5 Sheets—Sheet 1.

J. A. STOCKWELL.

Means for Launching Life-Boats, &c.

No. 209,938. **Patented Nov. 12, 1878.**

Fig. 1

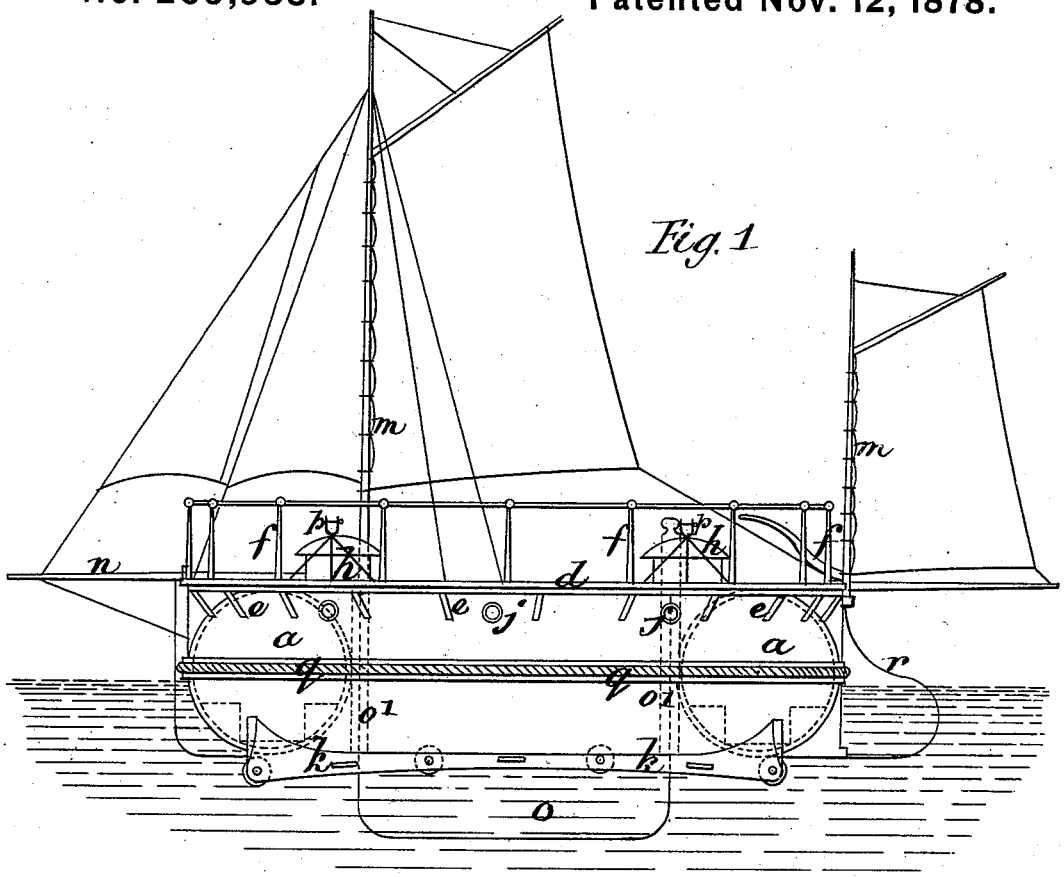
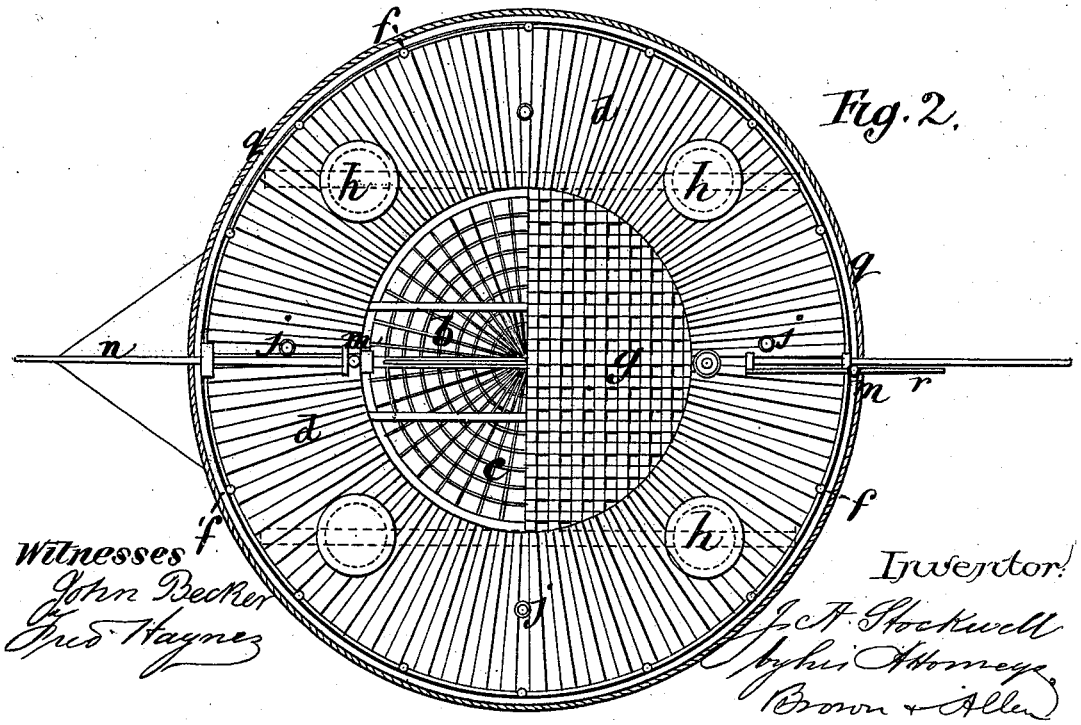


