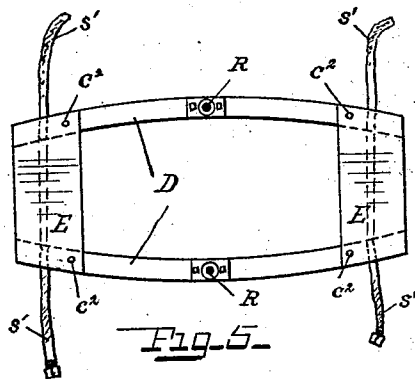
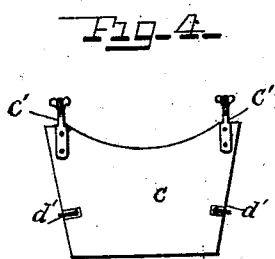
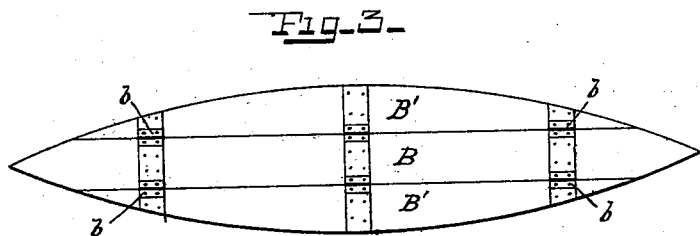
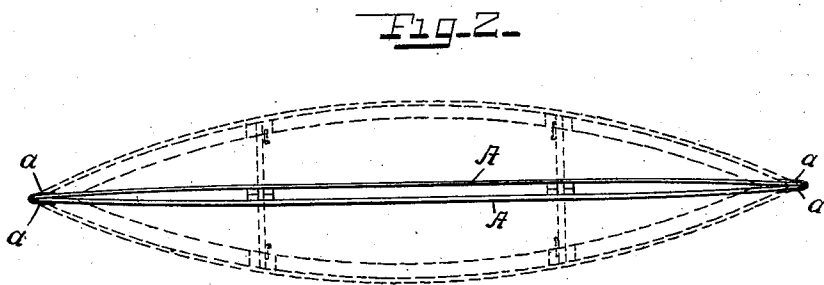
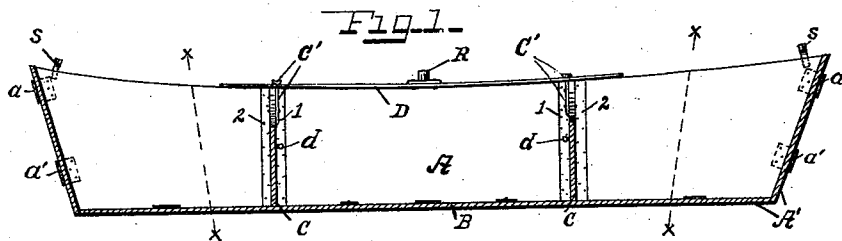


(No Model.)

R. K. LARAWAY.
COLLAPSIBLE BOAT.

No. 542,340.

Patented July 9, 1895.



Witnesses-
F. M. Metcalf-
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UNITED STATES PATENT OFFICE.

RANSOM K. LARAWAY, OF BATTLE CREEK, MICHIGAN.

COLLAPSIBLE BOAT.

SPECIFICATION forming part of Letters Patent No. 542,340, dated July 9, 1895.

Application filed January 5, 1895. Serial No. 533,916. (No model.)

To all whom it may concern:

Be it known that I, RANSOM K. LARAWAY, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Collapsible Boats; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention belongs to that class of collapsible boats designed to afford means for ready transportation from place to place by those who are away from lines of travel and have only such means of removal as the life of hunters and campers in the forest affords.

My object is to provide a cheaply-constructed, but safe and substantial, boat of combined wood and canvas, that shall be capable of ready packing in the narrowest possible form and shape, to pass by and between the trees and undergrowth, and so light that two persons may quickly pack and transport the same to any place desired.

In the illustrations forming part of this specification, and wherein letters and numerals of reference are used, the same letters and figures designate like parts in each of the several views.

Referring to the views, Figure 1 is a vertical central longitudinal section showing the opposite inside of the boat. Fig. 2 represents a longitudinal plan view showing the boat collapsed ready for packing, with its normal form in dotted lines. Fig. 3 represents the three members inside the boat's bottom in proper form and position for use; and Figs. 4 and 5 represent, respectively, the transverse vertical division brace-boards with attachments in form and for novel uses, as herein after described.

