The Evening Gazette

HUDSON & ROSE, Proprietors.

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REPUBLICAN STATE TICKET.

For Governor,
GEN. THOMAS M. BROWNE,
Of Randolph county.

For Lieutenant Governor,
LEONIDAS M. SEXTON,
Of Rush county.

For Congressman at Large,
GODLOVE S. ORTH,
Of Tippecanoe county.

For Secretary of State,
W. W. CURRY,
Of Vigo county.

For Auditor of State,
COL. JAMES A. WILDMAN
Of Howard county.

For Treasurer of State,
MAJOR JOHN D. GLOVER,
Of Lawrence county.

For Reporter of Supreme Court,
COL. JAMES B. BLACK,
of Marion county.

For Clerk of Supreme Court,
CHARLES SCHOLL,
Of Clark county.

For Superintendent of Public Instruction,
BENJAMIN W. SMITH,
Of Marion county.

For Attorney General,
JAMES P. DENNY,
Of Knox county.

THURSDAY, MARCH 28, 1872.

Water Works.

Understanding that the question of our water works will be submitted to the Common Council at its next meeting, we to-day take up a large portion of our columns in presenting to our readers what is thought of the Holly Water Works where they are in active use. These opinions will certainly be read with great interest by all of our citizens, for there is a very great desire that Water Works shall be completed at as early a day as possible in this city. The heat and dust of last summer told plainly how much we needed water all over the city, in order to make us all more comfortable, and more secure against fire. It is high time now that the company organized to build these works were actually at work, if we are to have the advantage of Water Works this summer and fall, and we are glad to know that steps are about to be taken to push the matter.

THE fossilized, fossiliferous fossil on the corner of Sixth and Ohio, amuses itself this morning by ridiculing Schurz and Trumbull. Sumner escapes, thanks to all the gods at once.

From the Toledo Blade.

THE HOLLY WATER WORKS.

Valuable Statistics and Reports from Cities that Have Them in Use.

In compliance with a resolution of the Water Works Committee of the Toledo City Council, Geo. W. Merrill, Esq., the City Clerk, addressed a circular to inquiry to the clerks of city having the Holly Water Works in use, and has received responses to his questions as given below. This information is very full and complete, and embraces all the points upon which our citizens can desire information to enable them to vote intelligently. We commend the reports to the careful attention of every voter:

Cost of works and miles of pipes:

Peoria, Ill., $440,000, 25½ miles, 200 double hydrants.

Cumberland, Md., $99,864, 6 miles, 47 hydrants.

Ogdensburg, N. Y., $135,000, 11 miles and 1,300 feet of pipe, 66 hydrants.

Binghampton, N. Y., $180,000, 19 miles of pipe, 128 hydrants.

Saratoga Springs, N. Y., $200,000, 11 miles of pipes, 99 hydrants.

Laporte, Ind., $95,000, 5½ miles of pipe, 52 hydrants.

Connersville, Ind., (cost not given) 3½ miles of pipe, 32 hydrants.

Norwalk, Ohio, $95,000, 9 miles of pipe, 70 hydrants.

Kalamazoo, Mich., $80,000, 10 miles of pipe, 70 hydrants.

Buffalo, N. Y., $42,000, (amount of pipe not stated,) 106 hydrants.

Governeur, N. Y., $16,000, ⅝ miles of pipe laid.

Vergennes, Vt., $27,000, 2 miles of pipe laid, 23 hydrants.

Evansville, Ind., $300,000, 13 miles of pipe—works uncompleted.

Dayton, O.—The cost of the works to January 1st, 1872, was $362,000. Number of miles of pipe, main and distributing, said to January 1st, 1872, 22 miles and 209 hydrants.

Minneapolis, Minn.—$110,000. Have about five miles of pipe.

Auburn, N. Y.—Cost about $175,000. About 17 miles of pipe—12, 10, 8, 6 and 4 inch; use the iron and cement pipes, of Water Pipe Co., 91 Liberty street, N. Y.; 155 hydrants.

Lockport, New York.—About $20,000. These are the original Holly Water Work, and comprise but one rotary pump and water wheel, with necessary connections, and 50 hydrants.

Columbus, O.—$353,309; 26 miles of main and sub-mains; 154 hydrants.

The annual cost of running the works:

Peoria, Ill.—$12,000.

Cumberland, Md.—Estimated, $8,500—have not been running a year.

Ogdensburg, N. Y.—$2,500, being $1,200 for salaries, and $1,300 for contingencies.

Binghamton, N. Y.—$12,000, including salaries.

