Sept. 8, 1925. 1,552,751

F. J. MARRIOTT

COLLAPSIBLE INFLATABLE VESSEL

Filed April 24, 1925

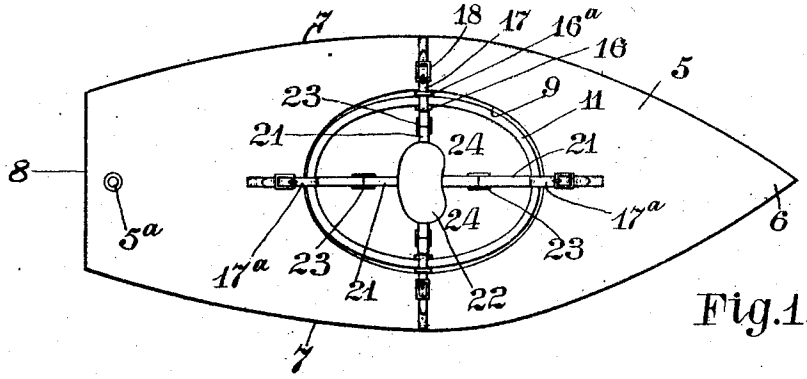


Fig.1.

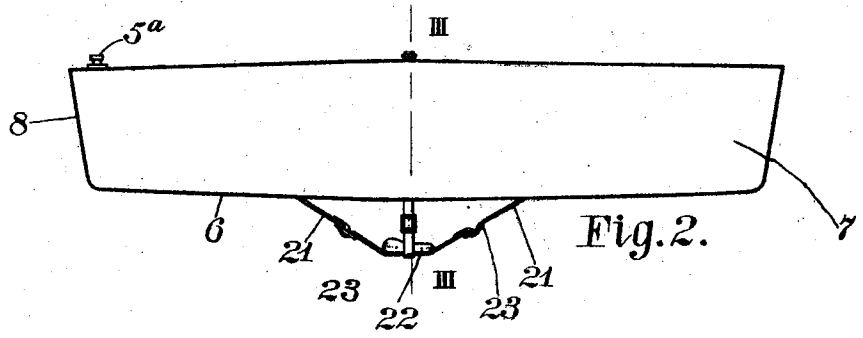


Fig.2.

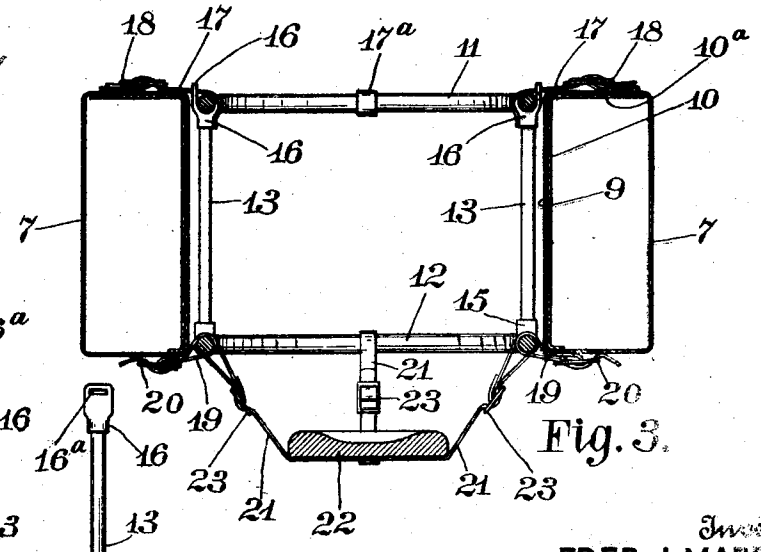


Fig.3.

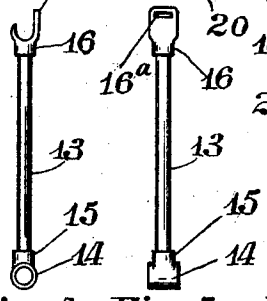


Fig.4.

Fig.5.

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UNITED STATES PATENT OFFICE.

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COLLAPSIBLE INFLATABLE VESSEL.

Application filed April 24, 1925. Serial No. 25,662.

To all whom it may concern:

Be it known that I, FRED J. MARRIOTT, a citizen of the United States, residing in Hilliar Township, in the county of Knox and State of Ohio, have invented a certain new and useful Improvement in Collapsible Inflatable Vessels, of which the following is a specification.

The particular object of this invention is to provide an improved portable, inflatable and collapsible vessel buoyant in water and preferably in boat form adapted in its deflated condition to be folded up into a comparatively small package and carried to the water's edge; and in its inflated condition adapted to sustain the body of the user in such a way that the arms shall be free while the legs are immersed so that either the legs may be used as in swimming or a paddle manipulated to propel the vessel.

The skin of such a vessel should be thin and of light weight such as balloon fabric but it can be made of thin sheet rubber and because such a vessel will be subject to rough usage especially in a heavy surf it is important that the part of the structure which immediately sustains the person shall be attached to the vessel in such a way as to distribute the strains imposed. It is also important that the person-receiving and sustaining portion shall be of such a construction as to permit ready escape therefrom in the event the buoyant element should be punctured and the vessel collapse while in the water.

