J. WEISMANTEL.

LAUNCHING APPARATUS FOR STEAM OR SAILING VESSELS.

APPLICATION FILED AUG. 15, 1917.

1,270,903.

Patented July 2, 1918.

2 SHEETS—SHEET 1.

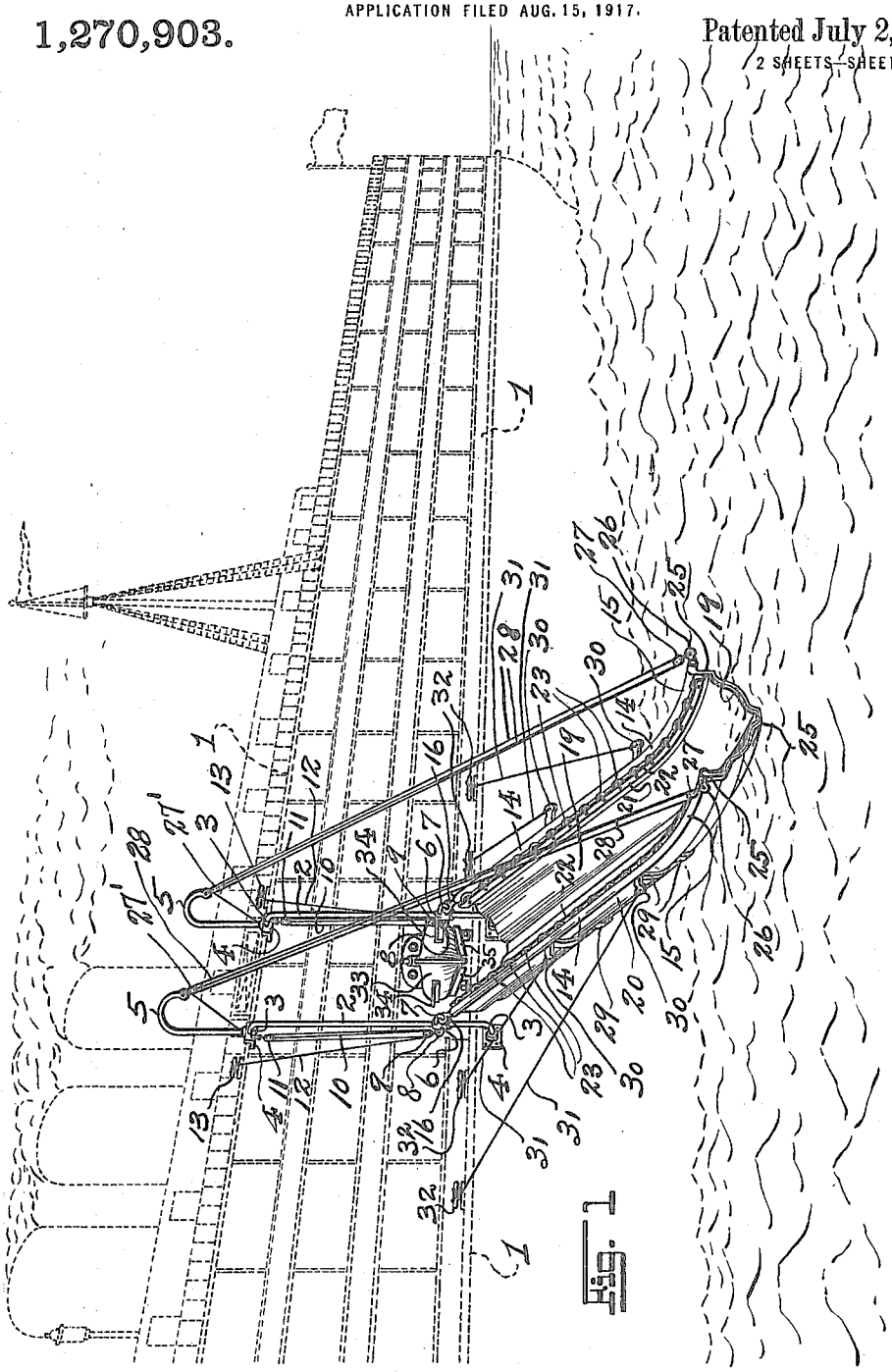


Fig. 1

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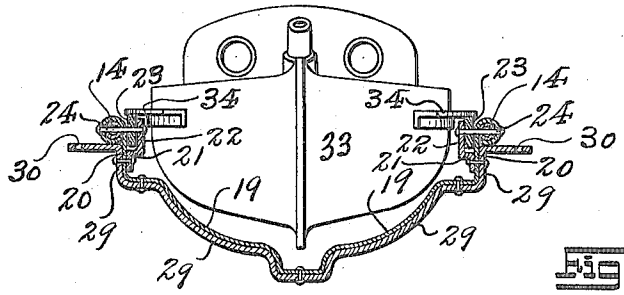


Fig. 2

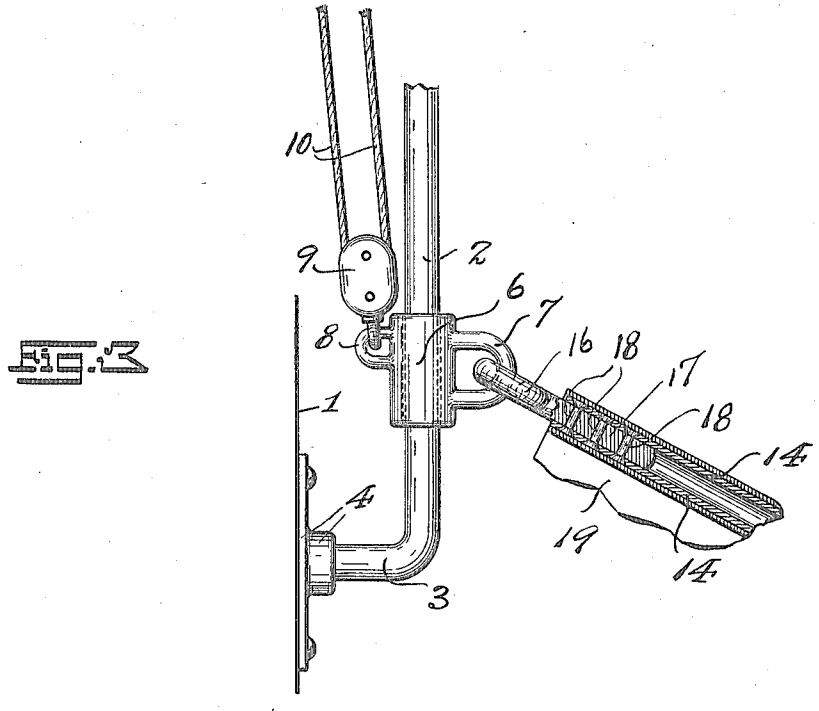


Fig. 3

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UNITED STATES PATENT OFFICE.

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LAUNCHING APPARATUS FOR STEAM OR SAILING VESSELS.

1,270,903. Specification of Letters Patent. Patented July 2, 1918.

Application filed August 15, 1917. Serial No. 186,288.

To all whom it may concern:

Be it known that I, JOSEPH WEISMANTEL, a citizen of the United States, residing at Irvington, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Launching Apparatus for Steam or Sailing Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The present invention has reference generally to improvements in launching devices for use on steam ships, sailing vessels, and the like; and the invention relates, more particularly, to a novel and easily operated construction of apparatus adapted to render the launching of a submarine chaser, lifeboat, or other small boat from the side of a steam or sailing vessel, both rapidly and easily accomplished.

The invention has for its principal object to provide a comparatively simple and easily operated launching apparatus for attachment to steam or sailing vessels whereby a small boat, fully manned, may be very quickly put into the water from the side of the said vessel; said apparatus being so constructed that the same is quickly available for use in all kinds of weather; and capable of being used whether the main vessel is riding on an even keel or is listed to one side or the other.

Another object of the present invention is to provide a launching apparatus which is particularly adapted for quickly putting over the side of a steam or sailing vessel a submarine chaser, whereby attacking enemy submarines, when sighted, may with a minimum loss of time, be subjected to counter attack by such quickly launched submarine chaser.

