J. W. WILSON.

APPARATUS FOR HANDLING LIFEBOATS.

APPLICATION FILED JULY 12, 1920.

1,411,320. **Patented Apr. 4, 1922.**

4 SHEETS—SHEET 1.

Fig. 1.

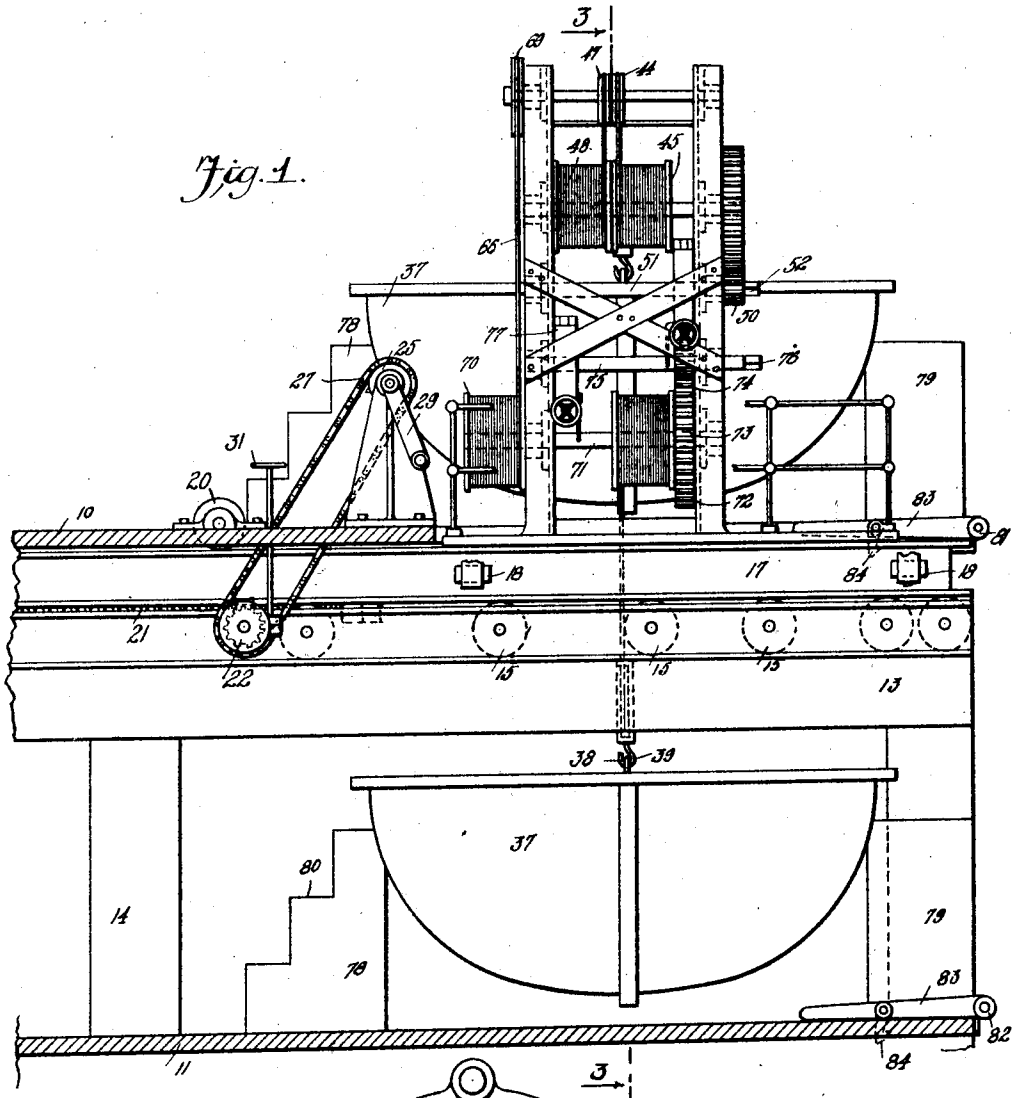
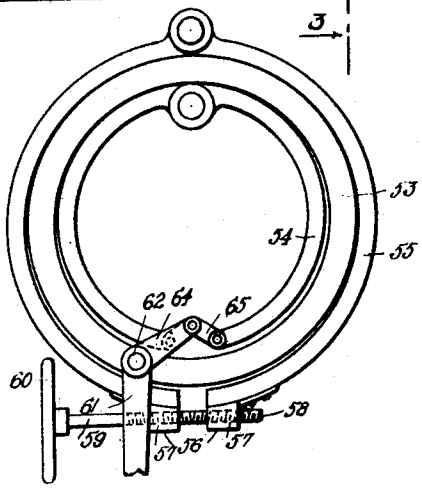


Fig. 5.