Fig. 2.



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5 Sheets—Sheet 2.

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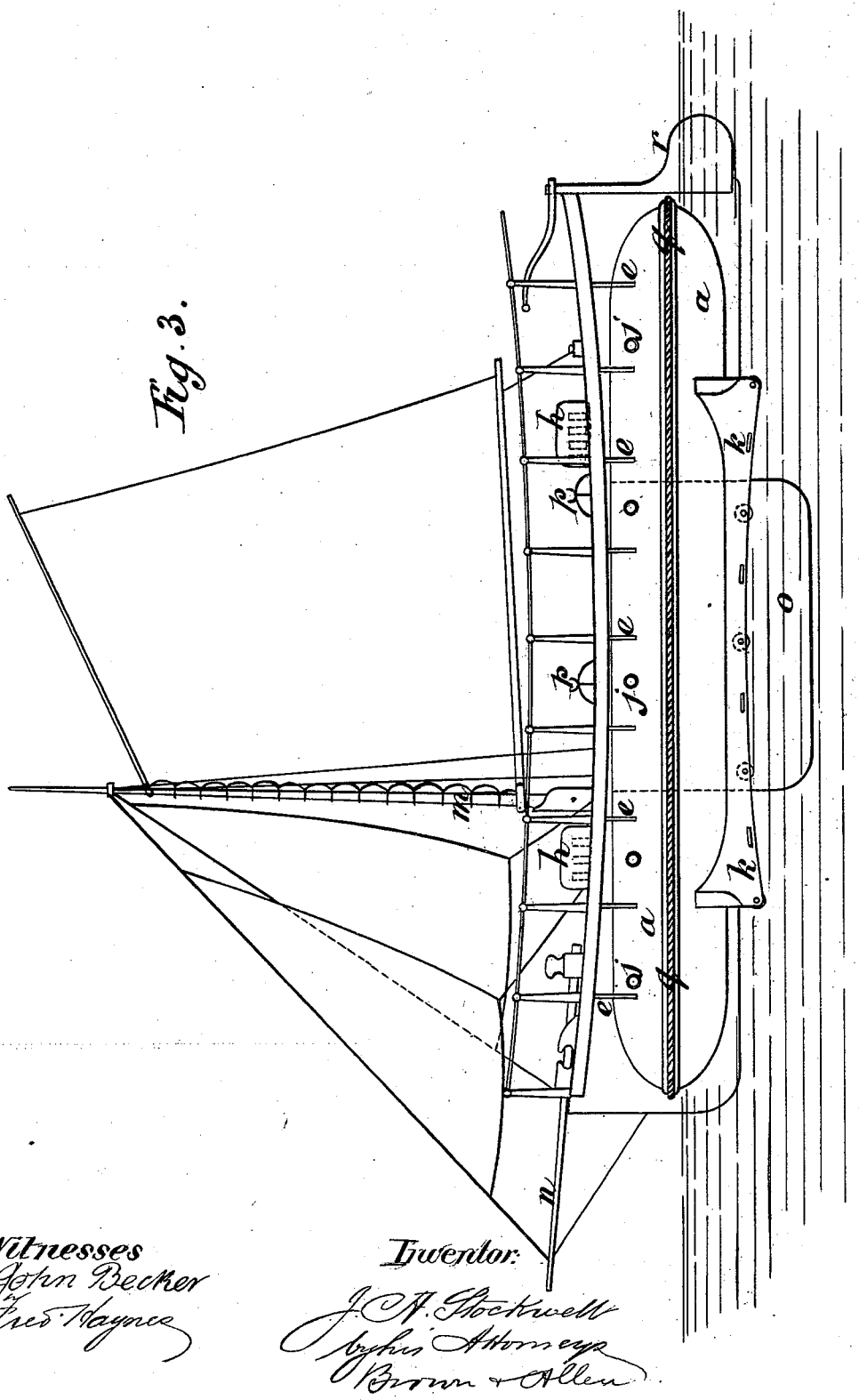
Fig. 3.



