

# THE WATER WORKS.

## The Plans for their Construction.

## Synopsis of the Contracts Made.

## The Buildings, Pumps, Lines of Mains.

### Etc., Etc., Etc.

The arrangements for the construction of water works have nearly all been completed, the contracts have all been signed by the Mayor and Clerk on the part of the city, and in a few days the bonds will be issued and the deeds for the water power signed. At the request of the committee, the STAR refrained from publishing an abstract of the plans and specifications until after the contracts had been awarded and signed, in order to avoid petitions from dissatisfied property owners for changes. The Committee had arrived at a decision after careful deliberation and consideration of all valid objections and were not willing to re-open the subject.

The contract for the house and foundations, turbine wheels, pumps and engines was awarded to the Cope and Maxwell Manufacturing Company of Hamilton, Ohio for the sum of \$33,625. The specifications are explicit and well guarded, and the STAR gives a brief synopsis of them:

#### THE HOUSE.

The Pump House to be of brick, one story in height, 18 feet walls, in the form of a T, and of the following dimensions: Engine room, 64 feet front by 30 feet 4 inches in depth; boiler room, 32 feet front by 38 feet in depth, being of a sufficient size to admit another set of engines, pumps and boilers of the same size and capacity as is proposed to be erected for present service. All to be substantially built of first-class material and workmanship. It is to be located on what is commonly known as the Cecil & Wilson mill property.

#### TURBINE WHEELS.

The pumps are to be driven by three Little Giant Turbine Wheels; one 40 inches in diameter, and two each 54 inches in diameter. The power to be transmitted by a pin on 24 inches in diameter and twelve inch face, and a mortice wheel eight feet in diameter and twelve-inch face. The pinion and wheels may be thrown in and out of gear, so that the pumps may be run by water or steam at the will of the operator.

#### THE PUMPS.

The pumps are to be in number, of the piston class, the cylinders to be separate and bolted in their places, so that they may be readily removed for repairs; the valves are to be of rubber, sliding upon central stems, and seated upon seats of pure composition metal; the valve chambers to be provided with hand holes for convenient access to the valves; air and vacuum vessels of ample size to be placed centrally between each pair of pumps; the pumps are to be eleven inches in diameter and twenty-four inch stroke; the pumps are to be set on bed plates, which also support the guides and plummer blocks for the driving shafts.

#### THE ENGINES.

To provide against stoppage by failure of the water power steam engines are to be furnished to operate the pumps in such an emergency; said engines to consist of two compound engines (each operating one set of pumps) of the following dimensions, to-wit: Diameter of high pressure cylinder about twelve inches; diameter of low pressure cylinder about twenty inches; length of stroke, sixteen inches. The engines to be placed vertically between the pumps and driving shaft, supported upon a strong frame work, and arranged so as to be thrown in and out of gear at the will of the operator. The air pumps to be single acting, operated by a beam attached to the piston rod of the low pressure cylinder. The engines are to be instantaneously convertible from condensing to non-condensing, using high pressure steam in both cylinders. By this arrangement the engine may be operated as a condensing engine with a high degree of economy when performing regular duty for domestic supply, and, at the same time, being convertible, an effective fire pressure may be obtained at any moment. By this the engine is kept in constant readiness in case of fire. By the arrangement of the eccentric the point of cut-off may be changed at will, and the engines are made reversible, equalizing the wear upon the slide and cogs.

#### THE BOILERS.

The boilers are to be two in number, set separate, each to be sixty-two inches in diameter and fourteen feet long; each with one hundred 5-inch flues; to be of the best charcoal hammered iron, five-sixteenths of an inch thick in shell and five eighths of an inch in heads of boilers; the longitudinal seams double riveted and all thoroughly braced and tested.

#### OTHER DETAILS.

These specifications are intended to include everything necessary to construct the pump house and foundations, and everything necessary to construct, erect and place in operative condition the machinery complete, together with the wheel pit, head and tail races, pumps, foundations, and all connecting pipes for both suction and discharge, and all special wrenches, tools and appliances for attaching and detaching the parts thereof, and whatever may be necessary to complete the work in a thorough, workmanlike and satisfactory manner. All the material used shall be of the very best character, and the entire work done in a substantial and workmanlike manner.

The pumping machinery is to be of sufficient capacity to deliver three million gallons of water to a vertical height of two hundred and fifty feet above the floor of the pumping house in twenty-

four hours, and shall be guaranteed to perform such service for a period of one year immediately succeeding its being put into operation. The said Cope & Maxwell reserve the right of selecting or approving the person to act as engineer in charge of said pumping machinery for the period of one year, during the term of their guarantee, to be employed at a price not to exceed the value that such services can be elsewhere obtained; said engineer to be paid for his services by the City of Logansport.

