A. B. ANDREASSEN.

LAUNCHING APPARATUS.

APPLICATION FILED AUG. 10, 1912.

1,049,970.

Patented Jan. 7, 1913.

3 SHEETS—SHEET 1.

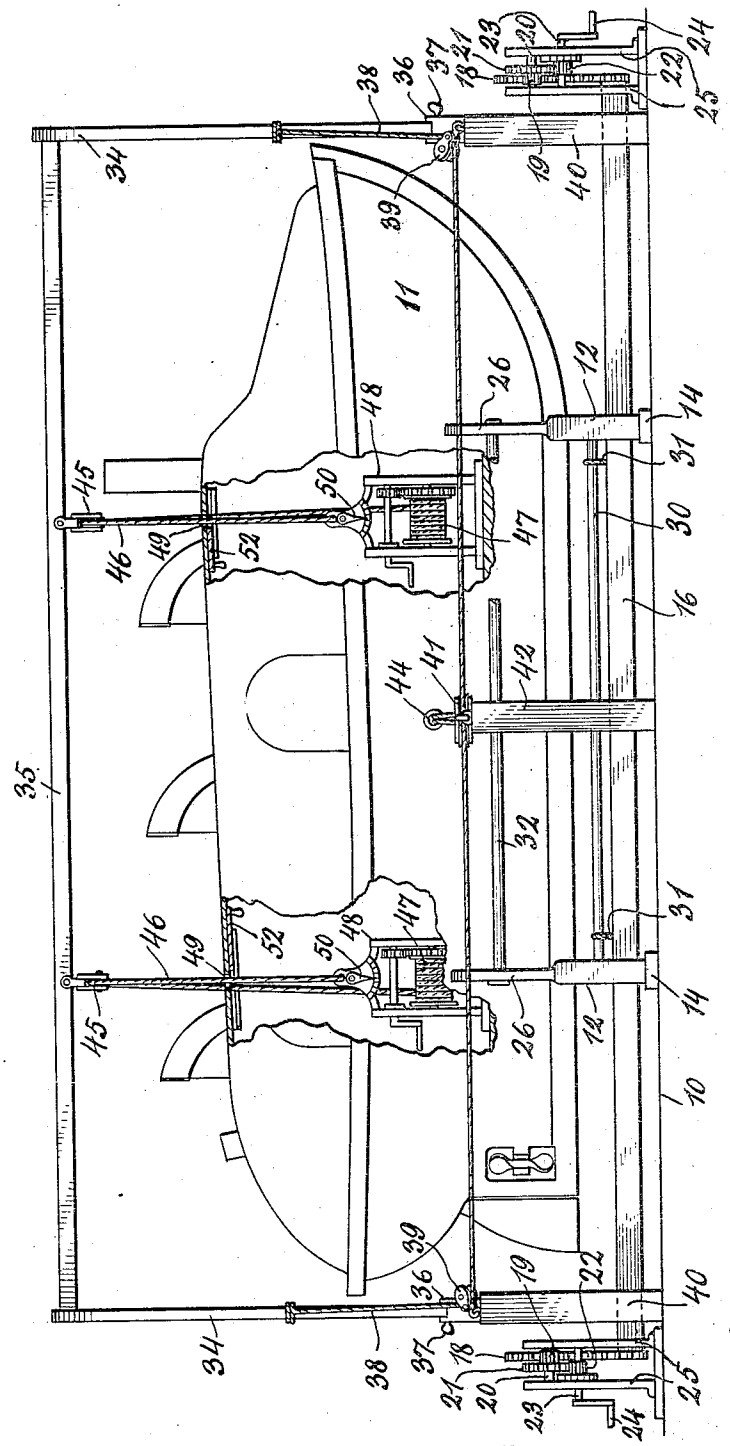

Fig. 1.

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3 SHEETS—SHEET 2.

Fig. 2.

