

(No Model.)

B. A. CAPEHART.  
AUTOMATIC BOAT DETACHING APPARATUS.

No. 460,556.

Patented Oct. 6, 1891.

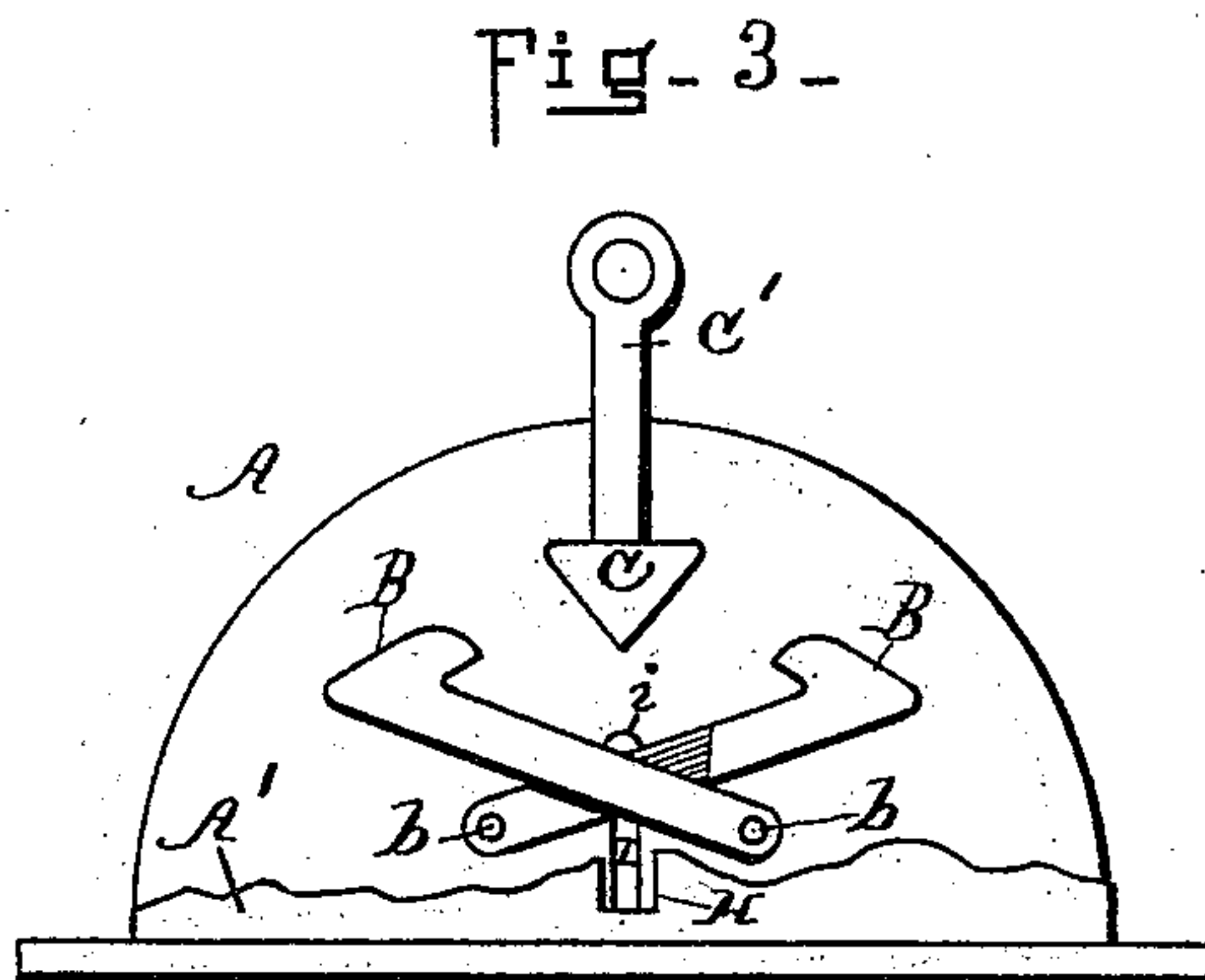