Saratoga Springs, N. Y.—Works in operation six months—no estimate.

Laporte, Ind.—$5,000.

Connersville, Ind.—Water power, $550; Superintendent, $150; total, $700.

Norwalk, O.—About $4,500—have not been in use a year.

Kalamazoo, Mich.—About $6,000.

Buffalo, N. Y.—About $7,000.

Gouverneur, N. Y.—$150, for attention to machinery and pumps.

Vergennes, Vt.—$150 for a man to take charge of machinery, &c.

Dayton, O.—$15,000. It will average this amount.

Minneapolis, Minn.—About $2,000.

Auburn, N. Y.—About $4,500—use water power.

Lockport, N. Y.—About $1,500.

Columbus, O.—About $1,600.

Its comparative value, based on your experience, as a protection against fire, and its economy as compared with a fire department, which will be equal to it in effectiveness? Answer:

Peoria, Ills.—Far superior to any Fire Department. We could not have a Department that would equal it in effectiveness, only at an enormous expense.

Cumberland, Md.—The fire protection of the "Holly" excels steamers, hand-engines, &c. Cannot be excelled.

Ogdensburg, N. Y.—It is the most efficient contrivance ever discovered to fight fire. Comparative value cannot be estimated.

Binghamton, N. Y.—We think it the most perfect protection against conflagration, of any mode known heretofore.

Saratoga Springs, N. Y., cheaper.

La Porte, Ind., there is no comparison.

Connersville, Ind,, don't think any other system equal to it for fire protection. We have saved property now more than its cost.

Norwalk, O., can hardly compare the two systems. Every hydrant is equal to two hand engines.

Kalamazoo, Mich., its efficiency is greater than any Fire Department that use either steamers or hand-engines. A Fire Department with engine to approximate the effectiveness would cost fully 50 per cent more.

Buffalo, N. Y,, the cost of running for all purposes, is about equal to the cost of maintaining one steamer; as effective as two or three.

Gouverneur, N.Y., We had no Fire Department before the erection of the works.

Vergennes, Vt., We don't estimate its value in figures—would not do without them. They paid for themselves in less than one month after starting.

Minneapolis, Minn., We think it is far more effective and much cheaper.

Dayton, O., The value of the works as protection from fire is difficult to estimate. A Fire Department to be equal to it in effectiveness would exceed the works in cost.

Auburn, N. Y.—Vastly superior to steam engines. We have put out fires this winter when so cold it's doubtful if any engine could work.

Lockport, N. Y.—At least five times.

Columbus, O.—Properly managed, they are of great value, and are much more efficient at fires at less cost than a regular steam fire department.

The percentage of increase each year over the first year, from receipts of rents, etc?

Peoria, Ill.—About 50 per cent.

Cumberland, Md.—Estimated for second year over 100 per cent.

Ogdensburg, N. Y.—Went into operation Nov. 1868—only a few consumers that year. In Nov., 1870, had 336; in Nov., 1871, had 468.

Binghamton, N. H.—Receipts in 1869, $3,671.14; receipts in 1870, $8,554.00; receipts in 1871, $12,976.13; receipts in two months of 1872, $3,733.23. Total, $28,934.00.

Connersville, Ind.—$2,000 to $2,500 by another year.

Kalamazoo, Mich.—Second over first year, 50 per cent—will probably increase 30 per cent. ensuing year.

Dayton, O.—Receipts for nine months in 1870, were $3,160; for twelve months in 1871, $9,960.

Auburn, N. Y.—Receipts for first year about $9,000.

The capacity of each hydrant, the height to which water can be thrown through them, and the number that can be worked at once effectively for fire purposes?

Peoria, Ill.—Each hydrant is equal to a steam fire engine. We have thrown thirteen streams of one inch at one time over 100 feet in height, and could throw more if necessary. Six 1¼ inch streams have been thrown on a fire at one time. We have to guard against damage by water nearly as much as damage by fire.

Cumberland, Md.—From six hydrants at the same time, it will force an inch and a half to two inch stream 150 to 170 feet perpendicular.

Ogdensburg, N. Y.—Each hydrant delivers two 2½ inch streams. They are located that four hydrants come within a radius of 700 feet; 100 pounds pressure will elevate all these streams 120 feet high, and even have the power to supply the pressure.

Binghampton, N. Y.—We have double and single nozzle hydrants. We can throw six streams and maintain them for any length of time. Have had seven at work at one time, throwing streams of 1 and 1¼ inch to an altitude of 125 to 150 feet.

Saratoga Springs, N. Y.—2½ inch streams 200 feet high. We have used twenty hydrants to good purpose at two fires which happened at the same time.