WITNESSES

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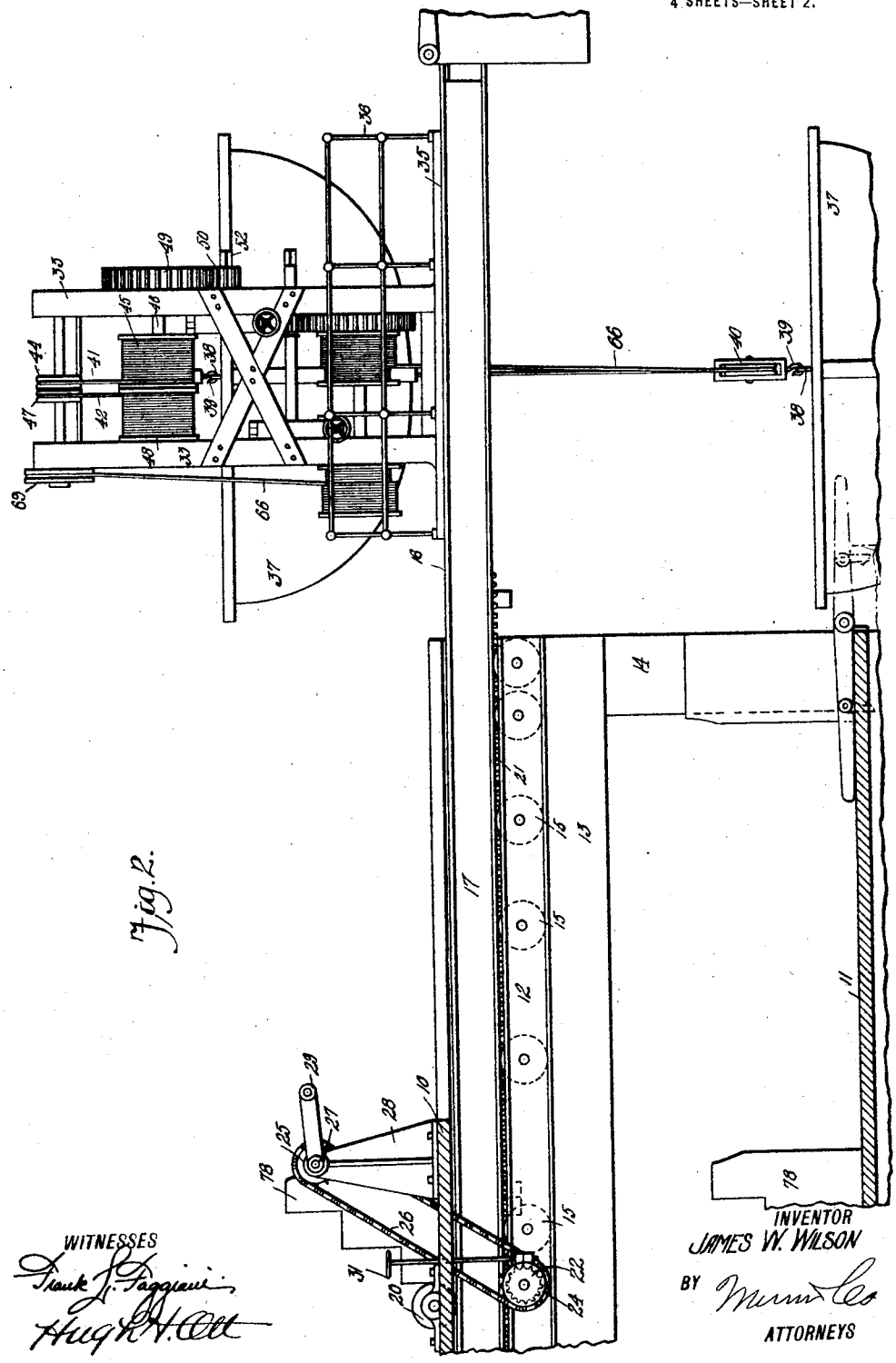


Fig. 2.