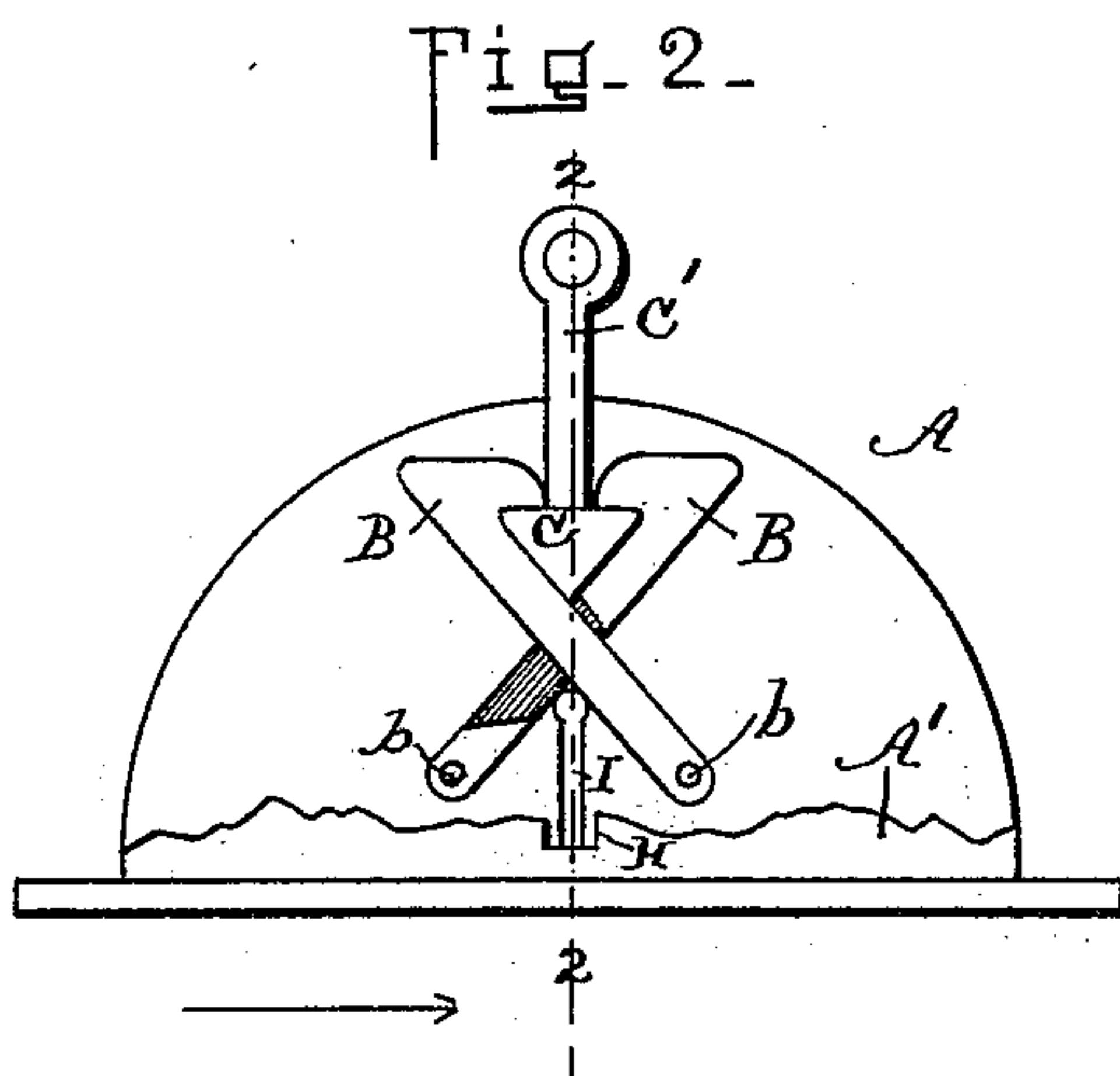
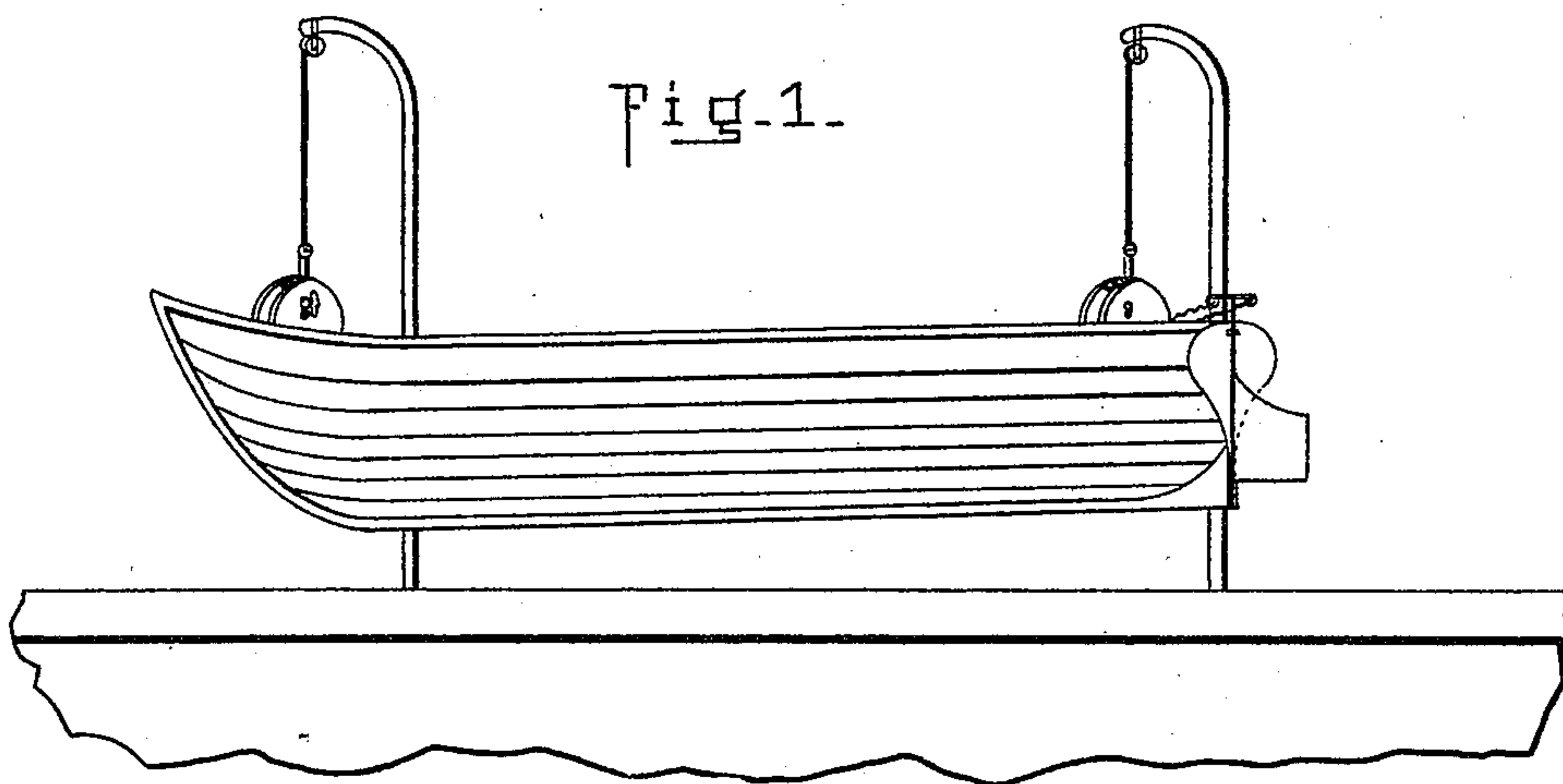


