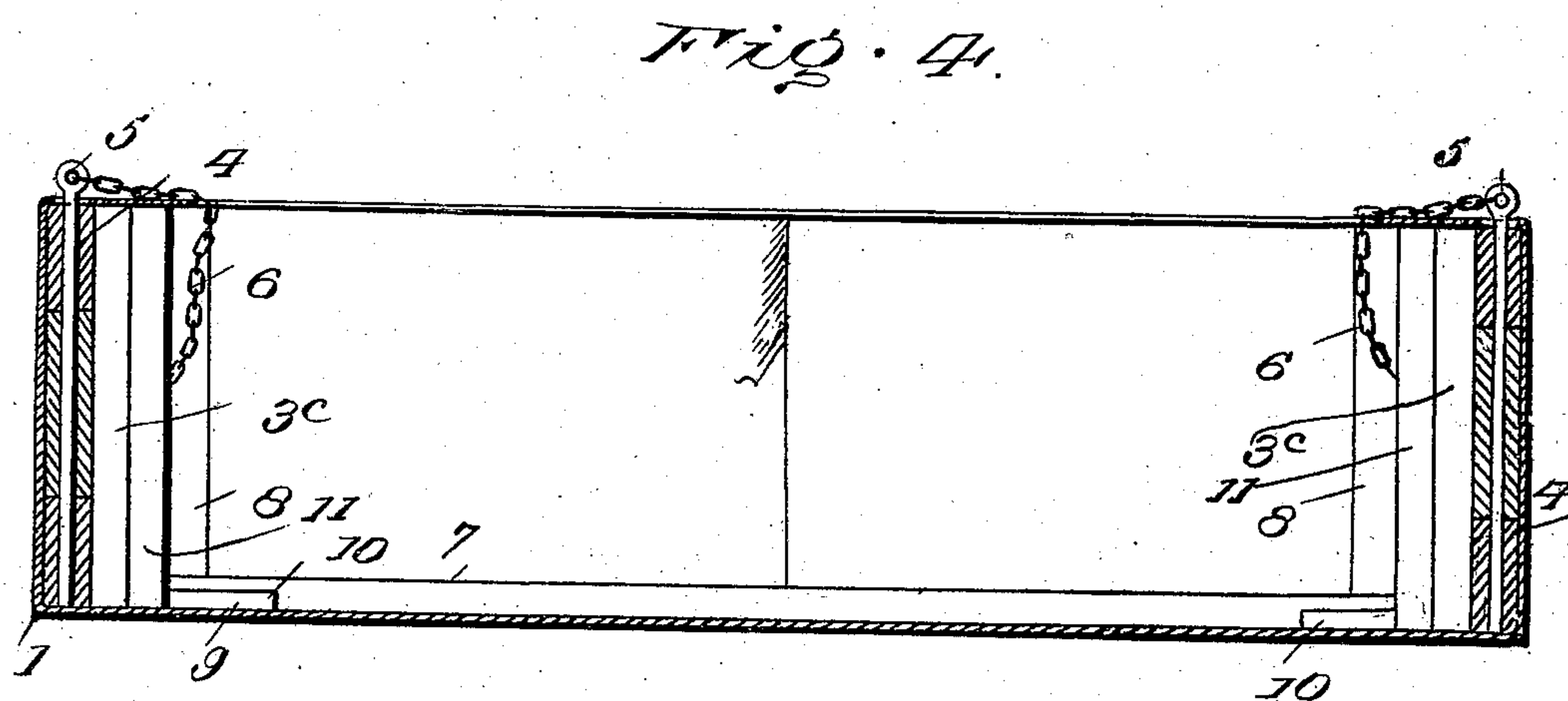
