

the corner pile, was destroyed, but the platform was made secure by bracing below.

On the 28th of December the machinery was started ; a few unimportant changes were found desirable, but its performance was, on the whole, very satisfactory. For the first week it was driven only by day, while the forces were being organized and drilled to their work. On Monday, the 4th of January, two gangs were put on, and the work proceeded both night and day. Each gang had a superintendent at its head, Mr. Tomlinson taking the day, and Mr. Bostwick the night shift ; a master of machinery had general charge of the four dredges, while two mechanics were assigned to the care of each dredge ; an engineman and fireman tended the engine on the lower floor, another man was given special charge of the donkey pump, and a spare machinist was employed upon odd jobs ; a large gang of laborers completed this force ; all the laborers worked under one foreman, and the majority of them were employed in wheeling off the sand, but twelve men were detailed to work the crabs on the top floor, and a few more to tend the suspension screws, while it occasionally became necessary to call in the entire force for the latter work. The same force was, of course, duplicated for the second shift ; each gang worked from seven to seven o'clock, the day gang being allowed an hour at noon for dinner, and the night gang being furnished with hot coffee at midnight.

Eight vertical rods, graduated into feet and tenths, were fastened on the sides of the caisson, one at each end and shoulder, and one in the middle of each long side ; they served as gauges to measure the descent, eight blocks placed on the platform opposite them, at an elevation of 109, answering as reading fingers ; the gauge at the west nose was numbered one, that at the south-west shoulder, two, and so on continuously around the pier. The dredges were also numbered from one to four—the new dredge at the west end being number one. A full journal of the progress of the sinking was kept by the superintendent, from which a set of tables, illustrating the behavior of the pier and conditions of the sinking, were prepared. These tables, which give the best illustration of the actual working of the plan, are printed in Appendix E.; they contain a statement of : 1st. The number of hours' work performed by each dredge, with