

No. 669,179.

Patented Mar. 5, 1901.

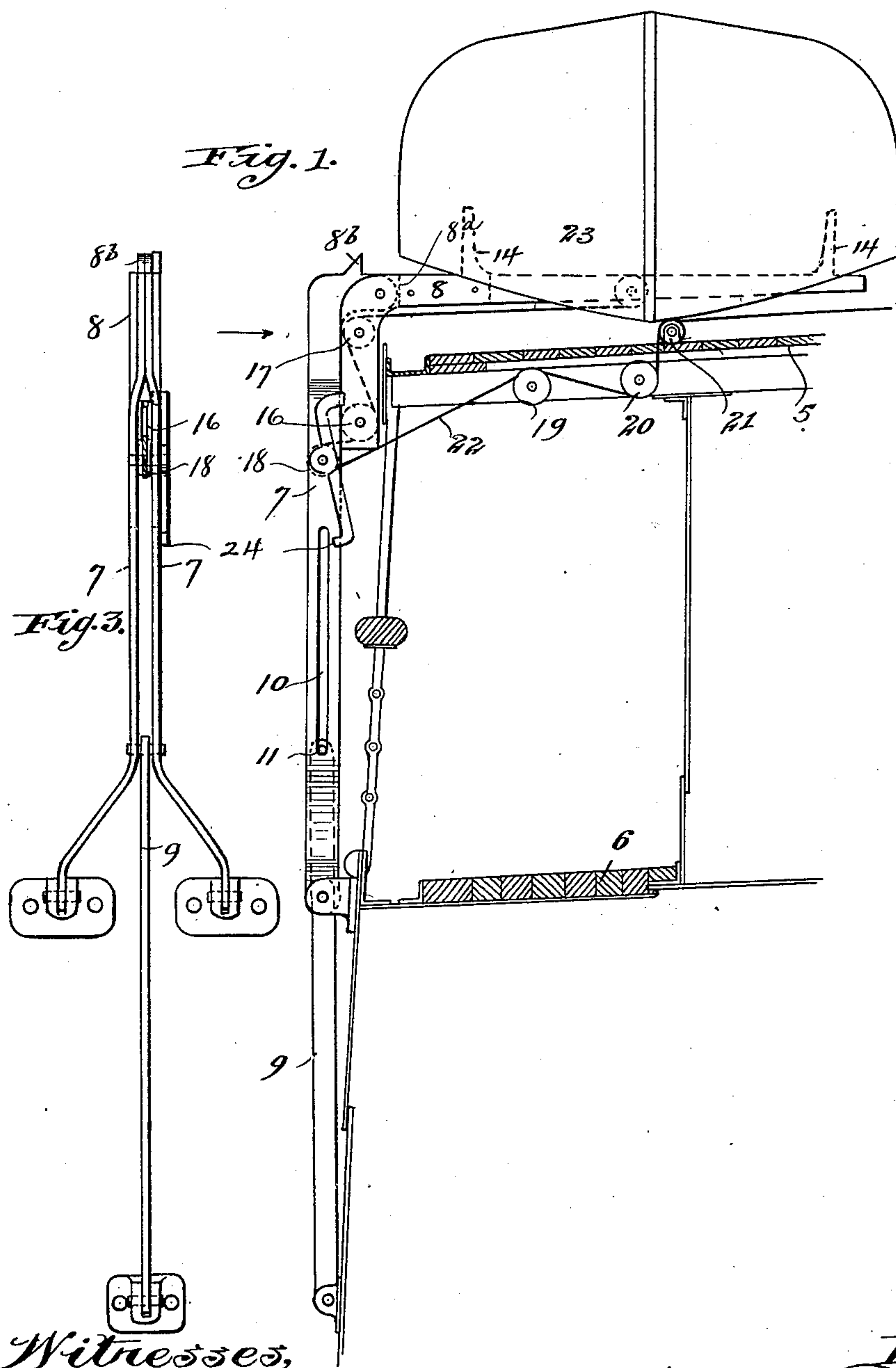
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(Application filed Oct. 2, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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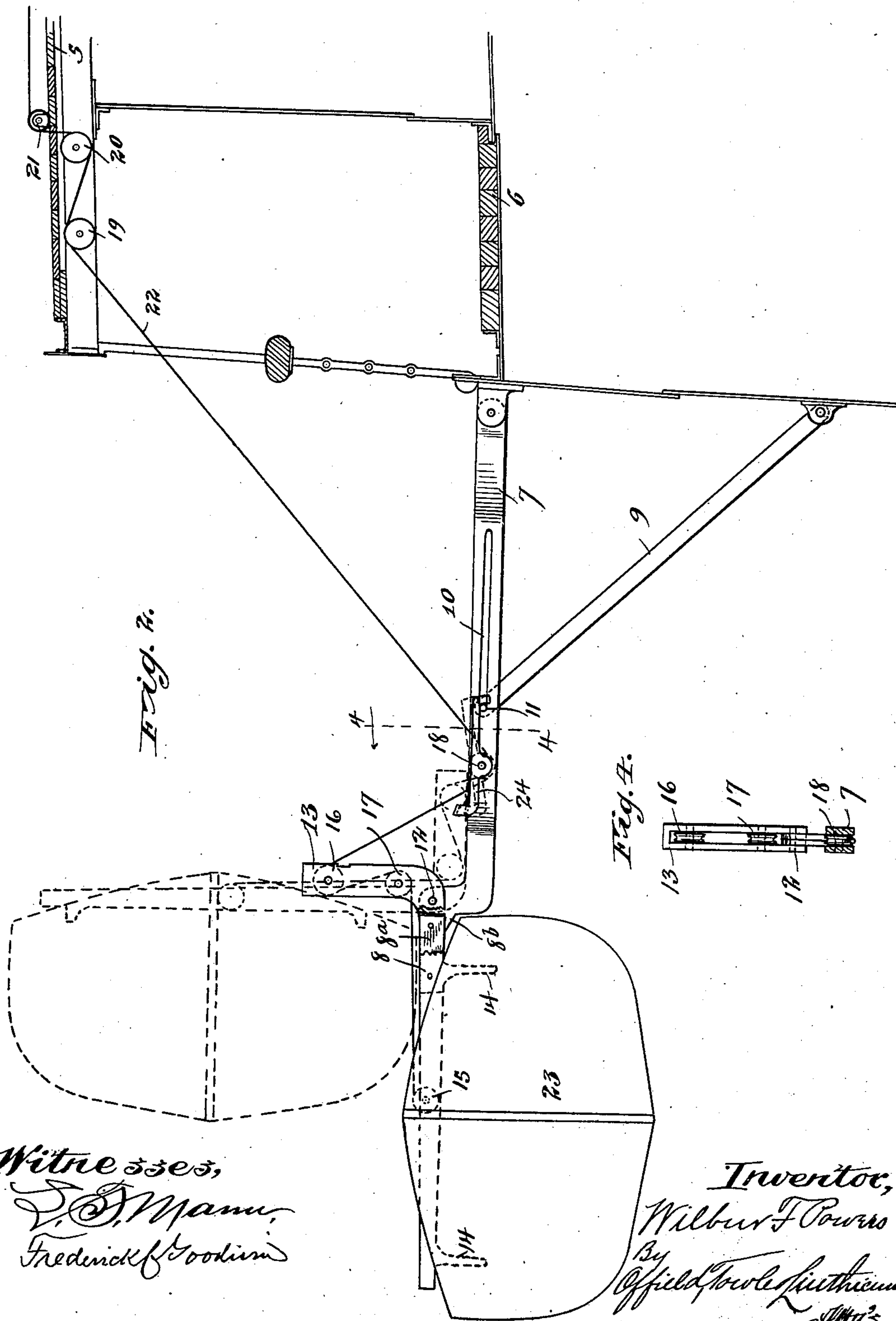
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR CARRYING AND LAUNCHING LIFE-BOATS.

