIN T. MARBLE.	EMERSON WARNER.
CHARLES B. KNIGHT.	RUFUS WOODWARD.	E. B. STODDARD.

STANDING COMMITTEES.

ON SCHOOL HOUSES—Messrs. Brown, Murphy, Chapin, Mrs. Rogers and Moriarty.

ON BOOKS AND APPARATUS—Messrs. Stoddard, Goulding, Mrs. Earle, McCafferty and Smith.

ON TEACHERS—Superintendent, *ex-officio*, and Messrs. Metcalf, Warner, Thompson, Conaty and Harlow.

ON FINANCE—Mayor, Superintendent, and Messrs. Marble, McMahon, McNulty, Knight and White.

ON APPOINTMENTS—Superintendent, *ex-officio*, and Messrs. Woodward, McCafferty, Plunkett, Timon and Bassett.

The Committee on Visitation shall exercise a general supervision over the Schools to which they are severally assigned, and shall visit them according to the provisions of the Statutes, not less than once in four weeks, and generally during the week preceding the monthly meeting of the Board, at which they shall report their true condition.—[Rules, Chap. 3, Sec. 6.]

Though each school is assigned to a Special Committee, yet every member of the Board shall deem it his duty to watch over all Public Schools of the city, to attend their examinations, and visit them at other times as his convenience will permit.—[Sec. 7.]

VISITING COMMITTEE.

CLASSICAL AND ENGLISH HIGH SCHOOL.

COMMITTEE.

Warner, Conaty, Woodward, Marble, Stoddard, McNulty, Goulding.

TEACHERS.

	Joseph W. Fairbanks, <i>Principal</i> .	
Edward H. Rice,	Alfred D. F. Hamlin,	Mary A. Parkhurst,
Nathan H. Dole,	Caro. V. Aldrich,	Fanny S. Tucker,
Alfred S. Roe,	Florence V. Beane,	Anna E. Ayers.
	Geo. E. Gladwin, <i>Drawing</i> .	

The ROMAN NUMERALS designate the ROOMS to which members of committees are specially assigned, and the GRADES according to the Course of Study.

BELMONT STREET.

COMMITTEE.

Goulding, IX, VIII, VII. Chapin, VI, V, IV. Knight, III, II, I.

TEACHERS.

IX, Preston D. Jones, <i>Principal</i> .			Emma C. McClellan, <i>Assistant</i> .
VIII, Mary H. Warren,	V, Abbie J. Reed,	II, Carrie P. Townsend,	
VII, Sarah L. Phillips,	IV, Esther G. Chenery,	I, Mary E. Deane.	
VI, Tirzah S. Nichols,	III, Mary T. Gale,		

DIX STREET.

COMMITTEE.

Earle, IX, VIII, VII. Smith, VI, V, IV. Metcalf, III, II, I.

TEACHERS.

IX, George R. Chase, <i>Principal</i> .			Clara Manley, <i>Assistant</i> .
VIII, Eldora M. Aldrich,	V, Abbie N. Hoxie,	II, Esther B. Smith,	
VII, Josephine M. Wilson,	IV, Ellen E. Daniels,	I, Alice W. Giddings.	
VI, Minnie Meade,	III, Susie W. Forbes,		

WALNUT STREET.

COMMITTEE.

Stoddard, IX, VIII, VII. Plunkett, VI, IV.

TEACHERS.

IX, Edward P. Elliot.			VIII, Etta A. Rounds, <i>Principal</i> .
VII, Nellie C. Thomas,	VI, Kate A. Meade,	IV, Ella M. McFarland,	

WOODLAND STREET.

COMMITTEE.

McCafferty, IX, VIII, VII. Bassett, VI, V, IV. Brown, III, II, I.

TEACHERS.

IX, Edward I. Comins, *Principal*. Annie C. Wyman, *Assistant*.
 VIII, Ann S. Dunton, V, Carrie R. Clements, II, Nellie M. Muzzy,
 VII, Jennie I. Rice, IV, Martha T. Wyman, I, Amanda H. Davie.
 VI, Mary M. Lawton, III, Maggie I. Melanefy,

LAMARTINE STREET.

COMMITTEE.

Murphy, IX, VIII, VII. Timon, VI, IV, III, II. Earle, II, I.
 McMahon, I, I.

TEACHERS.

IX, Charles T. Haynes, *Principal*. Josephine L. Sanborn, *Assistant*.
 VIII, Persis E. King, III, Mary E. Kavanagh, II, Ellen T. Shannon,
 VII, Fannie S. Holman, III, Susan M. Buttrick, I, Ida A. Tew,
 VI, M. Ella Spalding, II, Ida A. E. Kenney, I, F. Belle Perry.
 IV, Louise A. Dawson,

WASHINGTON STREET.

COMMITTEE.

McNulty, V, VI.

TEACHERS.

V, Janet Martin, *Principal*. VI, Mary A. Harrington,

LEDGE STREET.

COMMITTEE.

McMahon, IX, VIII, VII. Earle, VI, V, IV. Moriarty, III, II, I, I.

TEACHERS.

IX, Charles C. Woodman, *Principal*. Hannah N. Johnson, *Assistant*.
 VIII, Margaret M. Geary, V, Hattie E. Clarke, II, Mary E. D. King,
 VII, Maria P. Cole, IV, M. Addie Powers, I, Mary V. Callaghan,
 VI, Eliza E. Cowles, III, Emma L. Cowles, I, Emma C. Maynard.

THOMAS STREET.

COMMITTEE.

Rogers, VIII, VII, VI. Chapin, V, IV, III. McCafferty, II, I, I.

TEACHERS.

VIII, Harriet G. Waite, *Principal*. Emma J. Houghton, *Assistant*.
 VII, Amanda M. Phillips, IV, S. Lizzie Wedge, I, Mary E. D. Cavanough,
 VI, Annie J. Hitchcock, III, Abbie F. Hemenway, I, L. Ella Hemenway.
 V, Abbie C. Souther, II, Hattie W. Bliss,

SYCAMORE STREET.

COMMITTEE.

Marble, VIII, VII, VI. Goulding, V, IV. Bassett, III, II, I.

TEACHERS.

VIII, Abbie E. Clough, *Principal*.
 VII, Minnie F. Whittier. IV, Hattie A. Smith, II, Emma F. Marsh,
 VI, Ann E. McCambridge, III, Sarah W. Clements, I, Eliza J. Day.
 V, Susie A. Partridge,

EAST WORCESTER.

COMMITTEE.

Chapin, VI, V, IV. Rogers, IV, III, II. White, II, I, I, I.

TEACHERS.

VI, Ella W. Foskett, *Principal*.
 V, Annie Brown, III, Kate C. Cosgrove, I, Aloysia Radcliffe,
 IV, Tamerson S. Darling, II, Nellie A. Sprout, I, Mary J. O'Connor,
 IV, Julia A. Bunker, II, Mary E. Russell, I, Ada E. Simonds.

PROVIDENCE STREET.

COMMITTEE.

Plunkett, V, IV, III. Knight, II, I, I.

TEACHERS.

V, L. Elizabeth King, *Principal*.
 IV, Sarah J. Newton, II, Evelyn E. Towne, I, Alice G. McMahon.
 III, Anna M. Overend, I, S. Cornelia Maynard,

ASH STREET.

COMMITTEE.

Smith, V, IV. McMahon, III, II, I. McCafferty, I.

TEACHERS.

V, Mary J. Mack, *Principal*.
 IV, Lottie M. Harrington, II, Mattie A. Collins, I, Sarah J. Melanefy.
 III, Sara A. Harrington, I, Mary J. Packard,

SOUTH WORCESTER.

COMMITTEE.

Woodward, VIII, VII, V. McNulty, IV, IV, III. White, II, I, I.

TEACHERS.

VIII, Carrie A. George, *Principal*.
 VI, M. Louise Rice, IV, Esther E. Travis, I, Mary C. Paige,
 V, Ellen M. Boyden, III, Libbie H. Day, I, Alice E. Johnson, *tem*.
 IV, Myra J. Denby, *tem*., II, Mary S. Eaton,

PLEASANT STREET.

COMMITTEE.

Stoddard, V, IV, III. Woodward, II, I, I.

TEACHERS.

	V, Ella L. Dwyer, <i>Principal</i> .	
IV, Eunie M. Gates,	II, Mary E. A. Hoyt,	I, Martha E. Amidon.
III, Mary L. Norcross,	I, Emma J. Norcross,	

SALEM STREET.

COMMITTEE.

White, VI, V, IV. Murphy, III, II, II, I.

TEACHERS.

	VI, Albert P. Doe, <i>Principal</i> .	
V-IV, Mary O. Whitmore,	III-II, Emma I. Clafin,	II-I, Effie J. Phelps.

EDGEWORTH STREET.

COMMITTEE.

Knight, V, IV, III. Smith, II, I, I.

TEACHERS.

	V-IV, Ella E. Roper, <i>Principal</i> .	
III, Sarah M. Brigham,	I, Mary A. Gauren,	I, Mary McGown.
II, Jennie E. Maloney,		

NEW WORCESTER.

COMMITTEE.

Bassett, VIII, VI, V. Marble, IV, III, II, I.

TEACHERS.

	VIII, Charlotte H. Munger, <i>Principal</i> .	
VI-V, S. Lizzie Carter,	II. Belle H. Crowell,	I. Ada L. Sherman.
IV-III, Ella J. Moore,		

SUMMER STREET.

COMMITTEE.

Moriarty, III, II, I.

TEACHERS.

	III, Abbie A. Wells, <i>Principal</i> .
II, Carrie F. Merriam,	I, Lilla F. Upton.

QUINSIGAMOND.

COMMITTEE.

Timon, VII, VI, V, IV, III, I.

TEACHERS.

VII-VI, Sarah F. Carpenter, *Principal*.
 V-IV, Jennie P. Fiske, III-I, Ella M. Bates,

MASON STREET.

COMMITTEE.

Brown, III, I.

TEACHERS.

III, Mary E. Pease, *Principal*.

I, Lucy Lewisson.

ADRIATIC.

COMMITTEE.

Brown, III, I.

TEACHERS.

III, Amy E. Hopson, *Principal*.

I, Sarah J. Morgan.

UNION HILL.

COMMITTEE.

Murphy, V, IV, III, I.

TEACHERS.

V-IV, Mary A. Tyler, *Principal*.

III-I, Etha M. Stowell.

SUBURBAN.

COMMITTEE.

LOCALITY.

TEACHERS.

Plunkett,
 Brown,
 McCafferty,
 Marble,
 Smith,
 Plunkett,
 Earle,
 McCafferty,
 Knight,
 Rogers,

NORTHVILLE,
 TATNUCK,
 VALLEY FALLS,
 LEESVILLE,
 BLITHEWOOD,
 BLOOMINGDALE,
 ADAMS SQUARE,
 BURNCOAT PLAIN,
 NORTH POND,
 CHAMBEBLAIN,

Eudora A. Dearborn.
 Helen H. Welsh.
 Sarah A. Bullock.
 Eliza J. Seaver.
 Anna M. Bemis.
 Olive G. Davis.
 Kate A. Curtis.
 Nellie J. Spurr.
 M. Lizzie Vaughan.
 Mary F. Barker.

GENERAL ASSISTANT—Caroline H. Metcalf.

EVENING SCHOOLS.

LOCALITY.	TEACHER.	COMMITTEE.
WASHINGTON ST.—BOYS.	James H. Carroll,	McNulty.
CAMBRIDGE ST.—MIXED.	Henry Mackay,	Goulding.
WALNUT ST.—GIRLS.	Mary F. Souther,	Harlow.
SUMMER ST.—MIXED.	Albert P. Doe,	Harlow.
NEW WORCESTER.—MIXED.	Amelia M. W. Walker,	Marble.

DRAWING AND EVENING DRAWING SCHOOLS.

TEACHER.—George E. Gladwin.	COMMITTEE.—Thompson.
“ Everett J. Bardwell.	“ Rogers.
“ Edward F. Tolman.	“ Harlow.
“ Alfred D. F. Hamlin.	

TEACHER OF DRAWING—Lucius B. Morgan.

MUSIC.

COMMITTEE.

McCafferty, Mrs. Earle, Bassett.

TEACHER.

Edward S. Nason.

VOLUNTARY MEETING OF TEACHERS, at three o'clock, on the Saturday following the first Tuesday of each month, in the Superintendent's Office, 464 Main Street.

SCHOOL CALENDAR FOR 1876.

Vacation Periods indicated by Full Face Figures.

1876.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	1876.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
JAN.Y.	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	JULY.	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29
FEB.	6 13 20 27	7 14 21 28	8 15 22 29	1 9 16 23	2 10 17 24	3 11 18 25	4 12 19 26	AUGUST.	6 13 20 27	7 14 21 28	8 15 22 29	1 9 16 23 30	2 10 17 24 31	3 11 18 25	4 12 19 26
MARCH.	5 12 19 26	6 13 20 27	7 14 21 28	8 15 22 29	1 9 16 23 30	2 10 17 24 31	3 11 18 25	SEPT.	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	8 15 22 29	1 9 16 23 30
APRIL.	2 9 16 23 30	3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	OCT.	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28
MAY.	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	NOV.	5 12 19 26	6 13 20 27	7 14 21 28	8 15 22 29	1 9 16 23 30	2 10 17 24 25	3 11 18
JUNE.	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	3 10 17 24	DEC.	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30

The 1st Term begins Nov. 29th, 1875, and ends Feb. 18th, 1876, comprising 11 weeks.

" 2d " Feb. 28th, 1876, " April 28th, " 9 "

" 3d " May 8th, " " June 30th, " 8 "

" 4th " Aug. 28th, " " Dec. 2d, " 14 "

Half-Term Reports due April 1st and Oct. 14th, 1876.

*Assuming that Thanksgiving Day will be Thursday, November 23d.

REPORT

OF THE

ACTING CITY ENGINEER.

To the Honorable the City Council :

THE following Annual Report, relating to the Department of Civil Engineering of the City, for the year ending November 30, 1875, is respectfully presented.

HIGHWAYS.

The following tables exhibit the streets accepted and constructed ; also the sidewalks laid out and built during the past year, and work performed preliminary to further action by the City Council.

SIDEWALKS CONSTRUCTED FROM DEC. 1, 1874, TO DEC. 1, 1875.

NAME OF STREET.	FROM	TO	LENGTH.	REMARKS.
Main,	Downing,	Beaver,	935.5	
Main,	Beaver,	E. J. Marble, E. line,	212.0	
Auburn,	Oak Ave.	Catharine,	436.3	
Davis Park,	Around the	Park,	1,066.3	
Cedar,	Fruit,	Oak,	688.5	
Front,	Viaduct,	Washington Sq.,	340.0	
West,	William,	Bowdoin,	147.8	Curb and gutter laid last year.
Washington,	Ash.	Lamartine,	543.7	Curb and gutter laid last year.
Lamartine,	School lot,	Washington,	188.5	Curb and gutter laid last year.
John,			96.3	Abutting on C. Dyer estate.
Fruit,	Elm,	Pleasant,	505.8	Curb and gutter only.
Lincoln,	Forest Ave.,	Northerly,	163.2	Curb and gutter only.
Bowdoin,	N. Ashland.	West,	505.4	Curb and gutter laid last year.
Oread,	Beaver,	M. C. Davis, So. line,	308.0	
Hammond,	Main,	Curtis, south line.	436.3	
Total length,			6,440.8	

STREETS LOCATED FROM DEC. 1, 1874, TO DEC. 1, 1875.

NAME OF STREET.	FROM	TO	Width in feet.	Length in feet.	Date of Decree.	REMARKS.
Ellsworth, May.	Millbury, Main,	Bigelow, Westerly,	40	817.9	Nov. 21.	Relocation, South line.
Eastern ave.	Shelby,	East Central,	50	234.9	June 29.	
Normal,	Prospect,	Eastern avenue,	50	1,551.1	Nov. 22.	
				469.4	Nov. 22.	
Total length,				3,073.3		

STREETS CONSTRUCTED FROM DEC. 1, 1874, TO DEC. 1, 1875.

NAME OF STREET.	FROM	TO	Width in feet.	Length in feet.		REMARKS.
Ward, Canal,	Endicott, Front,	South'y to angle in st. Cherry,	50	1,250.0		Near Millbury line. Under construction. Regraded.
Kendall,	Oak Ave.,	Channing,	40	223.2		
Greenwood,			40	462.0		
Highland,				1,100.0		
Wash'n Sq.,	Pleasant,	near Park avenue,		2,100.0		
Total length,				5,135.2		

Surveys have been made, and plans and profiles prepared of the following streets, preliminary to action by the City Council.

NAME OF STREET.	FROM	TO	Width in feet.	Length in feet.		REMARKS.
Bellevue,	Chandler.	Bluff,	40	587.1		{ Widening and proposed extension. { Widening and proposed extension.
Bluff,	Bellevue,	King,	40	258.0		
Lincoln,	Lincoln Sq.	Frederick,	66	2,360.2		
Prospect,	Eastern Av.,	Mulberry,	40	620.3		
Queen,	Austin,	King,	45	1,652.6		
Dwight,	Cambridge,	St. John's Cemetery,	40	903.3		
Foster,	Main,	Summer,	60	2,000.0		
Waldo,	Exchange,	Front,	50	1,129.0		
Total length,				9,510.5		

SIDEWALKS DECREED FROM DEC. 1, 1874, TO DEC. 1, 1875.

NAME OF STREET.	FROM	TO	Date of decree.	Length in feet	REMARKS.
Main,	Beaver,	a point 212 ft. West'ly,	Sept. 20,	212.0	North side,
Oread,	Beacon,		April 27,	618.3	So. from Beacon St., both sides.
Sever,	Elm,	Highland,	Sept. 20,	3,554.0	Both sides.
Total length,				4,384.3	

Much time has been consumed in connection with the construction of the "Viaduct," many plans having been prepared showing the proposed schemes for crossing Bridge and Blackstone streets, before an arrangement could be made mutually satisfactory to the City and Railroad Corporations. Blackstone street will require to be relocated from Bridge street, northerly about one hundred and fifty feet, it being practically closed by the "Viaduct."

The reconstruction of the Railroad bridges over Southbridge street, and placing the abutments on the street lines will greatly improve that thoroughfare. To obtain a proper relation between the street and bridges will require the grade to be lowered under the bridges and in the approaches thereto. A plan and profile showing the proposed alteration has been prepared, and estimates of the cost made, but no action has been taken, as yet, by the County Commissioners, whose province it is to order such changes.

The construction of the Union Depot and Viaduct, and consequent concentration of railway traffic, will call for early action by the City Council to relieve certain streets in that vicinity, which will otherwise be blockaded at times. Grafton, Franklin and Green streets will require attention. From a preliminary examination of the ground it is believed that a street, fifty feet in width, commencing at the intersection of Front and Vine streets, thence following and widening Vine street to Franklin street, thence passing under the railroads, at nearly right angles thereto, to Temple street, will afford the easiest solution of this problem. The total length of the proposed street, from the

South line of Front street to the North line of Temple street would be 858 feet, and the area covered as follows :

Area within present fence line of Vine Street (private),	13,020 sq. ft.
Area in Cherry Street, outside “ “ “	541 “
Area in Franklin Street (public),	2,043 “
Area to be acquired outside of ways,	27,296 “
Total area,	42,900 “
Width of bridge,	78 feet.
Span “ “	52.9 feet in the clear.

If this scheme were carried out it would be desirable to relocate a portion of Franklin street, so as to avoid the grade crossing, and allow travel to go under the bridge. The distance between the north rail of the new tracks of the Boston and Albany Railroad and the south rail of the present south track is about 150 feet, and if new tracks are laid on the south, as is probable, it will be materially increased. At present it is an extremely dangerous grade crossing. It is believed the Railroad Corporations interested would be willing to make a liberal arrangement with the city to share the cost of changes, if they could avoid the expense they will otherwise be obliged to incur in the proper guarding of this crossing.

The completion of the Mill Brook Sewer in Union street, south of Lincoln Square, and the prospect of building operations being commenced on the abutting property in the Spring, will require the grade of that street to be established. I would call the attention of your honorable body to the need of early action, so that grade damages, from buildings being placed at improper levels, may be avoided.

The preservation of the integrity of the public streets of a city requires much watchfulness and care. By the provisions of Sec. 24, Chapter 47 of the Ordinances, any abutter may construct a door step that shall not extend more than two feet within the limits of the location of the street. In a forty foot street the standard width of the sidewalk is but six feet and eight inches, and by the above Ordinance it can, at the pleasure of the abutter, be practically reduced at any point to four feet and eight inches. It seems that regard for the appearance and convenience of our streets would suggest the repeal of this provision in the section referred to.

College Street, as ordered by the County Commissioners, is to be completed by July 1st, next. Concession having been made in the manner of construction, so far as not to compel the city, in any event, to top-dress the road bed with eight inches of gravel, as they were liable to do under the specifications of the Commissioners in the event of no other proper material being at hand, the estimated expense is reduced some \$2,000.00. If prices in the Spring are the same as during the past year, it can probably be put under contract for about \$4,000.00.

SEWERS.

Sewers have been constructed during the past year, and work connected therewith performed, as exhibited in the following table :—

ABSTRACT OF SEWERS

Built from December 1st, 1874, to December 1st, 1875.

BUILT BY SEWER DEPARTMENT.

STREETS.	Size in Inches.	Feet of Sewer.	Manholes.	Basins.	Inlets.	Feet of Pipe Inlets	Size of Inlets.	LOCATION, ETC.
Boynton,	15" oval	152.1	1		2	2	18.0	12" N. of Joe Bill road.
Catharine,	12"	163.5	2					Fm. Oak ave., east.
Fruit,								Fm. William st., S.
Main,	15"	10.0			1	1	15.0	15" Near George street.
Mechanic,					2	2	12.0	12" At Viaduct Bridge.
North Ashland,	15"	51.0	1		1	1	6.0	12" Corner Lily street.
Patterson,					2	2	18.0	12" Curve at Vernon st.
Pond,					2	2	8.0	12" Corner Winter st.
								place and corner
								Beach street.
Prescott,	12"	173.2	2					From Lexington st.,
								North.
Oak Avenue,					1	1	12.0	12" Nor. of Kendall st.
Queen,	15"	35.0	1		2	2	18.0	12" Curve at Chandler
								street.
Salisbury,					1	1	9.0	12" Opp. Boynton st.
Summer,					1	1	12.0	12" Corner Asylum st.
Ward,	12"	256.4	3					From Vernon to
								Foyle street.
Ward,	12"	294.0	3					From Foyle to Tay-
								lor street.
Ward,	15"	30.7	1		1	1	10.0	12" Curve at Endicott
								street.
Washington Sq.,					1	1	30.	12" At cor. Summer st.
West,	12"	233.3	2					From John street,
								North.
Totals,		1,399.2	16	17	17	168.0		

SUMMARY OF SEWERS

NOW LAID IN THE CITY OF WORCESTER.

DATE.	FEET OF SEWERS LAID.	Manholes.	Basins.	Inlets.	
Previous to 1867,	6,481.5	14	17	39	
1867,	5,539.5	19	2	4	
1868,	15,869.0	108	71	102	
1869,	24,720.0	199	51	61	
1870,	43,320.0	334	146	161	
1871,	33,158.9	292	163	173	
1872,	17,887.5	162	51	52	
1873,	14,893.4	127	90	82	
1874,	12,347.5	97	85	85	
1875,	1,399.2	16	17	17	
Totals,	175,616.5	1368	693	776	33.26 miles of Sewer.

MILL BROOK.

There has been completed 336.7 feet of Arch in Mill Brook Sewer, by Amos Pike, contractor. The form of construction of Mill Brook Sewer is as follows :—

- 5,075.35 Feet dry wall in open Canal.
- 4,694.70 “ Arch laid in cement.
- 882.25 “ In 15 stone arch bridges.

10,652.30 Feet total length, or 2.02 miles nearly.

One hundred and thirty-five permits to enter the Public Sewers have been issued during the year. The total number is 1901.

In cities with a system of sewers as extensive as we now have it is customary to adopt certain Ordinances relating to their police. With the exception of the Ordinance requiring entrance into the public sewers to be made under the direction of a licensed drain digger, there are, at present, no rules which can be enforced

in this city. While the officials whose duty it is to keep the sewers and appendages in proper condition and repair are aware of evil practices existing, they are powerless to prohibit them, on account of no ordinance relating thereto. I would most earnestly call the attention of your Honorable Body to the necessity of the passage of an Ordinance prohibiting exhausting steam into the public sewers. The steam inevitably softens and destroys the mortar, causing the rapid decay of the sewer, and prevents the workmen entering for the purpose of examination and making repairs in the vicinity of the exhaust pipe on account of the heat.

The practice of depositing dead animals, refuse and filth of all kinds into inlets and catch basins should also be prohibited.

The sewers built during the last year, with the exception of the Mill Brook Sewer at Lincoln Square, have been constructed under the charge of Gen. Chamberlain, the Superintendent of Sewers, and have been laid at considerable less expense than under the contract system. The care of maintenance, which entails cleaning of most of the catch basins several times during the year, and incidental repairs, has also been under the Superintendent's charge, and carried on in a very efficient and satisfactory manner.

Sept. 21st, bids were invited for the construction of about 340 lineal feet of the Mill Brook Sewer at Lincoln Square and in Union street, with a Forebay and Wheel pit to secure the water privilege of Hon. Stephen Salisbury. Sept. 29th, the contract was awarded to Amos Pike of this city, who has carried it on to completion in an energetic and satisfactory manner. The cost to the city has been under his contract, \$10,099.00. Mr. Salisbury paying in addition, \$817.86 for the Forebay and connection.

A contract has been made with Messrs. H. C. Fish & Co., for four sluice gates for the Forebay and Wheel pit at \$350.00 each; also for the main gate, to act as the dam, for \$450.00, making a total of \$1,850.00, \$700.00 of which is to be paid by Mr. Salisbury.

October 19th, your Honorable Body directed a report to be

made in relation to the “Island District Sewer,” and in regard to the outlet of the main sewer. The following report was submitted the 26th of the same month :

“To the Honorable the City Council of Worcester.

HAVING received instructions from your Honorable Body to report in relation to the Island District Sewer, and in regard to the outlet of the Main Sewer, I have the honor of submitting the following

REPORT.

No doubt can exist as to the necessity for drainage of the territory embraced within the so-called ‘Island District.’

About eighty acres of the territory would drain into the proposed sewer in addition to the Piedmont District. About thirty acres of the ‘Island District’ is extremely low, not more than $3\frac{1}{2}$ feet above the *ordinary water level* of the Blackstone River at the outlet of the Mill Brook Sewer. To drain the territory by gravity, at that point, under existing circumstances, is impracticable; cellars that are now flooded during high water would not be relieved. That the general health of the neighborhood would be improved by a perfect system of drainage is beyond question, and a large area of low land lying West of the Providence Rail Road would be greatly benefited by a sewer constructed at a level which would permit lateral sewers to enter from that direction.

The following schemes for accomplishing the object desired are submitted for consideration :—

First, by the passage of a grade law regulating the grades at which cellars and streets shall be built to insure perfect drainage. This cannot be recommended, as the law would, of necessity cover, not only the Island District, but the section West of the Providence Rail Road already referred to, and the expense of grading, and raising buildings already constructed, would be excessive in comparison with the other schemes.

The second scheme contemplates the purchase of a portion of the

water rights of the Washburn and Moen Manufacturing Co., at Quinsigamond Village, and taking down about five feet of their dam at that point. This would ensure proper drainage of the District, but is open to serious objections. The outlet of Mill Brook Sewer is at present into a *Mill Pond*; during low stages of water, a portion of the bed of the stream is uncovered and exposed to the action of the air; the sewage matter deposited undergoes a chemical change which is offensive, and in the future, as the population of the city increases, will become more so. To prevent this nuisance it would be necessary to wall the channel of the River so as to contract the flow during dry weather and prevent this deposit from taking place. The experience in London is instructive in this case. In 1858 a Commission was appointed to investigate and report on the subject of perfecting the system of outfall sewers of that city. Mr. Henry Letheby, one of the most eminent English Chemists, says:—

‘That there is much mischief resulting from the present mode of disposing of the sewage of the Metropolis, I cannot doubt; but this mischief is not occasioned, as I once supposed, by the soluble matter of the sewage, *but by the mud or insoluble constituents which settle and putrify upon the banks of the River.*’

Dr. Odling says:—

‘That any means which would prevent the deposition of organic mud in the bed, but more particularly on the exposed banks of the River, would effect an amply sufficient purification.’

Dr. Letheby further remarks:—

‘That the most effective means of improving the condition of the River, and of protecting the public health, is the embankment of the Thames; for the removal of the offensive mud, and the submerging the River’s banks, are, in my opinion, the most important of all considerations.’

The action of salt water on sewage is more pernicious in the Thames than fresh water would be, but the channel of the Blackstone would doubtless require to be walled in the future, if this scheme should be adopted. The cost of this, added to the cost of water rights to be acquired, would exceed the expense of the *third scheme*, which is to carry a sewer to a point below the dam at Quinsigamond Village for an outlet. A sewer of the requisite capacity to carry the storm waters of the Piedmont and Island District would be of sufficient size to take the ordinary flow of Mill Brook Sewer in addition to the dry weather

flow of the above districts. By an arrangement of gates, the dry weather flow of Mill Brook could, if desired at any time in the future, be diverted and carried below the dam, the waters during the wet season being discharged directly into the River as at present. In this connection it may be remarked that sewage discharged into a *rapidly running stream* has a tendency to purify itself by the action of the atmosphere, and the character of the River below the dam is more favorable for an outlet than above. The proposed Island Sewer would pass *under* the Mill Brook Sewer at Cambridge St. and have a uniform fall of one foot in one thousand. The estimated expense is, from Southbridge St. to Cambridge St. \$56,000.00; and from Cambridge Street to the outlet \$136,000.00.

The sewer would be in wet excavation for its entire length, and construction should be commenced at the outlet to admit of the economical disposal of water to be encountered.

Another advantage of the third scheme is, that in case any of the numerous chemical processes on trial in Europe for the purification of sewage should prove practicable, or if irrigation or filtration should be resorted to as a means of purifying the effluent water, the sewage during a large portion of the time could all be concentrated at *one point*, by gravity, where it could be dealt with at the greatest advantage. During freshets no evil effect would ensue from the discharge of the Mill Brook Sewer directly into the river.

Respectfully submitted,

C. H. M. BLAKE,

Civil Engineer.

WORCESTER, OCT. 25th, 1875."

The appraised value of Stock and Tools on hand under charge of the Superintendent of Sewers is appended.

INVENTORY OF PROPERTY IN THE CHARGE OF SUPERINTENDENT OF
SEWERS, NOVEMBER 30, 1875.