Laporte, Ind.—1st, the same as a steam fire engine; 2d, we have thrown 135 perpendicular feet; 3d, about 8.

Connersville, Ind.—Each hydrant has two openings for hose; can throw water 100 feet high, through inch nozzles.

Norwalk, O.—1st throws two streams; 2d, with inch nozzles we have thrown six streams at one time from as many different hydrants to the height of over 100 feet.

Kalamazoo, Mich.—Single hydrant; 4 inch openings; double hydrants double the capacity of single; single stream through 1⅛ inch nozzle has been thrown perpendicular 195 feet. Six streams through same size nozzle used simultaneously, 100 feet perpendicular. From 5 to 8 can be worked effectually at the same tine.

Buffalo, N. Y.—One double or two single dydrants are more than equal to a steamer. One hundred feet or upwards. Our works, which are of the size usually put in for supplying cities of from 8,000 to 82,000 inhabitants, good for six effective fire streams.

Governeur, N. Y.—Use 2½ inch hose, 1 inch nozzle, and can throw four streams over any building we have, the highest being 44 feet.

Vergennes, Vt.—Hydrants throw 2 streams, each 2½ inches. Can throw from the highest point in town 100 feet high easily. Have to force the water about 75 feet to our main pipe to get up to the highest point. We have never used more than two hydrants at one time, that I remember of.

Dayton, O.—Water can be thrown 100 feet high. We have frequently worked effectively from six to eight hydrants. Could work more if necessary.

Minneapolis, Minn.—We can throw six to eight streams 100 feet high, one inch nozzle, with ninety pounds pressure.

Auburn, N. Y.—We have used five at a time, and always forced water over the highest buildings. Have seen streams forced as high as 150 to 175 feet.

Lockport, N. Y.—Water has been thrown 120 feet perpendicularly. Each hydrant is as good at least as three hand engines. There has never been more than *ten* or *eleven* used in this city at once.

Columbus, O., each hydrant has connections with the main by a four inch pipe, and will throw equally as far as by any other not more powerful. There has been thrown not over 12 streams at one time, but the capacity of the works will allow some 16 or 18 streams thrown on a fire with good effect.

The great distance from the source of supplp water is forced for fire purpose?

Peoria, Ill.—Nearly 4 miles.

Cumberland, Md.—Two miles, but can be much greater.

Ogdensburg, N. Y.—About 1½ miles.

Binghampton, N. Y.—About 2 miles, straight line.

Saratoga Springs, N.Y.—About 3 miles.

Laporte, Ind.—One and a half miles.

Connersville, Ind.—Can carry water through 1200 feet of hose—all we got.

Norwalk, O.—About 2½ miles.

Kalamazoo, Mich.—Two miles.

Buffalo, N. Y.—About 2½ miles.

Governeur, N. Y.—Five-eighths of a mile, can be used any distance we require.

Vergennes, Vt.—Two hundred rods is the farthest we have any hydrants.

Dayton, O.—Three miles.

Minneapolis, Minn.—One and a half miles.

Auburn, N. Y.—Two and a half to three miles.

Lockport, N. Y.—One-half mile each way.

Columbus, O.—About two and a half miles.

The annual expense of your fire department previous to the construction of the works, and the present annual expense?

Peoria, Ill.—Previous to construction, about $15,000; now $5,500.

Cumberland, Md.—$900, and now about the same.

Ogdensburg, N. Y.—Before, volunteary—200 men. Now 30 men—$1 for first hour and 50 cents for each subsequent hour at a fire.

Saratoga Springs, N. Y.—$1,500.

Laporte, Ind.—1st, $4,000; 2d, $2,000.

Connersville, Ind.—1st $900; 2d, $350

Norwalk, O.—Department was volunteer.

Kalamazoo, Mich.—$3,500.

Buffalo, N. Y.—No change, as we occupy new territory.

Dayton, O.—This cannot well be ascertained.

Auburn, N. Y.—Am not able to state. We only had hand engines before these works. Expenses not more than one-half as much, and our city largely increased.

Lockport, N. Y.—The old fire department consisted of three hand engines. There is not much difference as the companies have been kept up for use beyond the territory protected by the Holly system; $3,000 per annum is the expense of the department.

Columbus, O.—$19,849.24. No report for the past year.

An approximate estimate of what would now be the cost of your fire department without Holly Water Works?

Peoria, Ill.—$20,000.

Cumberland, Md.—$900.

Binghampton, N. Y.—The interest on the bonds would about equal former cost of running the fire department.

