No. 647,777. Patented Apr. 17, 1900.

R. WHITE.

BOAT SECURING AND LAUNCHING APPARATUS.

(Application filed May 10, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

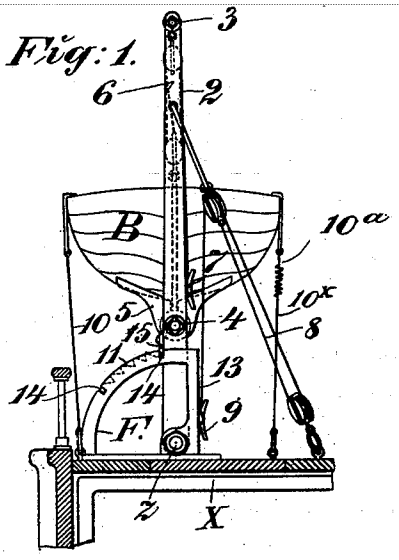


Fig. 2.

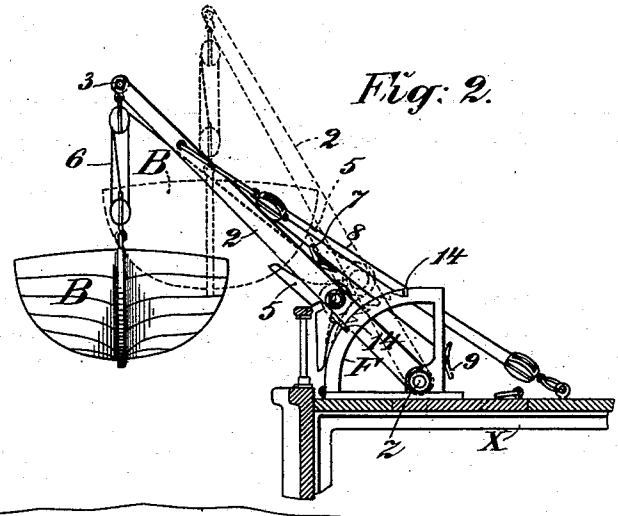


Fig. 3.

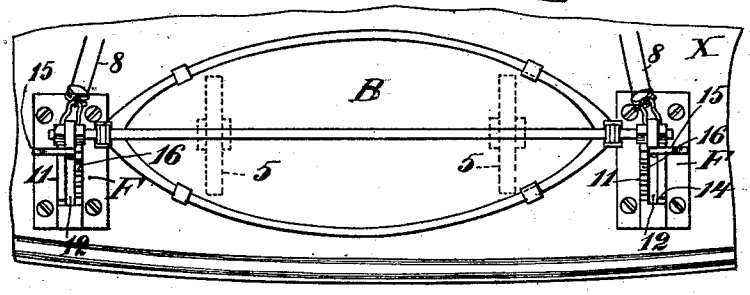


Fig. 4.

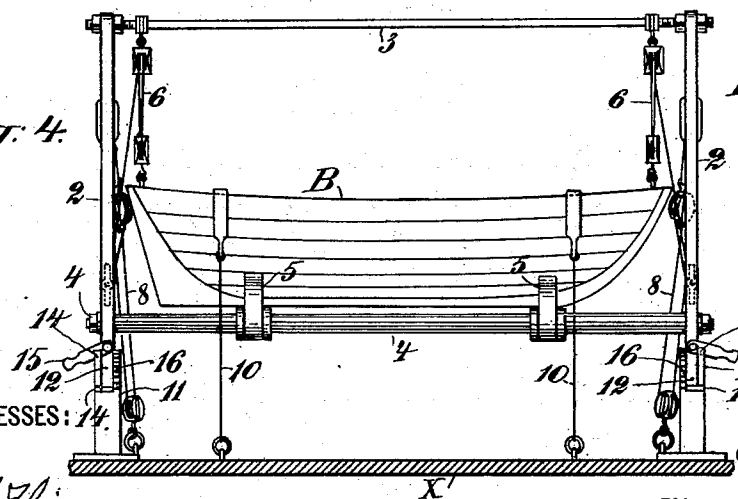


Fig. 5.



