

Feb. 6, 1951

O. A. KUHLER
LIFEBOAT LAUNCHING DEVICE

2,540,535

Filed May 7, 1947

2 Sheets-Sheet 1

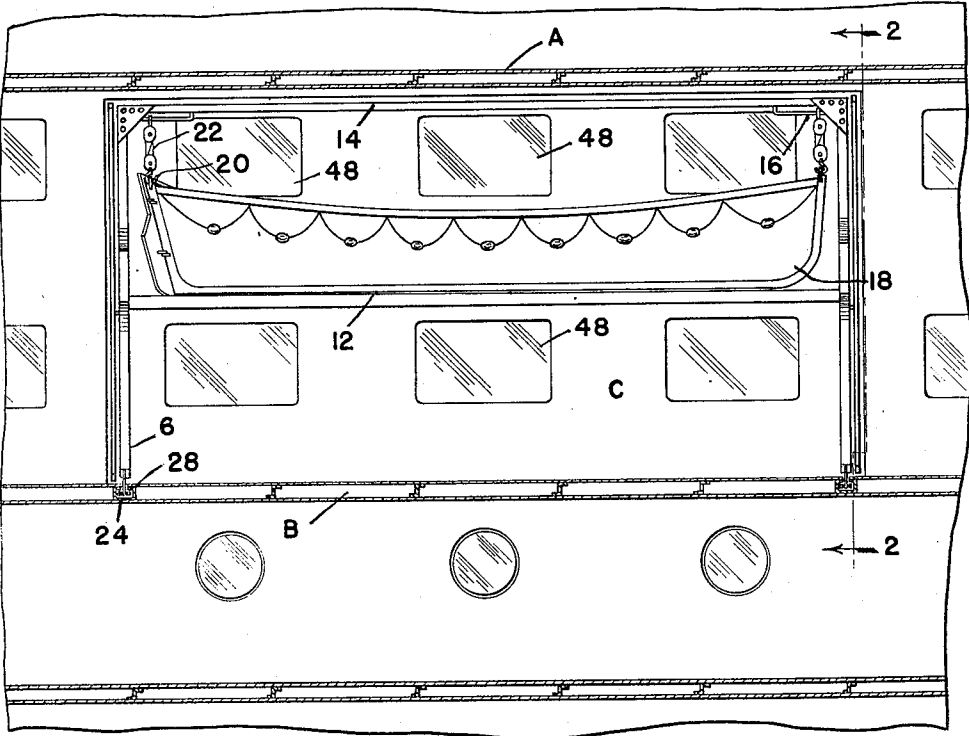


FIG. 1.

