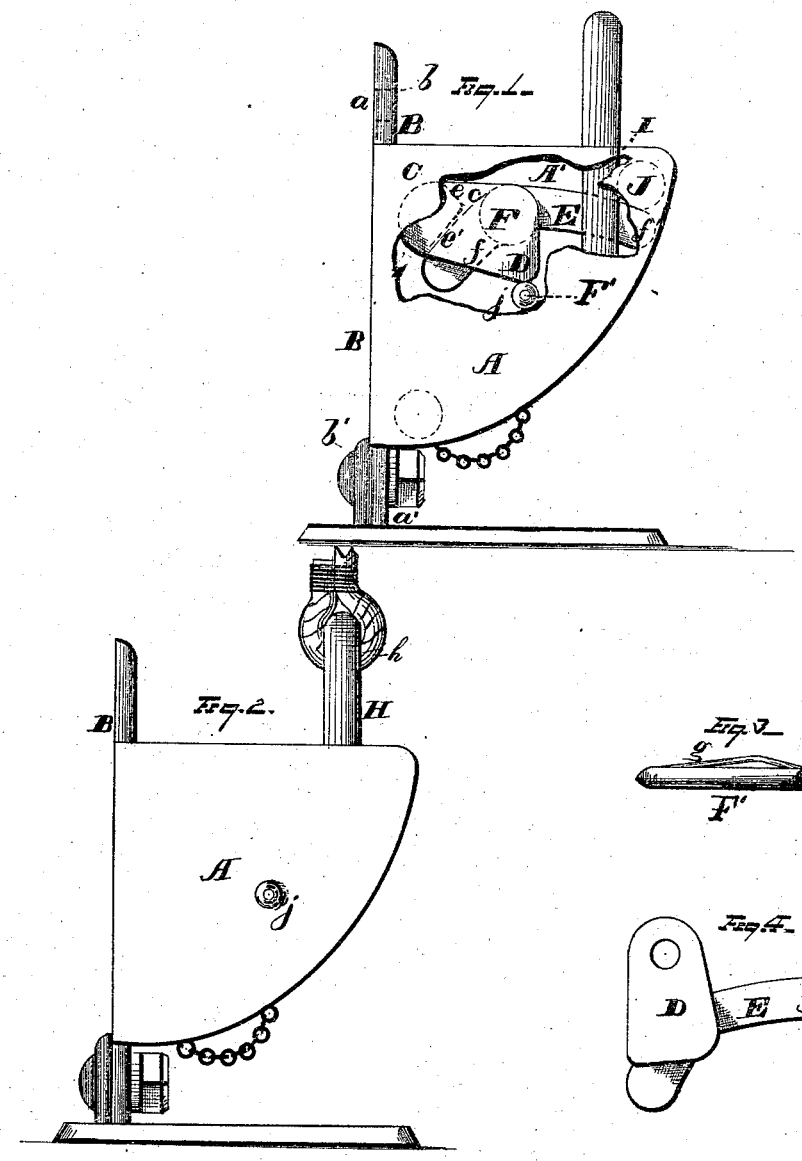
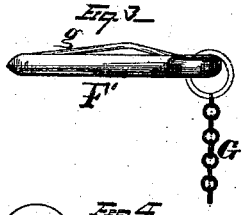
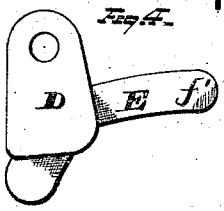
T. G. OTTERSON & A. S. REEVES.

BOAT DETACHING APPARATUS.

No. 182,593. Patented Sept. 26, 1876.







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UNITED STATES PATENT OFFICE.

THOMAS G. OTTERSON AND ALBERT S. REEVES, OF PHILADELPHIA, PA.

IMPROVEMENT IN BOAT-DETACHING APPARATUS.

Specification forming part of Letters Patent No. **182,593**, dated September 26, 1876; application filed July 29, 1876.

To all whom it may concern:

Be it known that we, THOMAS G. OTTERSON and ALBERT S. REEVES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Detaching Boats from Davits; and we 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in devices for detaching boats from davits.

In the accompanying drawings, Figure 1 represents the device as detached from the davits, the plate or wall of the device being broken away to show the interior mechanism. Fig. 2 shows the device when attached to the davits of a vessel. Fig. 3 is the pin for permanently securing the latch, and Fig. 4 is a detached view of the cam and latch.

