Jan. 5, 1926. 1,568,486

J. VON WALDY

BOAT

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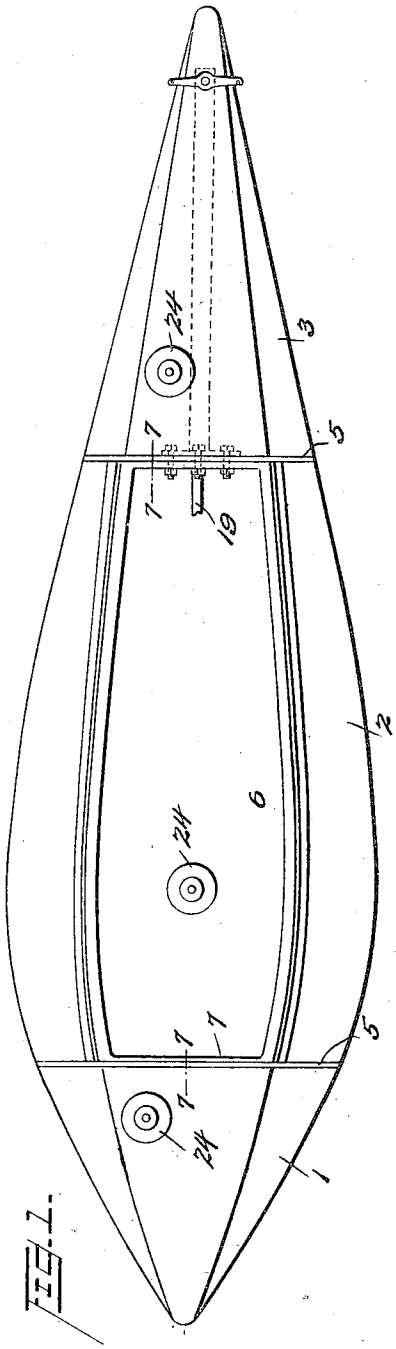


Fig. 1.

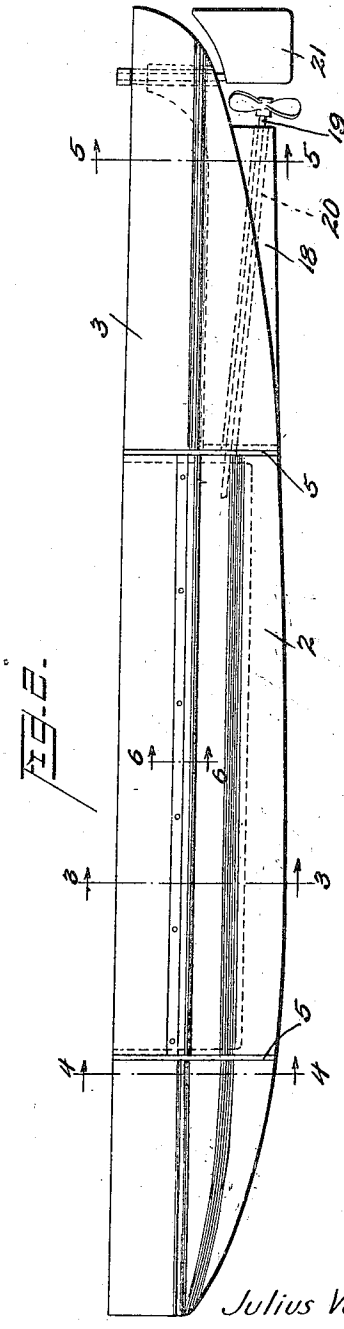


Fig. 2.

Inventor

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FIG. 3.

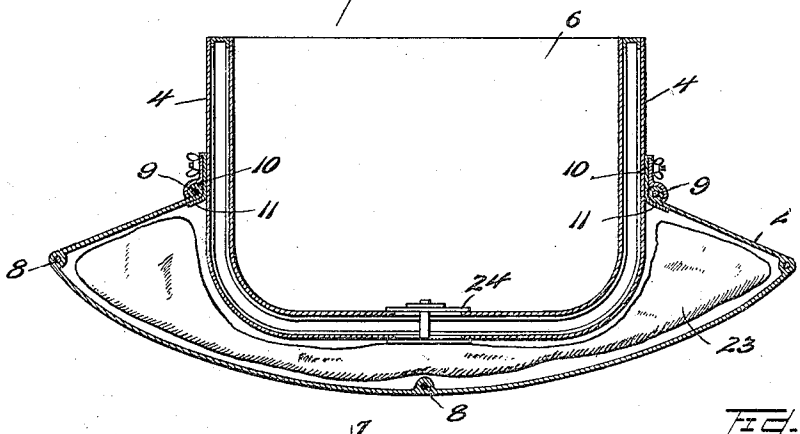


FIG. 4.

