

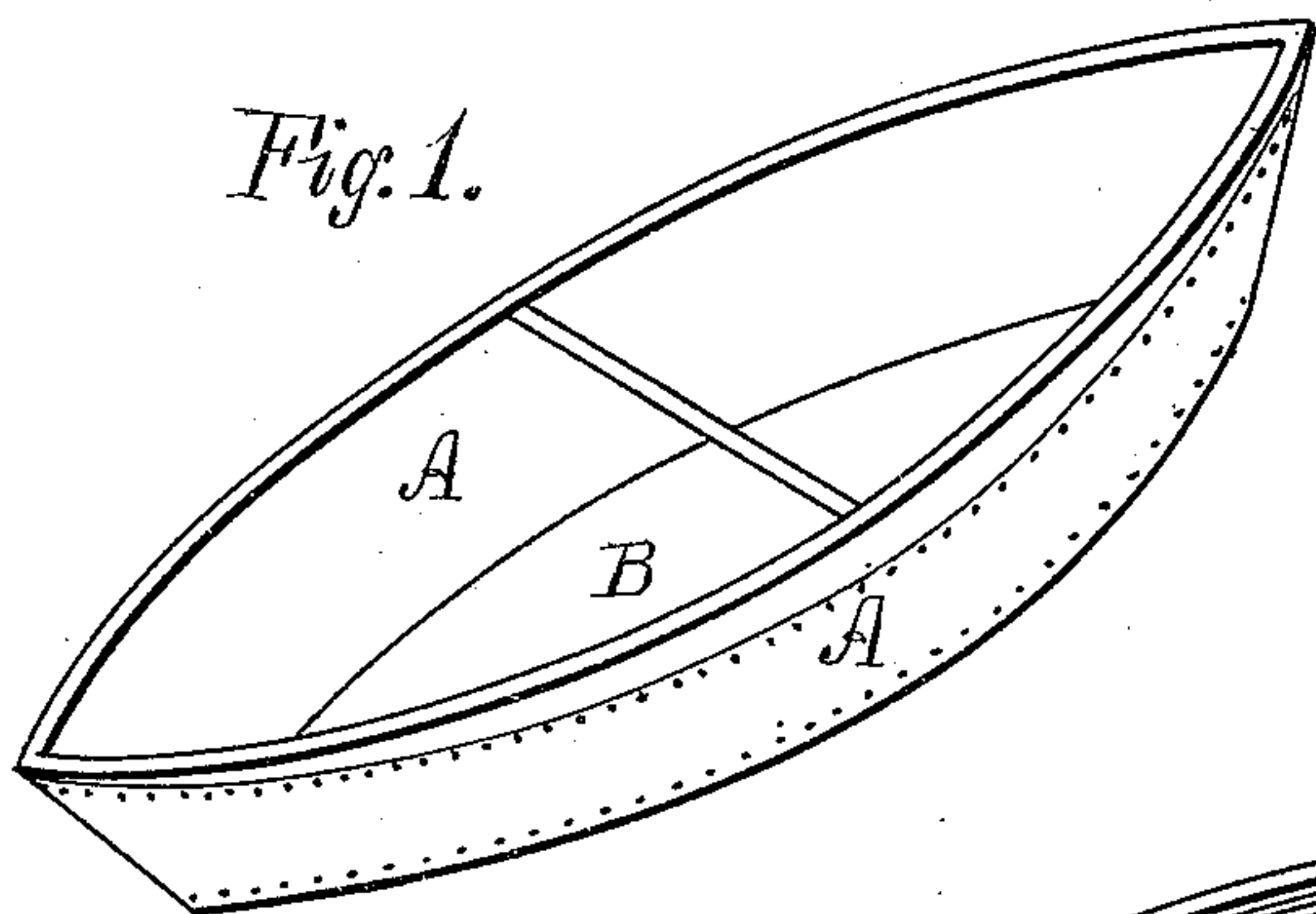
(No Model.)

T. L. STURTEVANT.  
Folding Boat.

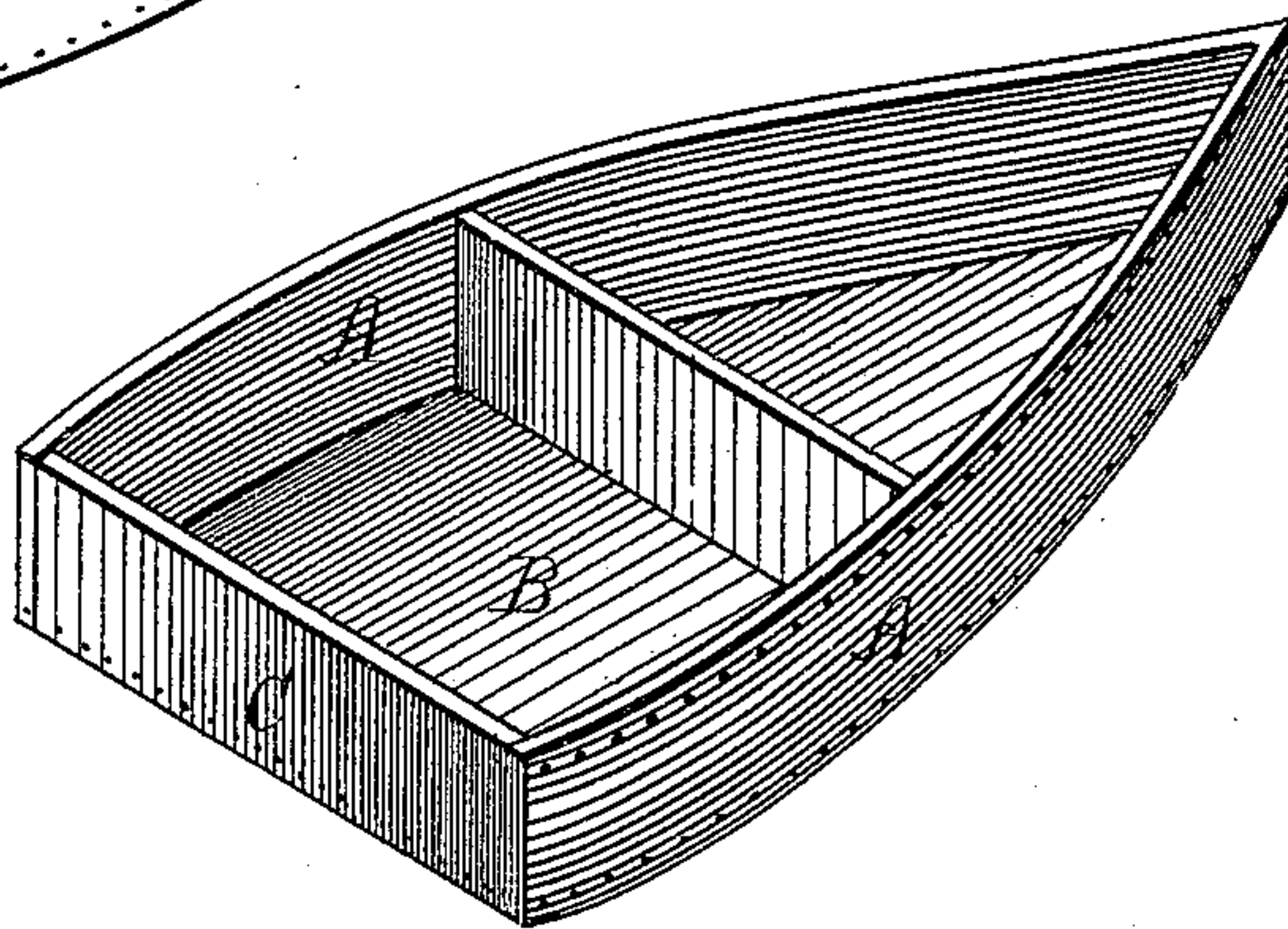
No. 231,117.

Patented Aug. 10, 1880.

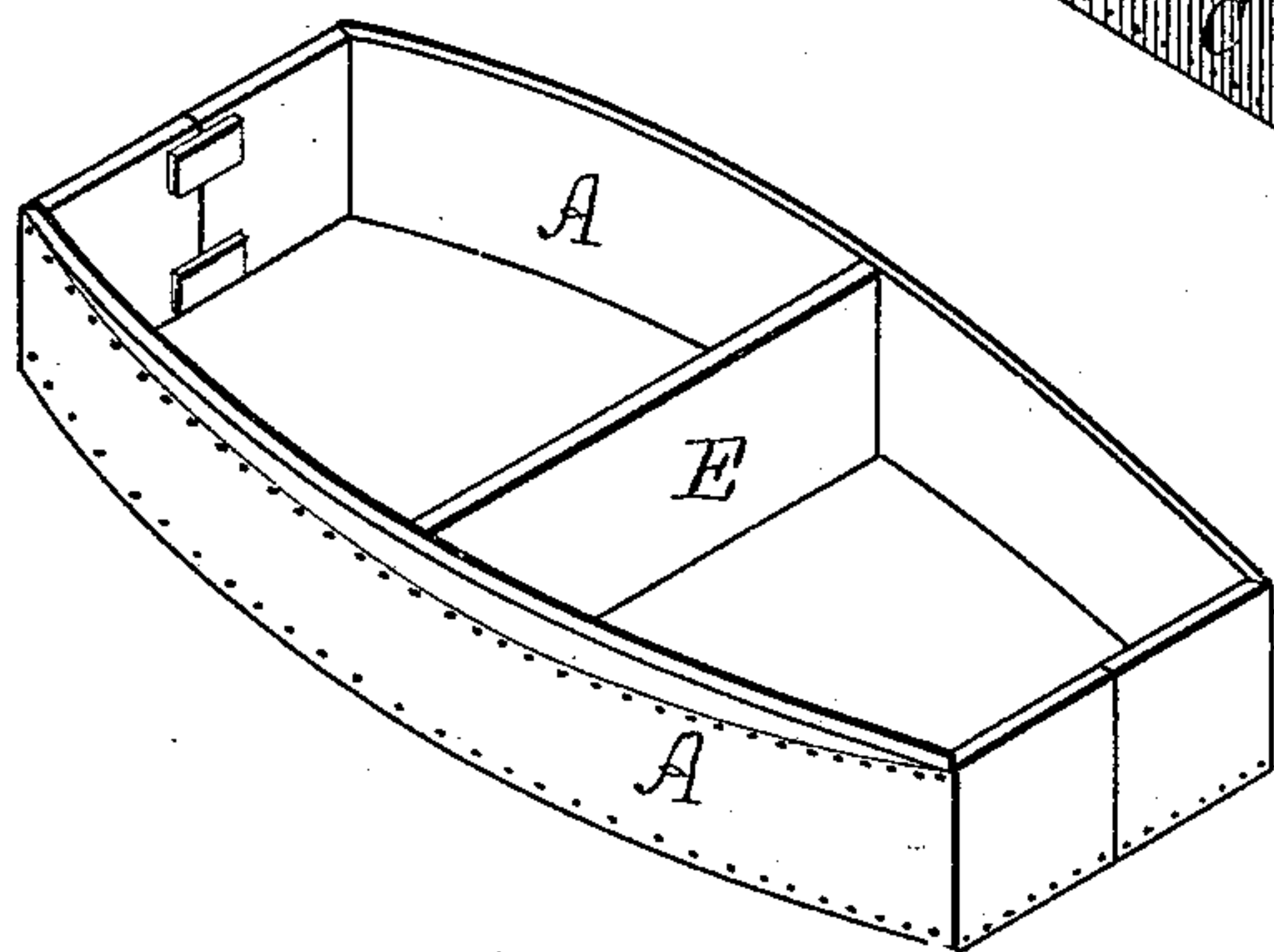
*Fig. 1.*



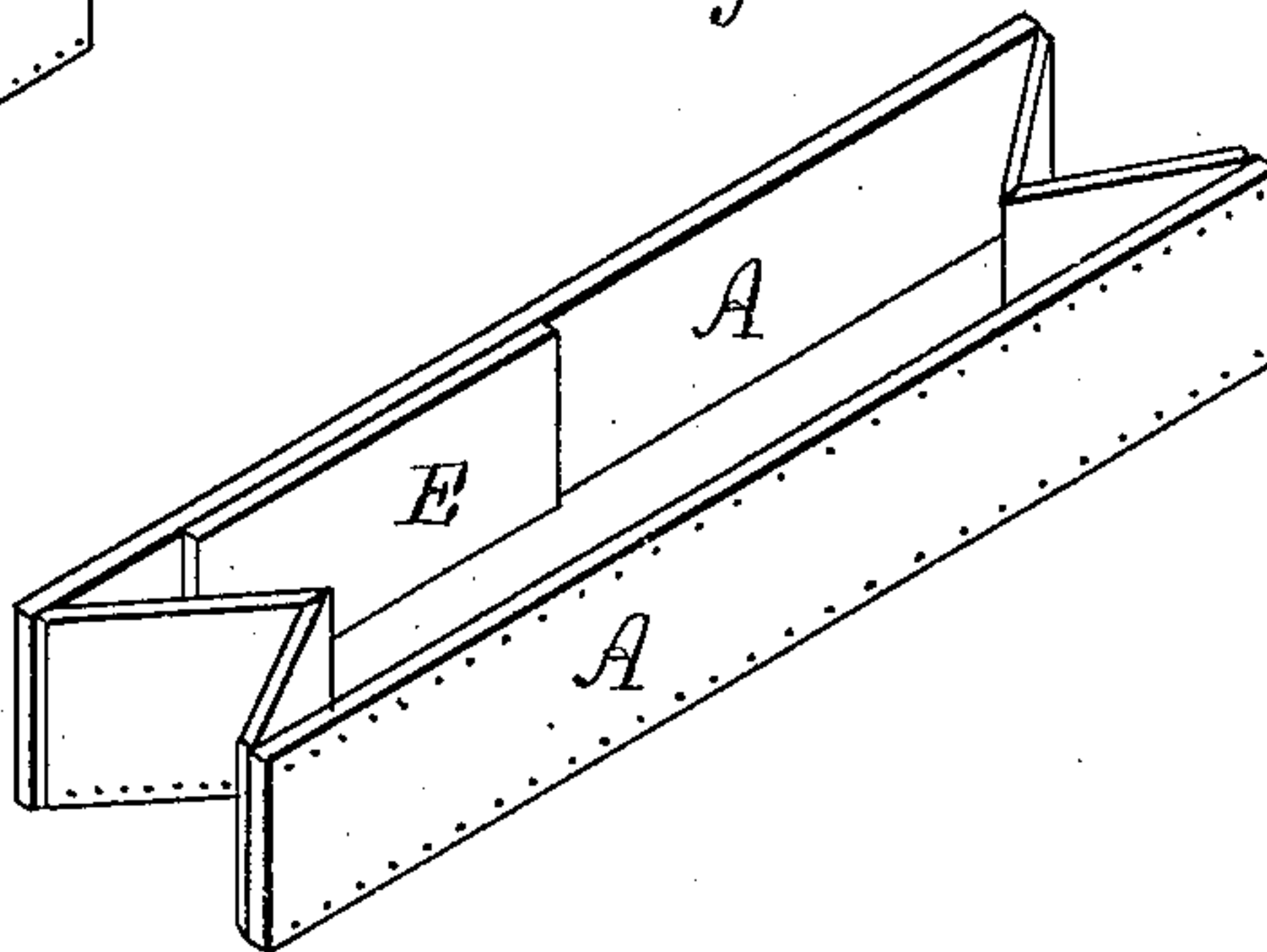
*Fig. 3.*



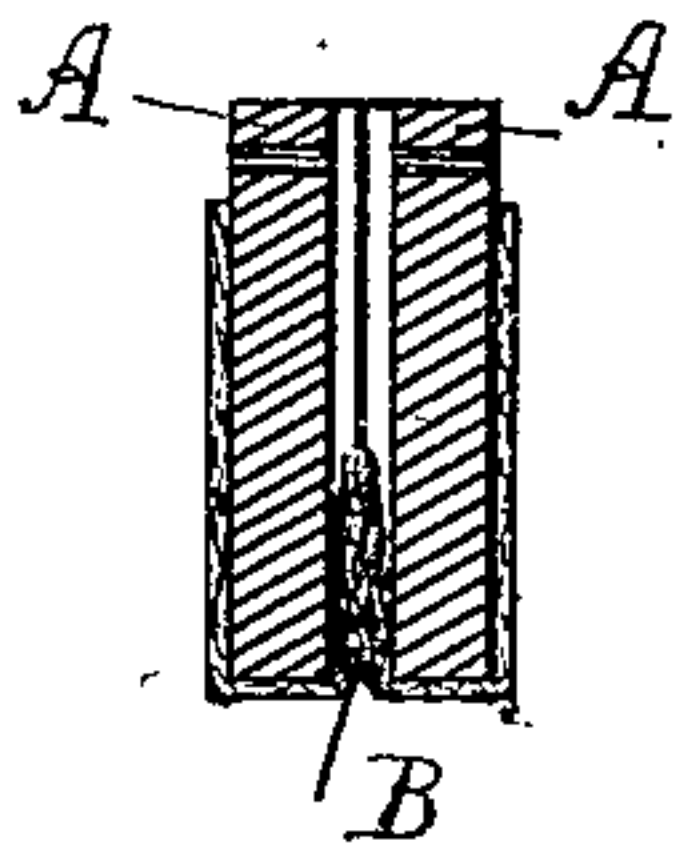
*Fig. 4.*



*Fig. 5.*



*Fig. 2.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

THOMAS L. STURTEVANT, OF SOUTH FRAMINGHAM, MASSACHUSETTS.

## FOLDING BOAT.

SPECIFICATION forming part of Letters Patent No. 231,117, dated August 10, 1880.

Application filed April 24, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS L. STURTEVANT, of South Framingham, county of Middlesex, and State of Massachusetts, have invented  
5 certain new and useful Improvements in Folding Boats, of which the following is a specification.

The purpose of this invention is to provide a light, strong, and serviceable boat, mainly  
10 for sportsmen's use, which shall be susceptible of being folded or contracted into very small compass in order to be easily transported from place to place; and my invention consists in a boat having its sides or side and  
15 ends of wood or other proper stiff material, and its bottom of canvas or other suitable woven or fibrous substance, this bottom serving to connect the sides or side and ends, and enabling the whole boat to be instantly and  
20 easily folded into the smallest possible compass.

In the accompanying drawings I shall represent a boat made in accordance with my invention in one form in which its principle is  
25 capable of being illustrated.

In these drawings, Figure 1 denotes an isometric elevation, and Fig. 2 a cross-section, of a boat made in accordance with my invention, the boat being open or expanded in Fig.  
30 1 and folded in Fig. 2. Fig. 3 shows, in isometric, a modified form of boat. Figs. 4 and 5 show, in isometric, a float containing my invention.

In said drawings, A A represent the sides  
35 of the boat, being straight boards of pine or other suitable material joined or hinged at their ends, so as to be readily spread apart at their centers. The bottom B of the boat is composed of canvas or other suitable woven  
40 or fibrous material, tacked, cemented, or otherwise secured to the outer surface of the lower edges of the sides with a water-tight joint, and this bottom is preferably rendered water-proof in some suitable manner.

In use the sides of the boat are to be spread  
45 apart until the bottom is stretched taut, and a thwart or cross-tie is then introduced between them to retain them in a distended state, or one or more boards may be extended from  
50 side to side and extending from top to bottom

of the sides to distend the latter, as shown in Fig. 3 of the drawings.

The distension or separation of the sides, in addition to stretching the bottom of the boat, imparts great longitudinal and lateral stiff-  
55 ness and strength to the boat.

Various methods may be employed for connecting the ends of the sides A A. They may be connected by bolts passing through each or by a hinge of suitable construction, or as  
60 shown in the accompanying drawings. The canvas which composes the bottom may be carried about them.

Alone the canvas bottom would not possess sufficient rigidity, and would be liable to in-  
65 jury, since the water is displaced only at the immediate spot at which the pressure is directed; to avoid which I employ a board, which is laid upon and partially covering the canvas bottom when the boat is in use; or a false bot-  
70 tom, covering the entire surface of the canvas, may be used, and, if found desirable or necessary, this bottom may be in two parts hinged at the middle, in order to fold into small compass.  
75

In Fig. 3 of the drawings the boat is pointed  
75 at one end, with a square stern, C. The canvas which composes the bottom is extended partially up the sides and secured thereto, as before stated, and it should be carried entirely  
80 over the stern, though this, perhaps, is not absolutely essential.

The stern-piece C may be in one piece and hinged at one end to the side, as shown in Fig. 3; or it may be in two pieces hinged to-  
85 gether in the middle and hinged at each end to the adjacent side, as shown in Fig. 4 of the drawings, in either of which cases the stern folds inward when the boat is collapsed. If  
90 in one piece its free end is to be provided with a bolt or other suitable device for locking it to the side where the boat is distended. If in two pieces a similar device is to be combined with its central point to obtain longitudinal  
95 stiffness of the stern.

In Fig. 4 of the drawings I have shown a  
sportman's float containing my invention. In this instance the ends are in two pieces, hinged or jointed at their inner ends by suitable  
100 means, and with their outer ends hinged to

the adjacent ends of the respective sides. When the float is collapsed these ends fold inward, as shown in Fig. 5 of the drawings, though they may be hinged upon the inside  
5 and fold outward. The thwart in this case is a board, E, hinged at one end to the inside of one of the sides A and about centrally of the latter, the length of this thwart being such that when extended laterally of the boat it  
10 shall crowd the sides apart to provide the requisite width of beam and distend the sides at the center. When the float is contracted the thwart folds alongside of the side to which it is hinged. (See Fig. 5.)  
15 The sides may be hinged in the middle and provided with a bolt or other means of securely locking them together and breaking the joint, in order not to impair their longitudinal stiffness, the object in dividing the sides being to  
20 reduce the length of the boat one-half when folded. This, however, would hardly be necessary owing to the small compass in which the boat folds.

In lieu of a bottom of duck or other woven

or fibrous material, the skins of animals tanned 25 in a manner to resist the hardening or stiffening action of water may be employed; or rubber cloth, such as is used for many purposes in the arts, may be employed.

In lieu of wood for the sides, tin or other 30 light sheet metal may be brought into requisition; but the employment of metal sides, if sufficiently thick to obtain the requisite stiffness, would entail great weight as well as expense. 35

I claim—

A folding boat having sides of wood or equivalent stiff bendable material, a bottom of pliable water-proof material, which connects the sides, and one or more movable cross- 40 braces or thwarts, which serve to hold the sides apart and to distend the bottom, as shown and described.

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Witnesses:

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