Saratoga Springs, N. Y.—$2,500.

Laporte, Ind.—$2,000.

Connersville, Ind.—Our old system was two hand engines.

Kalamazoo, Mich.—$1,600.

Buffalo, N. Y.—Not applicable to our case.

Auburn, N. Y.—If steamers were used, think it would cost at least four times what it does now.

Lockport, N. Y.—$11,000.

Has any serious accident happened to your works or mains since their construction, and if so, the cause?

Peoria, Ill.—None.

Cumberland, Md.—None, but a defective cog-wheel at first, which could not be discovered before a trial.

Ogdensburg, N. Y.—None. One pump has been on the go for summer use since the opening of the works without a fortnight's rest to date.

Binghampton, N. Y.—Not the slightest, or at least nothing of account.

Saratoga Springs, N. Y.—Several street mains have bursted, probably owing to defects in pipe.

Laporte, Ind.—None.

Connersville, Ind.—None; no expense.

Norwalk, O.—None.

Kalamazoo, Mich.—None, except at first fire after introduction of the works, when hydrant was broken by an inexperienced hydrant man.

Buffalo, N. Y.—None.

Governeur, N. Y.—The pipe through the river broke from being improperly put down. No further accident to mains or works.

Vergennes, Vt.—None.

Minneapolis, Minn.—None.

Auburn, N. Y.—None. We have been ready for every fire.

Lockport, N. Y.—None.

Columbus, O.—No accident has happened through imperfect work or material.

Has your experience in it satisfied you that the system is one which can be enlarged and extended, so as to provide for the future wants of your city as well as it does for present ones?

Peoria, Ill.—It does.

Cumberland, Md.—Yes, sir. It will supply water in quantity for 6 miles.

Ogdensburg, N. Y.—It has.

Binghampton, N. Y.—I don't know but it can be extended without limit. We have extended two or three times.

Saratoga Springs, N. Y.—Experience so limited cannot say.

Laporte, Ind.—Yes.

Connersville, Ind.—It will answer, in my judgment, for any sized city.

Norwalk, O.—We can see no reason why it cannot.

Kalamazoo, Mich.—Yes, to a capacity of its use by 30,000 inhabitants, its intended capacity for this place, with its prospective increase. The size and capacity of engine and pipe (mains) should be greater in a place or city your size, but which would not probably increase the running expenses of the works.

Buffalo, N. Y.—Yes.

Vergennes, Vt.—If you have pumps of sufficient capacity, they can be largely extended.

Dayton, O.—Yes.

Minneapolis, Minn.—Yes. We think the Holly systsm can be enlarged to almost any extent.

Auburn, N. Y.—It has.

Lockport, N. Y.—It can be extended to an almost unlimited extent.

Columbus, O.—In cities of large population the system would do by using more machinery.

Is the system generally popular with your citizens, and has it met fully the guarantees of its builders, and the expectations of the advocates of the system?

Peoria, Ill., Very popular, and is all that it was guaranteed to be,

Cumberland, Md., It does; but at first our citizens were prejudiced against it on account of being a new system.

Ogdensburg, N. Y., Extremely popular. It has not an enemy; exceeds expectations of its warmest friends.

Binghamton, N. Y., In efficiency, indeed, in every particular far exceeds the highest expectations of our citizens.

Saratoga Springs, N. Y., Yes, it is generally popular, but we have hardly had a chance to try it yet.

Laporte, Ind., Yes.

Connersville, Ind., It has; no one to condemn it.

Norwalk, O., We think it has fully.

Kalamazoo, Mich., Yes, fully.

Buffalo, N. Y., With those supplied therewith, yes. Guarantees all fulfilled.

Gouverneur, N. Y., Yes.

Vergenness, Vt., Nearly so, with the exception of our service pump.

Dayton. O., It has.

Minneapolis, Minn., Yes.

Auburn, N. Y., It is, and has, and more than promised us.

Lockport, N. Y., Is popular, and has met the expectations of all.

Columbus, O., As a general thing it gives satisfaction, especially to large tax payers.

From what source do you obtain your supply of water? Have you connected with it a system of filtration? and if so, does it purify the water so as to make it available for drinking and culinary purposes?

Peoria, Ills., From the Illinois river. We do not filter the water, although we have a filter bed in connection with the works. The water is very clear, except about a month in the spring.

Cumberland, Md.—From the Potomac river. Yes, we have a good and thorough double system of filtration, which purifies the water.

Ogdensburg, N. Y.—From the Oswegatchie river. No system of filtration; consumers filter for themselves, and pronounce it excellent for drinking purposes. Is quite soft.

