M. BOURKE.

LIFE-BOAT.

No. 185,282. Patented Dec. 12, 1876.

Fig. 1.

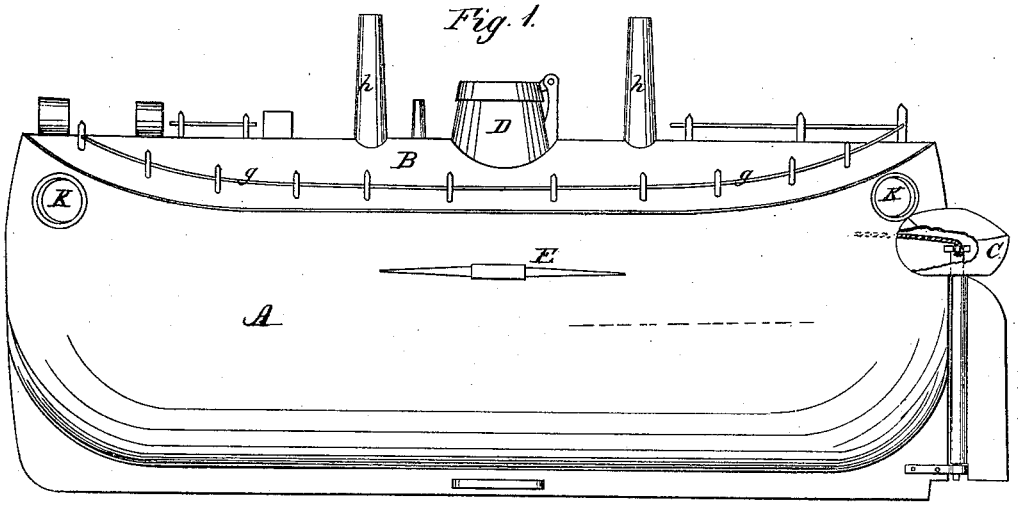


Fig. 2

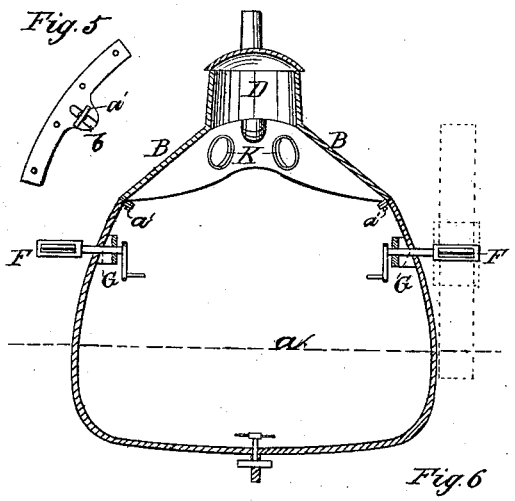


Fig. 5

Fig. 3.

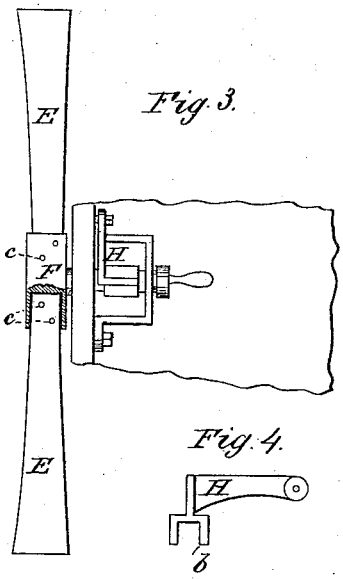


Fig. 4.

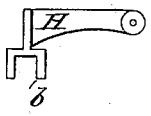
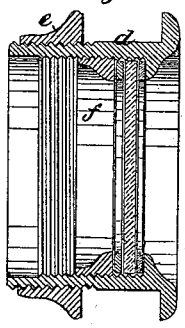


Fig. 6



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MARTIN BOURKE, OF MINERAL RIDGE, OHIO, ASSIGNOR TO BOURKE, WISE & CO.

IMPROVEMENT IN LIFE-BOATS.

Specification forming part of Letters Patent No. **185,282**, dated December 12, 1876; application filed July 14, 1876.

To all whom it may concern:

Be it known that I, MARTIN BOURKE, of Mineral Ridge, in the county of Trumbull and State of Ohio, have invented a new and Improved Life-Boat; and I do hereby declare that the following is a full, clear, and exact description of the same.

The object of my invention is, first, to produce a life-boat which will insure perfect protection to the passengers from the waves, which shall be of such shape that it cannot remain capsized, and also combines maximum strength, lightness, and cubical capacity.

The object is, secondly, to provide a life-boat with a deck or cover, to perfectly protect the passengers from wind and waves, and which may be readily detached by the passengers, to facilitate their escape when the boat is about to encounter reefs, rocks, or other obstacles, or is otherwise in extreme danger of destruction.

The third part of the invention relates to propellers or paddles, which may be held locked in such position that they will not impede the progress of the boat when sails are being used.

The invention relates, fourthly, to an improved construction of dead-lights.

The specific construction and arrangement of parts are as hereinafter described.

In the accompanying drawing, forming part of this specification, Figure 1 is a side elevation of my improved life-boat. Fig. 2 is a vertical section. Fig. 3 is a detail view of the paddles and device for locking the same. Fig. 4 is a detail view of the device for locking the paddles. Fig. 5 is a plan view of the flanges by which the cover of the boat is secured to the body thereof. Fig. 6 is a cross-section of the dead-light.

