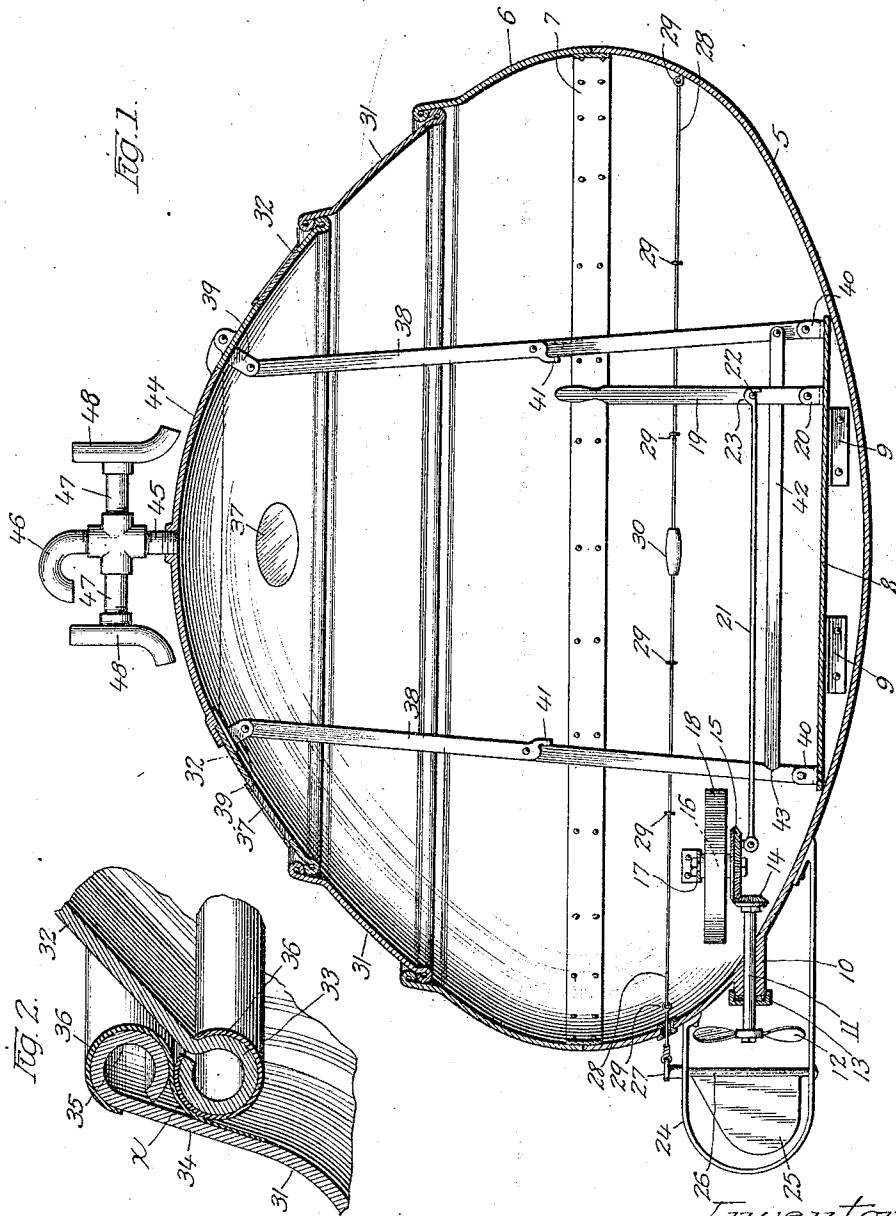


M. FIELD AND H. A. SCHLIEK.
LIFE SAVING APPARATUS.
APPLICATION FILED SEPT. 25, 1918.

1,303,872.

Patented May 20, 1919.



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UNITED STATES PATENT OFFICE.

MARTIN FIELD AND HARRY A. SCHLIEK, OF CHICAGO, ILLINOIS.

LIFE-SAVING APPARATUS.

1,303,872.

Specification of Letters Patent.

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Application filed September 25, 1918. Serial No. 255,630.

To all whom it may concern:

Be it known that we, MARTIN FIELD and HARRY A. SCHLIEK, citizens of the United States, and residents of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Life-Saving Apparatus, of which the following is a specification.

This invention relates to life saving appliances and more particularly to a small portable vessel in which one person may inclose himself and be sheltered from the elements and rough sea that may be running. The device is also provided with facilities for propelling it, as well as steering gear for directing its course and means for ventilating it and for permitting the person sheltered therein to observe his surroundings within a substantially wide range.

