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LAUNCHING APPARATUS.

APPLICATION FILED MAY 22, 1908. RENEWED AUG. 13, 1909.

953,694. Patented Apr. 5, 1910.

2 SHEETS—SHEET 1.

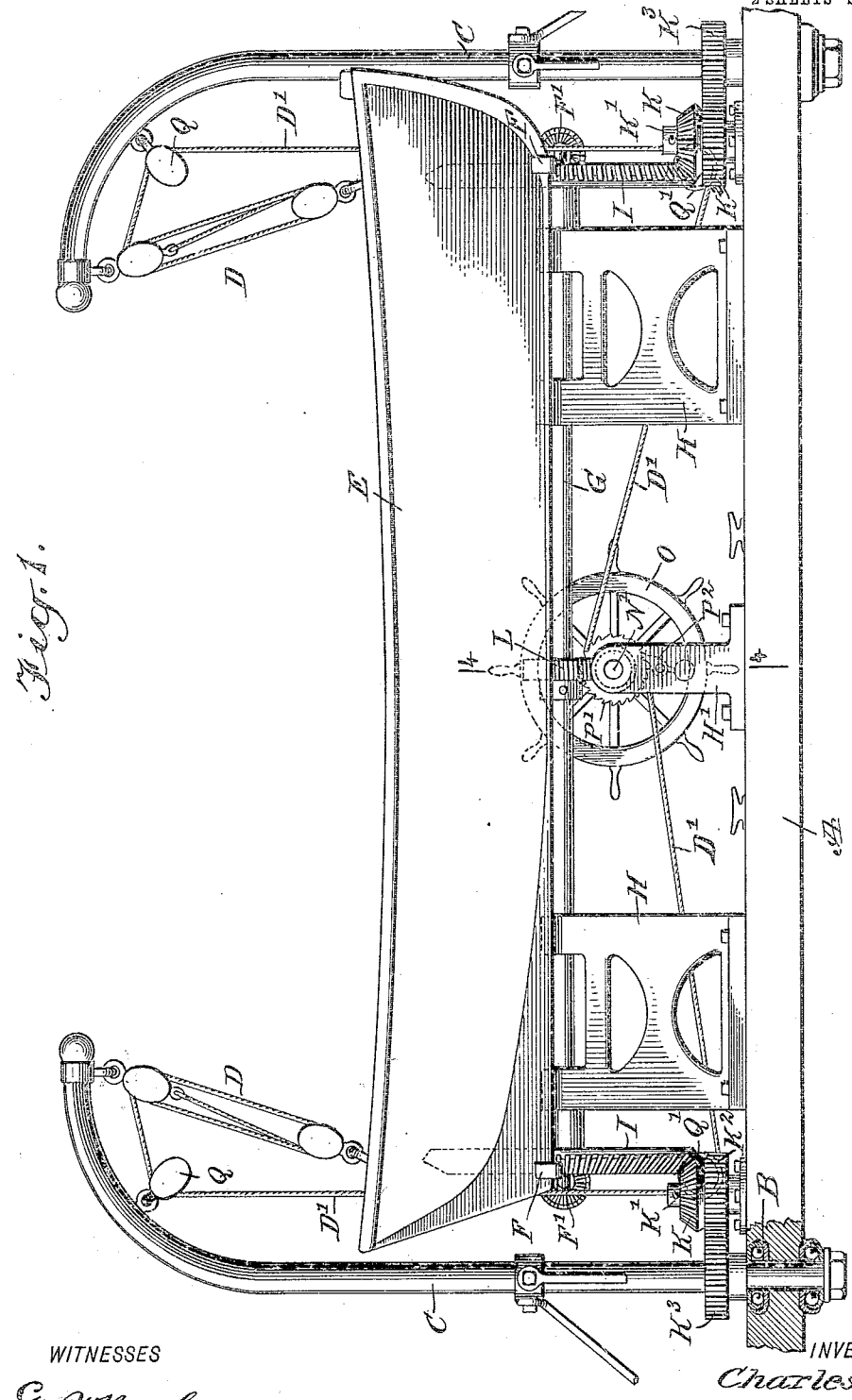

Fig. 1.

