

## THE MIXING BOX

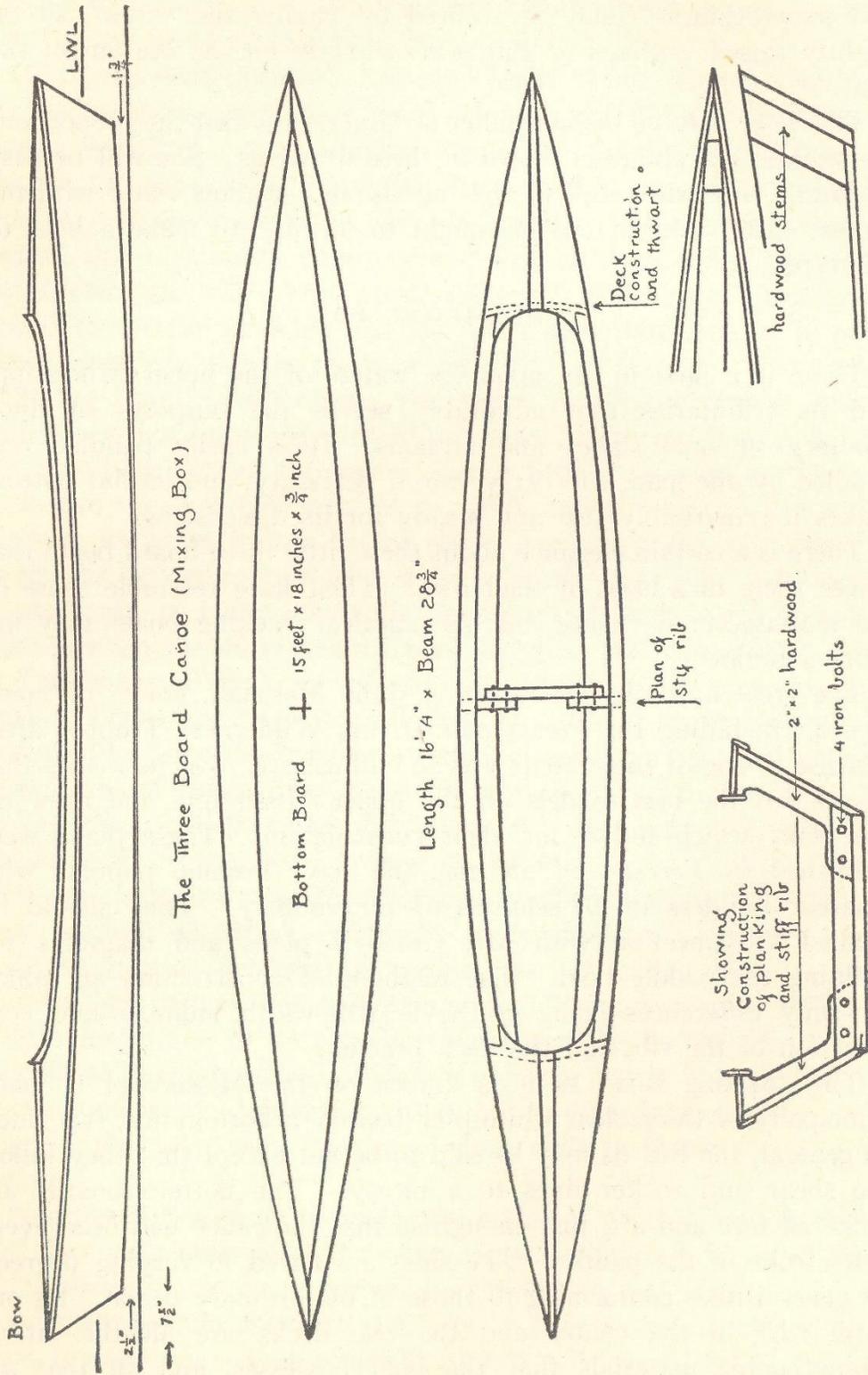
There is a boat in use upon the waters of the upper Mississippi and its tributaries that admirably serves the purposes of duck shooters on small lakes and streams. It is easily paddled and handled by one man, will carry two, if necessary, and its flat bottom makes it remarkably stiff and steady for its dimensions.

There is a certain elegance about these little three-board boats that places them in a class of their own. Their lines resemble those of the manufactured canoes, but as practical ducking boats they are much superior.

The great authority on canoeing, Julie Marshall, holder of many records, including the *Forest and Stream* Wilderness Trophy, after a cruise in one of these boats was so enthusiastic over its merits that he studied the best models on the upper Mississippi and drew up the plans which follow for their construction. These plans were published in *Forest and Stream*, and have become popular with amateur builders in all sections of the country. They should be studied in connection with Mr. Crosby's plans and diagrams for building the paddle boat. The methods of construction are alike, the only differences being in the length, width, number and construction of the rib, and the deck bracing.

The "Mixing Box" as it is known on the Mississippi is made principally of three clear white pine boards, a bottom and two sides. In general, the boards may be said to be flat except that they follow the shear and rocker lines to a nicety. The bottom boards are rockered fore and aft, just enough so that the canoe will heed every deft stroke of the paddle. The sides are flared to varying degrees, its general lines conforming to those of the ordinary canoe. Its one "stiff rib" in the center and the two decks are all the lateral strengthening materials that the boat possesses, and all that are necessary.

The materials used in the "Mixing Box" are: Bottom board, white



pine, 15' x 20" x  $\frac{3}{4}$ ". (Note: If a board of this width cannot be found, two 10" boards will have to be doweled and glued up. Finish this construction with a half round oak strip for a keelson.) The sides are white pine boards, 16'-6" x 12" x  $\frac{1}{2}$ ". Decks are of  $\frac{3}{8}$ " white pine, length to suit individual taste. The stem posts, stiff rib and knees, thwarts under decks, outwale beading and inwale coaming are of hardwood, preferably of oak. The posts, knees and rib can be cut from a 6' x 12" x 2" oak plank. All of the hardware should be of brass so as to prevent rot. Iron will rust in spite of paint and will eat away the strength of the wood.

The most important point in the construction comes in the beveling of the outside edges of the bottom board. This board will have to be drawn to scale according to the dimensions of your boat and later transcribed to both the inside and outside of the bottom board, taking the measurement every six inches. In this way your saw and plane will be guided correctly. Care at this point will give a nice joint between this edge and the side planks, and will prevent a leaky boat. The rocker bottom is shaped by means of a temporary joist holding the center of the bottom board down, and the joist being propped from the ceiling. Then block up the ends to the required height. Give the bow a trifle more rise than the stern. The shape of the stiff rib will determine the flare of the sides as well as the general lines of your canoe, so the stiff rib is set together with the stems before the sides are applied. When laying the sides, be sure that your plank is evenly balanced, then apply to the stiff rib first and work toward the ends, doing all your trimming and finishing after the whole side is in place. Following the finishing of the sides, you will place your thwarts which will serve both as a foundation for your decks and a further bracing of the side boards. Your decks, coaming and beading complete the construction. This is a matter of laying first and trimming afterward, taking particular care so as to make all joints and seams as tight as possible with a view to a ship-shape job. Finally, the paint, which should be of good grade marine quality, put on over a wood filler.

Most of the "Mixing Boxes" are equipped with a "bang iron" made from a flat piece of brass, which is neatly patterned and laid over both stems on the outside. These are fastened down with small brass screws. A hole is drilled through the top of each bang iron for "painter." The finished weight is about 65 pounds, and its capacity about 500.