INVENTOR
Otto A. Kuhler
BY *George P. Ericson*
ATTORNEY

Feb. 6, 1951

O. A. KUHLER
LIFEBOAT LAUNCHING DEVICE

2,540,535

Filed May 7, 1947

2 Sheets-Sheet 2

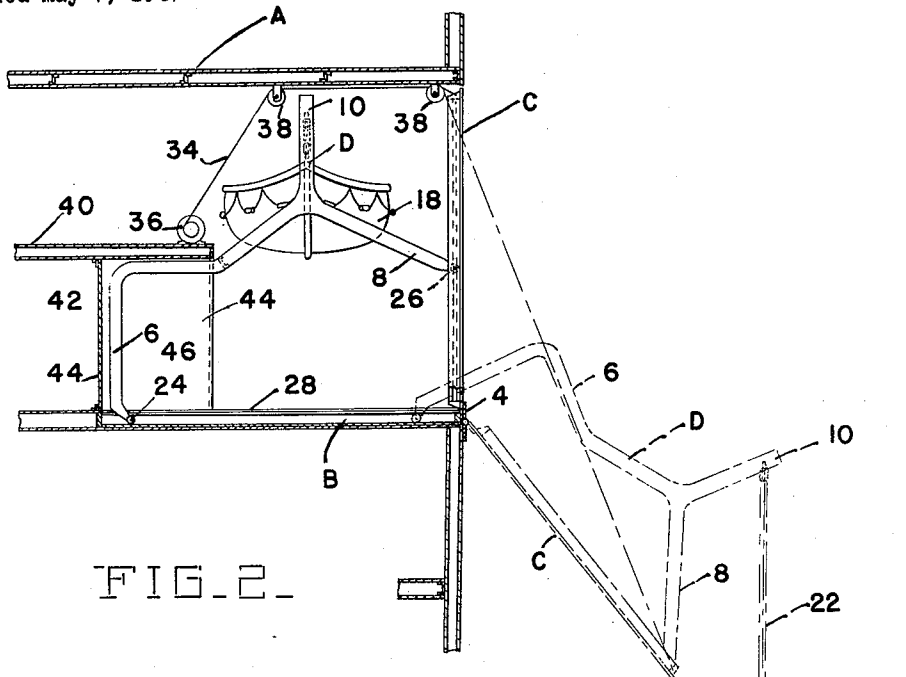


FIG. 2.

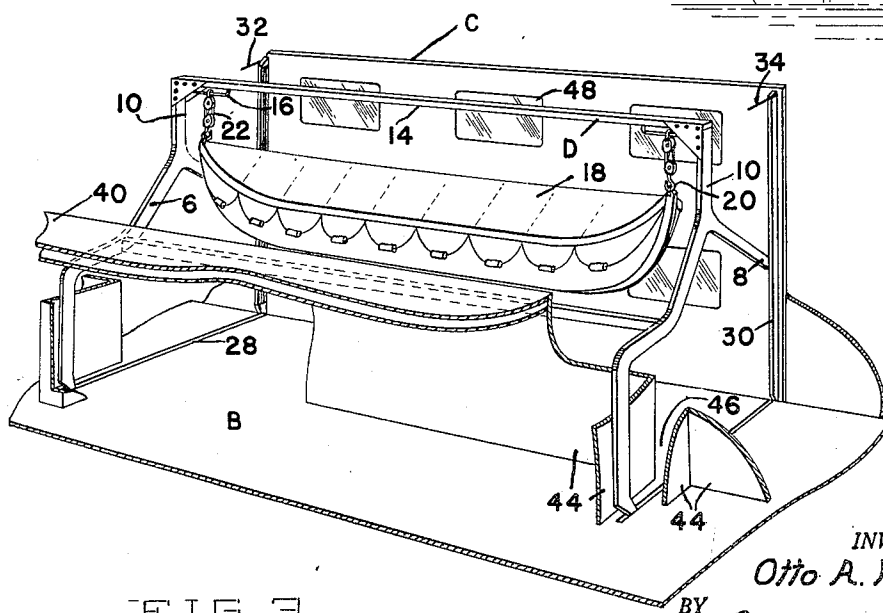


FIG. 3.

INVENTOR.
Otto A. Kuhler
BY
George R. Ericson
ATTORNEY

UNITED STATES PATENT OFFICE

2,540,535

LIFEBOAT LAUNCHING DEVICE

Otto A. Kuhler, Blauvelt, N. Y.

Application May 7, 1947, Serial No. 746,576

9 Claims. (Cl. 9—35)

1

This invention relates to devices for launching boats and particularly to devices for launching lifeboats from ships by gravity.

A contributing cause of disasters at sea is often the inability to launch all of the available lifeboats from the ship. This situation frequently results when the ship develops a strong list making it impossible to launch the lifeboats on the high side of the vessel due to the inclination of the boat deck. In addition to this, the conventional stowing of lifeboats on an exposed deck unprotected from the weather sometimes results in the running gear of the boats and davits being caked with ice, preventing their timely use. Obviously, the continuous exposure to the weather of the lifeboats also necessitates constant inspection and costly maintenance. Another disadvantage of stowing lifeboats on an exposed deck is that the wind, striking against the lifeboats and davits, considerably reduces the speed, especially of large vessels.

It is an object of this invention to provide means capable of launching all of the lifeboats from ships having a list closely approaching the point of capsizing.

Another object of the invention is to house the lifeboats entirely within the hull of the vessel, where they are protected from the weather and offer no resistance to the wind retarding the speed of the ship.

A further object of the invention is to provide means for launching lifeboats from ships which includes a portion of the hull of the ship acting as a ramp to launch the lifeboats by gravity.

