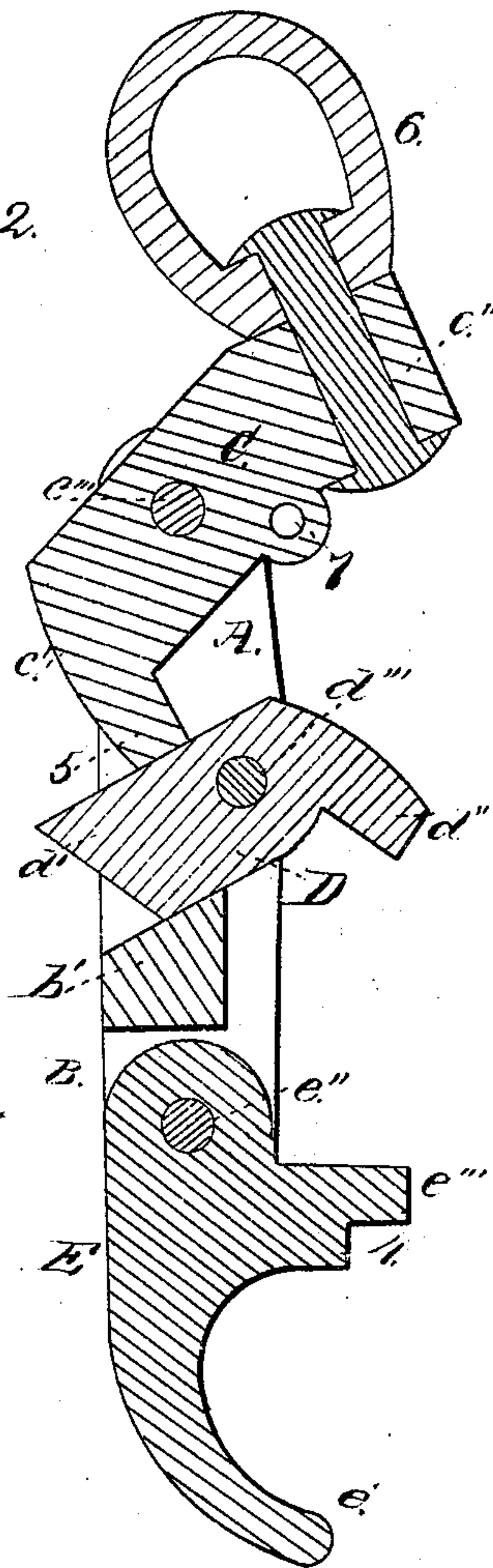
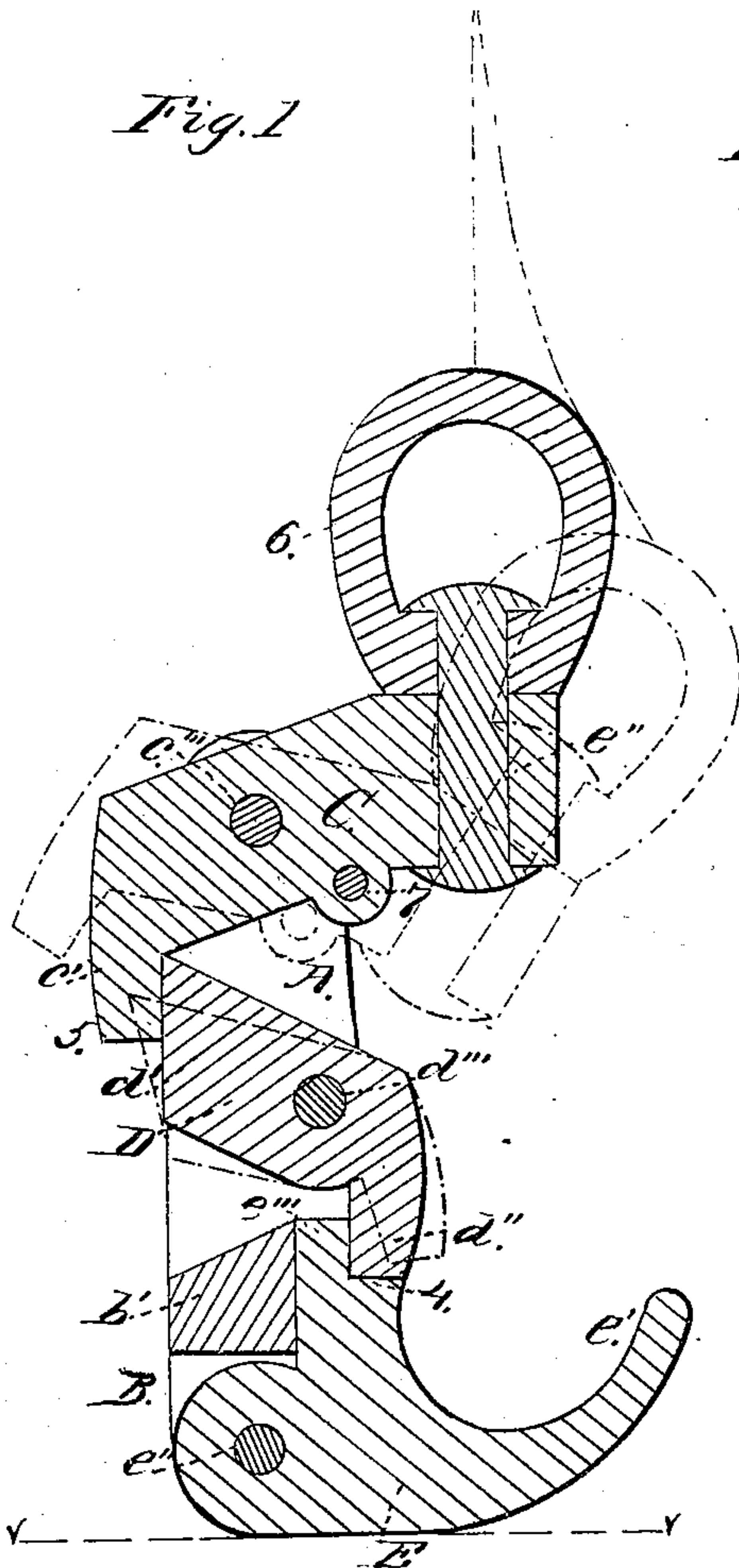


