The next operation was the placing of the caissons. These when completed were placed between two barges, on each of which was erected a frame to a height of 20′ above the deck; across these frames two 24″ square pieces of oak were placed, and from these 4 tackles of large quadruple blocks reeved with 6″ manilla rope, guided by lead blocks, to winches on board the barges, were used to lift the caissons.

The first caisson was lowered with hydraulic jacks from cobhouse cribs on the deck of the barges; but this method was found to be extremely slow, and was abandoned for the block and tackle system above described.

The caissons were provided with 3 anchors, varying in weight from 1½ to 3 tons, and the barges with 1 each all hove with 1½ inch steel wire cables.

When the excavation was ready the caisson and barges were towed out into the current from where they were built, about 1 mile above the bridge site, by from two to five tugs, and were allowed to drift down to their position, the tugs steaming slowly up stream; 800 feet above the line of bridge the main anchor was let go, the others following in quick succession. On the anchors taking hold the tugs were let go, and by paying out the cables the caisson was allowed to drift down to within 25 feet of its position; it was here heavily weighted with railway iron, and lowered to within a few feet of the bottom. The caisson was then eased back until it was brought to the exact position previously fixed by triangulation; all that was then necessary to sink it was to ease away on the tackles simultaneously until it reached its bearings on the bed rock.

Should it not set in true position the first time some of the weight was removed, and the strain taken upon the tackles when it could be raised without difficulty; but it only occurred once or twice that a caisson had to be lifted after once having been placed upon the bottom. When it was finally settled in position it was additionally weighted with railway iron, and the footing course of masonry was also placed upon the wall of the caisson. In taking the caissons down it was sometimes found necessary, owing to shoal water, to raise them to a 6 foot draft, and for this purpose the block and tackle system was found exceedingly successful.

In placing the caisson adjoining the pivot pier on the south side, considerable difficulty was experienced, owing to the great depth of water 30′ and the velocity of the current, which at this point is the swiftest in the vicinity of the bridge, and being in close proximity to the steamboat channel, the swell made by the steamboats passing down was severely felt. After two unsuccessful attempts to place the caisson it finally capsized, damaging one of the barges used in transporting it, and throwing its load of railway iron into the excavation. The top of the caisson was so badly damaged as to necessitate cutting it down, and using it for a pier of less depth of water, and building a new one to replace it. A dredge was again brought down to redredge the excavation, which was partly filled up by the load capsized from the caisson. The next attempt to place it was successful, and no further trouble was experienced at this point. This caisson was considered, next to the octagonal caisson for the pivot pier, the most difficult one of the bridge to set.

The pivot caisson on account of its construction presented a tremendous resistance to the current. 5 tugs and a large side wheel steamer being unable to hold it in the swift water, 8 anchors each hove with a 1½ inch steel wire cable were let go 1000 feet above the bridge line, and the cables slacked away and the caisson dropped back into position. Two of the 1½ inch steel wire cables to anchors were led to blocks made fast near the bottom of the caisson, and taken to timber heads on deck, in order to hold the caisson in an upright position, and prevent its being carried out of plumb by the stiff current

It was at this pier that the only fatal accident during the construction of the work was sustained, resulting in the loss of the lives of two men, both by drowning,—one during the construction of the substructure and the other during the erection of the superstructure.

Owing to the current striking the bridge line nearly at right angles, the caissons for the piers in the centres of the channels were subject to little or no side current; but those adjacent to the shores and islands