tons. During the year the south wall was extended fourteen hundred feet, and the north wall four hundred and fifty feet. In January, 1878, the entire length of each wall was nine thousand four hundred feet. Owing to the long continued inclemency of the season, operations have naturally been embarrassed. At present they are wholly suspended, because the immediate work which was to be done has been accomplished. Dredging has been carried on systematically and thoroughly. A channel between the two walls, six thousand feet in length, two hundred feet in width, and ten feet in depth to low water has been dug. Vessels drawing ten feet of water can now run up to the city front without the slightest difficulty at low ebb tide.

The next proposition connected with this channel, is to cut another,

or rather widening the present one two hundred feet.

The walls thus far laid down are known as foundation walls only. Hereafter they are to be built up to the height of extreme high water. The present elevation is five feet above low water mark. The walls extend now from either side of the mouth of the creek to points in San Francisco Bay where the water is twelve feet deep.

The smaller pieces of rock are laid on the bottom, and on this foundation rest the heavier blocks, some of which weigh several tons. Three dredgers have been at work, in 1877, removing debris from the channel.

The first congressional appropriation made for this work was in 1875, and amounted to \$100,000. The second, of \$100,000, was made the following year, and the third, of \$75,000, in 1877. The appropriation bill of the session of 1878 makes provision for an additional sum of \$80,000, and as this proposition has the endorsement of the committee it will undoubtedly be acted upon formally.

There is still left unexpended, over and above the \$80,000, the sum of

\$20,000.

It may be mentioned in conclusion, that twenty-seven thousand five hundred ions of rock were displaced, transported, and deposited in the lines of the walls in 1877. The total quantity of rock used thus far in the construction of this gigantic work has been one hundred and thirty-eight thousand five handred and sixty tons.

## BAY SHORE RAILWAY.

Another cord in the net line of railways, which the Central Pacific Company is laying all over the State, has been stretched from Oakland Point to Martinez, a distance of twenty-six miles. The work commenced early in the spring of 1877, and was finished in November. A few trains were run when the heavy rains set in. Shortly thereafter land slides occurred, and the road-bed in many places was washed away. The rains continuing incessantly, necessarily occasioned an entire suspension of travel over the road, and so material is the damage done, that the road will not be again ready for business before May, 1878. There are very heavy cuttings along the line, besides two tunnels, six and eight miles below Martinez, one four hundred feet in length and one six hundred feet long.

This road skirts the bays of San Francisco and San Pablo, and the Straits of Carquinez, and from the cars a constant succession of picturesque views are obtained, combining mountain, valley, and water scenery. This will be the most popular road for picnic and other pleas-

ure excursions of any in the State.

This completed section is a link in the air line which is to unite, by iron bands, Sacramento with Oakland, with a fleet ferry boat plying