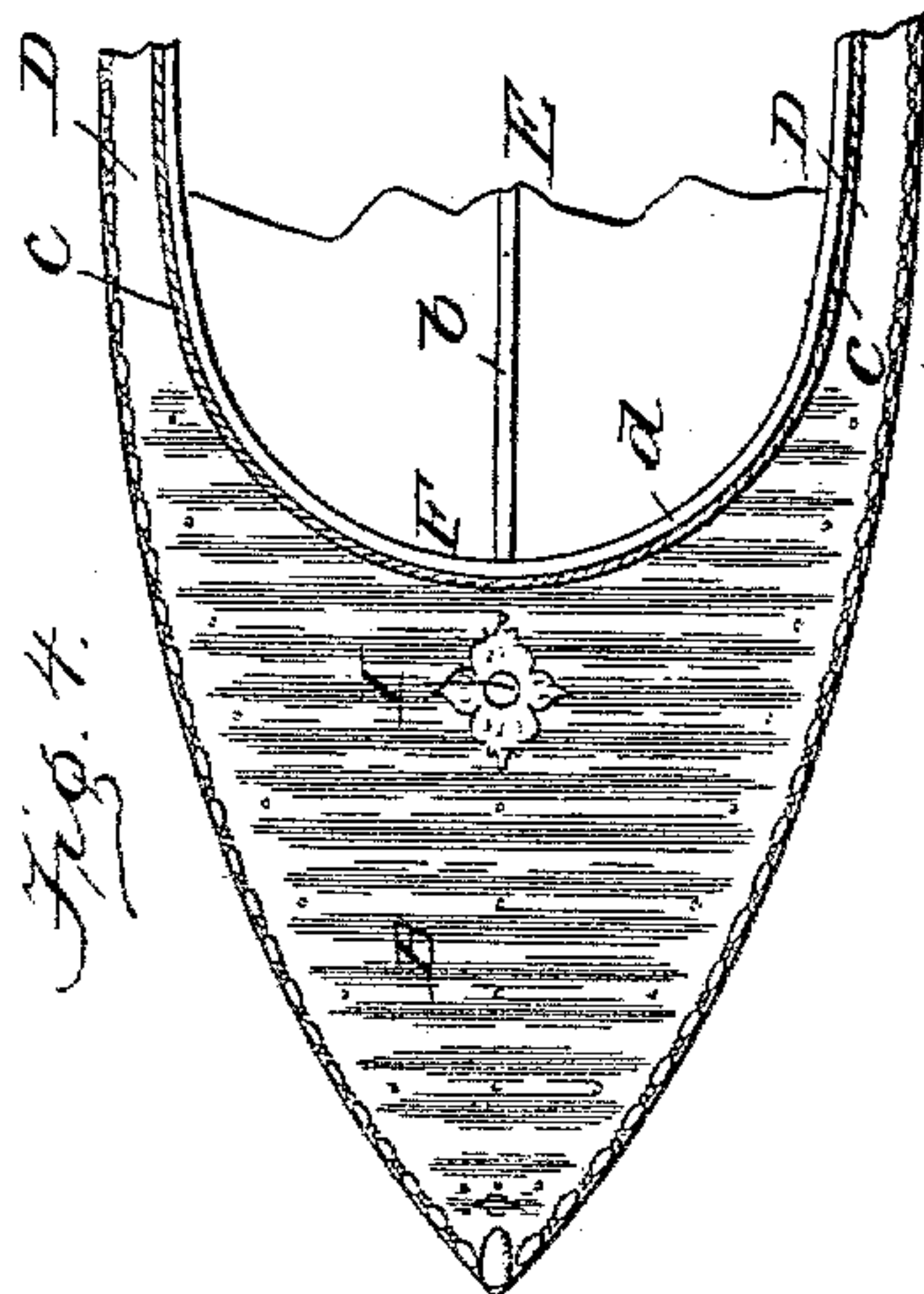
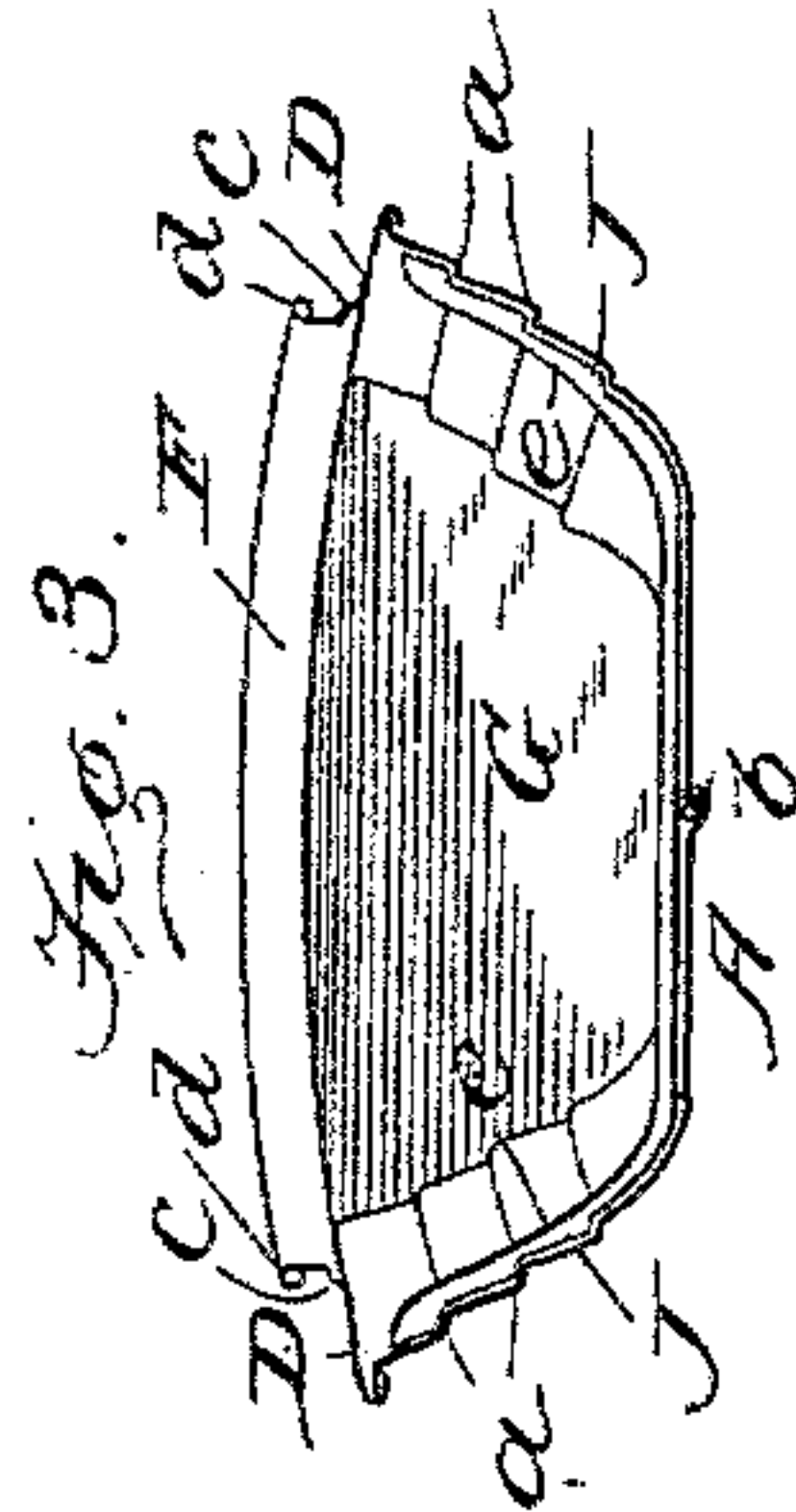