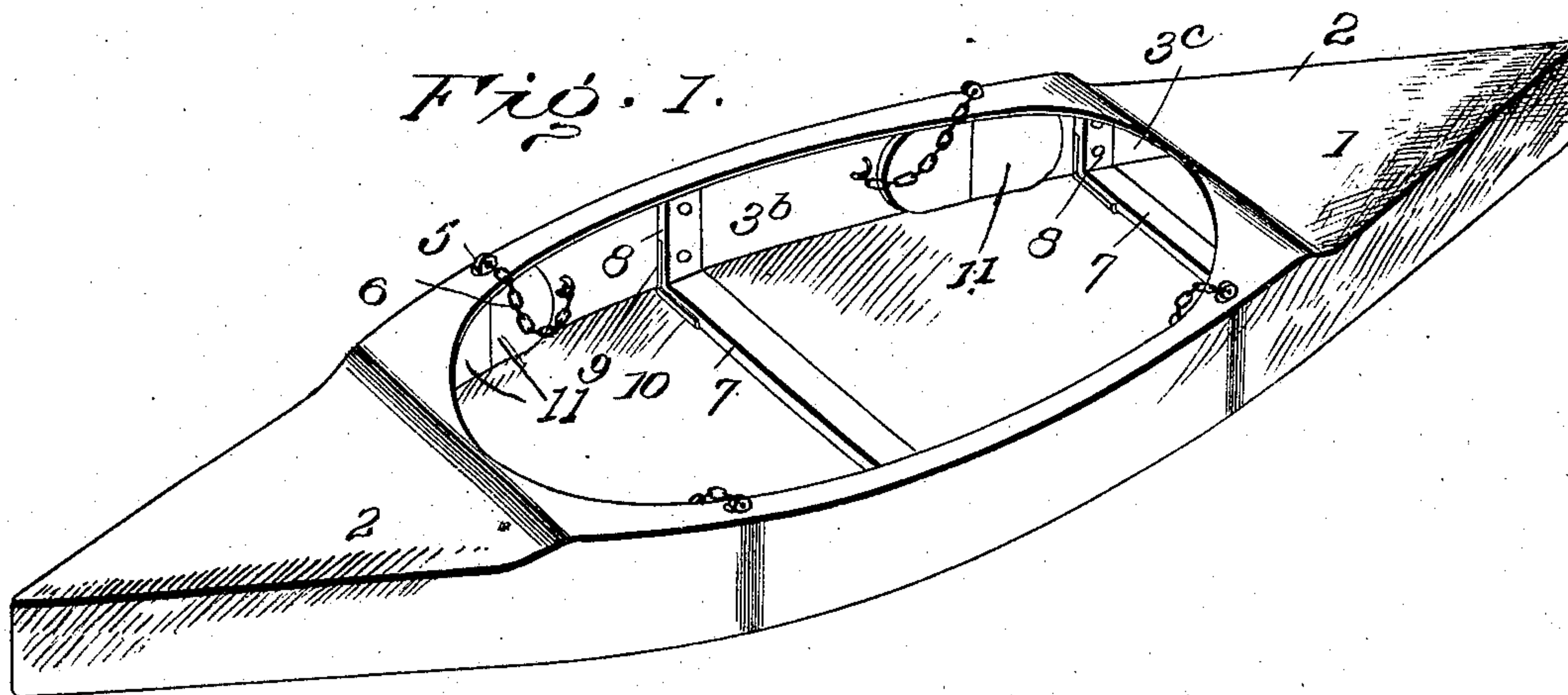