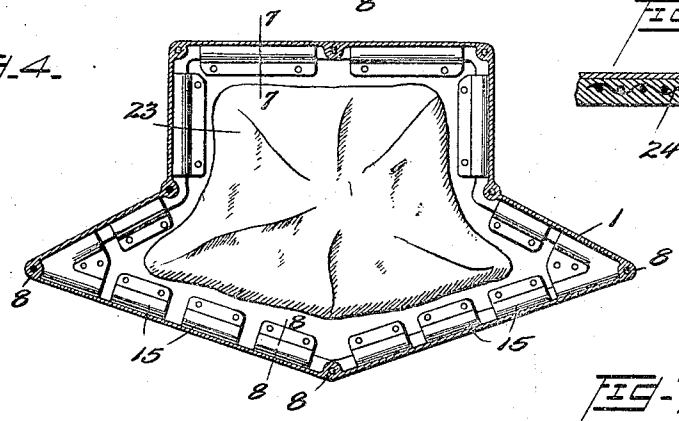


FIG. 9.

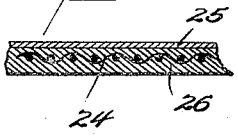


FIG. 5.

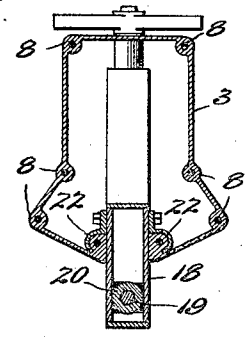


FIG. 6.

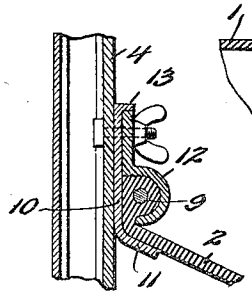
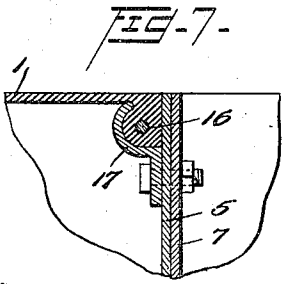


FIG. 7.



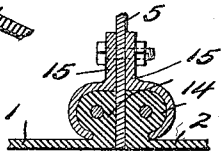


FIG. 8.

Inventor

Julius Von Waldy

By Emery, Booth, Janney & Varney

his Attorneys

Patented Jan. 5, 1926. 1,568,486

UNITED STATES PATENT OFFICE.

JULIUS VON WALDY, OF NEW YORK, N. Y.

BOAT.

Application filed March 8, 1924. Serial No. 697,917.

To all whom it may concern:

Be it known that I, JULIUS VON WALDY, a citizen of the United States, a resident of New York, in the county of New York and State of New York, have invented an Improvement in Boats, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention aims to provide an improved hull construction for boats and the like which is adapted to withstand the hard usage to which such craft is subjected.

In the drawings, wherein I have shown one illustrative embodiment of my invention:

Fig. 1 is a top plan view of a boat embodying my improved construction;

Fig. 2 is a side elevation of the boat shown in Fig. 1;

Figs. 3, 4, 5 and 6 are sectional views taken on the lines 3—3, 4—4, 5—5 and 6—6, respectively, of Fig. 2;

Fig. 7 is a fragmentary sectional view taken on the line 7—7 of Fig. 1.

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 4; and

Fig. 9 is an enlarged fragmentary sectional view of a flexible fabric suitable for use in my construction.

Referring to the illustrative embodiment of my invention, I have shown a semi-rigid boat having a hull preferably, though not necessarily, made of a plurality of flexible inflatable sections 1, 2 and 3. To provide a durable construction which will yield upon striking obstructions and avoid damage to the craft, the mid-section 2 is preferably detachably connected to rigid gunwales 4 amidships, and all of the sections are detachably connected together (see Figs. 1, 2 and 3). As shown, the bow and stern portions of the craft are made entirely of flexible material, such as reenforced vulcanized rubber, and these sections may be partly telescoped, one within the other, for shipping purposes. Thus the fore and aft decks are flexible so that they are capable of yielding upon striking obstructions.

To divide the hull into a plurality of separate inflatable compartments, I have shown partitions 5, preferably of flexible material, secured between the adjoining ends of the flexible sections. Thus if any one compartment is accidentally deflated in use the other compartments have sufficient buoyancy to float the craft.

As shown in Figs. 1 and 3, a suitable rigid cockpit 6 is secured between the gunwales amidships and presents front and rear rigid walls 7 to which the fore and aft flexible deck portions may be attached. The bottom or floor of the cockpit is spaced above the bottom flexible wall of the mid-section to provide an air space which forms a pneumatic cushion or shock absorber for the cockpit and permits the necessary flexing of the keel portion upon striking an obstruction under water.

