W. J. HAZELTON.

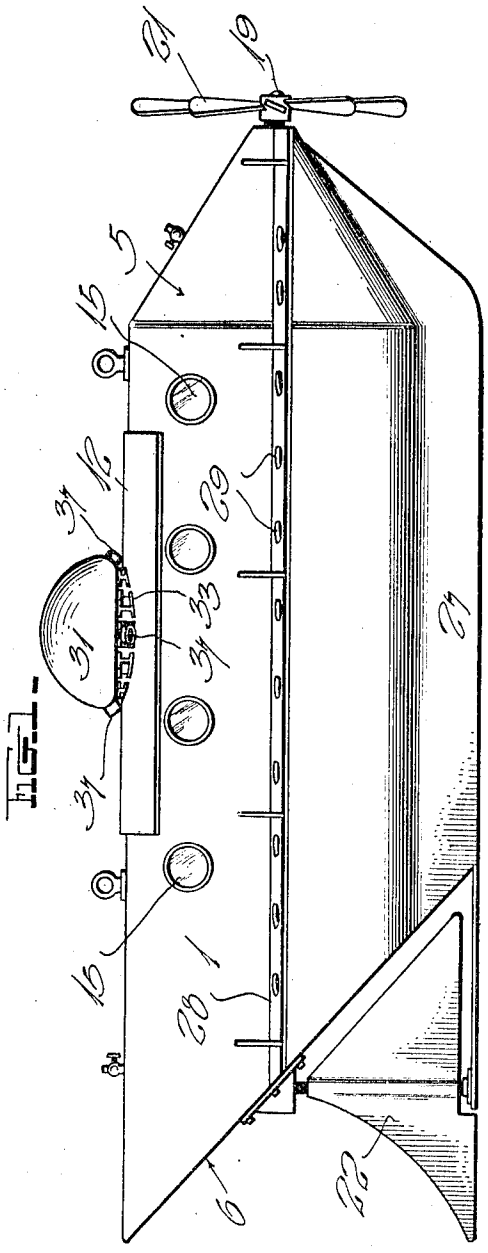
LIFE BOAT.

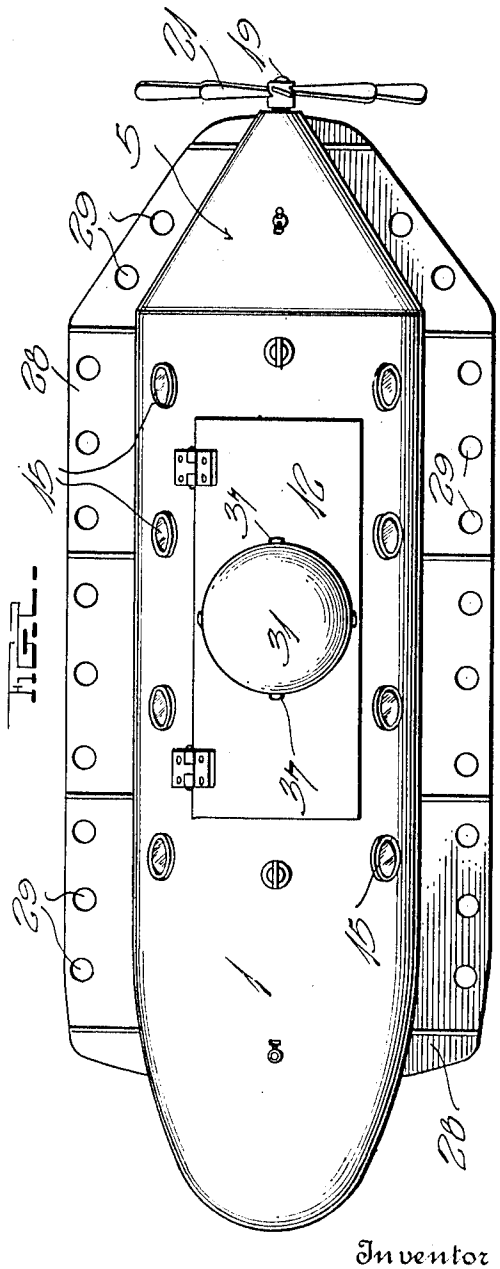
APPLICATION FILED NOV. 5, 1917.

1,270,616.

Patented June 25, 1918.

3 SHEETS—SHEET 1.





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3 SHEETS—SHEET 2.

