B. E. TOGERSEN.

LIFEBOAT.

APPLICATION FILED DEC. 21, 1920.

1,398,451.

Patented Nov. 29, 1921.

2 SHEETS—SHEET 1.

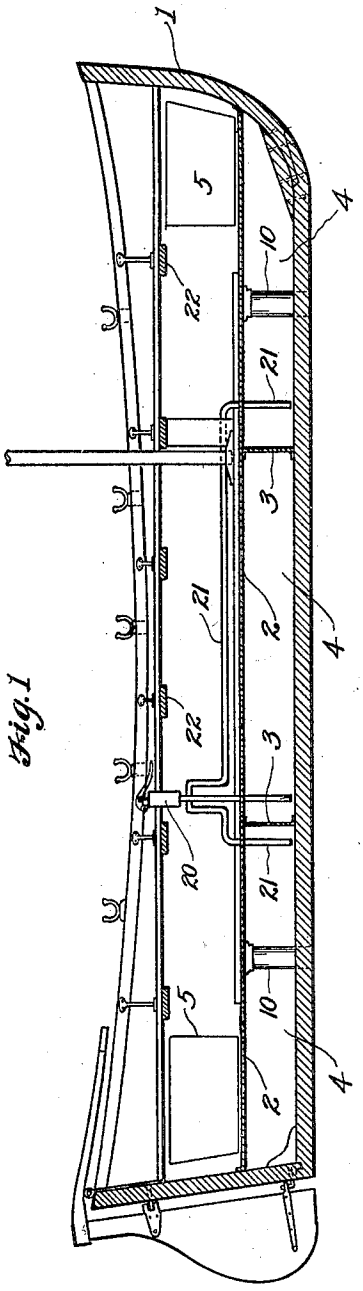


Fig. 1

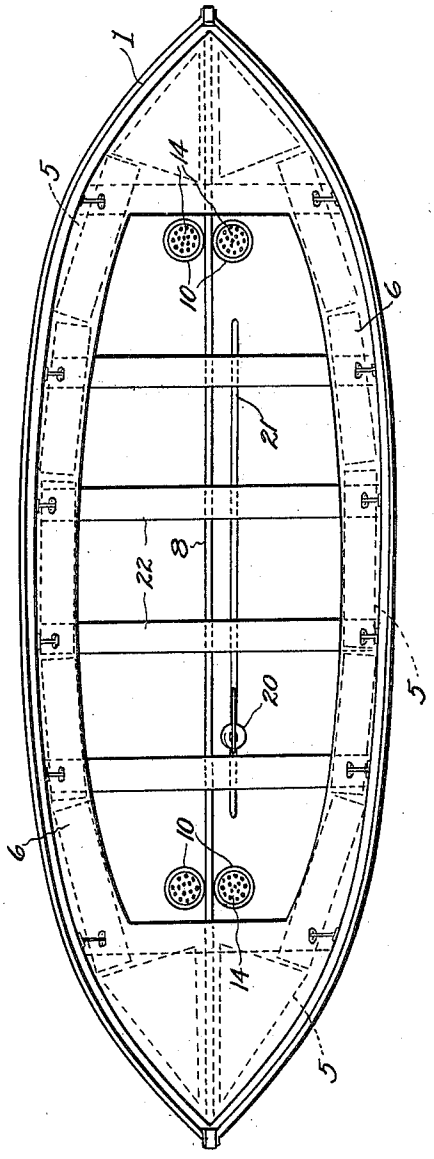


Fig. 2

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2 SHEETS—SHEET 2.

