

June 30, 1936.

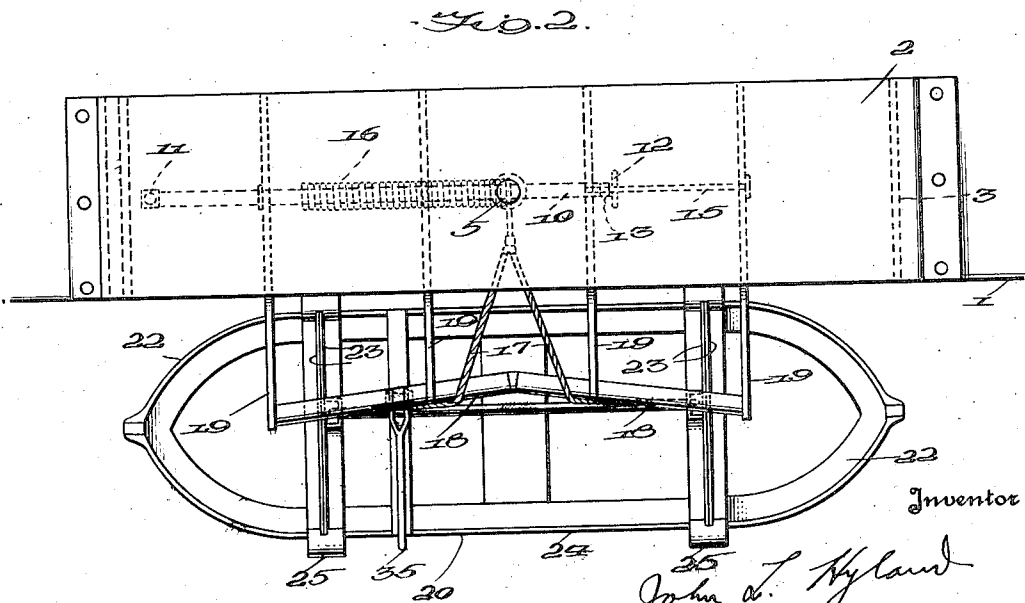
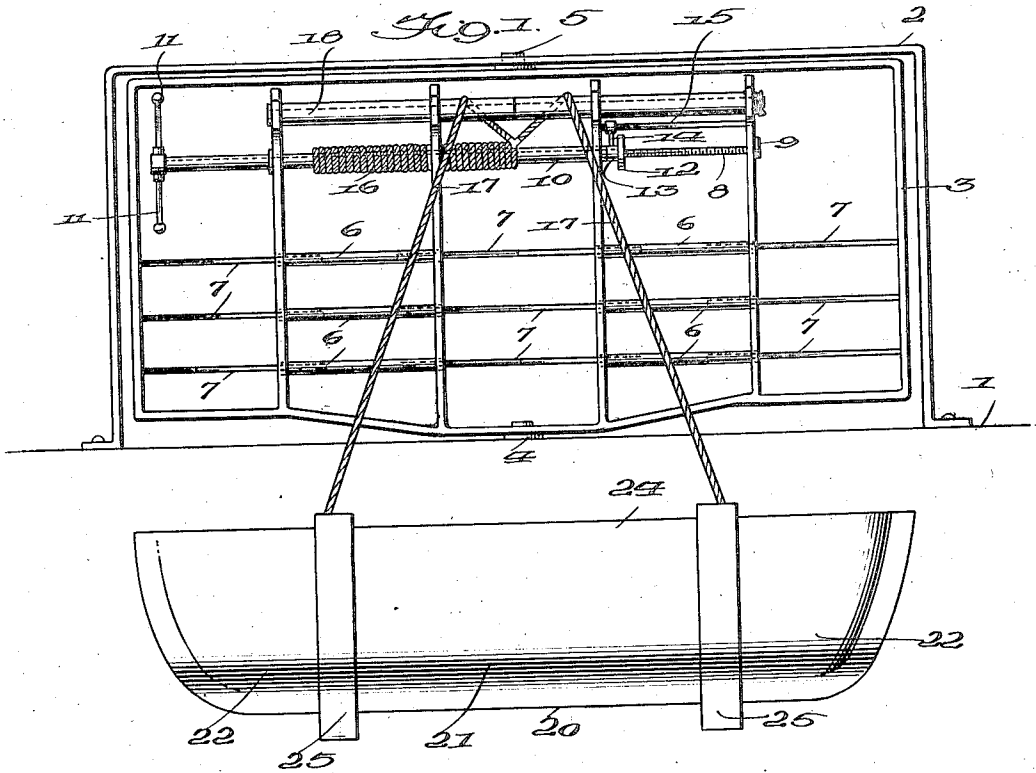
J. L. HYLAND

