

MAYOR'S REPORT.

The last Board of Trustees of the village of Ogdensburg, in the fall of 1867, acting in accordance with their own convictions and those of nearly all the citizens, called a public meeting to consider the subject of applying for a city charter, to which they were entitled according to the settled policy of the State on obtaining their majority of a population of ten thousand inhabitants. The citizens almost unanimously favored the change, and appointed a committee to draft a city charter. The charter was drawn and submitted to a similar general meeting, amended and approved, almost unanimously, and submitted to the Legislature, where it was amended in some particulars, and finally adopted on the 27th of April, 1868.

The first election under the city charter was held on the 11th day of May last.

The charter provided for the construction of water works at the expense of the city, with funds to be raised by issuing the bonds of the city, giving power to the Council to levy the necessary taxes to pay the interest and principal of the bonds as they became due. But the work was not to commence until after a plan had been submitted to the tax payers and approved by them by a majority vote by ballot.

The Common Council appointed a Board of Water Commissioners, consisting of the Mayor and Aldermen G. W. Pearson, W. B. Allen and C. B. Herriman, and three citizens not members of the board, viz: Hon. A. B. James, W. J. Averell and De Witt C. Brown, to devise the plan, attend to negotiating the contracts and some other details, subject to the direction and control of the Council.

It was understood that a large majority of the tax payers were in favor of water works, but there was so great a diversity of opinion in regard to the plan which should be adopted, that much time had to be spent by the Council in investigating the different projects. Many believed it was most advisable to have a reservoir on Lime-kiln Hill, supplied by a steam engine near the Marine Railway; many more that an artesian well would afford the best supply; others that the Oswegatchie water taken from the El Weir rapids would be preferable; and others that the Oswegatchie river, at the dam, was the best source of supply. It was soon demonstrated that water works dependant upon a supply from a reservoir on Lime-kiln Hill would be very expensive, and never satisfactory, and that plan was fortunately abandoned by those who had most favored it. Upon the question of the kind of water which should be introduced for domestic supply, there was much more difficulty, which was finally obviated or rather postponed by the consideration that whether we preferred the St. Lawrence water, artesian water, or the Oswegatchie water from the El Weir or at the dam, we required mechanical power to raise and distribute it through the city; and it did not admit of question that the most economical power for that purpose was the hydraulic power at the dam.

The St. Lawrence water can be brought at a small expense in a submerged trunk to the foot of the pumps. Artesian water can be bored for at the works with as much prospect of success as any where else; and, by using one of the water wheels to drive the drill, at one half the expense. The considerations here only briefly referred to were satisfactory, and on the 7th of July last the tax payers, by a vote of about five to one, authorized the Common Council to issue bonds of the city to the amount of one hundred thousand dollars and construct water works on the plan indicated above.

The plan so adopted by the tax payers provided for the purchase from George Parish, Esq., of the whole water power property on the east side of the river, at and near the dam; for a stone building there to contain the works, and of size sufficient to contain a steam engine and boiler, to be put in if it should ever be found necessary to provide for any contingency of failure of the dam or great drought; the upper part to be finished off as a dwelling for the superintendent of the works. The machinery was required to consist of three force pumps, driven by three water wheels, with the necessary regulators, strainers, and other necessary appurtenances, and either of which pumps should furnish the requisite quantity of water for ordinary use, and the water to be distributed through six miles of street pipes.