Fig-4-

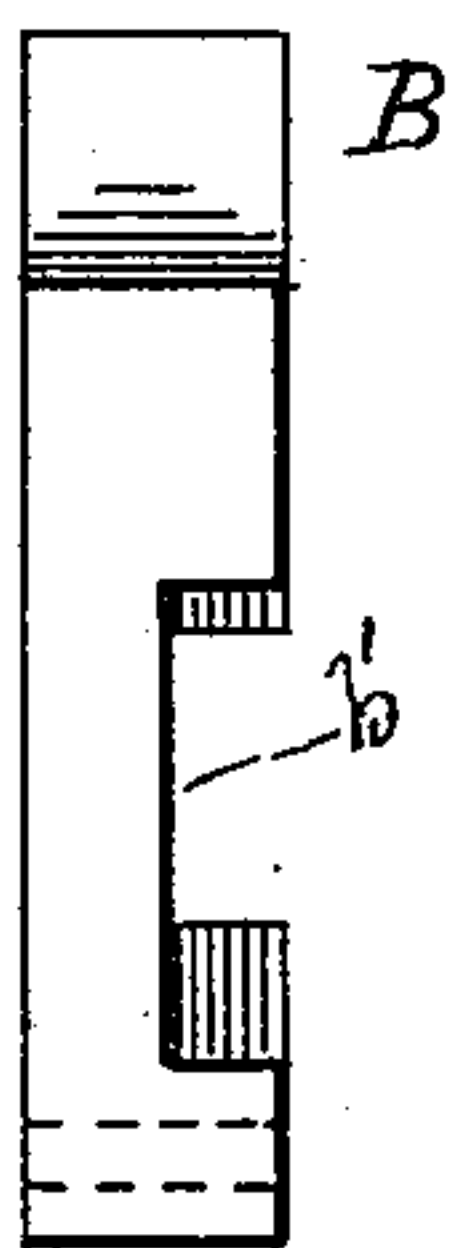


Fig-5-

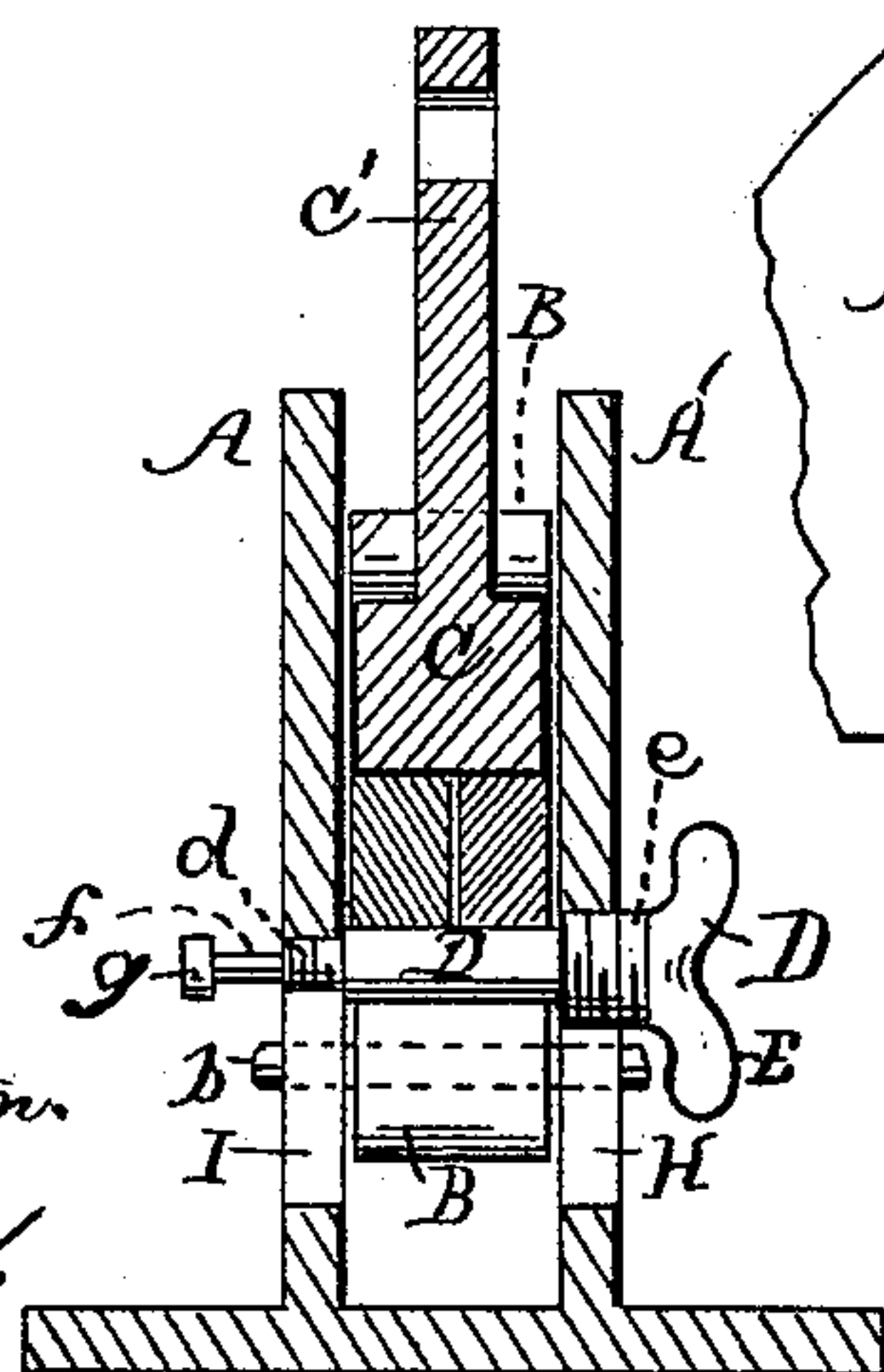
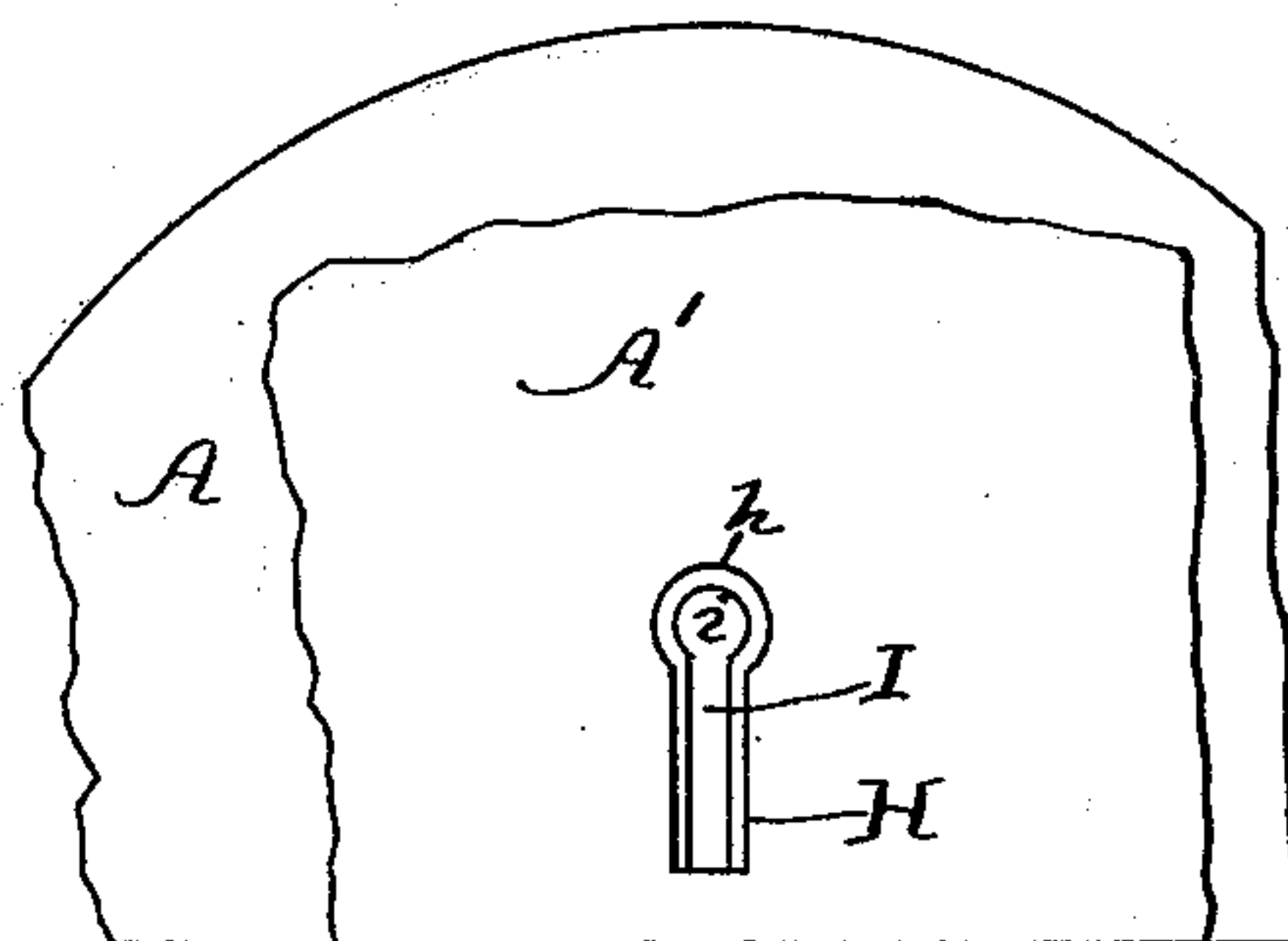


Fig-6-



Witnesses.  
Thos. Houghton.  
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Inventor  
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# UNITED STATES PATENT OFFICE.