2,045,603

LIFEBOAT LAUNCHING APPARATUS

Original Filed Aug. 28, 1930

2 Sheets-Sheet 1



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Fig. 3.

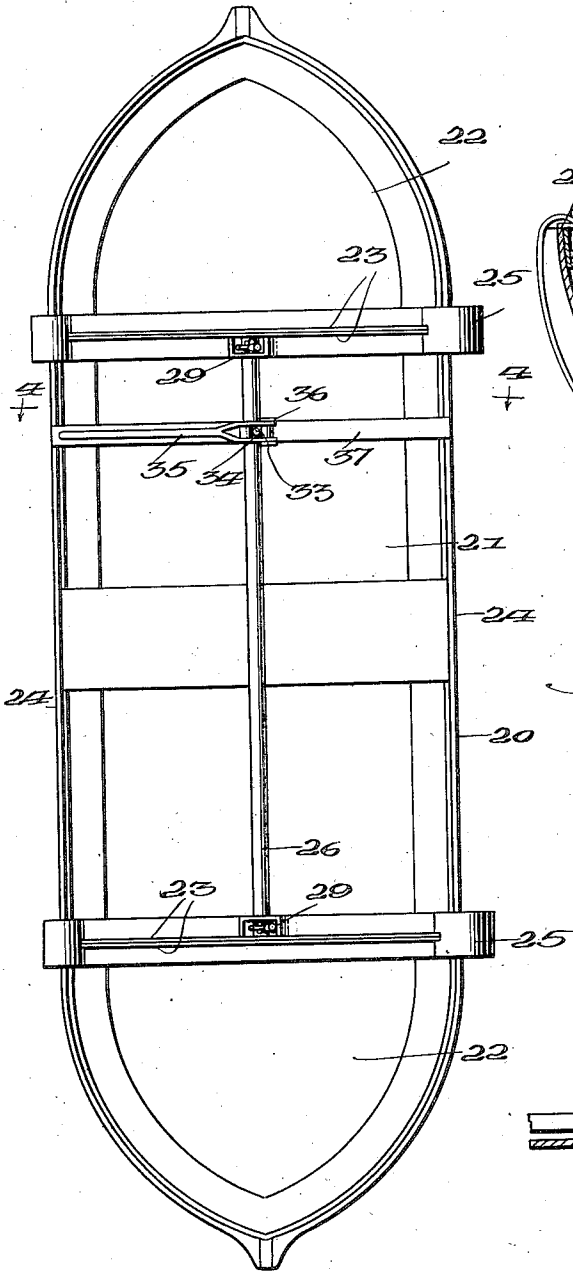


Fig. 4.

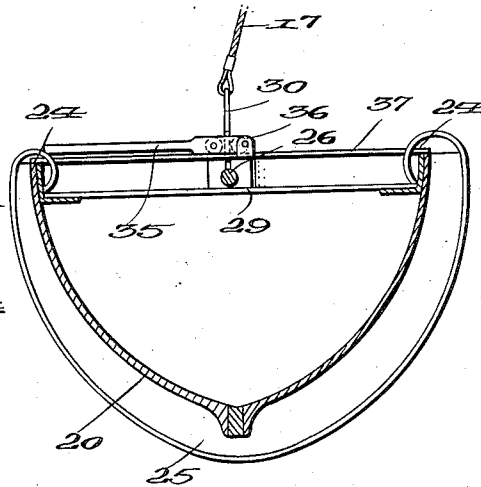


Fig. 5.