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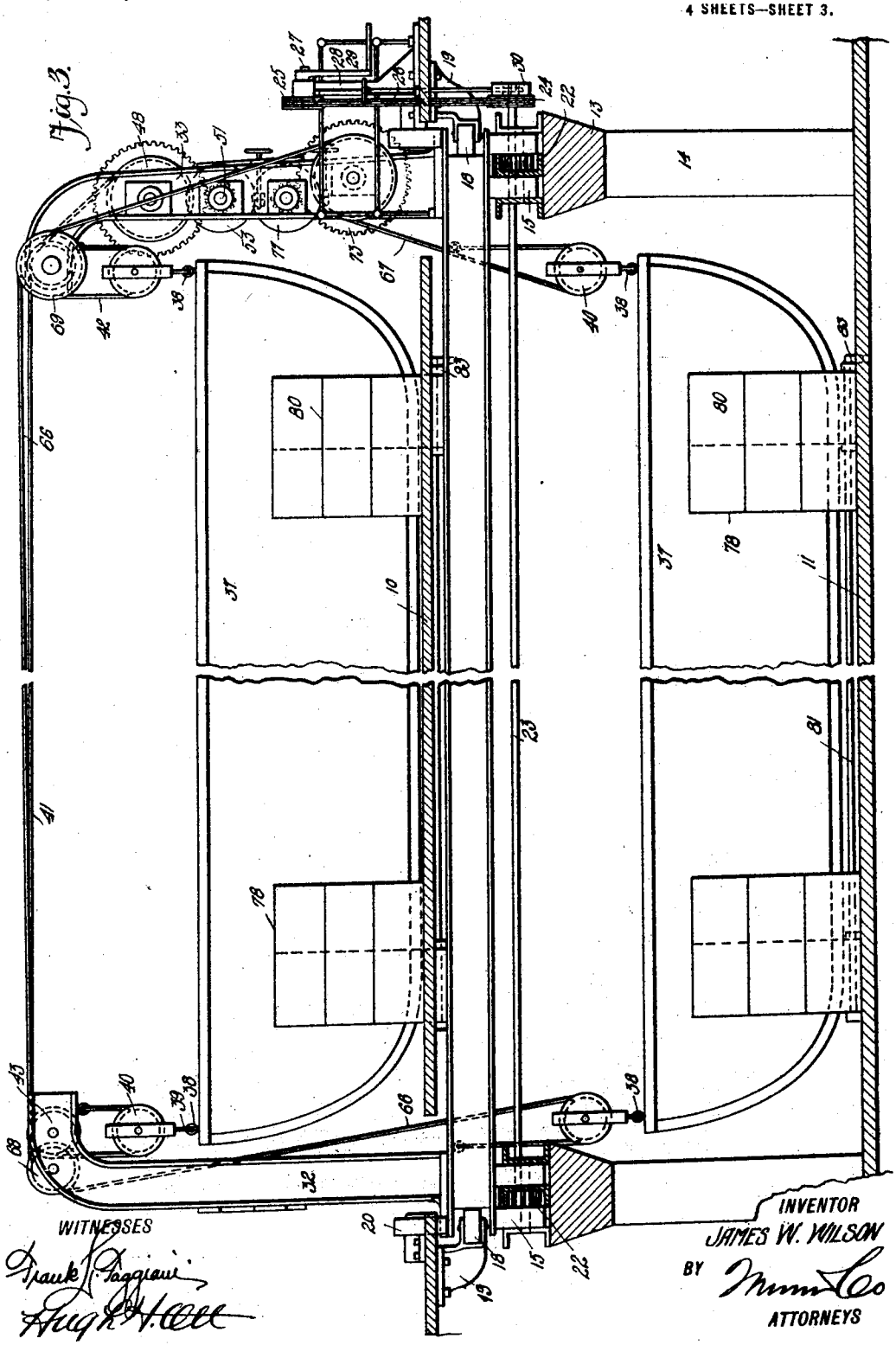
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4 SHEETS—SHEET 3.