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5 Sheets—Sheet 3.

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Fig. 5

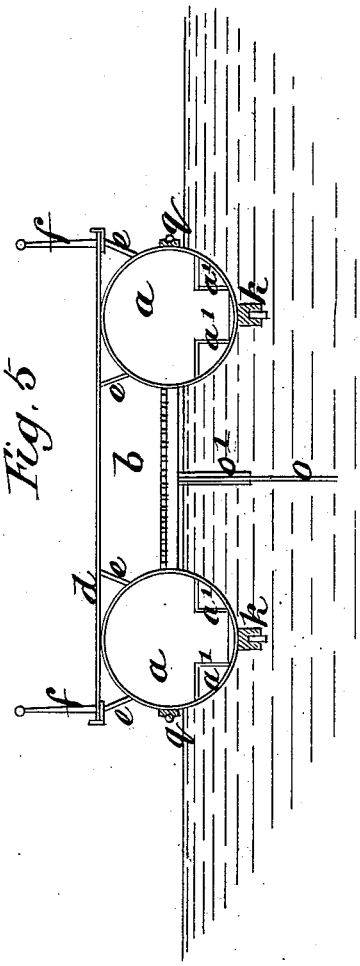
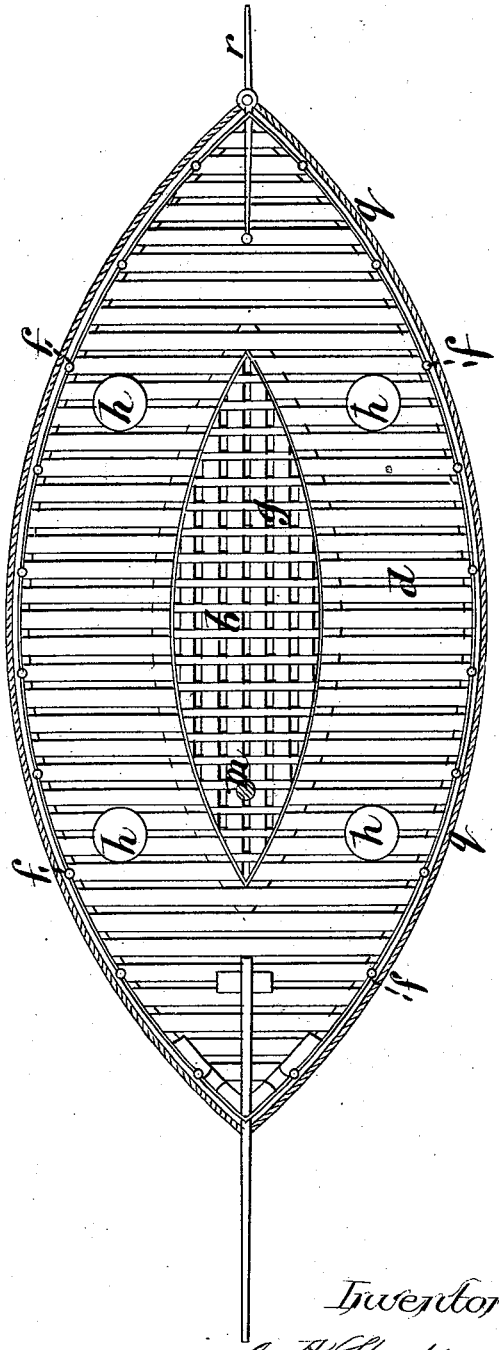