Binghamton, N. Y.—We have two wells 24 feet deep and 20 feet in diameter, located on either side of the engine house, and the water flows into them, from what source we do not certainly know. The wells are about 200 feet from the Susquehana river, gravel formation.

Saratoga Springs, N. Y.—A mill stream. We have a filter, and the water where used much is clear and pure; we don't drink much of it, but it is good to cook with.

Laporte, Ind.—First, from a lake; second, yes; third, yes.

Connersville, Ind.—Our supply of water is now taken from the hydraulic canal. We expect to sink a well this summer.

Norwalk, O.—So far from a small stream emptying into Huron river. The water is filtered into the well or resorvoir which so purifies it that there is no better drinking water in the village.

Kalamazoo, Mich.—Have heretofore

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taken water from a small stream supplied by springs at its source, which has been entirely satisfactory for drinking purposes. We are about to attach it to our new well just built at an expense of $8,500, which would well pay your committee to call and examine.

Buffalo, N. Y.—Niagara river; no filtration; generally used.

Governeur, N. Y.—We obtain it directly from the river, but we intend to attach a filterer for domestic use.

Vergennes, Vt.—From a river; not any filtration, but ought, and probably shall have at some time for our service pumps.

Dayton, O.—From a well within about 200 feet of the bank of the Miami river; we have no system of filtration whatever, and need none.

Minneapolis, Minn.—Mississippi river water. No filtration. Purified by house filters.

Auburn, N. Y.—From Owasco river, outlet of Owasco Lake. Use no filter—water satisfies without. If we should have any complaint should filter through the soil.

Lockport, N. Y.—From the Erie canal. Have no system of filtration. Water is not used for domestic and culinary purposes.

Columbus, O.—We obtain our supply for all domestic use from a large cistern which at present gives ample supply; the water is rather hard for washing clothes, although softer than our river water.

REMARKS.

Peoria, Ill.—As a protection from fire the Holly system cannot be excelled. Previous to the Chicago fire the insurance in the city was reduced nearly one-half. Now, some of our largest manufacturing establishments do not insure at all, but have provided themselves with hose, and had an additional fire plug put in at their own expense. Our department now consists of three hose carts only—the men are paid a small salary—the carts are run with horses. As to how high water can be thrown? We have thrown a solid two-inch stream 229 feet. Where a large quantity of water is wanted we have a Y that attaches to both openings in the plug. We have had no fires since the completion of the works but what were easily subdued.

Cumberland, Md.—We are about to extend about four miles of mains, which has been estimated by our Superintendent to cost $20,000. With the proposed extension of water mains we will have in all ten miles, making a total cost, including sundries, of $125,000. Size of maines, 18, 12, 10, 8, 6 and 4 inches.

Ogdensburg, N. Y.—Our works driven by water power, but we have a steam engine worth $7,500 to provide against every contingency. Can take take water from the St. Lawrence river if desirrable. Have a water works building, which, with Holly machinery and engine, cost about $50,000. The rest of the expense is in mains, hydrants, gates and wrought iron pipes to carry water across the Oswegatchie river to supply the West side.

Saratoga Springs, N. Y.—Our works are hardly completed yet, and are still in the hands of commissioners of construction, and therefore our knowledge of them is very limited. The expense of running the works is variously estimated at from $8,000 to $15,000.

Norwalk, O.—We should be happy to show you our works and give you an exhibition of their capacity for throwing water, if a committee of your citizens, or of your Council should find it convenient to visit us.

Kalamazoo, Mich.—The reduction in your rates of insurance should be sufficient to pay your citizens ten per cent. on the cost of introduction.

Governeur, N. Y.—There is no experiment with this system of water works, and by your consulting with those who have had experience with them, you can get much that will be of value to you, if you contemplate putting in these works. Our works were the second or third—second, I think—that were put in successful operation, and since then there have been some improvements.

Lockport, N. Y.—The Board of Underwriters in Lockport make the following statement of facts and opinions:

"We, the undersigned members of the Board of Underwriters of the city of Lockport, cordially give our testimony in favor of your system of Water Works, as invented by B. Holly, Esq., for the reasons that it is always in order for use, and can be put to work in case of fire with greater facility than any other fire apparatus; that it is more effective than other means of extinguishing fires we have ever seen; that in no case during the five years it has been in use in this city, has it failed to confine the fire to the building in which it originated; that its effect is to largely reduce the rate of insurance, and to render risk of large conflagrations less hazardous through the district where the Water Works are extended, and the hope that that district will soon embrace the whole city."