Fig. 3.



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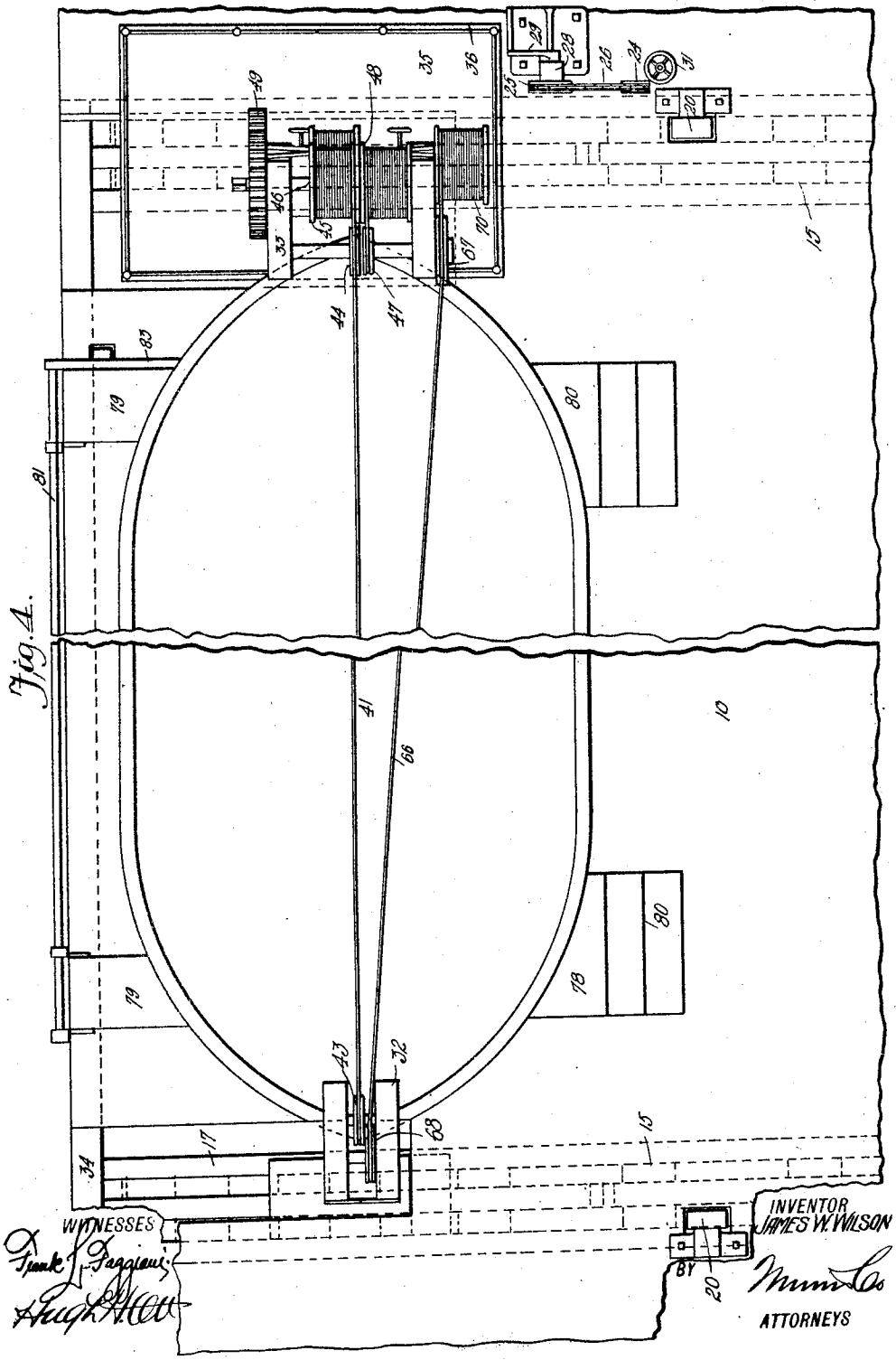


Fig. 4.

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UNITED STATES PATENT OFFICE.

