

Water Supply.

THE SPRING VALLEY WATER WORKS draw their principal supply at present from the Peninsula, where they control the water-shed of thirty-nine square miles, which supplies their three storage reservoirs, namely: the Pilarcitos, the San Andreas, and the Crystal Springs. These are located at a sufficiently high altitude to supply all parts of the city by gravitation. The three reservoirs together have a storage capacity of over fifteen thousand million gallons. They and will be increased to forty-six thousand million gallons, by building the lower Crystal Spring dam. The water from these reservoirs is conducted, by means of two thirty-inch plate-iron pipes into the Lake Honda and the College Hill reservoirs, respectively. The former holds thirty-two million gallons, and the latter fifteen million gallons. These two reservoirs again feed the smaller distributing reservoirs in San Francisco, viz: Market Street, Russian Hill, Francisco Street, Clay Street, and Brannan Street Reservoirs, all of which have a capacity of more than sixty million gallons. The water from these distributing reservoirs is furnished to the inhabitants of San Francisco through a system of cast-iron pipes, laid in the streets, nearly a hundred and seventy miles in length, varying in diameter from twenty-two inches to three inches. The Company also obtain from Lobos Creek, by means of an aqueduct and pumping works at Black Point, two million gallons daily. It owns additional water rights relating to the streams above and below Spanishtown, which will enable it to utilize a water-shed of six square miles. It has also acquired Calaveras Valley, which controls two hundred and twenty square miles of water-shed, and is the next nearest source of supply to San Francisco that exists. It has facilities readily adapting it to the construction of reservoirs that will contain five thousand million gallons. From these Calaveras reservoirs the water will be conducted by an aqueduct, consisting of two miles of tunnel, twenty-two miles of pipe, and about twenty-four miles of open aqueduct, to Crystal Springs and San Andreas Reservoirs; independent pipe lines will convey the water from there to the city reservoirs. When the entire works are developed as proposed, the Spring Valley Water Works will have a storage capacity aggregating eighty thousand million gallons, and fed from a total water-shed of about three hundred and fifty square miles; all of which, when developed, will give an average yield of more than two hundred million gallons daily—which, according to the amount consumed in Liverpool, England, viz: fifteen and one-half gallons per capita, will be enough to supply near fourteen million inhabitants. The Company is also prepared, in case of any exigency requiring additional supplies, to pump water from Lake Merced to the extent of five million gallons per day.

Exhaustive surveys, looking to the building of water works to be owned by the city, by Colonel Mendell, of the United States Engineer Corps, under the direction of the Board of Water Commissioners created by the act of the Legislature of 1876, were made in 1876 and 1877. Some nine different schemes were presented as the result, but the City and County Attorney, giving an opinion against the power of the city to contract outside of the Peninsula, all further proceedings looking to the erection of new works were abandoned and overtures were made for the purchase of the Spring Valley system.

Finding it impossible to agree upon a price, the Commissioners made a formal condemnation of the Spring Valley Works, and appointed Messrs. James R. Kelly, Patrick Crowley, and J. L. Meares as a Board of Arbitration, to assess and award damages for the property condemned.

Pending their action, a bill was introduced and passed through the lower House of the Legislature of 1878, authorizing the purchase of the Spring Valley Works by the city, the price fixed in the bill being \$15,500,000. The manifest injustice of these figures, so utterly beyond the value of the property in question, awakened such a storm of indignation and brought forth a vehement protest from the people of the city, that the bill never was pressed to a passage. Since that time no further steps in the matter of the arbitration have been taken. A very general sentiment is, however, gradually manifesting itself in the community looking to the establishment of a right on the part of the city over the rates as well as property of water companies.

Public Libraries.

THE MECHANICS' INSTITUTE contains thirty-three thousand volumes, of which about fifty hundred were added during the past year. This Library is the official depository of the Reports of the Patent Office at Washington; it also possesses the English Patent Reports, some thirty thousand volumes, which were presented by the British Government, and is the only set of this Coast. It occupies a three-story brick building, owned by the Institute, on the south side of Post Street, between Montgomery and Kearny. The Mechanics' Industrial fairs are held under the auspices of the Mechanics' Institute for the benefit of this Library. The Thirtieth Industrial Fair was opened August 13, 1878, and continued for a period of thirty-two days. Expenditures, \$20,904.24. The receipts: From admissions, \$37,289.65; privileges, \$3,855.55; total \$41,145.55—gain \$20,241.31.

The building occupied by the Institute is valued at \$135,000, books and fixtures \$48,000. The ground floor is used for stores; first floor for general library and reading-room; second floor, reading-rooms for newspapers, periodicals, etc., and chess rooms. This Library is

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