SPECIFICATION forming part of Letters Patent No. 669,179, dated March 5, 1901.

Application filed October 2, 1900. Serial No. 31,745. (No model.)

To all whom it may concern:

Be it known that I, WILBUR F. POWERS, of Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Apparatus for Carrying and Launching Life-Boats, of which the following is a specification.

Life-boats form part of the equipment of all passenger-carrying craft, and as they are intended to be used in emergencies only means for handling them quickly and launching them safely are a prime requisite. The most common means employed at the present time are ordinary davits, which are journaled in sockets to permit them to turn, so as to lower the boats alongside the vessel. Such davits overhang the side of the vessel in such manner that the boat is launched necessarily close to the vessel, and when the sea is rough the boats are frequently injured in launching by the pounding against the side of the vessel and disaster frequently results.

These life-boats are usually carried in stationary blocks or cradles secured upon the shade-deck, and it is desirable to protect the interior of the boats, which is frequently done by covering them with tarpaulins or special covers. A better plan is to carry the boats bottom side up in their cradles; but this is impracticable with the present form of davits.

It is the object of my invention to provide an apparatus for carrying and launching life-boats which will enable the boat to be carried in an inverted position and to be launched at such distance from the side of the vessel as to prevent collision therewith in rough water, and which is also constructed in such manner that the boat may be quickly launched and invariably in proper position.

To these ends my invention consists in the combination, with a vessel, of arms hinged to the sides of the vessel and suitably braced, said arms being constructed in two sections, the outer sections being pivotally connected to the inner, and suitable lines or hoisting-ropes running over sheaves or guides on both sections of the arms and attached to the life-boat in such manner that when the lines are slacked away the boat may be pushed overboard and launched in proper position or raised and made fast in an inverted position on the deck.