As soon as practicable after the adoption of the plan by the tax payers, contracts were made with the Holly Manufacturing Co., of Lockport, for the water wheels and machinery; with the Patent Water and Gas Pipe Co. of Jersey City for wrought iron and cement pipe; with Gates Curtis, Esq., of Ogdensburg, for the necessary cast iron pipe; with Morris, Tasker & Co., of the Pascal Iron Works of Philadelphia, for galvanized wrought iron pipe to cross the Oswegatchie river on its bed above the dam and to cross on the iron bridge at the foot of Ford street; with D. N. Stewart, Esq., of Ogdensburg, to dig the trenches and fill them after the pipe should be laid. The rock excavation for the foundation of the building and machinery, the millwrighting work, the construction of a tail-race to afford the greatest head and fall for the water wheels, the reconstruction of Water street to give access to the building, and the construction of the building, were considered unanimously by the Water Commissioners and Common Council as of too uncertain character in regard to expense to be let by contract, without the employment of some very able engineer at great expense, and involving great delay in preparation of specifications and estimates, procuring bids, making contracts, &c., and it was therefore determined to do that part of the work by day labor. Fortunately for the city we were able to secure the services of Joseph E. Johnson, Esq., late Master Machinist of the Ogdensburg & Lake Champlain Railroad, who is not only a machinist, but a thoroughly educated millwright, to superintend all the work not let by contract, including the laying and connecting of the cast iron pipes, the delicate and difficult operation of laying the pipe under the water across the Oswegatchie above the dam, and across the bridges.

Each contractor and employee appreciated the importance of having the works in operation this fall rather than to have the process of construction linger into the following spring or summer, and vied with each other, each to take care that his part of the work should not delay the others; and on the 7th day of November, just four months after the day on which the tax payers voted to have water works, the machinery was in operation, delivering the water through nearly one mile of street mains and a dozen hydrants, and with 89 lbs. water pressure delivering streams in volume and distance exceeding any ordinary performance of our steam fire engines. This pressure developed a half dozen leaks in joints of the cast iron pipe and twice as many in the whole length of the cement pipe, but only in those joints lately made where the cement had not had time to become thoroughly set and hardened. There was no break in any pipe and no development of any weakness in any part of the cement pipe which was first laid, and the defective joints were easily repaired.

The contracts of the city with the Holly Co. and with the Water Pipe Company are more particularly for results rather than for the details whereby these results are to be produced. The special points of the Holly contract are that either two of their pumps shall be sufficient when water is applied to two of the wheels under six feet head to force two millions of gallons of water in 24 hours through the various parts of the city, and that the pumps shall throw at an elevation of sixty feet above the pumps as follows: under ten feet head, eight one inch streams eighty feet high; under eight feet head, six one inch streams eighty feet high; under six feet head, five one inch streams eighty feet high; and under four feet head, three one inch streams eighty feet high; and one half of the contract price is to be withheld until the performance of these conditions. The experiments so far as made indicate plainly that the machinery will accomplish much more than was promised.

The special point of guaranty in the contract with the Water Pipe Company is that the pipes "shall be able to resist without fracture a hydraulic pressure of 100 pounds to the square inch during the first two years, and for thirty days thereafter 125 pounds per square inch, and such additional pressure as may at any time be occasioned by any ram or backhammer action." And the city retains ten per cent. of the contract price to await the fulfillment of this guaranty. No one of those who have taken the trouble to acquire actual knowledge of the strength of this kind of pipe have any doubt but that the guarantee will be fulfilled.

We have now laid throughout the city six miles and 441 feet of pipe; whereof 388 feet is cast iron 12 inches in diameter, 193 feet of cast iron 8 inches in diameter, 800 feet of galvanized wrought iron. The sizes are as follows:

1255 feet of 12 inch pipe.
5984 " 10 "
4426 " 6 "
18276 " 4 "

With 43 gates and 35 double hydrants.

The gates set are 1 of 12 inch diameter.

" " 1 " 10 "

" " 5 " 8 "

" " 29 " 4 "

" " 1 " 3 "

Over four miles of pipe is in use for ordinary domestic supply, under a pressure of thirty to forty pounds, and the rest will be by the time this report can be printed. But many of the cement joints having been lately made and not had time to become well set and hardened, the Water Pipe Co. do not propose to deliver the possession of them to the city, as finished according to their guarantee, under about two months, except the pipe from Fayette down Water to Ford street, which they are willing to have tested on or after the 15th of December, at the full pressure of 100 pounds to the square inch.