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Fig. 6.

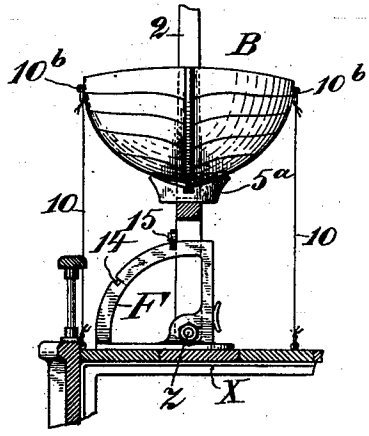
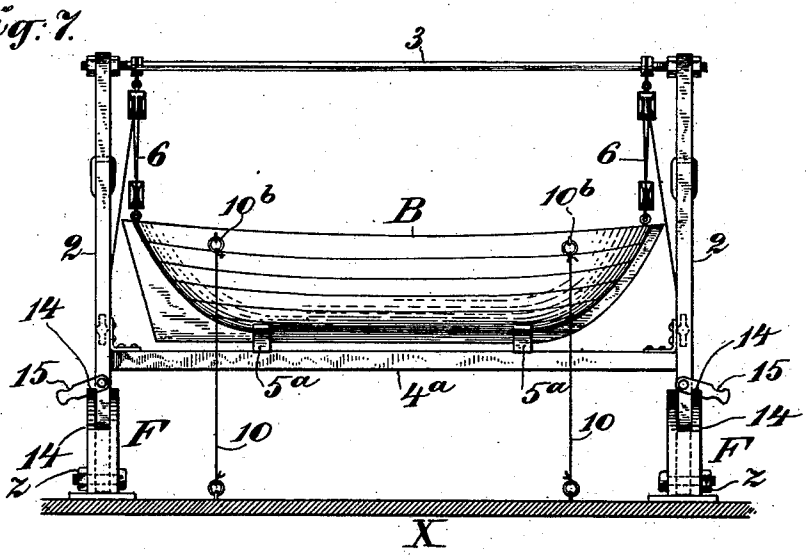


Fig. 7.



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UNITED STATES PATENT OFFICE.

ROBERT WHITE, OF NEW YORK, N. Y.

BOAT SECURING AND LAUNCHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 647,777, dated April 17, 1900.

Application filed May 10, 1899. Serial No. 716,257. (No model.)

To all whom it may concern:

Be it known that I, ROBERT WHITE, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Boat Securing and Launching Apparatuses, of which the following is a specification.

This invention belongs to the class of devices of which the ordinary davits on a vessel are examples; and the object is to provide means for safely securing a boat when it is not in use and a simple and ready means for launching and lowering it in any kind of weather.

It is well known to those experienced in the handling of ships and ships' boats that the problem of securing a boat on board when it is not in use so that it will not be injured by the rolling and pitching of the vessel and at the same time to provide means for quickly and safely launching the boat in an emergency is a very difficult one, and to overcome this difficulty is the purpose of the present invention, which will now be described with reference to the accompanying drawings, wherein an embodiment thereof is illustrated.

In the drawings, Figure 1 is an end view of the apparatus, showing the parts in their normal positions and the boat secured or stowed on board; and Fig. 2 is a similar view showing the boat launched and ready for lowering. Fig. 3 is a plan view of the apparatus and boat in the normal position illustrated in Fig. 1, and Fig. 4 is a side view of the same as seen from the left in Fig. 1. Fig. 5 is a detail view of the limiting-stop of the saddle or rocking chock. Fig. 6 is a sectional end view, and Fig. 7 is a side view, of the apparatus, illustrating a construction which differs slightly in some of its parts from the construction shown in the principal views.