One steam pump,	\$25 00
One boat (Mill Brook Sewer),	15 00
Two tool chests,	12 00
One tool chest (small),	1 00
Four pairs hip boots,	12 00
Four wheelbarrows,	12 00
Nine lanterns,	4 00
Fourteen picks,	15 00
Twenty shovels,	15 00
Two hoes,	1 00
Five crowbars,	8 00
Eight pails,	4 00
One lot sewer scrapers,	10 00
One lot gas pipe,	6 00
One hand saw, one hatchet,	2 00
One axe, one tape, one trowel,	2 00
Lot stone hammers,	15 00
Two iron buckets,	6 00
One hydrant wrench,	1 00
Lot hose for flushing,	20 00
Lot timber,	10 00
Lot tackle blocks,	10 00
Lot rope,	15 00
100 feet $\frac{5}{8}$ -in. hose,	8 00
One express wagon,	140 00
Lot striking hammers and drills,	30 00
800 brick,	7 50
Lot bracing plank,	10 00
Four long-handled shovels,	3 00
Two spirit levels,	2 50
One powder can, one oil can,	50
One tamping bar,	50
One lot cement pipe,	10 00

Two sets shears for tackle blocks,	5 00
One mattock, one square,	2 00
One puddling bar,	1 00
Four fish hook ropes,	2 00
One ladder,	1 00
One bbl. cement,	1 65
One bill hook,	1 00
Eight sets basin covers,	9 60
Six bucket chains,	1 50
Lot of bolts,	3 00
	<hr/>
	\$430 75

Respectfully submitted,

C. H. M. BLAKE,

Civil Engineer.

WORCESTER, Dec. 6th, 1875.

SOURCES FOR AN ADDITIONAL SUPPLY OF WATER.

CITY OF WORCESTER.

IN CITY COUNCIL, June 28, 1875.

The Joint Standing Committee on Water to whom was referred the *Order* relative to the feasibility of appropriating Tatnuck Brook for supplying the City with water—also the communication of the Mayor regarding a further supply of Water, would herein respectfully submit the following Report:

That they recommend the purchase of the several water rights on *Tatnuck Brook*, provided that the sum necessary to acquire said rights shall not exceed \$200,000.

They also recommend that a *Reservoir* be constructed, and *Water Pipes laid*, in accordance with the Report of the Acting City Engineer, which Report is herewith submitted.

D. S. GODDARD,
GEORGE GEER,
G. J. RUGG,
T. J. HASTINGS,

Joint Standing Committee on Water.

ENGINEER'S REPORT

ON SOURCES FOR AN ADDITIONAL SUPPLY OF WATER.

To the Honorable the City Council.

The following Order passed the City Council March 29th, 1875 :

“Ordered; That the City Engineer be directed to make such survey of Tatnuck Brook as shall ascertain its Water Shed, its capacity for storage, its value to the mill owners thereon, and such other expenses as would be involved by the taking of said brook for the uses of the City.”

Also to take the measure of flow of water from Henshaw Pond, “and Kettle Brook.” In obedience to the above Order I beg to submit the following Report :

A subject which should predicate the consideration of the result of the surveys and investigations made is the necessity of an additional supply of water. Worcester is essentially a manufacturing city, and any reduction in the allowance of water for manufacturing purposes will inevitably retard its future growth; it should therefore be the policy of the city to have a supply sufficient not only for the present but for years to come. The consumption of water is sure to increase more rapidly than the population, as proved by the experience of all cities. The Worcester Lunatic Hospital, which now has its own source of supply, will, next year, on removal to the new buildings, require from the city at least 30,000 gallons per day, an amount which would be seriously felt in seasons of dry weather; this is only a single case, but others will doubtless arise in the immediate future of equal magnitude. The quantity of the supply is for certain manufacturing purposes of scarcely more importance than the quality; bleaching and the manufacture of the best quality of paper for instance requires water of peculiar purity and clearness. The liability of each source to future pollution should also be carefully considered, which involves its distance from the city, quality of the soil for agricultural purposes and

location of manufacturing establishments, or prospect of such location in the future, above the point from which the supply is to be taken.

The Lynde Brook water-shed, from which we derive our present supply, has an area, including the water surface of the Reservoir, of 1870 Acres. The Reservoir when filled to its present safe capacity contains 663,330,000 gallons, or about 176 days supply. It has been customary, in estimating the amount of water to be collected from a shed, to assume a large percentage of the rainfall as available, but the test of experience in this country, as well as in England, has proved conclusively that this method of estimation has been fallacious, the results being much larger than can practically be obtained, and the numerous failures of supply have caused the most eminent engineers to base their calculations on entirely different data from that formerly used. It has been the practice to take as a basis for calculation the *average* fall for a *series of years*, when, to ascertain the amount that can be relied upon the *mean of the two or three dryest consecutive years* should be taken. Before making an estimate of the value of the present source the opinions of some of the best authorities in this country and England will be quoted. The experience in England is given to prove only that the true basis for calculation is from years of minimum rainfall, instead of the average of a series of years. As the evaporation in our climate is so much greater than in England, we cannot take the relation of the fall to the yield there as a precedent to base calculations on in this country.

Mr. Joseph P. Davis, City Engineer of Boston, in his Report on the available yield of the Sudbury River gives the experience at the Rivington Gravitation Works, which supply the City of Liverpool, as follows:—

“The area of the water-shed from which water is collected is about 16 square miles. The average rainfall for 17 years is stated at $45\frac{7}{8}$ inches. The compensation water stipulated to be given to the mills is 9,960,000 U. S. gallons per day, or about 13 inches of rainfall. The storage capacity was 48,500 cubic feet per acre of collecting ground, but it has recently been increased to 68,500 cubic feet. The average rainfall of the district was originally taken at 48 inches of which 36 inches or 75 per cent. was assumed to be available for the use of the city and for mill compensation. The average of 11 years rainfall delivered to Liverpool has been only $14\frac{1}{2}$ inches, and in 1865 only $9\frac{3}{4}$ inches, instead of the 24 inches originally estimated. It is stated that the present storage capacity of 68,500 cubic feet per acre has little chance of being filled in a run of dry years; indeed, the corporation engineer estimates that even with this enormous storage the available yield will only be equal to 12,600,000 U. S. gallons per day,

while reliance should not, he says, be placed on more than 10,800,000 gallons (equal to $14\frac{2}{10}$ inches of rainfall) in cycles of three dry years. Upon this estimate, the total collection, including the compensation to the mills, would be $14\frac{2}{10} + 13 = 27\frac{2}{10}$ inches, or $59\frac{1}{2}$ per cent. of the average rainfall, and this is with a storage capacity equal to 210 days supply.

The drainage grounds of the Rivington Works must afford unusual advantages for collecting water. The amount of storage provided shows that the slopes are steep, and undoubtedly the geological formation is generally of an impervious character, else basins covering such large areas would not be built.

The losses by evaporation and absorption are much less in the English climate than in this. As illustrating the difference in capacity to absorb moisture, of the atmospheres of the two countries, it may be stated that the mean yearly evaporation at Whitehaven, England, from water surfaces was determined, by six years of experiment, to be $30\frac{3}{10}$ inches, while experiments lasting for one year showed it to be at Ogdensburg, N. Y., $49\frac{37}{100}$ inches, and at Syracuse, N. Y., $50\frac{2}{10}$ inches. Observations taken at Salem and Cambridge, Mass., determine it to be about 56 inches. In England the yearly losses are comparatively uniform, and are usually estimated at from 9 to 16 inches in depth; here they are very variable, but are found to be as an average equal to about one half of the rainfall, or say from 15 to 30 inches of depth, or about 10 inches more than in the former place. This difference may, perhaps, be more satisfactorily shown by a comparison of percentage of yield. The total yield of the Rivington district for a term of six years was about 74 per cent. of the rainfall, the average fall during that period being 45 inches. On the Cochituate district the average yield for a long term of years is found to have been about 40 per cent. These results give the ratios of yield between the two districts as 100 to 54. The average yearly rainfall of Eastern Massachusetts is not very different from that of Liverpool, but the portion of it which can be made available for a water supply is much less. Applying the proper corrections to the Liverpool results, it will be found that with a storage capacity equal to 200 days supply, from 16 to 18 inches of depth may be reckoned upon as available, from a water-shed having steep slopes and a surface of an impervious character."

The Cochituate water-shed during a period of 9 years, from 1863 to 1871 inclusive, yielded to the Lake but $38\frac{1}{2}$ per cent. of the rainfall (see table 2, page 363). This district however is rather unfavorable for collecting a large percentage, a considerable portion consisting of bog meadows, which retain the water and admit of a large loss by evaporation.

In table 1 is embodied the result of a series of careful experiments made by Mr. Kirkwood, engineer of the Brooklyn Water Works, to

determine the capacity of storage reservoirs for an additional supply for that city. The area of water-shed used in experiments was, exclusive of water surfaces, 335 square miles. Mr. Kirkwood says in reference to the methods of obtaining the rainfalls.

“Returns are given of the rainfall at two different points, and for part of the time at three; one of the points is without the basin, but supposed to be characteristic of it. Of the other two, one is at the lower end, the Croton Lake, and the other towards the centre of the basin.”

TABLE I.

TABLE SHOWING THE MONTHLY RAINFALLS ON THE CROTON WATER-SHED FOR SIX (6) YEARS, AND PERCENTAGES OF THE SAME REACHING THE DAM.

MONTHS.	1864.			1865.			1866.			1867.			1868.			1869.		
	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.	Rainfall in inches.	Percentage flowing to Croton Dam.	Equivalent flow in inches.
January,	1.84	123.4	2.270	3.43	71.5	2.454	0.96	110.1	1.057	1.24	74.4	0.923	3.61	49.7	1.794	4.18	49.0	2.043
February,	1.39	62.9	0.874	2.86	42.4	1.213	5.03	101.1	5.086	3.74	107.0	4.000	1.15	62.1	0.714	4.74	74.5	3.533
March,	2.16	70.3	1.519	5.12	85.7	4.387	2.13	107.3	2.280	2.05	147.4	3.021	1.89	21.9	4.142	5.64	87.7	4.940
April,	3.04	53.5	1.626	2.95	66.0	1.944	2.69	86.8	2.310	3.26	70.2	2.290	4.32	81.4	3.514	2.48	125.7	3.116
May,	4.86	42.8	2.080	7.38	44.8	3.308	4.78	46.7	2.233	5.97	50.6	3.023	10.18	56.4	5.745	5.21	49.4	2.576
June,	3.41	18.6	0.634	5.71	28.1	1.603	3.90	56.6	2.209	6.19	67.4	4.172	5.76	53.3	3.071	2.51	46.1	1.156
July,	2.37	8.5	0.201	8.12	19.3	1.571	4.45	16.4	0.729	5.25	29.6	1.555	3.37	28.9	0.974	2.31	23.4	0.540
August,	6.90	8.4	0.577	3.05	17.4	0.530	6.11	16.1	0.984	9.21	42.2	3.885	8.63	21.7	1.877	2.30	10.9	0.252
September,	4.68	10.2	0.475	2.23	10.8	0.240	6.20	18.1	1.123	2.51	92.0	2.310	13.35	38.4	5.132	2.85	11.1	0.315
October,	3.94	23.9	0.940	4.56	7.6	0.346	5.08	21.9	1.114	4.51	38.1	1.717	0.74	366.5	2.712	8.74	28.8	2.518
November,	3.48	54.6	1.901	3.15	36.3	1.142	3.48	94.1	3.273	3.09	64.6	1.996	5.36	69.9	3.744	4.39	42.9	1.884
December,	2.73	62.1	1.795	3.87	47.2	1.825	3.76	74.7	2.810	1.86	94.5	1.757	2.51	55.2	1.385	6.86	39.0	2.675
Totals,	40.80	36.5	14.892	52.43	39.2	20.563	48.57	51.9	25.208	48.88	62.7	30.649	60.87	57.2	34.804	52.21	48.9	25.553

Total Rainfall for six years, $303\frac{7}{10}$ inches; average yearly rainfall $50\frac{6}{10}$ inches; percentage flowing to dam for six years, 50; average yearly quantity flowing to dam, $25\frac{3}{10}$ inches.

TABLE II.

TABLE SHOWING THE MONTHLY RAINFALLS ON THE COCHITUATE WATER-SHED FOR NINE (9) YEARS, AND THE PERCENTAGE OF THE SAME THAT REACHED THE LAKE.

MONTHS.	1863.			1864.			1865.			1866.			1867.			1868.			1869.			1870.			1871.		
	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.	Rainfall in inches.	Per cent. rec'd in Lake.	Inches collectable.
January,	4.10	47	1.93	3.37	71	2.39	4.99	43	2.15	1.44	51	0.73	2.76	40	1.10	3.70	33	1.22	3.71	49	1.82	7.85	60	4.71	1.31	79	1.03
February	4.38	71	3.11	0.98	159	1.56	4.45	39	1.74	5.80	49	2.84	5.40	97	5.24	1.18	95	1.12	7.07	26	1.84	4.68	84	3.93	2.30	99	2.28
March,	3.57	104	3.71	8.44	48	4.05	5.48	85	4.66	3.92	45	1.76	5.65	62	3.50	2.51	153	3.84	7.52	44	3.31	6.04	56	3.38	5.02	45	2.26
April,	11.34	39	4.42	4.02	66	2.65	2.18	124	2.70	1.94	84	1.63	2.43	118	2.87	5.61	62	3.48	2.57	97	2.49	8.81	78	6.87	2.29	57	1.31
May,	2.66	54	1.44	2.84	57	1.62	8.25	57	4.70	6.46	20	1.29	6.46	34	2.20	8.12	76	6.17	7.59	29	2.20	3.14	53	1.66	5.66	26	1.47
June,	1.98	34	0.67	0.58	84	0.49	0.91	37	0.34	4.80	23	1.10	2.95	22	0.65	2.95	54	1.59	3.68	29	1.07	4.05	24	0.97	5.96	9	0.54
July,	14.12	21	2.97	1.06	39	0.41	3.10	15	0.46	13.35	9	1.20	5.36	11	0.59	2.16	21	0.45	2.63	28	0.74	3.10	17	0.53	2.20	22	0.48
August,	5.61	27	1.51	3.56	19	0.68	3.36	14	0.47	3.98	16	0.64	12.36	17	2.10	7.38	16	1.18	2.34	25	0.58	2.03	20	0.41	3.56	26	0.93
Sept.,	3.39	29	0.98	1.52	32	0.49	1.66	27	0.45	8.36	16	1.34	1.08	29	0.31	7.69	24	1.85	8.49	13	1.10	0.64	13	0.08	1.46	39	0.59
October,	4.56	29	1.32	6.50	22	1.43	6.99	10	0.70	3.43	22	0.93	7.27	14	1.02	1.19	80	0.95	9.50	25	2.37	7.96	14	1.11	5.38	18	0.97
Nov.,	8.54	31	2.65	5.45	23	1.25	4.78	21	1.00	4.52	22	0.99	2.63	42	1.10	6.77	29	1.96	3.26	40	1.30	4.40	20	0.88	7.01	23	1.61
Dec.,	5.05	43	2.17	4.28	31	1.33	3.31	34	1.13	4.35	36	1.56	1.90	59	1.12	0.65	261	1.17	5.98	53	3.17	3.19	24	0.77	3.24	38	1.23
Totals.	69.30	39	26.88	42.60	43	18.38	49.46	42	20.50	62.32	26	16.01	56.25	39	21.80	50.06	50	24.98	64.34	34	21.99	55.89	45	25.30	45.39	32	14.68

Total Rainfall for nine (9) years, 495.61 inches. Average, 55.07. Percentage received into the Lake during nine (9) years, 38½. Average yearly depth of rain received into the Lake, 21.2 inches.

Mr. Davis, in estimating for a supply from the Shawshine, for Boston, says:—

“The Cochituate tables show that in 1871, with a rainfall of $45\frac{39}{100}$ inches, only $14\frac{68}{100}$ inches found their way into the Lake, the rest of the fall having been lost by evaporation. The rain tables published in the Report of the Water Board for 1871 show that frequently the yearly rainfall is considerably less than $45\frac{39}{100}$ inches. Thus, in 1849, the fall at Lake Cochituate was $34\frac{69}{100}$ inches; in 1852, $38\frac{58}{100}$ inches; in 1855, $39\frac{5}{100}$ inches; in 1860, $38\frac{24}{100}$ inches; in 1864, $36\frac{83}{100}$ inches. The fall in 1846 at Lowell was $28\frac{3}{100}$ inches only, and since 1842 there have been nine years when the fall was less than 40 inches. At Boston, in 1846, the fall was only $29\frac{9}{100}$ inches, and since 1842 there have been three years when it was less than 40 inches. At Cambridge, the fall in 1846 was $30\frac{37}{100}$ inches, and since 1842 there have been two years when it was less than 40 inches, and four years when it was between 40 and 41 inches. Should any of these low rainfalls occur with conditions favorable for a high rate of evaporation from the ground surface, the figures for 1871 show us that, at such time, the amount of water reaching the streams would not much, if at all, exceed 12 inches upon the area of the watershed. Gaugings taken at the outlet of Long Pond or Lake Cochituate, from June 27, 1837, to July 27, 1838, show that only $11\frac{7}{10}$ inches of the rainfall passed through the Lake during that year. In stating the available capacity the yield of the year of drought should be given, as that yield determines the real value of the source.”

The following extracts from the Report of the Royal Commission of 1867 on Water Supply show conclusively the fallacy of estimating the available yield from *averages* of rainfalls, *volumes of flow*, etc. The term “gravitation schemes” refers to sources of supply derived from small rivers and brooks, improved by storage reservoirs, similar to Lynde, Kettle, and Tatnuck Brook schemes, the water from which is delivered by gravity, in distinction to supplies derived directly from large rivers, without artificial storage, and which generally requires pumping:—

“During the sittings of the Commission the gravitation plans throughout the country have been subjected to a severe test by the occurrence of an unusually long drought in 1868. Although the rainfall of the whole year was above the average, yet it was very unequally distributed; as from the end of April to the end of September, a period of five months, there was scarcely any rain. Hence the capacities of the catchment reservoirs were severely tested, the towns having to depend entirely on the stores in them, without any feeding supply, except that of perennial springs.

In Manchester, it appears that after official notices had been published, cautioning the inhabitants against waste, and urging them to

economize their supplies, the corporation, on the 3rd of August, limited the supply to the city to twelve hours of the day, stopped the street watering, and diminished the trade supplies by one-half. They also made an arrangement with the mill-owners for reducing by one-half the quantity given to the mills on the line of the river, and made compensation in money for the deficiency. In the middle of September the general supply to the town was further limited to eight hours per day, and the quantity for trade also diminished. Many persons were prosecuted for waste or undue use of water. The eight hours supply lasted seven days, and the twelve hours supply 76 days.

"At Rochdale, as early as the 25th June, the supply was limited to four hours per day for 15 weeks; but, with this precaution, during the second week in October, the store became entirely exhausted, and the town would have been almost without water, but that recourse was had to pumping from a colliery in the neighborhood.

"At Bury, the store ran so low towards the end of August that it was reserved entirely for compensation to the mills, and the company obtained a supply of seven gallons per head from neighboring works; for baths, and for the numerous manufacturing and trade uses in the town there was none. This continued for five weeks."

The Report mentions the following towns depending upon storage schemes as having derived, during seasons of drought, a much less supply than had originally been estimated: Liverpool, Newcastle-on-Tyne, Bristol, Preston, Kendall, Bradford, Halifax, Sheffield, Stockport, Bolton, Ashton, Stalybridge, Oldham, Dewsbury, Warrington, Blackburn and others.

"The causes of this difficulty may lie either in an over-estimate of the available rainfall, or in an insufficient provision of storage. The sufficiency of water-collecting plans in these respects must be tested both by the concurrence of several consecutive dry years, and by occasional droughts of long duration; and to obtain the necessary data on these points for any particular district, must require special observations on that district, extended over a considerable time.

"In so variable a climate, and with a rainfall in different parts of the kingdom ranging, in round numbers, from 20 to 40 inches, it is of primary importance to have the most complete information as to the rainfall; and, as the annual variation is also great, the average fall for a term of years cannot be determined without observations extended over a long period. Less than 20 years would probably not suffice. *But the question with reference to a water supply, has to deal not with the average rainfall of a long term of years, but with a short term depending on the capacity of storage.* In no case yet contemplated would it be prudent to rely on more than an average of three years, and under certain conditions it is doubtful whether two years would not be a safer term.

“The question of storage room involves complicated considerations, which have been especially dwelt upon by Mr. Hawkesly. On account of the irregularity of the rainfall, particularly in mountainous districts, it is impracticable to construct reservoirs large enough to store the entire quantity received, so that all large floods occurring when the reservoirs are full must pass away and be lost. Hence the available average attainable from reservoirs must fall much short of that deduced simply from the fall of rain.”

Evidence of Robert Rawlinson, Esq., Civil Engineer :—

“Are we to understand that the object of the remarks which you have made with regard to the average of rainfall is to guard against the supposition that any scheme which professes to supply the inhabitants of any given town with water should not be calculated upon the *average*, but that there must be a deduction ; and of, in your judgment, one-third from that average as a proper deduction to make that quantity safe ? ”

“I think so ; the same as I say is exemplified in Liverpool ; they have been landed in a very grievous mistake, because they relied upon the supposed average.”

Evidence of Rev. J. C. Clutterbuck :—

“Does there appear in your judgment any serious objection, apart from the question of cost, to the schemes which have been generally considered ? ”

“One of the objections which struck me with regard to the scheme proposed by Mr. Bateman was, that he had not sufficiently shown that the water shed there would yield the amount of water that he calculates upon. In the first place, he has not sufficient information with reference to the average quantity of rainfall ; *not that I attach much importance to the average of rainfall*. I think that all rainfall with reference to the areas which are to supply water to London, must be considered with regard to the *minimum of rainfall*, and what shall be the possible duration of drouth which may deprive you of water at a certain time. The objection as it appears to me to Mr. Bateman's plan is that you have no certainty that you shall not at some period be deprived of water.”

“Then your objection would be taking an average at all ? ”
“Decidedly.”

“And for the sake of safety you would take the minimum fall, and all plus that would be gain ? ”

“The only thing to set against that would be the natural or artificial storage of water in those lakes, but when you speak of that as a supply of water which you are to depend upon you must take the minimum, as it appears to me.”

Evidence of Thomas Duncan, Esq., Engineer of the Liverpool Water Works:—

“I think the calculations for the supply of towns should be upon minimums and not means.”

Evidence of Thomas Hawksley, Esq., Hydraulic Engineer:—

“In order to furnish that supply to London, what amount of rainfall would you consider to be necessary?”

“I should first explain that the 45 inches of rain is only the quantity which on an average descends from the Heavens, and that quantity is subject to two deductions. In the first place, we know as a matter of absolute fact that we cannot by any system of reservoirs which it is practicable to construct (I will not say with a reasonable but with a large amount of capital) *deal with more than the average of three consecutive years of minimum fall*. We know as a matter of experience—and this important fact is verified by large and long-continued rain tables—that in those three years the average fall of rain is almost precisely one-sixth part less than the general average, and I could refer the Commission to any number of long-continued rain tables to establish that fact; but we know also, as engineers, that practically that is the case. If we take from the 45 inches a sixth of that quantity, that will be $7\frac{1}{2}$ inches, and that would leave $37\frac{1}{2}$ inches as the quantity of rainfall due to the three minimum years. Then from that we have to take the evaporation. Now the evaporation over a district like that, part of which is low land and part of which is high land, will be about $13\frac{1}{2}$ inches,” (the evaporation and losses in the Eastern States of this country are from 75 to 100 per cent. greater than in England), “and if that be deducted there is the residual quantity of 24 inches, and that may be deemed to be the available quantity. That is the way in which we now make all our calculations for undertakings of this kind. I am not shifting or moving the calculation in any way. This system has been tested by actual results in a great many cases, and is known to be as accurate as anything dependent upon the eventualities of the seasons can possibly be. It is as near the truth as we can in practice obtain anything.”

“You stated, did you not, that you allowed from the $37\frac{1}{2}$ inches $13\frac{1}{2}$ inches for evaporation?” “Yes $13\frac{1}{2}$ inches.” “That would give you an available rainfall of 24 inches?” “Yes, upon which you might, in my opinion, safely rely, providing your reservoirs were made large enough to deal with that quantity.”

“What sized reservoirs should you think would be large enough to deal with that quantity?” “The reservoirs to deal with that quantity should be of a magnitude to store 170 days supply.”

Extract from a Report to the Commission, by John Taylor, Esq., Civil Engineer, on Gravitation Water Supplies to large towns:—

“The general conclusions to be drawn from the data I have given in the preceding pages respecting the largest gravitation water supplies

in this country, are as follows:—"That none of the works alluded to have completely fulfilled the anticipated results.

"Manchester and Glasgow are favorable examples of gravitation works, but exhibit signs of deficiency when tested for cycles of dry years; and of the *five* large towns alluded to, *four* have already erected, or are erecting, pumping works in aid of the gravitation supplies. Thus, it appears that, basing calculations on *average* falls of rain is erroneous; the *minimum quantities only should be depended upon*; but, as I have before stated, there is yet no experience sufficient to show what are the minimum falls in a given district, nor what proportion of such falls would be available.

"The question of storage is, of course, an important element in gravitation works, and from past experience it is plain that complete security against want of water, in exceptionally dry years, could only be attained by storing all the flood water, of two or three successive winters, or, in other words, providing storage for 300 to 400 days supply to the district.

"This matter was well explained by Mr. Homersham, C. E., in a report on the supply of water to Manchester in 1848, in which he states generally that if the whole quantity of water collected in wet years be not used, then the quantity of water that could be regularly yielded by the reservoirs would depend upon the depth of rain falling on the gathering ground and flowing off it in the *average* of years, since the water falling in wet years would be stored from wet to dry years. The size of such reservoirs must, however, be *very large*, as they must be sufficient to contain the superabundance of a succession of wet years, in order to compensate for the deficiency of a succession of dry ones.

"The axiom in mechanics that the strength of a beam is the strength only of its weakest part applies also to gravitation water works, their real strength or power of supply being only the *minimum quantity they may be reduced to*."

Extract from a Report of John Taylor, Esq., on the drought of 1868, as regards its effect on gravitation water supplies to large towns:—

"The general result has been that nearly all gravitation supplies of water, obtained from drainage grounds, have failed in a manner hitherto unprecedented within the known experience of such works, proving that the data on which they have been based have been fallacious, and that the storage reservoir and gathering grounds of such works must be greatly increased to meet the demands of years like the present."

The question now arises, what amount of water can be relied upon as available from the Lynde Brook sheds. The area of the water-shed is, including the water surface of the reservoir, 1870 acres. The water surface of the Reservoir, at the present height of the rollway, is 132 acres, and as the evaporation from water surfaces in our climate is

greater than the rainfall, this area at least should be deducted, which leaves an effective shed of 1738 acres. Table 3 is a Record of the rainfall kept at the Worcester Lunatic Hospital from 1841 to 1870 inclusive. From the preceding evidence and experience we have had it is evident that our calculations should be based on the minimum fall of rain for two or three consecutive years, and not on the average. The next point is, what percentage of the rainfall shall be taken as available? By consulting table 1 it will be seen that in 1864, on the Croton shed, the rainfall amounted to $40\frac{8}{10}$ inches, of which but $36\frac{1}{2}$ per cent. or $14\frac{8.92}{100}$ inches reached the dam; in 1865 the rainfall was $50\frac{4.3}{100}$ inches, $39\frac{2}{10}$ per cent. or $20\frac{5.63}{100}$ inches reaching the dam, and the average rainfall for six years was $50\frac{6.2}{100}$ inches, 50 per cent. of which was collected.

TABLE III.

RECORD OF RAINFALL IN INCHES, KEPT AT THE WORCESTER LUNATIC
HOSPITAL, FROM 1841 TO 1870.

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTAL.
1841	4.78	0.83	3.43	6.54	3.46	0.92	2.94	2.97	4.27	3.84	4.17	4.77	42.92
1842	1.35	4.13	2.24	2.82	3.24	4.93	1.96	7.12	3.50	0.83	3.36	5.30	40.78
1843	5.05	4.45	5.23	3.13	1.73	4.15	3.39	9.19	1.25	5.19	3.63	2.28	48.67
1844	3.14	1.44	3.80	0.35	3.67	1.92	3.50	3.39	3.68	7.34	3.06	2.56	37.85
1845	4.17	2.61	3.29	1.61	3.23	3.14	2.91	2.36	2.57	4.44	6.77	5.39	42.49
1846	2.92	2.50	3.33	1.34	5.85	2.37	3.81	2.44	0.90	2.19	4.08	2.87	34.60
1847	4.66	4.08	3.89	1.67	3.52	5.29	4.86	4.20	7.17	2.87	3.75	4.93	50.89
1848	3.08	1.61	3.89	1.52	6.82	1.31	3.13	3.19	2.36	5.75	1.94	3.93	38.53
1849	0.98	1.30	4.75	1.95	3.56	1.25	1.60	4.28	2.49	6.45	4.11	3.12	35.84
1850	4.79	2.23	3.67	5.53	7.50	3.25	3.75	6.05	7.92	3.37	2.14	4.19	55.39
1851	2.07	4.01	1.40	6.76	4.73	3.16	2.17	1.97	2.59	7.04	5.68	2.30	43.88
1852	5.44	2.46	3.42	10.77	3.15	3.53	3.42	11.38	3.36	3.89	5.88	4.78	61.48
1853	3.04	8.09	3.60	4.92	5.45	1.01	3.29	10.71	5.26	6.20	5.30	3.79	60.66
1854	2.82	6.62	3.45	6.69	6.78	3.05	5.68	0.35	5.53	5.03	9.82	3.34	59.16
1855	8.11	4.48	0.23	5.39	1.64	4.19	9.40	4.06	0.20	8.17	5.85	6.90	58.62
1856	4.60	1.35	1.69	3.34	6.55	1.44	2.68	13.14	3.39	2.65	2.03	4.08	46.94
1857	4.48	2.24	2.80	8.77	4.56	3.44	3.80	5.75	4.92	3.93	3.12	6.11	53.92
1858	3.06	1.10	2.29	4.14	4.13	5.16	4.18	4.00	5.70	3.09	1.69	3.19	41.73
1859	5.75	3.67	7.71	2.90	3.65	5.17	1.26	5.45	4.00	2.46	3.00	4.55	49.57
1860	1.34	2.77	2.26	1.36	2.66	6.65	7.91	5.76	6.02	2.47	4.38	5.05	48.63
1861	4.33	1.60	2.85	5.71	3.50	2.46	5.29	3.99	3.11	3.38	3.93	1.81	41.96
1862	4.47	2.44	3.51	2.34	1.87	7.44	6.10	2.64	2.14	3.22	5.35	2.50	44.02
1863	4.09	3.42	5.78	5.28	1.76	1.18	8.87	3.96	2.56	4.85	4.77	4.41	50.93
1864	4.54	1.74	3.90	5.66	5.96	2.40	1.68	3.11	2.93	4.29	4.81	3.67	44.69
1865	3.92	3.26	4.72	2.51	5.33	1.72	3.37	3.39	0.68	0.51	2.36	2.75	34.52
1866	2.56	5.27	3.18	2.09	5.33	3.40	3.78	3.22	4.77	2.37	2.51	3.73	42.21
1867	5.16	4.42	4.40	2.50	4.91	3.32	3.36	10.79	1.97	3.79	2.19	2.07	48.88
1868	3.27	1.53	2.82	5.18	8.30	3.08	1.08	3.57	8.60	1.14	4.24	1.85	44.66
1869	2.82	5.49	4.83	2.52	5.77	3.08	1.40	2.21	4.74	9.81	2.43	5.25	50.35
1870	6.34	3.04	2.34	6.03	2.40	2.09	2.39	1.74	1.40	5.89	3.48	4.10	41.24

Average for 30 years 46.53 inches.

