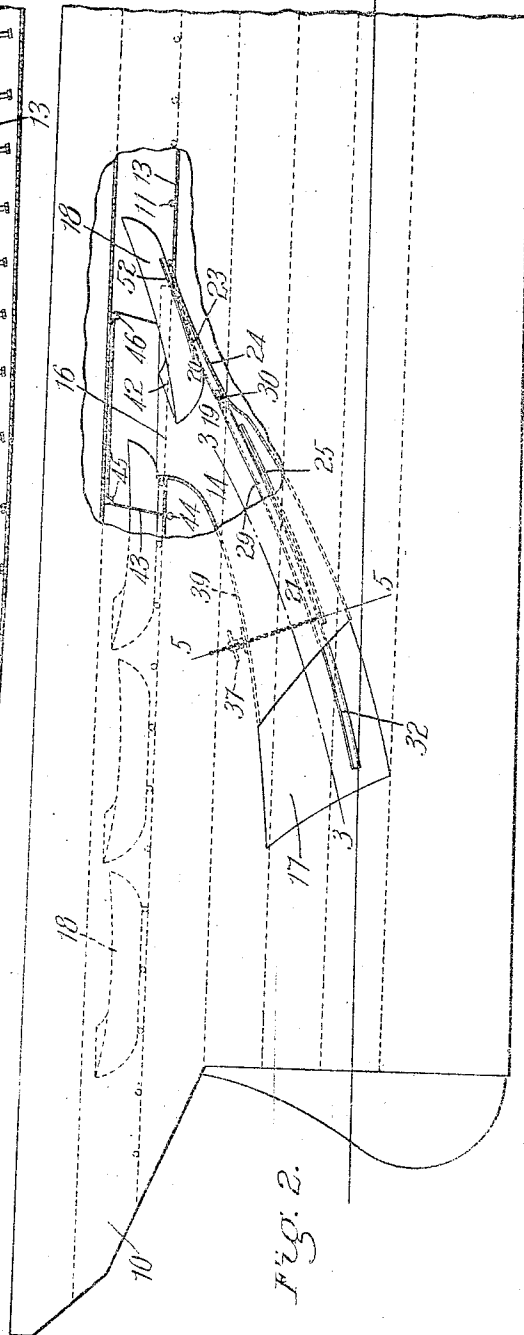
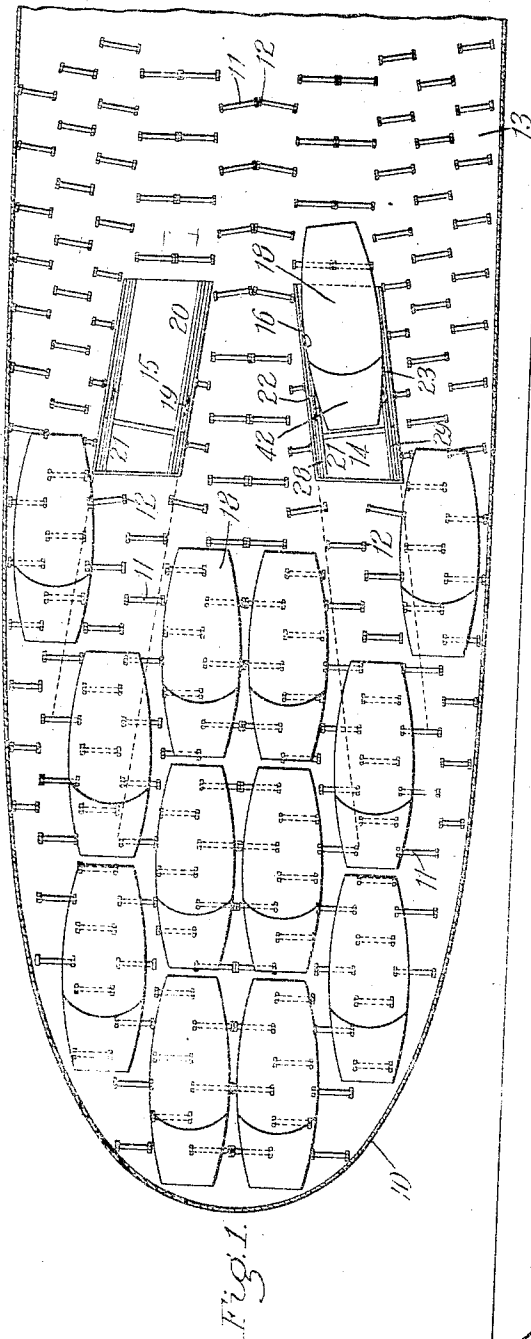


1,054,191.

