

WATERWORKS.

FRIDAY'S TESTS.

Complete Success in Every Respect.

Equal to any in the Country.

Their Capacity, &c. &c.

The waterworks are completed, and Dubuque may feel justly proud of the achievement made in their completion. The testing of them has been delayed somewhat from various causes, but yesterday they were put to a final test, and the result was a perfect success in demonstrating their power and utility.

Mr. R. T. Scowden, the consulting engineer of the company having the waterworks contract in hand, arrived in Dubuque a few days since and Friday was set as the day for a general and final test.

IN THE FORENOON

the hydrants were tested with the hose and in the afternoon the steam fire company made a trial with their engines. The result of the experiment in the forenoon was a proof that each and every hydrant throughout the city has a capacity equal to that of a steam fire engine; that the average length of the streams thrown from the several hydrants is one hundred feet. The plug at the corner of 4th and Iowa streets threw a stream completely over the chimneys of the Jefferson house, and seven different plugs were working at the same time. On the corner of 8th and Locust streets a stream was thrown some fifteen or twenty feet above a three-story building. The operation of several plugs at the same time did not seem to affect the size or power of the stream from any of them enough to make it worth mentioning—the variation in the head being only one inch; and to give it a fair test, the plugs were kept at work for two hours or more, and still the strength remained the same, so that the doubts of many on this point will be set at rest.

IN THE AFTERNOON,

At 1 o'clock, the fire department had out their engines, to finally settle a question of supply and demand in their minds. They questioned whether a single hydrant was capable of supplying water as fast as one of their steam engines would require when under full headway. The plug at the corner of 4th and Locust street was first tapped and the engine hose attached when full steam was up, and this question was settled, in that the engine was overflowed with water; the belief is, that a hydrant is capable of supplying two of the engines, and if hose of sufficient strength can be used the water from the plug will start the machinery of the engine and force its way through without the aid of steam. Two steam fire engines will pump a thousand gallons of water per minute, and the hydrant having the least head in the city, will force out something over six hundred gallons, and that having the greatest head will force out proportionately more. Trials were made by the engines in other parts of the city with a like satisfactory result. There were large crowds on the streets to witness the test, and everybody spoke of it as a grand success.

THE GENERAL CAPACITY

of the works may be set down as follows: Storage capacity of the present reservoir, 250,000 gallons; the minimum supply of water to the reservoir in 24 hours, 619,000 gallons, allowing each inhabitant 30 gallons per day, estimating the population of Dubuque at 20,000; height of the reservoir above low water is 120½ feet; the greatest head in the city is at the corner of Main and First street; the least head at the corner of Bluff and Fifteenth streets; the plug having the greatest head will throw a stream 125 feet in length; there have been eight miles of pipe already laid. To make more certain of an abundant supply of water, it is proposed to build

ANOTHER RESERVOIR,

which will have a capacity of 2,000,000 gallons, the plans and profiles for which are drawn up and Mr. R. T. Scowden, the consulting engineer, returning to Cincinnati last night, took them with him for further consideration, and gives it as his opinion that the reservoir can be completed in thirty days after commencement has been made.

THE QUALITY OF THE WORK DONE.

Great credit is due to the parties who have had the project in hand for the substantial and thorough manner in which the work has been done. Messrs. S Chamberlain, H W Clark, Capt J W Parker, and R J Gibbs, the gentlemen who compose the company, have made a great outlay of time and patience in attending to the duties devolved upon them, and Mr. Rutherford, the contractor for laying the pipe, is also worthy of much commendation for the efficient manner in which he done his share. In the tests made, all the attachments were found perfect throughout, and every part of the work sound. As a safeguard against frost, the pipes have been laid at a depth of six feet below the surface, and the hydrants have been enclosed in wooden boxes and filled in around with manure, so that they will not freeze.

IN CASE OF FIRE

The convenience of the water plugs cannot be overestimated; with a well drilled hose company the plugs can be tapped, hose attached and effective service rendered in a very short space of time, without waiting for the engines to make ready for the emergency. In large buildings, hydrants can be placed on every floor, and even on the roof, so that the entire building can be flooded with water in an instant.

THE ADVANTAGES

Of our Dubuque water works are manifold. In the first place there are no different degrees of pressure, as in other systems, but we have one constant and undiminishing power which can be used at any time. Then there is nothing artificial; it furnishes its own motive power in the natural flow of the water; there is nothing to burn about it; there are no engines, no frame work—there can be no danger to the water works from fire.

THE QUALITY OF THE WATER

Is almost pure; it has passed the analysis of the most eminent chemists, and all agree to its fine quality. Prof. Locke, of Cincinnati, pronounces that it could not be better, and in fact we could not expect it to be otherwise, flowing as it does from the heart of the hills whose caverns are protected from summer's heat and winter's cold by walls of rock and mineral, and are everlasting in delicious coolness.

THE COST

Of this work is undoubtedly great; the exact estimates regarding the entire expense have not yet been made out, but when they are we will present them to our readers. Notwithstanding the expense, we venture to say they prove to be worth more than double their cost in course of time, and stockholders will lose nothing on their investments. There is not a better system of water works in the country—and, the engineers say, in the world. To be sure, they are not planned on such an immense scale as some others; they are not like the conduits of Rome, which furnished 312 imperial gallons per day to a population of a million; nor the Croton water works of New York, and many other projects of a like character, but they are made suitable to our present and future use and convenience, and they could be no better.

As we have heretofore mentioned, all parties were perfectly satisfied with the result of the tests, and the works will probably be accepted at the next session of the council.