Minimum for three successive years 38.31 "

Table 2 shows that from 1863 to 1871 inclusive but $38\frac{1}{2}$ per cent. of the rainfall on the Cochituate shed reached the lake, while in 1866 but 26 per cent. of a fall of $62\frac{32}{100}$ inches, or $16\frac{20}{100}$ inches was collected. 50 per cent. of the rainfall, as available, is as much as we can safely base an estimate upon, and that is used in considering all the sources surveyed. By an examination of Table 3, it will be seen that,

In 1844 the rainfall in Worcester was $37\frac{85}{100}$ inches, in 1845 it was $42\frac{49}{100}$ inches, and in 1846, $34\frac{6}{100}$ inches, an average for *three consecutive years* of but $38\frac{31}{100}$ inches. This would give on a shed of 1,738 acres, with 50 per cent. collected, in round numbers, 904,000,000 gallons. The present consumption of water in Worcester is fully 3,750,000 gallons per day, so we should have averaged for each of those three years but 241 days supply, and have had a deficiency of 372 days supply at the end of three years, against which we should have the amount stored at the commencement of the first year. It will be supposed that the reservoir was raised to its proposed additional height of 5 feet, and that it was *full*, containing 895,300,000 gallons, or 238 days supply, which is the most favorable condition possible; deducting from 372, 238 and we still have a deficiency of 134 days, during which we should have had a water famine. Again, in 1848 the fall was $38\frac{53}{100}$ inches, and in 1849 $35\frac{84}{100}$ inches, the mean being $37\frac{185}{100}$ inches for two consecutive years, which would have given but about eight months supply for each year, and we should have had a deficiency of about one month's supply, supposing the reservoir to have started under the same conditions of storage as in the first case.

Still again, in 1864 the fall was $44\frac{69}{100}$ inches, in 1865 $34\frac{52}{100}$ inches, and in 1866 $42\frac{20}{100}$ inches, an average of but $40\frac{47}{100}$ inches, which would again have placed us in great danger. But our present condition is, perhaps, the strongest proof that can be produced to convince the most casual observer that our only safety lies in an additional and independent source of supply.

The following plan was adopted in estimating the value of each source. The total water-shed, including water surfaces, was first obtained. The area of water surfaces was then deducted, the evaporation rendering them worthless for collection, and the remaining area taken as the effective water-shed. The average rainfall, as observed for the years 1844, 1845 and 1846, was taken as a basis for calculation on the minimum amount to be relied upon in cycles of dry years, and therefore the true value of the source, and 50 per cent. of that rainfall taken as available. Kettle Brook will first be considered as a source of supply.

KETTLE BROOK.

The project of diverting the waters from Kettle Brook at Kent's Mill into the Lynde Brook Reservoir, will first be considered. The total area of the water-shed at Kent's Mill is 3,200 acres; deducting the area of water surface of Kent's Pond and the reservoirs above, and we have an effective shed of 2,937 acres, which, with adequate storage capacity, will insure a supply of 4,184,000 gallons daily.

While the execution of this scheme would relieve us speedily from danger of a water famine, at a very moderate outlay for construction, there are objections to its adoption as a permanent source of supply.

The storage capacity of the Reservoir is too limited for the water-shed we should secure, and although the Mill owners would recover heavy damages, we should be able to deal with but a small portion of the water paid for. Our reliance would be, as now, in one storage reservoir, and in the event of repairs being made at certain points, which would render it necessary to draw off the water, we should lose our supply for the time being.

If Kettle Brook is taken, these objections can be removed, by its diversion from the Waite Reservoir into Henshaw Pond, an additional water-shed of 688 acres, exclusive of water surfaces, would be secured, which added to the shed at Kent's Mill, gives an aggregate of 3,625 acres, from which a supply of 5,165,000 gallons per day can be obtained.

The storage capacity of Henshaw Pond, by building a dam and raising the water line twenty feet, drawing five feet below the present surface, would be 575,889,000 gallons.

ESTIMATE OF COST OF KETTLE BROOK AND HENSHAW POND SCHEME.

DAM AND ROLLWAY.	CUBIC YARDS.	PRICE.	COST.
Excavation for embankment	19,272	\$ 30	\$5,781 60
Rock excavation	100	2 00	200 00
Puddle	1,656	75	1,242 00
Broken stone	331	3 00	993 00
Block paving for slope	910	6 00	5,460 00
Coping	32	9 00	288 00
Cut stone			468 00
			\$14,432 60

PIPE LINE.	WEIGHT IN TONS.	PRICE.	COST.
2,800 lineal feet, 20 inch, class A	151		
1,610 " " " B	102		
2,225 " 24 "	132		
6,635 "	385	\$45 00	\$17,325 00
4,410 feet laying 20 inch		1 50	6,615 00
1,610 " " 24 "		1 75	2,817 50
Special castings			500 00
Two gates (20 inch)			600 00
Extra work through ridge			\$27,857 50
			7,965 00
			<u>\$35,822 50</u>

Gate House	\$2,878 50
Changing road	1,338 15
Connection with Kettle Brook	5,864 50
	<u>\$10,081 15</u>
Land taken	\$15,000 00

SUMMARY OF COST.

Dam	\$14,432 60
Pipe line	35,822 50
Gate house	2,878 50
Changing road	1,338 15
Connection with Kettle Brook	5,864 50
Land taken	15,000 00
	<u>\$75,336 25</u>
Engineering and contingencies, 10 per cent.	7,533 63
Total estimated cost	<u>\$82,869 88</u>

HENSHAW POND.

In accordance with the direction in the order of the City Council to "take the measure of the flow of water from Henshaw Pond," a weir was constructed at its outlet, and measurements of the discharge have been taken daily.

The rainfall during the gauging has been 4.90 inches; this was preceded by a fall of $\frac{4.5}{100}$ of an inch on the 14th of April, and $\frac{4.2}{100}$ on the 17th, which had an influence on the discharge. There was also a considerable body of snow on the ground when the measurements commenced. The period devoted to the gauging has been too limited to establish a ratio between the rainfall and yield of the water-shed, but the rapidity of increase of discharge following a storm, and precipitous character of the slopes of the shed, would indicate that fifty per cent. could be relied upon. This would insure a supply of 685,000 gallons per day from a shed of 481 acres. It will be seen that as a source of supply it is totally inadequate. Its present storage capacity is extremely limited. Soundings have been taken to ascertain the depth of the Pond, and there is not on an average more than ten feet of water, five feet only of which could be utilized to advantage. This would give but 46,114,000 gallons storage, or about two weeks supply for the city. It cannot be recommended to take Henshaw Pond, except in the event of Kettle Brook being secured by the city as a source of supply, in which case, by building a dam, and raising the water level of the Pond twenty feet, its storage capacity could be sufficiently increased to render it a valuable Reservoir, the water from the Brook being diverted from the Waite Reservoir and carried through a canal into the Pond.

Table 4 gives the daily discharge in gallons from the Pond during the gaugings.

TABLE IV.

FLOW OF WATER FROM HENSHAW POND.

MONTH.	FLOW IN GALLONS.	INCHES RAIN.	MONTH.	FLOW IN GALLONS.	INCHES RAIN.
April 21,	2,178,771		May 21,	897,715	
" 22,	1,721,313		" 22,	897,715	0.14
" 23,	1,593,856		" 23,	897,715	
" 24,	1,559,215		" 24,	706,029	
" 25,	1,499,563		" 25,	616,066	
" 26,	1,382,651		" 26,	572,927	
" 27,	1,327,136		" 27,	489,266	
" 28,	1,269,294		" 28,	410,194	
" 29,	1,104,783		" 29,	337,390	
" 30,	1,034,371		" 30,	337,390	
May 1,	999,407		" 31,	266,752	
" 2,	1,231,680	0.33	June 1,	202,932	
" 3,	1,231,680		" 2,	173,526	
" 4,	1,104,783		" 3,	119,433	
" 5,	999,407		" 4,	94,486	
" 6,	897,715		" 5,	72,642	
" 7,	2,431,390	1.22	" 6,	51,573	
" 8,	2,754,381		" 7,	51,573	
" 9,	2,400,025	0.25	" 8,	337,390	0.67
" 10,	2,178,771		" 9,	266,752	
" 11,	1,868,137		" 10,	1,104,783	1.43
" 12,	1,593,856		" 11,	1,159,039	
" 13,	1,327,136		" 12,	948,610	
" 14,	1,159,039		" 13,	809,998	0.21
" 15,	999,407		" 14,	616,066	
" 16,	1,104,783	0.25	" 15,	448,938	
" 17,	999,407		" 16,	372,225	
" 18,	948,610		" 17,	266,752	
" 19,	848,856	0.07	" 18,	337,390	0.15
" 20,	948,610	0.18			

TATNUCK BROOK.

The area of the water-shed, including water surfaces, is 3,348 acres. The Holden Reservoir Association Reservoir has a water surface of 88 acres and a storage capacity of 450,000,000 gallons. The proposed city Reservoir would have a water surface of 76 acres and capacity of 595,540,000. This would give an aggregate water surface of 164 acres, which deducted from 3,348 acres leave an effective shed of 3,184 acres. This will give, in the driest seasons, a supply of 4,536,000 gallons per day.

An unusually favorable site has been selected for the proposed reservoir. The dam would be located at a point above Seagrave's Mill, known as "the Narrows," and by constructing it 747 feet long we should obtain a Reservoir of the size and capacity above stated. The flow of water from this dam would carry the water line a short distance on the slope of the Holden Reservoir dam; by the construction of a wall of rubble masonry laid in cement, to prevent wash and percolation of the water, the upper Reservoir could be used as a reserve or feeder to the proposed Reservoir, to draw from during seasons of drought, and a total storage capacity would be obtained of 1,045,540,000 gallons. This greatly exceeds the capacity of the proposed Reservoir at Henshaw Pond. In table 4 is given the comparative storage capacity per acre of the different Reservoirs proposed and also of the Lynde Brook Reservoir, also the average depth of water. It will be seen by examination that the Tatnuck scheme is superior to either of the others, giving the largest storage capacity with the least area of water surface. The water-shed is very favorable for the collection of water, and is free from any cause of pollution, and there are no mills above the source of supply. The elevation of the proposed high water line of the Reservoir is 735 feet above tide water. Bell Pond Reservoir is 666.5, and the top of Newton Hill 672.3 above the same datum plane; the head of water will therefore be ample for all parts of the city except the "High Service" district, which will always be amply supplied from the present source, if an independent provision is made for the other portions of the city. The level of Hunt's Reservoir is 659.85, so that pressure valves would be used in making connections with pipes supplied from that point, the Tatnuck head being about 75 feet greater than the present. It is proposed to connect the Tatnuck Reservoir with the line of pipe on Newton Street, which is 16 inches in diameter. The first mile is proposed to be 24 inches in diameter, the remaining distance being 20 inch, classified into 4 weights, to correspond with the different pressures to be encountered. In this con-

nection I would call attention to the importance of an additional main to the city. In case of fire we should have double the amount of water to be obtained at present; main pipes are essentially *Reservoirs*; when we draw from them faster than the capacity of the pipe, under a given head, the pressure is affected, and if we have two mains to draw from, of equal capacity, the head is maintained where with but one pipe it would be seriously reduced. By continuing the main from Tatnuck through Pleasant Street to Main Street, and connecting with the mains through Main and Front Streets our supply for fire purposes would be greatly improved. The liability of accident to a line of pipes renders it precarious to depend entirely on one line of mains for a supply, and wherever water is obtained it would be advisable to continue the main into the city.

TABLE

SHOWING COMPARATIVE STORAGE CAPACITY OF THE DIFFERENT RESERVOIRS
PROPOSED; ALSO OF LYNDE BROOK RESERVOIR.

RESERVOIR.	AREA IN ACRES.	CAPACITY.	AVERAGE CAPACITY PER ACRE.	AVERAGE DEPTH.
North Pond, including Weasel Brook,	248	700,000,000	2,822,580	8.66
Lynde Brook Reservoir	132	663,330,000	5,025,227	15.42
Henshaw Pond, "as proposed" . . .	108.6	575,889,000	5,302,848	16.28
Present Holden Reservoir	88	450,000,000	5,113,636	15.69
Proposed Holden Reservoir	76	595,540,000	7,836,053	24.05

ESTIMATE OF COST OF TATNUCK BROOK SCHEME.

DAM AND ROLL WAY.	CUBIC YDS.	PRICE.	COST.
Excavation	112,651	\$0 30	\$33,795 30
Puddle	3,913	0 75	2,934 75
Broken stone	1,194	3 00	3,582 00
Block Paving for slope	2,362	6 00	14,172 00
Coping	82	9 00	738 00
Rubble Masonry	179	10 00	1,790 00
Cut Stone			138 00
1st Class Masonry	239	15 00	3,585 00
Rock Excavation	540	2 00	1,080 00
			\$61,815 05

PIPE LINE.	WEIGHT IN TONS.	PRICE.	COST.
5,280 lineal feet, 24 inch	425		
3,340 " " 20 " Class A	199		
5,280 " " " " " B	438		
1,600 " " " " " C	138		
3,700 " " " " " D	370		
19,200 " "	1,570	\$45 00	\$70,650 00
Laying 5,280 lineal feet, 24 inch		1 75	9,240 00
" 13,920 " " 20 "		1 50	20,880 00
Blow Offs and Air Cocks			500 00
			<u>\$101,270 00</u>

TATNUCK BROOK SCHEME.

Clearing and grubbing		\$1,500 00
Gate house		6,350 00
Two 24 inch gates	\$400 00	800 00
Rebuilding roads		2,750 00
Land taken		15,000 00
		<u>\$26,400 00</u>

SUMMARY.

Dam and Rollway	\$61,815 05
Pipe Line	101,270 00
Gate House	6,350 00
Rebuilding Roads, Land taken, etc.	20,050 00
	<u>\$189,485 05</u>
Engineering and contingencies, 10 per cent.	18,948 50
Total estimated cost of construction	<u>\$208,433 55</u>

CHARACTER OF DAM PROPOSED.

The general form of construction of dam is the same in each case.

The Henshaw Pond dam is proposed to be 15 feet wide on top, to be built in layers of six inches, thoroughly wet and rolled with heavy grooved rollers; the water side to have a slope of $1\frac{1}{2}$ horizontal to 1 vertical, and to be lined with two feet of puddle, eight inches of broken stone, and fifteen inches of block paving laid by hand, having a firm bearing on the broken stone behind, and to be thoroughly

pinned with small stones or spauls tightly driven. No stone larger than three inches in diameter to be allowed in the embankment.

The dam at the Tatnuck Reservoir is proposed to be of the same character, the top width being twenty feet instead of fifteen, to allow a driveway across.

The gate houses are to be of rubble masonry laid in hydraulic cement mortar.

The pipe arch of the Tatnuck Reservoir to be through solid ledge, with rubble covert.

The outer slopes of both dams are proposed to be 2 feet horizontal to 1 foot vertical.

DAMAGES ON KETTLE AND TATNUCK BROOKS.

In the calculation of damage incurred by the owners of water privileges the data is founded on the *average* rainfall for a series of years. The average rainfall, as observed at the Worcester Lunatic Hospital from 1841 to 1870 inclusive, was $46\frac{53}{100}$ inches, 50 per cent. of which is estimated as utilized by the mills. The best class of turbine water wheels, in practice, utilize about 75 per cent. of the water expended in running them, and this per cent. is taken in estimating the horse power taken from each privilege. The results are embodied in Table 5. The horse power is given merely for the purpose of showing the *relative value* of the two streams to the mill owners. A certain portion of it annually goes to waste on account of insufficient storage capacity to retain it during freshets.

No money value is assigned to the horse power on either stream.

The cost of a horse power of *steam* varies with the locality, the price of coal being an important item.

In Worcester, taking the Corliss Engine as a standard, the cost, including interest on cost of engine, salaries, repairs, etc., will not vary much from \$80.00 per year, and with different engines may be taken at from \$80.00 to \$100.00 per annum. In settling damages with owners of water power the basis must be furnishing an *equivalent* steam power for water power taken. The horse power given in the tables includes all the water flowing from the water-sheds, and should be reduced an amount equal to the loss during freshets, which it is impossible to estimate without long-continued measurements of the flow under all circumstances.

TABLE V.

SHOWING THE COMPARATIVE VALUE OF KETTLE AND TATNUCK BROOKS TO THE MILL OWNERS.

KETTLE BROOK.			TATNUCK BROOK.		
PRIVILEGE.	Fall.	Horse Power taken.	PRIVILEGE.	Fall.	Horse Power taken.
South Worcester,	4.13	8.35	South Worcester,	4.13	8.46
Crompton Carpet Co.	8.33	16.84	Crompton Carpet Co.	8.33	17.06
Hopeville,	5.78	11.69	Hopeville,	5.78	11.84
Curtis & Marble,	11.67	23.60	A. G. Coes,	13.70	28.06
Trowbridgeville,	10.31	20.85	Loring Coes,	14.80	30.31
Stoneville,	22.09	44.67	“ “	15.00	30.72
Jamesville,	20.03	40.50	Charles Ballard,	8.37	17.14
James' New Dam,	25.71	51.98	W. W. Patch,	19.30	39.53
Hunt's Mill,	17.30	34.98	“ “	17.17	35.16
Darling's Mill,	14.68	29.68	Philander Pond,	12.83	26.28
Ashworth & Jones,	35.75	72.29	John F. Pickford,	2.00	4.10
Wright Bottomly,	10.72	21.68	A. L. Whiting,	13.07	26.77
Smith's Mill,	19.88	40.20	Philander Pond,	16.50	33.79
Hodges' Mill,	26.24	53.06	J. D. Seagrave,	15.80	32.36
Dam,	10.22	20.66	“ “	11.64	23.84
Pierce's Mill,	9.36	18.93			
Chappel,	14.85	30.03			
Booth Bottomly Mill,	21.28	43.03			
Thayer's Mill,	16.43	33.22			
Waite's,	7.82	15.81			
Total,	312.58	632.05	Total,	178.42	365.42

The Horse Power on Kettle Brook is figured for diverting the water from the Waite Reservoir into Henshaw Pond. The falls in Kettle Brook are taken from Mr. Ball's report on North Pond.

The scheme of pumping water from Lake Quinsigamond has received considerable attention, and it may be of interest to have the cost of pumping stated. This subject has lately received much attention from Engineers and others, and great improvements have been made in machinery within the past few years. The American Society of Civil Engineers, appointed April 1st, 1874, a Committee, consisting of Messrs. Gorham P. Low, Jr., W. Milnor Roberts, and John Bogart, with instructions to make investigations and Report on the comparative efficiency of the principal pumping engines in use. Table 6 is extracted from their valuable Report to the Society under date of May 1st, 1875.

The information embodied in it will enable any person interested to form a reliable opinion as to the advisability of considering the project of pumping from any source, when a supply by gravity can be obtained at a reasonable expense. There are cases where pumping is advisable on account of excessive cost of obtaining a supply by gravity, but it would be the most expensive scheme under consideration to pump water from Lake Quinsigamond. There is but one Pumping Station in the United States, to my knowledge, where water is lifted as high as would be necessary in case Quinsigamond were taken. The vertical lift would be 311 feet. At the Roxborough Works, in Philadelphia, water is raised 334 feet, or 23 feet higher than from Quinsigamond Lake into Bell Pond. As the station is not included in the table the *Running expenses* for 1871 will be given.

RUNNING EXPENSES AT ROXBOROUGH STATION, PHILADELPHIA, 1871.

Salaries of Engineers and Firemen	\$4,200 00
Oil for lighting works	35 34
888 17-24 tons coal at \$5.75	5,110 88
45 gallons of oil at \$0.68 3-10	30 74
1,381 pounds tallow at \$0.16 7-10	230 36
Packing and small stores	200 45
Repairs	2,318 46
	<hr/>
	\$12,126 50

Cost of raising water into Reservoir, per million gallons, 334 feet lift	\$42 40
Cost of raising water, per million gallons, one foot high	0 12 7-10
Average gallons pumped per day	1,012,337

The engine is a full Cornish, considered an excellent type of pumping engine, which Frederic Graff, Esq., Chief Engineer of the Water Works thus refers to in his Report for the year.

“The Roxborough Works have been in successful operation during the year; the engine has worked remarkably well, and is an excellent example of the Cornish type.”

The cost given at this station is exclusive of interest on the cost of the engine, engine house, etc.

Columbus and Dayton, Ohio, are supplied with the Holley System of Water Works. In these works the water is pumped directly into the distributing pipes without the intervention of a Reservoir. The excessive cost of pumping for direct service would warrant a large outlay for reservoirs when they are practicable.

COMPARISON BETWEEN KETTLE AND TATNUCK BROOKS.

The cost of construction is in favor of Kettle Brook, providing we connect with our present line of mains, and have no increase in the capacity of our works for fire supply, which we should secure by an additional line of pipes to the city.

The damage to Mill owners, which is the important question to deal with, is 73 per cent. heavier on Kettle than on Tatnuck Brook, taking the comparative horse power as a standard, and if we are obliged to pay for the reservoirs above Waite's on Kettle Brook, the percentage will be increased. It is impossible to say what we should have to pay for the water rights of Henshaw Pond, but it is safe to assume the damages on Kettle Brook in connection with Henshaw Pond would be double that on the Tatnuck.

The amount of water to be obtained is in favor of Tatnuck Brook, over Kettle Brook, connected with Lynde Brook Reservoir, 350,000 gallons per day, and in favor of Kettle Brook 600,000 gallons per day if Henshaw Pond is secured as a reservoir.

The storage capacity of Tatnuck Brook Reservoir, in connection with the Holden Association Reservoir, which we should acquire in settling damages with the Mill owners, would be about 470,000,000 gallons greater than Henshaw Pond Reservoir, which would allow us to carry a surplus from wet to dry years.

ADDITIONAL SUPPLY OF WATER.

TABLE VI.
SHOWING ENGINE DUTY AND COST OF RAISING WATER AT VARIOUS PUMPING STATIONS.

LOCATION.	Year.	Number of days covered by Report.	Ratio of quantity pumped to capacity of Works.	Total number of Gallons pumped during time of Report.	Average dynamic Head.	Number of Pounds of Coal or its equivalent consumed, including that used for starting and Banking.	DUTY COST OF FUEL.			COST IN CENTS PER MILLION GALLONS RAISED ONE FOOT.					Cost of Engines and Boilers.	Interest on Cost of Engines and Boilers at 7 per cent.	Cost of raising one million gallons one foot, including interest on cost of Engines and Boilers.	REMARKS.
							Number of Pounds raised one foot per hundred Pounds of Coal.	Total Cost for time of Report.	Cost per net Ton.	Attendance.	Repairs.	Fuel.	Miscellaneous.	Total, exclusive of Interest.				
Boston, Mass., Highlands.	1871	365	.116	205,083,297	80.41	618,587	22,233,381	\$2,319.70	\$7.50	21.904	.152	14.064	.88	37.				Two horizontal condensing engines; stand pipe, direct service.
" " "	1872	366	.153	268,460,634	81.46	800,808	22,772,695	2,588.00	6.46	18.	2.	12.	2.	34.				
" " "	1873	365	.213	373,523,899	85.248	1,019,299	26,053,424	3,178.88	6.24	14.491	2.097	9.983	1.712	28.283				
Brooklyn, N. Y., Ridgewood.	1869	365	.33	6,334,141,911	177.	24,030,800	38,295,065	90,916.62	7.57	2.179	1.062	8.109	.473	11.823	\$401,949.81	\$28,136.49	14.333	Two duplex; cost of repairs included in "Miscellaneous."
" " "	1871	365	.37	7,011,987,350	176.	18,648,379	55,192,251			2.412		6.338		9.146	401,949.81	28,136.49	11.426	
" " "	1872	366	.44	8,288,509,360	175.9	20,777,410	58,521,803			2.169				7.586	401,949.81	28,136.49	9.516	
Charlestown, Mass.	1871	365	.5	1,831,485,375	156.472	4,374,600	54,634,602	18,506.53	8.46	1.932		6.46	.542	8.934	86,638.04	6,064.76	11.051	Three duplex; cost of repairs included in "Miscellaneous."
" " "	1872	366	.37	2,463,748,840	163.7	5,907,600	56,937,643	24,195.37	8.19	1.608		5.999	.413	8.02	154,888.04	10,842.16	10.708	
" " "	1873	365	.43	2,830,951,338	163.7	7,032,250	54,962,129	30,404.71	8.65	1.621		6.561	1.277	9.459	154,888.04	10,842.16	11.798	
Chicago, Ill.	'68-'69	365	.41	5,374,624,576	125.	13,096,950	42,781,281	49,768.56	7.60	1.945	.314	7.408	.295	9.962				Two Cornish engines; stand pipe and reservoir.
" " "	'72-'73	365	.78	10,050,939,192	133.	25,600,070	43,549,497	91,902.26	7.18	1.532	.087	6.857	.257	8.733				
" " "	'73-'74	365	.45	11,722,819,032	133.	29,051,230	44,759,467	124,357.90	8.56	1.412	.094	7.796	.189	9.671				
Cincinnati, Ohio.	1871	365	.48	4,482,995,692		20,627,500						5.895		14.639	423,000.00	29,610.00		Holley Works. Cost of pumping as given in letter from Superintendent.
Cleveland, "	1873	365	.71	1,869,768,835	164.38	6,136,000	41,774,955	6,718.92	2.19	2.927	.146	2.186	.314	5.574	85,798.95	6,005.93	7.528	
Columbus, "	'72-'73	365	.14	300,563,799	167.	3,651,924	11,462,579	3,431.33	1.88	13.754	.895	6.836	1.289	22.774	65,298.20	4,570.87	31.881	
Dayton, "	'73-'74	245	.2	340,447,600	167.									14.1				Wood and coal both used: one cord of wood is taken as equal to 1,310 lbs. of coal.
" " "	1872	366	.12	270,740,165	107.85	1,718,408	14,171,134	3,959.10	4.61	19.511	4.136	13.609	2,552	39.808	38,571.89	2,700.03	49.089	
" " "	1873	365	.14	309,244,380	107.85	2,147,263	12,953,971	4,375.55	4.08	15.561	1.87	13.119	.953	31.504	45,902.93	3,213.20	41.138	
Detroit, Mich., No. 1 and 2.	1873	91		677,234,628	88.	1,634,847	30,402,602	5,627.03	6.88	3.815		9.442	.409	13.666	42,000.00	2,940.00	18.6	One horizontal double engine; stand pipe, direct service.
" " " 3.	1873	274		2,521,159,320	88.	5,118,602	36,149,114	16,803.12	6.57	3.075		7.574	.33	10.958	70,000.00	4,900.00	13.167	
" " " 1, 2 and 3.	1873	365	.31	3,198,393,948	88.	6,753,449	34,758,022	22,430.15	6.64	3.232		7.97	.346	11.548	112,000.00	7,840.00	14.337	
Fall River, Mass.	1874	184	.16	138,493,971	152.68	633,625	27,832,953	2,300.00	7.26	9.128	.355	10.877	1.773	22.133				Three Cornish engines; stand pipe and reservoir.
Jersey City, (Belleville), N. J.	1872	366		3,502,333,494	160.	10,018,750	46,646,400											
Louisville, Ky.	1872	366	.6	1,079,555,925	146.15	3,676,294	35,793,139	9,108.48	4.95	4.267	.396	5.777	.278	10.718	117,092.66	8,196.49	15.913	
" " "	1873	365	.65	1,173,002,775	144.05	3,754,239	37,536,730	8,472.74	4.51	4.704	.397	5.014	.33	10.446	117,092.66	8,196.49	15.297	One compound beam engine, "Simpson."
Lowell, Mass.	1873	365	.1	186,683,702	164.3	740,087	34,564,284	3,361.79	9.09	7.048	.104	10.96	1.296	19.408	67,600.45	4,732.00	34.835	
" " "	1874	365	.16	288,060,990	161.407	662,003	58,575,149	2,767.34	7.85	5.522	.952	5.952	.742	13.168	67,600.45	4,732.00	23.345	
Lynn, "	'73-'74	121	.32	187,797,832	164.8	326,767	78,090,642	1,257.09	7.69	2.1	.568	4.062	.687	7.417	56,618.25	1,321.09	11.686	One compound beam engine, "Leavitt."
" " "	1874	365	.27	477,100,130	163.98	789,820	82,609,785	3,023.78	7.66	2.411	.317	3.865	.574	7.167	56,618.25	3,963.28	12.233	
New Bedford, Mass.	'72-'73	731	.2	737,889,781	137.57	1,595,100	53,075,411	5,176.11	6.49	4.678		5.099	.138	9.915	32,200.00	4,508.00	14.356	
Pittsburgh, Pa., lower works.	1873	365		4,425,137,177	162.	34,945,982	17,105,585	32,211.77	1.89	1.489	.516	4.493	.449	6.947				Approximate: max. actual lift and displacement delivery; non-condensing engines.
" " " upper "	1873	365		1,046,526,540	235.	8,005,764	25,620,133	8,484.67	2.12	1.886	.167	3.45	.199	5.702				
Philadelphia, Fairmount.	1867	365		7,990,416,594	100.						.61	.4	1.19	2.2				
" " "	1873	365		8,717,538,594	90.						1.019	.516	.7	2.235				Actual lift used.
" " Delaware.	1867	184		427,935,060	135.	1,818,317	26,497,665	5,205.97	5.72	7.688	11.182	9.011	1.315	29.197				
" " "	1873	365		1,364,109,884	135.	3,946,707	38,914,425	8,999.63	4.56	4.751	1.086	4.887	.765	11.489				
" " Schuylkill.	1867	365		1,590,248,454	138.	4,235,056	43,217,046	7,601.62	3.60	3.78	1.36	3.464	.684	9.288				One non-condensing and one condensing engine; extraordinary repairs.
" " "	1873	365		1,508,295,800	138.	4,031,776	43,055,917	8,495.53	4.21	6.27	3.262	4.082	.86	14.474				
" " 24th Ward.	1867	365		677,717,190	230.	2,456,900	52,912,650	5,723.20	4.66	2.823	1.437	3.672	.387	8.318				
" " Germantown.	1867	365		177,104,200	230.	1,529,920	22,905,120	4,114.00	5.38	7.594	1.034	10.1	.377	19.107				One Cornish beam, one Cornish side lever, and one compound.
" " Belmont.	1873	365	.32	1,959,966,670	217.75	9,195,989	36,506,440	20,443.25	4.45	1.523	.772	4.79	.255	7.34				
Salem Mass.	1873	365	.33	654,259,518	124.	1,520,170	44,624,684	7,638.94	10.05	2.729		9.416	2.358	14.503	45,000.00	3,150.00	18.385	
" " "	1874	365	.18	664,644,923	124.	1,164,800	59,010,199	4,160.00	7.14	2.936	3.7967	5.047	.375	12.156	90,000.00	6,300.00	19.8	Two Worthington duplex engines; reservoir. Extraordinary repairs on old engine.