JAMES WILLIAM WILSON, OF NORTH PORT, NEW YORK.

APPARATUS FOR HANDLING LIFEBOATS.

1,411,320. Specification of Letters Patent. Patented Apr. 4, 1922.

Application filed July 12, 1920. Serial No. 395,446.

To all whom it may concern:

Be it known that I, JAMES W. WILSON, a citizen of the United States, and resident of North Port, in the county of Suffolk and State of New York, have invented a new and Improved Apparatus for Handling Lifeboats, of which the following is a full, clear, and exact description.

This invention relates to life saving devices and has particular relation to an apparatus for handling life boats on board ship.

In devices of this nature now in general use, davits are commonly employed which are adapted to be swung to position the boats along side of the deck where the passengers and crew are then loaded and the boats lowered to the water. Many lives have been lost due to the fact that the boats are loaded after the same are suspended from the ship's side and due to the fact that each end of the boat is suspended and operated by a separate means.

The principal object therefore of the present invention is to overcome the above recited objections by the provision of an apparatus which permits of the loading of the boats before the same are projected from the ship's side and the provision of a common means for lowering both ends of the boat by single mechanism.

The invention further contemplates the provision of a single apparatus for handling a plurality of boats in superposed relation thereby reducing the expense in that a single apparatus is capable of launching a number of life boats.

A further object accomplished by the invention resides in the novel means for cradling the boats when not in use which means obviates the necessity of first raising the boats to permit of their projection from the side of the ship.

A still further object of the invention resides in the highly efficient, safe and expeditious manner with which the boats may be launched.

Another feature of the invention resides in the economy of the number of the crew necessary for the operation of the apparatus.

A further object of the invention is to provide a device of the character described which is comparatively simple in construction, inexpensive to produce and install and which is strong, durable and efficient in operation.

With the above recited and over objects in view, some of which will be more apparent as the nature, purpose and operation of the device is better understood, reference is had to the following detailed description, claims and accompanying drawings forming a part of this application and in which—

Figure 1 is a fragmentary sectional view through a portion of a ship illustrating the apparatus applied thereto and in normal position.

Figure 2 is a similar view illustrating the position of the apparatus when the life boats are projected from the ship's side and in position for launching.

Figure 3 is a fragmentary sectional view taken approximately on the line 3—3 of Figure 1.

Figure 4 is a fragmentary plan view thereof.

Figure 5 is a detail view of one of the brakes used in connection with the apparatus.

Referring to the drawings by characters of reference, 10 and 11 designate respectively a portion of the upper and lower decks of a ship. In practice a pair of parallel tracks 12 are supported by beams 13 which are braced by the standards 14. The tracks 12 as illustrated are spaced from and arranged below the upper deck 10 and are preferably provided with a plurality of bearing rollers 15. The carriage 16 is preferably constructed from a rectangular angle iron frame, the side rails 17 of which are designed to slide upon the bearing rollers 15. The carriage is guided and maintained against lateral displacement by the guide rollers 18 supported in the brackets 19 secured to the under side of the upper deck 10, said guide rollers engaging the outer surface of the side rails 17 of the frame. By this arrangement it will be seen that the frame is arranged between the tracks 12 and the upper deck 10 and is capable of projection beyond the ship's side. Preferably a plurality of brace rollers 20 are secured to the upper deck 10 and bear against the up-

