J. C. Cottingham,

Detaching Boats.

No. 108454. Patented Oct. 18. 1870.

Fig 1

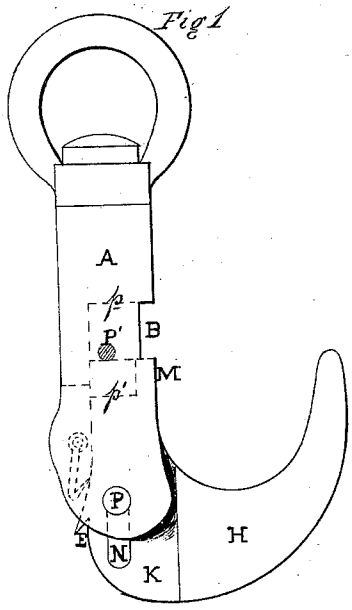


Fig 2

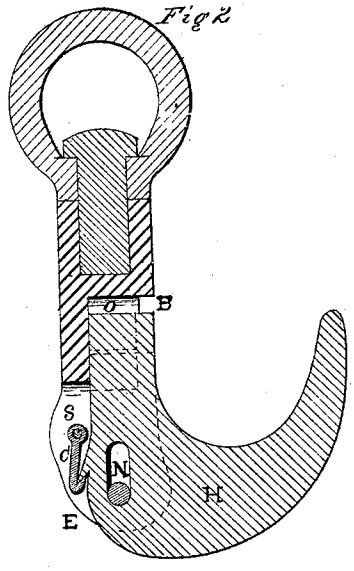


Fig 3

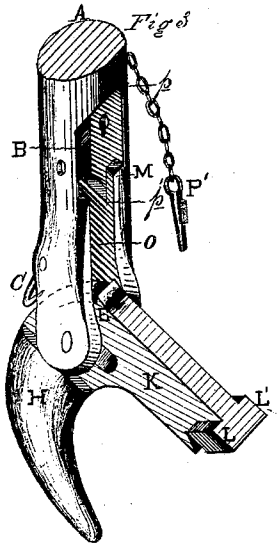
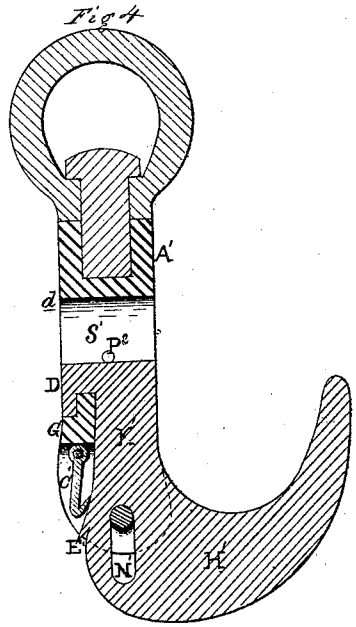


Fig 4



Witnesses.

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Letters Patent No. 108,454, dated October 18, 1870.

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, JOHN C. COTTINGHAM, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful "Improvement in Self-detaching Hooks;" 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 drawing and to the letters of reference marked thereon.

The nature of my invention consists in providing a hook, to be used in connection with a block and fall, for lowering light or heavy weight, and is especially adapted for safely lowering a boat from its davits in a smooth or rough sea.

The construction of the hook is such that it can be retained in place, if desired, and arranged so as to instantly release itself from the object retained by it the moment the weight is removed, as, for instance, when used for lowering a boat, the hooks will immediately release themselves from the ring or eye-bolts in the bow and stern, as soon as relieved of the weight of the boat, caused by the floatation of the same on the surface of the water, thus leaving it (the boat) clear of the vessel.

The hook is also so simple in all its parts that it is not liable to become disarranged or frozen fast, when covered with water in cold or stormy weather.

Figure 1 is a side view of my improvement in self-detaching hooks.

Figure 2 is a longitudinal section of same.

Figure 3 is a perspective view of the hook and the lower portion of the body.

Figure 4 is a sectional view of a hook, showing a different form of catch for securing it in the body.

To enable those skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

The body A of the hook is made in the form as shown in the drawing, and has formed in the central part, and of the proper depth, a recess, O, which terminates at the lower part into a slot, S, in which is placed and pivoted, by means of the pin P, a hook, H.

The shank K of the said hook is made flat, so as to pass freely into the recess O, and is provided, at the upper end, and on each side with lugs L and L'.

The opening N, through which the pin P passes, is made of an oblong, or any suitable shape, in order to allow the hook to rise and fall vertically in the slot S and recess O.

The interior of the recess O, at the upper part, is sunk still deeper on each side from the point *p* to the point *p'*, so as to form offsets and a square opening, B, through the side of the body.

Pivoted in and at the back part of the slot S is a catch, C, which engages with a notch, E, formed on the back part of the shank of the hook, so as to prevent the hook, after releasing itself, and while being raised, from drawing back into the object previously retained by it.

In securing the hook H in the body A, it (the hook) is turned until the lugs L and L' on the shank pass through the opening B, and then allowed to drop down vertically until the lugs touch and bear on the offsets formed on each side of the recess O; the metal M left standing in front of each of these offsets, against which the front part of the said lugs bear, will form a catch and prevent the hook from falling out of the recess, when weight is applied.

For retaining the hook in the body, a steady-pin, P', is passed through openings made in the body A directly over the upper end of the hook, so that the pin will bear on and prevent it from raising.

The shank K' of the hook H', fig. 4, is made perfectly flat, and the upper end made in the form of a hook, D, which passes over a lug, G, formed in the body A'.

In this case, the slot S' is made entirely through the body from the point *d* to the lower end of same, with the lug G extending across it.

The hook is also provided with any suitable shaped slot, N', in the shank, and the body A' with a steady-pin and a catch, C', which engages with a notch, E', on the shank of the hook.

If desired, the slot N or N' can be formed in the lower part of the body, and the pin P secured in the shank of the hook.

When the hook is used for lowering any weight, the moment such weight is relieved from it, owing to its reaching the ground-surface, or, in case of a boat, the water-surface, the resistance on the lower side of the hook will cause it to rise vertically in the recess or slot formed in the body, until the lugs L and L' are released from the offsets, when it (the hook) will instantly drop down in the position, as shown in fig. 3, and relieve itself from the object previously retained by it.

When power is again applied for the purpose of raising the hook, the catch C will engage itself in the notch E, on the shank of the hook, and support it in the position, as shown in fig. 2; that is, preventing it from dropping down in the recess, so that, in case it should be drawn back into the object previously retained, it will turn down in the position as shown in fig. 3, and again release itself.

Having thus described my invention, its construction and operation,

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

1. The arrangement of the body A, catch C,

steady-pin P′, hook H, provided with lugs L and L′, notch E, slot N, and pin P, so as to operate as and for the purpose specified.

2. The arrangement of the body A′, lug G, catch C′, steady-pin P′, hook H′, provided with a hook, D, notch E′, slot N′, and pin P′, so as to operate substantially as and for the purpose specified.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN C. COTTINGHAM.

Witnesses:

ISAAC R. OAKFORD,

GEO. E. NICHOLS.