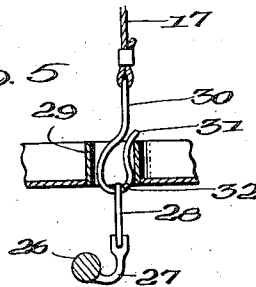
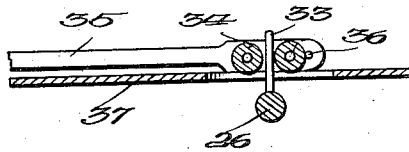


Fig. 6.



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UNITED STATES PATENT OFFICE

2,045,603

LIFEBOAT LAUNCHING APPARATUS

John L. Hyland, New York, N. Y.

Application August 28, 1930, Serial No. 478,452
Renewed November 9, 1935

18 Claims. (Cl. 9—22)

This invention relates to lifeboat launching apparatus.

The object of the invention is to facilitate the launching of lifeboats in the minimum amount of time from the deck of a ship merely upon turning the lifeboat around on the pivot of its davit, from where it may be loaded and lowered with ease and in the shortest possible time.

A further object of the invention is to provide for keeping the lifeboat level in the event that one end of the ship is lower than the other, which is accomplished by an angular guide rod for the ropes extending to the lifeboat and over which the ropes pass in maintaining the lifeboat in a horizontal position.

A still further object of the invention is to improve the construction of the lifeboat by building it in sections, with water-tight compartments, which facilitates the shipping of the lifeboat, by allowing its sections to be taken apart and shipped separately. The sections of the lifeboat are provided with bulk-heads which extend to the top of the gunwale, thus bracing the gunwale. Skids are permanently or removably attached to the lifeboat over the bulk-heads so as not only to guide the lowering of the lifeboat and keep it away from the side of the ship, but also to reinforce the bulk-heads and provide a rigid lifeboat structure.

In the accompanying drawings:

Fig. 1 is a side elevation of the davit showing the lifeboat in a position to be lowered;

Fig. 2 is a top plan view thereof;

Fig. 3 is a top plan view of the lifeboat;

Fig. 4 is a transverse sectional view there-through;

Fig. 5 is a detail sectional view showing the manner of connecting one of the lines with the lifeboat; and

Fig. 6 is a detail sectional view through the line releasing means.

The lifeboat is intended to be launched from a side of a deck of a ship, which deck is designated generally by the numeral 1 and has an upstanding open frame 2 secured thereto, and within which a pivotal frame 3 is mounted for swinging movement about pivots 4 and 5. This pivotal frame 3 constitutes the davit for the lifeboat.

The pivotal frame 3 is provided with telescoping sleeves 6 and bars 7, which serve to close the spaces therethrough but to permit these to be opened for the loading of the lifeboat. This

protects the passengers whether the lifeboat is carried outside or inside.

A threaded shaft 8 is journaled in the frame 3 and is held against turning by a pin 9. On this threaded shaft 8, a sleeve 10 is mounted, which sleeve is internally threaded for movement along the threaded shaft 8 upon rotation relative thereto.

The sleeve may be rotated by suitable means, such as the handles 11 fixed thereto. A hand-wheel 12 is threaded onto the threaded portion of the shaft 8, and disposed between this hand-wheel and the end of the sleeve 10 is a bushing 13 carried by an arm 14, the upper end of which is slidably mounted on a rod 15 as a guide therefor.

A rope or cable 16 is wound onto the sleeve 10 and is provided with crotch cables 17 connected therewith, as shown in Fig. 1, which extend over a guide rod 18. This rod is mounted in forwardly extending arms 19 of the frame 3 and, as shown in Fig. 2, is approximately V-shape. The guide rod 18 guides the crotch cables 17 as the lifeboat is lowered.

The lifeboat is generally designated by the numeral 20 and is constructed in sections, there being an intermediate section 21 and end sections 22, each of which is provided with a bulk-head 23 for closing its open end, which bulk-head 23 extends to the upper edge of the gunwale 24 so as to brace the gunwale and to provide water-tight compartments within the lifeboat.

