

inch. 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 coast streams above and below Spanishtown, which will enable it to utilize a water-shed of sixty square miles. It has also acquired Calaveras Valley, which controls two hundred and fifty 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 forty 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-six 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: fourteen and one-half gallons per capita, will be enough to supply near fourteen million inhabitants. During the past year the Company has appropriated the water in Lake Merced for the supplying of the city, and are taking therefrom upwards of three million gallons daily. The Company has also continued the introduction, during the past year, of meter attachments to their taps, thereby enabling it, by a just and accurate measurement of quantity consumed, to estimate amount required, as well as to effect a vast economy in consumption. The Company asserts that, with the completion of its meter system, it will be able to forever abolish many of its arbitrary rates.

The Board of Water Commissioners, consisting of A. J. Bryant, D. J. Murphy, and George F. Maynard, who were appointed under the Act of the Legislature of 1876, authorizing the city to provide and maintain public water works, submitted a report of their labors January 7, 1878. In connection with Colonel George H. Mendell, of the United States Engineer Corps, they have made an examination of the following water supplies: El Dorado Water and Deep Gravel Mining Company, Clear Lake and Putah Creek, Lake Tahoe, Mount Gregory and Rubicon River, Blue Lakes and Mokelumne River, San Joaquin, South Yuba, Feather River, the San Mateo Water Works Company, Lake Merced and the Spring Valley Water Works, including Calaveras, and the water rights claimed by the San Francisco Water Company. Of these schemes the Blue Lakes, which are one of the sources of the Mokelumne River, and situated in Alpine County on the summit of the Sierra Nevada, seemed to offer the best facilities. The Blue Lakes are three in number. The highest has an altitude of eight thousand one hundred and nine feet above the level of the sea, and an area of two hundred and thirty acres. The second in altitude lies, in distance, a mile and a half below the first, and in altitude ninety-seven feet; it has an area of seventy-three acres. Near the latter are the Twin Lakes. In reality they are one sheet of water. They have an area of thirty acres. The water of these lakes is unquestionably pure, and the aggregate of their storage capacity is over five billion and three hundred million of gallons. The Commissioners determined that the Blue Lakes afford the most available source of obtaining the needed water supply, and proposed entering into contracts for the construction of suitable works for introducing their waters. The City and County Attorney, however, expressed a decided opinion that they had no legal power to contract for water works to be constructed outside the Peninsula. Negotiations were accordingly broken off, and it only remained to endeavor to get a supply on the Peninsula. Attempts were made to purchase the Spring Valley, the Laguna de la Merced, and the San Mateo Water Works, all of which are within the Peninsula. No agreement, however, was reached as to the price to be paid. The Commissioners then condemned the property embraced in these three systems of water supply. It was their opinion that the only remedy for the evils of a water famine or a water monopoly was to condemn the entire water supply and water-shed on the Peninsula. Although perhaps no one of these properties so condemned will alone be able to furnish a sufficient supply of water to the city, the whole together are believed by the Commissioners fully adequate to afford a supply which will be ample for the next twenty-five or thirty years. Messrs. James R. Kelly, Patrick Crowley, and Dr. J. L. Meares have been appointed Commissioners to assess and award damages on the valuations of the property condemned. It is quite possible, however, that action may be taken in the present session of the Legislature which will make a material change in the present plan for the future water supply of the city.

#### Public Libraries.

THE MECHANICS' INSTITUTE contains thirty-two thousand volumes; of which about one thousand volumes were added during the past year. This Library is one of the official depositories of the Reports of the Patent Office at Washington. The building is a three-story brick on the south side of Post, between Montgomery and Kearny. The Mechanics' Industrial Fair is held under the auspices of and for the benefit of this Library. The Twelfth Industrial Fair was opened August 7, 1877, and continued for a period of forty-one days. Expenditures, \$47,187.05. The receipts from admissions, \$54,739.70; privileges, \$3,904—total, \$58,643.75. Gain, \$11,456.65. This was appropriated to payment of the remaining debt for the construction of the building, enabling the managers, for the first time, to clear off the entire debt.