Taking everything into consideration, I am clearly of the opinion that Tatnuck Brook is the most desirable source for the city to secure for an additional supply of water.

The surveys of the Tatnuck Brook water-shed and Reservoir, have been made by General Percy Daniels and party, and of Henshaw Pond by Mr. L. A. Taylor, and I desire to acknowledge the valuable assistance rendered by both of them in the energetic prosecution of the work under their charge.

Respectfully submitted,

C. H. M. BLAKE, *Civil Engineer.*

CITY ENGINEER'S OFFICE,
WORCESTER, June 21st, 1875.

REPORT

OF THE

COMMISSIONER OF HIGHWAYS.

To the Honorable City Council :

GENTLEMEN : As required by an ordinance of the City, I herewith present the annual report of the expenditures and receipts of the Highway Department for the year ending November 30th, 1875, including \$4,021.19 allowed by vote of the City Council for various reasons to sundry persons for damages, &c., also a schedule of the city property in charge of the same at that date. The ten oxen belonging to the department at the commencement of the year have been sold, and seven horses, one pair double and two single cart harnesses and a sweeping machine have been bought. Five ox carts have been changed to four-wheeled horse carts. Ten horse stalls, a chimney, harness room 15 by 30 feet, and a sleeping room 15 by 15 feet, have been built in the stables, and the stables, sheds, tool house and fence have been repaired and painted. The wall under the sheds built by the Boston and Albany Railroad has been paid for, all of which are included in the expenses.

REPAIRS.

Following, is a list of Streets and Bridges that have received the necessary repairs, and the cost of doing the same, also the cost of breaking roads, street cleaning, &c.

Apricot	street,	\$68 50
Austin	"	66 27
Ararat	"	19 25
Auburn	"	65 75
Ashland	"	56 00
Adams	"	150 55
Arch	"	39 00
Beaver	"	245 25
Belmont	"	746 17
Brooks	"	108 25
Bloomington	"	267 75
Boylston	"	21 00
West Boylston	"	361 50
Blithewood	"	36 00
Burncoat	"	24 50
Bailey	"	24 00
Beacon	"	11 25
Bellevue	"	36 75
Brattle	"	56 40
Bliss lane,		16 50
Cambridge	street,	270 95
Canterbury	"	137 15
Charlton	"	12 75
Chandler	"	270 75
Channing	"	112 50
College	"	85 75
Catharine	"	71 50
Crown	"	39 50
Chestnut	"	21 00
Coral	"	72 60
Canal	"	69 50
Cedar	"	28 00
Central	"	65 70
Dix	"	50 00
Elm	"	164 80
Chester	"	14 00
Elizabeth	"	47 35
Endicott	"	64 60
Edward	"	19 75
Eastern avenue,		134 25
Fowler street,		200 00

Front	street,	\$21 95
Foyle	"	12 50
Flagg	"	137 75
Franklin	"	12 75
Grafton	"	904 24
Grand	"	37 50
Green lane,		37 50
Green	street,	207 10
Grove	"	1,299 75
Garden	"	73 25
Gates' lane,		48 50
Greenwood street,		350 75
Hope avenue,		320 62
Hanover	street,	84 55
Hamilton	"	26 75
Harrington	"	108 00
Holden	"	481 00
Hermon	"	20 75
Hammond	"	23 26
Highland	"	183 00
Heard	"	32 50
Holmes	"	24 50
Jefferson	"	21 70
June	"	15 50
Jackson	"	47 75
Kendall	"	6 75
Lincoln	"	856 30
Leicester	"	313 15
Lake avenue,		18 75
Lovell	street,	37 20
Laurel	"	105 00
Lagrange	"	65 90
Ludlow	"	13 50
Ledge	"	13 50
Main	"	535 00
Millbury	"	712 00
Millbury avenue,		14 00
Mill	street,	177 60
Mountain	"	141 50
Malden	"	57 75
Millbrook	"	35 50
Mooreland	"	43 25
Manchester	"	32 53
May	"	239 55
Mechanic	"	32 50
Newton,	"	237 00
Newbury	"	15 00
Nelson place		21 50

North	street,	\$44 75
Norwood	"	50 00
Olean	"	5 00
Oxford	"	39 50
Orchard	"	9 00
Oread	"	114 40
Orange	"	35 45
Oak avenue,		15 00
Pleasant street,		654 97
Pratt	"	10 85
Plantation	"	721 64
Plymouth	"	39 25
Park	"	29 50
Pearl	"	9 50
Prescott	"	76 00
Portland	"	6 75
Prospect	"	7 50
Piedmont	"	16 50
Queen	"	52 50
Southbridge	"	742 67
Shrewsbury	"	324 50
Suffolk	"	97 75
Sever	"	25 50
Salisbury	"	367 40
Salem	"	51 00
Summer	"	93 75
Spring	"	13 50
Stafford	"	29 00
Sycamore	"	12 75
Spruce	"	10 80
Shelby	"	74 50
Trumbull	"	48 50
Taylor	"	37 25
Thomas	"	71 75
Temple	"	13 20
Union	"	16 22
Union avenue,		28 50
Vernon	street,	67 00
Washington	"	26 00
Washington square,		140 00
Webster	street,	285 70
Woodland	"	37 30
Ward	"	27 25
Water	"	55 82
West	"	13 80
Walnut	"	80 00
Wall	"	111 45
Wellington	"	10 50

William street,	\$12 50	
Wyman “	61 00	
Sundry streets,	369 65	
	<hr/>	
Total for street repairs,		\$19,425 75

BRIDGES.

Belmont street,	\$3 60	
Green “	2 00	
Grove “	6 66	
Grafton “	34 42	
June “	2 50	
Jamesville “	43 24	
Leicester “	5 65	
Mill “	171 89	
Market “	1 50	
Millbrook “	6 20	
Pleasant “	17 64	
Southbridge “	70 50	
Thomas “	9 80	
Union “	12 33	
Washington “	10 10	
Webster square,	29 91	
	<hr/>	
Total for repairs on bridges,		\$427 94

Snow and ice,	\$3,978 92	
Street cleaning,	3,215 60	
Incidental labor,	990 65	
	<hr/>	
		\$8,185 17

Total for repairs, snow and ice, cleaning streets, &c., \$28,038 86

The measurement of the materials used and charged to sidewalk accounts, is as follows :—

CURBSTONE.

Length of new curbstone,	4,913.6-10 feet.
“ “ curbstone reset,	866 “
“ “ circle curbstone,	78 “

FLAGSTONE.

Length of new flagstone,	2,195.2-10 feet.
“ “ flagstone relaid,	95.6-10 “

PAVING.

Amount of new gutter paving,	2,308	square yards.
“ “ gutter paving relaid,	187.9-10	“ “
“ “ new cross-walk paving,	1,159.7-10	“ “
“ “ cross-walk paving relaid,	184.2-10	“ “
“ “ new brick paving,	178.5-10	“ “
“ “ brick paving relaid,	47.5-10	“ “
“ “ block paving,	22.6-10	“ “
“ “ Asphaltum paving,	209.8-10	“ “

CORNERS.

Number of 3 foot corners,	18
“ “ 2 “ “	2
“ “ corners reset,	2

The cost of the labor in connection with the materials used is shown in a statement of the account with each street, to wit:—

MAIN STREET.

North-west side, from Downing to Beaver street.

958.3-10 lineal feet curbstone,	\$479 15
6.3-10 “ “ “ reset,	44
130 “ “ flagstone,	67 60
429.6-10 square yards gutter paving,	184 71
89.8-10 “ “ cross-walk paving,	38 61
3 long corners,	16 05
Engineering,	17 26
Labor, &c.,	294 50 —\$1,098 32

MAIN STREET.

West side, from Beaver street to the estate of E. T. Marble.

230.7-10 lineal feet curbstone,	\$115 35
27 “ “ “ reset,	1 89
18 “ “ circle curbstone,	15 66
95.5-10 square yards gutter paving,	41 06
39.7-10 “ “ cross-walk paving,	17 07
18.8-10 “ “ “ relaid,	2 82
42.2-10 lineal feet flagstone,	25 32
1 long corner,	5 35
Engineering, labor, &c.,	86 91 —\$311 43

CEDAR STREET.

North side, from West to Fruit street.

720.9-10	lineal feet curbstome,	\$360 45	
55.3	“ “ flagstone,	33 12	
8.5	“ “ curbstome reset,	59	
34	square yards cross-walk paving,	14 62	
310.5	“ “ gutter “	133 51	
4	“ “ “ “ relaid,	60	
2	long corners,	10 70	
	Gravel,	9 30	
	Grading, carting stone, &c.,	227 75	
	Engineering,	7 12	—\$797 76

AUBURN STREET.

West side, from Kendall street to the northerly line of the estate
of F. A. Gaskill, and east side from Kendall street to
Catharine street.

1,117	lineal feet curbstome,	\$558 50	
258.3-10	“ “ “ reset,	18 08	
50	“ “ flagstone,	30 00	
496.5-10	square yards gutter paving,	213 49	
82.2	“ “ “ “ relaid,	12 33	
24.6	“ “ cross-walk,	10 57	
2	long corners,	10 35	
	Carting stone and gravel,	76 25	
	Grading,	121 36	
	Engineering,	15 00	—\$1,065 93

DAVIS PARK.

243	lineal feet curbstome,	\$121 75	
60	“ “ circular curbstome,	52 20	
66	“ “ curbstome reset,	4 62	
135	square yards gutter paving,	58 05	
12	“ “ “ “ relaid,	1 80	
140.3	“ “ brick paving,	20 22	
6,312	bricks,	88 36	
	Carting stone and gravel,	19 10	
	Grading,	66 25	
	Sand,	16 80	
	Engineering,	5 50	—\$454 65

FRONT STREET.

South side of Washington square, in front of the estate of E. D. Weatherbee, and on the north side of Washington square, from the end of the present walk to Summer street. Also, on the south side of Front street, in front of the estate of Pratt and Earle.

129.9 lineal feet curbstone,	\$64 95	
48.1 " " " reset,	3 36	
146.2 " " flagstone,	76 02	
53.6 square yards cross-walk paving,	23 04	
50.2 " " gutter "	21 62	
16 " " brick "	2 24	
15.2 " " gutter " relaid,	2 28	
720 bricks,	10 08	
1 long corner,	5 35	
1 " " reset,	35	
Grading, Engineering, &c.,	27 35	—\$236 64

LINCOLN STREET.

West side, from Frederick street to Paine's driveway.

54.5-10 square yards gutter paving,	\$23 43	
40.1 " " " " relaid,	8 82	
Engineering, labor, &c.,	6 70	—\$118 95

OREAD STREET.

South side, from Main street to the easterly line of the estate of Myron C. Davis.

335.4-10 lineal feet curbstone,	\$167 70	
113.4 " " flagstone,	58 96	
69.8-10 square yards cross-walk paving,	30 01	
146.2 " " gutter "	62 86	
1 long corner,	5 35	
Grading,	123 50	
Labor, cutting stone,	9 40	
Engineering,	17 20	—\$474 98

FRUIT STREET.

West side, from Pleasant street to Elm street.

505.8-10 lineal feet curbstone,	\$252 90	
35 " " " reset,	2 45	
210.2 square yards gutter paving,	90 38	

1 long corner reset,	35	
1 short " " "	21	
Gravel,	5 85	
Grading, carting gravel, &c.,	141 20	
Engineering,	15 75	—\$509 09

HAMMOND STREET.

East side, from Main street southerly, to the southerly line of the estate of Charles Newton.

434.2-10 lineal feet curbstone,	\$217 10	
26 " " " reset,	1 82	
30 " " flagstone,	18 00	
26.6 square yards cross-walk paving,	11 43	
192.2 " " gutter "	82 64	
9 " " " relaid,	1 35	
37 " " brick " "	5 18	
1 long corner reset,	35	
Carting stone and gravel,	29 25	
Grading,	191 20	
Engineering,	3 56	—\$561 88

WASHINGTON STREET.

East side, in front of the estate of Francis Hoyle.

45.3-10 lineal feet curbstone,	\$22 65	
11 " " " reset,	77	
20.1 square yards gutter paving,	8 64	
1 long corner reset,	35	
Grading,	15 75	—\$48 16

CHANDLER STREET.

South side, in front of the estate of Alden Thayer.

114.2-10 lineal feet curbstone,	\$57 10	
50.7 square yards gutter paving,	21 70	
1 long corner,	5 35	
Grading,	16 40	—\$100 55

CROSS - WALKS.

WELLINGTON STREET.

14 lineal feet curbstone,	\$7 00	
20.5 " " " reset,	1 43	
66.4 " " Belgian flagstone,	56 44	
20.6 " " common "	13 39	
48.8 square yards, cross-walk paving,	25 38	
8.8 " " " relaid,	3 52	
22.4 " " gutter paving,	9 63	
14.4 " " brick " relaid,	2 88	
7.6 " " block " "	2 28	
Labor,	50 12	—\$172 07

TEMPLE STREET.

36 square yards cross-walk paving,	\$28 80	
50 lineal feet flagstone,	17 50	
Labor,	33 97	—\$80 27

MAIN STREET.

25 lineal feet curbstone,	\$12 50	
183.6 " " Belgian flagstone,	156 06	
168 " " common "	174 72	
50 " " curbstone reset,	3 50	
5 square yards block paving,	13 75	
185.9 " " cross-walk paving,	113 31	
6 " " gutter " relaid	90	
Labor,	41 60	—\$516 34

CHATHAM STREET.

56.6 lineal feet Belgian flagstone,	\$48 11	
31.5 square yards cross-walk paving,	13 54	
10.6 " " " " relaid,	1 59	
Grading,	9 80	
Labor, cutting stone,	9 00	—\$82 04

IRVING STREET.

40.3-10 square yards asphaltum paving,	80 60	—\$80 60
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FRONT STREET.

7.9-10 square yards brick paving relaid,	\$1 10	
67.6 " " cross-walk paving relaid,	10 14	
113.7 lineal feet curb reset,	7 95	
1 long corner,	5 35	
Labor,	14 25	—\$38 79

LINCOLN SQUARE.

6 square yards block paving,	\$16 50	
48.3 " " cross-walk paving,	20 76	
108.8 lineal feet flagstone,	65 28	
Labor,	35 75	—\$138 29

OAK AVENUE.

30.4 square yards cross-walk,	\$13 07	
63.8 lineal feet Belgian flagstone,	54 23	
Labor,	6 50	—\$73 80

WEST STREET.

8 square yards brick paving,	\$1 12	
729 bricks,	10 20	—\$11 32

ELM STREET.

36.4 square yards cross-walk paving,	\$15 65	
60 lineal feet flagstone,	36 00	
Labor, &c.,	9 80	—\$61 45

PEARL STREET.

16.2-10 square yards cross-walk paving relaid,	\$2 43	
55.3-10 " " gutter " "	8 29	
36.6 lineal feet flagstone,	21 96	
4 " " " "	2 00	
164.1 " " " reset,	11 48	
4 square yards brick paving,	1 12	
360 bricks,	5 04	—\$52 32

WASHINGTON SQUARE.

119.5-10 square yards asphaltum paving,	\$221 07	
237.7 " " cross-walk " "	102 21	
535 lineal feet Belgian flagstone,	454 75	
Labor, grading,	229 77	
Engineering,	27 70	
Labor, cutting stone,	60 83	—\$1,096 33

GREEN STREET.

50 square yards asphaltum paving,	\$100 00	
4 " " block " "	11 00	
31 " " cross-walk " "	13 33	
66 lineal feet flagstone,	39 60	
13 " " curbstone,	6 50	
Labor, &c.,	9 80	—\$180 23

HERMON STREET.

62.3 square yards gutter paving,	\$26 78	
Labor,	13 75	—\$40 53

WASHINGTON STREET.

38.6 lineal feet curbstone reset,	\$2 70	
2 long corners,	10 70	
30.4 square yards cross-walk paving,	13 07	
8.1 " " gutter " relaid,	1 21	
53 lineal feet flagstone,	31 80	
Labor,	11 00	—\$70 48

SOUTHBRIDGE STREET.

43.5 square yards cross-walk paving relaid,	\$6 52	
66 lineal feet flagstone	2 64	
33 square yards cross-walk,	14 19	
32.7 lineal feet Belgian flagstone,	27 79	
27.3 " " curbstome,	13 65	
1 Long corner,	5 35	
Labor,	29 25	—\$99 39

PLEASANT STREET.

72.1 square yards cross-walk paving,	\$31 00	
18.7-10 " " " relaid,	2 80	
125 lineal feet flagstone,	75 00	
39.6 " " " relaid,	1 58	
1 Long corner,	5 35	
Labor,	25 25	—\$140 98

SUNDRY SIDEWALKS.

Labor, repairing sundry walks,	\$245 69
Advertising for proposals to construct walks,	32 37
Damages for injury to persons and property,	671 54
Engineering,	165 74

Expense to the city for sidewalks,	\$9,828 91
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RECEIPTS.

Balance to the credit of the Department November 30th, 1874, brought forward,	\$2,316 02
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HIGHWAYS.

Appropriation,	\$40,000 00
For sidewalks, driveways, &c., collected and passed to the credit of the Department,	\$12,075 39

For Labor and Material.

Armory building,	\$22 88	
City Hospital,	46 38	
City Hall,	6 00	
Fire Department,	3 46	
Public Schools,	1 50	
Pauper Department,	10 00	
Water	196 17	
Sundry persons,	458 82	
" " 12 M. bricks,	168 00	
Street scrapings,	130 90	
Live stock. Horse and oxen sold,	1,145 00	
Shade trees and Public Grounds,	226 40	
Sewer Department,	87 95	—\$2,503 46

For Street Construction.

Endicott street,	\$1,830 81
Wellington street,	499 90
Pond “	145 43
Lincoln “	40 94
Highland “	662 45
Ward “	53 00
Sundry streets,	294 38
	<hr/> \$3,526 91

SIDEWALKS.

Appropriation,	\$10,000 00
Total receipts,	<hr/> \$70,421 78

EXPENDITURES.

Salary of Commissioner,	\$2,200 00
Labor as per pay roll,	29,085 66
Live stock,	1,400 00
Labor: Hired teams, &c.,	4,522 93
Breaking roads,	131 95
Shoeing,	364 80
Tools and repairs,	2,977 32
Hay, grain and straw,	4,195 48
4,843 feet curbstone, including freight,	2,136 77
1,887 “ flagstone, “ “	1,207 60
255 M. Bricks,	2,909 50
187 tons cobble stones,	195 91
33 street corners,	107 00
Lumber,	395 37
Daniel Sullivan, setting curb and paving,	1,931 10
Geo. F. Fisher, Asphaltum paving,	873 32
J. Sullivan, labor, patching walks,	151 87
C. O. Richardson, labor, patching walks,	57 04
Wall stone, border stone, stone bounds, &c.,	105 50
Gravel,	635 20
Paving blocks and storage,	103 20
Engineering,	1,863 79
Traveling expenses, horse hire and car tickets for engineers,	44 77
Alterations and repairs at City stables,	1,029 19
B. & A. Railroad for retaining wall at stables,	168 60
Advertising, writing, printing and stationery,	446 43
Insurance on stables and stock,	75 00
Fuel and lights at city stables,	92 19
Powder and fuse,	17 86
Drain pipe and cement,	223 38
Supply of water for trough, South Worcester,	20 00

Medicines and attendance at stables,	73 25	
Traveling expenses, telegraphing, &c.,	13 64	
Damages allowed Albert Curtis for injury to property and appraising the same,	317 50	
Staples and Goulding, for examining case of Jason Cha- pin, vs. City of Worcester,	15 00	
Damages allowed Geo. W. Gale for injury to carriage,	100 00	
Jane F. Woodward, legal expense of suit,	100 15	
Damages allowed Catharine Kneeland for injury to per- son,	25 00	
Damages allowed J. O. Sullivan for injury to person,	50 00	
Damages allowed Bridget Fitman for injury to person,	300 00	
Damages allowed F. T. Burr for injury to carriage,	100 00	
Damages allowed Josiah Rice for injury to person,	196 39	
Damages allowed Abbie Dunawin for injury to property,	460 90	
Damages allowed Leo Roberts for injury to person,	2,050 25	
Damages allowed Alvira Newton for injury to person,	300 00	
Damages allowed Michael McGrath for injury to property,	6 00	
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Total expenditure,		\$63,776 81
Expense to the City from sidewalks, as previously shown,	\$9,828 91	
Balance of expenditures for Highway Department,	53,947 90	
	<hr/>	\$63,776 81

RECAPITULATION.

HIGHWAYS.

Balance to the credit of Department brought forward, November 30th, 1874,	\$2,316 02	
Appropriation,	40,000 00	
	<hr/>	\$42,316 02
Revenue for Sidewalks, Driveways, &c., collected and passed to the credit of Highway Department,	\$12,075 39	
Revenue for labor and material from other departments and sundry persons,	2,503 46	
Revenue for Street Construction,	3,526 91	
	<hr/>	\$18,105 76
Total,		\$60,421 78
Expended,		53,947 90
	<hr/>	\$6,473 88
Balance unexpended,		

SIDEWALKS.

Appropriation,	\$10,000 00	
Expended,	9,828 91	
	<hr/>	
Balance unexpended,		171 09
		<hr/>
Balance unexpended to the credit of the Department,		6,644 97

SCHEDULE

Of Real and Personal Property in charge of the Highway Department,
November 30th, 1875.

REAL ESTATE.

50,331 feet land with City Stables thereon,	\$23,000 00	
1 acre land on Pleasant street,	150 00	
Land near Paxton line,	100 00	
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Total of Real Estate,		\$23,250 00

PERSONAL PROPERTY.

LIVE STOCK.

20 Horses,	\$3,750 00
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HAY AND GRAIN.

8,000 pounds hay,	\$92 00	
1,200 " straw,	12 00	
25 bushels oats,	15 00	
200 " corn,	170 00	
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		—\$289 00

WAGONS, CARTS, SLEDS AND EQUIPMENTS.

1 street sweeper,	\$300 00	29 neck yokes,	\$29 00
1 four-horse wagon,	175 00	2 pairs ox bows,	2 00
1 two horse wagon,	65 00	32 whiffletrees,	48 00
2 one-horse wagons,	300 00	15 horse blankets,	15 00
14 two-horse carts,	2,100 00	11 surcingles,	11 00
6 one-horse carts,	500 00	26 halters,	26 00
1 tight cart,	150 00	15 curry combs and brushes,	22 50
1 pair cart wheels,	56 00	40 meal bags,	10 00
1 stone lifter,	225 00	11 draft chains,	22 00
1 cesspool cleaner,	200 00	2 heavy cable chains,	15 00
1 street roller,	200 00	2 scraper chains,	4 00
1 stone truck,	40 00	17 stake chains,	8 50
2 two-horse sleds,	175 00	20 tie chains,	11 00
1 light horse sled,	40 00	16 whiffletree chains,	8 00
1 light express sleigh,	25 00	2 pair lead bars,	6 00
2 ox sleds,	35 00	1 brush harrow head,	5 00
8 pairs double harnesses,	400 00	1 portable watering trough,	5 00
3 single harnesses,	105 00	1 buggy,	75 00
6 cart harnesses,	200 00	1 buffalo robe,	5 00
1 pair lead harnesses,	50 00		
8 ox yokes,	40 00		
			<hr/>
			\$5,709 00

TOOLS.

2 sets tackle and falls,	\$15 00	1 adze,	\$2 00
1 grindstone,	13 00	5 chopping axes,	5 00
44 shovels,	44 00	1 broad ax,	2 00
56 snow shovels,	56 00	6 mattocks,	12 00
5 long-handle shovels,	5 00	2 ladders,	4 00
1 ox scraper,	17 00	1 cross-cut saw,	5 00
1 manure hook,	1 00	8 hay forks,	4 00
2 feed troughs,	8 00	46 street hoes,	46 00
7 oil cans,	3 00	8 snow scrapers,	25 00
2 garden rakes,	2 00	20 wheelbarrows,	20 00
24 picks,	48 00	6 stone forks,	6 00
3 stone drags,	15 00	2 steel wedges,	2 00
5 side-hill plows,	70 00	1 grain shovel,	2 00
1 pick plow,	50 00	2 churn drills,	4 00
1 snow plow,	10 00	1 oil pan,	5 00
7 striking hammers,	17 00	4 brooms,	2 00
16 crowbars,	48 00	1 iron vise,	6 00
10 stone drills,	20 00	3 monkey wrenches,	3 00
Lot light stone tools,	5 00	3 stoves,	25 00
3 stone hammers,	10 00	10 water pails,	5 00
8 cinder "	17 00	Lot carpenter's tools,	12 00
22 lanterns,	22 00	4 tool chests,	40 00
1 basket,	50	200 feet fire hose,	150 00
2 hay cutters,	18 00	75 " tape measure,	2 00
3 grain chests,	15 00	3 manure forks,	4 50
3 gravel screens,	25 00	2 coal hods,	3 00
2 patent scrapers,	70 00	Lot of manure,	200 00
3 side "	15 00		
1 set grain measures,	1 50		
1 spirit level,	2 00		
			<hr/>
			\$1,239 50

LUMBER.

5,000 feet bridge plank,	\$75 00	
6 bridge stringers,	72 00	—\$147 00

STONE AND BRICK.

300 tons cobble stones,	300 00	
Granite paving blocks,	75 00	
132 feet Belgian bridge,	132 00	
23 long corners,	69 00	
18 short "	45 00	
stone posts,	15 00	
25 M. paving bricks,	300 00	
100 yards gravel at stables,	55 00	
	<hr/>	\$991 00

Total of personal property,	\$12,125 50
" " real estate,	23,250 00

Amount in Department,	\$35,375 50
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Respectfully submitted,

RUFUS CARTER,

Commissioner of Highways.

WORCESTER, December 24th, 1875.

ANNUAL REPORT

OF THE

COMMITTEE ON WATER.

To the Council of the City of Worcester :—

IN compliance with an ordinance of the City, the Joint Standing Committee on Water submit their report with those of the Water Commissioner, the Water Registrar, and the City Engineer. For all details we refer to these reports. Within the year there has been laid 7300 feet of pipe, a part of which taking the place of smaller pipe. In addition to which about 9000 feet of service pipe was laid. The largest work was that of a 16 inch pipe in Main Street from Front to Lincoln Square, and in Thomas Street from Main to Union Street. This was done in accordance with a recommendation of the Committee of last year, concurred in by the present Committee, and ordered by the present Council.

The laying of a new main from Lincoln Square through Prescott Street to the works of the Ames Plow Co., also through Grafton Street from Washington Square to Providence Street, was recommended by the Committee of last year, but has not been ordered. We renew the recommendation that it be done the ensuing year.

With a revival of business in the City, many other changes and extensions will be called for, and should be met as the exigency arises.

WATER SUPPLY.

No steps beyond that of investigation have been taken toward a further supply. For a greater part of the year, rains have been so plentiful that the danger of an exhausted supply has not been imminent. But the fact that with more than a usual rainfall our only reservoir has not been filled for more than fifteen months, should excite apprehension, and should be kept prominently before the Council. The measurement of the flow from Henshaw Pond, caused to be made through the year, does not indicate much value from that source unless it should be as a storing reservoir.

North Pond has not, as a source of supply, met with that favor in committee that it had for two years previous. Tatnuck Brook as far as quantity, quality and capacity for storage is concerned, stands pre-eminent, but the expense, that we could not place below \$400,000, would in these times, compel great delay, if not a virtual abandonment. Another source of supply would be the storing of the storm waters, or the floods of Kettle Brook. There would be grave legal objections to this course, certainly, without legislative authority, expressly defined. But the expense of making the connection with our present reservoir would be so small that it might be wise to procure that authority, and make such connection.

Above the expense of the connection, it would involve the expense of additional storage either by raising the present dam, or building a new one above the present one to hold the Lynde Brook flow. In the opinion of the Committee, the latter course would be better, safer, and not necessarily more expensive.

We recommend that the Mayor be directed to petition the coming Legislature, for authority to take and store the waste waters of Kettle Brook. It has been stated in reports to the Council from time to time, that a small stream called Parsons Brook, could be turned into the Hunt reservoir at a very small outlay for construction or damage to estates. We recommend that the petition of the Mayor cover authority to take this stream for the uses of the City.

METERS.

Your attention is called to the report of the Registrar on this subject. A limited number of the new "Desper" meter and the "Gem" have been read the past year. The result has been so favorable compared with the Ball & Fitts meter that it may be thought best to make no discrimination between them hereafter. The Committee are unanimously of the opinion that *some* meter should be required, wherever the consumption is large, or where waste is tolerated.

The Registrar and Engineer in their reports have indicated the importance of the self-closing fixtures, applied to faucets, closets, etc. The Committee are impressed with the great importance of these fixtures and recommend such a change of the "Ordinance relative to Water" as shall allow an abatement where they shall be applied. Another necessary change in the Ordinance is one that shall hold all plumbers doing work in connection with the water pipes to a more direct accountability to the Water Department for the character of their work. With these changes, a revision of rates might very properly be considered.

The Commissioner and Registrar, have given their undivided attention to their several duties, and the Committee make this acknowledgment of their unvarying courtesy. The Registrar has largely reduced the expenses of his department, and with the increased business of the office a corresponding increase of salary would still leave it below that of other positions of no greater work or responsibility.

Respectfully submitted,

D. S. GODDARD,
GEORGE GEER,
G. J. RUGG,
T. J. HASTINGS,

Joint Standing Committee on Water.

December 20, 1875.

REPORT

OF THE

WATER REGISTRAR.

WORCESTER, Dec. 20, 1875.

To the Joint Standing Committee on Water :—

GENTLEMEN,—In conformity to Section 8 of the “ Ordinances relative to Water,” I present the following Report for the year ending November 30th, 1875.

During the year, two hundred and four (204) applications for water were received, of which number all but four were granted and the service pipes laid.

I rendered to the City Treasurer for collection the following water bills :—

By Meter,	2,578	amounting to	\$41,500 14
“ Assessment,	7,229	“ “	60,212 89
Total,	9,807	“ “	<u>\$101,713 03</u>

The water was shut off from the premises of one hundred and twenty-nine (129) takers, on account of unpaid over-due bills for water and labor furnished, and immediately let on upon the payment of bills.

Abatements amounting to \$12,018.51 were made, owing to parties ordering meters, on account of tenements which were vacant three months or more, and for correction of assessments.

The quantity of metered water sold is as follows :—

From October, 1874, to April, 1875,	66,515,086 gallons.
“ April, 1875, to October, 1875,	134,508,109 “

METERS.

