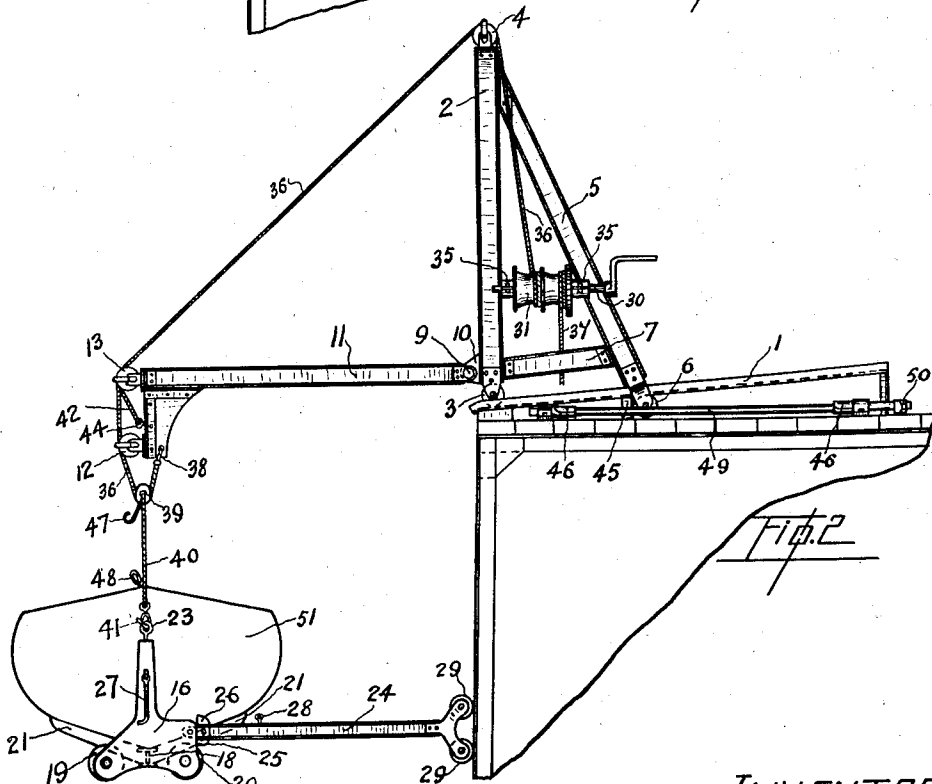
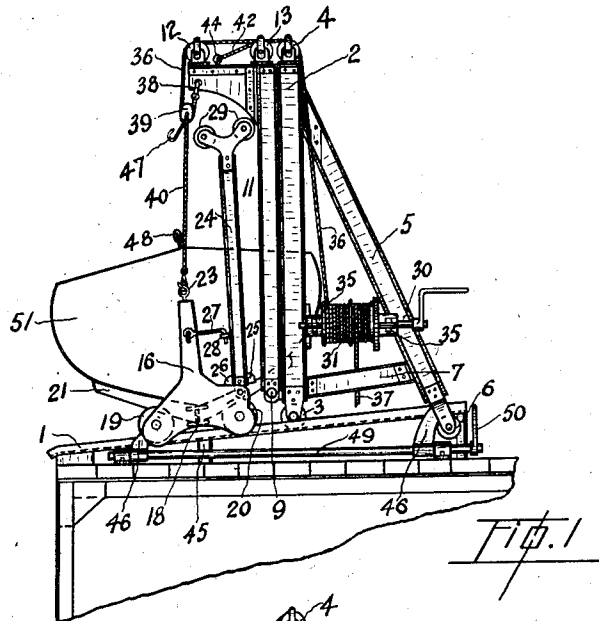


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 APPARATUS FOR LAUNCHING SHIPS' BOATS.
 APPLICATION FILED FEB. 18, 1914.

1,116,761.

Patented Nov. 10, 1914.