These and other objects of the invention will be apparent to those skilled in the art from a study of the following description and accompanying drawings, in which:

Figure 1 is a side elevational view from inside a ship equipped with the device of the present invention;

Figure 2 is a view taken on line 2—2 of Figure 1, the device being shown in broken lines when in the lifeboat launching position; and

Figure 3 is a fragmentary perspective view taken from within the ship and showing the device installed for use, certain parts being broken away to better disclose other parts.

Referring now to the drawings more in detail, the invention is shown as installed in a ship, only a part of which is shown, having decks A and B and an outwardly swinging hull portion or member C. The hull portion C is hinged, as indicated at 4, to the side of ship and adapted to swing outwardly by gravity beyond the side

2

of the ship to the position shown by broken lines in Figure 2. In this position the hull portion C acts as a ramp for the lifeboat launching davit device now to be described.

The davit device, generally indicated at D, is formed of spaced inboard and outboard extending legs 6 and 8, respectively, merging into upstanding arms 10 at opposite ends of the device. The inboard legs 6 and upstanding arms 10 are joined, respectively, by tie or truss members 12 and 14, the latter having suitable means 16 from which a lifeboat 18 is suspended. The lifeboat 18 is detachably supported at opposite ends from the davit device in a conventional manner, as by the hooks 20 and falls 22. Rollers 24 on inboard legs 6 and similar rollers 26 on outboard legs 8 ride, respectively, in tracks 28 extending across deck B and in tracks 30 provided on the swinging hull portion C. The tracks 28 are preferably flush with the floor of the deck, for obvious reasons, while the tracks 30 terminate just short of the upper edge of the swinging hull portion C, limiting the outboard movement of the davit device. Thus the davit device D is slidably and pivotally mounted to move outwardly and downwardly by gravity upon outward swinging movement of the hull portion C.

It will be seen that the davit device is normally supported in upright position at its inboard side on the deck B and at its outboard side by the closed hull portion C. The swinging hull portion is normally retained in closed position and its outward movement controlled by means of cables 32 and 34 and a winch mechanism 36, which may be either manually or mechanically operated. The cables 32 and 34 are connected with the upper part of the swinging hull portion, at opposite sides thereof, then carried in guide pulleys 38 secured to the under surface of deck A and connected with the winch mechanism mounted on an embarkation or loading platform 40 located above deck B adjacent the lifeboat 18. The inboard legs 6 are of greater length than the outboard legs 8, and extend inboard well above and to the side of deck B, leaving the deck clear and unobstructed for the use of passengers. With this arrangement, the lifeboat is located at a point relatively remote from the inboard rollers 24, so that the greater portion of the weight of the lifeboat and davit device is normally supported against the closed hinged hull portion C. In other words, since the inboard rollers are farther removed from the lifeboat than are the outboard rollers, the moment of force acting

3

about the inboard rollers 24 as a pivotal point and against the outboard rollers 26 is increased. Thus the maximum force is brought to bear against the hinged hull portion C by the weight of the lifeboat, especially when fully loaded, and its equipment, acting to push the hull portion outwardly by gravity subject only to the control of the winch and cable mechanism. In addition, the greater length of the inboard legs 6 provides a relatively wide base for the davit device permitting it to swing outwardly and downwardly to the full extent of the tracks 30 on the hull portion C.

The spaces 42 inboard of the deck B may be used for staterooms or other compartments. The walls 44 of the rooms or compartments are arranged to form pockets or recesses 46 which receive the inner end portions of the inboard legs 6 and the tracks 28. Any suitable means (not shown) may be provided for reaching the embarkation platform 40, either from the deck B or from the staterooms 42. The hinged hull portions C, as shown, are provided with windows 48, but obviously if desired the space between the tracks 30 may be left entirely open giving a relatively unobstructed view of the ocean to the passengers promenading on the deck.

From the foregoing description it will be seen that a device has been provided capable of launching lifeboats from a heavily listing ship approaching the point of capsizing, the latter usually being at about 40 to 45°, thus preventing loss of life in disasters at sea heretofore caused by inability to launch the lifeboats on the high side of the ship. In the device of the present invention, the combined weight of the loaded lifeboat, its equipment and gear and the davit device will, in cases up to a 40° list of the ship, push the hinged hull portion C outwardly, subject only to the control of the winch and cable mechanism causing the davit device to move outwardly and downwardly along its tracks to boat launching position. In addition, the housing of the lifeboats wholly within the ship's hull protects them from the deteriorating effect of the weather and assures their constant readiness for instant use. Further, this interior stowed arrangement reduces to a minimum the need for inspection and maintenance of the lifeboat and davit, and also eliminates any reduction of the speed of the ship on account of resistance to wind.