My invention will be shown embodied in a simple form of apparatus in the accompanying drawings, in which—

Figure 1 is a sectional elevation through the shade-deck and awning-deck of the vessel and showing my apparatus in the folded position with the boat resting inverted on the hinged extensions of the carrying arms or guides. Fig. 2 is a similar view showing the carrying-arms or davits unfolded and the boat in position to be lowered into the water. Fig. 3 is a side elevation of one of the davits as seen looking in the direction of the arrow in Fig. 1, and Fig. 4 is a sectional elevation taken on the line 4 4 of Fig. 2.

In the drawings let 5 represent the shade-deck and 6 the awning-deck. Pivoted to the outer side of the vessel and about in line with the awning-deck are shown the hinged carrying-arms or davits, of which the base sections are marked 7 and the outer sections or extensions 8. These arms are suitably braced—as, for example, by the diagonal strut-braces 9, pivoted at the side of the vessel at one end and having a sliding connection, as by the slot 10 and pin 11, with the section 7 of the carrying-arms. The outer sections 8 of said arms are pivoted to the upturned ends of the section 7, as shown at 12, and have the upstanding arms or levers 13 located inside of the pivot 12. The sections 8 carry the stop blocks or lugs 14 and the line guide or sheave 15 at a position intermediate said stop-blocks. The upturned lever ends of the sections 8 are also provided with the line-guides 16 17 and the sections 8 with a similar guide or sheave 18. 19, 20, and 21 represent guide-sheaves journaled on the vessel, the sheaves 19 and 20 being disposed below the shade-deck floor and the sheave 21 above said floor. The lines 22 are carried under the sheaves 20 and over the sheave 19, and thence over the sheaves or guides pivoted on the respective sections of the arms in such manner that when the lines are loosed the boat may be pushed overboard, and the lines being held taut until the sections of the arm 7 reach a horizontal position are then slacked to permit the sections 8 to turn from a vertical to a horizontal position, thus bringing the boat 23 into the proper position to be lowered. In hauling up the boat the lines be-

ing made fast thereto and drawn inboard the arms 8 will be swung upon their pivots 12, due to the leverage of the line on the crank-arms 13, first bringing the boat into an edge-wise position, as indicated by the dotted lines in Fig. 2, and the arms 13 contacting with the upper sides of the sections 7 the pull of the line will be such as to raise said sections and swing them inwardly, carrying the boat over the deck of the vessel and into the position shown in Fig. 1.

While the details of construction may be somewhat varied, I have shown and will now describe a particular novelty of construction which I deem best adapted to the use of my invention. The carrying-arms are preferably metal bars, and for lightness and strength steel bars are recommended. The sections 7 and 8 are preferably made by riveting together two of such bars, and the sections 7 have the rear ends of their component members diverging and separately hinged to the sides of the vessel, as indicated in Fig. 3. The braces 9 may be composed of single bars. The sections 8 have double bars spaced apart by blocks 8^a adjacent to their hinge-joints, thus affording space for the sheaves. The arms 13 extend in line with the outer ends of the sections 7 and embrace the upturned extremities thereof, so that after the boat is raised into contact with the lower sides of the sections 8 the further haul of the lines will result in rocking the sections 8 on their pivots, bringing the crank-arms 13 into contact with the upper surfaces of the section 7. A gravity-latch 24 is pivoted on one of the members of the section 7, preferably by the pivot of the sheave 18, and one end thereof is adapted to hook over the pin 11 of the brace 9 when said brace is fully extended. The heel of this latch projects into position to be engaged with the crank-arm 13 when the arms 8 are turned at right angles to the section 7 and into contact therewith, and thereby the latch is disengaged from the pivots previous to the inboard movement of the section 7. These several details of construction may be varied without departing from the broader scope of the invention; but they are nevertheless considered as novel in themselves.

I am aware that it has been proposed heretofore to hinge carrying-arms or davits to the sides of the vessel and to employ lines for swinging said arms and for lowering and raising the boat. I am also aware that it has been proposed to construct these carrying-arms in two sections; but in such case the outer sections simply constituted a cradle for the boat and did not enable it to be launched clear of said cradle nor to be carried in an inverted position on the upper deck.

It will be seen that the outer sections of the separating arms or davits form a cradle for the boat and dispense with the necessity of employing the usual blocks or cradle fixed to the top of the deck. It will further be seen

that the boat is inverted while it is being raised or lowered, and that the outer swinging sections may be extended into line with the base-sections in lowering and turned at right angles to the base-sections in raising the boat, and that their crank-arms afford stops to limit the inward swinging movement of the inner sections and to lock them rigidly to the base-section.