#### THE PIPE.

In consideration of \$91,000, D. A. Chappel, of Chicago, was awarded the contract for pipes, valves, etc. The specifications are lengthy and provide against all emergencies.

The pipe, as at present contemplated, will be distributed as follows:

Twenty inch pipe—From the works, up Eighth to Broadway.

Sixteen inch pipe—West on Broadway to Plum from Eighth.

Twelve inch pipe—From Broadway south on Eighth to Spear and Spencer; from Broadway south on Third to Canal street; from Haynes northward on Plum to Miami, and from Plum southward on Haynes to Market.

Ten inch pipe—From Eighth up Broadway to Fifteenth, south on Fifteenth to Toledo; from corner of Spear and Spencer up Spear to Ninth, and down Ninth to Lytle; from Haynes west on Market to Heath.

Eight-inch pipe—From Third up Canal street to Lytle, east on Lytle to Ewing, north on Ewing to Toledo, east on Toledo to Sixteenth, and south on Sixteenth to P., C., & St. L. shops; from Broadway south on Twelfth to Toledo.

Six-inch pipe—From Eighth west on High to Fourth, south on Fourth to Canal street; from Broadway north on Third to North, and east on North to Seventeenth; from North on Fourteenth to Broadway; from Third west on Canal street to First, and thence north to Eel street, and thence northeast on Eel to Broadway; from Twelfth to Fifteenth, on George; from First on Market to Seventeenth; from Wright west to Twelfth; from Plum northeast on Miami to Sycamore.

Four-inch pipe—From Market north on Heath to Broadway; thence on Broadway to Barron, thence on Barron to Market; from Miami to Bates on Plum, and thence west on Bates to Heath; from North to High on Tenth; from Market to Spear on Tenth; from Market to George on Thirteenth; from Fifteenth to W. & E. Canal on Wright.

#### LOCATION OF HYDRANTS.

Hydrants, as at present contemplated, will be distributed as follows:

On Seventeenth at North; on Sixteenth at North and Market; Fifteenth at Broadway, Spear, Smead, Usher and W. & E. Canal; on Fourteenth at North, Market, George and Wright; on Thirteenth at Broadway and Spear; on Twelfth at High, Market, George and Smead; on Wright at W. & E. Canal; On Eleventh at North and Market; on Tenth at High and Spear; on Ninth at North and Market; on Eighth at Water Works, Broadway, Market and Spencer; on Seventh at High and Broadway; on Sixth at North and Broadway; On Fifth at High, North, Broadway, Market and Canal; on Fourth at North Broadway, Market and Canal; on Third at North, Broadway, Market and Canal; on Second at Market; on First at Canal; on North between Seventh and Eighth; on Broadway between Eleventh and Twelfth, and between Ninth and Tenth; on Market between Sixth and Seventh, and between Fifth and Sixth; on Canal at Berkley and Taylor; at the corner of Lytle and Ewing; on Toledo between Ewing street and Wilson's addition, and at Twelfth street, Thirteenth, Fourteenth, and at Sixteenth street, railroad shops; on Miami at Elm; on Vine at Plum; on Bates about half-way between Heth and Plum; and at Heth, on Market at Brown and Cicott; on Broadway at Cicott, Barron and Heth, and such other places as the Committee and Engineer may determine where the remaining hydrants shall be placed.

This city is placed in a peculiar position by the recent decision of the Supreme Court of the State, being virtually without a head. The Mayor having gone off to California, we have no authorized judicial officer. The police are therefore chary about making arrests for fear of laying themselves liable to actions for damages. This leaves matters in a very confused state, and the Council should take some action "to bring order out of chaos." Judge McGregor is unwilling to deliver the police docket to any one but the Mayor or to some one presenting an order from him, and it is stated that Mayor Shultz failed to leave such an order. It is hoped that the council at its meeting to-morrow night will make such arrangements that the police can act with confidence in the matter of making arrests, and not be intimidated with the prospect of a suit for damages.

#### The Y. M. C. A. Revival.

The meetings at the First Presbyterian church yesterday were well attended. In the morning the time was devoted to an exposition of the different effects the revival was having on the hearts of those attending. Several gave their experiences, all acknowledging that the good work now going on had only stimulated them to renewed efforts in the cause of religion. In the afternoon at four o'clock a bible meeting was held and was well attended. In the evening a large meeting was held in the Broadway M. E. Church, and was addressed by several members of the congregation. The revival will continue all week.

Mr. T. B. Rhodes has purchased the property on the south side of Market street, adjoining the alley between Fourth and Bridge streets, from Mr. Daniel Laughlin. The price paid was \$7,000. Mr. Rhodes will put in an oven and open out a branch bakery and eating house on the premises.

In some portions of the city, the sidewalks are almost impassible from the deep mudholes surrounding them.