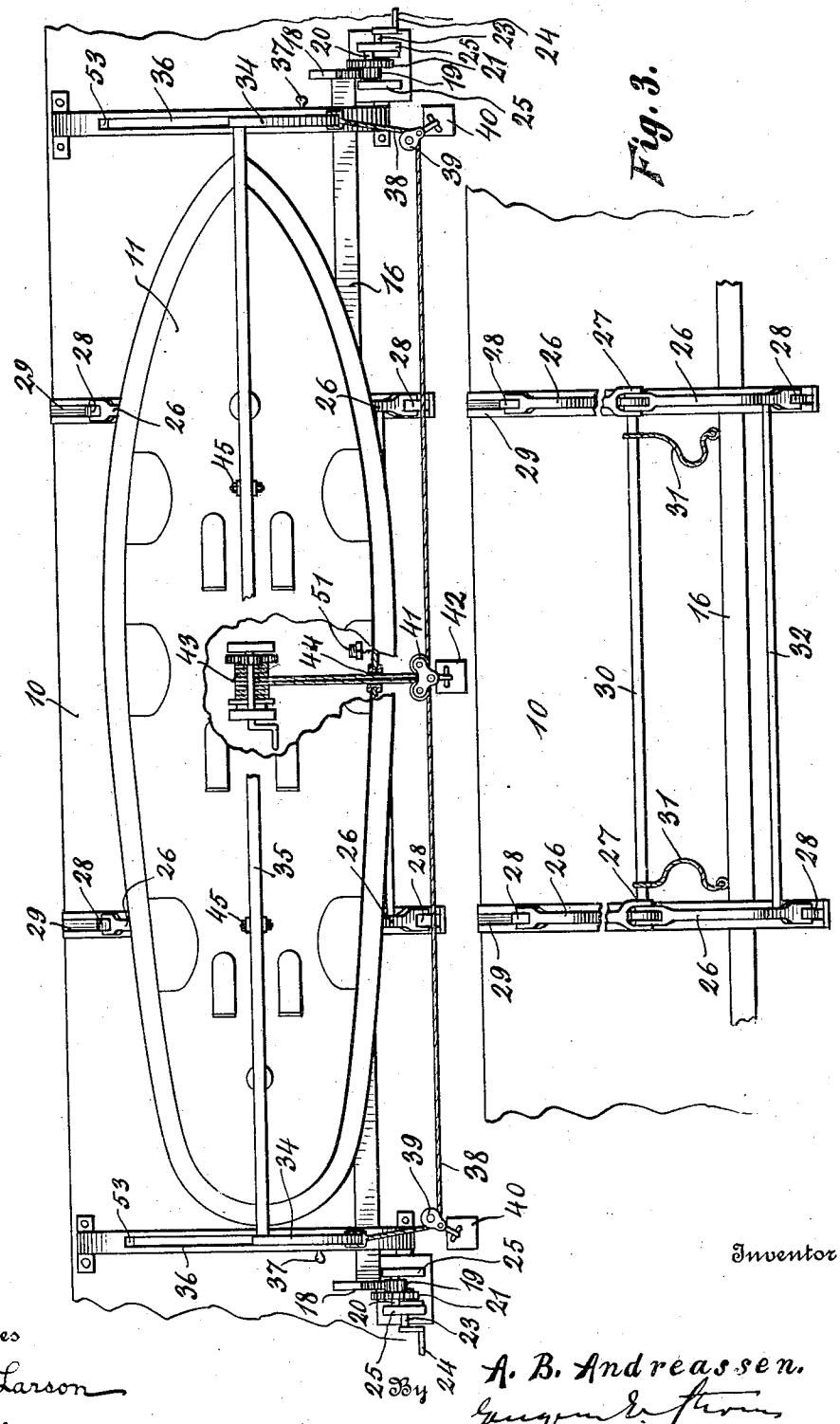

Fig. 3.

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3 SHEETS—SHEET 3.

Fig. 5.