Fig. 4



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5 Sheets—Sheet 4.

J. A. STOCKWELL.

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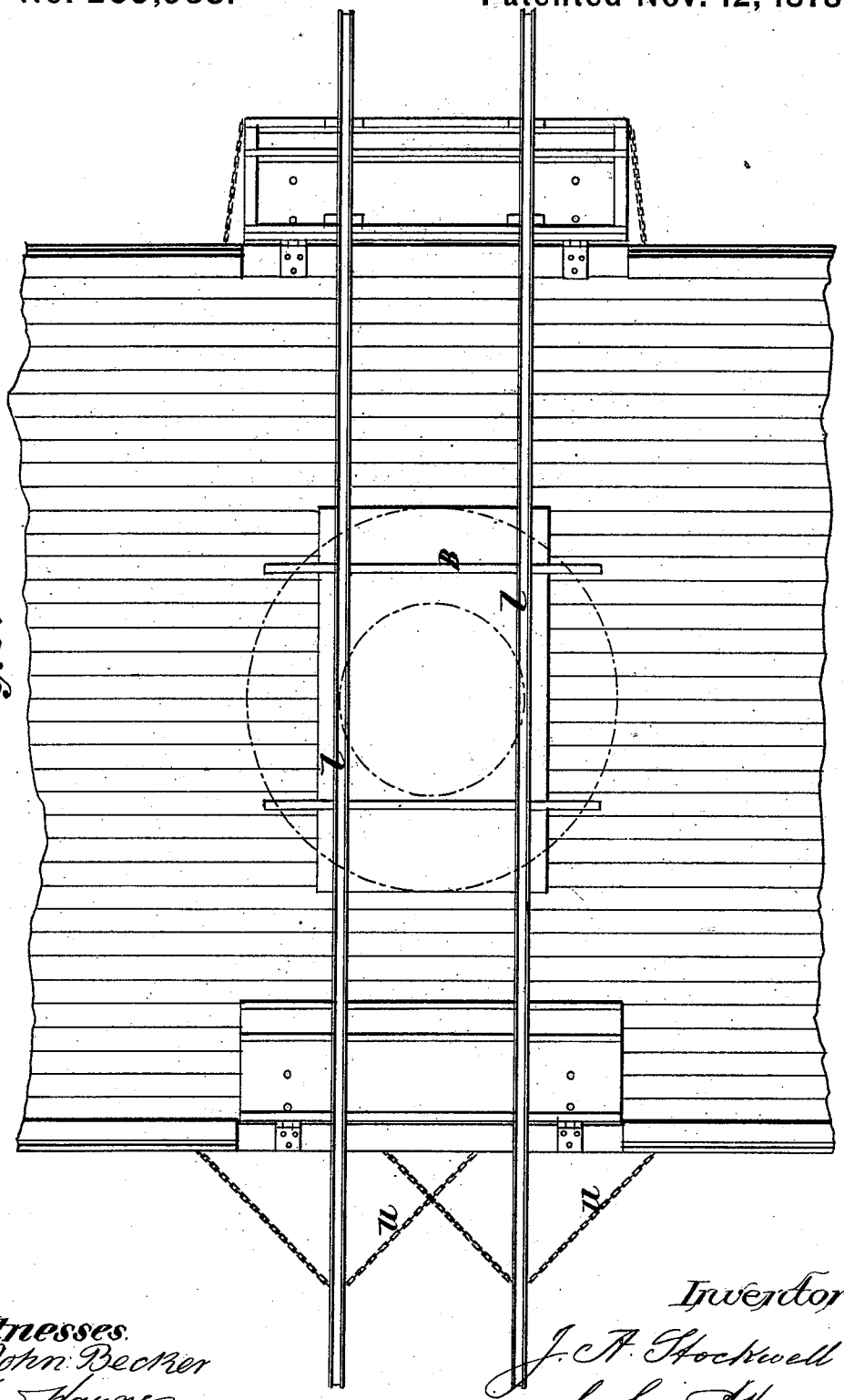

