

PROPOSITION FOR WATER SUPPLY.

The Board of Trustees, at their meeting Saturday morning, opened and read the proposals that had been received in accordance with notice published by the Board in the UNION for the sixty days previous. There were five propositions altogether—one from Horace Adams, of this city; one from A. L. Fish, of San Francisco, and three from the Holly Manufacturing Company, of Lockport, New York. We give below but one of these Holly propositions, which offers to furnish the machinery for \$58,000; one of the other propositions was to furnish machinery less extensive for \$48,000, and the other plan offered a set of machinery differing in style from the first for \$52,000. The Board decided to meet next Wednesday, at 10 A. M., to give Fish an opportunity to explain his system.

ADAMS' PROPOSITION.

Horace Adams proposed to set up the machinery, upon foundations and brickwork furnished by the city authorities, and place it in running order within the specified time (all the work to be done in this city) for the sum of \$58,000 in gold coin, or, at the option of the Trustees, \$61,700 in certificates of indebtedness of the city authorized by law. It is understood that he will use pumps similar in style to those now in the water-works, and run them by Corliss engines.

There shall be four boilers (tubular) 48 inches in diameter by 16 feet long, with two double furnace fronts and full furnaces of grate-bars; also two double breechings and two smokestacks; also one steam-drum, two safety-valves, with steam-pipes, and globe valves to form the necessary connections with the several boilers, also gauge-cocks and two steam-gauges.

There shall be two steam pumps, with necessary steam-pipes to connect with the steam-drum, and the requisite water-pipes, globe and check-valves to supply water to and through the heater to the several boilers, as shown in the accompanying drawing.

There shall be two engines, each having a cylinder of 18-inch bore by 41-inch stroke, with the necessary pipes, etc., to form connections between said engines and the steam-drum; also exhaust pipes to the heater and open air. There shall be keyed on the crank-shaft of each engine one spur pinion, to work with the spur gears, which are keyed on the intermediate shafts; also at the ends of said intermediate shafts there shall be secured the cranks which, by connecting rods and cross-heads (which cross-heads shall be supported by slides), shall work the piston-rods of the pumps.

There shall be four double-acting pumps, 15 inches bore and 72-inch stroke, with brass valves and valve-seats, cast-iron valve-chambers and delivery-pipes.

The suction-pipe of each pump shall, for the purposes of this specification, be deemed and understood to extend no further than the first flange next beyond the air-chamber as located in the drawing.

The delivery-pipes shall, through the valve-chambers, branch pipes, elbows, pipes and valves, supply water to the stand pipe (which is 48 inches in diameter), and through this stand pipe directly to the street mains through the pipe, which pipe shall for the purposes of this specification be deemed and understood as terminating at 27 feet from the center of said stand pipe. The stand pipe shall have two safety-valves, and one overflow or surplus water pipe, which may be extended upwards to the water tank, but which for the purposes of this contract shall be deemed and understood to terminate at the outer flange of the water gate, and at a shoot nozzle and blank flange between the said water gate and the stand pipe. There shall also be a water-gauge connecting with the water pipe.

The whole of the above described machinery shall be constructed and erected in a good and workman-like manner.

FISH'S PROPOSITION.

I herewith submit to your consideration plans and specifications, as called for by your honorable Board, for machinery necessary to raise three million gallons of water per day (twenty-four hours) against a pressure of 100 feet, and in case of fire, to increase the pressure to 200 feet head. The pumping machinery I propose to erect for this purpose consist of 3 Knowles' patent steam pumps, each of 1,550,000 gallons capacity, in connection with two steam boilers, each 54-inch diameter, 16 feet long, of the best C. H. No. 1 charcoal iron, 5-16-inch thick, heads, 5-8 flanged iron; to contain each 68 3-inch tubes. Or, should the Trustees prefer, I will put instead three boilers, 48-inch by 16 feet, shell, 5-16; heads, 1/2-inch; each to contain 44 3-inch tubes; boilers well braced, with steam-drum connecting the three boilers and steam gates to break connections from all in case of damage, or when but one or two only would be required. Also mud-drums with each. Separate stands, back plates, fronts, grate bars, such as may be required for either wood or coal; with Bruchings's smokestack (whatever length may be required); all necessary check-valves, gauge-cocks, blow-off-cocks, steam-gauges for each boiler, safety-valve (steam-drum) to be covered with Ives & Mann's patent non-conductor; all necessary feed-pipes, heater, with No. 5 Knowles' pump to feed hot water into boilers. Boilers put up in brick and mortar, furnaces lined with fire-brick, fronts well stayed, walls thoroughly braced with rods, collars and bolts, smokestack well guyed, and, in fact, work to be done in the very best manner and approved by your honorable body, or constructing or consulting engineer. The pumps to be three in number, each 32-inch diameter, of steam cylinders, water cylinders to be composition lined, piston-rods all to be iron jacketed with brass. The suction-pipe to be of 1/4-inch iron, riveted, 18-inch diameter, connected to every pump with 12-inch connections. Discharge pipes, each 10-inch, connecting one horizontal cylinder, 4-feet diameter, 20 feet long. The connection from this to city's main to be 18-inch diameter, of 1/4-inch pipe. I propose to extend from near the bottom of this horizontal cylinder a pipe, 2 or 2 1/2-inch diameter, 200 feet high, properly stayed, with the top open. I have attachments to connect this receiver to a lever valve which throttles steam to the pumps, making them automatic in starting and stopping, not infringing in the least with the Holly, just as effective and to the same purpose. I propose to have these pumps so arranged as to work one, two or three at once, as may be required. Steam cylinders of the pumps to be lagged and steam pipes covered; foundations for pumps to be of brick or timbers, as may be required. I propose everything to be in a substantial, suitable and workmanlike manner; I furnishing everything, perform all labor, get up steam, run the machinery thirty days; the party for whom the work is done to furnish fuel, oil and a good fireman. Should everything work to the satisfaction of the Trustees or examining committee, the same to be accepted and become property of the city of Sacramento upon the payment of certificates of indebtedness, as proposed and authorized by the city of Sacramento, to the amount of \$24,700; otherwise machinery to revert back to me.

