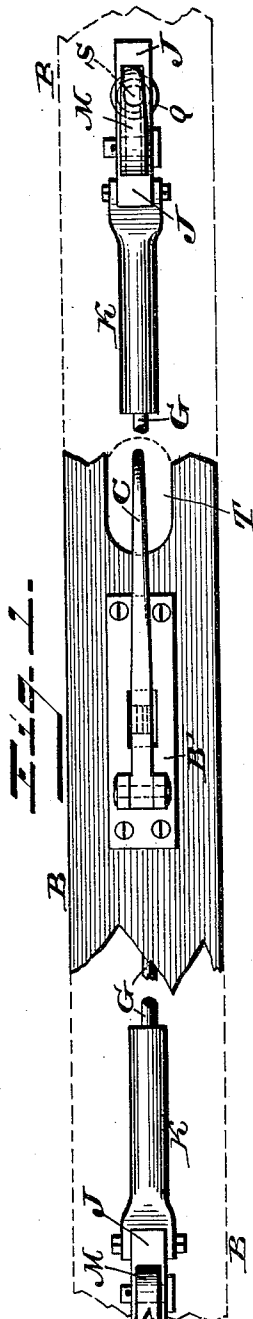


(No Model.)

H. ASHFORD.
BOAT DETACHING APPARATUS.

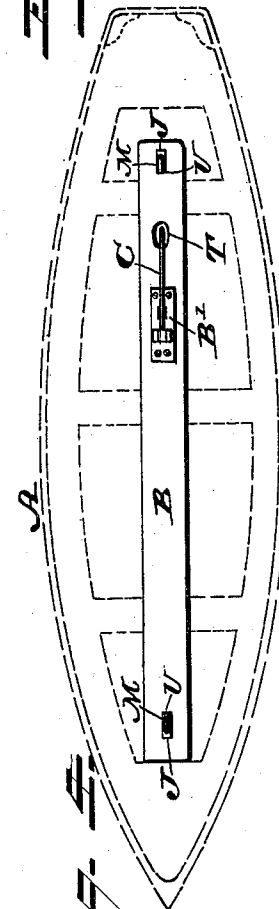
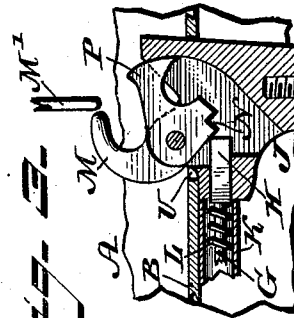
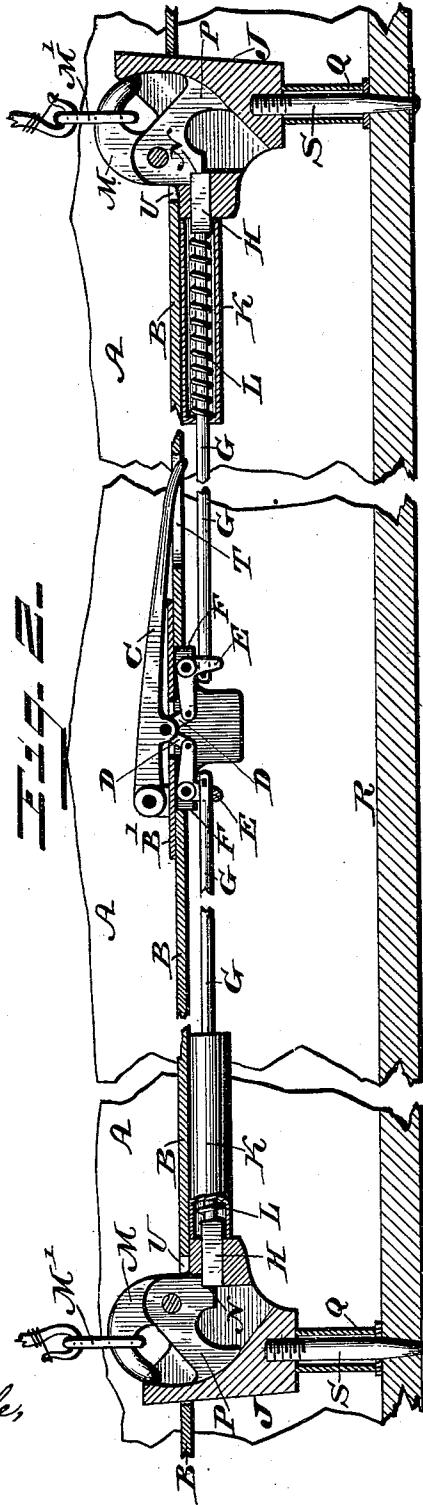
No. 469,034.

Patented Feb. 16, 1892.



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

HENRY ASHFORD, OF PHILADELPHIA, PENNSYLVANIA.

BOAT-DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 469,034, dated February 16, 1892.

Application filed June 30, 1891. Serial No. 397,998. (No model.)

To all whom it may concern:

Be it known that I, HENRY ASHFORD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Boat-Detaching Apparatus, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of a boat-detaching apparatus whereby the same is effective and reliable in execution, compact, strong, durable, and steady, and provided with guards for preventing improper or accidental operation of the apparatus, as will be hereinafter set forth.

Figure 1 represents a top or plan view of a boat-detaching device embodying my invention. Fig. 2 represents a partial side elevation and partial vertical section thereof. Fig. 3 represents a vertical section of a detached portion, showing the unlocking of one of the hooks of the apparatus. Fig. 4 represents a top or plan view on a reduced scale.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a boat of usual construction, and B designates a bar or beam, which extends in the longitudinal direction of the boat and is supported in any suitable manner thereon.