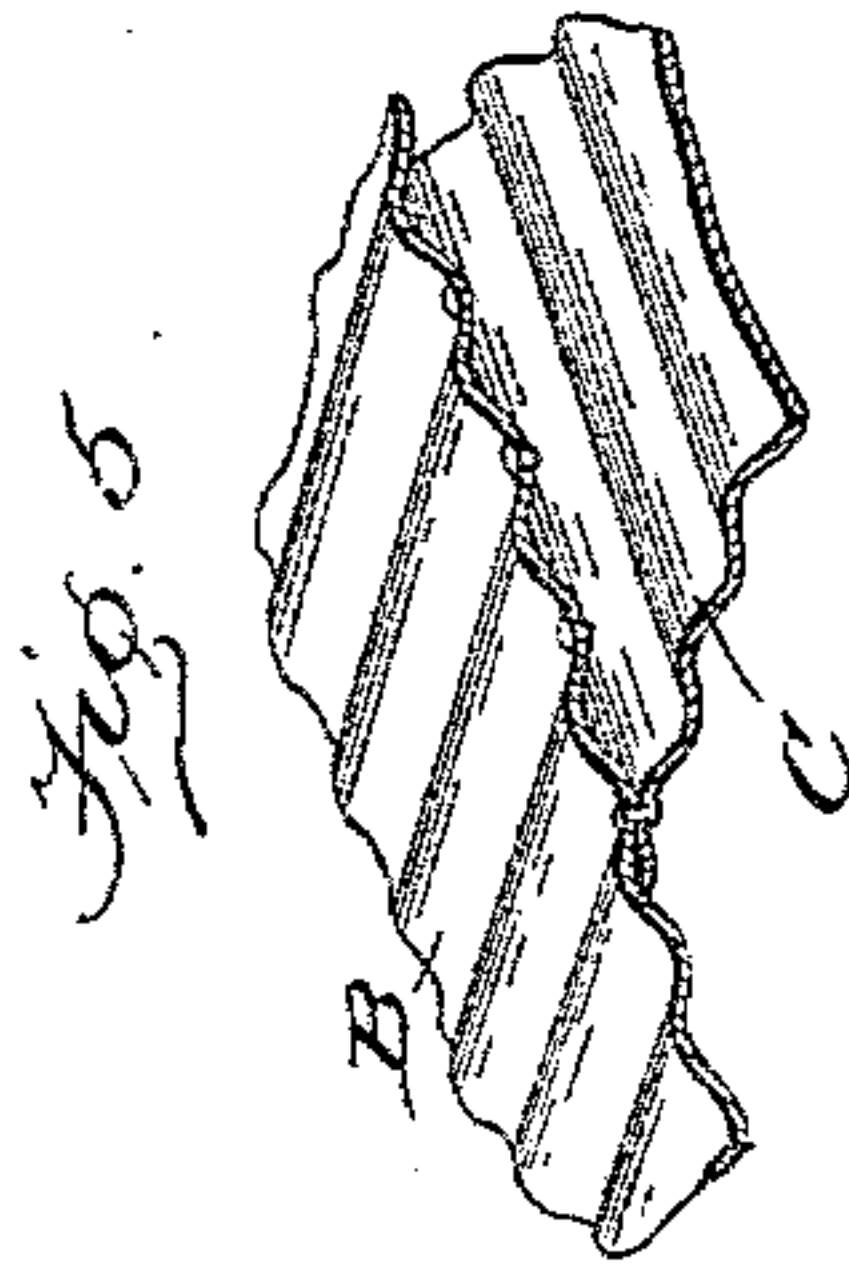