A still further object of the present invention is to provide a novel construction of launching apparatus for operative association with the side of a ship, which is adjustably related to the ship's side, so that the same may be readily adjusted to receive and launch a small boat from any one of several decks with which said ship is provided.

Other objects of the present invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

With the various objects of my present invention in view the same consists, primarily, in the novel construction of launching apparatus hereinafter set forth; and, the invention consists, furthermore, in the novel arrangements and combinations of the various devices and parts, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the claims appended thereto.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the novel launching apparatus made according to and embodying the principles of my present invention, the same being shown in its operative relation to the side of a ship ready for use, said ship with which it is associated being represented in dotted outline.

Fig. 2 is a transverse section through the shute of said novel launching apparatus, drawn on an enlarged scale, and showing in operative relation to said chute a small boat, such as a submarine chaser, and the means whereby the latter is slidably related to said chute when descending the same into the water from the side of the main vessel.

Fig. 3 is an enlarged detail view illustrating a portion of the means whereby the launching apparatus is rendered both foldable against the side of the ship, and vertically adjustable relative to the ship's side so as to be capable of use from any deck.

Similar characters of reference are employed in all of the hereinabove described views, to indicate corresponding parts.

Referring now to the said drawings the reference-character 1 indicates a ship to which my novel launching apparatus is connected. The launching apparatus itself comprises a pair of vertical supporting rails 2, having inwardly turned ends 3, the latter being secured in suitable anchor-plates 4 fixed in attached relation to the sides and superstructure of said ship 1, so that said rails are slightly off-set from the ship's side, and so that the same extend vertically to cross the level of the ship's decks. Connected, preferably, with the top-most deck of the ship 1, and in substantially vertical alinement with said rails 2, are a pair of davits 5 of the

usual form ordinarily used to swing small boats over-side. Slidably disposed upon each rail 2 is a sliding rider, sleeve or collar 6 provided on its forward side with a fulcrum link or eye-member 7, and on its rearward side with a hoisting eye-member 8. Connected with said hoisting eye-member 8 is the lower block 9 of a hoisting tackle 10, the upper block 11 of the latter being fixed to the ship's side at some convenient point adjacent to the level of the topmost deck of the ship. The hauling end 12 of said tackle 10 is secured upon a cleat 13 affixed to said topmost deck of said ship 1.

Pivotally connected with each rider, sleeve or collar 6 is a skid-rail 14, the outer free end of which is provided with an upwardly curved portion 15. The upper end of each skid-rail 14 is provided with a pivot or hinge eye-portion 16, the shank portion 17 of which is preferably affixed to said skid-rail by means of rivets 18, or any other suitable construction of fastening means. Said pivot or hinge eye-portion 16 is pivotally linked with a fulcrum link or eye-member 7 of a sleeve rider, or collar 6. In this manner the inner ends of said skid-rails 14 are pivotally associated with said riders, sleeves or collars 6 mounted on the vertical rails 2, so that the same are spaced laterally apart, and extend longitudinally in parallel relation to each other. Supported by said skid-rails 14, and secured to the latter by its longitudinal marginal edges, in any suitable manner, is a chute-portion 19, which may be made of sheet metal, or any other suitable material. Said chute-portion 19 is preferably shaped in cross-section to conform generally to the cross-sectional shape of the hull of a small power-boat or life-boat, and said chute-portion is provided at its sides, where it joins said skid-rails 14, with vertical flanges 20. Riveted to the inner side of each of said vertical flanges 20 are longitudinally extending bracket-members 21 provided at their upper longitudinal marginal edges with inwardly off-set bearing-flanges 22. Mounted in the space between said vertical flanges 20 and said bearing-flanges 22 are rollers 23, the same being rotatably supported upon axle-pins 24 which extend transversely through said skid-rails and flanges 20 secured thereto and said bearing flanges 22, thus providing on each side of said chute-portion a series of longitudinally disposed and spaced rollers, the upper peripheries of which project above said skid-rails. The outer extremities of said skid-rails, and said chute-portion supported thereby, are interconnected by a laterally extending cross-rib or brace 25, at the free ends of which are eye-members 26 to which are secured the lower blocks 27 of hoisting tackle 28, the upper blocks 27′ of the latter being suspended from said davits 5.