Fig. 6.

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5 Sheets—Sheet 5.

J. A. STOCKWELL.

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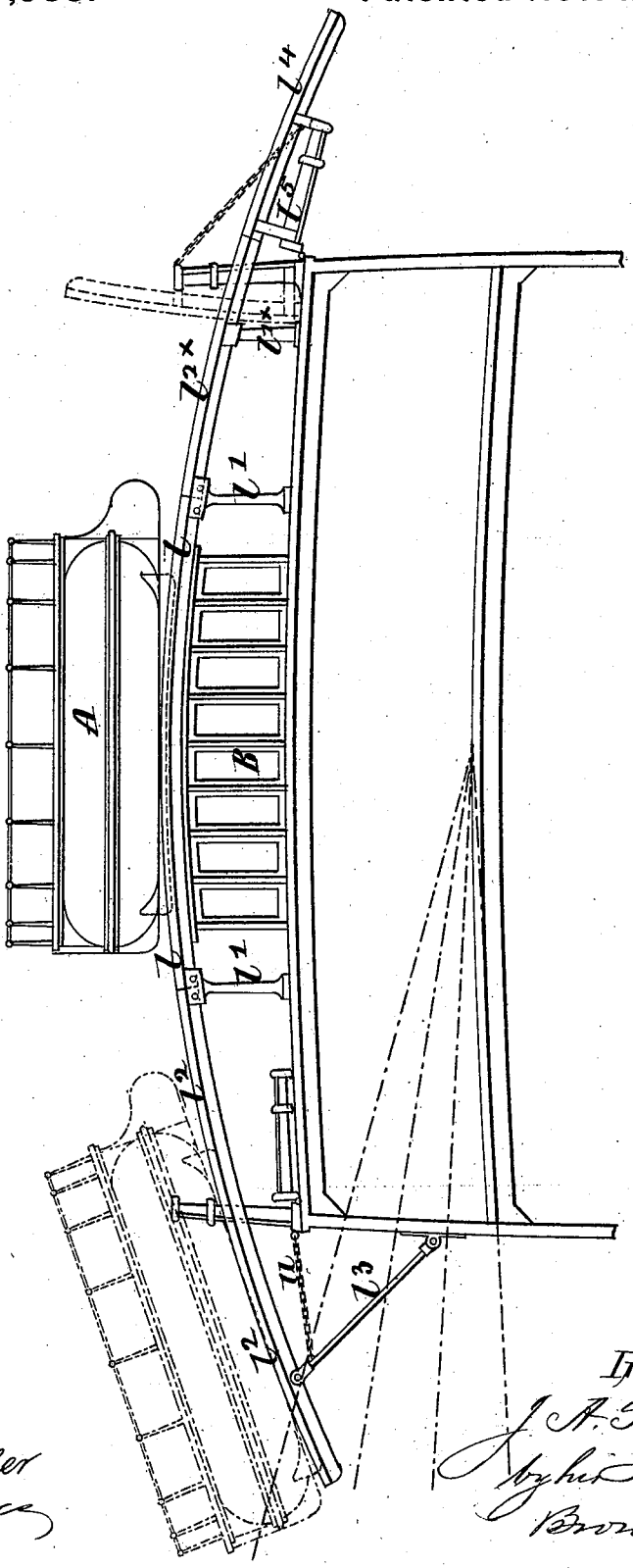
Fig. 1.