per surface of the side rails 17 to confine the lower surface of the side rails against the bearing rollers 15 and brace the inner end of the carriage. The side rails are further provided with the rack teeth 21 which co-act with the pinions 22 keyed to the transverse shaft 23. A sprocket 24 is keyed to one extremity of the shaft 23 and is coupled to the sprocket 25 by the chain 26. The sprocket 25 is mounted on a crank shaft 27 mounted in the bearing 28 secured to the upper deck 10 and a crank arm 29 constitutes a means for manually rotating the sprocket 25. By this arrangement the carriage may be manually projected from or retracted within the ship's side when desired. In order to provide means to normally lock the carriage in its retracted position to prevent accidental projection of the same on heavy seas, a suitable brake 30 is provided on the shaft 23 adjacent the sprocket 24, the operating handle 31 thereof being disposed above the upper deck 10 adjacent the crank handle 29. The boat suspending means includes a pair of davits 32 and 33 secured to the side rails 17 of the carriage adjacent its outer end rail 34. The davit 33 has mounted thereon means for controlling the raising and lowering of the boats and therefor in order to afford suitable accommodation for the operator, a platform 35 having a guard railing 36 is provided adjacent thereto. The life boats 37 are each provided at their bow and stern with an eye bolt 38 which is adapted to receive the hook 39 on the fall block 40 of the hoisting and lowering tackle. Independent means is provided for raising and lowering each boat which is of substantially identical construction. The hoisting tackle for the upper life boat comprises the cables 41 and 42 respectively trained over the fall blocks 40 at the bow and the stern. The cable 41 is trained over an idler sheeve 43 in the davit 32 and over an idler 44 in the davit 33, the remainder of said cable being wound upon the drum 45 keyed to the transverse shaft 46 in the davit 33. The cable 42 is trained over the idler sheeve 47 mounted in the davit 33 and the remainder thereof is wound upon and secured to the drum 48 which is also keyed upon the shaft 46 adjacent to the drum 45. The outer end of the shaft 46 has keyed thereto a gear 49 which meshes with the gear 50 on the shaft 51, the outer extremity of which is square as at 52 for the reception of a crank handle (not shown) for winding the cables upon the drums to raise the life boats when lowered. A suitable friction drum 53 is also secured to the shaft 51 and inner and outer brake bands 54 and 55 are normally expanded and contracted thereagainst for locking the shaft against rotation. As illustrated the means for effecting the gripping and releasing of the outer bands against the drum comprises the lugs 56 mounted on the outer band which are provided with oppositely threaded and aligned openings 57 adapted to receive the oppositely threaded extremities 58 of the shaft 59 having an operating handle 60. The inner band is controlled by the lever 61 which is pivoted as at 62 with with an angularly disposed arm 64, the extremity of which constitutes a common pivot point for the links 65. In practice the outer band serves as a permanent means for locking the shaft 51 against rotation while the inner band serves as a means for controlling the rotations of the shaft for gradually lowering and launching the life boats. The lower life boat is supported and suspended from the davits by the cables 66 and 67 which are trained over the fall blocks 40 respectively arranged at the bow and stern of the same. The cable 66 is trained over the idler sheeve 68 on the davit 32 and the idler sheeve 69 on the davit 33, the remainder of said cable being wound upon the drum 70 keyed to the transverse shaft 71 mounted in the davit 33. The cable 67 is wound directly on the drum 72 which is also keyed to the shaft 71. A gear 73 is keyed to the shaft 71 and meshes with the gear 74 on the shaft 75. The shaft 75 is provided with a squared extremity 76 for the reception of a crank handle for turning the same, and a friction brake mechanism 77 identical to the friction brake mechanism employed on the shaft 51 is provided and operates in a similar manner.

In use and operation of the apparatus the carriage is normally retracted to dispose the boats within the side of the ship, the upper boat being arranged on the upper decks and the lower boat on the lower decks 11. In order to provide means for supporting and cradling the boats 37, use is made of the inner stationary cradle members 78 and the outer pivoted cradle members 79. The inner members 78 are permanently secured to the upper and lower decks 10 and 11 respectively and are formed to provide the loading steps 80 by which the passengers enter the boats. The outer cradle members 79 for the upper boat are pivoted to a common shaft 81 which is supported in brackets secured to the outer end rail 34 of the carriage. The outer cradle members for the lower boat are pivoted to a transverse shaft 82 secured to the outer edge of the lower deck 11. Levers 83 are secured to the shafts 81 and 82 respectively for swinging the outer cradle members to an out-of-the-way position, said levers being normally locked by suitable latches 84. When it is necessary to launch the boats, the passengers first enter the same by the steps 80 and when the boats have been filled, the outer cradle members 79 are swung to an out-of-the-way position by the levers 83. One of the crew is stationed on the platform 35 and another mans the

crank arm 29. As the crank arm 29 is turned in the proper direction, the carriage will be projected from the side of the vessel through the engagement of the teeth of the pinion 22 with the rack teeth 21 on the carriage 16. When the carriage has been projected a suitable distance beyond the ship's side, the man stationed on the platform will release the outer brake band of the brake mechanism 77 and swing the lever controlling the inner brake band to permit the lowermost boat 37 to descend. When the lower boat has been launched and the hooks 39 disengaged from the eye-bolts 38, the second boat will be lowered in a similar manner. If desired the carriage may be projected from the ship's sides by power instead of manually from a central power station. The length of the carriage may be sufficient to admit of a wide range of projection in case the ship has a bad list.