2 SHEETS—SHEET 1.



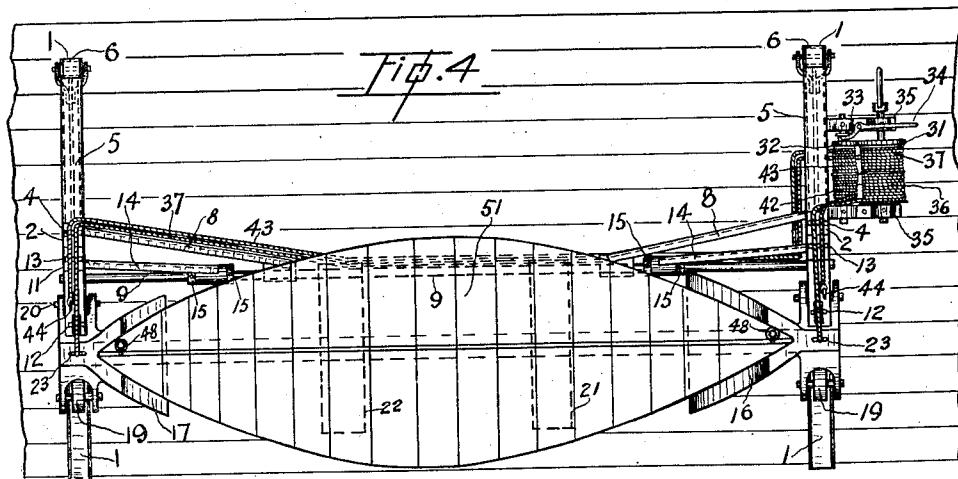
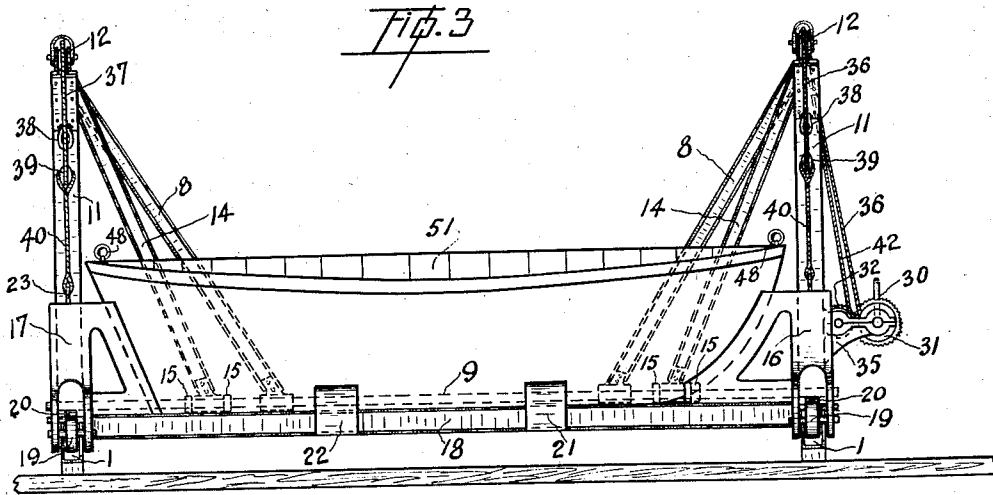
WITNESSES.
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UNITED STATES PATENT OFFICE.

HARRY G. THOMPSON, OF VANCOUVER, BRITISH COLUMBIA, CANADA.

APPARATUS FOR LAUNCHING SHIPS' BOATS.

1,116,761.

Specification of Letters Patent.

Patented Nov. 10, 1914.

Application filed February 18, 1914. Serial No. 819,433.

To all whom it may concern:

Be it known that I, HARRY G. THOMPSON, a subject of the King of Great Britain, and a resident of the city of Vancouver, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Apparatus for Launching Ships' Boats, of which the following is a specification.

My invention relates to improvements in apparatus for launching ships' boats, and the object of my invention is to devise a strong, practical, and simple means whereby ships' boats can be launched much more quickly than they can be at the present time, and which provides for the launching operation being performed with the minimum of skilled assistance.

A further object is to devise a means for launching ships' boats the use of which will obviate entirely the risk of the boats being smashed against the side of the vessel when rolling in a heavy sea, and which will insure that the boat will be lowered at a distance from the ships' side and squarely into the water, thus allowing for the oars on both sides being used so that the boat may be pulled away from the vessel immediately on striking the water.