No. 858,506.

PATENTED JULY 2, 1907.

F. H. FARRAND.
COLLAPSIBLE BOAT.
APPLICATION FILED JUNE 15, 1906.

2 SHEETS—SHEET 1.



Witnesses

J. M. M. M.
W. R. Woodson.

Inventor

F. H. Farrand

By

R. A. Blaney, Attorneys

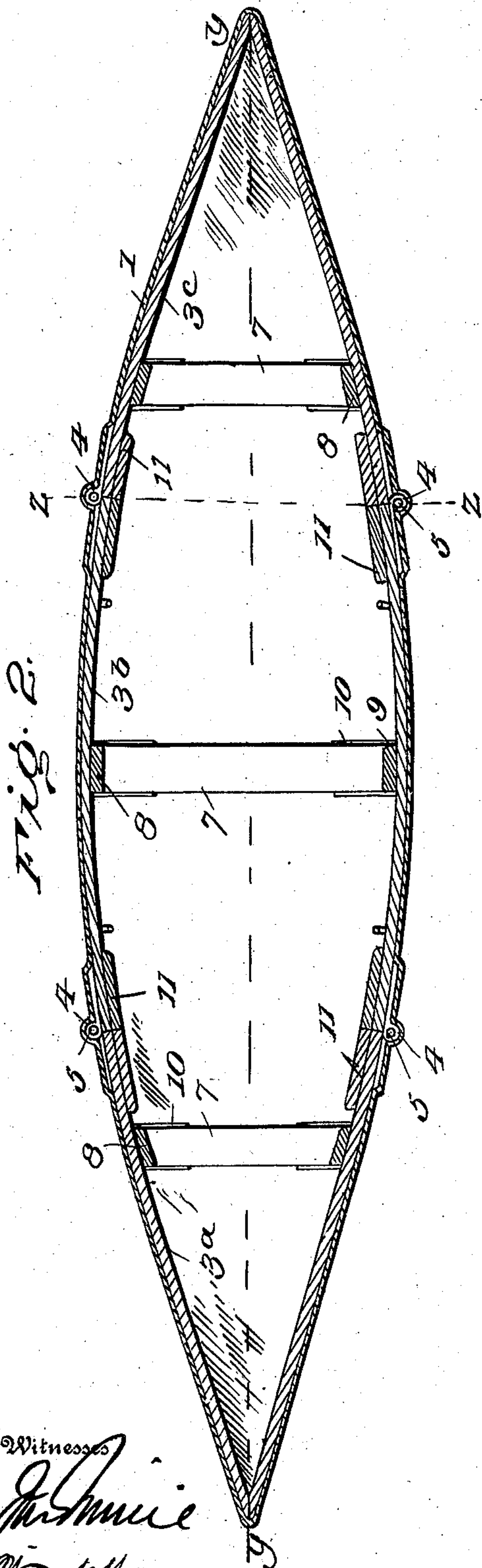
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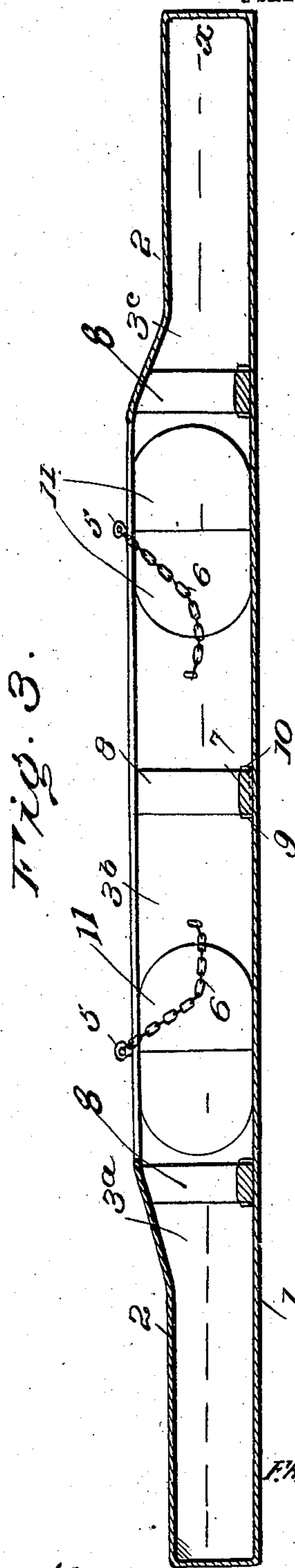
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2 SHEETS—SHEET 2.