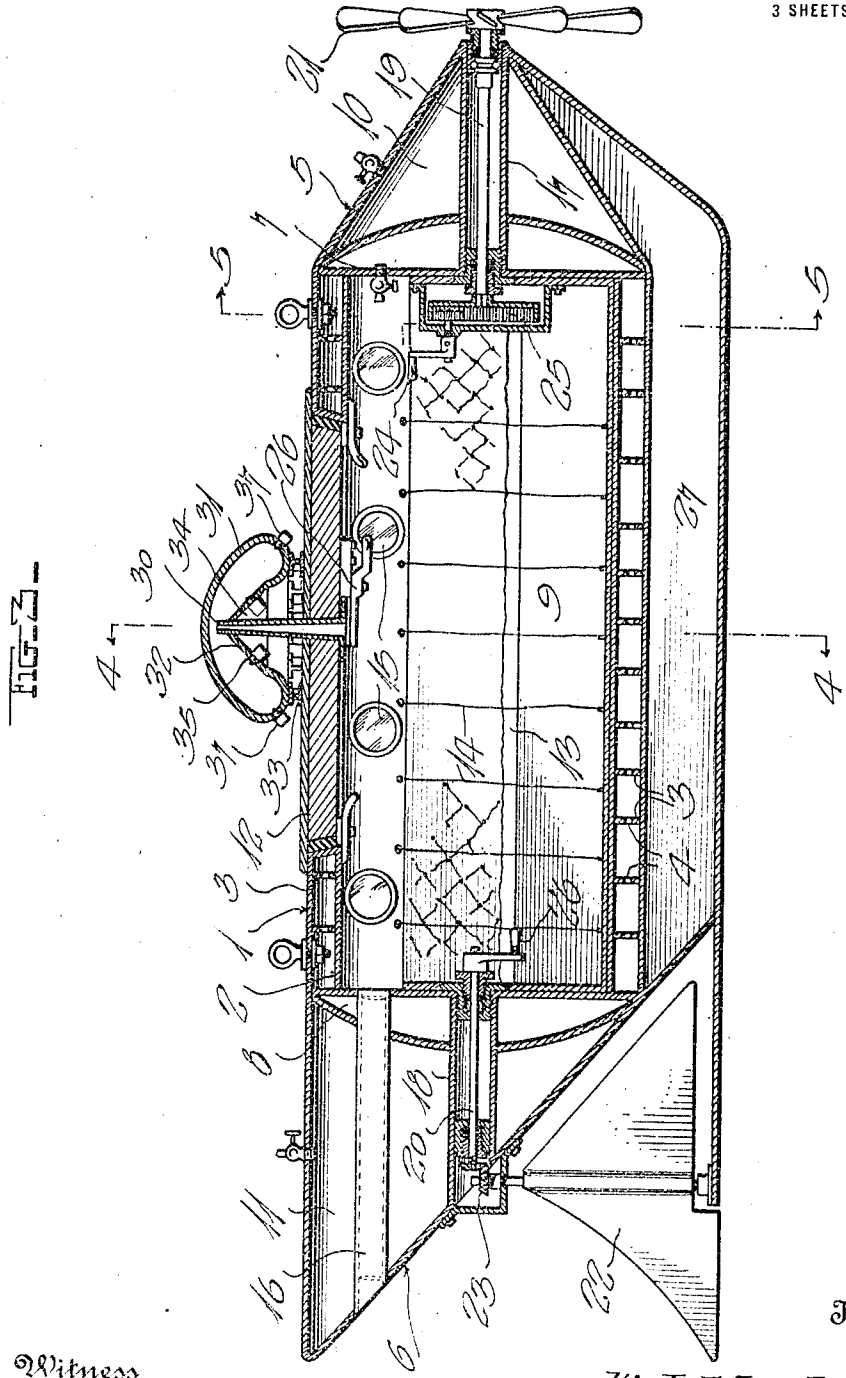


Fig. 2.

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3 SHEETS—SHEET 3.

FIG. 5.

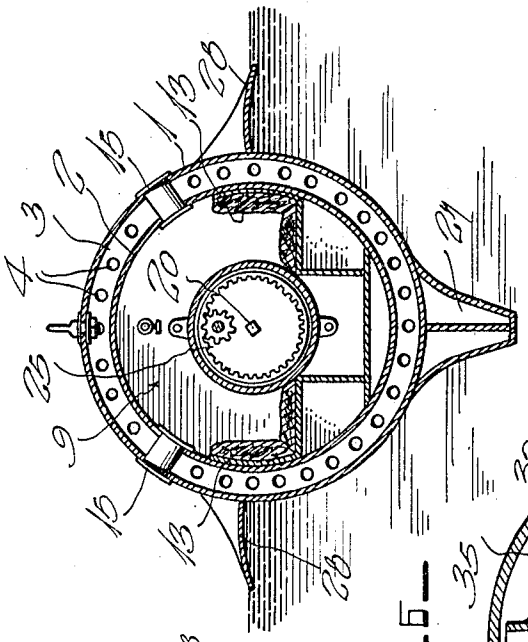


FIG. 6.