WITNESSES

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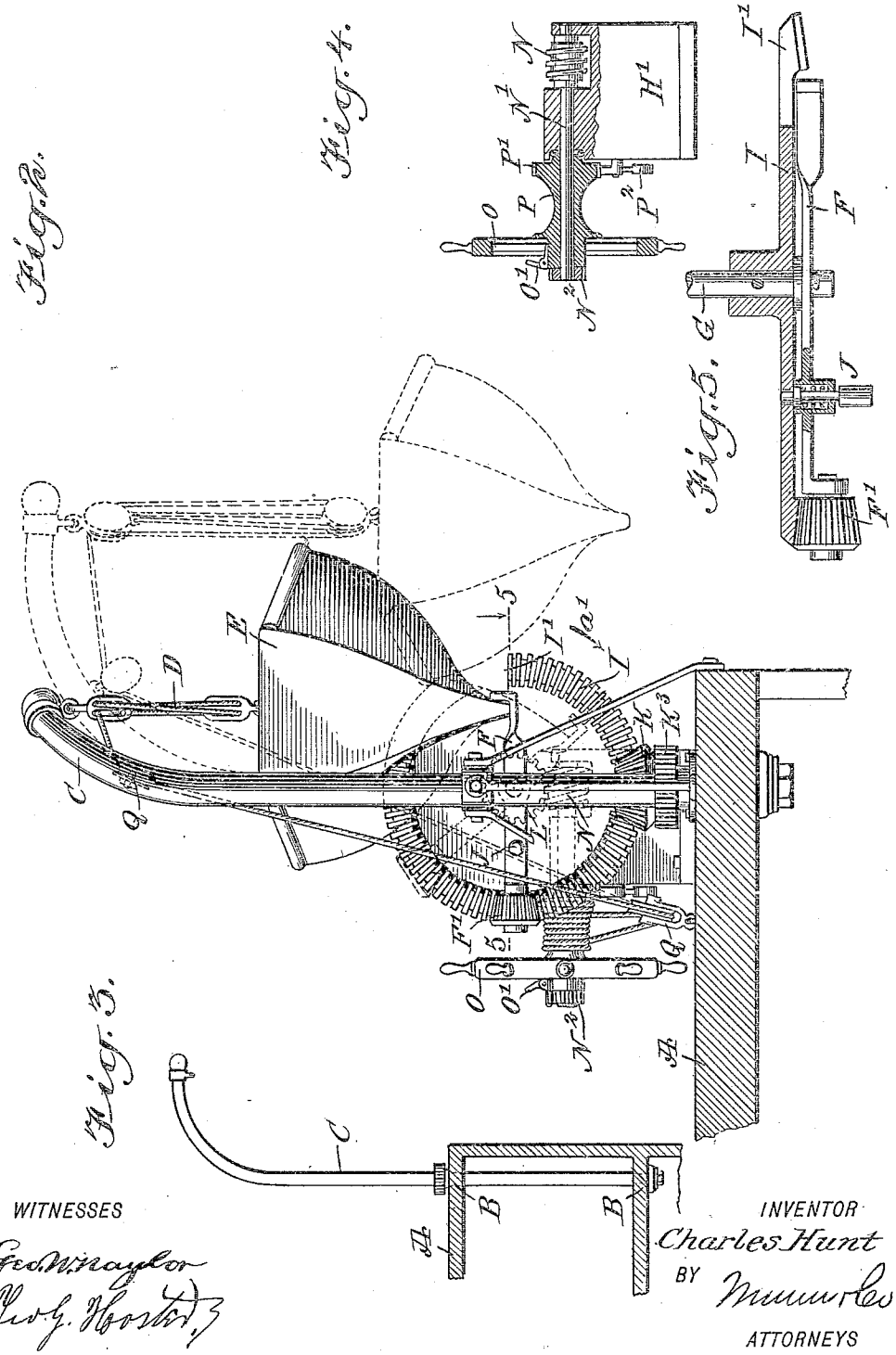

UNITED STATES PATENT OFFICE.

CHARLES HUNT, OF NEW YORK, N. Y., ASSIGNOR OF ONE-FOURTH TO JASON ROGERS, OF ESSEX FELLS, NEW JERSEY.

LAUNCHING APPARATUS.

953,694. Specification of Letters Patent. Patented Apr. 5, 1910.

Application filed May 22, 1908, Serial No. 434,256. Renewed August 13, 1909. Serial No. 512,751.