Referring to Figs. 3 to 7, the flexible sections 1, 2 and 3 have reenforcing beads 8 where they are bent or present sharp curves so as to maintain their shapes upon inflation and to strengthen the fabric. The upper securing edges of the mid-sections 2 preferably present reenforced beads 9 having cores of heavy wire to facilitate attachment to the rigid gunwales 4 (see Fig. 6). Suitable bead receiving means such as the rims 10 providing bead channels 11 may be secured to the gunwale walls 4 and clamping devices such as the bead clamps 12 cooperate with the rims to hold the beads securely in place (Fig. 6). If desired, the rims 10 may have stop shoulders or flanges 13 at their upper edges to prevent displacement of the clamps under severe strains. The clamps may be bolted or otherwise secured to the rims.

The adjacent securing edges of the sections likewise may have reenforced beads 14 presenting flat inner edges to engage each other or to engage opposite sides of the partition walls 5 (see Fig. 8). Suitable opposed clamps or lugs 15 may be secured together in clamping relation on the beads. These clamps are distributed along the joints to permit the desired flexibility of the fabric.

The fore and aft deck sections are preferably secured to the cockpit walls 7 in a manner somewhat similar to that employed for connecting the mid-section 2 to the gunwales 4. As shown in Fig. 7, the fabric presents a bead 16 having a flat vertical edge adapted to contact with the wall 7 and a continuous clamp 17 is secured to the wall to hold the bead in place.

Referring to Fig. 5, the stern section 3 may have a rigid keel if it is desired to use a propeller. As shown, a suitable

housing 18 preferably made of sheet metal is secured to the rear wall 7 of the cockpit 6 and projects through the bottom at the stern to carry the propeller shaft 19. If desired, the housing may be rectangular in section and a tubular bearing 20 for the shaft 19 may be secured to the walls of the housing by welding or other convenient securing means. As shown in Fig. 2, the housing 18 extends upwardly at the stern to provide a rigid support for a rudder 21. The fabric stern section 3 may have a longitudinal slot to accommodate the housing 18, and the edges of the fabric may be beaded and secured to the housing by suitable clamps 22.

It is not necessary for all of the sections of fabric to be secured in airtight engagement to form the inflatable compartments. If desired, inflatable bags 23 of suitable shapes may be employed (see Figs. 3 and 4). Handholds 24 may be provided as shown in Fig. 1 to afford access to the bags for inflation or for removal for repairs.

Referring to Fig. 9, I have shown a reenforced fabric suitable for the flexible walls. As shown, the fabric comprises a wire mesh reenforcement 24 having an inner lining of fabric 25 such as light duck and the wire mesh is embedded in a layer of flexible vulcanized rubber 26. I have found that such a fabric has the desired strength and will resist tearing when subjected to rough usage.

My improved boat may be manufactured economically on a quantity production basis and shipped in sections at minimum transportation cost. If any of the sections are destroyed they may easily be replaced.

Obviously my invention is not limited to the specific embodiment herein shown and described.

What I claim as my invention, and desire to secure by Letters Patent, is:

1. A hull for boats and the like comprising, in combination, a midship portion presenting rigid gunwales and having a rigid cockpit therein and a flexible, inflatable bottom detachably connected to the gunwales providing an air cushion for said cockpit.

2. A hull for boats and the like comprising, in combination, a rigid midship section having a flexible inflatable bottom detachably connected thereto, and a flexible bow section detachably connected to said flexible bottom.

3. A boat having a flexible inflatable hull and a flexible transverse partition wall therein dividing the interior into a plurality of independent compartments.

4. A hull for boats and the like comprising, in combination, a plurality of sections of flexible, reinforced fabric presenting reinforced beads at their securing edges and means for clamping said beads in watertight engagement.

5. A hull for boats and the like comprising, in combination, a plurality of sections of reinforced flexible fabric presenting beads at their securing edges and a plurality of clamps cooperating with said beads to hold them in watertight engagement.

6. A hull for boats and the like comprising, in combination, a plurality of reinforced flexible fabric sections having beaded edges, flexible partitions between said beaded edges and clamping means for holding said edges and said partitions in watertight engagement.

7. A hull for boats and the like comprising, in combination, rigid gunwale walls, a flexible fabric bottom having reinforced beads at its upper edges and detachable clamps for securing said beads to said gunwale walls.

8. A hull for boats and the like comprising, in combination, rigid gunwale walls, a flexible inflatable bottom having beaded upper edges, bead receiving rims on said gunwale walls and clamps for holding said beads in said rims.

9. A hull for boats and the like comprising, in combination, a flexible inflatable bottom of vulcanized, reenforced fabric having reinforcing beads therein.

10. A hull for motor boats and the like, having a flexible inflatable stern section and a rigid propeller shaft housing in said stern section.

11. A boat having flexible walls of vulcanized fabric, a wire mesh reinforcement in said fabric and reinforced beads for the bent portions of said walls.

In testimony whereof, I have signed my name to this specification.

JULIUS VON WALDY.