Mounted on the deck X of the vessel, near the side, are two strong and somewhat quadrant-shaped guide-frames F F, and in these are hinged, respectively, at *z* the uprights 2 2 of a strong launching-frame and the horizontal members or bars 3 and 4, which tie the uprights 2 firmly together. The boat B is suspended from the upper member or bar 3 and is supported normally in chocks 5 5, which are mounted to rest and turn on the lower member or bar 4. The boat is suspended by lowering-tackles 6 6 from the bar 3, one of said tackles coupling with a suitable releasing device near the bow of the boat and the other to a similar device near the stern thereof. The falls from these lowering-tackles lead to cleats 7, which may be on the uprights 2. The launching-tackles 8 8 are coupled at their upper ends to the said launching-frame and at their lower ends to rings or the like in the deck, and their falls lead to cleats 9 on the respective guide-frames F. The boat is steadied in its chocks 5 by means of two pairs of grips 10 $10^{\times}$. Each guide-frame F has in its curved rail 11 a keeper-slot 12, in which the upright 2 plays, and when the latter is erect it rests against the upright portion 13 of the frame, as seen in Fig. 1. In the curved rail 11, at one side of the slot therein, are formed two locking-notches 14, adapted to be engaged by a locking lever or dog 15, pivotally mounted on the outer edge of the upright 2, for locking the launching-frame in both of its positions—namely, that seen in Fig. 1 and that seen in Fig. 2. In the said curved rail 11, on the side opposite to the notches 14 by preference, are ratchet-teeth 16, the purpose of which will be hereinafter explained.

Figs. 1, 3, and 4 show the boat B securely stowed in the apparatus and within the space bounded by the uprights 2 2 and horizontal members or bars 3 and 4. In order to launch it, the grips 10 $10^{\times}$ are cast off, the dogs 15 thrown over and out of the upper notches 14, and the boat then launched over the side, as shown in Fig. 2. The dogs 15 are now made to engage the lower locking-notches 14, so as to hold the frame firmly, and the boat, now free from the vessel, is lowered into the water. As it touches the water the lowering-tackle is detached therefrom and the boat is free.

The purpose of the ratchet-teeth 16 is to provide shoulders for the dogs 15 to catch on, so as to prevent the launching-frame of the apparatus from swinging inward inadvertently in launching a boat should the vessel careen or roll unduly before the boat has been fairly launched.

The operation of hoisting and restowing the boat is substantially a reversal of the

above-described operation. The hoisting-tackles are lowered and made fast to the boat and the latter hoisted to about the position seen in Fig. 2, the falls of the launching-tackles 8 manned and the frame hoisted to an upright position and locked, the chocks 5 placed, and the boat lowered into them and made fast by the grips. The chocks 5 turn about the lower bar 4 outward from the position seen in Fig. 1 to that seen in Fig. 2, being provided with limiting-stops to prevent their further movement, and when the boat is hoisted and swung in (see dotted lines in Fig. 2) it engages the upper arms of the chocks and turns the latter to their proper positions. Fig. 5 shows the limiting-stop device. This consists of a stud 17 in the side of the chock, which plays between shoulders 18 in a collar fixed on the bar 4.

It will be observed that the operation comprises launching to get the boat well out and free from the side of the vessel and then lowering and that there are two launching-tackle falls and two lowering-tackle falls. The boat swings clear between the uprights 2 and no portion of the apparatus projects normally beyond the side of the vessel. This latter feature is objectionable for obvious reasons.

One special and important feature of the construction is the mounting of the supporting-chocks on the swinging frame, whereby the boat is supported wholly by the davits or launching mechanism directly over the hinging-point Z, and in the rocking chocks, which allow the boat to free itself and swing clear automatically during the launching operation without the necessity of first hoisting the boat to free it. These features enable the boat to be launched quickly and safely even in rough weather.