Patented Feb. 25, 1913.

2 SHEETS-SHEET 1.



Witnesses.
Franklin E. Low
Leonard A. Powell.

Inventor:
William Friman,
by his attorney, Miller & Goosling.

1,054,191.

Patented Feb. 25, 1913.

2 SHEETS—SHEET 2.

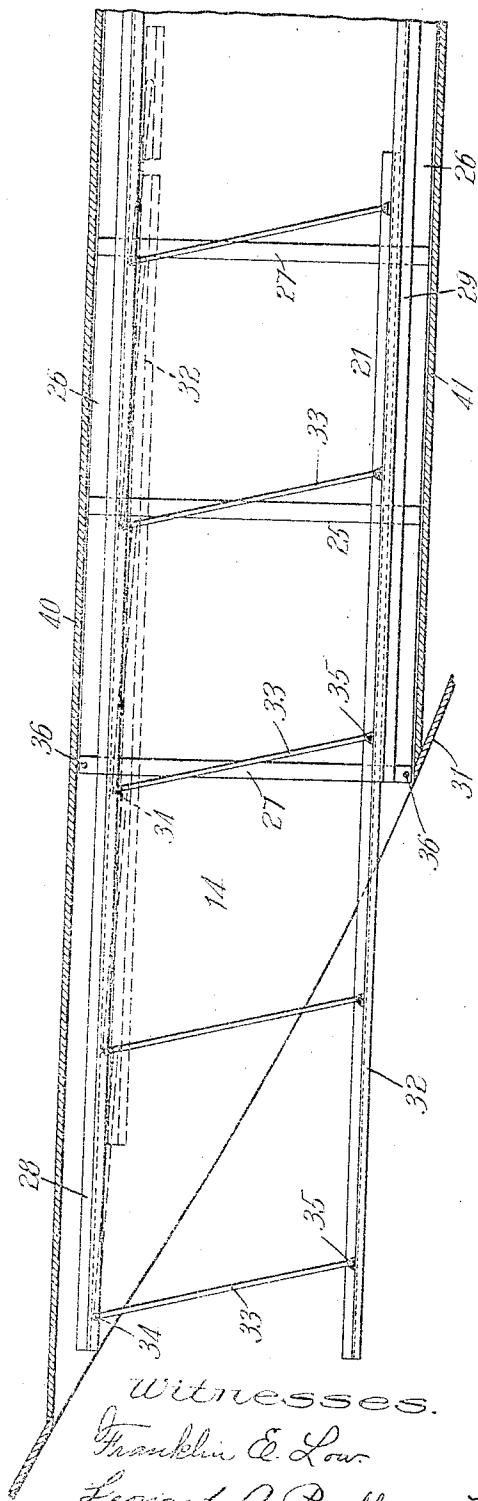


Fig. 3.

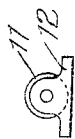


Fig. 5.

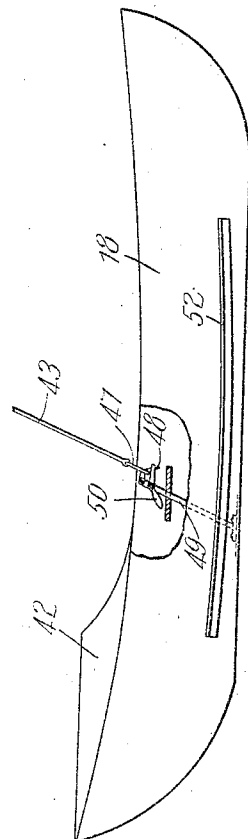


Fig. 4.