One of the objects of our invention is to provide a structure that is capable of being made in an economical manner and in a collapsible form so that it may be folded together and stored in a relatively small space upon a vessel. We prefer to accomplish the divers objects of our invention by the means and in the manner hereinafter more fully described and as more particularly pointed out in the claims, reference being had to the accompanying drawing that forms a part of this specification, in which,—

Figure 1 is a vertical longitudinal section of our life saving appliance.

Fig. 2 is a greatly enlarged view in partial section and elevation, showing the manner of constructing the overlapping or telescoping parts.

In the drawings we have employed similar reference characters to designate the same parts in both the views. By referring to Fig. 1, it will be observed the body of the appliance is of an ovoid or egg shape, consisting of a main hull plate 5 that is substantially semi-elliptical in longitudinal section, and an upper hull plate 6 that forms a continuation of the lower plate, in the manner shown, the two plates being joined at the meeting edges by means of an internal band 7. These two plates form a permanent hull of the contour shown and provide a compartment or chamber within which the occupant may seat himself conveniently. For this purpose we provide a platform 8 that is mounted upon suitable brackets 9 and opposite sides of the hull adjacent the bottom or keel thereof, said plat-

form being so proportioned that the occupant may squat or seat himself tailor-fashion, or kneel in some comfortable position.

The hull is provided with a suitable tubular outwardly extended embossment 10 at its stern, through which a propeller shaft 11 extends, the usual blade propeller 12 being securely fastened upon the extended end of said shaft and the tubular embossment is provided with a stuffing-box 13 to prevent leakage therethrough. The inner end of the propeller shaft is provided with a miter gear 14 that meshes with a horizontally disposed larger miter gear 15 secured upon the lower end of a vertical or pendent arbor 16. The arbor 16 is carried by a suitable cross-bar 17 that extends from the port to the starboard side of the hull and the miter gear 15 preferably has its boss provided with a balance wheel or counterweight 18. The miter gear 15 is actuated by means of and oscillatory hand lever 19, pivoted at its lower end on a lug 20 arising from the platform 8 and which is connected to the miter gear 15 by a pitman or connecting rod 21, as shown. The operating lever 19 is provided with a projection 22 and the pitman 21 is removably connected therewith by providing a hook-shaped end 23 on the same so that when not in use, the hook may be lifted off the projection and the pitman and operating lever laid down flat upon the floor of the boat.

A suitable rudder bracket 24, of substantially U-shape, extends outwardly from the stern of the vessel and the rudder 25 has its spindle 26 extended through suitable apertures in said frame 24, while at its upper end it is provided with a cross-arm 27 to the ends of which the steering cable 28 is secured. This steering cable passes around the interior of the hull and is supported and guided in suitable rings 29 mounted upon the lower hull plate 5, and in order to facilitate the operation of said steering cable, we provide suitable grips 30 upon opposite sides so that they will be within convenient reach of the occupant of the boat.

In order to protect the occupant from the elements, we prefer to deck-over or cover the vessel heretofore described by providing a suitable collapsible deck or cover. This comprises a plurality of collapsible or telescopic ring sections or plates 31 and 32 of a dish or bowl shape, having no bottoms or

tops, and adapted to cooperate with each other and with the hull of the boat in a manner similar to the operation of the ordinary collapsible drinking cup. In order to prevent leakage of water that may wash over the vessel, we have designed these plates in the manner illustrated in the enlarged detail (Fig. 2), wherein it will be observed the plate 32 has its lower edge bent around to form a substantially round bead 33 and the upper edge of the plate 31 is deflected outwardly as at 34, to pass outside of the bead 33 and at its upper edge is turned inwardly to form a corresponding bead 35 of a diameter substantially the same as the diameter of the bead 33 which is disposed below the same, and the diameter of the narrowest portion of the lower section or ring 31 is less than the diameter of the widest portion of the upper section or ring 32. We prefer to cover these beads with suitable packing 36, such as rubber or the like, in order that the points of contact may be rendered less susceptible to leakage and it will be observed that the rubber 36 on the bead 35 extends away from the bead and contacts with a portion of the rubber upon the bead 36, as shown at *x* in the drawing, and the lower edge of this rubber sheet being extended down below the lower edge of the bead 33. This insures a greater area of contact between the members, thereby rendering the joints more watertight.