A still further object is to devise a launching means in which the boats are always ready for lowering without the necessity of swinging the davits, as at the present time, and in which no unhooking of falls is necessary when the boat is launched, thereby overcoming a particular disadvantage which obtains at present when the boat is launched, since, in bad weather, disaster is liable to occur to the ship's boat before the falls can be unhooked.

I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure 1 is a view showing my launching apparatus when not in use, looking on one end thereof. Fig. 2 is a view showing the manner in which my apparatus is used to launch a ship's boat. Fig. 3 is a front view of the view shown in Fig. 1. Fig. 4 is a plan view of the view shown in Fig. 3.

Similar figures of reference indicate similar parts throughout the several views.

1 are runways in which my apparatus travels when moving outboard or inboard. These runways are formed of steel, preferably channel section, and extend from the

side of the vessel as far inboard as necessary to allow of the boat being stowed properly. They are positioned fore and aft in accordance with the length of the boat and are laid athwartships on the boat deck on an incline, so as to allow the launching apparatus to run out to the edge of the deck of its own weight when released from the catches, hereinafter mentioned.

2 are the upright members of my apparatus, which are situated, one in each runway 1, each being provided on their lower ends with a roller 3, which roller travels in its respective runway and is guided by the flanges of the channel member of which the runway is formed.

4 are double sheave blocks secured on top of each of the upright members 2.

5 are brace members which are secured to each of the upright members 2, near the upper ends thereof, to hold the uprights in the vertical position. The lower end of each brace member 5 is adapted to straddle its respective runway 1 and to carry a roller 6 which bears against and travels along the under side of the runway, as shown in Figs. 1, 2, and 4. These brace members 5 extend inwardly just sufficiently to give the required bracing effect to the uprights, 2.

7 are stiffeners connecting the members 2 and 5 together near their lower extremities, as shown in Figs. 1 and 2. In order to brace the uprights in the fore and aft direction the members 8 are provided, the upper ends of each of these members being secured to each of their respective uprights toward the upper end thereof, while the lower extremities of the fore and aft brace members 8 are adapted to be rigidly connected to the shaft 9.

9 is a stationary shaft which extends across between the upright members 2, being carried thereby in the brackets 10.

11 represents the booms of my apparatus, the lower ends of each of which are adapted to be carried by the shaft 9, and to be swingable thereon, and on the upper ends of which are carried the single sheave blocks 12, and the double sheave blocks 13. To provide for the bracing of the booms in the fore and aft direction, each of them is provided with a brace member 14, the upper end of which is rigidly secured to its respective boom toward the upper end thereof, their lower extremities being adapted to engage the shaft 9 and to be swingable thereon

between the collars 15, which collars are secured rigidly to the shaft 9.

The boat carriage which is movable in the runways 1, consists of the end members 16 and 17, each of which is adapted to conform to the shape of the bow and stern of the boat respectively, and in which the ends of the boat sit, as shown in Figs. 3 and 4, these end members being rigidly connected together by the fore and aft member 18, to form the complete boat carriage.

19 and 20 are rollers carried by the members 16 and 17, to provide for the easy traveling of the carriage along the runways 1. The members 16 and 17 are themselves adapted to straddle the runways to act as guides for the carriage as it is run in or out, as shown in Fig. 3.

21 and 22 are chocks secured at suitable positions on the fore and aft member 18 of the carriage for the purpose of keeping the boat from movement in a heavy sea.

23 are rings secured into the end members 16 and 17 to which rings the operating ropes are attached for the purpose of lowering or hoisting the carriage.