Skids 25 are secured about the bulk-heads 23 at the point where the sections of the lifeboat are joined together, and are rigidly fixed to the lifeboat at such points to reinforce the bulk-heads and hold the sections of the lifeboat together rigidly.

A shaft 26 has its ends journaled in the bulk-heads 23 of the intermediate section 21 and carries arms 27, to which links 28 are pivoted, as shown in Fig. 5. The links 28 extend upward within guides 29 secured to the bulk-heads 23 of the intermediate section. The crotch cables 17 have hooks 30 attached to the lower ends thereof, which hooks have the ends 31 pivoted to the body portions as at 32. These hooks 30 extend into the guides 29 and the hooks are held closed by these guides.

As a means of releasing the hooks, the shaft 26 is provided with a pin 33 extending upwardly therefrom to be received within an opening 34 formed in a lever 35 pivoted as at 36 to a cross-piece 37 secured to the sides of the lifeboat.

In operation, the lifeboat is normally mounted in a position on the inside of the frame 2 over the inner side of the deck 1. When the lifeboat is to be launched, it is only necessary to release the locking means for the frame 3, a suitable lock being normally employed to hold the frame 3 against turning, and the frame which also constitutes the davit may then be swung 180° to a position disposing the lifeboat 20 off of the side of the deck. Upon turning the hand-wheel 12, the sleeve 10 is permitted to feed lengthwise of the threaded portion of the shaft 8 by reason of its threaded connection therewith to unwind the rope 16 and lower the lifeboat.

The bushing 13 is loosely received over the shaft 8 and serves to prevent a turning of the hand-wheel 12 by the sleeve 10 and the rope attached thereto and to the lifeboat. The bars 7 may be withdrawn or slid backward into the sleeve 6 to permit a loading of the lifeboat before it is lowered.

The lifeboat is then lowered to the surface of the water, the skids 25 guiding it downward off of the side of the boat, preventing injury to occupants and to the boat. The guide rod 18 serves to keep the lifeboat against the side of the ship because as the crotch-cables 17 are unwound, they will approach the apex of the guide rod, thus bringing the lifeboat closer against the side of the ship. This guide rod also serves to keep the boat level as it is lowered in the event that the ship is listing to an end, and also brings the boat in closer on the deck.

When the lifeboat reaches the surface of the water, it is only necessary to release the lever 35, which releases the pin 33 and allows the rod 36 to turn sufficiently to raise the links 28 upward through the guide 29 and release the hook 30, thus casting off the lines from the lifeboat.

This action is extremely simple and permits the launching of the lifeboat in a minimum amount of time and with as simple an operation as is possible.

I claim:

1. In lifeboat launching apparatus, the combination of a frame, a second frame bodily mounted pivotally within said first-mentioned frame for end turning movement about an axis extending upwardly at one side of the lifeboat, and means connected with said second frame for supporting a lifeboat thereon for turning movement.

2. In lifeboat launching apparatus, the combination of a frame, a second frame pivotally mounted within said first-mentioned frame to turn therein, means for pivotally supporting said second frame about a vertical axis, and means for connecting a lifeboat with the second frame to be turned thereby from a position within the frame to an outer position at the side of a boat deck.

3. In lifeboat launching apparatus, the combination of a rectangular frame, a second frame pivotally mounted within said rectangular frame, means for pivotally mounting said second frame about a vertical axis, bars for closing the space within the second frame, and means for supporting a lifeboat on a side of the second frame to be turned therewith from a position on the inner sides of said frames to an outer position on the outer sides thereof at the edge of a boat deck.

4. In lifeboat launching apparatus, the combination of a rectangular frame, a second frame pivotally mounted within said rectangular frame, means for pivotally mounting said second frame

about a vertical axis, bars for closing the space within the second frame, means for supporting a lifeboat on a side of the second frame to be turned therewith from a position on the inner sides of said frames to an outer position on the outer sides thereof at the edge of a boat deck, and means connected with said second frame for permitting lowering of the lifeboat.

5. In lifeboat launching apparatus, the combination of a shaft, a sleeve mounted on the shaft for receiving a lowering line for the life boat, said sleeve and shaft having a screw-threaded connection therebetween for relative longitudinal movement upon relative turning movement, a hand-wheel having a screw-threaded connection with the shaft, and a bushing disposed between the hand-wheel and an end of the sleeve.