Referring to the letters and numerals designating the different parts, A represents the main frame or inside, made of single side pieces of light, strong, flexible wood, one for each side, connected together at or near their end portions by hinges *a a'* and having vertical cleats 1 2 fixed on the inside thereof at

suitable points equidistant from the center or where the rowlock is preferably located, and at a proper point near the boat-bottom a hole *d* is made in the cleat for engagement of a fastening bolt or latch for the twin division-boards C. These division-boards are made flaring from top to bottom, exactly the width and depth designed for the inside of the boat at the points indicated for the seats and equidistant from the rowlocks, as already seen, and when forced down in engagement with said cleats 1 2 act as spreaders and brace-boards of and for the boat, as is evident. The top edge of the said vertical brace-boards C are cut out or curve downward, so as to form an easy seat-support, as presently appearing, and from the outermost upper corners of said vertical transverse boards C rise threaded upright and thumb-nut bolts *c'*, and below are located the fixed spring bolts or latches *d'*, the office of which is to engage the holes *d* of the said vertical cleats 1 2, whereby the said brace-board is firmly locked to the side A of the main frame or boat side.

The gunwales D are provided with central rowlocks R and are firmly but removably locked to the frame A and transverse division brace-boards C by means of the bolts and nuts *c'* thereof, while most convenient and easy-sitting seats E, situated directly above the said divisions C, are provided, of similar material composing the outer covering of the said boat, (represented by A'.) The said outer canvas covering may be made of any substantial cloth, such as "duck," suitably saturated or coated with flexible substance impervious to water, and is only to be permanently attached to the sides A at the top and middle portion thereof, leaving that end portion indicated by dotted lines loose to be held in place when the boat is in use by means of the securing-straps and buckles *s*, Fig. 1.

The gunwales D may extend the entire length of the boat or only a short distance fore and aft the seats E, as shown, and strengthening-cleats embracing the inside and outside of the boat-body A may be added to the underside of the gunwales D, but these only add weight and are an incumbrance, since the combination and construction described provides a boat sufficiently strong for all practical purposes and one that can be

quickly placed in convenient compass for traveling, in manner following, to wit: Loosening the straps *s* and removing the thumb-nuts *c'* the gunwales *D* are laid down with the canvas seats spread, as shown in Fig. 5, when the vertical division-boards *C* are readily removed in the manner already indicated, whereby the frame is "collapsed," together with its canvas covering *A'*, as appearing in Fig. 2, when it is placed lengthwise prone on the center of the canvasses *E E*, and the bottom is folded on either or both sides of said portion already packed, the division-boards *C*, oars, and any other articles grouped alongside or within, when the whole is firmly bound in a compact and convenient shape to handle by means of the loose transportation straps *s'* provided for that purpose.

Having thus clearly described and illustrated my invention and described its mode of operation, incidentally touching upon some of its many great advantages, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A collapsible boat, comprised of an outer envelope of impervious canvas, inner sides, composed of longitudinal strips of wood connected at their end portions by hinges, an inside bottom comprising a plurality of longitudinally folding boards or strips of wood connected together by hinges, removable division boards and braces, provided with means for securing the same to the said side strips, and gunwales removably secured to the said division boards and braces, substantially in the manner, and for the purposes set forth.

2. A collapsible boat, comprised of an outer envelope, or covering of canvas, made impervious to water, inner sides, constituting the body part thereof, composed of longitudinal strips of wood connected at their end portions by hinges; gun-wales carrying row locks, removably secured to the said body part, the inner bottom part comprising a plurality of longitudinal strips of wood placed side by side and connected by hinges; vertical brace-boards located transversely of the boat, and provided with means, substantially as shown and described, for removably securing the said division brace-boards to said side strips and gun-wales, to form a substantial boat, for the purposes set forth.

3. In a collapsible boat, the outermost covering of impervious canvas, the side portions of wood, extending longitudinally the entire length of said boat, hinged together at or near

the ends thereof, gun-wales, provided with row-locks and removably attached to said side portions, the boat inside bottom board, composed of a plurality of wooden strips placed side by side, and hinged together, vertical transverse brace and division boards, provided with means for removably securing the same to said boat sides, substantially in the manner and for the purposes illustrated and described.

4. In a collapsible boat, the outer covering of canvas, the side portions of wood extending longitudinally the entire length and forming the inside of the boat hinged together at their end portions; gun-wales provided with row locks, and having a plurality of canvas seats attaching them transversely in length, corresponding with the width of the top of the brace-bars, or division boards; division brace-boards removably fixed to the side-ports, and to the said gun-wales, and a plurality of strips of wood, placed side by side, and secured together by hinges,—the whole constructed and arranged substantially as and for the purposes specified.

5. In a collapsible boat, the main frame or sides *A*, the bottom *B*, the canvas covering, *A'*, the transverse brace-division boards *C*, the gun-wales *D*, provided with row locks *R*, and canvas seats *E*, and means, substantially as shown illustrated and described, for attaching the several parts together and for collapsing and packing the same, for the purposes set forth.

6. In a collapsible boat, the canvas covering, the gunwales made in sections and hinged together at their ends, combined with the bottom, the side cleats, the division boards, and the seats, having their ends supported upon the gunwales and bolted in position, substantially as set forth.

7. In a collapsible boat, the canvas covering, the canvas seat, having its ends secured to the gunwales and located above the recessed top edges of the division boards, combined with the division boards and the vertical side pieces to which the ends of the division boards are fastened, substantially as shown.

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

RANSOM K. LARAWAY.

Witnesses:

FRANK W. CLAPP,
E. J. HOBBS.