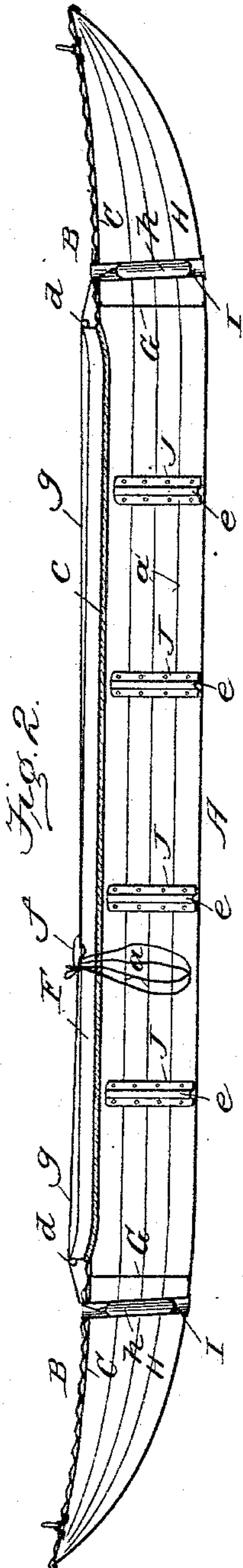
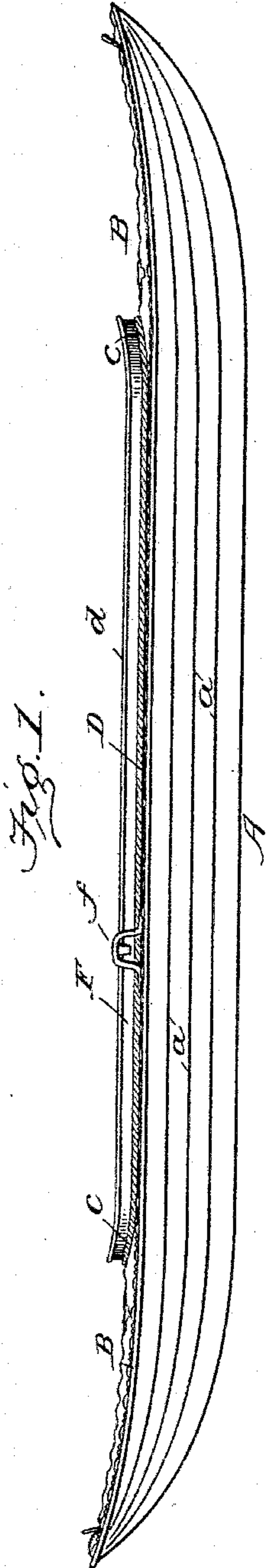