Witnesses
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Inventor:
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UNITED STATES PATENT OFFICE.

JOHN A. STOCKWELL, OF LEE, ENGLAND.

IMPROVEMENT IN MEANS FOR LAUNCHING LIFE-BOATS, &c.

Specification forming part of Letters Patent No. **209,938**, dated November 12, 1878; application filed May 1, 1877.

To all whom it may concern:

Be it known that I, JOHN ALFRED STOCKWELL, of Lee, in the county of Kent, England, have invented certain Improvements in the Construction of Vessels for Saving Life at Sea, and in the Apparatus for Launching the Same, of which the following is a specification:

This invention relates to an improvement in launching life-boats from vessels at sea; and it consists in the combination, with the hull of the boat, of cradles or runners, provided with anti-friction rollers or wheels, to facilitate the launching of the boat along or over grooved skids or ways, a preferable construction of which latter will now be described.

In most large ships some of the boats are carried bottom upward on boat-skids, placed in the center or other convenient part of the ship. These skids are supported on stanchions at some height above the deck, and often extend from one side of the ship to the other. I make use of these boat-skids for carrying my life-saving vessels, and I further propose that the vessel shall be launched direct from the skids.

In cases where the skids do not extend fully across the ship, I hinge to them continuation-pieces, the opposite ends of which shall rest on the top rail of the bulwarks. These skids are constructed so as to form the arc of a circle, and the connecting-pieces formed so as to continue the arc or curve.

It will be necessary that these skids shall be made to project beyond the ship's sides, and to effect this object I make use of narrow metal boxes or troughs, the lower ends of which are connected to the ship's side in any suitable manner, as will be hereinafter explained. These boxes will contain continuation-pieces, which are pivoted or hinged to the upper end of the boxes, and these continuation-pieces will carry at their opposite ends bolt-rings, by which they can be attached to the ship's side. By this means continuous ways will be provided for launching the life-saving vessel.

The projecting ways may be held rigidly in position by means of struts or stays; and, in order to facilitate the launching, grooves will be made in the ways to receive the runners attached to the bottom of the life-saving vessel.

In cases where the ship is not of sufficient size to have boat-skids, the life-saving vessel may be swung off in a horizontal position by a rope rove through a block on the yard-arm, or in any other convenient position, and provided with any suitable disconnecting-hook, which will disconnect itself as soon as the vessel touches the water.