Witnesses
Johnnie
W. P. Woodson



By *H. B. Racy,* Attorneys
Inventor
F. H. Farrand

UNITED STATES PATENT OFFICE.

FREDDIE H. FARRAND, OF LIDGERWOOD, NORTH DAKOTA.

COLLAPSIBLE BOAT.

No. 858,506.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed June 15, 1906. Serial No. 321,924.

To all whom it may concern:

Be it known that I, FREDDIE H. FARRAND, a citizen of the United States, residing at Lidgerwood, in the county of Richland and State of North Dakota, have
5 invented certain new and useful Improvements in Collapsible Boats, of which the following is a specification.

This invention consists of a novel and improved form of canvas covered boat and the essential feature of the invention resides in the construction of the boat where-
10 by the same may be readily collapsed or "knocked down" in order to facilitate transportation of the boat from one place to another. When collapsed, the parts of the boat may be disposed so as to occupy a minimum amount of space and they may be transported from one
15 place to another advantageously, at the same time being so constructed as to be quickly connected together so as to occupy operative positions for use.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the
20 details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a boat embodying the invention, a portion of the canvas or flexible cover-
25 ing being broken away to show the arrangement of the hinges which connect sections of a side thereof. Fig. 2 is a horizontal sectional view on the line X—X of Fig. 3. Fig. 3 is a vertical sectional view on the line Y—Y of Fig. 2. Fig. 4 is a transverse section on the line Z—Z of
30 Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates
35 the flexible covering for the boat, which constitutes the bottom thereof, and extends along the sides thereof and is formed at opposite ends with deck portions 2. The sides of the boat are preferably made of wood or any material conducive to lightness and strength or rigidity,
40 and each side is composed of a number of sections, three being illustrated in the drawing. The sections of the sides are indicated 3^a, 3^b and 3^c, the intermediate sections being designated 3^b.

It is contemplated in the scope of the invention and
45 dependent particularly upon the size of the boat, to make the sides of any suitable number of sections according as is desired. The sections 3^a, 3^b and 3^c of each side, are connected together by means preferably of strap hinges 4, vertical pintle rods 5 being located at the
50 joints and passing through end portions of the strap hinges 4 to connect the same together. The upper extremities of the pintle rods 5 are formed with heads having openings therein to receive rings connected with chains 6 by which the rods are permanently attached to
55 one of the sections of the adjacent sides, and to the intermediate sections 3^b, as shown in the drawing.

The upper edge portions of the end sections 3^a and 3^c of each side are cut away toward the bow and stern of the boat, which are shaped alike preferably, so that the deck portions 2 of the covering of the boat, may be sub-
60 merged in the water and only the intermediate or main portion of the boat in view, when the same is in use. This feature of the invention, however, is subsidiary and not essential when boats are constructed on certain lines.

The top portion of the covering 1 is provided with openings adjacent to the rods 5 to permit rods to be placed in position connecting the strap hinges 4, and the said top portion of the covering is preferably stitched
65 or otherwise secured to the side portions, forming after a manner, a continuous boat covering which is entirely waterproof and which is effective for the purposes of the invention. The covering 1 is of course sufficiently stout to hold the opposite ends of the sides of the boat in proper relation to one another, when the interme-
70 diate portions of said sides are held apart by cross bars 7 at intervals in the length of the boat. The cross bars 7 have the opposite ends thereof in engagement with the inner sides and lower extreme portions, of vertical pieces 8, which are preferably attached in any
75 suitable way to the inner sides of the sections 3^a, 3^b, and 3^c of the sides of the boat. In order that the cross bars 7 may be held from accidental displacement, it is preferred that L-shaped brackets 9 be attached to
80 the sides of the boat, the lateral portions of said brackets extending beneath the ends of the cross bars 7 to hold the same from downward displacement or movement, while the vertical or longer portions of the brackets are
85 securely fastened to the sides of the boat between said sides and the vertical pieces 8 attached thereto. To ef-
90 fectively prevent the extremities of the bars 7 from slipping off of the portions of the brackets 9 upon which they rest, it is desirable that the lateral portions of said brackets be formed with spaced flanges 10 forming seats
95 or pockets therebetween, receiving the ends of the bars 7 and accomplishing the desired purpose in a very effective manner. The fastenings which attach the vertical
pieces 8 to the sides of the boat may be used to secure the brackets 9 to said sides in an effective manner.