It will be seen by the financial statements in

this report that the city has issued and sold city bonds to the amount of \$91,600, which produced the net sum of \$92,150.30. There was also raised for water works purposes the sum of \$1000, by taxation, making the total cash receipts to that fund to this time \$93,150.30, and there remains city bonds to be disposed of whenever it may be necessary to the amount of \$8,400.

The whole amount that has been paid out from this fund to the present time is \$65,167.79, leaving a balance of cash in the fund of \$27,982.51, to which add the amount of unsold bonds, \$8,400, gives the balance available of that fund at \$36,382.51. All past due claims upon the fund have, so far as known, been paid, except that orders have been granted and not presented to the treasurer for payment, amounting to..... \$346 01 There will be due the Holly Co., on completion of their contract..... 8,500 00 To the Water Pipe Co., about \$15,896.66 Whereof there is payable presently..... 8,997 50 And when the pipe is completed..... 3,139 50 And upon the fulfillment of guaranty, at the expiration of 2 years and 30 days, 2,759 66 There is held in reserve from D. N. Stewart, Esq., as security for the completion of his contract, the sum of..... 1,000 00 To Morris, Tasker & Co., for the galvanized wrought iron pipe and fixtures crossing the iron bridge, there is due.. 445 87

Making the total of known outstanding indebtedness against the water fund.. \$25,161 88

As the work is not yet complete and is still progressing, and there must be outstanding bills to some extent yet to come in, it can not be known to any certainty, what the amount may be; but as all the work has been done and materials purchased at cash prices, and with the understanding that the city was ready to pay as fast as bills were presented, audited and approved by the Council, it is not probable that any considerable amounts are outstanding beyond those above mentioned.

Supposing that the outstanding accounts and expense of work yet to be done may amount to..... \$2,000 00 There will be to be paid..... 27,161 88

Leaving a balance available in this fund of..... \$9,220 63

The Common Council about to be elected will probably decide, when they find, as they will, that the Water Works machinery is fully adequate to supply the whole city with water for domestic purposes and the extinguishment of fires, that this fund can be best applied to extending the mains and hydrants. The fund under their control will enable them to add from two to three miles of street pipes of the smaller sizes, with all needful appurtenance.

In establishing water rates, the Commissioners referred to the rates in many other cities and villages, and recommended, and the Council adopted, about the lowest rates for which they found any precedent. It is believed that the most wise policy for the city is to so establish the rates that when the water is generally taken by those who find it for their interest to have it, the revenue will about pay the interest on the cost of the works and expense of superintendence. In investigating the subject of rates, the Commissioners found a very marked difference between the places where the municipalities owned the works, and where private corporations have been permitted to obtain the franchise. In the latter cases the rates were much higher, and the municipalities had to raise considerable sums, by annual taxation, for water for the hydrants; seventy-five dollars for each single hydrant appearing to be considered a moderate price.

Although the rates are very low, hundreds of families who need the water will be unable to obtain it, by reason of the expense of bringing the pipes into their houses, unless the Council devise some plan for hydrants in the streets, from which such people may take water on payment of a small annual or semi-annual rate. Until the Council take some action on the subject, the waste at the ends of street mains, desirable to be continued to keep up a proper circulation in the pipes, will be run in troughs, where all who please may take it freely. These hydrants may be enclosed and locked, and a key furnished to each householder paying such sum as the Council may prescribe; or the people in the neighborhood might subscribe and pay a sufficient sum to render it proper for the Council to leave the hydrant open for the benefit of all.

The attention of the citizens is called to the necessity of organizing more hose companies. The city owns three excellent hand fire engines, which will never be used here, and should be sold and the proceeds invested in hose and hose carts. One of our steam fire engines may also be spared for the same purpose during the coming year; for when the pipes become thoroughly hardened to bear the strain for which they are guaranteed, each double hydrant will be the equivalent of a steam fire engine, located at the same point, fired up and fully supplied with water and fuel. The opening of a hydrant in any part of the city is signalled instantaneously at the works by diminution of pressure in the cylinder of the regulator, changing its action so that it opens wider the gate to the water wheel, until the increased power applied to the pump restores and maintains the pressure. If one water wheel, when fully open, does not supply the draft, the regulator opens the gate to another water wheel and sets another pump in operation. As the hydrants are closed the regulator closes the gates, and reduces the action of the pumps to correspond with the diminished drain from the pipes. All this is done automatically, and requires no attention.