To the plate B', which is secured to the beam, is pivoted the lever C, to which near the fulcrum thereof, are pivoted the links D, the latter being pivoted to the elbow-levers E, whose bearings are on the ears F on the under side of the plate B'.

G designates rods which extend longitudinally beneath the beam and have the inner ends freely connected with the lower limbs of the elbow-levers E and carry at the outer ends the bolts H, which are guided in horizontal openings in heads J, which are located at opposite ends of the boat. To the heads are secured the tubes K, through which the rods G pass, and within each of which is a coiled or other spring L, the tendency of which is to force the respective bolt H in outward direction.

To the heads J are pivoted the hooks M, which receive the rings M' of the ropes or chains, by which the boat is suspended from

the davits. On the heel of each hook near the fulcrum thereof is a shoulder N, which is adapted to be engaged by the relative bolt H, thus locking or controlling the hook, as will be seen in Fig. 2.

Projecting from the axial portion of each hook is a radial arm P, which occupies a position within an opening in the head J, the walls of said opening being segmental and according with the outer end of the arm, so that said end rides on said wall when motion is imparted to the hook, it being also noticed that the outer end of the hook is adapted to enter the opening of the head, whereby it is covered or not exposed, as will be seen in Fig. 2.

The heads J are supported on tubular standards Q, which rest on the keel or a beam R below the beam B, and through which are passed the bolts S, whose upper ends are screwed to the heads J and whose lower ends are riveted to the beam R, by which provision the heads and attached parts are firmly sustained and likewise strongly connected with the boat.

In the beam B is an opening T to receive the free end of the lever C when in lowered position, whereby said end is covered, whereby improper operation of the lever by blows, &c., is prevented.

Portions of the heads J project upwardly through the openings U in the beam B, so that the hooks M occupy the proper operative position both for disengagement and engagement of the rings M'.

The operation is as follows: The boat is suspended from the ship's davits, the rings M' receiving the hooks M and the latter being held in locked position by the bolts H, all as will be seen in Fig. 2. When the boat is to be detached, the lever C is raised, whereby the rods G are operated and the bolts H simultaneously shot back or withdrawn from the shoulders N of the hooks. As the hooks are now unlocked, they are permitted to rotate or turn upwardly and inwardly, thus slipping through the rings M' and entirely clearing the same, as will be seen in Fig. 3, the boat thus being detached. In order to connect the boat with the ropes or chains of the davits, each ring M' is presented to its hook and caused to strike the arm P. The

hook is thus rotated or turned, the operation being assisted by hand, if desired, the motion being outward and downward, whereby the hook enters the ring. The heel of the hook bears against the bolt H and forces back the same, when the bolt springs into the shoulder N, thus again locking the hook, the parts being in the position shown in Fig. 2, ready for further detachment of the boat when so required. The arms P serve to steady the hooks in their motions and relieve the axes thereof of strain when the boat is suspended from the davits, the weight of the boat being primarily sustained by the hooks. The openings in the heads J, in which the arms P and ends of the hooks M have their play, are open from top to bottom in order to cause water to flow freely through the same and prevent the lodgment of obstacles of any kind.

20 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A boat-detaching device consisting of a lever C and elbow-levers E, mounted on the support B, the links D, pivoted to said levers, rods G, connected with said levers, bolts H on the outer ends of said rods, heads J, guides K, supports for said heads and guides, springs connected with said guides and rods, and hooks M, with shoulders N, mounted on said heads and adapted to be engaged by said bolts H, said heads J having segmental recesses, within which the ends of the hooks are received, said parts being combined substantially as described.

2. In a boat-detaching device, a lever having a suitable support on the boat, heads supported at opposite ends of the boat, each having a segmental recess therein, a hook pivoted in each of said heads and having a radial arm, bolts guided in said heads for releasing said hooks, and levers connected to said bolts for operating the same, each of said hooks and arms having its outer end normally covered by said head, said parts being combined substantially as described.

3. In a boat-detaching device, a recessed head having a suitable support at or near one end of the boat, a hook pivotally supported in the recess of the head, a bolt guided in said head, and mechanism connected with said bolt which engages the hook for releasing the same, the wall of the said recess of the head covering the end of the hook when the latter is closed, said parts being combined substantially as described.

4. In a boat-detaching apparatus, heads having recesses therein, in combination with hooks pivotally mounted in said recesses and having radial arms, spring-actuated bolts adapted to engage said hooks, elbow-levers connected with said bolts, an operating-lever connected with said elbow-levers, and supports for the parts, said bolts being simultaneously forced outward to release the hooks, substantially as described.

5. In a boat-detaching device, a head suitably supported at one end of the boat and having a segmental opening therein, and a pivoted hook provided with a radial arm in said segmental opening, the outer end of said hook being adapted to enter the opening of the head, and mechanism for opening said hook, substantially as described.

6. In a boat-detaching device, a bar suitably supported and extending lengthwise of the boat, a lever pivotally connected to said bar, an elbow-lever having a suitable support and linked to said lever, rods connected with said levers, bolts carried by said rods, heads suitably supported at opposite ends of the boat and having openings forming guides for said bolts, tubes secured to said heads, springs in said tubes, hooks pivoted to said heads and having shoulders thereon, and arms extending from said hooks and guided in openings in said heads, said parts being combined substantially as described.

HENRY ASHFORD.

Witnesses:

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