N^o 90,738.

Patented Jun 1, 1869.

Fig. 2.



Inventor:

Wm L Morison.

James Foster, Jr.

United States Patent Office.

JAMES FOSTER, JR., OF CAMDEN, NEW JERSEY, ASSIGNOR TO HIMSELF AND NOAH HAND, OF SAME PLACE.

Letters Patent No. 90,738, dated June 1, 1869.

IMPROVEMENT IN BOAT-DETACHING APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES FOSTER, Jr., of Camden, in the county of Camden, and State of New Jersey, have invented a new and useful Improvement in the Boat-Detaching Hook; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of the said improved hook, as when a boat is suspended thereby; and

Figure 2, a like section of the same, as when the boat has just been detached therefrom.

Like letters and numbers of reference indicate the same parts when in both figures.

The nature of my invention consists in constructing and arranging the different constituent parts of the hook, substantially as hereinafter set forth and described, so that the weight of the boat, when suspended thereby, will keep the hook securely closed; but when the boat reaches and is supported by the water, the said hook consequently opens and instantly releases the said boat.

Referring to the drawings, A B is one of two corresponding metallic plates connected, parallel with each other, by an intervening block, *b'*, of like material, and leaving proper spaces for the insertion of the three adjustable parts, C, D, and E.

The part E is curved at one end, *e'*, and forms the hook proper, its other end, *e''*, being articulated to and between the lower ends of the connected plates A B, so as to swing freely below the connecting-block *b'* of the said plates.

The upper side of E has a projection, *e'''*, one side of which fits against the corresponding side of the block *b'*, when E is in the horizontal position shown in fig. 1.

The opposite side of *e'''* has a rectangular notch, 4, in which (when the hook proper, E, is in its said horizontal position) the lower or lighter end of the part D fits, as shown in the same figure.

The part D is a lever, having unequal arms, *d' d''*, and turns upon a fulcrum-pin, *d'''*, so that, when left free, its longer or heavier arm, *d'*, falls down and rests upon the block *b'*, (see fig. 2;) but when turned into connection with the hook proper, E, its shorter or lighter arm *d''* fits in the notch 4 of the latter, as shown in the figure.

The part C is also a lever, having unequal arms, *c' c''*, and turns freely in the upper end of A B, on a fulcrum-pivot, *c'''*.

Its shorter or lighter arm *c'* has a projection, 5, on the under side, which, when the apparatus is adjusted for supporting a boat, fits against the end, *d'*, of D; and its longer arm, *c''*, is fitted with a swivelling-loop, 6, whereby the said boat-detaching hook is to be connected to and suspended from the usual davit-tackle.

Operation.

When a boat is suspended from the usual davit-tackle, by a pair of these detaching-hooks, the different parts of the latter having previously been placed in the relative positions shown in fig. 1, it will be seen that the weight of the boat, attached thereto by its ends, will consequently keep the parts C, D, and E firmly in the relative positions shown in the said figure, and that, as the boat enters the water, the strain on the tackle diminishes until the whole weight is transferred to the water, and consequently the lower ends of this detaching-hook will rest upon the respective ends of the boat, as indicated by the dotted line *v v*, and thus cause the loop-end *c''*, of the lever C, to tilt downward, so as to release the lever D, as indicated by the dotted lines in fig. 1; and as the boat moves away, the hook proper, E, falling open, into the position shown in fig. 2.

In attaching, for the purpose of hoisting the boat, the parts C, D, and E are brought into the relative positions shown in fig. 1; and, to prevent the possibility of any accidental tilting of the hook proper, E, a spike or bolt may be readily inserted through the hole 7, provided in the lever C for the purpose, and the said spike, in bearing across against the edges of the plates A B, will effectually prevent the said lever C from tilting.

All the different parts described should be made of wrought-iron, and strongly secured together.

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

In a boat-detaching hook, the combination and arrangement of the levers C, D, and E, as herein described and for the purpose set forth.

JAMES FOSTER, JR.

Witnesses:

BENJ. MORISON,
WM. H. MORISON.