and small cofferdams were also employed to make connection at both ends of the intake pipe after laying.

The suction well, the location of which on the river bank is illustrated in Fig. 3, is a reinforced concrete structure provided with a concrete roof with cast-iron



Fig. 5.-River Bank Excavation for the Intake Pipe.

covers for man-hole, screen and gate rod openings. The inlet from the intake pipe and the three low-lift pump suctions, the latter protected by duplicate copper screens, are arranged as shown in Fig. 8.

The low-lift pumps, whereby the raw water reaches the coagulation basins, as illustrated in Fig. 4, are three in number, each with a capacity of three million gallons per day. (There is a condenser connection also with the



Fig. 6.—Novel Arrangement for Laying the Intake Pipe, Lowering Screws in Position.

Power house as will be later described.) These pumps are located as illustrated to avoid occasional flooding which occurs along the river bank. They are in a pump pit, as shown in Fig. 10, within easy suction lift (about ¹⁷ feet) of the river at low water and safe from danger in time of flood. They are served by independent 16-inch cast-iron flanged sections, laid in a concrete tunnel constructed under the coagulation basins to the suction well, as illustrated in Figs. 9 and 10. These suctions have foot valves and the pumps are provided with ejectors for priming.

The coagulation basins consist of two units each with a preliminary and final basin. Regulating valves control the incoming supply of raw water.

The mechanical gravity filter plant consists of six units, each of one million gallons per day capacity. They are arranged in rows of three on either side of the operating room, as shown in Fig. 9. Each unit occupies 24 feet by $17\frac{1}{2}$ feet floor space. Underneath the filters



and on the same level as the coagulation basins are the clear-water basins, with a capacity of 125,000 gallons. The arrangement is clearly indicated in Fig. 10. The filtration plant provides for a minimum of three hours' sedimentation.

The high-lift pumps, for raising the filtered water from the clear-water basins to the service reservoir, or for pumping directly into the distribution system, are also three in number, each with a capacity of 3,000,000 gallons per 24 hours. They are placed on the upper floor level of the station and their arrangement, together with the wash-water pump and blower for the filters is shown in Fig. 9. The service reservoir has a capacity also of 3,000,000 gallons, and its location is indicated in Fig. 2. From the plant to the reservoir is a length of about 9,500 feet of 20-inch main, with an 18-inch feeder 11,000 feet long on Sissons Street to connect with the old low-level system through a pressure-regulating valve. In all pipe