During the year, three hundred and seventy-nine (379) meters were placed on the works, making at the present time in use fourteen hundred and eighty-six (1,486), the sizes and kinds of which are as follows:—

	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.	1 in.	2 in.	3 in.	4 in.
<i>Union Water Meter,</i>	242	33	4	3	—	—
<i>Desper, “ “</i>	75	5	1	—	—	—
<i>Gem, “ “</i>	15	—	—	1	1	2

The “*Union*” Meter has been in use a number of years and gives good satisfaction, and is deemed as reliable as any in the market. The new “*Desper*” Meter, patented November 18th, 1873, is a decided improvement on the *old* meter. The former being adopted by the Committee, with certain provisos, for one year, is not entitled to the criticism which a longer term of operation would bestow, but the experience thus far is satisfactory. The “*Gem*” meter, unlike the others in construction, is the least costly, but as to durability a further test is necessary to decide.

It is universally conceded that no meter is perfectly accurate, and the discrepancy is always in favor of the consumer, which fact proves that the register does no injustice to parties who pay for water by meter rates.

THE WASTE OF WATER.

I deem the system of measuring water to *all* consumers to be the most equitable, as it is an undeniable fact that some families waste much more than others use, and yet, under the present arrangement, pay the same rate. Unnecessary consumption of water is certainly checked by the tell-tale meter, and the city receives pay for water which is indifferently used. Cases often occur where a party having water by meter rates is surprised at the amount of his bill, and positive that his use of water would incur a much less sum. When informed that his hose pipe, left open on the lawn, is wasting four thousand gallons per day; that a faucet, allowed to run a broken stream, is adding two hundred gallons daily to his meter register; that the float in his water

tank is arranged so as to permit thousands of gallons of water to run into the sewer weekly, the party immediately takes measures to check the disorder, which but for the meter might continue to exist. Enormous wastes of water have been detected through the presence of meters. During the past year, several large leaks have occurred in covered service-pipes, and had not the unusual amount of water registered indicated something wrong, the waste would have continued an indefinite period.

I desire to offer a word in commendation of Desper's self-closing fixtures, which can be attached at a small expense to faucets, closets, etc. The advantage to consumers of measured water is obvious, as the liability to leave water running is prevented. Several instances of its efficacy which have come to the knowledge of the department prompts this notice.

Cheap fixtures in buildings, constantly needing repairs—water closets and sinks used in common by several families—water allowed to run in Winter to prevent freezing—hose pipes used to an extent little dreamed of by those who fixed the rates for same; these, with other causes, serve to swell the torrent of waste water running annually, and for which the city derives no revenue. I might expatiate on the subject, but deem the following, which I quote from the report of the Chicago Water Department, as pertinent in conclusion:—

“The monstrous waste of water which takes place annually in the extreme weather of Summer and Winter, is a reflection upon the moral sense of those who are guilty of it. It appears to be impossible for many people to understand that water, unlike air, is not a free commodity, and that no one is entitled to use more water than he pays for. The water of the city is municipal property, sold to individuals in precisely the same commercial way in which citizens purchase food or clothing; and it is no more a privilege to waste water than to steal the groceries of the merchant or the fabrics of the dry goods dealer.”

I consider the matter of plumbing work being done under a license as highly important. Many cities have very strict rules and enforce them, which bear on this subject. Much cheap and poorly done work is performed by parties whose knowledge of plumbing is so limited that their ignorance is palpable, the result of which is a detriment to the owners of property and an expense to the city.

Owing to the general depression in business, many tenements have been idle, thereby causing a large number of abatements on bills. For the same reason, numerous over-due accounts remain unpaid. The Registrar admits that he has been somewhat dilatory in enforcing Section 9 of Rules and Regulations, but the pressure caused by the existing state of financial affairs induced him, after consultation with the City Treasurer, to show as much leniency as possible to those whose desire to settle bills was as apparent as their inability so to do.

The triple subject of Consumption, Supply and Waste, has always furnished ample avenues of thought and discussion. You have certainly had the burden of opinion to bear the last year, and, I am confident, will not object to the investigation of the theme by any future Committee who have the interest of the city at heart.

Respectfully submitted,

J. STEWART BROWN,

Registrar.

REPORT

OF THE

WATER COMMISSIONER.

To the Joint Standing Committee on Water :—

THE Commissioner presents his Annual Report for the year ending November 30, 1875.

Main pipes have been laid in all streets where ordered by the City Council, as follows :—

8 inch pipe in Lincoln street, from Forest avenue north,	480 feet.
8 “ “ “ Bloomingdale road, from Suffolk street west,	670 “
6 “ “ “ Pitt st., from Cambridge st. to Riverside Mill,	621 “
6 “ “ “ King street, from Chandler to Woodland st.,	723 “
6 “ “ “ Sigourney st., from North to Edgeworth st.,	435 “
6 “ “ “ Suffolk street, from Bloomingdale road,	45 “
6 “ “ “ Reservoir street, from Elizabeth st. east,	158 “
6 “ “ “ Laurel street, from Carroll street east,	129 “
6 “ “ “ Temple street under Mill Brook,	60 “
4 “ “ “ Temple street to Mill Brook,	50 “
4 “ “ “ Mount Pleasant st. from Benefit to Allen st.,	350 “
4 “ “ “ Hermon street east of Junction Shop, to connect to Jackson street,	120 “
Amount of new pipe laid this year,	3,841 “

Connection has been made between the high service and the 12 inch pipe to the Hunt Reservoir, to be used in case of repairs upon the old line from the Leicester Reservoir.

The 4 and 6 inch pipe on Main street, from Front street to Lincoln Square, has been taken up and replaced by 16 inch pipe a distance of 2,896 feet. 16 inch pipe has been laid in Thomas street, from Main to Union street, a distance of 638 feet.

Owing to change of grade in Suffolk street, 525 feet of 6 inch pipe had to be taken up and relaid; also 342 feet of 4 inch pipe in May street, for the same reason. In Gardner street, 310 feet of 6 inch pipe has been relaid, between Canterbury and Southgate streets. Amount of pipe relaid, 4,711 feet.

Number of gates set, 45; hydrants, 28; hydrant branches, 18; street branches, 34; meters, 379; service pipes laid, 214 or 4,087 feet 7 inches for the city, and 5,089 feet 3 inches for applicants.

The extreme cold weather of the last Winter continuing until near Spring, caused serious trouble with water pipes and hydrants, not only here but throughout the country, causing great inconvenience and annoyance to water takers, and a large expense to the city, making this as busy a time as any season of the year. 750 service pipes were reported frozen, which were thawed by the Department, the last one being thawed April 30. Many were thawed by plumbers, so it is impossible to tell the number of pipes frozen.

Main pipe was frozen in Belmont street,					12 inch pipe.		
"	"	"	"	Bismarck street,	200 feet,	2	" "
"	"	"	"	Blossom street,	600	" 4	" "
"	"	"	"	E. Central street,		4	" "
"	"	"	"	Goddard street,		2	" "
"	"	"	"	Gold street,		4	" "
"	"	"	"	Grosvenor street,	100 feet,	4	" "
"	"	"	"	Hudson street,	500	" 4	" "
"	"	"	"	Lodi street,	100	" 4	" "
"	"	"	"	Market street,	400	" 4	" "
"	"	"	"	Park street,	200	" 4	" "
"	"	"	"	Pleasant street,	300	" 8	" "
"	"	"	"	Siegel street,	500	" 4	" "
"	"	"	"	Summer street,	300	" 4	" "

Great credit is due to Chief Engineer Combs and the officers of the Fire Department for the assistance rendered in caring for hydrants, thereby relieving, in a measure, the demands upon this Department.

Various devices have been brought before the public as “non-freezing” and “anti-freezing,” which have been recommended for the use of water works; but the plan deemed the most effectual is the laying of all pipe at a depth to be below the reach of the frost.

Acting upon this idea, many of the service pipes have been lowered, and all that are now laid are put six and one-half feet below the surface.

Longer hydrants have been substituted for several of the short ones formerly in use, and by another season all of them will be removed.

The number of leaks repaired, 284. On main pipe: Joints, 106; rust, 38; frost, 17; split, 7; pick-hole, 3; bowl joint, 5; hydrant valve, 4; packing, 1; bonnet blew off, 1; $\frac{1}{4}$ turn blew off, 1. On service pipe: Frost, 81; lead connection, 10; settling of earth, 2; union joint, 2; split, 6. Stoppages in service pipe reported, 81.

Location of hydrants set during the year:—

Austin street, opposite Queen street.

“ “ corner Bellevue street.

Bellevue street, between Austin and Pleasant streets.

Bloomingdale road, west of Graton & Knight's shop.

Carroll street, opposite Shelby street.

Highland street, opposite Goulding street.

“ “ corner Boynton street.

Jefferson street, corner Arlington street.

King street, west of Shepard street.

Lafayette street, corner Lodi street.

“ “ “ Grosvenor street.

Main street, opposite Piedmont street.

“ “ corner Allen street.

“ “ “ Kilby street.

Mason “ “ Austin street.

May “ “ Kingsbury street.

Milton “ “ Edgeworth street.

Mount Pleasant street, opposite Allen street.

Norfolk street, corner Hawkins street.

“ “ “ Ascension street.

Ripley street, south of J. H. Walker's.

Shelby street, opposite Mulberry street.

Sigourney street, corner Edgeworth street.

Southgate street, south side of Norwich & Worcester Railroad.

“ “ front of D. S. Goddard's shop.

Temple street, west of Church.

Wall street, corner Norfolk street.

Wachusett street, between Dix and Highland streets.

Accompanying this Report is an Inventory of Stock of Tools on hand November 30, the appraised value of which is \$37,190.65.

Respectfully submitted,

FRANK E. HALL,

Water Commissioner.

WORCESTER, Dec. 20, 1875.

INVENTORY OF STOCK AND TOOLS ON HAND DECEMBER 1, 1875.

10 pieces 20 inch cast iron pipe,	2 12x4 three way branches,
63 pieces 16 inch cast iron pipe,	1 10x6 three way branches,
152 pieces 12 inch cast iron pipe,	2 10x4 three way branches,
23 pieces 8 inch cast iron pipe, class B,	12 8x8 three way branches,
117 pieces 8 inch cast iron pipe, class A,	38 8x6 three way branches,
46 pieces 6 inch cast iron pipe,	10 8x4 three way branches,
189 pieces 6 inch cast iron pipe, been used,	26 6x6 three way branches,
128 pieces 5 inch cast iron pipe, been used,	27 6x4 three way branches,
12 feet 24 inch cast iron pipe,	11 5x4 three way branches,
16 feet 20 inch cast iron pipe,	33 4x4 three way branches,
131 feet 16 inch cast iron pipe,	1 16x16 four way branches,
40 feet 12 inch cast iron pipe,	4 16x12 four way branches,
30 feet 8 inch cast iron pipe,	3 12x8 four way branches,
50 feet 6 inch cast iron pipe,	3 12x6 four way branches,
275 feet 6 inch cast iron pipe, been used,	2 8x8 four way branches,
220 feet 4 inch cast iron pipe, been used,	2 8x6 four way branches,
1,810 feet 15 inch unlined pipe,	11 6x6 four way branches,
210 feet 12 inch cement lined pipe,	1 4x4 four way branches,
1,596 feet 10 inch cement lined pipe,	14½ set sleeves for 16 inch cement lined pipe,
1,638 feet 8 inch cement lined pipe,	28 set sleeves for 12 inch cement lined pipe,
70 feet 6 inch cement lined pipe,	21 set sleeves for 10 inch cement lined pipe,
448 feet 3 inch cement lined pipe,	7½ set sleeves for 8 inch cement lined pipe,
504 feet 2 inch cement lined pipe,	26½ set sleeves for 6 inch cement lined pipe,
72 feet 20 inch cement lined pipe, been used,	6½ set sleeves for 4 inch cement lined pipe,
137 feet 16 inch cement lined pipe, been used,	7½ set sleeves for 3 inch cement lined pipe,
107 feet 12 inch cement lined pipe, been used,	40 set sleeves for 2 inch cement lined pipe,
273 feet 10 inch cement lined pipe, been used,	14 sleeves for 24 inch cast iron pipe,
98 feet 6 inch cement lined pipe, been used,	2 sleeves for 20 inch cast iron pipe,
2,226 feet 4 inch cement lined pipe, been used,	7 sleeves for 16 inch cast iron pipe,
664 feet 2 inch galvanized iron pipe,	3 sleeves for 12 inch cast iron pipe,
2 20 inch curve pieces,	35 sleeves for 8 inch cast iron pipe,
6 16 inch curve pieces,	20 sleeves for 6 inch cast iron pipe,
10 8 inch one-eighth turns,	8 sleeves for 5 inch cast iron pipe,
2 6 inch one-eighth turns,	17 sleeves for 4 inch cast iron pipe,
8 4 inch one-eighth turns,	3 sleeves for 3 inch cast iron pipe,
4 16 inch quarter turns,	8 set ½ sleeves for 12 inch pipe, with bolts,
4 12 inch quarter turns,	8 set ½ sleeves for 8 inch pipe, with bolts,
6 8 inch quarter turns,	1 20x16 inch taper,
10 6 inch quarter turns,	9 12x8 inch tapers,
8 4 inch quarter turns,	1 12x6 inch taper,
1 2 inch quarter turn, brass,	12 8x6 inch tapers,
3 16x16 three way branches,	16 6x4 inch tapers,
2 16x12 three way branches,	5 4x3 inch tapers,
2 16x8 three way branches,	4 4x2 inch tapers,
8 16x6 three way branches,	2 24 inch bonnets,
12 16x4 three way branches,	1 16 inch honnet,
4 12x8 three way branches,	2 12 inch bonnets,
8 12x6 three way branches,	16 8 inch honnets,
	22 6 inch bonnets,
	39 4 inch bonnets,

- 1 20 inch plug,
- 1 16 inch plug,
- 11 12 inch plugs,
- 4 8 inch plugs,
- 6 6 inch plugs,
- 1 16 inch gate, Ayres,
- 4 12 inch gates,
- 1 10 inch gate,
- 18 8 inch gates,
- 12 6 inch gates,
- 21 4 inch gates,
- 18 gate boxes,
- 12 gate box frames,
- 20 gate box covers,
- 4 gate box frames and covers, small,
- 3 flush hydrants,
- 1 Philadelphia hydrant,
- 11 flush hydrant box frames and covers,
- 27 hydrant wastes,
- 7 hydrant bowls,
- 2 pieces cast iron pipe for hydrant bowls,
- 8 set bands and bolts for flush hydrants,
- 318 lbs. cast iron bands for repairing solder branches,
- 1,042 lbs. wrought iron bands and bolts for street branches,
- 40 feet 3 inch steam pipe,
- 300 feet $1\frac{1}{4}$ inch steam pipe,
- 375 feet 1 inch rubber coated pipe,
- 975 feet 1 inch cement lined pipe,
- 697 feet $\frac{3}{4}$ inch cement lined pipe,
- 761 feet 1 inch unlined pipe,
- 385 lbs. 2 inch lead pipe,
- 300 lbs. 1 inch lead pipe,
- 50 lbs. $\frac{5}{8}$ inch lead pipe,
- 1,190 lbs. $\frac{1}{2}$ inch lead pipe, been used,
- 25 lbs. solder,
- 26 1 inch lead connections,
- 7 $\frac{5}{8}$ inch lead connections,
- 67 $\frac{1}{2}$ inch lead connections,
- 2 3 inch globe valves,
- 11 1 inch Ludlow gates,
- 6 $\frac{3}{4}$ inch Ludlow gates,
- 37 $\frac{1}{2}$ inch stops for bands,
- 82 $\frac{1}{2}$ inch stops for bands, been used,
- 3 $\frac{3}{4}$ inch waste stops,
- 34 $\frac{1}{2}$ inch waste stops,
- 8 2 inch long brass nipples,
- 15 2 inch short brass nipples,
- 63 cast iron stop boxes,
- 330 cast iron stop box covers,
- 6,220 lbs. tapping bands,
- 96 lbs. wrought iron bands,
- 608 lbs. bolts and nuts for service pipe,
- 133 lbs. bolts for 24 inch sleeves,
- 65 $1\frac{1}{4}$ inch brass tees,
- 259 1 inch brass tees,
- 25 $1\frac{3}{4}$ inch rubber coated tees,
- 20 2 inch plugs,
- 56 $1\frac{1}{4}$ inch plugs,
- 80 1 inch plugs,
- 209 $\frac{3}{4}$ inch plugs,
- 10 1 inch combination nipples,
- 38 $\frac{5}{8}$ inch combination nipples,
- 18 $\frac{3}{4}$ inch thimble couplings,
- 22 $\frac{1}{2}$ inch thimble couplings,
- 15 $1\frac{3}{4}$ inch rubber galvanized iron reducing coupling,
- 10 2 inch malleable iron unions,
- 1 $1\frac{1}{2}$ inch malleable iron unions,
- 12 1 inch malleable iron unions,
- 1 2 inch rubber coated elbow,
- 2 1 inch rubber coated elbows,
- 25 $1\frac{3}{4}$ inch galvanized iron elbows,
- 18 2 inch rubber packings for tapping bands,
- 54 1 inch rubber packings for tapping bands,
- 148 $\frac{1}{2}$ inch rubber packings for tapping bands,
- 2 4 inch meters,
- 1 2 inch Gem meter,
- 6 1 inch meters,
- 6 $\frac{3}{4}$ inch meters,
- 1 1 inch Worthington meter,
- 1 $\frac{5}{8}$ inch meter,
- 2 meter box frames and covers
- 3 bbls. Portland cement,
- 16 bbls. cement,
- 1 Knowles' rotary pump,
- 1 Knowles' large steam pump,
- 1 Knowles' small steam pump,
- 5 force pumps,
- 2 copper pumps,
- 3 tool boxes and 4 chests,
- 9 wheelbarrows,
- 46 picks,
- 12 pick handles,
- 48 shovels,
- 11 iron bars,
- 16 iron tampers,
- 14 striking hammers,
- 5 stone hammers,
- 12 hand hammers,
- 2 paving hammers,
- 31 hammer handles,
- 271 lbs. steel in drills,
- 25 hand drills,
- 10 iron spoons,
- 4 ladles,
- 1 small ladle,
- 56 cold chisels,
- 28 steel sets,
- 5 packing irons,
- 1 large furnace and ladle,
- 4 furnaces,
- 15 monkey wrenches,
- 12 Baxter wrenches,
- 4 pair $1\frac{1}{2}$ inch pipe tongs,
- 6 pair $1\frac{1}{4}$ inch pipe tongs,
- 5 pair 1 inch pipe tongs,

- 6 pair $\frac{3}{4}$ inch pipe tongs,
- 4 pair $\frac{1}{2}$ inch pipe tongs,
- 1 pair $\frac{3}{8}$ inch pipe tongs,
- 2 pair $\frac{1}{4}$ inch pipe tongs,
- 4 pair $\frac{1}{8}$ inch pipe tongs,
- 9 hand axes,
- 1 adze,
- 4 hand saws,
- 2 bit stocks and bits,
- 1 saw set,
- 2 try squares,
- 2 planes,
- 1 drawing knife,
- 2 grind-stones,
- 1 oil stone,
- 3 screw drivers,
- 1 hoe,
- 1 spirit level,
- 5 oilers,
- 2 powder cans,
- 10 trowels,
- 3 soldering furnaces and tools,
- 17 files,
- 3 pair plyers,
- 2 paving rammers,
- 1 ratchet and drills,
- 3 pair tongs for lifting pipe,
- 5 hay knives,
- 1 hay fork,
- 14 long handled forks,
- 2 scythes and snaths,
- 3 spoons for cleaning stop boxes,

- 6 hooks for removing hydrant wastes,
- 3 forks for removing hay from hydrants,
- 5 Stanwood's pipe cutters,
- 1 Chase patent pipe cutter and dies,
- 1 2 inch tap,
- 1 $1\frac{1}{4}$ inch tap,
- 1 1 inch tap,
- 1 $\frac{3}{4}$ inch tap,
- 1 $\frac{1}{2}$ inch tap,
- 1 packing box tap,
- 7 die plates and 23 dies,
- 6 packed drill stocks and 20 drills,
- 1 drill stock and drill for drilling iron pipe,
- 14 stop wrenches,
- 11 gate wrenches,
- 10 hydrant wrenches,
- 3 wrenches for repairing hydrants,
- Lot of tools for building hydrants,
- 1 platform scale,
- 9 sets cones for lining pipe,
- 9 sets cones for lining service pipe,
- 9 rubber cones,
- 3 wagons,
- 1 Concord buggy,
- 1 sleigh,
- 1 harness,
- 2 hand carts,
- 3 derricks,
- 3 sets pulley blocks and ropes,
- 8 dies for cutting packing.

MISCELLANEOUS.

- 34 water pails,
- 3 galvanized iron boilers,
- 1 copper boiler,
- 2 boilers for thawing hydrants,
- 1 tank for testing meters,
- 1 truck,
- 1 hand sled,
- 5 mixing boxes,
- 15 pair rubber boots,
- 5 brooms,
- 1 coal hod,
- 31 lanterns,
- 42 lantern globes,
- 35 glasses for lamps,
- 5,000 feet chestnut lumber,
- 1,022 lbs. wrought iron rods,
- 170 lbs. old brass,
- 2,100 lbs. pig lead,
- 800 lbs. old lead,
- 10 lbs. white lead,
- 458 lbs. chains,
- 274 lbs. rosin,
- 27 pickets for reservoir fence,
- 12 pair rubber mittens,
- 2 pair long rubber mittens,
- 2 cast iron sinks,
- 4 stoves,

- 1 goose neck,
- 262 feet rubber hose,
- 9 tea kettles,
- 1 anvil,
- 1 portable forge,
- 2 fan blowers,
- 3 iron vises,
- 2 wood vises,
- 3 pair shears,
- 1 cast iron frame for screen,
- 1 mud boat,
- 1 drinking fountain,
- 1 stand pipe for filling watering cart,
- 3 tons of coal,
- 1 handle basket,
- 4 carpenters' horses,
- 1 steam gauge,
- 1 oil tank,
- 9 oil cans,
- 10 gallons kerosene,
- 11 brass screws for gates,
- 11 nozzles for hydrants,
- 24 hydrant caps,
- 4 brass tops for hydrants,
- 150 lbs. post hydrant box hoops,
- 180 lbs. post hydrant box fastenings,
- 2 brass screws for hydrants,

14 jack screws,
2 desks,
5 office chairs,
4 window frames,
3 platforms for holding pipe
3 oil cloth suits,
1 canvas tent and frame,
4 lbs. rubber packing cloth,
6 yards enameled cloth,
214 lbs. hemp packing,
16 lbs. steam packing,
120 lbs. winding twine,
8 lbs. hemp twine,
4 bbls. charcoal,

4 nuts and tops for Boston hydrants,
950 feet $\frac{1}{8}$ inch gas pipe for thawing
service pipe,
45 lbs. tin pipe for thawing service
pipe,
1 sand screen,
1 gimlet,
3 tape lines,
1 wood marker,
2 augers,
Patterns for pipe gates, branches,
hydrant box frames, &c.,
1 iron bedstead and bedding.

REPORT OF CITY ENGINEER

TO THE

COMMITTEE ON WATER.

To the Joint Standing Committee on Water :

GENTLEMEN :—In accordance with the provisions of Sect. 11, Chapter 68 of the Ordinances of the City, I respectfully present the following *Report*.

The dam of the Lynde Brook Reservoir has been carefully examined at frequent intervals during the year. The increased leakage in the vicinity of the “pipe arch,” as indicated by the weir, induced me to address the following communication to your committee, under date of September 7th.

To the Joint Standing Committee on Water :

GENTLEMEN :—In accordance with the provisions of Sect. 11, Chap. 68 of the Ordinances of the City of Worcester, I deem it my duty to call your attention to the increased leakage through the Lynde Brook Reservoir embankment in the vicinity of the “pipe arch.” In April, with the water six feet below the roll-way, the leakage was at the rate of 24,221 gallons in twenty-four hours. In July, under a similar head, it had increased to 39,810 gallons per day, and it still continues at that rate, except when affected by surface water after storms. I would recommend that the pipe arch be thoroughly cleaned of all deposit, which will enable careful inspection to determine if the water is discolored on entering the archway, which would indicate an increase of wash under the foundation.

Respectfully submitted,

C. H. M. BLAKE,
Civil Engineer.

The cleaning of deposit from the archway was ordered by your Committee, in accordance with the recommendation contained in the above communication. The only means of determining the amount of leakage had been, to this time, by means of the flow over the weir below the outlet of the waste culvert. This, while answering the purpose very well during dry weather, was defective and unreliable at times from the effect of surface water. In order to obviate this difficulty, a weir has been set in the pipe arch itself, where no water not actually entering the arch through a leak can be measured.

The leakage at present is 48,448 gallons per day, showing an increase of about 24,000 gallons since April 1st. It being important to locate the leakage, two weirs were set in the arch, one a short distance from the upper end, and the other near the lower end. It is a matter of congratulation that the investigations prove the leakage is confined entirely within a short distance of the upper end.

The question of an additional supply of water for the city has received considerable attention during the year. By order of the City Council, approved April 6th, thorough surveys were made of Tatnuck Brook, comprising the determination of the extent of its water-shed, capacity of a storage reservoir, and location of dam. Measurements of the flow from Henshaw Pond, and survey of a pipe line from both sources were also made, and June 21st, a Report giving the result of the surveys, estimated cost of construction, and such other suggestions as the object of the order seemed to render necessary for the proper consideration of this important subject was submitted to the City Council. I am convinced that the city cannot with safety defer action on this question. We may, if the seasons are favorable, feel no need of an increase in our supply for several years, and perhaps get through one dry season without serious inconvenience, but long continued meteorological observations prove that *cycles* of dry years are as certain to recur at intervals as the precession of the equinoxes is to continue, and no water supply is reliable which is not capable of providing for these seasons of long continued dry

weather. To illustrate the variation of rainfall for terms of years I would refer to table III. in the report mentioned.

The question of economy in the use of water has so often been brought to your notice that, perhaps nothing new can be adduced. There is no doubt that if self-acting hopper-closets were generally introduced, a large saving in domestic consumption would ensue, as the ordinary hopper closet has been proved by actual observation in other cities to be one of the most prevalent sources of waste. As the manufacturing interests of the city are further developed, necessity will arise for the additional supply of large amounts of water for industrial purposes, and it is not to be expected that any system of economy in its use, however rigidly enforced, will decrease the use of water sufficiently to counter-balance the legitimate demand of additional takers.

The daily condition of the supply in the Lynde Brook Reservoir for the year ending December 1st, 1875, is given in the accompanying table, and the Report made to the City Council June 21st, is appended.

I am indebted to the Water Commissioner, Mr. Hall, and the Registrar, Mr. Brown, for information in regard to the Water Department, which has always been cheerfully given on application.

Thanking the Committee for the uniform courtesy received from them while prosecuting work under their direction, this report is most respectfully submitted.

C. H. M. BLAKE,

Civil Engineer.

WORCESTER, Dec. 1st, 1875.

TABLE

SHOWING THE DAILY CONDITION OF LYNDE BROOK RESERVOIR SUPPLY FOR THE YEAR ENDING DECEMBER 1ST, 1875, AND RAINFALL DURING THAT PERIOD.

