

One smaller flat boat, with hole through the centre for boring, and used also for stone.

Two small barges, about 50 feet long, purchased at Kansas City, and rebuilt for use on the bridge.

Three flat boats with square bows, two of them 20 by 53 feet, and the other 22 by 64 feet. Two of them were fitted out as floating derricks,* and the third was used for pile-driving.

One small scow, housed, and used as a diving boat.

A large yawl, with a crew of seven men, and a skiff manned by two men, were also kept on the river; a few other skiffs were generally in use on various parts of the works, and two small flats, which could easily be towed by the yawl, were used as sand boats. One of the large flats sunk in the spring of 1868 when heavily loaded with stone, and was lost; the other six were rebuilt after the completion of the bridge; their decks were raised, and they were converted into pontoons, to be anchored in a line above Pier No. 1, where they should serve as a protection for steamboats passing down through the draw.†

The principal items in the remaining equipment were:—

Four portable steam-engines, of 8, 12, 15 and 25 horse-power respectively; one of these was employed to drive the machinery in the shop.

One nine-inch Alden centrifugal pump.

One No. 4 Andrews centrifugal force-pump, four inch discharge, and six inch supply pipes, with flexible hose.

One six-inch steam siphon pump.

One donkey pump, used for jetting.

One air-pump, diving-dress and outfit complete.

Four large dredges, with attachments.

One small dredge.

Three pile-drivers, with 2,200 pound hammers.

Eight land derricks, with rigging complete, and horse-powers.

One sawing-machine, for cutting off piles under water.

* Plate VIII.

† The Pontoon Protection is shown on Plate II; the dotted lines on the plan indicate the position of the floats at high water.