To all whom it may concern:

Be it known that I, CHARLES HUNT, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Launching Apparatus, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved launching apparatus, more especially designed for conveniently, quickly and safely launching life boats over the sides of a ship and while loaded with passengers and crew, and without requiring much physical exertion on the part of the operator.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement, parts being shown in section; Fig. 2 is an end view of the same, the deck of the vessel being shown in section; Fig. 3 is a cross section of the vessel, and a davit of modified form mounted thereon; Fig. 4 is a transverse section of the operating device, the section being on the line 4—4 of Fig. 1; and Fig. 5 is an enlarged sectional plan view of the boat support, the section being on the line 5—5 of Fig. 2.

On the deck of the vessel A are mounted to turn in suitable bearings B, the davits C supporting tackles D connected with the boat E to be lowered or raised over the side of the vessel A, the said boat E normally resting on angular supporting arms F mounted to turn loosely on a longitudinally extending shaft G journaled in suitable bearings H held on the deck of the vessel A. On the shaft G are secured bevel gear wheels I having cut out portions I′ for accommodating the boat E, as plainly indicated in Fig. 2, and to the bevel gear wheels I are normally locked the supporting arms F by the use of spring-pressed pins J (see Fig. 5) held on the arms F and engaging apertures in the gear wheels I. The supporting arms F are normally in a horizontal position, as plainly indicated in Fig. 2, to support the boat E, the arms being then locked by the pins J to the gear wheels I. The gear wheels I are in mesh with pinions K mounted to rotate on studs K′ attached to the deck of the vessel A, and on the bevel pinions K are secured spur wheels K^2 in mesh with similar wheels K^3 attached to the davits C, as plainly indicated in the drawings.

On the shaft G is secured a worm wheel L (see Fig. 1) in mesh with a worm N (see Figs. 2 and 4) having its transverse shaft N′ journaled in a suitable bearing H′ attached to the deck of the vessel A. On the forward end of the shaft N′ is secured a toothed wheel N^2 adapted to be engaged by a pawl O′ fulcrumed on the hub of a hand wheel O, mounted to rotate loosely on the shaft N′. On the hand wheel O is secured or formed a drum P on which wind and unwind the loose ends of the ropes D′ of the tackles D, and which ropes pass over guide pulleys Q, held on the davits C, and over guide pulleys Q′ mounted on the deck of the vessel A, as indicated in Figs. 1 and 2. On the drum P is formed a ratchet wheel P′, engaged by a dog P^2 fulcrumed on the bearing H′, to prevent the drum P and the wheel O from turning accidentally in the wrong direction unless the dog P^2 is thrown out of engagement with the ratchet wheel P′.

The operation is as follows: When the several parts are in the position illustrated in Figs. 1 and 2, then the boat E rests on the supports F locked to the gear wheels I secured on the shaft G held against rotation by the worm wheel L meshing with the worm N. Now when it is desired to lower the boat E after the passengers and crew have taken their seats therein then the operator turns the hand wheel O, so as to impart a turning motion to the shaft N′, the worm N, worm wheel L and shaft G, whereby the gear wheels I are caused to turn in the direction of the arrow *a′*, thus causing the arms F to gradually swing downward and with them the boat E. At the same time the gear wheels I impart a turning motion to the pinions K and spur wheels K^2, K^3, so that the davits C are caused to turn and to swing outward, and the ropes D′ of the tackles D unwind from the drum P, to accommodate the lowering of the boat E and the outward swinging movement of the davits C, as will be readily understood by reference to the

dotted line position shown in Fig. 2. When the arms F have swung down to a discharging position, as indicated in dotted lines in Fig. 2, the boat E readily leaves the arms F and now hangs free and clear over the side of the ship, to be lowered by the operator now disengaging the pawl O′ from the wheel N², to cause the shaft N′ to remain at a standstill, while the drum P can be turned by the operator working the hand wheel O correspondingly, so that the ropes D′ further unwind from the drum P to lower the boat E down into the water. It is understood that during this lowering of the boat the davits C remain stationary in their outward position. After the boat E has reached the water, the tackles D are disconnected from the boat.