24 are arms swingably connected to the members 16 and 17 on the side nearest the vessel, the purpose of these arms being to act as fenders and keep the boat at a specified distance from the side of the vessel when lowering and thus prevent the boat from being dashed against the vessel's side in bad weather, and at the same time allowing the oars nearest the vessel to be used immediately the boat strikes the water. These arms are adapted to be swung downwardly to an approximately horizontal position when in use, stops 25 on the lower side of the arms acting against the end members 16 and 17 to keep the arms in this position, as shown in Fig. 2, while stops 26 on the other side of the arms are fitted to keep the arms in an approximately vertical position when raised and out of use. When not in use, these arms 24 are kept from movement by means of the hooks 27 and eyes 28, as shown in Fig. 1. Rollers 29 are provided on the ends of the arms 24 to insure smoothness of operation when launching.

30 is a winch for lowering and hoisting the booms 11 and the boat carriage. This winch may be of any type suitable for the purpose, such as that which consists of two separate rope drums 31 and 32, operated by one handle common to both, but which drums may be thrown out of gear with each other as required, by means of a suitable clutch 33 and lever 34, such as shown in Fig. 4, so that the large drum 31 only will rotate or that both drums 31 and 32 will rotate together, at the will of the operator. This winch 30 may be located in any suitable position in proximity to the respective boat it is designated to serve, but it is preferable

that it should be carried by the launching apparatus and embodied thereon, a suitable arrangement being indicated in Figs. 3 and 4, in which the winch is shown carried in the brackets 35, these brackets being themselves rigidly secured to the upright member 2 and the brace member 5, at one end of the launching apparatus.

The boat carriage is lowered or hoisted by means of the rope 36 at one end and the rope 37 at the other end, each rope having one end shackled to its respective boom 11, by means of the shackle 38, the other end of each rope being led over the sheave block 39 and the sheave blocks 12, 13, and 4, to the drum 31, so that both ends of the carriage may be lowered or hoisted simultaneously when the drum 31 is rotated. Connection to the carriage is made by means of the ropes 40, which have one end attached to their respective sheave blocks 39, while their other ends are hooked respectively into the rings 23 of the carriage by means of the hooks 41.

The booms 11 are lowered and raised by means of the ropes 42 and 43, one end of each of which is secured to a suitable eyebolt 44 in the head of its respective boom, the other ends of the ropes 42 and 43 being led over the sheave blocks 13 so that both booms will lower and raise simultaneously as the drum 32 rotates. It will, of course, be understood that the ropes for operating both the boat carriage and the booms may be led to the winch in the most approved fashion by means of suitable fairlead blocks, placed where required.

45 are stops positioned under each of the runways 1 for the purpose of limiting the outboard travel of the apparatus.

46 are catches secured in suitable positions and adapted to be operated by the lever 49 and rod 50 to engage the lower ends of the brace members 5 and the boat carriage, to hold the apparatus when in its farthest inboard position, or to release the apparatus in order to allow it to move down the runways into the extreme outboard position. 51 represents a typical ship's boat.

Having thus indicated the principal parts of my invention, I will now describe the manner in which it operates.

My apparatus is carried on the deck of a vessel, one such apparatus carrying a ship's boat, the normal position being as shown in Fig. 1, that is, the apparatus in its inboard position being so located that the boat may be stowed properly with relation to the ship's side. It will be seen, therefore, that the apparatus is normally held at the highest point of the runways 1 by means of the catches 46. In order, then, to launch a boat, either empty or loaded, the catches 46 are depressed, whereupon the apparatus runs out to the extreme position, being held there by means of the stops 45, as shown in Fig. 2.

The operator then turns the winch 30 to unwind the boom ropes 36, 37, 42 and 43, thus lowering the booms 11 to the horizontal position and causing the boat to be swung out well clear of the vessel's side. He then throws the drum 32 out of gear, thus holding the booms 11 on their horizontal position, while at the same time turning the winch to lower on the ropes 36 and 37, thus lowering the boat carriage and the boat. The arms 24 have meanwhile been swung out, should the vessel be rolling, thus preventing the boat from being smashed against the vessel's side, and allowing it to be lowered at a safe distance from the vessel. Should the sea be fairly smooth, the operator keeps on lowering until the carriage is submerged sufficiently to allow the boat to float free from it. Should, however, the sea be high, he holds the carriage at a safe height until a suitable opportunity presents itself whereupon he lowers away rapidly on the ropes 36 and 37, allowing the carriage to sink and thus permitting the boat to be carried away by the sea without any unhooking of falls being necessary.