Suitable port holes 37 are provided in the plate 32 and are fitted with glass so that the occupant may observe his surroundings therethrough. In order that the structure may be supported in the position shown in Fig. 1, in other words, ready for occupancy, we provide four toggles 38, 38 connected to lugs 39 disposed equi-distant around the upper edge of the plate 32, which have their lower ends pivotally connected to lugs 40 arising from the platform or seat 8, heretofore mentioned. The lower ends of the upper members of the toggles have projections 41 that strike against the adjacent portions of the lower members of the toggles to prevent their movement in a reverse direction after the two members of the toggles have been brought into alinement. In order to prevent the collapsing of the toggles, we provide suitable struts 42 for each of the front and rear pairs of toggles, said struts being pivotally connected to the forward pair and having their rear ends engage recesses 43 made in the facing portions of the lower ends of the toggles.

The structure thus far described provides a suitable chamber within which the occupant may steer and propel the vessel, as well as observe his surroundings outside of the boat, and a suitable hatchway is closed by a hinged cover 44 in the central or outermost portion of which we have provided

ventilating means which consist of a vertical pipe 45 having a hook-shaped upper end 46 and lateral members 47, to the outer ends of which are connected vertical J-shaped pipes 48 so that, as much as possible, the wash from a heavy sea will drain off and be prevented from entering the pipes forming said ventilating devices and drip therefrom into the boat.

When not in use, the operating lever is released from the pitman and folded flat upon the floor; the strut 42 is pushed out of its engaging recess and the toggles 38 are broken at their joints and folded down, thus permitting the entire structure above the hull, in other words, above plates 5 and 6, to be collapsed and deposited within the hull. If desired, the collapsed vessel may be covered with suitable tarpaulin or canvas to prevent the rain and other elements from entering the same during stormy weather.

It will be understood that this appliance is not designed for the purpose of holding a large number of persons, it being essentially for the use of one person, who, upon occupying the vessel, may close the same tightly and escape the dangers of capsizing in rough seas and at the same time have ventilation and be able to propel or steer his vessel for a considerable period until rescued. While we have herein illustrated and described a particular manner of carrying out our invention, it, of course, will be understood that divers modifications thereof may be made without materially departing from the principles involved in our invention, and it will also be understood that the vessel may be made of larger dimensions and be provided with motive power for driving the propeller. We desire it understood that all such obvious modifications are contemplated as being included within the scope of our invention as expressed in the appended claims.

What we claim as new is:—

1. A life saving appliance comprising a hull the side walls whereof converge inwardly toward their tops and provide an opening of less dimension than the greatest width and length of said hull, in combination with means for closing said opening consisting of a plurality of substantially bowl-shaped ringlike plates of decreasing diameters toward the top and fitted within each other in a substantially telescopic manner, a plurality of foldable uprights supporting the topmost of said plates, and a hinged door closing the opening at the top of the uppermost plate.

2. A life saving appliance comprising a suitable hull, a housing or deck therefor consisting of a plurality of interfitting collapsible sections the lower edge of the lowermost section coacting with the upper edge of said hull, hinged foldable braces adapted to

support said sections in extended position, and means for locking said braces in position.

3. A life saving appliance comprising a suitable hull, the upper edge whereof is provided with an overturned bead, and a collapsible deck covering the open portion of said hull consisting of a plurality of circular plates of frustum conical shape the meeting edges whereof are provided with coacting beads that prevent the outward movement of said plates beyond predetermined distances and permit of the collapsing and storage of said deck within the hull, and means for supporting said deck in extended position.

4. A life saving appliance comprising a compartment the lower portions of the walls whereof are rigid and the upper portions of said walls are interengaging and collapsible, and foldable means pivotally mounted upon the rigid portion of said compartment walls and adapted to be extended to support the collapsible portions of said walls in coactive relation with each other and with said rigid wall portion.

5. A life saving appliance comprising a compartment the walls whereof are composed of a rigid section and a plurality of collapsible sections coacting therewith, the coacting edges of all said sections being provided with beads that prevent the separation of said sections, and extensible supports for retaining the collapsible sections in extended position.

6. A life saving appliance comprising a

plurality of collapsible frustum conical hollow sections the lower edge of each section provided with a rolled-back portion to provide an annular bead, the adjacent upper edge of each section provided with a similar bead and positioned above the first mentioned bead, a gasket surrounding said first-mentioned bead, and a similar gasket partially surrounding the last described bead and having its lower portion partially spaced away from the adjacent surface of its section and in contact with the adjacent bead upon the coacting section.

7. In a life saving appliance a suitable hull, a closure for the open portion thereof arching above said hull and consisting of a plurality of separate interfitting annular members adapted to be collapsed and stowed entirely within said hull, said members being so constructed as to be incapable of removal from said hull, and foldable braces the extension of which is adapted to elevate the members of said closure from within the hull and position them above the same whereby said closure members and said hull provide a water-tight compartment.

Signed at Chicago, county of Cook and State of Illinois, this 21st day of September, 1918.

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Witnesses:

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