Fig. 5

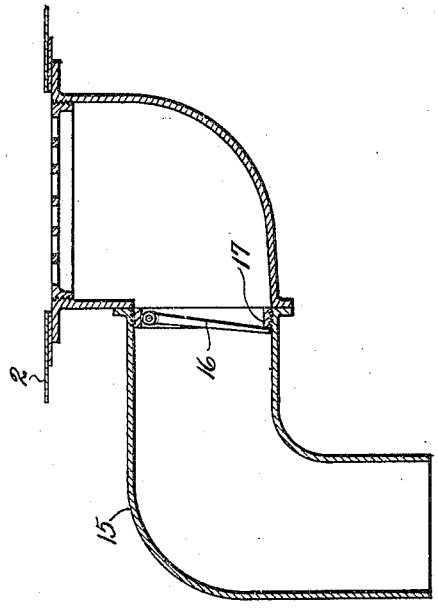


Fig. 3

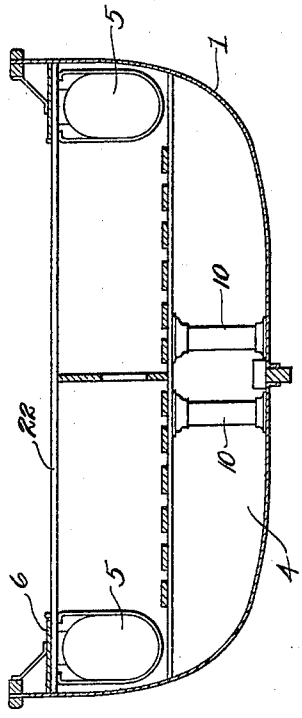
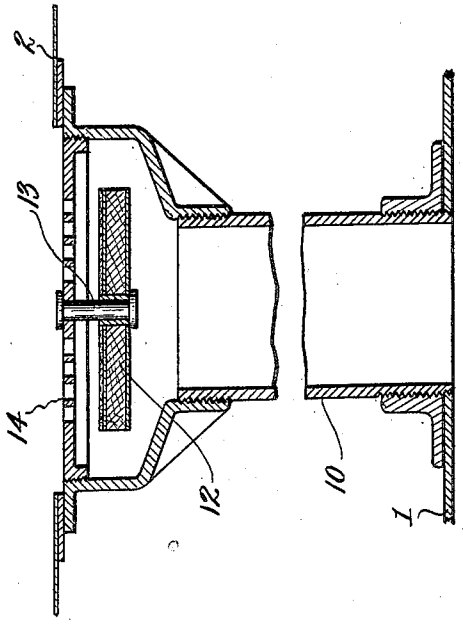


Fig. 4



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UNITED STATES PATENT OFFICE.

BERNT E. TOGERSEN, OF SEATTLE, WASHINGTON, ASSIGNOR TO THE SELF BAILING LIFE BOAT COMPANY, INC.

LIFEBOAT.

1,398,451. Specification of Letters Patent. Patented Nov. 29, 1921.

Application filed December 21, 1920. Serial No. 432,329.

To all whom it may concern:

Be it known that I, BERNT E. TOGERSEN, a citizen of the United States, and a resident of the city of Seattle, county of King, State of Washington, have invented certain new and useful Improvements in Lifeboats, of which the following is a specification.

This invention relates to improvements in life boats, and has for its principal object to provide a boat of that character equipped with a plurality of air tight compartments for increasing its buoyancy, which is self bailing so that its buoyancy will not be reduced by water entering the boat and which is provided with means for removing water from any of the said air compartments in the case of injury thereto.

In accomplishing the objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a central, longitudinal sectional view of a boat constructed in accordance with the present invention.

Fig. 2 is a plan view of the same.

Fig. 3 is a transverse sectional view of the boat.

Fig. 4 is an enlarged sectional view through one of the valved bailing pipes.

Fig. 5 is a sectional view of a valve of an alternative type, to be used in lieu of that shown in Fig. 4.

Referring more in detail to the several views of the drawings, wherein like reference numerals designate the same or like parts—

1 designates the hull of the boat taken as a whole. This may be of any suitable shape and size, but preferably of sheet metal constructed and of the shape shown, and is provided with a false floor or bottom 2 which is spaced from the bottom of the hull to form an intermediate air space. This latter is divided by transverse bulkheads, or walls 3 to provide a plurality of individually sealed airtight compartments 4.