The spacing or filling blocks 8^a will afford a stop to prevent the sections 8 swinging below the plane of the sections 7 when extended; but I have shown an additional stop for this purpose at 8^b, the same being a shoulder on the end of arm-section 7.

Among the obvious modifications in the structural features above set forth it may be suggested that instead of the lugs or stops 14 latches might be employed to engage the boat and cause it to be held in contact with the lower sides of the arms 8 in case the lines or hauling-ropes were cut, as in cases of emergency. The stop blocks or lugs 14 are, however, shown of such length that they will carry the boat until the sections 7 of the davits reach the horizontal position, and should the boat slide off the sections 8 it will strike the water in such position that it will not fill. The line-guides may be arranged in various ways. The sheaves 19, 20, and 21 are located in such position as to lead the line clear of all obstructions to rope-reels, capstans, or winches for raising the boat; but they may be dispensed with by placing a rope-reel or winding-drum on the under side of the deck. The line-guide or sheave 17 on the outer section of the davit may also be dispensed with and the line led directly from the sheave 15 over the sheave 16. The construction shown is preferred, because it keeps the line clear of the deck when the boat is raised into the carrying position. The strut-braces 9 may be substituted by chains or other flexible supports connected to the sections 7 of the davits and to the deck-roof or rail above said sections.

The boat furnishings will of course be lashed or otherwise secured to the boat, so as not to become displaced when the latter is inverted.

In using the boat it will be found safer to maintain it suspended from the davits until it receives its occupants. This may be conveniently done by extending a gang-plank from the deck 6 to the edge of the boat, or the davits may be provided with a permanent gangway, preferably wide enough to admit but one person at a time and protected by life-lines, so as to prevent the passengers falling off, as well as overcrowding.

What I claim as new, and desire to secure by Letters Patent, is—

1. An apparatus for carrying and launching life-boats, comprising in combination carrying-arms or davits having inner or base sections pivotally connected to the sides of the vessel and outer hinged sections, line-guides

carried by said sections, and lines passing over said guides and adapted to be made fast to the boat, whereby the outer sections of said arms may be folded and unfolded and the base-sections raised and lowered, substantially as described.

2. An apparatus for carrying and launching life-boats, comprising in combination carrying-arms or davits having inner or base sections pivotally connected to the sides of the vessel, and outer sections hinged thereto and provided with crank-arms inside their pivots, line-guides upon each of said sections and lines running over said guides and adapted to be made fast to the boat, and braces for the base-sections, said braces being pivotally connected at their lower ends to the sides of the vessel and having a sliding connection with the base-sections between their pivots, substantially as described.

3. An apparatus for carrying and launching life-boats, comprising in combination carrying-arms or davits having inner or base sections pivotally connected to the sides of the vessel, and outer sections hinged thereto, said inner sections having upturned ends and the outer sections being provided with crank-arms pivoted to said upturned ends and adapted when swung on their pivots to engage the base-sections, said base-sections having a line-guide, said crank-arms having a plurality of line-guides arranged inside their pivotal connection and lines extending over the guides of the base-sections and over and under the guides of the crank-arms and over a guide on the outer section and adapted to be made fast to the boat, substantially as described.

4. An apparatus for carrying and launching life-boats, comprising in combination carrying-arms or davits having inner or base sections pivotally connected to the sides of the vessel, and outer sections hinged thereto, said inner sections having upturned ends and the outer sections being provided with crank-arms pivoted to said upturned ends and adapted when swung on their pivots to engage the

base-sections, and braces for the base-sections, said braces being pivoted to the sides of the vessel below the base-sections and having a slot-and-pin connection therewith and a latch for locking said pin in the outer end of the slot, said latch being adapted to be released by engagement of the crank-arms of the outer sections therewith when folded, substantially as described.

5. An apparatus for carrying and launching boats, comprising in combination carrying-arms or davits pivoted to the side of the vessel above the water-line and above the deck, said arms being constructed in two sections the outer sections hinged to the inner or base sections, line-guides on said sections, the guides of the outer sections being disposed on opposite sides of its pivot and lines running over said guides and adapted to be made fast to the boat, whereby the boat may be raised to contact the lower sides of the outer sections of the arms and the latter turned at an angle to the base-sections and then swing therewith, the boat being inverted while being raised and resting on said hinged extremities when folded, substantially as described.

6. An apparatus for carrying and launching boats, comprising carrying-arms or davits having base-sections adapted to be pivoted to the side of the vessel below the deck and above the water-line, said arms being constructed in two sections the outer sections hinged to the inner whereby they may be extended in line therewith and be swung on their pivots at an angle thereto, stops for limiting the swinging movement of the outer sections whereby they may be locked to the inner sections and lines connected with said sections and adapted to be made fast to the boat, substantially as described.

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