DAILY NEW ERA.

ATLANTA, GEORGIA, : NOVEMBER 29.

Water Works for the City of Atlanta.

To-night our City Council meet in committee of the whole to consider the question of water works.

THE IMPORTANCE OF THE SUBJECT.

A meeting to consider a more important subject could not be held. It is a question of most vital interest to our community, and the satisfactory development of a perfect system of water works will tend more to make our city what it ought to be than anything else. It has been, and will be until supplied, our greatest necessity, and no question of like importance has come before the City Council since the war.

In this regard we trust there will be no penny-wise and pound foolish policy. The city fathers must remember they are legislating for their children and children's children, spending money which future generations must pay, and with that on their minds, let us hope that the system adopted, the bid accepted, will be one that will stand the test of time.

A PRACTICAL IDEA.

Water works is not a theoretical system, the science of years has been brought to bear upon it. The ablest engineers of the two most civilized continents have made it their special study. Millions have been spent upon it, and to-day the hygenic properties of our cities and towns becomes a primary question with settlers; the next being asked concerning the scholastic system.

THE BILL AND AUTHORITY OF THE COMPANY.

By dint of energy and perseverance a bill was passed in the last Legislature authorizing the City Council to establish a system of water works, and in obedience to the provisions of that act the City Council meet to-night to consider the question and the various bids.

It is to be hoped that there will be no hasty action on the part of our City Fathers. The question is one which, as we have said, involves too much money and too many interests to be disposed of hastily. If they need more time they should take it, and as a measure of precaution we would suggest before a final decision is come to, that some eminent engineer, who has made water works his especial study should be engaged to examine the different systems and plans submitted, and report upon the same. Such a course would require time but it would be time well spent if it resulted in giving our city a perfect system.

DIFFICULTIES TO BE OVERCOME.

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Atlanta presents difficulties to an engineer of no ordinary character when the question of water works comes up. It is the great business center of a vast and flat region, where it is almost impossible to get any natural pressure, consequently the erection of a perfect system of water works is difficult and expensive, presenting obstacles which, but a quarter of a century ago, would have been deemed insurmountable, but science has made such rapid strides that the question is not, in the present day, what an engineer can do, but what he cannot do. When oceans are connected with a magnetic wire, when continents are crossed with an iron belt five feet wide, when steam has reached such perfect development as to be not only the helpmeet but the indispensable agent of man; it is folly to talk of what cannot be accomplished by engineering skill.

THE SYSTEMS PROPOSED.

We believe that there will be many systems brought forward; or at least as many as four or five in a more or less complete state. We are enabled to give our readers a fair description of two of the more prominent of these systems, and one of which, will, in all probability, be selected as the most feasible plan. The first is:

THE CORNISH PUMPING ENGINE.

This is perhaps the most simple of all the systems of water works. It provides a primary tank or dam, powerful engines, a standpipe and a distributing reservoir, amply sufficient for ordinary supply. In case of large fires the engineer is notified in ample time to replenish his reservoir by increased power.

We understand that a bid has been put in for works of this discription. The water is raised into the standpipe by means of two (2) Cornish Bull engines. They are upright engines, and measure, from the bottom of the bed-plate to the top of the cylinder cap fifty-two (52) feet, they are exactly alike. The steam cylinders are sixty (60) inches in diameter, and the pumps twenty-one (21) inches in diameter, the length of stroke is ten (10) feet.

These engines are driven by six double fine boilers, each forty-two (42) inches in diamater, and thirty (30) feet long.

These engines are driven by six double flue boilers, each forty-two (42) inches in diameter, and thirty (30) feet long.

The pumping capacity of the works is 2,000,000 gallons in twenty hours, running the engines at twelve strokes each per minute; they can be worked with safety to a speed of sixteen strokes per minute, thus greatly increasing the supply.

By this system it is proposed to dam up South River at a point three miles and a half from the city, where, at a comparately small cost, a supply of water for months can be accumulated. Here the engines and standpipe will be erected and the water pumped into a reservoir of a capacity of 500,000 gallons, which will always be kept full, and which will be erected

at a high point on Peachtree street. The mains of communication between the pump and resorvoir will be iron tubing twenty inches in diameter, whence it will be distributed through the city by mains of iron twelve to four inches. The engine house and smoke-stack will be of brick; the stand pipe about 230 feet high of brick and iron. The machinery will weigh some 300 tons, and the estimated weight of piping is 6,000,000 pounds. The balancing beam, twenty-three feet in length, will weigh over five tons. The city will have to furnish buildings and foundations. The proposed contractors, under this system, are Messrs. Stidham & Co., of Philadelphia, through J. C. Adams, Esq., and the Norris Iron Company, of Philadelphia, through T. T. Woodruff, Esq., President.

The most complete and successful Water Works built under this system are at Erie, Pennsylvania. They are also used at following places: Philadelphia has five; Easton, Pa., one; Louisville, Ky., two; Cleveland, Ohio, two; Jersey City, two; St. Louis, two; and Buffalo, two; besides there are several of considerable size in use by private corporations, draining mines or supplying canals. This system is fully endorsed by H. P. M. Birkinhime, Esq., Civil Engineer.

The next most prominent bid for the favor of the Atlanta community is a system of

WATER WORKS WITHOUT RESERVOIRS.

The Holly Manufacturing Company put in a bid for a system of water works without resevoirs. They thus do away with the great primary expense of building water works, and also do away with fire engines, as by this system water is pumped directly into the mains, a sufficient pressure being kept up to furnish an ordinary supply.

How then are fires to be provided for? This is done by a delicate piece of machinery connected with the engines. If the ordinary supply requires say fifty pounds of hydraulic pressure and a fire requires 100, the rapid depletion causes an immediate alarm at the Engine House and additional power sufficient for anything is put on and the water consequently supplied. Every fire plug by this means becomes a fire engine capable of throwing a stream from 125 to 150 feet high with 200 feet of hose according to the nozzle used.

This company propose to erect four engines and four boilers. In ordinary use not more than one engine and boiler are required, consequently there would be three engines and three boilers always in reserve. It is estimated that by this system over 6,000 tons of pipe would be required supposing the water to be taken from the Chattahoochee river.

Now by adopting this system and granting its utility as is fully demonstrated by some thirty places that have adopted it, such as Rome; New York; Dayton, Ohio; Auburn, New York; Vergennes, Vermont; Peoria, Illinois; whose testimony in favor of the system is very satisfactory. The question arises in our mind, or the series of questions, can an engineer, even supposing him to be at his post, be communicated with, with sufficient rapidity at a distance of five or ten miles to guarantee a supply of water in case of a fire at any hour day or night. Secondly, what will be the diminution in our expences if we have to keep up fire companies to run hose carriages. Thirdly, will not the great pressure constantly on the pipes, caused by direct pumping, prove a large and never ending expense. With water works half a mile off this system might answer well, but we should prefer to see it tried at that distance than at ten, five, or even three miles.

One thing we note with regard to this system of water works, as with any other good system, that the boards of underwriters in many places have reduced their insurance premiums in consequence of its adoption. The queries we have propounded are claimed by the advocates of the company to be answered by experience. No failure having yet taken place where the system has been adopted. In many cities the cost of the fire department has been materially reduced.

But the subject lies with the City Council whose bounden duty it is to see that to the best of their judgment the best plan is carried out. They have competent advisers, and if not, should engage them, and it will be their fault in a great measure of future generations find fault with the system of water works adopted for Atlanta at the present time.