Heretofore, self-detaching hooks have been used; but they have been found objectionable in use, from the fact that the boat is liable to be disengaged from the hooks, when struck by a heavy sea, and also when the boat is released from the hooks the latter occasionally catch upon the sides of the boat and upset it, or catch the seats and tear them from the boat. Again, lever-detaching devices—not automatic—have been used; but owing to the liability of their becoming deranged, and the time and experience necessary to manipulate the devices, in order to quickly detach a boat, they have met with little favor with the public.

The object of our invention is to obviate the defects above noted; and to that end our invention consists in the combination of parts hereinafter described and claimed.

A A′ denote the walls or side plates, and B the attaching-plate of the device, the plate B extending above and below the side walls, and the projecting portions *a a′* of same provided with bolt-holes *b b′*, whereby the devices are adapted to be rigidly secured to the stem and stern of a boat. Upon a stud-bolt, C, secured in the upper corner of the frame, is journaled a cam-lever, D, which is slotted at *c*, forming arms, between which the lever-catch E is loosely journaled on a bolt or shaft, F, secured to the arms; or the latch may be formed with trunnions, and the arms perforated to serve as bearings for the same. The cam-lever D is formed with angular bearings *e e′*, the lower bearing *e′* serving as a bearing for the inner end *f* of the lever-latch E when the latter is raised to secure the link. F′ is a pin, secured by a cord or chain, G, to any portion of the frame, and said pin is grooved to receive a spring, *g*, for the purpose of preventing the accidental displacement of the pin from the frame.

The operation of the device is as follows: A device, constructed as above set forth, is secured, one to the bow and another to the stern of the boat, by means of bolts passing through the bolt-holes in the end plates, and into the timbers of the boat. The eye *h* of the closed link H is secured to the block of the davits, and the lower end of the link inserted through an opening, I, in the top of the frame, and slipped over the forward end *f′* of the lever-latch E. The cam is then raised, carrying the latch and link until the portion *f′* of latch E strikes beneath the bolt J of the frames. The lines are then drawn taut, raising the boat clear of the water, when the weight of the boat is directly sustained by the latches E of devices attached to the bow and stern of the boat. The latch E has a central bearing on the bolt of the cam-lever, and end bearings on the bolt J, and the angular bearing *e′* of the cam-lever.

If the boat is to be secured for a voyage, the pin F is inserted through holes *j j′*, and passes beneath the cam, thereby effectually preventing the displacement of the latch and link while the pin is in place, and the spring secured to the pin prevents any accidental displacement of the pin.

When these devices are attached to boats belonging to small vessels, the bolt J may be formed with a slot on its lower side, to receive the forward end of the latch E, and thereby prevent any lateral strain on the cam, as such boats are drawn up and turned over on their side to clear them from the surface of the water.

When it is desired to lower the boat the pins F′ are withdrawn, and as the boat touches the water the strain on the latch E is suddenly relieved, when the cam falls and disengages

the link from the latch, thereby entirely freeing the boat from the davits. As the links are entirely closed they can do no damage, which often results from the use of hooks, as heretofore stated.

This device forms a perfectly safe and sure attachment, and there is no possible danger of an accidental detachment of the boat from the davits in a heavy sea.

If desired, a lever attachment may be combined with the cams, to draw the same down at each end, which will release the latches from the eyes of the links at the same instant, thereby freeing the boat before she touches the water; and, also, pulleys may be attached to the sides of the boat opposite the pins F′, and cords attached to the pins, secured to the center of the boat, so that the pins may be simultaneously withdrawn by a single person.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the slotted cam, of the lever-latch, substantially as and for the purpose set forth.

2. The combination, with the slotted cam and lever-latch journaled thereto, of the bolt J and link, substantially as and for the purpose specified.

3. The slotted cam, constructed with angular bearings *e e′*, in combination with the lever-latch E, formed with projections *f f′*, substantially as and for the purpose set forth.

4. The combination, with the slotted cam and the latch-lever, of the pin F′, provided with a retaining-spring, *g*, substantially as and for the purpose set forth.

5. The combination, with the slotted cam and lever-latch, of the closed link and supporting-pin, substantially as and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands.

THOMAS G. OTTERSON.
ALBERT S. REEVES.

Witnesses:
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