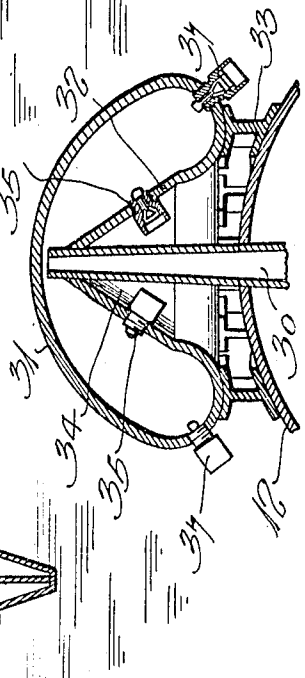
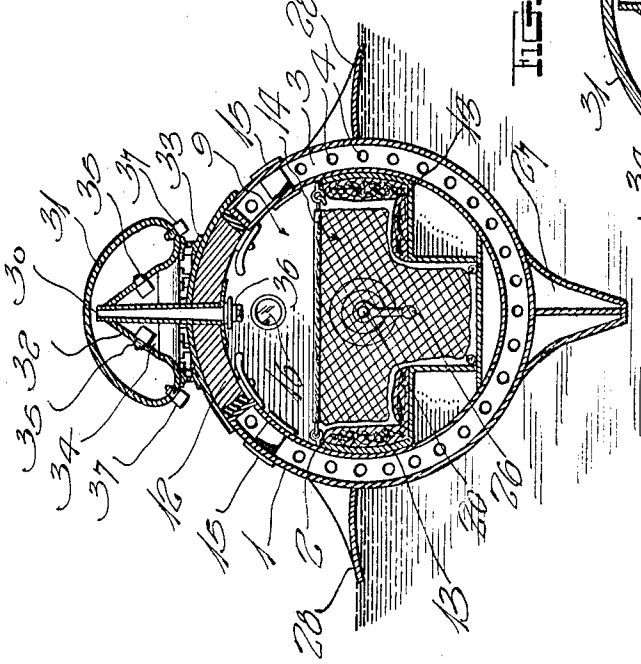


FIG. 4.



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UNITED STATES PATENT OFFICE.

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LIFE-BOAT.

1,270,616. Specification of Letters Patent. Patented June 25, 1918.

Application filed November 5, 1917. Serial No. 200,398.

To all whom it may concern:

Be it known that I, WILLIAM J. HAZELTON, a citizen of the United States, residing at Pontiac, in the county of Oakland and State of Michigan, have invented certain new and useful Improvements in Life-Boats; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in life boats of the inclosed type, that is to that class of life boats employing a compartment for the passengers having no communication with the exterior of the boat, except through suitable means for permitting fresh air to enter the compartment.

One object of the invention is to provide novel means for permitting an abundant quantity of fresh air to enter, yet for automatically preventing the entrance of water in case the boat should submerge when launched, or if the waves should wash over the craft.

A further object is to provide a life boat constructed in a comparatively simple and inexpensive manner, yet so as to be extremely buoyant and easily propelled and steered.

With the foregoing general objects in view, the invention resides in certain novel featues of construction and in unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which form a part of this specification and in which:—

Figures 1 and 2 are respectively a side elevation and a top plan view of the improved boat.

Fig. 3 is a central vertical longitudinal section thereof.

Figs. 4 and 5 are transverse sections on the planes indicated by the lines 4—4 and 5—5 in Fig. 3 respectively, and

Fig. 6 is an enlarged section through the air inlet dome.

In the drawings above briefly described, the hull of the boat is shown constructed of outer and inner cylindrical shells 1 and 2, respectively, the two being spaced apart by annular ribs 3, having perforations 4, whereby a dead air space surrounds the inner shell 2, and to a large extent insulates the same from the cold sea water. The outer shell 1 is of greater length than the shell 2. The front end of said outer shell extends beyond the shell 2 and is of cone shape as indicated at 5, whereas the rear end of the shell 1 also extends beyond the inner shell but preferably inclines downwardly and forwardly as indicated at 6.

Front and rear bulkheads 7 and 8 respectively, extend across the front and rear portions of the hull and are preferably of the hollow construction shown in Fig. 3 to form containers for any purpose desired, such as carrying water or liquid food. The two bulkheads 7 and 8 abut the ends of the inner shell 2 and divide the entire hull into a passenger compartment 9, extending approximately throughout the length of the hull, and front and rear air chambers 10 and 11 respectively. The passenger compartment 9 is provided with a suitable door 12 in its top through which the passengers may enter and leave, and the interior of said compartment is equipped with longitudinal seats 13, and preferably with transverse partitions or nets 14 which will prevent the survivors from being roughly tossed about in the ship. The sides of the hull, above the seats 13, are formed with suitable windows or portholes 15, whereas a lookout tube 16 will in most cases be provided, either at the front or the rear end of the boat, or at both.