In taking a boat aboard again, it is floated into position above the submerged carriage, after which the carriage is hoisted so as to engage the bow and stern of the boat in the end members 16 and 17 and the chocks 21 and 22. The arms 24 are swung upward and hooked in place by the hooks 27 engaging in the eyes 28. The hoisting operation may then be continued until the boat carriage is in its highest position and the booms 11 are in their normal vertical position, after which the entire apparatus may be run inboard and secured by the catches 46 in its normal position.

In order to provide for the difficulty which might arise in shipping the floating boat into the submerged carriage, should the sea be rough, I provide the hooks 47, on the blocks 39, which hooks may be engaged into the ring bolts 48 in the bow and stern of the boat, so that the boat and boat carriage may be hoisted separately out of the water, after which it is an easy matter to then ship the boat properly into the carriage. It will be seen, therefore, that I have devised a simple, strong, practical apparatus whereby ship's boats are always ready for lowering and by the use of which they can be launched much quicker than they can be at the present time and that such launching operation can be performed by the minimum of skilled assistance. It will be seen, also, that the use of my apparatus obviates the risk of the boat being smashed against the vessel's side when lowering, a common occurrence at the present time when launching boats in heavy weather. It will be seen further that, with my apparatus, no unhooking of falls is necessary, since the

boat floats free immediately on striking the water, and as it is launched well clear of the vessel, the oars on both sides may be brought into operation to pull the boat immediately away from the vessel's side.

What I claim as my invention is:—

1. In an apparatus for launching ship's boats, a movable carriage adapted to support a ship's boat, inclined runways suitably mounted on the ship and on which the said carriage is movably supported, vertical frames carried by the runways adapted to be movable outboard and inboard thereon, means carried by said frames for swinging the said carriage outboard and inboard, and means for lowering and raising the carriage, as and for the purpose specified.

2. In an apparatus for launching ship's boats, a movable carriage adapted to support a ship's boat, inclined runways suitably mounted on the ship and on which the said carriage is movably supported, vertical frames carried by the runways adapted to be movable outboard and inboard thereon, means for swinging the carriage outboard and inboard, means for lowering and raising said carriage, and means for retaining the said frames in the extreme inboard position and for limiting the outboard movement thereof, as and for the purpose specified.

3. In an apparatus for launching ship's boats, a movable carriage adapted to support a ship's boat, inclined runways suitably mounted on the ship, and on which the said carriage travels, vertical frames supported by the said runways and movable thereon, booms swingably connected to the said frames and adapted to swing the said carriage outboard and inboard, lowering and raising mechanism, operating ropes suitably connected to the said mechanism and to the said booms and boat carriage whereby the said booms may be operated simultaneously and the said boat carriage raised and lowered, as and for the purpose specified.

4. In an apparatus for launching ship's boats, a movable boat carriage, inclined runways on which the said carriage travels, vertical frames adapted to travel on said runways and to be supported thereby, a shaft connecting the said frames, a pair of booms swingable on the said shaft, a lowering and raising mechanism, operating ropes suitably led from the said booms and boat carriage to the said mechanism, whereby the said booms and boat carriage may be raised and lowered, means for holding the said vertical frames and said carriage in the inboard position, means for releasing the said frames and said carriage whereby they may travel down the runways, and means for limiting the movement of said frames in the outboard direction, as and for the purpose specified.

5. In an apparatus for launching ship's
boats, the combination with a carriage
adapted to support and launch a ship's boat,
of a pair of arms swingably connected to
5 the said carriage adapted to be carried in a
normally vertical position, and to be swung
to an approximately horizontal position so
as to extend between the carriage and the
ship when the carriage is being lowered,
10 rollers carried by the said arms for engage-

ment against the ship's side, and means for
retaining the said arms in the vertical and
in the horizontal position, as and for the
purpose specified.

Dated at Vancouver, B. C., this 30th day 15
of January, A. D. 1914.

HARRY G. THOMPSON.

Witnesses:

JAMES TAYLOR,
ALEX. D. WILSON.