When it is desired to hoist a boat from the water, the tackles D are connected with the boat and then the hand wheel O is turned in a reverse direction, to wind up the ropes D′ to lift the boat by the tackles D. When the boat has reached a position at or near the gear wheels I then the operator swings the pawl O′ in engagement with the gear wheel N², so that on further turning of the wheel O the davits swing inward to carry the boat into position in the notches I′ of the gear wheels I. The supporting arms F which had been previously unlocked are now swung up to engage with the keel of the boat, after which the arms F are again locked in place. The arms F are preferably provided with bevel pinions F′ in mesh with the gear wheels I, to insure an easy swinging and steadying of the arms F. On further turning of the hand wheel O the davits swing inward, to bring the several parts back to normal position.

The bearings B for the davits C may extend only on one deck, as shown in Figs. 1 and 2, or may be mounted on two decks, as indicated in Fig. 3.

From the foregoing it will be seen that when lowering the boat, the supports F swing downward and the davits swing simultaneously outward, and the ropes D′ unwind, so that the boat is safely swung clear of the ship and is free to be lowered to the water.

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

1. A launching apparatus for boats, comprising a support for the life boat, davits mounted to turn, tackles held on the said davits and connected with the said life boat, a manually controlled driving shaft, and mechanism for actuating the said support, the davits and the tackle from the said driving shaft.

2. An apparatus for launching a boat over the side of a vessel comprising turnable davits, a revoluble shaft, supports for the boat adapted to turn with said revoluble shaft, gearing for turning the davits from said shaft, tackles connecting the davits with the boat, a manually controlled driving shaft, means for turning the said revoluble shaft from the driving shaft, and a drum carried by said driving shaft and connected with the ropes of the said tackles.

3. An apparatus for launching a boat over the side of a vessel comprising turnable davits, a revoluble shaft, gear wheels on the said shaft and connected with gears on the davits to turn the latter, supports for the boat to rest on normally, the said supports being mounted loosely on said shaft, and means for locking the said supports to said gear wheels.

4. An apparatus for launching a boat over the side of a vessel, comprising davits mounted to turn on the vessel, a manually controlled gearing for turning the said davits, supporting arms on the said gearing for normally supporting the boat, tackles connecting the davits with the boat, and a drum adapted to turn with the said gearing and on which wind and unwind the ropes of the said tackles.

5. An apparatus for launching a boat over the side of a vessel, comprising davits mounted to turn, tackles supported on the said davits and connected with the boat to be launched, a gearing for turning the said davits and having supporting arms for the boat to rest on normally, a drum on the driving shaft of the said gearing and connected with the ropes of the said tackles, and means for connecting and disconnecting the said drum and the said driving shaft.

6. An apparatus for launching a boat over the side of a vessel, provided with a revoluble shaft, wheels on the said shaft, supporting arms for the boat to rest on and mounted loosely on the shaft, and a locking device for locking the said supporting arms to the said wheels.

7. An apparatus for launching a boat over the side of a vessel, provided with a revoluble shaft, wheels on the said shaft, supporting arms for the boat to rest on and mounted loosely on the shaft, a locking device for locking the said supporting arms to the said wheels, and pinions journaled loosely on the said supporting arms and in mesh with gear teeth on the said wheels.

8. An apparatus for launching a boat over the side of a vessel, comprising davits mounted to turn, tackles supported on the davits and connected with the boat, studs secured to the deck of the vessel, bevel pinions mounted to rotate on said studs, spur wheels carried by said pinions and in mesh with similar wheels on the davits, a longitudinally extending shaft journaled in bearings held on the deck of the vessel, bevel gear wheels secured on said shaft and having cut

out portions to accommodate the boat, the said bevel gear wheels meshing with said bevel pinions, supporting arms for the boat adapted to turn with the said shaft, and means for turning the shaft.

9. An apparatus for launching a boat over the side of a vessel, comprising davits mounted to turn, tackles supported on the davits and connected with the boat, a revoluble shaft provided with a worm wheel, gearing between said shaft and the davits for turning the latter, when the shaft is turned, supporting arms for the boat arranged to turn with said shaft, a manually controlled driving shaft provided with a worm engaging the worm wheel on said revoluble shaft, a drum on said driving shaft with which the tackle ropes are connected, and means for connecting and disconnecting the said drum and driving shaft.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES HUNT.

Witnesses:
THEO. G. HOSTER,
EVERARD B. MARSHALL.