In the accompanying drawings, Figure 1, Sheet I, is an elevation of a form of life-saving vessels, with masts, sails, rigging, rudder, and every necessary appliance, and is shown as floating in the water. This vessel is constructed of a circular form, as will be seen in the plan view, Fig. 2. The same principle of construction, but with the vessel built of an elongated form, is shown at Fig. 3, Sheet II, which represents, in side elevation, a boat-shaped form of vessel. Fig. 4, Sheet III, is a plan view of the same; and Fig. 5 is a transverse vertical section of the hull of the vessel.

In the several figures above mentioned, representing the circular and boat-shaped form of vessel, the same letters of reference denote corresponding parts, so that the same description will equally apply to both forms of vessel.

To the under side of the hull are attached permanent cradles or runners *k k*, in the lower part of which are fixed horizontal and vertical rollers. These cradles or runners fit in grooved skids or launchways, which must be made to project beyond the sides of the ship and over the bulwarks in the manner hereinafter explained.

In Sheets IV and V, I have shown plan and sectional views, illustrating the method of launching the life-saving vessel from the ship to which she belongs. When not required, the life-saving vessel A is secured on the launchways *l l*, fixed on the top of the deck-house B, as shown in Fig. 7, which is a partial transverse section of a ship, showing the life-saving vessel A in the act of being launched. Fig. 6 is a plan view of the same.

The launchways *l l* are firmly fixed on the roof of the deck-house B, and their projecting ends are supported on short vertical standards l^1 l^1, Fig. 7. Movable extension-pieces l^2 l^2 (which, when not in use, lie alongside of the fixed pieces *l l* on the roof of the deck-house) are, when required to be used, moved into place, so as to form an extension or continuation of the fixed ways *l l*, as shown at Figs. 6 and 7. The inner ends of these extension-

pieces l^2 abut against the projecting ends of the fixed launchways $l\,l$, and are supported by the short vertical standards $l^1\,l^1$, to which they are secured by cross-pins. The outer ends of these extension-pieces project beyond the ship's side, and are supported by the struts $l^3\,l^3$, which are hinged to the ship's side, as shown at Fig. 7, and, when not in use, are laid flat against the side of the ship in a vertical position.

When the launchways are required to be completed preparatory to launching the life-saving vessel, the hinged struts are released and allowed to fall into the inclined position shown at Fig. 7, in which position they are securely held by the guy-chains $u\,u$. The lower ends of the extension-pieces $l^2\,l^2$ will thus be supported by the struts l^3, and all lateral movement will be prevented by the guy-chains $u\,u$.

On the other side of Figs. 6 and 7 I have shown another mode of constructing and arranging the extension of the launchways. In this instance the extension-pieces are made in two parts, consisting, first, of short lengths, l^{2*}, extending from the standards l^1 to the extreme edge of the ship's side. The outer ends of the extension-pieces l^{2*} are supported by the short standards l^{1*}. Second lengths of extension-pieces, l^4, are secured to the inside of a movable part, l^5, of the bulwarks. This movable part is hinged to the side of the ship in such a manner that it may fall outward, and held firmly in nearly a horizontal position by means of the chains s, so that the extension-pieces l^4 will abut against and form a continuation of the launchways l^{2*} and l, as shown at the right-hand side of Figs. 6 and 7.

The launchways having thus been properly completed in accordance with either of the plans shown at Figs. 6 and 7, and secured by cross-pins or otherwise, nothing now remains but to release the fastenings which hold the life-saving vessel A in place on the deck-house B, and then push it forward, when it will of itself run down the ways over the side of the ship into the water, as indicated in Fig. 7, in which the dotted radial lines indicate the varying level of the water in relation to the sides of the ship as she heels over more or less.

Having now described my invention of improvements in the construction of vessels for saving life at sea, and in the apparatus for launching the same, and having explained the manner of carrying the same into effect, I wish it to be understood that I claim—

In combination with the tubular hull, the cradles or runners k, provided with anti-friction wheels or rollers, as and for the purpose described.

Dated the 28th day of February, 1877.

J. A. STOCKWELL.

Witnesses:

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