Date.	1874. DECEMBER.		1875. JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.		JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		REMARKS.
	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	Water.	Rain-fall.	
1	9' 7 $\frac{3}{4}$ "		12' 11 "		19' 2 $\frac{3}{4}$ "		14' 2 $\frac{1}{4}$ "		14' 11 $\frac{1}{2}$ "		4' 5 $\frac{3}{4}$ "		4' 6 "		6' 2 $\frac{1}{4}$ "		8' 4 $\frac{3}{4}$ "		7' 6 $\frac{3}{4}$ "		9' 3 $\frac{1}{4}$ "		7' 8 $\frac{1}{2}$ "		Rainfall for the year ending Dec. 1st, 1875, 47 $\frac{11}{16}$ inches.
2	9' 8 $\frac{1}{2}$ "	0.10	13' 0 $\frac{1}{4}$ "	0.35	19' 5 $\frac{1}{2}$ "		14' 3 "	0.81	13' 8 $\frac{3}{4}$ "		4' 5 "	0.33	4' 7 $\frac{1}{2}$ "		6' 3 $\frac{1}{4}$ "		8' 7 $\frac{1}{4}$ "		7' 8 "		9' 3 "	0.18	7' 7 $\frac{1}{2}$ "		
3	9' 9 $\frac{1}{2}$ "		13' 2 $\frac{3}{4}$ "		19' 7 $\frac{1}{2}$ "	0.58	14' 5 "		10' 5 $\frac{3}{4}$ "	0.27	4' 4 "		4' 8 $\frac{1}{4}$ "		6' 5 $\frac{1}{4}$ "		8' 8 "	0.46	7' 9 "		9' 4 $\frac{3}{4}$ "		7' 7 $\frac{1}{2}$ "		Average rainfall 46 $\frac{53}{100}$ inches.
4	9' 10 $\frac{1}{2}$ "		13' 3 $\frac{3}{4}$ "		18' 8 $\frac{1}{4}$ "	0.34	14' 6 $\frac{1}{4}$ "	0.11	9' 4 $\frac{1}{2}$ "	0.16	4' 5 $\frac{1}{2}$ "		4' 8 $\frac{3}{4}$ "		6' 6 $\frac{3}{4}$ "		8' 6 $\frac{1}{2}$ "	1.12	7' 10 $\frac{3}{4}$ "	0.01	9' 5 $\frac{3}{4}$ "		7' 7 $\frac{1}{2}$ "		
5	9' 11 $\frac{1}{2}$ "		13' 7 "		18' 6 "		14' 8 $\frac{1}{4}$ "		7' 4 $\frac{3}{4}$ "	1.06	4' 5 $\frac{1}{2}$ "		4' 10 $\frac{3}{4}$ "		6' 7 $\frac{1}{4}$ "	0.09	8' 6 $\frac{1}{2}$ "	0.27	7' 10 "		9' 7 "		7' 8 $\frac{1}{4}$ "		Capacity of Reservoir, Stored Nov. 30th, 1875,
6	10' 0 $\frac{1}{2}$ "		13' 9 $\frac{1}{2}$ "		18' 5 $\frac{3}{4}$ "		14' 10 $\frac{1}{4}$ "		6' 10 "		4' 6 "		4' 11 $\frac{3}{4}$ "		6' 4 $\frac{3}{4}$ "	2.16	8' 6 $\frac{1}{4}$ "	0.33	8' 0 $\frac{3}{4}$ "	0.10	9' 7 $\frac{1}{2}$ "		7' 8 $\frac{1}{2}$ "		
7	10' 1 "	0.21	13' 11 $\frac{3}{4}$ "		18' 5 $\frac{1}{4}$ "		15' 0 $\frac{1}{2}$ "		6' 6 $\frac{1}{2}$ "		4' 11 $\frac{1}{2}$ "	1.22	5' 0 $\frac{1}{2}$ "		6' 2 $\frac{3}{4}$ "	0.56	8' 7 $\frac{1}{4}$ "	0.07	8' 1 $\frac{1}{2}$ "		9' 4 $\frac{1}{4}$ "	2.05	7' 9 "		663,330,000 gallons. 474,399,100 "
8	10' 2 $\frac{1}{2}$ "		14' 1 $\frac{1}{2}$ "	0.48	18' 5 $\frac{3}{4}$ "		15' 1 "	0.55	6' 5 "		3' 10 $\frac{1}{4}$ "		5' 0 $\frac{1}{2}$ "	0.67	6' 2 $\frac{3}{4}$ "		8' 8 $\frac{3}{4}$ "		8' 4 "		8' 6 $\frac{1}{4}$ "	0.44	7' 9 "		
9	10' 4 "		14' 4 "	0.04	18' 8 "		15' 3 $\frac{1}{2}$ "		6' 3 $\frac{1}{2}$ "		3' 8 $\frac{1}{2}$ "	0.25	5' 1 $\frac{1}{2}$ "		6' 4 $\frac{1}{4}$ "		8' 9 $\frac{1}{4}$ "		8' 5 "		8' 4 $\frac{1}{2}$ "		7' 9 $\frac{3}{4}$ "		188,930,000 "
10	10' 5 $\frac{1}{4}$ "		14' 5 $\frac{1}{4}$ "		18' 10 $\frac{3}{4}$ "		15' 5 $\frac{3}{4}$ "		6' 3 "		3' 7 $\frac{1}{2}$ "		4' 10 $\frac{3}{4}$ "	1.43	6' 5 $\frac{1}{2}$ "		8' 11 $\frac{1}{4}$ "		8' 6 $\frac{1}{4}$ "		8' 5 $\frac{1}{2}$ "		7' 10 $\frac{1}{4}$ "		
11	10' 6 $\frac{1}{4}$ "	0.10	14' 8 $\frac{1}{4}$ "		19' 1 $\frac{1}{4}$ "	1.16	15' 7 $\frac{1}{2}$ "	0.10	6' 0 "		3' 6 $\frac{3}{4}$ "		4' 10 "		6' 6 "		9' 1 $\frac{1}{2}$ "		8' 7 "	0.33	8' 3 $\frac{1}{2}$ "	0.53	6' 10 "	1.84	Deficiency,
12	10' 7 $\frac{3}{4}$ "		14' 10 $\frac{1}{4}$ "		18' 10 $\frac{1}{4}$ "	0.14	15' 9 $\frac{3}{4}$ "		5' 10 $\frac{3}{4}$ "		3' 7 "		4' 10 $\frac{1}{2}$ "		6' 7 "		9' 2 $\frac{1}{4}$ "	0.58	8' 9 $\frac{1}{4}$ "		8' 2 $\frac{1}{4}$ "		6' 8 "		
13	10' 9 $\frac{1}{4}$ "	0.29	15' 0 $\frac{3}{4}$ "	0.07	18' 11 $\frac{1}{4}$ "		15' 11 $\frac{1}{2}$ "		5' 10 $\frac{3}{4}$ "		3' 6 $\frac{1}{2}$ "		4' 10 $\frac{3}{4}$ "	0.21	6' 8 $\frac{1}{4}$ "		9' 3 $\frac{1}{2}$ "	0.16	8' 10 $\frac{1}{4}$ "	0.07	8' 3 "		6' 7 $\frac{1}{2}$ "		0.15
14	10' 10 "	0.22	15' 4 $\frac{1}{2}$ "		18' 11 $\frac{1}{2}$ "		16' 0 $\frac{1}{2}$ "	0.18	5' 9 $\frac{3}{4}$ "	0.45	3' 7 $\frac{3}{4}$ "		5' 0 "		6' 9 $\frac{3}{4}$ "		9' 4 $\frac{1}{2}$ "	0.03	8' 11 $\frac{3}{4}$ "		8' 3 $\frac{1}{2}$ "		6' 6 $\frac{3}{4}$ "		
15	10' 11 $\frac{1}{2}$ "		15' 7 $\frac{1}{4}$ "		19' 1 $\frac{1}{2}$ "		16' 0 $\frac{1}{4}$ "	0.11	5' 8 $\frac{3}{4}$ "		3' 8 $\frac{1}{4}$ "		5' 0 "		6' 11 $\frac{1}{4}$ "		9' 5 $\frac{3}{4}$ "		9' 0 $\frac{3}{4}$ "		8' 2 $\frac{1}{2}$ "		6' 6 "		0.67
16	11' 0 $\frac{3}{4}$ "		15' 9 $\frac{1}{2}$ "		19' 4 $\frac{1}{2}$ "		15' 9 $\frac{1}{4}$ "	0.49	5' 6 "		3' 7 "	0.25	5' 1 $\frac{1}{2}$ "		7' 1 $\frac{1}{2}$ "		9' 7 "		9' 2 "		8' 3 $\frac{1}{2}$ "	0.20	6' 6 $\frac{1}{4}$ "	0.15	
17	11' 2 $\frac{1}{2}$ "		16' 1 "		19' 7 $\frac{1}{4}$ "		15' 3 $\frac{3}{4}$ "		4' 9 $\frac{3}{4}$ "	0.42	3' 8 $\frac{1}{4}$ "		5' 3 "		7' 1 $\frac{1}{2}$ "	0.12	9' 7 $\frac{3}{4}$ "	0.29	8' 7 "	2.45	8' 1 "	0.31	6' 6 "	0.67	1.13
18	11' 4 "		16' 2 $\frac{1}{2}$ "		19' 10 $\frac{1}{4}$ "		15' 0 "		4' 6 $\frac{3}{4}$ "		3' 8 "		5' 4 "	0.15	7' 3 $\frac{3}{4}$ "	0.27	9' 9 "	0.05	8' 6 $\frac{1}{2}$ "		8' 2 $\frac{1}{4}$ "		6' 6 $\frac{1}{4}$ "		
19	11' 5 $\frac{3}{4}$ "		16' 3 "		20' 1 $\frac{3}{4}$ "		14' 11 $\frac{1}{4}$ "		4' 5 "		3' 9 $\frac{1}{4}$ "	0.07	5' 2 $\frac{1}{4}$ "	1.00	7' 4 "		7' 6 "	3.97	8' 6 $\frac{3}{4}$ "		8' 2 "		6' 1 $\frac{1}{2}$ "		0.74
20	11' 7 $\frac{3}{4}$ "	0.26	16' 4 "		20' 5 "	0.11	14' 10 $\frac{3}{4}$ "		4' 4 $\frac{1}{2}$ "		3' 9 "	0.18	5' 0 $\frac{1}{2}$ "		7' 5 $\frac{1}{2}$ "		7' 2 $\frac{3}{4}$ "	0.05	8' 7 $\frac{1}{4}$ "	0.20	8' 2 "		6' 0 $\frac{1}{2}$ "		
21	11' 9 "		16' 5 "	0.37	20' 6 $\frac{3}{4}$ "	0.22	14' 10 $\frac{3}{4}$ "	0.51	4' 6 $\frac{1}{4}$ "		3' 9 "		5' 3 $\frac{1}{4}$ "		7' 6 $\frac{1}{4}$ "		7' 0 "	0.46	8' 7 $\frac{1}{2}$ "	0.10	8' 3 "		6' 1 "		0.26
22	11' 10 "		16' 11 "	0.16	20' 9 $\frac{1}{2}$ "		15' 1 $\frac{1}{4}$ "		4' 5 $\frac{3}{4}$ "		3' 9 "	0.14	5' 3 $\frac{3}{4}$ "		7' 7 $\frac{1}{2}$ "		6' 11 $\frac{1}{2}$ "		8' 8 $\frac{1}{4}$ "		8' 4 "		6' 1 "		
23	12' 0 "	0.05	17' 3 "		21' 0 $\frac{1}{2}$ "		15' 3 $\frac{1}{4}$ "		4' 5 $\frac{1}{4}$ "		3' 9 $\frac{1}{2}$ "		5' 5 $\frac{1}{2}$ "		7' 8 $\frac{1}{4}$ "	1.45	6' 10 "	0.20	8' 9 $\frac{1}{4}$ "		8' 4 $\frac{3}{4}$ "		6' 1 $\frac{1}{4}$ "		0.74
24	12' 1 $\frac{1}{2}$ "	0.06	17' 3 $\frac{3}{4}$ "	0.47	20' 9 $\frac{3}{4}$ "		15' 5 $\frac{1}{4}$ "		4' 6 "		3' 10 "		5' 6 $\frac{1}{4}$ "		7' 7 $\frac{1}{4}$ "		6' 10 $\frac{1}{2}$ "		8' 9 $\frac{1}{4}$ "		8' 5 $\frac{1}{2}$ "		5' 9 "	1.13	
25	12' 4 "		17' 8 $\frac{1}{2}$ "		17' 0 $\frac{1}{4}$ "	0.11	15' 8 "	0.18	4' 5 $\frac{1}{4}$ "		3' 10 $\frac{3}{4}$ "		5' 7 $\frac{1}{2}$ "		7' 9 "		6' 11 $\frac{1}{2}$ "		8' 10 $\frac{3}{4}$ "		8' 5 $\frac{3}{4}$ "		5' 7 $\frac{1}{4}$ "		0.74
26	12' 6 $\frac{1}{2}$ "		17' 8 "		14' 2 $\frac{3}{4}$ "	0.49	15' 10 $\frac{1}{2}$ "		4' 4 $\frac{3}{4}$ "		3' 11 "		5' 9 "		7' 10 "	0.12	7' 1 $\frac{1}{2}$ "		8' 11 $\frac{3}{4}$ "		8' 6 $\frac{1}{2}$ "		5' 7 $\frac{1}{4}$ "	0.74	
27	12' 7 $\frac{3}{4}$ "		17' 10 "		14' 0 $\frac{1}{4}$ "		16' 1 $\frac{1}{2}$ "	0.06	4' 4 $\frac{3}{4}$ "		3' 11 $\frac{1}{2}$ "		5' 10 "	0.10	7' 10 $\frac{3}{4}$ "		7' 2 "		8' 11 $\frac{3}{4}$ "	0.34	8' 6 $\frac{1}{2}$ "	0.47	5' 2 $\frac{1}{2}$ "		0.26
28	12' 8 $\frac{3}{4}$ "	0.37	18' 0 "		14' 1 "	0.47	16' 2 $\frac{1}{2}$ "		4' 4 $\frac{3}{4}$ "		4' 1 $\frac{3}{4}$ "		5' 11 "		8' 0 $\frac{1}{4}$ "		7' 3 "		9' 1 "		8' 6 $\frac{1}{2}$ "		5' 0 $\frac{3}{4}$ "		
29	12' 6 $\frac{1}{4}$ "		18' 9 $\frac{3}{4}$ "	0.27			16' 2 $\frac{1}{4}$ "		4' 5 "		4' 2 $\frac{3}{4}$ "		6' 0 "	0.19	8' 1 $\frac{1}{4}$ "	0.01	7' 3 $\frac{1}{2}$ "		9' 1 $\frac{1}{2}$ "	0.06	8' 6 $\frac{3}{4}$ "		4' 11 "	0.26	
30	12' 6 $\frac{3}{4}$ "		18' 10 $\frac{1}{2}$ "	0.17			16' 0 $\frac{3}{4}$ "		4' 5 $\frac{1}{4}$ "		4' 2 $\frac{3}{4}$ "		6' 0 $\frac{3}{4}$ "	0.02	8' 2 $\frac{1}{4}$ "	0.11	7' 3 $\frac{1}{2}$ "		9' 2 $\frac{3}{4}$ "	0.12	8' 7 $\frac{1}{4}$ "	0.09	4' 10 $\frac{1}{2}$ "		
31	12' 8 $\frac{3}{4}$ "		19' 1 "	0.47			15' 6 $\frac{1}{4}$ "				4' 4 "				8' 4 "	0.03	7' 5 "				8' 0 "	1.51			
Totals,	1.66		2.85		3.62		3.10		2.36		2.44		3.77		4.92		8.04		3.78		5.78		4.79		

The Elevation of Water shows the distance of the surface below the Rollway in feet and inches, it having been below during the whole year.

The Rainfall is in inches and decimals of an inch.

THE CITY HOSPITAL.

BOARD OF TRUSTEES, 1875.

<i>Alderman</i> —	LEWIS BARNARD,	}	Terms Expire 1875.
<i>Councilmen</i> {	HAMILTON B. STAPLES,		
	GEORGE F. HEWETT,		
<i>At Large</i> —	DR. FRANK H. KELLEY,	Term Expires 1876.	
	STEPHEN SALISBURY, JR.,	"	1875.
	DR. JOSEPH SARGENT,	"	1878.
	ALBERT CURTIS,	"	1879.

ORGANIZATION.

President—DR. FRANK H. KELLEY.

Secretary—STEPHEN SALISBURY, JR.

Auditors { LEWIS BARNARD.
GEORGE F. HEWETT.

Superintendent and Resident Physician.

DR. CHARLES A. PEABODY.

MEDICAL STAFF, 1875.

Consulting Physicians.

Joseph Sargent, M. D. Frank H. Kelley, M. D.
Bernard D. Eastman, M. D.

Visiting Physicians.

Rufus Woodward, M. D.	J. Marcus Rice, M. D.
George A. Bates, M. D.	Albert Wood, M. D.
Oramel Martin, M. D.	Emerson Warner, M. D.
Henry Clarke, M. D.	George E. Francis, M. D.
Joseph N. Bates, M. D.	John O. Marble, M. D.
Thomas H. Gage, M. D.	Leonard Wheeler, M. D.

Oculist and Aurist.

LEWIS S. DIXON, M. D.

Microscopist and Pathologist.

WILLIAM H. WORKMAN, M. D.

ORGANIZATION.

President—ORAMEL MARTIN, M. D.

Secretary—LEONARD WHEELER, M. D.

Committee on Report { ALBERT WOOD, M. D.
EMERSON WARNER, M. D.
GEORGE A. BATES, M. D.

Committee on Conference { THOMAS H. GAGE, M. D.
GEORGE E. FRANCIS, M. D.
RUFUS WOODWARD, M. D.

REPORT OF TRUSTEES.

To Hon. Clark Jillson, Mayor, and the City Council of the City of Worcester :

THE Trustees of the City Hospital respectfully present their Fifth Annual Report.

CONDITION OF THE HOSPITAL.

From the opening of the Hospital, October 26, 1871, to the date of this report, 710 patients have been received, and during the past municipal year 212 have been treated, an increase of 25 over the number of patients in the municipal year 1873-'74. In the report of the Superintendent, which is appended, valuable statistical information is given concerning the practical operation of the Hospital. This charity has met the approval of the community and has saved many lives, besides relieving and benefiting a great number of persons who otherwise would have been exposed to much suffering, with but little prospect of regaining or improving their health. The success of the Medical and Surgical treatment, furnished gratuitously by the staff of fourteen physicians, has been abundant, and it is expected that the improved accommodations and facilities, soon to be afforded by the new wards, will offer even more favorable conditions for the treatment of disease than has been possible in the past. At the request of the Medical Staff, Dr. William H. Workman has been appointed Microscopist and Pathologist to the Hospital.

The ability of Dr. Charles A. Peabody, in his position of Superintendent and Resident Physician, and his unremitting devotion to the duties and interests of the Institution, call for particular recognition on the part of the Trustees. The subordinate offices of the household are discharged by the employees faithfully and to the satisfaction of the Medical Staff.

The garden connected with the Hospital has been much improved and has yielded a gratifying return of fresh vegetables and flowers during the past season. From returns furnished by the Superintendent, it appears that in an accurate account with this department, in which the supplies of vegetables and fruit have been charged at market rates, the income from the garden has exceeded the cost of production by \$19.87, a very creditable exhibit when the advantage of a better quality of vegetables is taken into account.

ATTEMPT TO PROCURE A PERMANENT LOCATION.

The Trustees have always considered the occupation of the Jaques Homestead as a temporary expedient, not only for the reason that the house is poorly adapted to the purposes of a Hospital, but also because they realized the fact that by the present arrangement a very considerable proportion of the bequest of our benefactor, Mr. Jaques, was rendered unproductive, thus defeating the purpose of his liberality in a measure. The estimated value of the property embraced in the Homestead Estate is approaching one-half in value of the whole legacy of Mr. Jaques, and though the present does not seem to be a desirable time to dispose of real estate, the Trustees have felt that it was their duty to make some effort towards procuring a permanent location on land offering the greatest natural advantages from situation in a sanitary point of view, and by removal rendering available for sale the valuable property which they now occupy. The land given by Mr. Jaques, as a site for the Hospital, has never met the full approval of the Physicians connected with the Hospital. The fact that it is situated upon the northeast side of a hill, was an objection which was deemed very important; for in the

treatment of disease it is now regarded of the highest moment to offer all possible natural advantages in regard to light and air. On the 10th of April, an opportunity of purchasing the Colton estate, adjacent to the present Hospital lot, so called, but having a southeasterly exposure, having presented itself, and the terms upon which such purchase could be made being then deemed reasonable as a basis of negotiation, and the above location commending itself to their best judgment as an entirely advantageous location for a Hospital, in which opinion they were joined by the written approval of the whole Medical Staff, and by the City Committee on the Hospital, the Trustees prepared a memorial to the City Council, recommending the purchase of the Colton estate. This proposition was, however, not approved by the City authorities.

NEW WARDS.

At the monthly meeting of Trustees, on October 2d, the overcrowded condition of the Hospital being more than ever apparent, was a subject of much solicitude and discussion. In all the wards the ventilation was none of the best, but in the ward devoted to the care of surgical cases, the evils arising from this cause were so evident that the Trustees passed a vote to diminish the number of patients in this ward and to request the City Council to afford temporary relief, by building isolated wards in which the atmospheric conditions might be more favorable for the treatment of serious surgical cases. By a visit to the Hospital, his honor, Mayor Jillson, was made acquainted with the existing evils, and with the views of the Trustees and of the Medical Staff as to the remedy. The Mayor presented the subject at the next meeting of the City Council and an order was passed providing that the Superintendent of Public Buildings, under direction of the Committee on Public Buildings, construct such temporary additional accommodations as might be required for six patients, the expenses thereof to be charged to the appropriation for the City Hospital. Estimated cost of construction, \$2,000.00.

In consequence of this order, a Committee of Trustees, acting in concert with the City Committee on Public Buildings, planned the erection of two temporary pavilions, one of them 25 feet by 37 feet, and the other 25 feet by 27 feet, each of the rooms thus provided being 14 feet in height in the clear, and the two buildings being isolated, but connected with the present Hospital by a plank walk. The two pavilions are to have open fire-places with air flues in each chimney, and a small room is partitioned off in one of the wards for the treatment of special cases which it is advisable to separate. The pavilions are to be ventilated on the plan invented and introduced by Mr. A. B. Brown, a system which has commended itself to the Trustees from a previous trial in one of the wards. An operating room is in process of construction 16 feet by 25 feet, and 11 feet in height in the clear, lighted by a skylight in the roof. This room is in the rear of the Hospital, closely connected with the main building and with the pavilions, and is in all respects better adapted for an operating room than the one at present used, a removal from which is desirable on many accounts.

In carrying out the projected improvements, the Trustees are indebted to Mr. Charles H. Peck, Superintendent of Public Buildings, for the plans and superintendence of the work, and also for many valuable suggestions. It is anticipated that the new wards will be ready for occupation in February of the ensuing year.

The ready response of the City authorities to the urgent calls of this charity, in providing the relief asked for, by the erection of these new buildings, deserves the grateful acknowledgments of the Trustees and of all interested in the prosperity of this Institution. It is now thought, that with the additional accommodations offered by the new buildings, patients can be better cared for and their restoration to health very much hastened. An opportunity is also given to make a trial of the pavilion plan upon a small scale, the results from which will determine whether this system shall be adopted when permanent buildings are erected for this Hospital. It is hoped that the experiment may receive a thorough trial in the present location before any further steps are taken to procure or erect permanent structures.

LEAVE TO SELL REAL ESTATE.

The Supreme Judicial Court has authorized and empowered the City of Worcester to sell and convey real estate devised by the will of the late George Jaques, and to execute and deliver conveyances of the same to purchasers, and to hold and apply the proceeds of all lands sold and conveyed, by a *decree* of the 26th of May last, for the use and benefit of the City Hospital.

On the 12th of July, the City Council passed an order authorizing the Trustees to sell at public or private sale, such portion of the real estate, devised to the city by the will of George Jaques, as by decree of the Supreme Judicial Court may be lawfully sold by the city, as they may from time to time deem expedient. The deeds of conveyance are to be signed by the Mayor and sealed by the common seal of the city, and delivered by the Trustees in the name of the city. But it provides, however, that such sales shall be subject to the approval of the Committee on Finance on the part of the city, to be shown by the endorsement of such approval on any deed given, which is to be attested by the City Clerk.

Thus it will be seen that the Trustees, subject to the approval of the City Finance Committee, are furnished with legal authority to dispose of such portions of the Jaques property as may be deemed advisable, and plans of this real estate have been prepared and may be consulted on application at the Hospital. Greater efforts would be made to sell parts of the estate if the dullness of the market did not render it undesirable at present.

DONATIONS.

Dr. Rufus Woodward, of the Medical Staff, gave in the month of January, more than seventy volumes of books of a miscellaneous character, as the nucleus and foundation of a library for the use of patients. The People's Club afterwards added fifty-one books, and Hon. Edward Earle gave forty volumes to this library. These valuable presents were acknowledged by the Trustees in appropriate votes of thanks.

In the month of January, Mr. Albert Curtis, one of the Trustees, added twenty-nine standard medical and surgical books to the valuable consulting library at the Hospital, which he had previously established, and on the 10th of March, Mr. Curtis sent a communication to the Trustees, in which he expressed his desire to provide permanently for replenishing this library, and enclosed one thousand dollars as a fund, to the present Board of Trustees and their successors, to be by them safely invested, the income or interest thereof to be expended at the discretion of the Board, for the benefit of the Medical and Surgical Library and in procuring books, maps, plates, and other apparatus therefor which might, in their judgment, aid and assist medical and surgical operations. In consequence of this liberal gift, the Trustees passed the following vote: "*Resolved*, That the Trustees of the City Hospital do hereby, as said Trustees, accept and receive from Albert Curtis, Esq., the sum of one thousand dollars, to be held under the name of the Curtis Fund by them, *ex-officio*, and their successors in said office, in trust for the uses, trusts and purposes touching the same, declared by said Albert Curtis in and by his letter to the Trustees of date March 10, 1875, to be herewith recorded in the records of the Trustees." The conditions of this trust were approved by the City Council.

The following additional gifts were received during the year: (December), Mrs. G. Henry Whitcomb, shirts, pieces and papers; Mrs. E. W. Ball, pieces; Mrs. Marble, pieces; People's Club, pieces; Anonymous, pieces; Mrs. Benjamin Walker, pieces; Mrs. N. Harkness, pieces and papers; Mrs. A. P. Brown, pieces; Mr. Francis Douglass, easy chair. (January), Mrs. G. Henry Whitcomb, pieces; Mr. C. C. Woodbury, pieces; Mrs. E. L. Davis, sheets and pieces; Mrs. Wm. Brown, pieces; Mrs. Gill, night dresses, jellies and pieces; Mrs. L. Leonard, pieces; Mrs. A. B. Barnard, pieces; Mr. Salisbury, dressing gown, pieces and shirts; People's Club, pieces; Mrs. Miller, pieces. (February), People's Club, shirts and pieces, books and reports; Boynton Street Book Club, "Old and New," Lippincott for 1874. (March), People's Club, pieces; Mrs. Eaton, pieces; Mrs. P. L. Cooper, pieces; Mrs.

E. N. Harkness, pieces and papers; Mrs. Ezra Kent, pieces; Mr. C. F. Lincoln, pieces. (April), Mr. Salisbury, linen; Mrs. Hawes, pieces; Mrs. Albro, pieces; Mr. Edward Earle, periodicals. (May), Mrs. Green, pamphlets; Mrs. Potter, pieces; Mrs. Winthrop, pieces; Mrs. Jabez Rice, pieces. (June), Miss Clarissa Sikes, pieces; Ladies' Benevolent Society, 1st Unitarian Church, pillow cases, sheets and night dresses; Flower Mission, flowers; Mrs. Halstead, papers. (July), Flower Mission, flowers each week and papers. (August), Flower Mission, periodicals and sheets; Mrs. H. E. Richardson, pieces; Mrs. M. J. Greenleaf, sheets; Anonymous, pieces; A Friend, \$25 for rides for patients. (September), Flower Mission, flowers each week, papers and pieces; Miss Gill, flowers and pieces. (November), Memorial Free Dispensary, pieces. (December), Mrs. C. H. Whiting, pieces.

RECEIPTS AND EXPENSES.

The following report in detail of the receipts and expenses of maintaining and conducting the Hospital during the past year is submitted. A payment from the State for the care of patients, amounting to \$695.72, was received one day too late to appear in this statement, but is now deposited with the City Treasurer, and will be credited to the Hospital in the next monthly statement of the Auditor.

RECEIPTS.

Balance unexpended Nov. 30, 1874,	\$1,579 57
Appropriation, 1875,	10,500 00
Board from paying patients,	655 93
Board from State for care of patients,	31 71
Sales of produce and materials,	174 10
	<hr/> \$12,941 31

EXPENSES.

Salaries and pay roll,	\$3,245 44
Groceries and provisions,	2,441 45
Carpets, bedding, table linen, &c.,	171 42

Repairs,	133 90
Coal and wood,	426 71
Surgical Instruments,	145 70
Medicines,	492 58
Gas,	210 43
Crockery, tin ware, &c.,	128 58
Stationery, postage, expressage, &c.,	44 34
Printing,	60 45
Furniture and fixtures,	110 40
Ice,	13 83
Trucking,	20 80
Hay and grain,	140 05
Advertising,	25 00
Cow and swine,	200 00
Hot bed frames and sashes,	40 00
Boots and shoes,	6 04
Manure,	86 62
Cooking range,	103 25
Fowls,	13 50
Seeds,	20 30
Hack hire,	47 77
Tools,	9 20
Legal service,	379 53
Engineering,	8 00
Balance unexpended Dec. 1, 1874,	4,216 02
	<hr/> \$12,941 31

There are now outstanding bills for the cost of construction of the new wards, which, when completed, will require furniture and fixtures. On the completion of the new buildings a larger number of patients can be accommodated and the expenses of maintenance will be somewhat increased.

In view of the probable requirements of this department, the Trustees would respectfully ask the City Government for an appropriation of \$12,000.00 to meet the expenses of the ensuing year.

INCIDENTAL TOPICS.

The present service at the Hospital includes the Superintendent and Resident Physician, Dr. Charles A. Peabody, the Matron, Miss M. A. Hales, a Cook and Assistant, a Male and Female Attendant, a Night Watchman, a Gardener and a Laundress.

The Trustees are under great obligations to the City Treasurer, Wm. S. Barton, Esq., for his careful and accurate management of the accounts relating to the Jaques Fund, the surplus and interest from which is safely and productively invested.

In behalf and by order of the Trustees,

STEPHEN SALISBURY, JR.,

Secretary.

WORCESTER, December 24, 1875.

REPORT

OF THE

SUPERINTENDENT AND RESIDENT PHYSICIAN.

To the Trustees:—

GENTLEMEN: The following Statistical Report is respectfully submitted.

Since the Hospital was opened there have been admitted 710 patients, 161 of them suffering from accidental injury; 70 have died, and 160 have been refused admission; as follows:—

	Admitted.	Refused.	Accidents.	Died.
1871, Five weeks ending Nov. 30,	16	0	1	1
1872, Year	160	29	38	19
1873, “ “	162	44	34	24
1874, “ “	174	32	54	14
1875, “ “	198	57	33	12

In the Hospital December 1, 1874: Males, 10; Females, 4; Total, 14.

ADMITTED FROM DECEMBER 1, 1874, TO DECEMBER 1, 1875.

Males,	128.	Females,	70.	Total,	198.
Medical,	88.	Surgical,	110.		
Paying,	37.	Free,	161.		

Of these, 21 paid \$10.00 per week, and 16 others paid various smaller amounts. The average price per week paid was \$8.54. The number of accidents admitted was 33.

TREATED DURING THE YEAR.

Males,	136.	Females,	76.	Total,	212.
Medical,	95.	Surgical,	117.		

The largest number of patients in the Hospital at any one time was 16 ; smallest number, 5. Daily average number, 11.2.

Average time of patients in the Hospital, 19 days ; of paying patients, 22.73 days ; of free patients, 18.8 days.

DISCHARGED DURING THE YEAR.

Well,	124
Much relieved,	24
Relieved,	19
Not relieved,	7
Not treated,	13
Died,	12
Eloped,	3
	<hr/>
	202

Cause of Death : Railroad accident, Pneumonia, Typhoid Fever, 2 each ; Aneurism, Heart disease, Cirrhosis of Liver, Convulsions, Enteritis, Pyæmia, 1 each. *Death rate*, 5.6.

REMAINING NOVEMBER 30, 1875.

Males,	7.	Females,	3.	Total,	10.
Medical,	2.	Surgical,	8.		

RESIDENCE OF PATIENTS.

Worcester,	171
Other Towns in Massachusetts,	20
Other States,	7
	<hr/>
	198

BIRTHPLACE.

	Males.	Females.	Total.
Massachusetts,	34	19	53
Other States,	20	10	30
Ireland,	57	35	92
England,	5	3	8
British Provinces,	7	2	9
Other countries,	5	1	6
	<hr/>	<hr/>	<hr/>
	128	70	198

OCCUPATION.

Males.		Females.	
Laborers,	66	Domestics,	35
Mechanics,	42	Housewives,	22
Minors,	11	Minors,	11
Clerks,	4	Nurses,	2
Railroad Employés,	5		
	<hr/>		<hr/>
	128		70

CIVIL CONDITION.

Males.		Females.	
Single,	70	Single,	35
Married,	44	Married,	15
Widowers,	14	Widows,	20

ADMISSION REFUSED.

Pulmonary disease,	15	Bright's disease,	1
Injury,	6	Bunion,	1
Ulcer,	4	Hemorrhoids,	1
Cancer,	4	Lichen,	1
Venereal disease,	4	Phlegmasia Dolens,	1
Paralysis,	3	Pregnancy,	1
Typhoid Fever,	3	Rheumatism,	1
Abscess,	3	Strabismus,	1
Dysentery,	2	Tonsillitis,	1
Uterine disease,	2		
Cardiac disease,	1		—
Chorea,	1		57

Of these, more than forty were refused for lack of room.

The death rate is lower than that of any previous year; but it should also be stated that the number of deaths from disease was larger than ever before (9.4 per cent.), while the number resulting from accident was very much smaller.

Of the twelve deaths of the year, eight occurred during the cold months; and of the remaining four, two occurred within a day from the time of admission, and one resulted from the rupture of an aneurism.

This statement, so far as it is of value, goes to illustrate the evils of overcrowding and insufficient ventilation, of necessity much greater in Winter than in Summer. These evils, which cannot be avoided in the old house, will, to a great extent, be obviated in the new wards now building. These wards, while meeting for the time the most urgent demands of the Hospital, will also afford a practical test of some of the more recent ideas in hospital construction.

