Dec. 19, 1944. F. D. BARTON, JR 2,365,446

WATERCRAFT

Filed Aug. 30, 1943

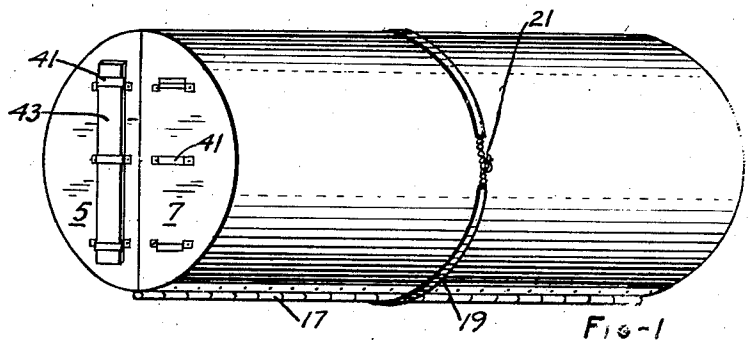


FIG-1

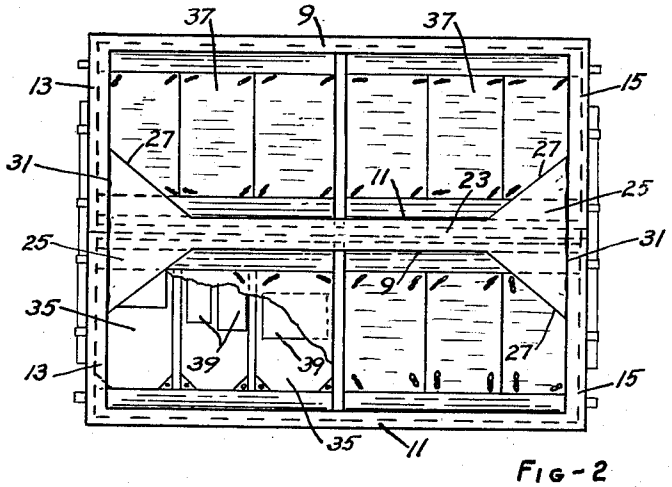


FIG-2

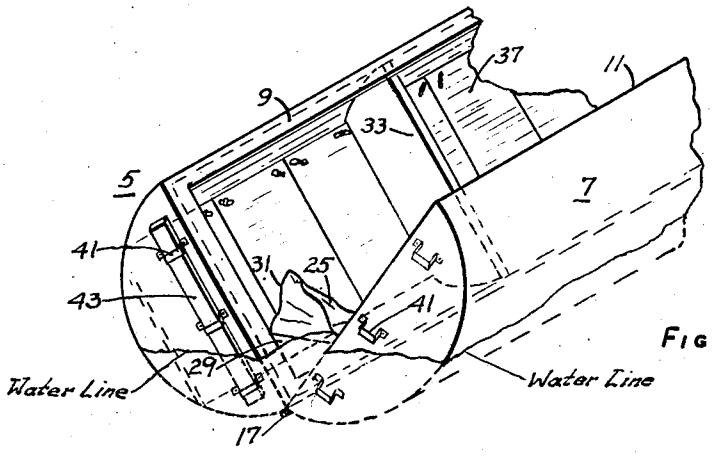


FIG-3

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WATERCRAFT

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6 Claims. (Cl. 9—2)

My invention relates to watercraft, particularly of the portable type adapted for individual use and for emergency and rescue work.

Among the objects of my invention are:

(1) To provide a novel and improved portable watercraft capable of being easily launched;

(2) To provide a novel and improved watercraft of great stability in service;

(3) To provide a novel and improved watercraft capable of being collapsed into a compact unit when not in service and having the ability to unfold itself when launched in a haphazard manner;

(4) To provide a novel and improved watercraft capable of being launched from aircraft;

(5) To provide a novel and improved watercraft so constructed as to be separable into two independent craft when desired;

(6) To provide a novel and improved watercraft capable of being launched by parachute;

(7) To provide a novel and improved watercraft which lends itself admirably to the rescue of survivors at sea.