The invention may be modified in various respects as will occur to those skilled in the art and the exclusive use of all modifications as come within the scope of the appended claims as contemplated.

What is claimed is:

1. In a ship having a deck, a hull portion hinged at the side of said deck and adapted to swing outwardly, a life boat carrying davit device slidably mounted on the deck and having a slidable connection with said hinged hull portion such as to be movable therewith to a downwardly tilted boat launching position when the hull portion is swung outwardly, and means for controlling the outward swinging movement of said hinged hull portion.

2. In a ship having a deck, a member hinged at one side of said deck and adapted to swing outwardly beyond the side of the ship to act as a ramp, a davit device slidably supported at its inboard side on the deck and at its outboard side by said ramp member to move outwardly therewith by gravity, a lifeboat supported by said de-

4

vice adjacent its outboard side, and means for controlling the outward movement of said ramp member whereby to launch said lifeboat.

3. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, a davit device having its inboard side slidably supported on said deck with its outboard side slidably bearing against and movable outwardly by gravity with said ramp means, a lifeboat suspended from said davit device in stowed position above said deck, and means for controlling the outward swinging movement of said ramp means whereby to launch said lifeboat.

4. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, tracks athwart said deck and on said ramp means, a davit device slidably and pivotally supported at its inboard side in said deck tracks and at its outboard side in said ramp tracks, a lifeboat suspended from said davit device in stowed position above said deck, and means for controlling the outward movement of said ramp means whereby to launch said lifeboat by gravity.

5. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, a davit device on said deck and normally retained in upright position by said ramp means and movable therewith by gravity, tracks extending across said deck and said ramp means, said davit device having inboard and outboard legs slidably engaged, respectively, with said tracks, a lifeboat suspended from said davit device in stowed position above said deck, and means for controlling the movement of said ramp means whereby to launch said lifeboat.

6. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, a davit device slidably mounted on said deck and normally retained in upright position by slidable bearing engagement against said ramp means for outward movement therewith by gravity, a lifeboat suspended from said davit device in stowed position above said deck, an embarkation platform above said deck adjacent said lifeboat, and means for controlling the movement of said ramp means to launch said lifeboat.

7. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, a davit device, a lifeboat suspended from said davit device in stowed position above said deck, said davit device being slidably supported at its inboard side on said deck at a point remote from said lifeboat and at its outboard side by said ramp means at a point adjacent said lifeboat, and means for controlling movement of said ramp means whereby to launch said lifeboat by gravity.

8. In a ship having a deck, ramp means hinged at the side of said deck and adapted to swing outwardly, a davit device, a lifeboat suspended from said device in stowed position above said deck, tracks extending across said deck and said ramp means, said davit device having elongated inboard legs and relatively shorter outboard legs slidably engaged, respectively, with said tracks, and means for controlling the outward movement of said ramp means whereby said lifeboat may be launched by gravity.

9. In a ship having a pair of decks, a member hinged at the side of one of said decks and adapted to swing outwardly by gravity beyond the side of the ship, a davit device associated with said member and movable therewith, a lifeboat supported by said davit device, a lifeboat

2,540,535

5

loading platform between said decks, winch mechanism on said loading platform, and cable means carried by the other of said decks and connecting said winch mechanism with said hinged member for controlling its outward movement during launching of said lifeboat.

OTTO A. KUHLEK.

6

UNITED STATES PATENTS

Number	Name	Date
1,133,700	Basile -----	Mar. 30, 1915
1,578,583	Ceelen -----	Mar. 30, 1926
1,636,059	Jurriaanse -----	July 19, 1927
1,958,040	Geddes et al. -----	May 8, 1934
2,141,181	Geddes -----	Dec. 27, 1938

REFERENCES CITED

The following references are of record in the file of this patent: