H. ASHFORD.

Boat-Detaching Apparatus.

No. 208,280. Patented Sept. 24, 1878.

Fig. 1.

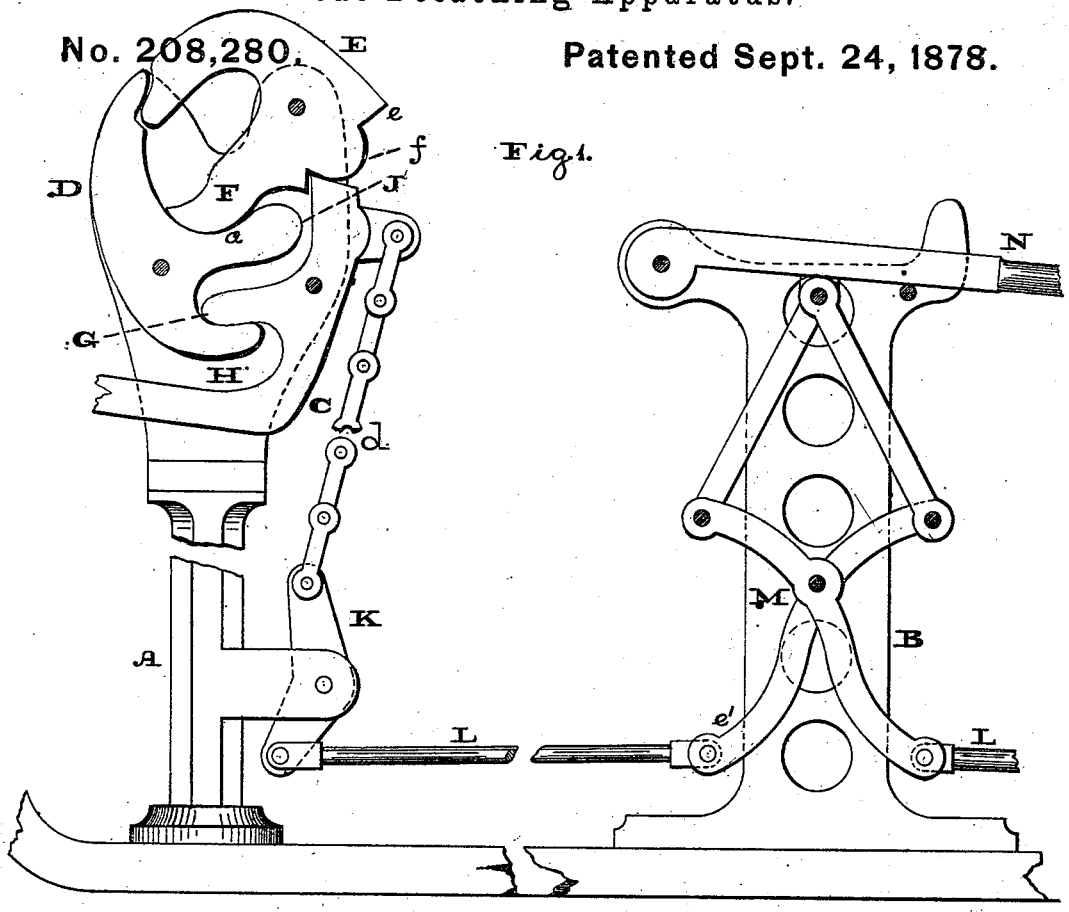


Fig. 2.

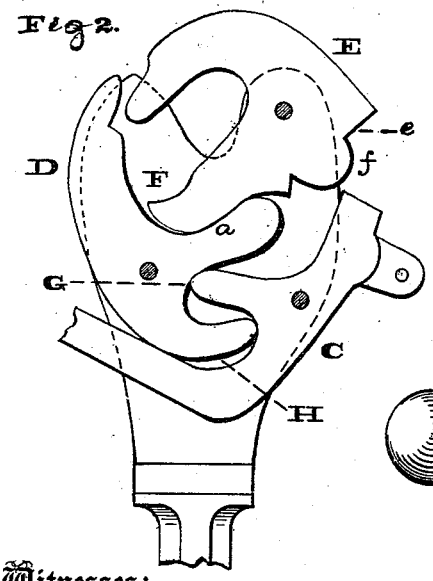
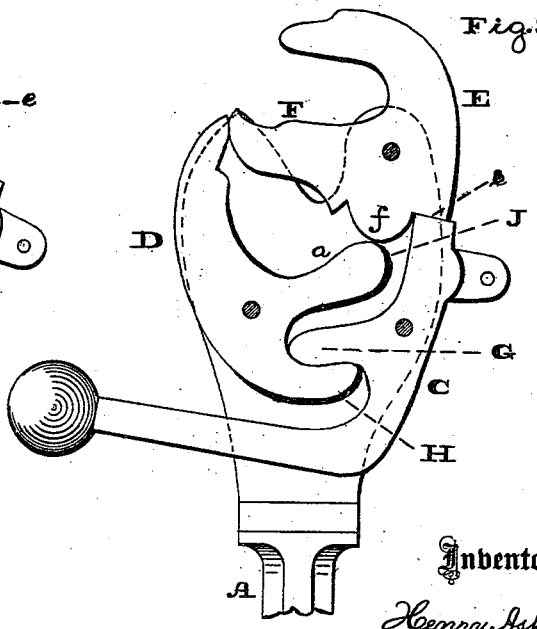


Fig. 3.



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IMPROVEMENT IN BOAT-DETACHING APPARATUS.

Specification forming part of Letters Patent No. **208,280**, dated September 24, 1878; application filed March 6, 1878.

To all whom it may concern:

Be it known that I, HENRY ASHFORD, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Detaching Boats, which improvement is fully set forth in the following specification and accompanying drawings, in which the figures are side elevations of the apparatus embodying my invention, certain face-plates being removed to show the operative parts.

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

My invention consists of mechanism for instantly and positively releasing a boat simultaneously at both ends from the tackle-blocks suspended from the davits or other means of suspension of the boat.

It also consists of means for retaining the disengaging-hooks in position and causing their subsequent automatic engagement with the tackle-blocks or other means of suspension of the boat.

Referring to the drawings, A represents standards, which are secured at opposite ends to the bottom or keel of a boat, and B represents an upright or support, likewise secured to the bottom or keel of the boat, but intermediate of the standards A. To the upper end of each standard A are pivoted a vertically-extending elbow-lever, C, whose lower end is weighted, a latch, D, and a disengaging-hook, E. The lever C is below, the hook E is above, and the latch D occupies a position at one side adjacent to a point between the said lever and hook.

F represents a cam-head projecting from the hook E toward the axis of the latch D and engaging with the latter at the curved surface *a*, so as to hold said latch.

G represents an arm extending from the lever C below its axis toward and engaging with a foot, H, at the lower end of the latch D, the said arm and foot G H projecting in opposite directions. At or near the center of the inner face of the latch D there is an arm, J, which projects therefrom so as to enter between the cam-head F and the arm G.

It will be noticed, in Figure 1, that the upper end of the lever C engages with the heel of the hook E, the arm G with the foot H, and the head F with the latch D, and, owing to the disposition of the axes of the lever, hook, and latch, the upward strain on the hook E is communicated to the upper end of the lever C, so that said end is prevented from outward movement. This causes the arm G to hold the foot H, which in return causes the head of the latch D to engage with the nose of the hook E, whereby the latter will be firmly locked.

The boat will be suspended from the ship's davits or elsewhere by means of the tackle-blocks or ropes attached to the hooks E, which, as has been stated, are firmly secured or locked; consequently the boat may be lowered with safety. To the upper end of the lever C there is connected a chain or cord, *d*, which is attached to an elbow-lever, K, pivoted to the lower end of the standard A. To the lower limb of said lever there is pivoted a rod, L, extending horizontally and pivoted to the lower end of a lever, *e'*, of a system of cross-levers, M, whose axis is on the uprights or supports B, the upper end of said levers being attached to an operating lever or handle, N. All these parts, excepting the levers M and lever or handle N, are duplicated, so that there is a standard with its connected mechanism at each end of the boat.

It will be seen that when the boat reaches the water the officer or other person in charge slightly raises the lever N. This operates the levers M so as to quickly draw in the rods L, and, owing to the elbow-levers K and chains *d*, the upper ends of the levers C are forced outward or from the heels of the hooks E. (See Fig. 2.) This raises the arms G and causes them to leave the foot H and press against the arms J, the heads F being free from holding contact with the latches D, whereby the heads of the latches D are moved from the noses of the hooks E, which, being no longer controlled, immediately turn on their axes and present their noses upward, (see Fig. 3,) the tackle or rope being thereby quickly disengaged from the hooks, and the boat is free.

As the levers C promptly return to their normal positions the hooks restrained by shoulders *e*, which engage with the levers, remain

open, and are supported on said levers C, the heads F assuming somewhat horizontal positions. When the tackle or ropes are again to be attached to the boat the rings or hooks of said tackle or ropes are placed on the heads F, the superimposed weight thereon causing the hooks to return or swing downward. The cam-surfaces *f* on the hooks, near the heels thereof, now ride on the upper inner corners of the levers C, so that the latter are forced outward. When the levers C have cleared the cam-faces *f* the heads F bear against the arm J, the levers again engage with the heels of the hooks, and the arms G with the feet H, whereby the hooks, are again secured or locked, and the boat may be raised.

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

1. The hooks E, with cam-heads F, and locking-levers C, with arms G, in combination with the latches D, whereby the latter are doubly held by the heads F and arms G, substantially as and for the purpose set forth.

2. The hooks E, with heads F, the latches D, with arms J and feet H, and the levers C, with arms G, combined and operating substantially as and for the purpose set forth.

3. The hooks E, with shoulders *e* and cam-faces *f*, in combination with the levers C, substantially as and for the purpose set forth.

4. The cross-levers M and lever N, in combination with the rods L, elbow-levers K, connections *d*, lever C, and hooks E, substantially as and for the purpose set forth.

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