Situated at longitudinally spaced intervals in interconnected relation to said skid-rails 14 and said chute-portion 19, are reinforcing or stiffening cross-ribs or braces 29, having at their ends eye-portions 30, to which are secured the ends of guy-ropes 31, the latter being secured to cleats 32 suitably located and fixed upon a deck of the ship.

When the launching device is not in use, the tackle 28 is manipulated to swing upwardly the outer end of the launching chute so that the latter stands in vertical raised position against the side of the ship, in which position the same may be suitably lashed.

When, however, the launching device is to be positioned for use, the lashings are cut away, and the tackle 28 utilized to lower away the free end thereof. When thus lowered the chute swings outwardly and downwardly from the pivotal connection at its inner end, and is thus positioned to incline downwardly from a desired deck of the ship outboard until its outer curved end dips into the water, whereupon the tackle 28 is made fast, the guy-ropes 31 adjusted and made fast, so that the launching device is then ready for use.

The small boats 33 to be put over side and into the water by means of the said launching apparatus, are each equipped, in proper location upon the exterior sides of their hulls, with longitudinally extending supporting flanges 34, which project laterally from each side of the hull. When all is ready the said small boats 33, which are preferably supported on suitable wheeled trucks 35, are rolled up to the upper end or entrance to the chute, and are pushed into the latter until their flanges 34 engage and ride on the rollers 23, the boat 33 is then freed whereupon it swiftly slides down the inclined chute upon the rollers 23, until it strikes the upward curved end of the skid-rails, which turn the bow of the boat upward, and tend to shoot the same out upon the surface of the water on an even keel. It will thus be clear that small armed power-boats, adapted for service as submarine chasers may be quickly launched from a large vessel, and sent out from the side of the latter with a minimum loss of time, and with little effort, ready manned to take up the chase, or life boats for escape purposes or rescue work and with equal despatch be launched.

Another advantage of my novel launching apparatus above described, lies in its easy and ready adaptability to the condition of the ship, inasmuch as the same is easily and readily capable of operation and use while the ship is in motion, or when the ship is listed to either one side or the other.

It will also be apparent that my launching device is readily adjusted or positioned to extend outward and downward from any

desired deck of the ship with which it is connected, since the hoisting tackle 10 may be manipulated to raise the riders, collars or sleeves 6 upon the rails 2 to any deck level desired to position accordingly the upper or receiving end of the launching chute.

I am aware that some changes may be made in the various arrangements and combinations of the several devices and parts as well as in the details of the construction of the same, without departing from the scope of the present invention as described in the above specification and defined in the appended claims. Hence, I do not limit my present invention to the exact arrangements and combinations of the devices and parts as described in the foregoing specification, nor do I confine myself to the exact details of the construction of said devices and parts as shown in the accompanying drawings.

I claim:—

1. In a device of the kind described a pair of laterally spaced vertical rails connected with the side of a ship, riders slidably mounted on said rails, hoisting tackle for vertically adjusting said riders upon said rails, a launching chute having means of pivotal connection at its inner end with said riders, and supporting tackle connected with the outer end of said chute for raising and lowering the same upon its pivotal connection, said chute being hull-shaped in cross-section, and the outer end of said chute being curved upward to cause a boat descending the same to enter the water on substantially even keel.

2. In a device of the kind described, a pair of laterally spaced vertical rails connected with the side of a ship, riders slidably mounted on said rails, hoisting tackle for vertically adjusting said riders upon said rails, a launching chute having means of pivotal connection at its inner end with said riders, and supporting tackle connected with the outer end of said chute for raising and lowering the same upon its pivotal connection, said chute being hull-shaped in cross-section, and the outer end of said chute being curved upward to cause a boat descending the same to enter the water on substantially even keel, and anti-friction rollers mounted on the inner sides of said chute to slidably support a boat when descending said chute.