Additional objects of my invention will be brought out in the following description of a preferred embodiment of the same, taken in conjunction with accompanying drawing wherein:

Figure 1 is a view in perspective of my novel and improved watercraft in its collapsed condition and ready for launching;

Figure 2 is a plan view of my invention in unfolded condition as when in use;

Figure 3 is a view in perspective of my invention in the act of unfolding itself following a launching.

Referring to the drawing for a description of my invention in one of its preferred forms, it comprises a pair of preferably similar hollow receptacle portions 5 and 7 each having side edges 9 and 11 and end edges 13 and 15. These receptacle portions are disposed with a side edge 11 of one portion 5 adjacent a side edge 9 of the other portion 7 and connected together along such adjacent side edges by hinge means 17, preferably of the type known as the piano hinge, although not necessarily limited to this particular type. This hinge permits the receptacle portions 5 and 7 to be folded into mating engagement with each other along their edges 9, 11, 13 and 15 to form a compact unit which may be readily stored for launching purposes when not in use, and is maintained in such compact form by means of a binding strap 19 about the unit which is preferably of two sections held in place by suitable latches 21 of a type such as the "pelican" latch, which can be quickly and conveniently unlatched in an emergency.

Each receptacle portion 5 and 7 is preferably of semi-cylindrical form so that when collapsed into mating engagement, the resulting unit will be substantially cylindrical in form.

Each of the receptacle portions is provided with a slightly unequal distribution of weight such that there will be a slight predominance of weight to one side of its longitudinal axis in the direction of the hinge 17. Such weight distribution may be embodied in the design of the craft, or may be effected by a proper distribution of load to be stowed in such craft preliminary to its launching.

The craft is preferably built of material such as plastic or plastic impregnated wood or other sheet material capable of withstanding the shock of impact, thereby enabling the craft to be readily launched by throwing the same overboard from the deck of a ship. Upon being unlatched after striking the water, the craft will, due to the predominance of weight adjacent the hinge, automatically unfold itself right-side-up in position for use. The cylindrical shape of the craft in its collapsed condition is an asset in this connection, in enabling the unit to right itself quickly under the action of the weight concentration toward the hinge.

During the preliminary stage of the unfolding process, the weighted portion, including the hinge 17, will be below the water level thereby exposing the craft to the entrance of water particularly at the apex of the angle formed by the opening end edges 13 and 15.

An important feature of my invention resides in the provision of means in the form of a water barrier for precluding an inrush of water into the craft during this early stage of its opening process.

This water barrier in its preferred form may constitute a strip 23 of canvas or similar material covering the hinge 17 and tacked or otherwise affixed to the adjacent side edges 9 and 11 of the receptacle portions. At each end, the strip terminates in a triangular section 25 to provide angularly disposed edges 27 which are tacked or otherwise affixed to the free edges of the gussets 29 inserted in the corners of each receptacle portion 5 and 7 adjacent the hinge 17. The base line 31 of each triangular end section 25 of the water barrier is left unattached to anything and is of such length that during the early stage of the unfolding process, it spans the angle formed at its associated end of the craft by the end edges 13

or 15 and at all times extends to above the water line.

My improved water craft may be constructed to a size adapting it for lifeboat purposes, in which case, each receptacle portion 5 and 7 may be divided into two sections by a central partition wall 33 and each section may be provided with a series of bulkheads 35 and removably secured covers or thwarts 37 therefor. These bulkheads may be utilized for the storage of emergency rations 39 which might include such items as water and food supplies in addition to useful accessories such as flares, fishing tackle, radio, etc. These might preferably be anchored in the bulkheads so as to produce a predominance of over-all weight toward the hinge whereby to assure the proper opening of the unit when launched.

The ends of each receptacle portion of the craft are provided with a series of brackets 41, the brackets of one receptacle portion serving as a holder for a locking bar 43 which upon complete opening of the unit is adapted to be urged into engagement with the brackets of the other receptacle portion to form a rigid locking means for the two portions of the craft.

The binding strap 19 when of two sections as previously described, may be readily disunited from either side and at a point within convenient arm's reach of the water.

