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2,223,625

PNEUMATIC BOAT

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Fig. 1.

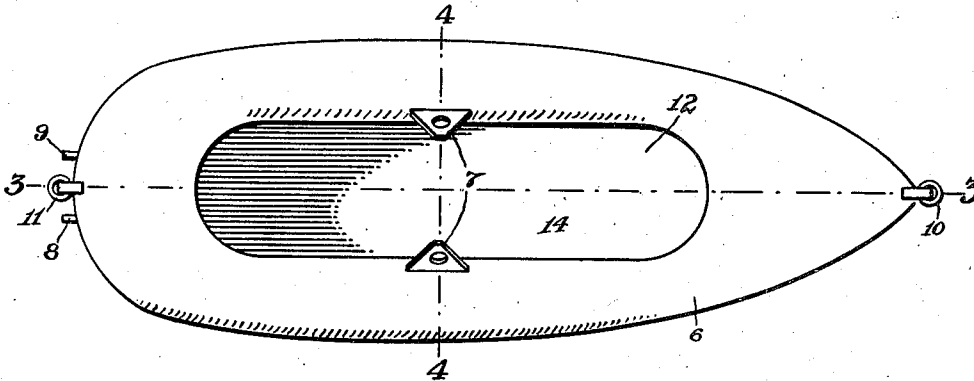


Fig. 2.

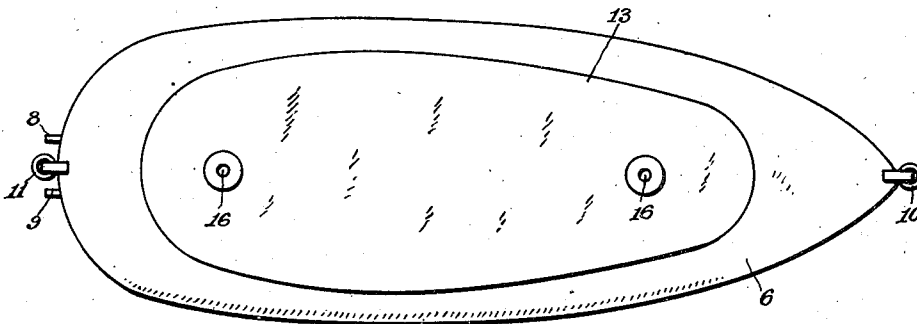


Fig. 3.

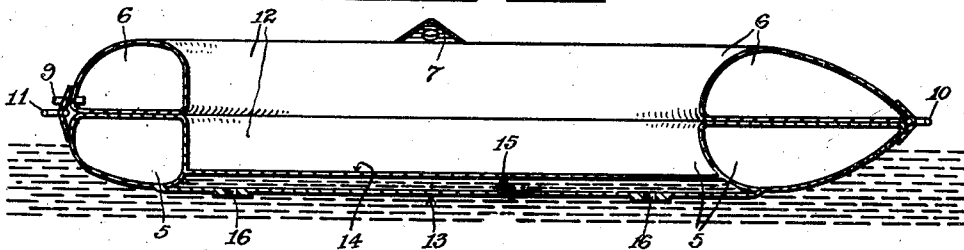
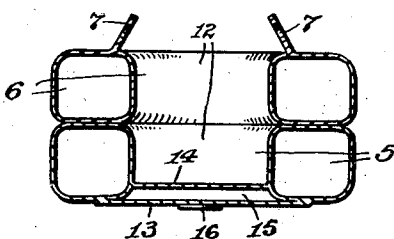


Fig. 4.



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PNEUMATIC BOAT

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1 Claim. (Cl. 9—11)

This invention embodies a pneumatic boat, and, more particularly, a collapsible and portable boat that is preferably made of rubber or other leak-proof material. One object of the invention is to provide a pneumatic boat having a double bottom with a compartment between and entry ports or valves whereby this compartment fills with water when the boat is placed therein, and whereby the water readily drains out when the boat is removed from the water. Another object is to provide a boat comprising several separate pontoons superimposed upon one another and fixedly connected together. The combination of the two foregoing objects provides a boat that is very steady in the water and one which will readily carry several people of average size even though the boat is comparatively small in size. Another resultant object or advantage in providing a pneumatic boat of small size and increased buoyancy is that it may be transported in an air plane or other small vehicle in its collapsed or folded condition and used as a life-raft in an emergency.