(No Model.)

W. H. MULLINS.
BOAT.

No. 563,674.

Patented July 7, 1896.



WITNESSES:

Edwin L. Bradford.
J. W. Ritter Jr.

INVENTOR

W. H. Mullins.
BY
J. W. Dyer.
ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM H. MULLINS, OF SALEM, OHIO.

BOAT.

SPECIFICATION forming part of Letters Patent No. 563,674, dated July 7, 1896.

Application filed November 12, 1895. Serial No. 568,715. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. MULLINS, a citizen of the United States, residing at Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to boats, and has for its object the production of a light portable craft on the canoe order, having certain characteristic features of construction which will later appear.

The boat is by preference stamped in sections from sheet metal, which sections are secured together by rivets and solder, manganese-bronze, aluminium, copper, or galvanized iron being employed as a material, though obviously wood or other boat-building material may be used without departing from the spirit of my invention.

When constructed of metal upon the lines indicated, the result is a light, durable, and steady craft especially adapted for a gunning-skiff or for canoeing purposes, whether propelled by paddle, oars, or sail; the first quality, lightness, being insured by thinness of the metal itself; the second, durability, by stiffness of the structure, freedom from corrosion or action of the elements; and the third, steadiness in smooth or rough water, by the outlines of the boat and its breadth of beam. Special and important features of construction are further to be found in air-tight compartments, fore and aft, insuring sufficient buoyancy in the event of swamping; hawse-holes or mast-holes penetrating said air-tight compartments; strengthening-ribs, lap-joints and seams for reinforcing the structure; and double corrugated decks upon the bow and stern, all as will later appear, and be more fully pointed out in the claims following.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side elevation of my invention; Fig. 2, a longitudinal central section thereof; Fig. 3, a transverse central section; and Figs. 4 and 5, detail fragmentary views illustrating, respectively, a plan view of one corrugated deck

and a perspective view of the double corrugated plates from which it is formed.

Reference being had to the drawings and letters thereon, A indicates the hull or body of the boat, which, in the present instance, is stamped from sheet metal in corresponding halves, each having a series of longitudinal offsets *a*, affording rigidity to the metal and producing the appearance of a lap-streak boat built from individual timbers. These halves are jointed, to produce the hull A, by a lap-joint *b*, extending from stem to stern at the longitudinal center or keel of the boat, and are spoon-shaped upon their extremities, thus imparting to the structure a double-ended cymbiform appearance. At the bow and stern the hull A thus formed is decked, as at B, said decks overlapping and housing the gunwales to which they are secured in a permanent and water-tight manner, being corrugated transversely, as shown, for the double purpose of stiffness and drainage. By way of further bracing and stiffening, the main decks B are each reinforced by a second or false deck C of substantially the same size and of corresponding configuration, the latter being riveted beneath the former with their corrugations arranged at right angles, as illustrated by Fig. 5.