It is within the contemplation of my invention to dispense with the locking bar feature and provide the unit with a separable hinge, whereby the two receptacle portions 5 and 7 after launching, may be conveniently separated and permitted to drift independently of each other. In this case, the water barrier would also be severed to permit the free and independent use of the receptacle portions of the craft. A loosely fitting hinge bolt offers one means for realizing a separable hinge applicable in this connection. This feature of my invention provides for a quick method of launching conventional type life boats in pairs from a sinking vessel, and my invention contemplates its use in that connection.

While I have described one form of my invention as applicable to service as a lifeboat, a similar construction though probably smaller in size may be utilized in the dropping of food supplies and necessary accessories to survivors at sea.

Regardless of the particular purpose for which the craft may be designed, it can be constructed of material capable of withstanding the shock of impact when thrown from the deck of a ship. When to be launched from greater height as from moving aircraft, it is contemplated that the same may be dropped by parachute to avoid damage thereto and assure safe landing.

While I have disclosed a preferred embodiment of my invention, it is conceivable that the same is subject to alteration and modification without departing from the underlying principles of the same. Automatic unlatching of the fastening means may be provided in lieu of manual operation, for example, which could be accomplished by an electrical control made effective in response to contact with the salt water of the sea. Other improvements will no doubt suggest themselves to those skilled in the art.

I accordingly do not desire to be limited in my protection to the specific details disclosed except as may be necessitated by the appended claims.

I claim:

1. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions each having side edges and end edges, said receptacle portions being disposed with a side edge of one portion adjacent a side edge of the other portion, hinge means joining said receptacle portions along adjacent side edges enabling said receptacle portions to be swung on said hinge means into mating engagement along their side and end edges to form a compact closed unit, means for opening said closed unit right-side-up when placed in water, and a water barrier covering said hinge means and spanning the angle formed at each end by said end edges during opening of said unit and extending to above the water line existing at each end throughout the opening of said unit.

2. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions each having side edges, said receptacle portions being disposed with a side edge of one portion adjacent a side edge of the other portion, hinge means joining said receptacle portions and enabling said receptacle portions to be swung on said hinge means into mating engagement along their edges to form a compact closed unit, means weighting the hinged portion of said unit for opening said closed unit right-side-up when placed in water, and a water barrier spanning the space formed during opening of said craft between said receptacle portions adjacent the ends of said hinge means, said water barrier extending to above the water line existing at each end of said hinge means throughout the opening of said unit.

3. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions each having side edges and end edges, said receptacle portions being disposed with a side edge of one portion adjacent a side edge of the other portion, hinge means joining said receptacle portions along adjacent side edges enabling said receptacle portions to be swung on said hinge means into mating engagement along their side and end edges to form a compact closed unit, means producing a weight distribution in each of said receptacle portions predominantly off center in the direction of said hinge means for opening said closed unit right-side-up when placed in water, and a water barrier spanning the angle formed at each end by said end edges during opening of said unit and extending to above the water line existing at each end throughout the opening of said unit.

4. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions each having side edges and end edges, said receptacle portions being disposed with a side edge of one portion adjacent a side edge of the other portion, hinge means joining said receptacle portions along adjacent side edges enabling said receptacle portions to be swung on said hinge means into mating engagement along their side and end edges to form a compact closed unit, means producing a weight distribution in each of said receptacle portions predominantly off center in the direction of said hinge means for opening said closed unit right-side-up when placed in water, and a water barrier covering said hinge means and spanning the angle formed at each end by said end edges during opening of said unit and extending to above the water line existing at each end throughout the opening of said unit.

5. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions having mateable edges, hinge means joining said receptacle portions along adjacent side edges

enabling said receptacle portions to be swung on said hinge means into mating engagement along their mateable edges to form a compact closed unit, and a water barrier extending between said receptacle portions during opening of said craft.

6. A collapsible self-opening watercraft, comprising a pair of hollow receptacle portions having mateable edges, hinge means joining said receptacle portions and enabling said receptacle portions to be swung on said hinge means into mating engagement along their mateable edges to form a compact unit, self-contained means for opening said closed unit right-side-up when placed in water, and a water barrier extending between said receptacle portions during opening of said craft.

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