While there has been illustrated and described a single and preferred adaptation of the invention, no limitation is necessarily made to the precise structural details and it is understood that various changes and modifications which fall within the scope of the appended claims may be resorted to when found expedient.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In an apparatus of the character described, means for cradling and supporting life boats on adjacent decks, a common means for simultaneously projecting said boats from the side of a ship, and independent means for raising and lowering each of said boats.

2. In an apparatus of the character described, means for cradling and supporting a plurality of life boats respectively on the adjacent superposed decks of a ship, a common means for simultaneously projecting said boats from the side of the ship, independent means for raising and lowering each of said boats, and means for normally supporting the boats on the respective decks of a ship.

3. An apparatus for handling life boats, comprising a sliding carriage normally disposed within a ship's side and capable of projection therefrom, means on said carriage for suspending a plurality of boats in superposed relation, mechanism for independently actuating the suspension means to raise and lower said boats, and means for supporting said boats on the decks when the carriage is in its normal position.

4. In an apparatus for handling life boats on a ship, means for supporting and suspending a plurality of life boats in superposed relation, independent means on adjacent decks for cradling each of said boats respectively on the decks, a common means for simultaneously projecting the boats from the side of the ship, and mechanism for independently actuating the suspension means to effect the launching of said boats.

5. An apparatus for the handling of life boats on a ship, comprising means from which a plurality of boats are suspended, mechanism for projecting said means from the ship's side, independent means for normally cradling and supporting each boat from the adjacent decks of the ship, means for releasing said boats from the cradling means, and means for independently launching or raising each of said boats.

6. A life boat handling apparatus comprising a carriage slidably mounted beneath one deck and over the next lower adjacent deck, mechanism for effecting the projection of the outer end of the carriage from the ship's side, davits on the outer end of said carriage, means for independently suspending and controlling the raising and lowering of a plurality of superposed life boats from said davits, and means on each of said decks for independently cradling the boats respectively from said decks.

7. An apparatus for handling life boats, comprising means for individually cradling and supporting the boats in superposed relation on superposed supports, a common means for simultaneously projecting said boats from the side of said supports, and independently operable means for effecting the raising and lowering of each of said boats.

8. An apparatus for the handling of life boats of a ship, comprising inner fixed members secured respectively to superposed decks and outer pivoted members coacting therewith to constitute a cradle for normally supporting the boats from the decks, a carriage normally disposed within the ship's side and capable of projection therefrom, means for suspending a plurality of boats therefrom, independent actuating means for respectively effecting the raising and lowering of said boats by the suspension means, said carriage affording means for simultaneously projecting said boats from the ship's side, the said outer cradle members adapted to be swung to an out of the way position to permit of the projection of said boats from the ship's side.

9. In an apparatus for the handling of life boats on a ship, the combination with a spaced inwardly slotted upper deck, of a carriage mounted for lateral sliding movement therebeneath, upstanding davits supported by the carriage and accommodated by the slotted portions of the deck, means on the upper deck and the deck therebeneath for respectively cradling life boats, means for suspending life boats from the davits, and mechanism for actuating the carriage whereby to effect simultaneous lateral projection of the boats from the ship's side.

10. In an apparatus for the handling of

life boats on a ship, the combination with a spaced inwardly slotted upper deck, of a carriage mounted for lateral sliding movement therebeneath, upstanding davits supported by the carriage and accommodated by the slotted portions of the deck, means on the upper deck and the deck therebeneath for respectively cradling life boats, means for suspending life boats from the davits, mechanism for actuating the carriage whereby to effect simultaneous lateral projection of the boats from the ship's side, and independent means for actuatng the boat suspension means to effect the raising and lowering of the same.

JAMES WILLIAM WILSON.