6. In lifeboat launching apparatus, the combination with a davit for a lifeboat, a shaft fixed in the davit, and having a threaded portion, a sleeve mounted on the shaft and having a screw-threaded connection with said threaded portion for receiving a lowering line, a hand-wheel threaded onto the shaft, a bushing interposed between the hand-wheel and the end of the sleeve, and guiding means for said bushing.

7. In lifeboat launching apparatus, the combination of a davit having outwardly extending arms carried thereby, a guide member mounted in said arms and having portions arranged at acute angles thereto, and lowering lines operatively connected with the davit to extend over said angular portions.

8. In lifeboat launching apparatus, the combination of a davit having outwardly extending arms carried thereby, a guiding shaft mounted in the arms and having portions at the opposite ends thereof arranged approximately at acute angles to the arms, and lowering lines operatively connected with the davit and extending over said angular portions.

9. In lifeboat launching apparatus, the combination of a davit having outwardly extending arms carried thereby, a guide shaft mounted in the arms being of approximately V-shape, a lowering line operatively connected with the davit, means for controlling the lowering of said line, and crotch lines connected with the lowering line and extending over the arms of the V-shaped shaft.

10. In lifeboat launching apparatus, the combination of a lifeboat, a shaft mounted therein and having off-set arms, links connected with said arms, lowering lines for the lifeboat having hooks thereon to engage in the links, and means surrounding the hooks for normally holding the hooks in the links.

11. In lifeboat launching apparatus, the combination of a lifeboat, a shaft mounted therein and having off-set arms, links connected with the arms, and guiding means within which the upper portions of said links extend, lowering lines carrying hooks for engaging with the links.

12. In lifeboat launching apparatus, the combination of a lifeboat, a shaft mounted therein and carrying an arm at a side thereof having means for detachable connection with an end portion of a line, and an annular guide surrounding the detachable connection means at the point of connection with the line cooperating with the connecting means of said arm to normally prevent release of the line therefrom.

13. In a lifeboat, a shaft having one or more off-set arms attached thereto, a link connected with each arm to receive a hook attached to a

line, and guide-means arranged over the arm and extending around the hook when attached to the link in position to hold the hook in the link.

5 14. In lifeboat launching apparatus, the combination of a lifeboat, a shaft journaled in the lifeboat and carrying arms normally disposed on lower sides thereof, links connected with said arms and extending upwardly therefrom, guides into which said links extend, lowering lines having 10 hooks connected therewith, portions of each of said hooks being pivoted together for engagement with the links and being normally held closed by the guides, and means connected with the shaft for normally holding said shaft against turning 15 and for releasing the shaft to permit the hooks to be released from the links.

15 15. In lifeboat launching apparatus, the combination of a shaft having off-set arms attached thereto and extending laterally and upwardly 20 from the shaft, a link connected with each arm, a cable having a hook to engage in the link, and a guide into which the hook extends and surrounding the hook when said hook is attached to the link preventing removal thereof from the 25 link.

16. In lifeboat launching apparatus, the combination of a shaft having an off-set arm attached

thereto and extending laterally and upwardly from the shaft, a link connected to each arm and adapted to receive a hook of a cable, and a guide into which the hook is adapted to extend and surrounding the hook when said hook is attached to the link preventing removal thereof from the 5 link.

17. In lifeboat launching apparatus, the combination of an upright approximately rectangular rigid frame, a second frame mounted bodily 10 within the rigid frame and adapted to carry a lifeboat at one side thereof, means pivotally supporting the second frame within the rigid frame for turning movement through approximately 180° relative thereto about an axis extending up- 15 wardly at one side of the lifeboat.

18. In lifeboat launching apparatus, the combination of a frame adapted to support a lifeboat at one side thereof, said frame being approximately rectangular with upper and lower horizontal 20 sides and upright ends joining said sides, means pivotally supporting said frame on the deck of a ship for turning movement about an upright axis, and guard rails extending horizontally between the ends of the frame at the lower portion thereof. 25

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