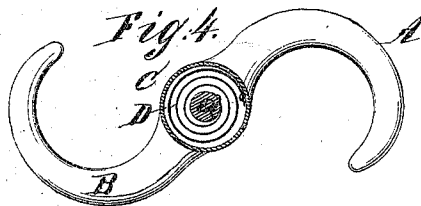
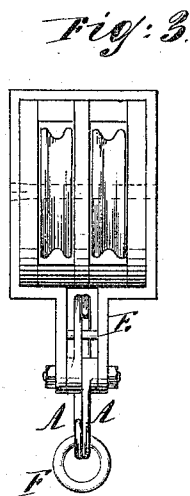
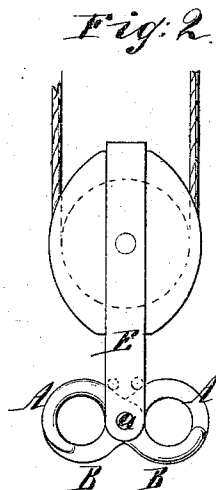
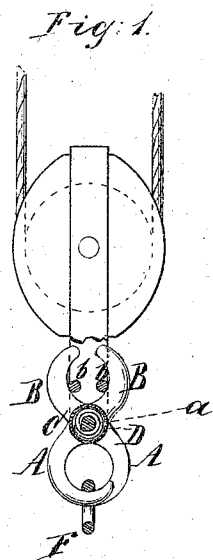


W. F. MORGAN.
Boat Detaching Devices

No. 142,496.

Patented September 2, 1873.



Witnesses:
Egypt Bilhuber.
Chas. Wickers.

Inventor:
William F. Morgan
per
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0204

UNITED STATES PATENT OFFICE.

WILLIAM F. MORGAN, OF NEW YORK, N. Y.

IMPROVEMENT IN BOAT-DETACHING DEVICES.

Specification forming part of Letters Patent No. **142,496**, dated September 2, 1873; application filed May 24, 1873.

To all whom it may concern:

Be it known that I, WILLIAM F. MORGAN, of the city, county, and State of New York, have invented a new and useful Improvement in Detaching Boats from Davits; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents my improvement, partly in section, as it appears when a boat is secured by it. Fig. 2 represents it as it appears after the boat has been detached. Fig. 3 is a side view of my improvement, showing also the davit fall-block, the apparatus being in the same condition as in Fig. 1. Fig. 4 is a detached view of one of the sister hooks, showing, in cross-section, the pin on which the hook turns, and also the spring which actuates it.

Similar letters indicate corresponding parts.

This invention relates to apparatus for securing and detaching boats on vessels, or in other places; and consists in an automatic apparatus so constructed and arranged that the weight of the boat, when hanging on the davits, operates to keep it attached and securely fastened to the davits; but when lowered so that its weight comes on the water, it is automatically released from the davits.

In carrying out this invention I employ two sister hooks, whose ends, when closed, arrange themselves alongside of each other, so as to form an unbroken ring. These hooks are mounted on a common pin, around which are placed springs, one end of each of which is fastened to the pin and the other ends to the respective hooks, the arrangement of the springs being such that they act to open the hooks. Each hook is provided with a guard, which projects from the rear of the hook in a reverse direction or curve, and has two principal offices, one being to clear the hooks in the act of opening from the ring or eye to which the hooks had been fastened, and an-

other is to cover the points of the hooks while they are open, and thereby prevent them from catching on any object.

The letter A designates a pair of sister hooks mounted upon a common pin, *a*, which is fixed so as not to turn within the lower part of the frame of the lower fall-block of the davits. Each hook A is provided with a counter-hook or guard, B, which extends from the rear of the hook, and is bent in a reverse direction or curve to the hook itself, as shown in the drawing. Each hook has a hollow hub, C, which contains a spring, D, whose ends are attached, respectively, to the pin *a* and to the hub of the hook, and the several springs are so arranged and applied that the act of closing the hooks causes the springs to be compressed, and consequently the tendency of the springs is to throw the hooks open, the hooks being turned by the springs in opposite directions. The frame E, in which the hooks are mounted, is provided with stops *b b*, against which the backs of the hooks rest when they are open, as shown in Fig. 2.

Each of the hooks A forms more than a half circle, so that when they are closed upon or against each other their ends lap, and they form, together, a ring, their points extending past the line of the center of gravity and lowest part of the ring thus formed, so that when a boat hook or eye, F, or rope is confined within the combined hooks, and the weight of a boat or other weight is brought to bear on them sufficiently to overcome the tension of the spring, the points of the hooks, which will be higher than that part of the combined hooks whereon the weight rests, will not be able to move back, but will be held in the position shown in Fig. 1 until the hook is relieved of the weight, as by the flotation of the boat, in which case the springs will withdraw the hooks and throw them in the position shown in Fig. 2.

While the hooks are moving back to the position shown in Fig. 2, the guard B of one hook sweeps, back foremost, past the curve of the other hook in such a manner

as to force out of its curve the hook or eye F; and when the backs of the hooks rest against the stops *b b*, the guard B of one hook closes the curve of the other hook, as shown in Fig. 2.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of the hooks A A and their springs D with the guards B B, con-

structed and operating substantially as herein shown and described.

This specification signed by me this 15th day of May, 1873.

WM. F. MORGAN.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.