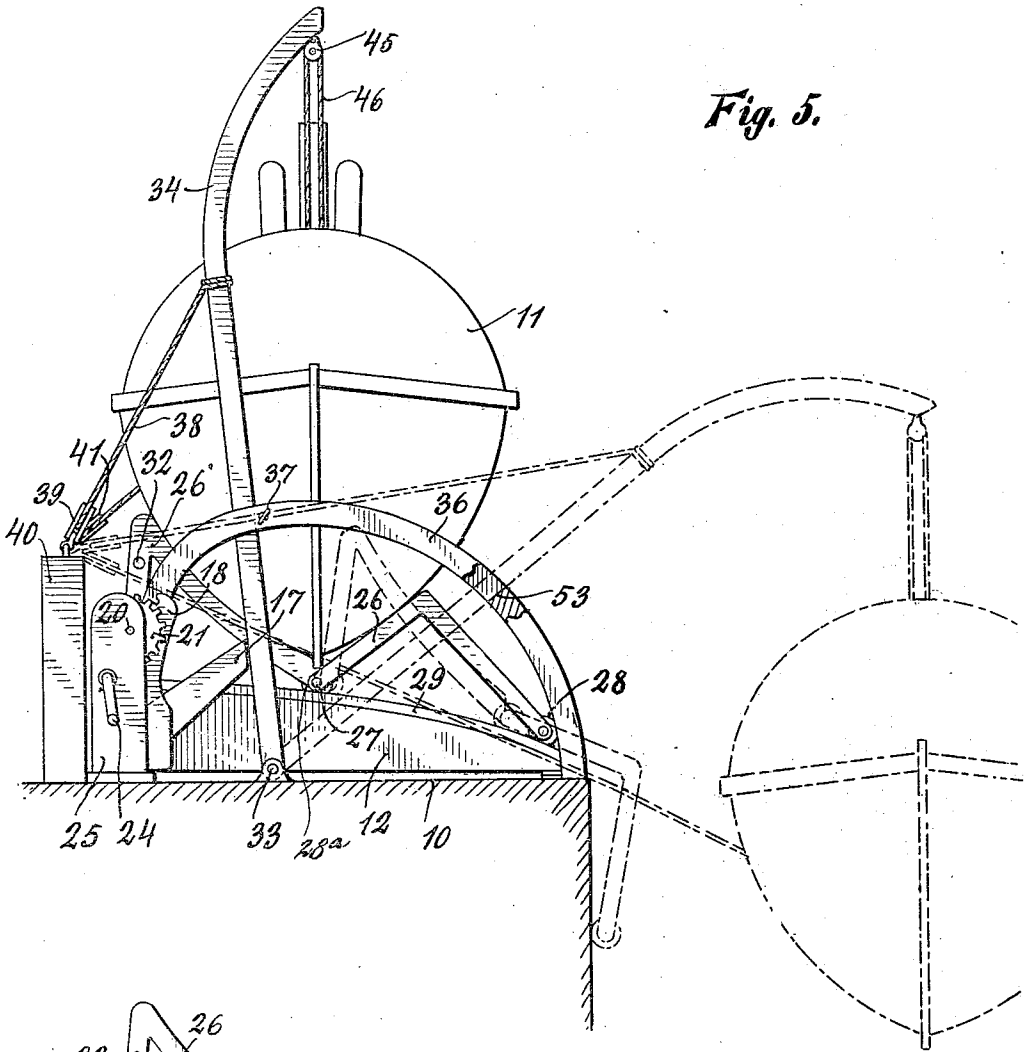
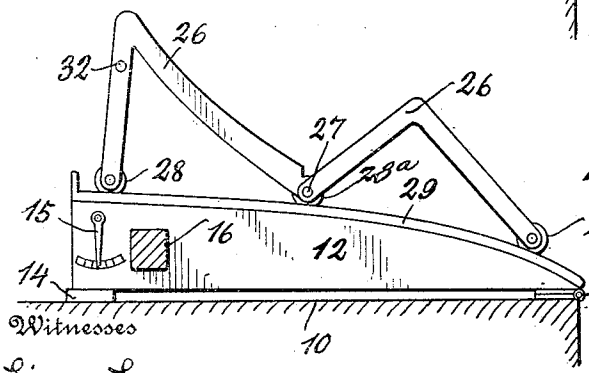


Fig. 4.



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UNITED STATES PATENT OFFICE.

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LAUNCHING APPARATUS.

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To all whom it may concern:

Be it known that I, ANDREAS B. ANDREASSEN, a subject of the King of Norway, residing at 7210 Third avenue, Brooklyn, State of New York, have invented certain new and useful Improvements in Launching Apparatus, of which the following is a specification.

This invention relates to improvements in apparatus for launching life-boats from the decks of vessels, and its object is to provide an apparatus of this kind whereby the life-boats can be quickly and safely launched.

The invention also has for its object to provide a launching apparatus which will take the life-boat clear of the side of the vessel, and also to provide a lowering device which can be readily controlled so that the boat will not be tilted endwise by lowering one end faster than the other.