3. In a device of the kind described, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner end of said skid-rails to the side of a ship, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction rollers mounted on the sides of said chute-body, and a hoisting tackle connected with the outer free ends of said skid-rails whereby the same and said chute body may be raised and lowered about the pivotal connection thereof with said ship.

4. In a device of the kind described, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner end of said skid-rails to the side of a ship, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction rollers mounted on the sides of said chute-body, a hoisting tackle connected with the outer free ends of said skid-rails whereby the same and said chute-body may be raised and lowered about the pivotal connection thereof with said ship, and transverse cross-ribs connected with said skid-rails and chute-body.

5. In a device of the kind described, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner end of said skid-rails to the side of a ship, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction rollers mounted on the sides of said chute-body, a hoisting tackle connected with the outer free ends of said skid rails whereby the same and said chute body may be raised and lowered about the pivotal connection thereof with said ship, transverse cross-ribs connected with said skid-rails and chute-body, said cross-ribs having eye-members at their ends, and guy-ropes extending from said eye-members to the side of said ship.

6. In a device of the kind described a pair of laterally spaced vertical rails connected with the side of a ship, riders slidably mounted on said rails, hoisting tackle for adjustably positioning said riders upon said rails, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner ends of said skid-rails respectively with said riders, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction-rollers mounted on the sides of said chute-body, and a hoisting tackle connected with the outer free ends of said skid-rails whereby the same and said chute-body may be raised and lowered about the pivotal connection thereof with said sleeves.

7. In a device of the kind described a pair of laterally spaced vertical rails connected with the side of a ship, riders slidably mounted on said rails, hoisting tackle for adjustably positioning said riders upon said rails, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner ends of said skid-rails respectively with said riders, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction rollers mounted on the sides of said chute-body, a hoisting tackle connected with the

outer free ends of said skid-rails whereby the same and said chute-body may be raised and lowered about the pivotal connection thereof with said riders, and transverse cross-ribs connected with said skid-rails and chute-body.

8. In a device of the kind described a pair of laterally spaced vertical rails connected with the side of a ship, riders slidably mounted on said rails, hoisting tackle for adjustably positioning said riders upon said rails, a pair of longitudinally parallel skid-rails, means for pivotally connecting the inner ends of said skid-rails respectively with said riders, the outer ends of said skid-rails being curved upward, a chute-body supported between said skid-rails, anti-friction-rollers mounted on the sides of said chute-body, a hoisting tackle connected with the outer free ends of said skid-rails whereby the same and said chute-body may be raised and lowered about the pivotal connection thereof with said riders, transverse cross-ribs connected with said skid-rails and chute-body, said cross-ribs having eye-members at their ends, and guy-ropes extending from said eye-members to the side of said ship.

9. In a device of the kind described, a pair of longitudinally parallel laterally spaced skid-rails, means for pivotally connecting the inner ends of said skid-rails with the side of a ship, the outer-ends of said skid-rails being curved upward, means laterally interconnecting said skid-rails, anti-friction rollers associated with said skid-rails to slidably support a boat descending the latter, and a hoisting tackle connected with the outer ends of said skid-rails for raising and lowering the same.

10. In a device of the kind described, a pair of laterally spaced vertical rails connected with the side of a ship, sleeves slidably mounted on said rails, hoisting tackle for adjusting said sleeves upon said rails, a pair of longitudinally parallel laterally spaced skid-rails, means for pivotally connecting the inner ends of said skid-rails respectively with said sleeves, the outer ends of said skid-rails being curved upward, means laterally interconnecting said skid-rails, anti-friction rollers associated with said skid-rails to slidably support a boat descending the latter, and a hoisting tackle connected with the outer ends of said skid-rails for raising and lowering the same.

In testimony that I claim the invention set forth above I have hereunto set my hand this 13th day of August, 1917.

JOSEPH WEISMANTEL.

Witnesses:
FRED'K C. FRAENTZEL,
FRED'K H. W. FRAENTZEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."