The boat A has a vertical and blunt bow and stern and straight keel. The bottom is slightly rounded, and the greatest breadth of the boat is at a point just below or at the water-line *a*, while the top B is angular, being shaped like a gable-roof, by which form the boat is adapted not only to resist the action of the waves in such manner that it can be capsized only in extreme cases, but is absolutely prevented from remaining capsized, and has also a maximum strength and lightness, combined with great and available cubical capacity—qualities more desirable and necessary in life-boats than any other. The general outline of the body of the hull or hull proper approximates that of a certain class of sea-going vessels, except that the greatest breadth of the latter is usually at a point above the water-line; but the angular shape of the top or cover B, taken in connection with such form of hull, imparts a new configuration to the boat, as a whole, and secures the desired qualities above named. The capacity of the boat for resisting and, as it were, shedding, the waves which pass over it is due, chiefly, to the angular form of the top or cover, and the desired vertical space within the boat along the center of the same is also obtained by such form; but the incapability of remaining capsized is due, rather, to the shape of the boat as a whole.

The upper bearing of the vertical rudder-post is in a box or hollow conical projection, C, of the stern of the boat, which also contains the tiller. By means of said box C I am enabled to make the main body of the boat shorter in its top portion than would be otherwise practicable, and at the same time secure protection for the tiller without taking up space for it within the boat proper. If the entire top of boat were made sufficiently long to inclose and protect the tiller, the boat would be overweighted and tend to prevent it righting itself, if capsized. The entrance to the boat is effected through the hatchway D, which is located in the middle of the deck or top portion B, and provided with a hinged hatch or cover. The entire deck B is made removable, so that it may be detached when danger of encountering a reef or rocky coast is imminent. The means of attachment are screw-bolts *a'*, which enter a flange attached to the cover B, and have narrow heads, to enable them to pass vertically through the notches or open slots *b*, formed in the flange attached to the upper edge or rim of the body of the boat. When the screw-heads are turned crosswise of the slots or notches, the top or cover B is held firmly in place; but when it is desired to detach the cover, the screws are turned one-quarter round, to bring their heads parallel to the sides of the slots, so that they will pass

through the slots, thus allowing the cover to be raised off the body A, and be completely removed.

The flanges may be continuous around the boat or made in sections, as preferred; but in either case, they will impart strength and rigidity to the boat, and enable the body of the boat to be made thinner than would be otherwise practicable.

Rubber packing will, in practice, be employed to form a perfectly water-tight joint between the flanges.

When sails are employed to propel the boat, and also, occasionally at other times, it will be requisite that the paddles E shall be held up out of the water. For this purpose I employ a locking device, H, which consists of a bar, pivoted to the side of the boat, and provided with a square socket or open slot, *b'*, in its free end. The said socket or slot is adapted to receive and closely fit the contiguous portion of the square crank-shafts, and thus, when the paddles E have been adjusted in the horizontal position, the locking device H will so hold or maintain them by preventing rotation of the crank-shafts. The shanks of the paddle-blades E are inserted in sockets F, formed or suitably secured upon the outer end of the crank-shafts G, which have their bearings in the middle portion of the sides of the boat. The said blades are thus adapted to be readily detached by removing the fastening-rivets, pins, or bolts, *c*, when required for transportation, repair, or other purpose.

The boat is provided with dead-lights K, which are composed of three parts—first, a screw-threaded cylindrical tube, *d*, having an exterior and interior flange formed on one end; and, second, a circular nut, *e*, which screws on the other end. The third part is an exteriorly-threaded tube, *f*, which screws into the flanged tube, and secures the glass. To apply the dead-light to the boat, a hole, sufficiently large to receive the tube *d*, is made in the proper place, and said tube inserted therein. The nut *e* is then screwed on its inner end till the outer flange is drawn up against the hull. The glass is then inserted, and the tube *d* screwed in to secure the glass between its inner end and the inner flange of the socket-tube, as shown. Gaskets or washers of rubber or other elastic material are placed between the glass and tube *f*, and between head and nut of tube *d* and the hull, to form perfectly water-tight joints. The glass may be readily removed and another inserted, and the entire dead-light may be quickly attached and detached from the boat, as occasion requires.

My improved life-boat may be constructed of wood, iron, or other suitable material, and, owing to its shape, the hull may be made very thin, so that its weight shall be reduced to a minimum.

The cover B of the boat is provided with hand-holds or guards *g* around the edge, and along the ridge, as shown, Fig. 1. Ventilating-tubes *h* also extend up a few feet above the cover. Provision is likewise made for sectional masts to be erected and properly stayed upon the cover.

The boat is designed to be launched from the deck of a vessel by aid of an apparatus for which I have made application for Letters Patent.

What I claim is—

1. The improved life-boat having the top or cover B constructed with inclined sides or angular in cross-section, and the hull proper having the slightly-rounded bottom, greatest breadth at or below the water-line, and sides inclined inward, all as shown and described.

2. The removable deck or cover, the notched flange, and screw-bolts, in combination with the body of the life-boat, substantially as shown and described.

3. The life-boat provided with the hollow conical projection, as and for the purpose specified.

4. The combination of the pivoted locking device H with the polygonal paddle-shaft, as shown and described.

5. The improved dead-light, formed of the outer or socket tube, provided with an inner and outer flange, and screw-threaded, as shown, the inner tube *b*, for securing the glass, and the nut *d*, as set forth.

MARTIN BOURKE.

Witnesses:

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