The decks B B, extending fore and aft, merge into side decks D, which are secured to the gunwales of hull A in like manner as the decks before mentioned, thus forming a cockpit E within the confines of said decks B D, bordered by a vertical combing F, formed by the upturned edges thereof. At the intersection of said combing F and the decks, from which it is formed, is located a rope-like embossment *c*, serving as an ornamentation and in addition the more important function of strengthening the structure at this point, while the upper edge of combing F is rolled upon itself, as at *d*, for the purpose of giving to it a body.

At either end of cockpit E beneath the decks B are located vertical bulkheads G, fitting closely the contour of said decks and hull at these points, and there closely secured as by solder forming air-tight compartments H in the bow and stern for the purpose of floating the metallic boat in the event of swamping.

In the longitudinal center of the decks B adjacent to the combing F are rigidly secured tubes I, which perforate the air-tight compartments H and are firmly soldered in place, 5 their open ends registering above and below with corresponding openings in the decks B and hull A, respectively, which openings, however, as will be observed by inspection of Fig. 2, are preferably not in vertical alinement, 10 thus imparting to the tubes I a desirable rake.

Within the cockpit E are located ribs J, crossing the hull A transversely from gunwale to gunwale, being riveted in position, as shown by Fig. 2, and provided each with a central 15 raised or semitubular portion *e*, serving materially to strengthen the rib J and through it the hull A, while upon the decks D outside of the combing F are bracket oar-locks *f* for the reception of oars when desired. This being 20 substantially the construction of my invention its use and operation are as follows:

When the boat is employed as a gunning-skiff, the tubes I, one or both, are used as hawse-holes, having passed therethrough an 25 anchor-line *g*, bearing at its extremity a suitable anchor *h*, as, for instance, a window-sash weight, adapted to be hoisted or lowered from within the boat, where the end of said line is made fast. Likewise a double line may be 30 used, or a single line having anchor-weights at both ends, operating through both hawse holes or tubes I. Under the latter rig it is obvious that a sportsman having both anchors under control, while waiting in ambush 35 or decoying for game, may moor the craft by one or the other, according to direction of the tide or current in which he may be stationed, and may quietly and readily manipulate 40 drifting onto game or changing location of the boat as circumstances may require.

When the boat is employed for canoeing purposes, it is equally as well adapted to be 45 propelled by oars from the oar-locks *f* or by a paddle in the usual manner, and owing to its peculiar lines of construction, its system

of decking, combing, and air-tight compartments is especially arranged and adapted for sailing in rough or smooth waters. In the latter connection tubes I serve in the capacity 50 of mast-holes for the reception of a mast or masts, upon which suitable sails may be bent, such masts being socketed in the tubes throughout the entire length of the latter, receiving a superior stepping at their lower ex- 55 tremity and an adequate brace at the decks without in the least interfering with or jeopardizing the air-tight compartments through which they pass. As thus equipped the boat constitutes a satisfactory sailing-craft, but 60 obviously a centerboard and rudder add materially to its sailing and working qualities. These, however, not being embraced in the present application, need not be herein further referred to. 65

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A boat or skiff provided with air-tight compartments respectively at the bow and 70 stern thereof, the decks of said compartments composed of double metallic corrugations as described, and said compartments provided with metallic tubes passing substantially ver- 75 tically therethrough to serve the purpose of stays or braces and also to receive anchor chains or ropes, substantially as described.

2. A boat or skiff provided with air-tight compartments located respectively at the bow and stern thereof, said compartments having 80 metallic tubes passing substantially vertically therethrough, and a continuous line passing through said tubes the outboard or lower ends thereof bearing anchor-weights, 85 as and for the purpose specified.

In testimony whereof I subscribe my signature in presence of two witnesses.

WILLIAM H. MULLINS.

Witnesses:

F. J. MULLINS,
LAURA ELLYSON.