In the construction shown in Figs. 1 to 4 the grips 10 and $10^{\times}$ have hooks which take over the edge of the boat, and the grips $10^{\times}$ have in them springs 10^{a}, so that they may stretch somewhat and permit of the engagement of the hooks; but in the construction of Figs. 6 and 7 the grips 10 are passed through rings or eyes 10^{b} in the sides of the boat, drawn taut, and tied. In the construction of Figs. 6 and 7 the ratchets 16 are omitted and the chocks 5^{a} are fixed on a square bar 4^{a}.

It will be noted that the boat clears itself from its supporting-chocks automatically by the rocking of the same, thus avoiding the necessity of tackle for the purpose, and that the boat when housed or secured rests directly over the pivotal point of the launching-frame, so that no extraneous strain is put on the latter.

While I have described the apparatus as it is represented in the drawings, I do not limit myself strictly to this exact construction, as it may be modified to some extent without departing materially from my invention. For example, the stops to limit the movement of the chocks are not absolutely essential; but it is preferred to have at least a stop to steady the chock when in its upright supporting position.

Having thus described my invention, I claim—

1. In an apparatus for securing and launching boats, the combination with the fixed guide-frames, and the launching-frame hinged therein, said frame comprising the two uprights and the two horizontal members, one above and one below the boat, of the means for locking said frame in both of its terminal positions, chocks on the lower member of the frame, and launching and lowering tackles, substantially as set forth.

2. In an apparatus for securing and launching boats, the combination with the two fixed guide-frames F, each having a guide-slot, two locking-notches in its curved rail at one side of said slot and ratchet-teeth at the other side thereof, the launching-frame having its pivotally-mounted uprights engaged and playing in the respective guide-slots in the frames, the locking-dogs, pivotally mounted one on each of the said uprights and adapted to engage either the locking-notches or the ratchet-teeth in the frame, rocking chocks in the frame to support the boat, and launching and lowering tackles, substantially as set forth.

3. In an apparatus for securing and launching boats, the combination with the hinged launching-frame, its guide-frame and locking devices, and the launching and lowering tackles, of the rocking chocks 5, on the frame, and means for limiting the rocking movements of said chocks, substantially as set forth.

4. In an apparatus for securing and launching boats, the combination with the hinged launching-frame having rocking, V-shaped chocks to support the boat, and the launching and hoisting tackles, of the fixed, slotted guide-frames having locking-notches and ratchet-teeth, and the pivotally-mounted dogs on the frame adapted to engage either the said notches or ratchet-teeth, substantially as set forth.

5. An apparatus for launching boats, having a swinging frame with its upright set apart a distance exceeding the length of the boat, and chocks carried on said frame for the boat to rest on, said chocks being situated when the boat is at rest, directly over the hinging-point of said frame, substantially as set forth.

6. An apparatus for launching boats, having a swinging frame hinged at its foot and provided with independently-rocking chocks to support the boat, said chocks being between the uprights of the frame and alined between the hinging-point of the frame and the bar 3 thereof from which the boat is suspended, substantially as set forth.

7. An apparatus for launching boats, having a swinging frame, and independently-rocking and automatically-clearing chocks mounted to turn on a bar in said frame, said

chocks supporting the boat while at rest, the pivotal axis of the chocks being substantially in a plane passing through the hinging-point of the frame and the suspension-point of the boat therein, substantially as set forth.

8. In an apparatus for launching boats, the combination with the hinged launching-frame, and means for securing and for lowering said frame, of a pair of V-shaped chocks 5, mounted to rock freely on a bar in said frame, for supporting the boat, said chocks being adapted to be held in their supporting or upright positions by the boat, substantially as and for the purposes set forth.

In witness whereof I have hereunto signed my name, this 29th day of April, 1899, in the presence of two subscribing witnesses.

ROBERT WHITE.

Witnesses:
THOS. H. WHITE,
FRED G. PITCHER.