The turbine wheels which propel the machinery of the water works are placed so low, and the tail race sunk so deep, that there can be no reasonable doubt but that, even if the extraordinary droughts of the last two years should continue, the machinery may always be propelled by water power. But as the city owns only one-twentieth of the water power of the river, we may be liable to infringe upon the rights of owners of water power on the West Side, and in that case the city must take the necessary additional runs of water, and pay for them at what they may be appraised; or put in a steam engine to be used in such emergencies; or encourage, and join with, the other owners of water power in excavating a channel, with gates at the outlet of Black Lake, so as to improve that Lake for a reservoir.

The city has received as a donation from George Parish, Esq., and Elijah B. Allen, Esq., a grant of all that land, &c., lying between the center of Water street and the center of the Oswegatchie river, from a point twenty feet south of the Parish cribbing to a point three hundred feet northerly of Montgomery street, upon the condition that the city shall expend an average of five hundred dollars per annum for five years, in protecting and improving it as a public ground. The work of the first necessity in this respect is the construction of a protecting wall on the original shore line, and the prevention of any further wash of the banks from above. To this end three hundred dollars have been expended this year from the General Fund, and considerable more from the Water Fund, as a necessary incident to the construction of the tail race, and the removal from the streets of the stone which came out in digging the trenches.

The Council have proposed to the tax-payers to raise one thousand dollars by tax to use in fulfilling the conditions of this grant; also, five hundred dollars to fence Mansion Square, and a similar amount to place a fountain and other improvements in the Park in the Third Ward. It is hoped the tax-payers will find no other objections to either of these appropriations than that they are too small. In the purchase of the water power for the Water Works, the city has acquired title to all the rest of the bank of the Oswegatchie river to the State Arsenal, about four hundred feet south of the dam; and it is hoped that the whole may be improved together for a public park.

STATEMENT OF FINANCIAL TRANSACTIONS FOR THE TERM.

GENERAL FUND.

Balance in Treasury at the commencement of the term.....	\$20 10
Rec'd per taxes collected.....	2000 00
" from E. White, Esq., late Police Justice, for fines and fees of last year.....	159 30
" from D. McQuay, Recorder, for fines and fees collected.....	735 05
" for grass on parks.....	14 00
" " excise licenses.....	2376 00
" " carters and porters' licenses.....	119 00
" " exhibition licenses.....	205 00
" " hucksters' stands.....	8 00
Total.....	\$5685 45

DISBURSEMENTS FROM GENERAL FUND.

1. For old claims against the Village.

Hall & Gardner, for coal for engine house.....	\$21 50
S. G. Pope, salary as Chief Engineer.....	50 00
J. & G. B. Bell, care of town clock.....	85 50
W. B. Allen & Co., repairing plow, &c.....	7 68
H. R. James, printing, advertising, &c.....	235 75
W. H. Cochran, repairing hose.....	2 00
Geo. Morris, costs in suit still pending.....	243 00
H. Thomas, repairing bridges.....	3 00
M. Leonard, police services.....	16 25
A. Patno, ".....	12 00
Odin Glynn, ".....	6 00
H. C. Trickey, cleaning hose.....	12 50
S. G. Pope, disbursements for Fire Department.....	21 69
S. Balice, carting hose at fires.....	20 50
R. Johnson, rent of engine house and hauling engine to fires.....	101 05
R. B. Lowry, salary Supt. of Schools.....	100 00
A. Gilbert, wood for Town House.....	54 75
D. A. Trickey, care of engine No. 2.....	87 50
Gas Co., for gas for town house and engine houses.....	45 60
W. H. Young, for rubber coats for pipe-men.....	12 00
J. Parker, hauling engine No. 2 at fires.....	18 50
E. Merry, engineer steamer No. 2.....	47 00