The combined volume of the several compartments 4 is such that their water displacement will sustain the boat when loaded at such height that the bottom 2 will lie above the outside water level, and these compartments are supplemented by a plurality of individually sealed air tanks 5, arranged end to end along the sides and at the ends of the boat upon the bottom 2 and beneath seats 6 which are secured along the boat walls as shown in Fig. 3. These tanks, or compartments, are for the purpose of increasing the buoyancy of the boat and for preventing its being capsized by high waves or rough water.

Extending longitudinally of the boat, from end to end above the bottom 2, is a bulkhead 8 which is principally for effecting counterbalance of the boat when full of water, and which may serve the purpose of preventing occupants of the boat from being thrown from side to side if the boat rocks, for preventing water splashing over one side of the boat from filling or falling into the entire boat and for adding strength and rigidity to the construction.

In order that the boat will be self bailing, I have provided at opposite sides of the partition wall, at spaced intervals along the boat, a plurality of drain pipes 10 which, at their upper ends open through the bottom 2 and at their lower ends open through the bottom of the hull so that water that may splash within the boat will drain therefrom by gravity.

In order to prevent water from entering the boat through these pipes, there is provided in each pipe a wood or cork float valve 12. These valves are slidably mounted on pins 13 extended downwardly from perforated cover plates 14, which are threaded into the upper ends of the pipes in such manner that incoming water will raise the floats against the cover plates to close the perforations and thus prevent its entering the boat, while water draining from the boat will move the float downward away from the cover and provide an open passage to the bottom of the hull.

In Fig. 5 I have illustrated an alternative valve construction wherein the drain pipes have a horizontally turned elbow portion 15 provided with a pivotally mounted gravity valve 16 to swing outwardly from and against a flange or seat 17 to control the passage of water as previously described.

For the purpose of bailing the compartments 4 in case of leakage, there is provided a conveniently accessible pump 20 within the boat having pipes 21 leading therefrom to the several compartments whereby, on operation of the pump, the water will be drawn from the compartments to be delivered with-

in the boat upon the floor 2 where it will pass outwardly through the drain pipes 10.

The boat is further provided with transverse seats 22 beneath which water casks, bread breakers or the like may be placed. Also with the usual oar locks, a rudder, and mast socket so that the boat may be properly navigated.

It is apparent that should a boat so constructed, for any reason, become filled with water, the buoyancy afforded by the air-tight compartments will raise it sufficiently to cause the water therein to drain quickly through the pipes 10 so that the boat will ride at its normal level in the water.

It is also apparent that the disposition of the air tanks will greatly increase the buoyancy of the boat and will insure it against capsizing.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is:

1. A boat of the class described having a false bottom spaced from the floor of the hull forming an air-chamber, transverse walls dividing said chamber into a plurality of individual air-tight compartments, and a partition wall above said false bottom dividing the boat longitudinally.

2. A boat of the class described comprising a false bottom spaced from the bottom of the hull and forming an air-tight chamber of such volume that the boat will ride normally with said false floor above the outside water level, partitions placed transversely across said chamber dividing it into a plurality of individual, air-tight compartments, a partition wall extending longitudinally of the boat above the false bottom, drain pipes opening through the false floor at opposite sides of said longitudinal partition and opening at their lower ends through the bottom of said hull, perforated closures for the upper ends of said pipes, and float valves mounted beneath said closures permitting and outflow of water but movable against said closures to prevent any inflow therethrough.

3. In a boat of the class described having a false bottom spaced from the bottom of the hull and forming an intermediate air chamber, a drain pipe extending through said false bottom and hull and opening at its opposite ends to the interior of the boat and exterior of the hull, a perforated cover plate mounted in the inner end of the pipe, a pin extending downwardly from said plate, a float slidable on said pin from and against the plate to permit an outflow of water but preventing an inflow therethrough.

Signed at Seattle, Washington, this 16th day of December, 1920.

BERNT E. TOGERSEN.