

# The Daily Journal

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## Our Water Works.

A year ago, from frequent destructive fires, the attention of the citizens of Ogdensburg was directed to the immediate necessity of water works, which would afford means of defence against the ravages of the devouring element, as well as a supply of water for domestic purposes. A public meeting was called, and the municipal authorities instructed to make investigations as to the best means of furnishing the supply, and also to obtain the necessary legislation to enable them to raise the money needed to erect the works. The city authorities caused surveys and estimates of the probable expense of works on the plan of a reservoir on Limekiln Hill, a point of 94 feet elevation, to be made.

At the same time, they summoned hither Messrs. Flagler and Holly, of the Holly Manufacturing Company, who explained the new system of water works just being brought into use. These gentlemen met a public meeting, and their statements resulted in the appointment of a committee of inquiry, or water commissioners, who visited Auburn and inspected the Holly Water Works of that city. They came back enthusiastic, and recommended the adoption of the Holly system, which consists of force pumps, driven by water wheels, thus keeping the pipes filled at any desired pressure to the square inch. Their estimate was that \$100,000 would be required to purchase pipe, erect building, procure machinery, and dig seven miles of trenches, and set everything in working order.

On the 7th of July, the tax-payers were called upon to vote upon the proposition to erect water works upon this plan, and it was accepted. Work was commenced at once.—The vacant lot at the east end of the dam was selected for the erection of the water works building, and on the 7th of November, just four months from the day of election, the water was running through the pipes.

The contract with the Holly company was for three force pumps, driven by three water wheels. 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 million gallons of water in twenty-four hours through various parts of the city, and that the pumps shall throw at an elevation of sixty feet above the pumps, as follows: Under ten-foot 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.

When Mr. Hamilton, the gentleman sent here by the Holly company, had finished setting up the machinery, the pipes were not in condition for the trial, and it was delayed. Some time in December, Messrs. Flagler and Holly came on to give the works a practical test, but owing to the fact that the machinery had not been adjusted, no satisfactory test was made.—Mr. Holly remained and placed the machinery in complete working order, but only about half a mile of the pipe was in condition to be submitted to the test, and it was proposed to vary the method of testing.

On Thursday, the President and Secretary of the Holly company came on again to have a trial of the machinery. A wheel and one pump at a time, with one, two and three streams. The hydrants brought into use were those at the corner of Fayette and Pickering streets; at the junction of Pickering and Water; and at the corner of Green and Water streets, the extremes being about quarter of a mile apart. All three of the pumps were tested with single wheels. Upon first test, two streams were elevated 106½ feet from the ground, 45 feet above the river; second test, three streams 102 feet high; third test, two streams 112 feet. After this, 350 feet of hose were attached to the Green street hydrant, and a 1½ inch stream elevated 96 feet. The height was taken by T. B. Tate, civil engineer. It is proper to say that Mr. Flagler, of the Holly company, preferred to have the test demanded by the contract, but as the water pipe company's agent was unwilling to have all the pipes subjected to 100 lbs. pressure to the square inch, it was impossible to do so.

The trial on Thursday was satisfactory to all who witnessed it, and to those who had taken the trouble to post themselves in relation to the machinery, most interesting.

Nobody expresses a doubt from what they have seen, that the machinery will do all that is guaranteed, and more too. The great improvement of the Holly system over the old reservoir system, is that it affords full protection against, or means to fight fire in the whole district traversed by the water pipes. Every hydrant has the capacity of a steam fire engine, and the power is ready to act almost instantly. All of the machinery is governed by an automaton regulator and alarm, whose performance is wonderful. This regulator may be set to any required pressure of water in the pipes. For ordinary service, 25 pounds is sufficient, and the automaton is set at that point. One wheel at a low rate of speed will furnish this pressure.—In times of fires, 100 pounds may be needed. In the dead hour of the night a fire may occur. A hydrant is opened near the fire, perhaps a mile away. This open hydrant relieves the pressure, or instantly lets it down five, ten or twenty pounds, as the case may be. The pressure gauge of the automaton instantly drops, throws off a guard and a bell in the Superintendent's room rings violently. This signals fire or trouble. The Superintendent springs to the automaton and sets it to 100 pounds. The automaton hoists the gates to let on the required pressure. If additional hydrants are open, the automaton raises the gates higher, if one is shut, the automaton lowers the gate. And thus the firemen unconsciously act through the hydrants on the regulator, and the regulator on the wheels. All in all, it is the most complete and wonderful contrivance for fighting fires ever invented. The total cost of the machinery and hydrants, purchased of the Holly company, and expenses of setting up, is about \$19,000. It will probably furnish all the water we shall ever demand.

The Holly works are located at Lockport.—It is only three or four years since the system was introduced. The success obtained is attracting attention everywhere water works are demanded. They have been introduced at Auburn, Lockport, Binghamton, Gouverneur, Vergennes, Canton, O., Peoria, Minneapolis and Ogdensburg. We think they are destined to supercede all other systems.