

PREPARING THE SITE OF THE FOUNDATION.

It has been estimated that the same length of time would be required to prepare the bed for the caisson as to build it. But owing to some unforeseen difficulties, possession of the ground was not obtained until January 1, 1870.

The winter had hitherto been mild and continued so, much to our advantage.

The preparation of the site consisted in establishing a rectangular basin, open towards the water side, surrounded on three sides by a wall of sheet piling with the bottom levelled off to a uniform depth of eighteen feet below high water. This point was determined upon because one portion of the bottom was already as deep, and because the caisson required that much water to come in at all stages of the tide.

The dismantling of this space—the ferry slip—drawing a hundred piles, tearing out three hundred and fifty feet of fender sheathing, removing the same amount of heavy cribbing filled with stone, and dredging off the loose material on top, required in all about one month.

The dredging was performed by the Osgood dredge, and the piles drawn by a craneboat. One-half of the pier separating the Fulton Ferry slip from our inclosure was also removed without interfering with the Ferry.

All the timber and piles taken out were found to be infested with thousands of sea worms; their ravages, however, were bound to be confined to the space between low water and the mud line. A pile which was sixteen inches diameter below the mud perfectly sound and free from worms, would be found eaten away to a thin stem of three inches just above; all timber, moreover, being affected alike.

This experience shows the necessity of going below the river bed with the timber foundation, and also proves its entire safety in that position.

DREDGING AND BLASTING.

In all there were ten thousand seven hundred yards taken out—the bulk of it in the course of a month—comprising the filling in and surface mud. A line of soundings then taken