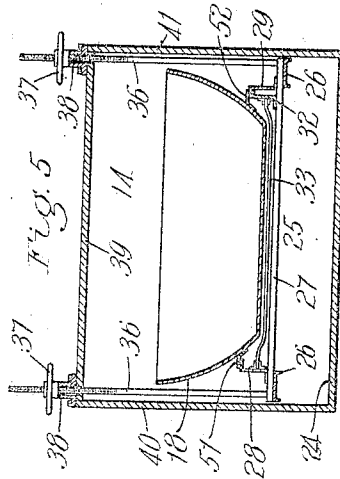


Fig. 6.

Witnesses.
Franklin E. Low.
Leonard A. Powell.

Inventor:
Wilhelm Friman,
by his attorney, Charles S. Gooding.

UNITED STATES PATENT OFFICE.

WILHELM FRIMAN, OF QUINCY, MASSACHUSETTS.

LIFE-SAVING APPARATUS.

1,054,191.

Specification of Letters Patent.

Patented Feb. 25, 1913.

Application filed August 1, 1912. Serial No. 712,626.

To all whom it may concern:

Be it known that I, WILHELM FRIMAN, a subject of the Czar of Russia, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Life-Saving Apparatus, of which the following is a specification.

This invention relates to a life saving apparatus, particularly adapted to be used in connection with large vessels or ocean going steamships.

The object of the invention is to provide a construction and apparatus whereby different boats on a certain deck of a vessel may be moved readily and easily to an opening through the deck of the vessel, loaded with people and passed down a passageway or chute which extends through the deck of the vessel and downwardly and outwardly therefrom through an opening in the side of the vessel, so that the boat as it slides down the passageway from the deck is guided outwardly from the vessel at an angle and onto the surface of the water upon which at the time the vessel may be floating.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a sectional plan of a portion of a deck of a vessel constructed in accordance with my invention illustrating two chutes or passageways through which the boats can be passed, and with a number of life saving boats assembled on the deck of a vessel. Fig. 2 is a side elevation of what is set forth in Fig. 1, broken away for the sake of illustration. Fig. 3 is an enlarged sectional plan taken on line 3--3 of Fig. 2. Fig. 4 is a side elevation, partly broken away, illustrating one of the life saving boats. Fig. 5 is an enlarged section taken on line 5--5 of Fig. 2. Fig. 6 is an end elevation of one of the rollers together with its supporting bracket, upon which the boats are moved toward the passageways.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 10 is the hull of a vessel constructed in accordance with my invention.

11 are rollers set at different angles and rotatably mounted upon brackets 12 fast to the deck 13 of the vessel. Passageways

14 and 15 are provided, the same being of like construction, except that the passage 14 leads out of one side of a vessel and the passage 15 out of the other side of the vessel. Referring, then, to the passage 14, the same extends downwardly through an opening 16 in the deck and extends outwardly through an opening 17 in the side of the hull 10. The boats 18 are adapted to slide downwardly through this passageway from the deck and outwardly at an angle to said vessel onto the surface of the water upon which the vessel floats. A track 19 leads downwardly through the passageway 14 and said track is made in two sections, an upper section 20 and a lower section 21.

The upper section consists of two rails 22 and 23 which are permanently fastened to the bottom 24 of the passageway 14 and lead from the deck downwardly there-through and into the passageway 14. The lower section 21 leads from the lower end of the upper section downwardly through the passageway and out of the opening 17. Said lower section consists of a framework 25 (see Figs. 3 and 5), said framework comprising two longitudinally extending channel irons 26 and cross pieces 27 joining said channel irons together.

Two rails 28 and 29 aline with the rails 22 and 23, respectively, and are fastened rigidly to the cross pieces 27. The rails 28 and 29 are pivotally connected at their upper ends by means of links 30 to the lower ends of the rails 22 and 23, respectively, of the upper section. The rails 28 and 29, as set forth, are pivotally mounted in the passageway 14 and it will be noted that said rails 28 and 29 terminate at their lower ends along the line 31 of the hull or side of the vessel, so that the rail 28 is longer than the rail 29 and this is compensated for by supplying a third rail 32, the outer end of which is flush with the outer end of the rail 28 when the parts are in the position illustrated in Fig. 3, or, in other words, when the device is in position for use.