Front and rear tubes 17 and 18 extend from the bulkheads 7 and 8 respectively, to the front and rear ends of the hull, front and rear shafts 19 and 20 being mounted in said tubes and preferably located on the axis of the hull as shown in Fig. 3. The front shaft 19 carries a marine propeller 21 whereas a rudder 22 is connected by suitable gearing 23, with the rear shaft 20, said rudder being positioned beneath the inclined ends 6 of the hull. A crank 24 and suitable gearing 25 are employed for driving the shaft 19 to propel the boat, and although any preferred means could be used for turning the shaft 20 to steer the craft, a crank 26 is shown for this purpose. I wish it understood that any suitable type of engine or motor could be substituted for the cranks 24 and 26, but as such uses of motors and engines are well known, it will not be necessary to show or describe them in detail.

A keel 27 extends along the bottom of the hull and terminates at the pointed front end thereof, the front end of said keel decreasing gradually in height as shown. A pair of

laterally projecting rigid wings 28 extend along the sides of the hull and the pointed end thereof as shown in Figs. 1 and 2, and assist in stabilizing the craft, said wings preferably having openings at 29. In addition to performing a stabilizing function, it will be obvious that the rigid wings 28 will serve as means to easly permit survivors to enter the improved life boat from the water. It is intended however, that wherever possible, the boat shall be completely loaded before it is lowered into the water. After loading the door 12 is closed and locked to prevent any possibility of water entering the boat. Air is now supplied to the occupants by the construction described below.

A vertical air inlet tube 30 rises through the door 12 and extends above the top of the boat, the upper end of said tube being in communication with the interior of a hollow dome 31 which is provided with a cone shaped bottom 32 at whose apex the dome and tube are secured together. Suitable supports 33 rise from the door 12 to the dome 31 and permit air to enter the conical pocket 34 formed by the bottom 32. A plurality of upwardly closing check valves 35 are provided for normally admitting air from the pocket 34 into the interior of the dome 31, so that it may enter the passage compartment through the tube 30. When for any reason, however, water enters the lower end of the pocket 34, the air in the latter will be compressed so that the valves 35 are automatically closed. A quantity of air is thus trapped between the water and the valves, so that even should these valves leak, the entrance of water into the dome 31 will be postponed indefinitely. In case wates does finally enter through the tube 30, this may be checked by the cut off valve 36 at the inner end of said tube.

In order to drain any water from the dome 31, which may possibly enter the latter, a plurality of upwardly closing check valves 37 are provided at the lower end of said dome. Under normal circumstances, that is with the dome 31 spaced above the surface of the water, all check valves will be open so that air may be supplied to the passengers, but the moment the water comes in contact with any of the valves, the pressure thereof will close these valves automatically, as will be readily understood.

From the foregoing taken in connection with the accompanying drawings, it will be obvious that although my invention is of comparatively simple and inexpensive nature, it will be highly efficient and durable. Since probably the best results are obtained from the several specific details shown and described, these details constitute the preferred form of the device. I wish it understood, however, that within the scope of the invention as claimed, numerous minor changes may well be made.

I claim:—

1. A life boat comprising a hollow cylindrical hull having a cone-shaped front end and a downwardly and forwardly inclined rear end, hollow transverse bulkheads extending across the front and rear portions of said hull and dividing the same into a non-rotatable passenger compartment extending approximately throughout the length of the hull, and a pair of air compartments at the ends of said hull, a metal lining for said passenger compartment spaced inwardly from the hull by a plurality of annular ribs, a door in the top of said compartment, a pair of tubes extending through said bulkheads to the ends of the hull and located at the axis of the latter, front and rear shafts extending through said tubes, packing means to prevent entrance of water through said tubes, independent means for rotating said shafts, a marine propeller secured on said front shaft, a substantially triangular rudder under the inclined end of the hull and having a vertical operating shaft operatively associated with said rear shaft, a pair of rigid horizontal wings extending longitudinally along the sides of the hull and terminating at the point of its front end, said wings having openings along their edges and decreasing in width toward said front end of the hull, and a hollow keel extending along the boat bottom and inclining upwardly to said point of the front end, said keel also decreasing in width toward said end.

2. An air supply device for air tight life boats comprising a vertical tube to communicate at its lower end with the interior of the boat, a hollow dome having a conical bottom whose apex is joined to the upper end of said tube, said tube communicating with the interior of said dome, a plurality of downwardly opening check valves between the apex and base of said bottom for admitting air but excluding water, similar check valves in the lower extremity of said dome, and means for supporting said dome with said lower extremity a slight distance above the boat, whereby air may enter and be confined under said conical bottom.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM J. HAZELTON.

Witnesses:
T. L. PERRY,
A. G. MCCHOLIE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."