In admitting patients, the rule has been kept in view that this is not, and should not be considered in any sense, a home for the unfortunate, but a hospital for the cure of those suffering from disease or injury. Yet, even under this rule, the demand for accommodation is more than the Hospital can supply. The necessity which called for the establishment of this charity was a real one, and doubtless its further enlargement would show that the field of its usefulness is by no means as yet fully occupied.

The advantage of the Hospital to the class for which it was especially designed cannot be over-estimated. There can be but little doubt that lives have been saved, and the attacks of disease shortened and made lighter by removing patients from their cold, damp, cheerless and squalid homes—often attics or cellars—to the better surroundings, better conditions, and better fare of the Hospital.

For the most part those admitted are, of necessity, free patients. There are others, however, who are able and ought to pay. Most of these are willing to pay, and expect to do so. The proportion of paying patients is larger than in many public hospitals, being about one-fifth of the whole number treated.

Board is charged at the rate of \$10.00 per week, which nearly covers the expense, to the City, for each patient. Some patients, however, unable to pay full rates, are charged various smaller amounts, according to circumstances. The average price paid the past year was \$8.54 per week.

All patients from other towns are charged full rates. All patients who have not a settlement in Worcester are charged to the towns where they belong; or, in case they have no settlement, to the State.

The Patients' Library, begun early in the year, has been in very constant use from the first. Entertaining and illustrated books and periodicals, new or old, afford much enjoyment to convalescents. In some cities "Hospital Boxes" are set up at the railroad stations for the reception of such books, periodicals and illustrated papers as travelers or others may choose to deposit therein for the use of hospital patients. Such a box might be useful here.

During the year many persons, by very acceptable donations and in other ways, have shown their interest in the Hospital. Among others, the ladies of some of the churches; and especially the ladies of the Flower Mission, whose frequent visits through the Summer gave the sick much pleasure.

CHAS. A. PEABODY,
Superintendent and Resident Physician.

WORCESTER, December 1, 1875.

REPORT OF THE MEDICAL STAFF.

THE following Tables give a Summary of Cases Treated and results, from December 1, 1874, to December 1, 1875.

[Prepared by the Resident Physician.]

MEDICAL.

DISEASES.	In Hosp. Dec. 1, 1874.	ADMITTED.			DISCHARGED.						In Hosp. Dec. 1, 1875.	
		Male.	Female.	Total.	Well.	Much Relieved.	Relieved.	Not Relieved.	Not Treated.	Died.		Total.
GENERAL DISEASES:												
Typhoid Fever,	1	10	4	15	13	..	..	..	..	2	15	....
Febricula,.....	1	2	3	6	6	..	..	..	..	..	6	....
Intermittent Fever,.....	..	1	...	1	1	..	..	..	..	..	1	....
Rheumatism—Acute,.....	..	2	4	6	6	..	..	..	..	..	6	....
“ Sub-acute.....	..	1	1	2	2	..	..	..	..	..	2	....
Phthisis,	1	...	1	..	..	..	..	..	..	..	1
Purpura,	1	..	1	2	1	1	..	..	..	..	2	....
Debility,	1	1	..	..	1	..	..	..	1	....
Marasmus.....	1	1	..	..	1	..	..	..	1	....
NERVOUS SYSTEM:												
Chorea,.....	..	2	...	2	...	1	1	..	..	..	2	....
Paralysis,.....	1	1	..	1	..	..	..	..	1	....
Neuralgia,	1	1	2	1	..	..	1	..	..	2	....
Epilepsy,	1	1	..	..	1	..	..	..	1	....
Insolation,.....	..	1	...	1	..	..	1	..	..	..	1	....
FAUCES AND THORACIC VISCERA;												
Tonsillitis,	2	2	2	..	..	..	..	..	2	....
Bronchitis,.....	..	1	1	2	1	1	..	..	..	..	2	....
Pleuritis,.....	..	2	3	5	3	1	..	1	..	..	5	....
Pneumonia,	7	1	8	5	2	..	..	1	..	8	....
Hæmoptysis,	1	...	1	1	..	..	..	..	..	1	....
Emphysema,	1	...	...	1	..	1	..	..	..	..	1	....
Pulmonary Œdema,.....	1	1	..	..	..	1	..	1	1	....
Valvular Disease of Heart,	1	1	2	..	..	1	..	1	..	2	....
Epistaxis,.....	..	1	...	1	1	..	..	..	..	..	1	....
Aneurism of Aorta,.....	..	1	...	1	..	..	..	..	1	..	1	....

MEDICAL—*Continued.*

DISEASES.	In Hosp. Dec. 1, 1874.	ADMITTED.			DISCHARGED.						In Hosp. Dec. 1, 1875.	
		Male.	Female.	Total.	Well.	Much Relieved. Relieved.	Not Relieved.	Not Treated.	Died.	Total.		
ABDOMINAL VISCERA:												
Gastritis,.....	1	1	1	.....	.....	.....	.....	.....	1	.....
Enteritis,	1	.....	1	.....	.....	.....	.....	.....	1	1	.....
Cirrhosis of Liver,.....	1	.....	1	.....	.....	.....	.....	.....	1	1	.....
Ascites,	1	1	2	1	.....	1	.....	.....	.....	2	.....
Bright's Disease,.....	3	1	4	2	.....	.....	2	.....	.....	4	.....
Diarrhœa,.....	1	.....	1	1	.....	.....	.....	.....	.....	1	.....
Dysentery,	2	4	4	.....	.....	.....	.....	.....	4	.....
Dyspepsia,	1	.....	1	1	.....	.....	.....	.....	.....	1	.....
DISEASES OF WOMEN:												
Metrorrhagia,	1	1	1	.....	.....	.....	.....	.....	1	.....
Ovaritis,	1	1	1	.....	.....	.....	.....	.....	1	.....
Retroflexion of Uterus,.....	1	.....	2	3	1	2	.....	.....	.....	.....	3	.....
Ulcer of Uterus,	1	1	.....	.....	1	.....	.....	.....	1	.....
Pelvic Cellulitis,.....	1	1	1	.....	.....	.....	.....	.....	1	.....
DISEASES OF PREGNANCY:												
Eclampsia,	1	1	.....	.....	.....	.....	.....	1	1	.....
DISEASES OF THE SKIN:												
Eczema,	1	2	1	4	1	3	.....	.....	.....	.....	4	.....
Syphiloderma,	2	1	3	.....	1	.....	1	.....	.....	.....	1

SURGICAL.

DISEASES.	In Hosp. Dec. 1, 1874.	ADMITTED.			DISCHARGED.						In Hosp. Dec. 1, 1875.	
		Male.	Female.	Total.	Well.	Much Relieved.	Relieved.	Not Relieved.	Not Treated.	Died.		Total.
Ulcer of Cornea,		1	...	1	1	...	...	...	...	...	1	...
Staphyloma, .....		...	1	1	1	...	...	...	...	...	1	...
Pyæmia,		3	...	3	2	...	...	...	...	1	3	...
Erysipelas,		1	1	2	2	...	...	...	...	...	2	...
Hernia,		2	1	3	...	...	1	...	2	...	3	...
Hemorrhoids,		1	...	1	1	...	...	...	...	...	1	...
Fistula in Ano,		1	...	1	1	...	...	...	...	...	1	...
Stricture of Urethra,	1	5	...	6	1	2	3	...	...	...	6	...
Hydrocele,	1	1	...	2	1	1	...	...	...	...	2	...
Synovitis,		3	2	5	4	...	...	1	...	...	5	...
Abscess of Face, .....		...	1	1	...	1	...	...	...	...	1	...
“ “ Thigh,		2	...	2	2	...	...	...	...	...	2	...
“ “ Abdomen,		2	...	2	1	...	...	...	...	...	1	1
“ Psoas,		1	...	1	...	...	1	...	...	...	1	...
“ Palmar,		2	...	2	2	...	...	...	...	...	2	...

SURGICAL—*Continued.*

DISEASES.	In Hosp. Dec. 1, 1874.	ADMITTED.			DISCHARGED.						In Hosp. Dec. 1, 1875.
		Male.	Female.	Total.	Well.	Much Relieved. Relieved.	Not Relieved.	Not Treated.	Died.	Total.	
Chronic Ulcer of Leg,.....	2	1	3	1	1	1	1	1	2	1	
Tumor of Superior Maxilla,.....	1	2	2	1	1	1	1	1	2	1	
“ “ Scalp, Sebaceous,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Neck, Adenoid,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Thigh,.....	2	2	2	2	2	2	2	2	2	2	
“ Abdominal,.....	1	1	1	1	1	1	1	1	1	1	
Cancer of breast,.....	1	2	2	2	2	2	2	2	2	2	
Carbuncle,.....	1	1	1	1	1	1	1	1	1	1	
Orchitis,.....	2	2	2	1	1	1	1	1	1	1	
Phimosis,.....	1	1	1	1	1	1	1	1	1	1	
Urinary Calculus,.....	3	3	3	1	1	1	2	1	3	1	
Keloid,.....	1	1	1	1	1	1	1	1	1	1	
Supernumerary Toe,.....	1	1	1	1	1	1	1	1	1	1	
Sensitive Stump,.....	2	2	2	1	1	1	1	1	2	1	
Cystitis,.....	1	1	1	1	1	1	1	1	1	1	
INJURIES:											
Traumatic Injury of Eye,.....	1	1	2	2	2	2	2	2	2	2	
Scalp Wound,.....	1	1	1	1	1	1	1	1	1	1	
Cut Throat,.....	2	2	2	2	2	2	2	2	2	2	
Injury to Neck, Cervical Vertebrae.....	1	2	3	1	2	2	2	2	3	1	
Burn,.....	1	2	3	2	2	2	2	2	3	1	
Frost-bite,.....	4	4	4	4	4	4	4	4	4	4	
Wound of Arm,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Fingers,.....	1	1	1	1	1	1	1	1	1	1	
Bruises,.....	5	3	8	4	1	2	1	1	7	1	
Sprain,.....	2	2	4	3	1	1	1	1	4	1	
Rupture of Urethra,.....	1	1	1	1	1	1	1	1	1	1	
Dislocation Shoulder,.....	1	1	1	1	1	1	1	1	1	1	
Fracture of Ribs,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Clavicle,.....	2	1	3	1	1	1	1	1	2	1	
“ “ Femur,.....	1	1	2	2	2	2	2	2	2	1	
“ “ Cervix Femoris,.....	1	2	3	3	3	3	3	3	3	1	
“ “ Metacarpus,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Phalanges,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Tibia,.....	1	1	1	1	1	1	1	1	1	1	
“ “ Tibia and Fibula,.....	3	1	4	2	2	2	2	2	3	1	
Comp. Frac. of Fore-arm,.....	1	1	1	1	1	1	1	1	1	1	
“ “ “ Humerus,.....	1	1	1	1	1	1	1	1	1	1	
“ “ “ Tibia and Fibula,.....	1	3	5	3	3	3	3	3	5	1	
“ “ “ Carpus, Metacarpus, &c.....	3	3	3	2	2	2	2	2	3	1	
“ “ “ Tarsus, Metatarsus and Phalanges,.....	2	4	6	4	4	4	4	4	5	1	

ALBERT WOOD,
E. WARNER,
GEO. A. BATES, } Committee
on
Reports.

THE TWENTY-SECOND ANNUAL REPORT
OF THE
COMMISSIONERS OF HOPE CEMETERY,
FOR THE YEAR 1875.

*To the Hon. Clark Jillson, Mayor, and the City Council of
the City of Worcester:—*

THE Commissioners of Hope Cemetery respectfully present their Twenty-Second Annual Report.

The increase in number of those who must find a resting-place in Hope Cemetery causes an extension of the avenues and paths, and now they are several miles in length. They require constant care and attention. Sufficient labor has been performed on them to keep them in good condition. Occasionally, complaints have come to us, but we have found them groundless, or arising from the effect of heavy showers, or the fact that persons, when clearing their lots, had deposited rubbish and waste where it might annoy some passer-by before it was discovered by the very diligent and faithful foreman we employed the last year. From the paving of gutters, putting in culverts and the hardening of the drive-ways improvement follows. We have given due attention to these requirements; but as it is work that never ends it must sometimes give place to other necessities.

In the first month of the year the work of filling and grading the uneven and apparently worthless land between the front

entrance way and the south line of the Cemetery was continued. About one acre and a half was made available for lots, and about *forty-five* may be laid out when needed. The material for filling was taken from the opposite side of Webster street, and was moved only a short distance. A terrace, which can be made in the Spring, inside of and parallel with the front fence, will complete the work, so that the whole front line of the Cemetery will present a more finished aspect than it has heretofore, and a little care and culture in the future will make it beautiful and attractive.

On the south side of Pine Avenue, and from the avenue to the extreme south line of our grounds, the filling of low and swamp land has been extended from the place where work was suspended in 1874. Land has been made with good material for about twenty lots, where none could have been located before. These lots will be very valuable, and give a fair return for the cost of preparing them. The sales of lots have been more in number, and their improvements by grading, curbing and the erection of monuments have been more marked in the three years since lots were first laid out on Pine avenue than in any other part of the Cemetery.

The Worcester Lunatic Hospital was in possession of a lot on the north side of this avenue, which, when laid out, was supposed to be sufficiently large for the future wants of that institution, and private lots were taken on both sides of it. The Trustees consented to the removal of their curbing and the remains of persons who had been buried to a lot on the corner of Laurel and Cherry avenues, near the east corner of the Cemetery, which may be enlarged on two sides if its extension shall be necessary at some future time, and where the soil is better in which to make burials of persons whose friends may wish to remove them to other or family lots. The space vacated is in an eligible locality, will make six common-sized lots, which will fully compensate us for the expense incurred by making the change.

The abrupt and steep hill and deep valley between Maple, Chapel and Rue avenues, which were inaccessible excepting to persons on foot, have been reclaimed, and the greatest improvement and largest expenditure of the year have been made in that

locality. A new avenue on the side-hill circling from Maple to Rue has been built. It has a retaining wall on the upper side; above there is to be a terrace and room for a row of lots between those already laid out on the upper side of the hill and the terrace. On the opposite and lower side there will be a fence, for which the posts are firmly and deeply set, and below the fence another terrace and row of trees. In the deep valley below a basin or pond of water can be made.

Most of the material for filling was taken from the north-east side of Maple avenue, and that locality was reclaimed and graded. We have preserved the natural and romantic beauty of the place, shall make the most attractive drive and walks in the grounds, and fit a large part of the land for lots. Ornamental trees have been planted in several places.

The small water course running through the south part of the Cemetery, which had become clogged with leaves and rubbish, has been cleared, and a quantity of muck obtained, for use on the upland.

The free burial place, on River avenue, has been dressed, grass is coming in, and soon the surface will be turfed over.

Low-priced lots on the opposite side of the avenue have been selected by many families, who think them large enough for their prospective wants. There should always be lots that can be sold without advancing the price from the present rate to those who prefer them.

When this Commission was established, twenty-two years ago, it found a vast plan of operations had been projected, extending over the whole area of more than fifty acres, from Webster street to the extreme limits of the lot, and grading had been commenced on distant and isolated parcels of ground. The improvements of the last year have nearly completed the reclamation of all the land lying between those distant lots, and are the result of the judicious plan of the Commissioners, adopted at the beginning of their supervision.

We have expended on these extensive improvements something more than the receipts for the year, but we have a good balance in the treasury, and have adhered strictly to the custom and resolution of the Commissioners stated in their early reports, that

they would never exceed in expenditure the sum on hand and under their control. We have not lost sight of the necessity of creating a fund that may be available in contingencies that may arise in the future, and for the care of the grounds after sources of income cease because all lots that can be laid out have been sold. Neither shall we forget that all moneys accruing from the sale of lots or other sources must be used wisely and faithfully for improvements that shall be for the best interest of the several proprietors.

In 1874, 94 Lots were sold for	\$3,726
In 1875, 57 " " " "	2,525
A decrease of 37 in number and of \$1,201 in amount.	

Appended to this report, and making a part of it, will be found a full statement of the receipts from all sources, and an account in detail of all expenditures.

In our last report we referred to the desirability of the establishment of a fund for the care of lots of such proprietors as should contribute to it, and which would insure their lots against waste and neglect after they had passed away. The action we then recommended is now unnecessary. Proper provision was made by an Act of the Legislature approved May 1st, 1875. Some of the owners of lots have already availed themselves of the Act, and we desire to have it printed with this report for the information of others.

[CHAP. 174.]

“AN ACT to encourage the Planting of Shade Trees, laying out, ornamenting and maintaining Parks, Cemeteries and Cemetery Lots, and erecting and maintaining Drinking Fountains.

Be it enacted, &c., as follows :—

SECT. 1. Any savings bank in this Commonwealth is hereby authorized to receive funds, in trust, on deposit, to an unlimited amount, for any one or all of the hereinafter named purposes; said funds shall be placed upon interest in said bank, and the interest and dividends arising therefrom shall be paid semi-annually to such town, city, or cemetery authorities as may be designated by the donors of said funds or the will of the person bequeathing the same; said interest and dividends to be expended by such town, city or cemetery authorities, within the precincts of such town, city or cemetery, in setting out shade trees in streets and parks, and in improving the same;

in purchasing land for parks and improving the same; in maintaining cemeteries or cemetery lots, and in erecting and maintaining drinking fountains in public places; for any one or all of the before named purposes as may be specified by donors of the said funds or the will of the person bequeathing the same. No part of the principal of said funds shall be withdrawn or expended, and it shall be exempt from attachment or levy on execution.

SECT. 2. The funds held in accordance with this act shall be known as the 'Shade Tree and Cemetery Fund,' and the treasurer of any savings bank in which said funds are deposited, shall give a certificate of gift to each donor of such funds, and shall send by mail or deliver in the month of January, every third year after the first deposit, to the mayor of any city, or the chairman of the selectmen of any town, within the limits of which the interests and dividends of said funds are to be expended, a written statement, signed by such treasurer, of the amount of funds on deposit, for the purposes aforesaid, and said statement shall be recorded in full in the office of the clerk for said city or town.

SECT. 3. In case any savings bank holding such funds shall surrender its charter or cease to do business, the Supreme Judicial Court is hereby authorized to order said funds transferred and deposited in some other savings bank upon the same trusts as aforesaid; and if the laws authorizing such banks shall be repealed, said court is hereby authorized to order said funds transferred and deposited in such banking institution as said court may deem proper and for the best interest of said funds, to be by it held upon the trusts aforesaid.

SECT. 4. This act shall take effect upon its passage. [*Approved May 1, 1875.*]"

Beside the positive duties assigned us of the care and improvement of the Cemetery, we are frequently appealed to for advice by owners of lots, and in a few instances have seen, somewhat strangely, "the ruling propensity" influencing persons in matters connected with the last resting place selected for their families or themselves; but generally there is a commendable degree of reverence and thoughtful decorum exercised by those who visit or are interested in the place dedicated to most sacred purposes. There are some stricken mourners who make frequent visits and cling to the spot where the remains of a loved one have been deposited, as if it were for them the best place for meditation and prayer, and where they could be most earnestly inspired by the hope of reunion with the departed, and of immortality for themselves.

The long-continued relations of this Board have from the first been entirely harmonious, their action always unanimous, influ-

enced and dictated by the unfailing charity that should guide in the management of the home where all strife must end.

The Board has been organized for the present year, and promise careful attention to its duties. Inasmuch as our services are entirely gratuitous, three of our number may say that two members are entitled to grateful remembrance for the constant care and time they have devoted to a public interest.

The City Treasurer and his assistants have put us under renewed obligations by their performance of the service we come to expect from them, in so courteous a manner that work with them becomes a pleasure, and we forget it is extra service on their part.

Respectfully submitted for the Commissioners,

ALBERT TOLMAN.

WORCESTER, *January 1*, 1876.

RECEIPTS AND EXPENSES.

Report of Receipts and Expenses, for Hope Cemetery, in the year ending
Nov. 30, 1875.

1874.		RECEIPTS.	
Dec.	1.	Cash on deposit,	\$5,098 19
"	1.	" in hands of Superintendent,	194 77
1875.			
Jan.	5.	" for wood sold,	1 50
Feb.	6.	" " wood sold,	30 00
"	6.	" " grading lots,	15 00
April	5.	" " grading lots,	15 00
"	5.	" " wood sold,	7 87
May	4.	" " wood sold,	5 50
"	4.	" " grading lots,	33
June	22.	" " grading lots,	36 00
"	26.	" " wood sold,	12 37
July	2.	" " wood sold,	13 75
"	2.	" " grading lots,	3 00
Aug.	4.	" " wood sold,	14 75
"	4.	" " grading lots, &c.,	13 45
Sept.	20.	" " wood sold,	57 69
"	30.	" " grading lots,	11 00
Oct.	26.	" " wood sold,	10 62
"	26.	" " grading lots, &c.,	63 06
Nov.	27.	" " wood sold,	49 50
"	30.	" " 57 lots sold in 1875,	2,525 00
"	30.	" " interest on deposit,	137 20
			\$8,315 55

1874.		EXPENSES.	
Dec.	4.	Paid Labor on grounds,	\$315 73
"	7.	" City Water Works, labor &c.,	95 30
1875.			
Jan.	5.	" Labor on grounds,	417 00
"	23.	" Loam and lumber,	91 28
"	23.	" Curtis & Marble's bill,	13 21
Feb.	6.	" Labor on grounds,	325 25
"	6.	" J. D. Lovell's bill,	10 40
"	6.	" W. H. Heywood's bill,	13 00

March	5.	Paid Labor on grounds,	211 75	
"	5.	" P. Coon's bill,	6 60	
April	15.	" Charles Hamilton's bill,	18 76	
May	4.	" Labor on grounds,	177 25	
"	6.	" Mann, Bigelow & Gosling's bill,	43 75	
June	1.	" Henry Bigelow's bill,	70 00	
"	3.	" Labor on grounds,	295 37	
"	12.	" Gilbert & Holmes' bill,	29 25	
"	18.	" L. Drury's bill,	6 00	
"	29.	" City Water Works,	6 93	
July	2.	" Labor on grounds,	218 62	
"	2.	" E. Dyer's bill,	2 00	
Aug.	1.	" W. W. Cook's bill,	6 17	
"	4.	" Labor on grounds,	198 75	
Sept.	2.	" J. D. Lovell's bill,	12 05	
"	3.	" Labor on grounds,	193 25	
Oct.	5.	" Labor on grounds,	161 12	
"	12.	" U. Stone's bill,	7 00	
"	19.	" Loring Coes & Co.'s bill,	14 38	
"	19.	" L. B. Stone's bill,	136 18	
Nov.	3.	" Labor on grounds,	165 75	
"	12.	" Geo. Sessions & Son's bill,	156 00	
"	12.	" Bemis & Co.'s bill,	9 00	
			<hr/>	\$3,427 10
Nov.	30.	Cash deposits in Savings Bank,	3,500 00	
"	30.	" in City Treasury,	1,073 83	
"	30.	" in hands of Superintendent,	314 62	
			<hr/>	\$4,888 45
			<hr/>	\$8,315 55

STEPHEN SALISBURY, JR.,

Secretary of Commissioners of Hope Cemetery.

REPORT

OF THE

COMMITTEE ON LIGHTING STREETS.

To the Honorable the City Council :

THE Joint Standing Committee on Lighting Streets respectfully present the following Report relating to the Department, for the year ending November 30th, 1875.

Lights, as petitioned for, have been set during the year as exhibited in the accompanying tables.

The New England Gas Light Company's fixtures continue in use for the Gasoline lights, and give perfect satisfaction. A new form of reservoir, with fixtures, has lately been applied to all their posts, and, with the improved packing they now use, it is believed the light is superior to any similar one in use.

The care of the street lights and other property of the Department has been under the charge of Mr. Patrick Ronayne, who has discharged his duties in a manner entirely satisfactory to the committee. An inventory is annexed, giving the appraised value of stock and fixtures on hand. The lamps are in a good state of repair.

GASOLINE LIGHTS SET DURING THE YEAR ENDING NOVEMBER
30TH, 1875.

Arlington st., 1; Blackstone st., 2; Crescent st., 1; Charles st., 1; Canterbury st., 4; Cambridge st., 6; Camp st., 5; Cross st., 1; Castle st., 2; Douglas st., 5; Eaton st., 1; Franklin st., 1; Hollywood st., 4; Howard st., 1; Houchin ave., 1; Hammond st., 1; Holmes st., 2; Henry st., 1; John st., 1; Kingsbury st., 1; Ledge st., 1; Lincoln place, 1; Prescott st., 1; Pleasant st., 1; Pond st., 1; Shepard st., 1; Southbridge st., 1; Union ave., 2; Ward st., 1; Woodland st., 5; West st., 3; Rear of Quinsigamond Bank, 1. Total 61. Set previous to Nov. 1st, 1874, 423. Total 484.

GAS LIGHTS SET DURING THE YEAR ENDING NOVEMBER 30TH,
1875.

Church place, 1; Cherry st., 1; Common st., 1; Chatham place, 1; Cedar st., 1; Lincoln st., 1; Oak st., 1; Pleasant st., 1; Woodland st., 1; William st., 2. Total 11. Gas lights set previous to Nov. 30th, 1874, 632. Total number now set, 643. Boulevard lanterns now set, 256; Boulevard lanterns broken during the year, 12.

Inventory of stock on hand, Street Lighting Department, December 1st, 1875, valued at \$20,517 70

GEO. R. SPURR, SAMUEL D. HARDING, ANDREW ATHY, WILLIAM KICKHAM,	}	<i>Committee.</i>
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REPORT

OF THE

SUPERINTENDENT OF PUBLIC BUILDINGS.

OFFICE OF THE SUPT. OF PUBLIC BUILDINGS,
464 Main Street.

CITY OF WORCESTER, December 27, 1875.

To the Honorable City Council :

GENTLEMEN:—In compliance with the thirteenth section of the "Ordinance relating to Public Buildings" I have the honor to submit the following Report.

SCHOOL HOUSES.

Of the 34 School Buildings occupied for school purposes, their general condition, with few exceptions, is good, and they will require no unusual outlay the ensuing year to keep them in good repair.

The school house at Leesville is hardly in a creditable condition and would have been repaired had there not been a prospect of a new school house at Jamesville to take its place.

The houses at Adriatic and Union Hill should be painted and the house in Chamberlain District will require shingling the coming year.

During the year six new school rooms have been finished · one in upper story South Worcester, 2 in upper story Dix Street, 2 in upper story Ledge Street, 1 in upper story Edgeworth Street houses.

There has also been fitted up and furnished, a school room in Walnut Street House, for the accommodation of an additional school, Grade IX.

There has been leased a store in Quinn's Block to accommodate the school formerly kept in the Hall of the Engine House at New Worcester.

A room was fitted up and furnished in the upper story at Providence street but has not as yet been occupied.

The expenditures for repairs, alterations and improvements have been \$7,456.60, of which the following are the principal items :—

Plastering basement ceiling, Woodland street house :

George W. Lovell, contract, Lath and plastering,	\$95 00	
Carpenters, stock and labor,	67 18	
Cartage,	1 00	
	<hr/>	163 18

Varnishing High School desks,		68 77
Shingling school house, Adams square,		109 90
Summer street lot has been improved by a new fence, at a cost of		139 90
Repair of steps and piazza, Summer street,		60 69
Sycamore street building has been slated and provided with snow guards, at a cost of		584 92

The cornice on the Thomas street building was found to be badly decayed and dangerous ; it has been replaced by a galvanized iron cornice, at a cost of		217 10
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The cost of finishing the additional school rooms at South Worcester, including the re-plastering of the two ceilings in the old part, has been	\$353 90	
Putting in sewer and cesspool,	80 40	
Introducing city water,	35 24	
	<hr/>	468 54

Finishing the two additional rooms in the French roof story at Dix street, the cost has been		300 02
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Finishing the two additional rooms in Hall story, Ledge street, the cost has been		318 76
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Finishing the additional room in French roof story, Edgeworth street, the cost has been		174 24
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The New Worcester lot has been improved by a new fence, at a cost of		70 20
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The house was also painted on the outside, which had become badly worn, at a cost of	60 00
The house at Valley Falls has been shingled and plastering repaired, at a cost of	50 17
The house at Blithewood, which was very badly worn, has been painted, at a cost of	61 53
The varnish at the High School having worn through in many places, it was thought best to retouch the same, which has been done, at an expense of	110 95
There is also included in the charges for repairs, the covers to the new fountains, which have been made portable, and cost	58 30
There has also been expended for plumbing repairs in various houses,	142 19
For Repairs: Slating in various houses,	135 04
“ “ Paving “ “	62 15
“ “ Blackboards in various houses,	41 09
“ “ Whitening “ “	243 69
“ “ Painting “ “	142 57
“ “ Mason work “ “	161 15
“ “ Grading, Highway department,	179 73
“ “ Hardware,	267 11
“ “ Lumber,	88 70
“ “ Gas,	45 80
“ “ Trucking,	412 20
“ “ Stoves,	1,365 65
For Miscellaneous Repairs, including Carpenters' Pay Roll,	1,151 37
	<hr/> \$7,456 60

NEW FURNITURE.

The whole amount expended for new furniture is \$6,755.95; of this amount there is charged to new furniture, \$755.17, for materials and labor which went into last year's desks, and should not be reckoned as the cost of new desks this year.

For Fitting up Superintendent of Schools' office,	\$924 31
“ Cost of Wood patterns, School desks,	324 45
“ “ Iron “ “	200 00
“ “ New stoves,	636 28
681 New single desks have been made and rooms furnished complete, at a cost of \$5.75,	3,915 74
	<hr/> \$6,000 78
Or, adding the \$755.17, it would make the cost \$6.85 per seat.	755 17
	<hr/> \$6,755 95

The following are the rooms furnished with new seats the past year : East Worcester, old house, 2 ; East Worcester, new house, 6 ; Summer Street, 2 ; Ash Street, 1 ; New Worcester, 1.

There will be required to carry out the present policy of re-seating 2 rooms at New Worcester, 5 rooms at Sycamore and 2 rooms at Salem Street—making, in aggregate, 518 seats at \$5.75 each—will cost \$2,986.50 ; and I recommend that in the future all new seats be made by contract.

HEATING.

The heating of our school rooms with stoves is subject to many objections, among which are the constant care and expense required to keep 144 stoves in repair, the large amount of coal consumed,—being from 5 to 7 tons to each stove ; this involves for a house of 10 rooms the carrying up one and two flights of stairs of 50 tons of coal, and the carrying down of the ashes made, to say nothing of the extra amount of dust and dirt occasioned by it. Another serious objection is the unevenness of the temperature, the scholars sitting near the stove being too warm, while those distant will be in a semi-frigid condition. I recommend that instead of putting in more stoves, one of the large school houses be furnished with steam heating apparatus, which can be done at an additional cost of \$600.00, or about the average amount expended annually for new stoves.

CLEANING BUILDINGS AND YARDS.

The total cost of cleaning buildings has been \$1,011.50. This includes the washing of all the windows and all the wood work, including floors, stairs, &c. The balances include the cleaning of yards, removing ashes, care of out-buildings, &c.

JANITORS.