In the drawing:

- Figure 1 is a top plan view of the boat;
 Fig. 2 is a bottom plan view of the same;
 Fig. 3 is a view in longitudinal vertical section taken on a broken line 3—3 of Fig. 1; and
 Fig. 4 is a view in transverse vertical section taken on a broken line 4—4 of Fig. 1.

Referring in detail to the drawing wherein like reference numerals indicate like parts in the several views, the numeral 5 designates a lower or bottom pontoon, and the numeral 6 indicates an upper pontoon which is superimposed upon and fixedly connected to the lower pontoon. The upper pontoon 6 is provided with a pair of rowlocks 7 that are made of heavy or reenforced rubber and vulcanized or otherwise fixed thereto, it being understood that both the upper and lower pontoons are made of rubber or like material. A valve 8 serves as means for inflating or deflating the lower pontoon, and a corresponding valve 9 serves as means for inflating and deflating the upper pontoon. Two rings 10 and 11 are respectively secured to the bow and the stern of the boat in any desirable manner. The central opening or space in which the occupants of the boat sit is designated by the numeral 12 and extends downward through both pontoons to the double bottom which will now be described.

The double bottom is the most important feature of this invention and consists of a lower bottom member 13 and an upper bottom member 14. These two bottom members are vulcanized

to the lower pontoon 5 thus making a water-tight connection therewith. They are disposed a short distance apart thus forming a compartment 15 therebetween. The lower bottom member 13 is provided with a pair of water entry ports or valves 16. Said ports are reenforced around their edges and are respectively located at the forward and rear ends of the lower bottom member. The compartment 15 readily fills with water entering through the ports 16 when the boat is placed in the water as shown in Fig. 3 of the drawing. When the boat is taken out of the water this compartment is readily emptied by the water draining out through the ports 16. The boat is then deflated by means of the valves 8 and 9 and folded into compact form for storage or transportation.

Referring particularly to Fig. 3, when the compartment 15 is filled with water, the boat is thereby made unusually steady and the occupants may step into the boat and stand upon its upper bottom member 14 without tipping it to any marked extent. Water is caused to enter the double bottom compartment 15 through the ports 16 by persons in shifting their weight on the flexible bottom member 14 while moving or walking around in the boat. Their shifting weight causes the flexible double bottom and its compartment to act as a pump in forcing the air out and drawing water in when the boat is first placed in the water. When the air is pumped out it cannot reenter, and the weight of the water has a remarkable stabilizing effect in preventing the boat from tipping over. In the use of a small boat that is substantially six or seven feet long and two and one-half feet wide, the weight of two average size persons causes it to sink down into the water about half its depth, or until the water level is even with the plane of joinder of the upper and lower pontoons, thus leaving the upper pontoon 6 above the water level and making a very seaworthy boat. In using this boat as a life-raft, it has been determined that twenty persons may support themselves in the water around the boat by holding onto its sides or to a grab line secured around its sides.

While I have described the double bottom as being secured to a boat consisting of several pontoons, it will, of course, be understood that this double bottom may also be used on a boat consisting of only one pontoon. However, the double bottom distinctively cooperates with the pontoons of a boat comprising several pontoons in making the boat more steady and seaworthy,

and in eliminating the tendency to tip over which has heretofore been so prevalent in this class of boats. This boat is adapted for use both in times of peace and in times of war.

5 I claim:

A pneumatic boat consisting of pontoons connected together, a double bottom comprising a lower and an upper flexible bottom member dis-

posed in slight spaced apart relation and connected to the lower portion of the lowermost pontoon, means for the entry of water and the escape of air through the lower bottom member, and said means consisting of a plurality of open ports extending through the lower bottom member. 5

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