When the device is not being used the third rail 32 is swung backwardly into the passageway, as it is not desirable to have the same project beyond the side of the hull, and in order to enable this to be done, said rail is pivotally mounted to swing in a horizontal plane from the outer rail 29 toward the inner rail 28, said outer rail being connected to the rail 28 by a series of parallel

and horizontally disposed links 33, pivotally connected at 34 and 35 to the rails 28 and 32, respectively. The lower section 21 is, therefore, pivoted by means of the links 30 to the upper section 20 and said lower section is raised and lowered by means of screw-threaded rods 36 and hand wheels 37 having screw-threaded engagement with said rods 36. The lower ends of the rods 36 are fastened to one of the cross-pieces 27; the upper ends of said rods project through brackets 38 which are fastened to the top 39 of the passageway 14. Said passageway is also provided with sides 40 and 41, to render the same watertight. By turning upon the hand wheels 37 in one direction, it is evident that the lower section will be raised, together with the rails supported thereon, and said section will be swung in a vertical plane about the pivotal links 30 as a center. When the rail 32 is not in use, it is swung to the position illustrated in dotted lines in Fig. 3.

The boats 18 are preferably covered at the front end, as at 42. The boats are loaded adjacent to the opening 16 of the passageway 14 and are held in position ready to be moved down the passageway 14 by a rope 43 which is fastened at one end to a weight 44 and passes upwardly from the deck over a pulley 45, thence horizontally along and above said deck and over a pulley 46 and thence downwardly, terminating in a ring 47, which, when the boat is in the position illustrated in Fig. 2 and before the boat is sent downwardly through the passageway, engages a hook 48 fast to a standard 49 which, in turn, is fastened to the bottom of the boat 18.

A locking lever 50 is pivoted upon the standard 49 and holds the ring 47 locked upon the hook 48 until the boat is ready to start, when the lever 50 is tipped upon its pivot and the ring 47 unshipped from the hook 48. The boat is then in readiness to descend through the passageway 14 to the outside thereof.

Each of the boats 18 is provided upon the sides thereof with flanges 51 and 52 which are adapted to slide upon the rails of the upper and lower sections of the track which leads downwardly through the passageway.

It will be noted that the rollers on the deck 13 are inclined at different angles to each other, more especially in the vicinity of the openings of the passageways 14 and 15. This is to assist the crews of the boats in manipulating the same in order to get them into position to be shot down the passageways 14 and 15.

The general operation of the device hereinbefore specifically described is as follows: The boat to be loaded is pushed along on the rollers 11 until it is brought into position at the top of the passageway, as illus-

trated in Fig. 2, where the boat is shown in position ready to be launched through the passageway 14. The boat is locked in position by the rope 43 until the same has received the number of passengers which are to be sent therein. Then the rope is detached by tipping the lever 50 upwardly and slipping the ring 47 off of the hook 48. When the ring 47 is released the weight 44 will pull said ring and the rope attached thereto upwardly out of the way of the boat 18. The boat is then pushed down the passageway 14 and the flanges 51 and 52 slide along the rails 22 and 23 of the upper section 20 and from these rails said flanges pass to the rails 28 and 29 of the lower section. In the last part of the passage of the boat down the passageway, the flange 52 will slide along on the third rail 32, finally passing out of the opening 17 and onto the surface of the water.

The principal object of raising and lowering the outer end of the lower section of the track 19 is to have the lower ends of the rails 28 and 32 a little below the level of the water. This level of the water varies relatively to the opening 17 according to whether the ship is partly sunk or according to whether the same is heavily loaded or lightly loaded, and thus it is desirable that said track should be adjustable and this is accomplished, as hereinbefore set forth, by means of the rods 36 and hand wheels 37.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel and a boat adapted to slide down said passageway from said deck and outwardly therefrom at an angle to said vessel and onto the surface of the water upon which said vessel floats.

2. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, and a boat adapted to slide on said track down said passageway from said deck and outwardly therefrom at an angle to said vessel onto the surface of the water upon which said vessel floats.

3. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track leading down said passageway pivoted at its upper end to a stationary support and adapted to swing in a vertical plane and a boat adapted to slide on said track down said passageway.

4. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track leading down said passageway pivoted at its upper end to a stationary support, means adapted to rock said track on its pivot in a vertical plane and a boat adapted to slide down said passageway from said deck and outwardly therefrom at an angle to said vessel and onto the surface of the water upon which said vessel floats.

5. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, said track comprising an upper section and a lower section, said upper section permanently fastened to said vessel and leading from said deck downwardly therethrough and into said passageway, said lower section leading from said upper section downwardly through said passageway and out of said opening and pivoted at its upper end to swing in a vertical plane and a boat adapted to slide down said passageway from said deck and outwardly therefrom at an angle to said vessel and onto the surface of the water upon which said vessel floats.

6. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, said track comprising an upper section and a lower section, said upper section permanently fastened to said vessel and leading from said deck downwardly therethrough and into said passageway and consisting of two rails, said lower section consisting of a framework and two rails fast thereto and leading from said upper section downwardly through said passageway and out of said opening, said rails pivotally connected at their upper ends to the lower ends of the rails of the upper section to swing in a vertical plane.

7. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, said track comprising an upper section and a lower section, said upper section permanently fastened to said vessel and leading from said deck downwardly therethrough and into said passageway and consisting of two rails, said lower section consisting of a framework and two rails fast thereto and leading from said upper section downwardly through said passageway and out of said opening, said

rails pivotally connected at their upper ends to the lower ends of the rails of the upper section to swing in a vertical plane, and a third rail adapted to aline with the outer of said lower section rails and pivotally mounted to swing in a horizontal plane from said outer rail toward the inner rail of said lower section rails.

8. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, said track comprising an upper section and a lower section, said upper section consisting of two rails and permanently fastened to said vessel and leading from said deck downwardly therethrough and into said passageway, said lower section consisting of a framework and two rails fast thereto and leading from said upper section downwardly through said passageway and out of said opening, said rails pivotally connected at their upper ends to the lower ends of the rails of the upper section to swing in a vertical plane and means to raise and lower said framework and swing said lower section rails about their pivots.

9. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a track in said passageway, said track comprising an upper section and a lower section, said upper section consisting of two rails and permanently fastened to said vessel and leading from said deck downwardly therethrough and into said passageway, said lower section consisting of a framework and two rails fast thereto and leading from said upper section downwardly through said passageway and out of said opening, said rails pivotally connected at their upper ends to the lower ends of the rails of the upper section to swing in a vertical plane, a third rail adapted to aline with the outer rail of said lower section rails and a series of parallel horizontally disposed links pivotally connected at their opposite ends, respectively, to said third rail and the inner rail of said lower section rails, whereby said third rail may be swung horizontally toward and away from said outer rail.

10. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through an opening in the side of said vessel, a boat adapted to slide down said passageway from said deck and outwardly therefrom at an angle to said vessel and onto the surface of the water upon which said vessel

floats and means to detachably fasten said boat to said vessel at the upper end of said passageway.

11. A life saving apparatus having, in
5 combination, a vessel having a passageway therein leading from a deck downwardly through said deck and outwardly through
10 an opening in the side of said vessel, a track in said passageway comprising two rails thereof adapted to aline with said rails,
whereby said boat may slide down said pas-
15 sageway along said track and outwardly from said vessel at an angle thereto onto the surface of the water upon which said vessel floats.

12. A life saving apparatus having, in combination, a vessel having a passageway therein leading from a deck downwardly

through said deck and outwardly through 20
an opening in the side of said vessel, a plu-
rality of rollers journaled to rotate on said
deck and arranged at different angles and
a boat resting on said rollers and adapted 25
to be supported and guided thereby toward
said opening, said boat adapted to slide
down said passageway from said deck and
outwardly therefrom at an angle to said
vessel and onto the surface of the water
upon which said vessel floats. 30

In testimony whereof I have hereunto
set my hand in presence of two subscribing
witnesses.

WILHELM FRIMAN.

Witnesses:

DANIEL A. ROLLINS,
MARGARETTE F. FINNERTY.