The invention is embodied in the example shown in the accompanying drawing and hereinafter particularly set forth, the features of novelty being finally claimed.

In said drawing—

Figure 1 is a top plan of the vessel.

Fig. 2 is a side view of the same.

Fig. 3 is a section mainly on the line III—III Fig. 2.

Figs. 4 and 5 are elevations in two positions of the uprights used in forming the cockpit frame.

In manufacturing the hull or buoyant part of the device the deck 5, bottom 6, sides 7, stern 8 and cockpit wall 9 can each be cut with the aid of a suitable pattern out of balloon fabric and all secured together to form a structure such as shown, care being taken to apply along the seams a suitable paint or varnish insoluble in and excluding water. The same method can be followed in forming the boat of sheet rubber or rubberized fabric impervious to water except that seams need not be sewed but the margins joined by the usual method practiced with such material. The boat may also be in the whole or part made as a molded job. In either case it may be desirable to strengthen or reinforce the wall of the cockpit and the deck and bottom where the strains imposed by the weight of the occupant are applied and somewhat as indicated at 10 and 10^a in Fig. 3.

The cockpit is made as a through opening preferably slightly ellipsoid in plan view and extending as respects its major diameter fore and aft the vessel. The structure for receiving and sustaining the user includes two rings 11 and 12 preferably of wood or of aluminum tubing of a form to fit as closely as convenient within the cockpit near its upper and lower ends and two or more uprights 13, 13 of wood or aluminum connecting the rings. According to my invention each of said uprights 13 is permanently hinged to the lower ring 12 by means of a transverse collar 14 on a socket piece 15 into which the lower end of the upright is secured. In manufacture the hinging member 14—15 is put on the bar of the ring before the bar is closed to form the ring. The upper end of the upright is provided with a stirrup 16 having an extended and slotted lip 16^a, said stirrup receiving the ring 11 which is secured therein by a short strap 17 passed through the slot of the lip 16^a and fastened to a buckle 18 secured on the deck of the vessel. Three or four of these uprights can be provided to maintain the parallelism of the rings 11 and 12 or two of them with looped straps 17^a secured to the deck to maintain such parallelism. The lower ring 12 is connected with the bottom of the boat by looped straps 19 engaged with buckles 20. The frame thus described, while light in weight, affords an effectual resistance to entrapping collapse about the body of the occupant upon puncture of the boat especially if the skin of the boat or parts thereof be formed of elastic material.

Hung upon the lower ring 12 by means of four straps 21 looped around the ring is a saddle 22 the straps being provided with buckles 23 in which the straps are adjustable in the usual manner so that the saddle

can be located at different depths according to the size of the user or the extent of immersion desired by him.

An ordinary pneumatic tire inflating and deflating nipple 5^a can be placed anywhere on the deck, as for example at the stern; and the boat can be inflated through said nipple with an ordinary tire pump; and it can be deflated by depressing the valve of said nipple.

Preparatory to use, the body of the vessel is best first inflated or partially inflated to distend the cockpit and thereby facilitate the application thereto of the bracing frame and saddle.

In practice the user will sit on the saddle facing the bow with his legs extended through the open spaces at 24, 24. In this position his arms will be free to wield a paddle or he can make strokes with his legs after the manner employed in swimming.

It will be observed that the considerable strain imposed by the occupant of the cockpit frame especially when used in a rough surf is borne by the extended connections of that frame with the deck and bottom.

When to be collapsed for transportation or storage the straps holding the cockpit frame are released and the uprights 13 folded to lie substantially in the plane of the ring 12, the boat body deflated and folded and all the parts placed together compactly in a suitable cover or bag.

The forms of the parts can be changed without departing from the gist of the invention as claimed.

What I claim is:

1. A collapsible inflatable vessel provided with a through cockpit and a collapsible frame within the cockpit attached to the vessel, said collapsible frame including a removable ring for the upper and lower ends of the cockpit and connecting uprights.

2. A collapsible vessel provided with a through cockpit and a bracing member for the cockpit consisting of rigid rings attached to the vessel near the upper and lower ends of the wall of the cockpit.

3. A collapsible inflatable vessel provided with a through cockpit and bracing members for the cockpit consisting of rigid rings attached to the vessel near the upper and lower ends of the wall of the cockpit and rigid upright members connecting said rings.

4. A collapsible inflatable vessel provided with a through cockpit and bracing members for the cockpit consisting of rigid rings attached to the vessel near the upper and lower ends of the wall of the cockpit and rigid upright members hinged to one of said rings connecting said rings.

5. A collapsible inflatable vessel provided with a through cockpit and bracing members for the cockpit consisting of rigid rings attached to the vessel near the upper and lower ends of the wall of the cockpit and rigid upright members hinged to one of said rings and detachably connected with the other.

6. A collapsible inflatable vessel provided with a through cockpit, a rigid frame within the cockpit, said frame including a removable ring at the top and bottom of the cockpit and connecting uprights and a saddle sustained by said frame.

7. A collapsible inflatable vessel provided with a through cockpit, a removable frame within the cockpit and a saddle sustained by said frame.

8. A collapsible inflatable vessel provided with a through cockpit, a removable collapsible frame within the cockpit and a saddle sustained by said frame.

FRED J. MARRIOTT.