A further object of the invention is to provide means for shifting the boat supports to correspond to the list of the vessel.

Other objects and advantages of the invention will be pointed out in the detailed description appearing hereinafter, and in order that the invention may be better understood, reference is had to the accompanying drawings, in which—

Figure 1 is a side elevation of the apparatus and the life-boat, the latter being shown partly broken away. Fig. 2 is a plan view, the boat being also shown partly broken away. Fig. 3 is a plan view showing the supporting-cradle of the boat. Fig. 4 is an end view of the said cradle, and Fig. 5 is an end view of the apparatus.

Referring specifically to the drawings, 10 denotes the deck of the vessel carrying the launching apparatus of the life-boat 11. On said deck are mounted two spaced supports 12 for the cradle in which the boat rests. The top of each support is curved and inclined toward the side of the vessel at which latter it terminates and is hinged, as indicated at 13, to swing in a vertical plane. The free inner end of the support rests on a block 14. The supports are hinged to the deck in order that they may be adjusted to level the cradle if the vessel has a list. Each support carries a pendulum lever 15. The supports 12 are connected near their free ends by a cross-bar 16 having at its ends an outstanding arm 17 for a purpose to be hereinafter described. To each end of the cross-bar is also fastened a rack 18 which meshes with a pinion 19 on a shaft 20. On said shaft is also fast a spur gear 21 which is in mesh with a pinion 22 on a shaft 23 having a crank-handle 24. The shafts 20 and 23 are supported between stands 25 mounted on the deck 10. The rack 18 is curved on an arc having for its center the hinge connection 13, in view of which it will be evident that the supports 12 may be adjusted as herein-before described upon operating the crank-handle 24.

The cradle which supports the boat 11 consists of two angular members 26 which are pivotally connected at 27 so as to form a substantially M-shaped frame. The two pivotally connected inner branches of the members extend upward and divergingly from the pivot, and the boat seats therebetween. The two outer branches of the members extend downward from the upper ends of the inner branches and have rollers 28 at their lower ends which are mounted to travel on a track 29 on top of the support 12. Each support carries one of the herein-described cradles. The cradles are slidably mounted on the tracks 29 by means of the rollers 28, and are adapted to travel toward the side of the vessel and carry the boat 11 thereto. The tracks 29 are inclined so that the cradles slide freely forward when released, and when the outer branch of the outer cradle member reaches the end of the deck 10, it drops down over the side of the vessel as shown by dotted lines in Fig. 5. The two members thereupon spread and release the boat, the inner branch of the outer cradle member assuming an outward and downward inclined position, so that the boat may slip down on the same and over the side of the vessel. If the list of the vessel is such that the tracks no longer incline toward the side of the vessel, the supports 12 can be readily adjusted by the means hereinbefore described to give the tracks the required inclination. The cradles are connected at the pivot 27 by a cross-rod 30 which is connected by lines 31 to the cross-bar 16, whereby the cradles are prevented from dropping off the vessel when in launching position. The outer branches of the inner cradle members are also connected by a cross-rod 32. The rod 30 carries rollers 28ª similar to the rollers 28.

To the deck 10 are pivoted at 33, to swing in a vertical plane toward and from the side of the vessel, davits 34 connected at their

outer ends by a cross-rod 35. The davits work in guides 36 mounted on the deck 10, and they may be locked in said guides by pins 37. To each davit 34 is connected a line 38, which passes rearward to a pulley 39 mounted on top of a stanchion 40 rising from the deck 10. After passing over the pulley 39, the line 38 extends to and passes over a pulley 41 mounted on top of a stanchion 42 rising from the deck. The last-mentioned stanchion is mounted so that the line 38 may pass forward from the pulley 41 to a hoisting drum 43 mounted amidships in the boat 11, the latter having an opening 44 in its side through which the line passes. A hauling line as herein described is connected to each davit, and both lines are wound on the hoisting drum 43.