By a vote of the Committee on Public Buildings, I was instructed to assume control of the Janitors of the various buildings, but upon consultation with the City Solicitor, it was found

that it was within the province of the School Board ; but as it seemed very desirable that the Supt. of Public Buildings should have authority, it was voted that the Supt. of Public Buildings, in consultation with the Principals of schools, should employ the Janitors, which arrangement has proved satisfactory to all parties. Very much depends upon the Janitors, both as regards the care of stoves, water pipes, and cleanliness of the buildings. Total cost for Janitors, as per Janitors' Pay Roll, \$5,585.55.

LEDGE STREET FENCE.

By order of the City Council, Ledge Street School House lot has been graded, a retaining wall built, and the lot fenced. The cost has been as follows :—

For Engineering,	\$24 04
Grading,	572 15
Retaining wall,	465 96
Fencing,	539 09
	<hr/>
	\$1,601 24

STEAMER AND HOSE HOUSES.

The condition of the several Steamer and Hose stations in general repairs is, with a few exceptions, excellent, and it seems to be the aim of each company to make their own the model station. All the smaller repairs in this department are done by its permanent members, without additional cost, and is found to be a very satisfactory arrangement.

By the fire on the night of May 17, the Steamer and Hose House on School Street was damaged by fire and water, as estimated by appraisers, to amount to \$350.00, which sum was paid by the Merchants' and Farmers' Insurance Co.

In consequence of the repairs made necessary by the damage by fire it was decided to finish the halls into sleeping and bath-rooms, which was done at a cost of \$915.85, as follows :

O'Gara Bros., Slating roof,	\$109 91
G. W. Lovell, Mason work,	201 40
J. R. Fish, Carpenter work,	310 74

J. W. Greene, Plumbing as per contract,	142 00
Rice & Griffin Manufacturing Co., Mouldings,	66 92
George H. Clarke, Painting,	84 88
	<hr/>
	\$915 85
Less Insurance,	350 00
	<hr/>
Actual cost of alterations,	\$565 85

By order of the City Council, an additional story has been constructed on the Hose House on Exchange street.

The contract for the carpenter, mason work and painting was awarded to Elbridge Kimball, for the sum of	\$710 00
The contract for plumbing was awarded to C. H. Baldwin, for	133 91
Elbridge Kimball, for extra work, Hose Tower,	30 57
Albert S. Brown, papering ceiling, whitening walls,	34 19
80 feet picture moulding and labor,	8 00
	<hr/>
	\$916 67

The stone floors to the Steamer and Hook and Ladder House, Bigelow Court, have been removed and a wood floor substituted, the cost of which is as follows :

Contract with Augustus Balcom,	\$275 00
B. C. Jacques, repairs to stable,	34 95
	<hr/>
	\$309 95

Also the stone floor at the Hose House on Exchange street has been taken out and replaced with wood ; cost as follows :

Elbridge Kimball, contract,	\$95 00
J. E. Stearns, mason work,	27 01
	<hr/>
	\$122 01

For substituting a wood floor for stone removed at the School Street House, at which hard pine timber was used and a pit constructed for repairing steamers, the cost has been as follows :

Hard Pine timber and boards,	\$211 09
Chestnut timber,	11 59
Chestnut plank,	85 42
Mason work,	57 57
Carpenter work,	177 93
	<hr/>
	\$543 40

The house of Hose No. 5, Myrtle street, will require repairs at no distant day, the floor timbers being badly decayed, and the walls are badly sprung, owing to the poor foundations.

The floor of Hose No. 3, Carlton street, should be relaid, but will probably answer for the present.

There has been sold and credited to the Fire Department and bills passed to Auditor, old stone removed from floors, amounting to \$85.00; the balance are stored on the Summer street lot.

OTHER BUILDINGS.

Free Public Library.—The general condition of this building is good and no extensive repairs will be needed, unless, for want of room, it should be necessary to finish the French roof story and put in an elevator. The repairs have been as follows:

For painting,	\$64 97
New book cases,	172 94
Whitening reading room,	17 00
Plumbing,	15 13
Steam repairs,	11 99
Carpenter work,	7 22
Trucking,	18 75
	<hr/>
	\$307 96

There has been sold and credited to the Public Library, 1 out-building, and the bill passed to the Auditor,	\$5 00
--	--------

CITY STABLES.

A much needed want at the City Stables has been met by the finishing of harness and sleeping rooms and the construction of additional stalls, and the building has been painted, at the following cost:

For Painting,	\$171 60
Lumber,	215 14
Doors and sash,	53 58
Mason work,	27 00
Stove,	18 79
Hardware,	68 60
Gas piping,	20 96

Slating,	9 27
Plumbing,	105 25
Castings,	42 17
Carpenters' labor,	296 83
	<hr/>
	\$1,029 19

CITY HALL.

There has been expended on City Hall building for general repairs,	\$652 97
For Office fixtures and furniture,	1,037 90
Of which there was case for plans, Engineer's office,	\$417 84
Book case and map racks, Engineer's office,	148 62
Counter and fixtures in Water Commissioner's office,	153 95
Book case, Auditor's office,	51 65
Case and drawers, Treasurer's office, and carpets,	174 56
Small repairs,	53 58
	<hr/>
	\$1,027 90

STREET LIGHT DEPARTMENT.

The building occupied by this department is not adapted to its use, being small and inconvenient. It has been repaired by shingling a portion, and made as convenient as possible ; the cost has been :

For Lumber,	\$13 58
Carpenter work,	12 60
Trucking,	2 00
	<hr/>
	\$28 18

ARMORY.

Upon assuming the duties of this office, I found this building nearly completed, and by the terms of the contract, to be accepted by the Building Committee and the Architects.

On its completion and acceptance, as above, it was taken in charge by the Committee on Public Buildings and provided with the necessary fixtures and furniture, a portion of which was made

necessary by the fire of the 29th of May last, by which the several companies lost their entire outfit. The several items are as follows :

C. O. Richardson, paving,	\$236 00
Highway Department, gravel,	22 88
School Department, stove,	50 00
Trucking brick, &c.,	13 50
Worcester Gas Light Co., gas pipe,	8 40
Dexter Rice, painting numbers,	10 35
Hair Bros., connecting meters,	18 63
J. B. Lawrence & Co., furniture,	294 00
J. D. Chollar & Co., furniture,	68 00
C. Foster & Co., furniture,	27 00
E. H. Knowlton—contract, gas fixtures,	220 00
E. T. Rawson, whitening,	30 00
Mann, Bigelow & Gosling, curbstone,	66 72
J. Foley, cleaning,	2 00
John Laverty, grading,	3 00
Henry W. Eddy—contract, gun-racks,	475 00
James Kearns, mason work,	4 00
C. A. Vaile & Co., galvanized Iron,	18 30
Wm. O. Wilder, trucking stove,	75
E. H. Knowlton, gas torch,	4 50
J. Murphy, Co. A, closets for overcoats,	72 66
J. Murphy, Co. C, closets for overcoats,	73 23
E. H. Knowlton, matches for torch,	50
J. Marble & Co., glass,	63
	<hr/>
	\$1,650 05

By order of the City Council it has been furnished with stoves. The contract was awarded to Henry W. Miller, and the total cost has been \$338.39. The Ward Room for Ward 3 in basement has been fitted up, at an expense of \$59.58.

CITY HOSPITAL.

An order of the City Council directing the construction of an additional ward has been complied with and the building is nearly completed. The contract was awarded to George S. Clough for the sum of \$1,893.00.

The building formerly occupied by the 5th Light Battery is now unoccupied, with the exception of a small number of school desks stored.

WORCESTER WATER WORKS.

The buildings occupied by the Water Commissioner's De-	
partment have been painted, at a cost of	\$92 50
Also, there has been expended for repairs: Mason work,	3 25
For Lumber,	38 40
Labor,	16 95
Finishing room: Lumber,	31 16
Labor,	23 69
	<hr/>
	\$205 95

The old building on School street, belonging to the Water Department, has been occupied by this department as a repair shop since May last and is well adapted to its uses.

CITY FARM.

The Several buildings are in good condition. No repairs have been made by this department.

Appended is the list of stock and tools belonging to the city in charge of this department.

SCHOOL DEPARTMENT.

AMOUNT OF STOCK ON HAND AT CITY SHOP, NOVEMBER 30TH, 1875.

46 feet Hard pine,	\$2 07	1 No. 5, new pattern, back seat,	1 12
29 " Cherry,	2 03	8 Umbrella racks,	16 00
34 " Ash,	1 53	15 Gross screws, various sizes,	9 00
150 " Spruce,	2 40	300 lbs. nails,	10 50
333 " Pine boards,	16 65	3 Boxes glass,	10 50
82 " Pine boards,	4 10	1 Grindstone,	7 00
2,104 " Whitewood,	84 16	1 Wheelbarrow,	3 00
2,029 " Birch, 1 inch,	71 61	1 Crowbar,	1 00
372 " Birch, $\frac{1}{2}$ inch,	13 02	1 Glue pot,	75
429 " Whitewood sheathing,	19 30	2 pair clamps,	2 00
132 " Pine sheathing,	5 23	32 12 inch double desks, old style, taken out,	96 00
140 Spruce pickets, 6 feet,	3 50	45 10 inch double desks, old style, taken out,	123 75
100 Spruce pickets, 6 ft., old,	1 00	20 single desks, Miller's pattern,	60 00
134 Desk tops, unfinished, No. 4,	13 40	21 single desks, Boston pattern,	63 00
275 Desk tops, unfinished, No. 2,	41 25	9 Settees, damaged,	9 00
68 Desk tops, unfinished, No. 3,	10 20	100 Small chairs,	20 00
25 Desk tops, unfinished, No. 5,	3 75	2 Teachers' Tables, old,	6 00
104 Desk shelves, No. 3,	16 64		<hr/>
36 pairs Desk irons, Miller's pattern,	54 00		\$276 37
18 No. 6 Back seat irons, last pattern,	18 00		
4 No. 2, Stone's pattern,	8 00	FOR WASHING SCHOOL HOUSES.	
1 No. 2, new pattern,	2 12	40 Pails,	
1 No. 3, new pattern,	1 95	2 5 gallon kettles,	
2 No. 4, new pattern,	3 00	1 Dozen mops.	
1 No. 5, new pattern,	1 35		

MATERIALS SOLD AND BILLS LEFT WITH AUDITOR.

Old desks sold,	\$43 00
Stove sold,	50 00
Old iron,	66 44
Flagstone sold,	85 00
Old lumber,	1 00
Old buildings sold, less Auctioneer's charges,	41 63
Out-building, Public Library,	5 00
	<hr/>
	\$272 07

The following tables will show the number and location of the buildings belonging to the city, which are in charge of this department.

All of which is respectfully submitted,

CHARLES H. PECK,

Superintendent of Public Buildings.

SCHOOL HOUSES.

NAME.	LOCATION.	Number feet in lot.	No. Rooms.	REMARKS.
Ash Street,	Cor. Ash and Summit Sts.,	13,400	6	
Adriatic,	Southgate Street,	25,000	2	
Adams Square,	Adams Square,	23,360	1	
Belmont,	Belmont Street,	31,440	10	Hall in upper story, Ward 2 ward room in Basement.
Bithewood,	Millbury Avenue,	1 acre.	1	
Burncoat,	Burncoat Street,	21,500	1	
Chamberlain,	Chamberlain District,	1	1	
Dix,	Dix Street,	24,000	10	Two Rooms and Hall in French Roof.
East Worcester,	Old; cor. Shrewsbury and E. Worcester.	9,060	3	
East Worcester,	New; East Worcester,	18,150	6	
Edgeworth,	Cor. Edgeworth and Milton Sts.	30,760	5	One Room in French Roof.
High,	Cor. Walnut and Maple Streets.	31,672	14	
Lamartine,	Lamartine Street,	48,041	12	Hall and School Rooms in Roof.
Ledge,	Ledge Street,	40,670	10	Ward 4 room in Basement, 2 Rooms and Hall in Roof.
Leesville,	Webster Street,	5,050	1	
Mason,	Mason Street,	13,200	2	
New Worcester,	Webster Street,	14,900	4	One School Room in Quinn's Block.
North Pond,	Salisbury Street,	20,300	1	
Northville,		34,875	2	One Room unoccupied.
Providence,	Cor. Providence and Grafton Streets,	58,000	8	Two Rooms in French Roof unoccupied.
Pleasant,	Cor. Pleasant and Oxford Streets,	17,200	5	
Quinsigamond,	Millbury Street,	34,500	6	Three Rooms unoccupied.
South Worcester,	Cambridge Street,	29,184	8	Two Rooms in Roof Story.
Salem,	Salem Street,	12,555	4	
Sycamore,	Sycamore Street,	12,625	8	
Summer,	Summer Street,	18,300	4	One Room unoccupied.
Tannuck,	Pleasant Street,	11,500	2	One Room unoccupied.
Thomas,	Cor. Thomas and Summer Streets,	25,000	10	
Union Hill,	Union Avenue,	11,000	2	
Valley Falls,	Leicester Street,	4,988	1	
Walnut,	Walnut Street,	9,487	6	{ Ward 8 ward room and Rooms for Evening Draw-
Washington,	Orange Street,	7,188	2	ing School in this Building.
Woodland,	Woodland Street,	40,000	9	Hall in Roof.
		16½ acres.	167	

NUMBER OF SEATS.

Whole number of Sitzings, High School,	382
“ “ “ “ Grades, IX.—VI.,	1,901
“ “ “ “ “ V.—IV.,	1,699
“ “ “ “ “ III.—II.—I.,	3,786
Suburban,	440
Total,	8,208

ENGINE AND HOSE HOUSES.

NAME.	LOCATION.	No. feet in lot.	REMARKS.
Gov. Lincoln No. 1,	Bigelow Court,	5,310	{ Headquarters of the Chief Engineer and assistants in this building.
S. E. Combs No. 2,	Cor. Beacon and Lagrange sts.,	8,000	
A. B. Lovell No. 3,	School st.,	7,688	
Rapid No. 4,	Webster st.,		
City Hose No. 1,	School st.,		With Steamer 2.
Ocean Hose No. 2,	Bloomingtondale,		On B. & A. R. R. Land.
Eagle Hose No. 3,	Carlton st.,	1,270	
Niagara Hose No. 4,	Exchange st.,	500	
Yankee Hose No. 5,	Myrtle st.,	1,277	Ward 6 ward room in this building.
Tiger Hose No. 6,	Pleasant st.,	6,106	Ward 5 ward room in this building.
Protector Hose No. 7,	Lamarine st.,	47,096	
Babcock Extinguisher,	John st.,	1,837	With Steamer 1.
Hook and Ladder No. 1,	Bigelow Court,		
Hook and Ladder No. 2,	Thomas st.,		On School house lot.
Bell Tower,	Pleasant st.,		

OTHER BUILDINGS.

City Hall,	Cor. Front and Main sts.,	common	{ City Offices, Police Station and Police Court Room, Ward 7 ward room in this building.
Armory,	Waldo st.,	7,258	
City Stable,	Salem st.,	17,959	
Free Public Library,	Elm st.,	9,902	Ward 3 ward room in this building.
City Farm,	Boylston st.,		
Water Works Shop,	Thomas st.,	10,525	
City Shop,	School st.,	8,265	
City Hospital,	Wellington st.,		
Building formerly occupied by 5th Battery, Salem street.			
Building occupied by Street Light Department, Salem street.			

APPENDIX.

GOVERNMENT AND OFFICERS

OF THE
CITY OF WORCESTER,
FOR 1876.

MAYOR.

CLARK JILLSON.

ALDERMEN.

Ward 1.—HARRISON BLISS.

“ 2.—*JOHN M. WILLIAMS.

“ 3.—WILLIAM H. JOURDAN.

“ 4.—*SAMUEL D. HARDING.

“ 5.—STEPHEN SAWYER.

“ 6.—*MOWRY A. LAPHAM.

“ 7.—WARREN McFARLAND.

“ 8.—*SUMNER PRATT.

CITY CLERK AND CLERK OF THE BOARD OF ALDERMEN.

SAMUEL SMITH.

Office, No. 2 City Hall ; Residence, 10 Harvard Street.

CITY MESSENGER.

CHARLES MARVIN.

Office, No. 1 City Hall ; Residence, No. 1 Clinton Street.

COMMON COUNCIL.

President.—THOMAS J. HASTINGS. *Clerk.*—S. HAMILTON COE.

Ward 1.—Thoms J. Hastings, *George E. Boyden, *Benjamin Walker.	Ward 5.—William Kickham, *John R. Thayer, *William O'Connell.
Ward 2.—Samuel A. Porter, Francis A. Gaskill, *Orrin H. Weston.	Ward 6.—Loring Coes, Gilbert J. Rugg, *Ellery B. Crane.
Ward 3.—Cornelius O'Sullivan, *Paul Henry, *John B. O'Leary.	Ward 7.—Albert A. Lovell, *Caleb Colvin, *Wm. H. Heywood.
Ward 4.—Andrew Athly, T. Edward Murray, *John J. O'Gorman.	Ward 8.—George Geer, Oscar F. Rawson, *Charles Belcher.

PAGE TO COMMON COUNCIL.—Frank C. Jillson.

JOINT STANDING COMMITTEES FOR 1876.

On Finance.—The Mayor, Aldermen Bliss and Jourdan; the President of the Council, and Councilmen Porter, Rugg and Murray.

On Accounts.—Aldermen Jourdan and Bliss; and Councilmen Colvin, Coes and O'Sullivan.

On Claims.—The Mayor, Aldermen Jourdan and Pratt; the President of the Council, and Councilmen Porter, Rawson and Thayer.

On Water.—Aldermen Harding and Bliss; Councilmen Geer, Rugg and Heywood.

On Sewers.—The Mayor, Aldermen Bliss and Sawyer; the President of the Council, and Councilmen Coes, Walker and O'Connell.

On Fire Department.—Aldermen Bliss and McFarland; Councilmen Kickham, Porter and Geer.

*Aldermen and Council marked *, elected for two years.

On Education.—The Mayor, Aldermen Sawyer and Williams; the President of the Council, and Councilmen Thayer, Gaskill and Crane.

On Printing.—Aldermen Harding and Lapham; Councilmen Weston, O'Gorman and Boyden.

On Highways.—Aldermen Pratt and Harding; Councilmen Heywood, Belcher and Henry.

On Sidewalks.—Aldermen Pratt and Harding; Councilmen Belcher, Heywood and Henry.

On Lighting Streets.—Aldermen Sawyer and Harding; Councilmen Lovell, Kickham and Colvin.

On Military Affairs.—Aldermen Pratt and Williams; Councilmen O'Gorman, O'Sullivan and Weston.

On Charities.—Aldermen Williams and Bliss; Councilmen Rawson, Lovell and O'Connell.

On Free Public Market.—Aldermen McFarland and Harding; Councilmen Athy, Boyden and O'Leary.

On Public Buildings.—Aldermen McFarland and Lapham; Councilmen Boyden, Walker and O'Connell.

On Mayor's Inaugural Address, and Unfinished Business.—Aldermen Jourdan and Harding; Councilmen Crane, Gaskill and Murray.

STANDING COMMITTEES OF THE BOARD OF ALDERMEN.

On Health.—The Mayor, and Aldermen Jourdan and Lapham.

On Bills in Second Reading.—Aldermen Lapham and Sawyer.

On Enrollment.—Aldermen Williams and Lapham.

On Elections and Returns.—Aldermen Sawyer and Pratt.

STANDING COMMITTEES OF THE COMMON COUNCIL.

On Bills in Second Reading.—Councilmen Gaskill, O'Gorman and Lovell.

On Enrollment.—Councilmen O’Sullivan, Athy and Crane.

On Elections and Returns.—Councilmen Murray, Weston, and O’Leary.

CITY SOLICITOR.

FRANCIS T. BLACKMER,

Office, 7 Post Office Block, Pearl Street.

TREASURER AND COLLECTOR.

WILLIAM S. BARTON.

Office, No. 6 City Hall; Residence, 23 High Street.

AUDITOR.

HENRY GRIFFIN. Office, No. 7 City Hall.

ASSESSORS.

Enoch H. Towne, 2 years.

Wm. L. Clark, 1 year.

Office, No. 12 City Hall.

ASSISTANT ASSESSORS.

Ward 1.—Chandler P. Putnam,

Ward 5.—William O’Connell,

“ 2.—George W. Paul,

“ 6.—E. L. Brigham,

“ 3.—Michael Griffin,

“ 7.—Wm. G. Maynard,

“ 4.—D. M. O’Connor,

“ 8.—Alexander Marsh.

ACTING CITY ENGINEER.

C. H. M. BLAKE. Office, No. 11 City Hall.

SUPERINTENDENT OF PUBLIC BUILDINGS.

CHARLES H. PECK.

COMMISSIONER OF HIGHWAYS.

DAVID F. PARKER. Office, No. 3 City Hall.

WATER COMMISSIONER.

FRANK E. HALL. Office, No. 5 City Hall.

WATER REGISTRAR.

J. STEWART BROWN. Office, No. 5 City Hall.

COMMISSIONERS OF HOPE CEMETERY.

Albert Tolman, 5 years.

Albert Curtis, 4 years,

Henry Chapin, 2 years,

Stephen Salisbury, Jr., 3 years,

William Bush, 1 year.

COMMISSIONERS OF SHADE TREES AND PUBLIC GROUNDS.

Edward W. Lincoln, 3 years.

Stephen Salisbury, Jr., 2 years,

O. B. Hadwen, 1 year.

DIRECTORS OF THE FREE PUBLIC LIBRARY.

T. L. NELSON, *President*.NATHANIEL PAINE, *Clerk*.

Nathaniel Paine,	}	6 years.	Charles H. Doe,	}	3 years.
J. Evarts Greene,	}		John J. Power,	}	
Peter C. Bacon,	}	5 years.	T. L. Nelson,	}	2 years.
Edward H. Hall,	}		T. E. St. John,	}	
George E. Francis,	}	4 years.	C. H. Morgan,	}	1 year.
Edward Earle,	}		C. O. Thompson,	}	

Samuel S. Green, *Librarian*.

SCHOOL COMMITTEE.

CLARK JILLSON, Mayor, *ex-Officio* President.

A. P. MARBLE, Superintendent and Secretary. Office, No. 464 Main Street.

Members whose term expires January, 1879.	Members whose term expires January, 1878.	Members whose term expires January, 1877.
William A. Smith,	Caleb B. Metcalf,	Charles O. Thompson,
William T. Harlow,	Anna B. Rogers,	Sarah B. Earle,
Eugene Moriarty,	Jason Chapin,	James McMahon,
Francis Plunkett,	F. J. McNulty,	Thomas J. Conaty,
John Timon,	James J. McCafferty,	Jeremiah L. Murphy,
Alzirus Brown,	Francis P. Goulding,	Franklin B. White,
J. M. Bassett,	Edwin T. Marble,	Emerson Warner,
Charles B. Knight.	Rufus Woodward.	E. B. Stoddard.

MUNICIPAL COURT.

HARTLEY WILLIAMS, *Chief Justice*.

SAMUEL UTLEY,
 GEORGE M. WOODWARD, } *Associate Justices.*

THEODORE S. JOHNSON, *Clerk*.

TRUANT COMMISSIONERS.

CLARK JILLSON, Mayor.

A. P. MARBLE, Superintendent of Schools.

W. ANSEL WASHBURN. City Marshal.

HENRY E. FAYERWEATHER, }
 MARTIN HOWARD, } *Truant Officers.*

MARSHAL.

W. ANSEL WASHBURN. Office, City Hall.

ASSISTANT MARSHALS.

E. D. McFARLAND. Office, City Hall; Residence, No. 117 Thomas Street.

JOSEPH M. DYSON. Office, City Hall; Residence, No. 5 Sudbury Street.

WATCHMEN AND DAY POLICE.

AMOS ATKINSON, Captain of Night Police.

DETECTIVE.

EZRA CHURCHILL.

PATROLMEN.

Ballou, Samuel,	Hubbard, Martin J.
Barker, Chas. W.	Johnson, Orrin A.
Barker, George V.	Johnson, Wm. H.
Bliss, Geo. S.	Keyes, Warren C.
Bonn, Albert N.	March, Addison
Briggs, Charles S.	Martin, Austin
Colby, Reuben M.	Matthews, David A.
Deady, Michael	McDonnell, John
Diggins, Patrick	Mecorney, Henry H.
Doyle, Peter	O'Connor, Patrick
Fairbanks, Edson	O'Hagan, Patrick
Flint, Jos. H.	Piper, William A.
Foster, Thomas R.	Ranger, Summer W.
French, Cornelius	Sandner, Henry
Garland, Charles A.	Streeter, Henry B.
Gates, Jaalam	Thomas, Quincy A.
Green, Marshall S.	Tyler, Elliott
Hannigan, John	Walsh, Matthew J.
Harper, Louis	Wheeler, Wm. A.
Harris, Floyd H.	Willard, Geo. A.
Hennessey, James	Williams, Daniel
Hill, John E.	Woodard, James
Horan, William	

CONSTABLES.

W. Ansel Washburn,	Edwin D. McFarland,
Joseph M. Dyson,	Ezra Churchill,
Edward J. Russell,	Charles N. Hair,
Amos Atkinson.	

TRUSTEES OF THE CITY HOSPITAL.

F. H. Kelley, *President*. Stephen Salisbury, Jr., *Secretary*.

Sumner Pratt, Alderman.	Stephen Salisbury, Jr., 4 years,
Benjamin Walker, } Councilmen.	Albert Curtis, 3 years,
John R. Thayer, }	Joseph Sargent, 2 years,
	F. H. Kelley, 1 year.

OVERSEERS OF THE POOR.

CLARK JILLSON, Mayor,	} <i>Ex-Officio</i> Members.
A. P. MARBLE, Sup't of Schools,	
W. ANSEL WASHBURN, City Marshal,	

Clark Jillson, *President*. George W. Gale, *Clerk*.

Charles L. Hartshorn and James Draper, 3 years.
George W. Gale and George Geer, 2 years.
Edward Kendall and John J. O'Gorman, 1 year.

CITY PHYSICIAN.

GEORGE JORDAN.

KEEPER OF ALMSHOUSE.

JOHN FARWELL.

UNDERTAKERS.

George Sessions, George G. Hildreth,
Waldo E. Sessions, Andrew Athy,
John Fay.

PUBLIC WEIGHERS.

A. W. Barrows, N. Worcester, Silas Penniman, Lincoln Sq.,
Samuel Houghton, Salem Square.

WEIGHERS OF COAL.

L. S. Nicolls, at Jourdan's,	F. W. Fairbanks, at Southbridge St.
F. H. Knight, "	E. J. Rising, "
Wm. S. Jourdan, "	Chas. W. Clafin, at Central St.
F. W. Wellington, at City Coal Yd.	B. F. Parkhurst, "
E. A. Sumner, at Union St.	James Plympton, at Manchester St.

MEASURERS OF WOOD AND BARK.

S. Penniman, Lincoln Square,	Sibley Putnam, Green Street,
A. W. Barrows, New Worcester,	Alden Thayer, Pleasantville,
Samuel Houghton, Salem Square,	Edwin Chapin, South Worcester.

SURVEYORS OF LUMBER.

Nahum R. Hapgood.	Leander R. Hapgood.
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FENCE VIEWERS.

Charles W. Burbank,	Ebenezer Cutler,	Charles Ballard.
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MILK INSPECTOR.

Russell R. Shepard, 3 Pleasant Street.

FIELD DRIVERS.

Thomas R. Foster,	Wm. L. Nichols.
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POUND KEEPER.—Cornelius Marsh.

SEALER OF WEIGHTS AND MEASURES.

Russell R. Shepard, Office, No. 3 Pleasant Street.

WARD OFFICERS.

Ward 1.—WARDEN, James Green.	CLERK, Arthur Metcalf.
INSPECTORS.—H. W. Wilson, L. J. White, Wm. S. Clark.	
Ward 2.—WARDEN, Stephen C. Earle.	CLERK, Geo. W. Gale.
INSPECTORS, Luther Ross, William H. Rice, George A. Barnard.	

Ward 3.—WARDEN, Lyman Brown. CLERK, John W. Foley.
INSPECTORS, William Loughlin, Cornelius O'Sullivan,
Richard Bieberbach.

Ward 4.—WARDEN, Walter N. Drohan. CLERK, Thomas
McLaughlin.
INSPECTORS, William Myers, Patrick McCarty, Peter
Rooney.

Ward 5.—WARDEN, J. A. Kelley. CLERK, George C. Reidy.
INSPECTORS, Patrick J. Quinn, Michael Connelly,
Dennis Quinn.

Ward 6.—WARDEN, Charles L. Redding. CLERK, Augustus
Coolidge.
INSPECTORS, H. D. Barber, S. W. Ranger, Jonathan
C. French.

Ward 7.—WARDEN, Charles E. Brooks. CLERK, Arthur E.
Dennis.
INSPECTORS, J. O. Bemis, Wm. G. Maynard, John W.
Hadley.

Ward 8.—WARDEN, Joseph A. Titus. CLERK, Woodbury C.
Smith.
INSPECTORS, James F. Meech, S. D. Perry, Thomas
Talbot.

BOARD OF ENGINEERS.

Office, No. 80 Front Street.

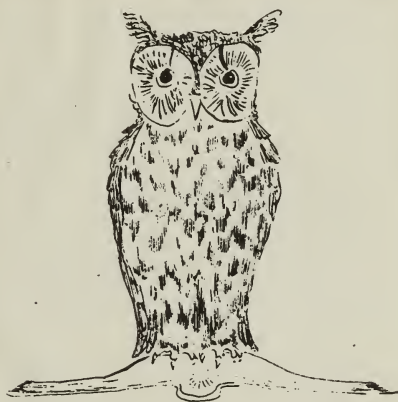
SIMON E. COMBS, *Chief*. SAMUEL H. DAY, *Clerk*.

William Brophy, } *Assistant Engineers.* { Samuel H. Day,
John W. Loring, } { Gilbert N. Rawson.

SALARIES OF CITY OFFICERS.

1876.

Mayor,.....	\$1,500
City Clerk,.....	1,800
City Treasurer and Collector,.....	2,500
City Engineer,	1,800
City Solicitor,	1,800
City Physician,.....	700
Auditor of Accounts,.....	1,400
City Messenger,	1,100
Commissioner of Highways, with team,.....	1,900
Water Commissioner, with team,	1,900
Water Registrar,.....	1,200
Clerk of the Common Council,.....	300
Clerk of the Overseers,	1,350
One Assessor and Clerk of the Board,	1,400
Two Assessors—each,	1,300
Asst. Assessors—each,	four dollars per diem.
Milk Inspector,	50
Sealer of Weights and Measures,	300
City Marshal, with team,.....	1,800
Asst. Marshals, with team—each	1,350
Capt. of Day Police,.....	\$2.75 per day.
Capt. of Night Police,	\$2.75 per night.
Patrolmen,.....	\$2.50 per day or night.
Chief Engineer,	1,200
1st Asst. Engineer and Electrician,	800
Assistant Engineers—each,	200
Foremen of Companies—each,	125
Asst. Foremen of Companies—each,	115
Engineers of Steamers—each,.....	300
Asst. Engineers of Steamers,	175
Hosemen and Members of Hook and Ladder Companies—each	100



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