HOLLY PROPOSITION.

Two pairs of double-cylinder, quarter crank, condensing, piston steam engines, mounted upon a heavy, iron-arched frame. The four cylinders for the engines above described are to be each sixteen by twenty-seven inches, and so connected at the crank shaft as to take steam at eight different points at each revolution. There is also to be attached to the above frame four double-acting pumping engines, each driven directly by one of the above-named cylinders; the said pumping engines to be each ten and one-fourth inches in diameter and twenty-seven inches stroke, and take suction at eight different points in each revolution, in order to give a uniform flow and steady pressure of water in the mains and pipes of the city; and also the necessary steam boilers, not less than three in number, of sufficient size and capacity to generate steam and enable the machinery to do the work hereinafter guaranteed. Also, Holly's patent hydrostatic pressure gauge for controlling the pressure of water in the mains and enabling the operator to vary the same for domestic uses or fire protection. Also Holly's patent variable steam cut-off, so arranged as to be operated upon by the pressure of the water in the mains and pipes for the purpose of regulating the supply of steam for the engines in the proportion due to the constantly varying demand for water by consumers. Also, donkey engine, boilers, feed pump, air pump; also, the necessary gearing, shafting, couplings, connections, steam pipes and fittings, steam valves, steam, water and vacuum gauges in engine room, steam gauges in boiler room, one for each boiler, blow-off cocks, breeching, fire fronts, grate bars, one rotary steam engine, two Holly's rotary pumps for the purpose of throwing five streams as hereinafter stated, together with all other machinery needed inside the building in which it is to be placed as hereinafter provided to make the machinery effective and adapted to the use hereinafter stated. The said machinery will be delivered and set up, ready for use, in the city of Sacramento, in a building and upon foundations to be built and furnished by said city of Sacramento in accordance with plans and specifications which shall be furnished said city by said Holly Manufacturing Company free of expense to said city. The above described machinery includes the connecting pipes between the various parts of said machinery; but does not include suction and discharge water pipe. The city of Sacramento is also to furnish a suitable smoke stack and to do all brick and stone masonry, stone cutting and drilling, carpenter and wood work about said building and machinery, and to make suitable connections between the pumps and street mains as soon as the same can be properly done in order that the machinery may be tested when completed; and in case upon arrival of said machinery the building and other preparations for its reception are not completed, the said city agrees to take care of and protect from injury and pay all damages and expenses which may accrue on account of its exposure to the elements or otherwise. The said Holly Manufacturing Company also guarantee that the above machinery shall have power and capacity to furnish, by pumping directly into the street mains, three million gallons water in twenty-four hours under a pressure of forty pounds to the square inch. It shall also have power and capacity to furnish and reliably supply water through the distributing pipes to a height which is one hundred feet above the point at which the machinery is set. And the Holly Manufacturing Company also guarantee that the above described machinery shall have power and capacity to throw six one-inch streams of water under a maximum pressure of one hundred pounds per square inch, each one hundred feet high, directly through hydrants and one section of hose without any intermediate power of fire engines or other agency, provided said hydrants are placed upon lines of street mains of suitable size and strength. The said machinery shall be delivered, set up and in operation within eight months from the time when contract is entered into for said machinery, provided said city do what is required of it in season so that the said company are not delayed thereby.

The Holly Manufacturing Company offer to furnish the above described machinery, manufactured, set up, adjusted and guaranteed as above for the sum of \$58,000, in the certificates which, by the terms of the law and the advisement of the Board of Trustees of said city of Sacramento, they have the option of paying on account of machinery and connecting pipes, it being understood that said certificates are to be payable in gold or its equivalent value. Payment for said machinery and connecting pipes shall be made by said city to the said Holly Manufacturing Company as follows, viz.: Twenty per cent of above sum two months from date of acceptance of this proposition, twenty per cent in three months, twenty per cent in four months, twenty per cent in five months from acceptance of this proposition, and the balance of twenty per cent when the machinery and connecting pipes are completed and delivered as above specified. In case there should be blockade of snow or detention on the lines of transportation from other causes, it shall operate to proportionally extend the time for completion and setting up and testing said machinery. We herewith submit plans of above described machinery and connecting pipes which exhibit the manner in which the work is to be accomplished. The building and foundations for said machinery shall be completed and ready for reception of said machinery within six months from the time of signing and delivery of the contract for said machinery. The above machinery is designed and arranged to perform a two-fold service.

First—It will reliably furnish a supply of water for daily consumption in said city of Sacramento by pump-