It is contemplated that any suitable sort of bottom of
100 wood, strips, or parts, or of other material, shall be placed upon the cross bars 7 to prevent the bottom of the boat as represented by the bottom of the covering 1, from being mutilated or injured in the actual use of the invention. The shape of the covering 1 is such that it
105 conforms with the arrangements of the sides of the boat after the latter have been forced apart and are held apart by the cross bars 7. In other words, the covering 1 exerts a normal tension to force the sides of the body together, but such tension is resisted by the bars 7 in
110 such a way that the structure of the body is made very rigid.

To reinforce the connection of the sections of each side of the body at the joints, it is preferred that blocks 11 or similar members be attached to said sections, said blocks 11 having abutting end portions which rigidify the joints of the sections and which necessitate bending of the sides when the latter are spread apart and held apart by the bars 7.

A boat such as above described may be collapsed readily by removal of the cross pieces or bars 7, which will cause the sides to move together. This will reduce the boat to a flat compact article of the original length of said boat. To further collapse the boat, it is only necessary to remove the pintle rods 5 and the sides may be taken apart by reason of the sectional construction thereof, and the covering 1 removed in a manner readily apparent. The body may be reduced in this way to an article composed of the various sections, cross bars and covering and being of perhaps a third or fourth of the original length of the boat according to the number of sections in which the sides may be constructed. Setting up and "knocking down" of the boat may be readily accomplished and the article is constructed so as to be very light, compact and easy to handle.

The deck portions 2 of the covering 1, are advantageous in that the covering is thereby virtually formed with pockets at its opposite extremities receiving the opposite ends of the sides of the boat and absolutely preventing the covering from being displaced from the sides, thus doing away with the necessity for employment of any other fastening means for this purpose. Under actual working conditions it is impractical to remove the sides from the covering 1 before disconnecting the sections thereof, for obvious reasons. Furthermore the arrangement of the brackets 9 is very desirable in that the lower lateral end portions thereof prevent the ends of the cross bars 7 from being disconnected from

the sides of the boat and causing injury to the material from which the covering is made.

Having thus described the invention, what is claimed as new is:

1. A boat comprising a covering, sides composed of sections and detachable from the covering, means for holding the sides separated and the covering under tension and consisting of brackets applied to the opposite sides and having lateral extensions projecting from the sides near the lower edge portions thereof, and cross bars between the sides and having the ends thereof seated on the lateral extensions of the brackets for the purpose specified.

2. In a boat the combination of a covering consisting of a continuous or integral body comprising bottom, side and deck portions at opposite ends connecting the sides, sides for the boat having the extremities thereof received between the bottom and deck portions of the covering and composed of a plurality of sections, means normally connecting the sections of the sides of the boat together to prevent displacement of the opposite ends of said sides from the space between the bottom and deck portions of the covering, but admitting of disconnection of the sections of the sides to displace the said sides from the covering, and means for holding the sectional sides apart.

3. A boat comprising a covering consisting of bottom, side and deck portions at opposite ends, sides for the boat having the extremities thereof received between the bottom and deck portions of the covering aforesaid, each of the sides being made in a plurality of sections, cross bars interposed between the sides for normally holding the same apart, vertical pieces applied to the sides and engaged by the ends of the cross bars, and L-shaped brackets attached to the sides at the vertical pieces and having laterally extending portions on which the end portions of the cross bars rest.

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

FREDDIE H. FARRAND. [L. s.]

Witnesses:

A. F. BANZER,
F. W. MASHEK.