The tackle for lowering the boat 11 comprises blocks 45 suspended from the cross-rod 35, through each of which blocks is reeved a line 46 having both of its ends passing down into the boat. One end of the line is unwound on a drum 47 supported by a frame 48 mounted in the boat, and the other end of the line is made fast to said frame. The top of the boat has an opening 49 through which the line passes. The winding drums 47 of the two lines are located fore and aft respectively, in the boat, and the frames 48 thereof have pendulum levels 50, in order that the operators of the drums 47 may readily observe whether the boat is tilting endwise by one of the lines 46 being paid out faster than the other, and it is therefore possible to keep complete control over the boat as it is being lowered into the water. A stopper 51 is provided for the opening 44, and the openings 49 are provided with sliding shutters 52 for closing the same. The boat 11 is entirely closed over on top as shown and has side doors through which access to the interior is had. The launching of the boat 11 is effected entirely from the interior thereof, an operator being stationed at the hoisting drum 43, and one at each of the drums 47.

The operation is as follows: The davits 34 being released by removing the pins 37, the lines 38 are paid out, whereupon the cradles slide down the tracks 29 and drop the boat over the side of the vessel as hereinbefore described. The davits also swing downward and carry the boat beyond the side of the vessel as shown by dotted lines in Fig. 5. The guides 36 have stops 53 for limiting the downward swing of the davits. The boat may now be lowered into the water by paying out the lines 46, and at the same time continuing to pay out the lines 38 or severing the same. In case of emergency, the lines 46 may also be cut when the boat reaches the water. The boat is lowered some distance away from the side of the vessel and may be lowered evenly at both ends by the operators observing the levels 50. The boat can therefore be lowered and gotten under way in a very short time and without danger of upsetting. If the vessel lists, the supports 12 will be adjusted as hereinbefore described. The arms 17 engage the davits 34 and serve to adjust the same simultaneous with the supports 12.

I claim:

1. A life-boat launching apparatus comprising supports hinged to swing in a vertical plane and extending to the edge of the vessel, means for adjusting the supports, cradles slidably mounted on the supports, a life-boat supported in the cradles, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, and boat suspension and lowering devices connected to the davits and operable from the boat.

2. A life-boat launching apparatus comprising supports hinged to swing in a vertical plane, and extending to the edge of the vessel, racks carried by the supports, gears in mesh with the racks, means for operating the gears, cradles slidably mounted on the supports, a life-boat supported in the cradles, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, and boat suspension and lowering devices connected to the davits and operable from the boat.

3. A life-boat launching apparatus comprising supports extending to the edge of the vessel, cradles slidably mounted on the supports, a life-boat supported in the cradles, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, winding devices in the fore and aft parts of the boat, and hoisting lines engageable with said winding devices and suspended from the davits.

4. A life-boat launching apparatus comprising supports extending to the edge of the vessel, cradles slidably mounted on the supports, a life-boat supported in the cradles, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, a cross-rod connecting the davits, blocks suspended from said cross-rod, winding devices in the fore and aft parts of the boat, and hoisting lines engageable with said winding devices and reeved through the blocks.

5. A life-boat launching apparatus comprising supports hinged to swing in a verti-

cal plane and extending to the edge of the vessel, a connection between the supports, arms extending from the connection, means for adjusting the supports, cradles slidably mounted on the supports, a life-boat supported in the cradles, davits pivoted to swing in a vertical plane over the side of the vessel and engageable by the aforesaid arms, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, and boat suspension and lowering devices connected to the davits and operable from the boat.

6. A life-boat launching apparatus comprising supports extending to the edge of the vessel, cradles slidably mounted on the supports and comprising sections which are angular, and the adjacent branches of the sections being pivotally connected, and from which pivot said branches extend upward and divergingly, the other branches of the sections extending downward from the diverging branches, a life-boat supported between the diverging branches, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, and boat suspension and lowering devices connected to the davits and operable from the boat.

7. A life-boat launching apparatus comprising supports extending to the edge of the vessel, cradles slidably mounted on the supports and comprising sections which are angular, and the adjacent branches of the sections being pivotally connected, and from which pivot said branches extend upward and divergingly, the other branches of the sections extending downward from the diverging branches, rollers carried by the lower ends of the downwardly extending branches, said rollers engaging the supports, a life boat supported between the diverging branches, davits pivoted to swing in a vertical plane over the side of the vessel, controlling lines connected to the davits, a winding device in the boat to which device the controlling lines are connected, and boat suspension and lowering devices connected to the davits and operable from the boat.

In testimony whereof I affix my signature in presence of two witnesses.

ANDREAS B. ANDREASSEN.

Witnesses:

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LEIGHTON M. EDELMAN.