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NORTH CAROLINA.

## AUTOMATIC BOAT-DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 460,556, dated October 6, 1891.

Application filed March 14, 1891. Serial No. 384,987. (No model.)

*To all whom it may concern:*

Be it known that I, BALDY ASHBOURNE CAPEHART, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Boat-Detaching Apparatus; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to provide a clutch for securing and automatically releasing boats, when lowered to the water from the davits of vessels, in an efficient, safe, and speedy manner, and this I effect by means of the devices constructed and arranged as shown in the specification and drawings hereto annexed, in which—

Figure 1 represents a boat attached and suspended by my device to and from the davits of a vessel; Fig. 2, a side view of the clutch in position while holding a boat in suspension, with one of the side plates broken away; Fig. 3, a similar view of the clutch when the grip is released; Fig. 4, a separate view of one of the jaws of the clutch, showing the recess *b'*, adapted to receive the other jaw, similarly recessed; Fig. 5, a vertical section through line 2 2 of Fig. 2 of the clutch, with the pin D holding the jaws in engagement with the tongue *C' C*; and Fig. 6, a side view of the side plates *A' A*, showing the slots *H I* for the locking bolt or pin D.

*A' A* represent two parallel vertical metal semicircular plates, both secured at or near the bow and stern of a boat, and between and through these plates, and near the bottom of the space therein inclosed, are pivoted the metal jaws *B B*, Figs. 2 and 3, by pivots *b b* at the lower ends of said jaws. The diameter of these plates need not be more than from six to eighteen inches and their distance apart from one to six inches.

The jaws *B B* cross each other, as shown in Figs. 2 and 3, in the recessed parts *b'* of same

in Fig. 4, and are provided at their upper ends with V-shaped hooks on their inner sides, adapted to interlock with shoulders on the arrow-shaped head *C* of the metal bolt *C'*, which bolt is secured to the lines from the vessel's davits, as shown in Fig. 1. The hooks of these jaws are weighted, being thicker than the stem, and are so arranged that the lines of their centers of gravity fall outside of their respective pivots *b b*, and when released from tension by any means these jaws must fall apart and assume the position shown in Fig. 3 and release the bolt *C' C* from engagement. The angles of the V-shaped hooks on the jaws *B B* and the shoulders on the bolt *C' C* should be such as are best adapted to secure a firm grip and also to permit the instantaneous release of the same when the tension is removed, and this release is effected the instant that the boat, when lowered, touches the water, and its support, being transferred from the lines attached to the davits to the water beneath, the jaws *B B* automatically fall apart by gravity, as in Fig. 3, and by no possible means, except manual effort by the parties in the boat, can the bolt *C' C* and the jaws *B B* resume their engagement. To supply a means to re-engage the jaws with the bolt and to insure a firm hold by the clutch to secure the boat while in position suspended from the davits at the rail of the vessel, I have provided a pin D, Fig. 5, having an auger-handle *E* on one end and the section *e* of same being screw-threaded for the purpose hereinafter shown. The section *d* at the other end of this pin is also screw-threaded for a short space and has a small recessed neck *f* longer than the thickness of the side plate *A*, and is terminated with a button or nut *g* larger than the circular opening *i*. This pin D is intended to be inserted in the slots *H I* in the parallel side plates *A' A*. These slots, large enough to admit the pin D, have at their upper ends larger circular screw-threaded holes *h i*, corresponding, respectively, to the screw-threaded sections *e* and *d* of the pin D, and are situated with their screw-threaded upper ends just below the lower angle formed by the



crossing of the jaws B B when they are in the position shown in Fig. 2—that is, when interlocked with the bolt C' C.

When it is desired to raise the boat from the water to the davits and secure it when in that position, the bolt C' C is manually placed in position, as shown in Fig. 3, and the pin D is raised until the respective screw-threaded ends *e* and *d* engage the screw-threaded sockets *h* and *i*, and then by a few turns it will remain fixed at the point of the lower angle of intersection of the jaws B B, and thus lock the jaws with the bolt C' C, as shown in Fig. 2, and prevent them from falling apart.

When the boat is to be lowered, this pin is unscrewed and drops to the bottom of the slots, which should be so situated that the pin D when in such position shall prevent the jaws B B from falling unnecessarily low.

The dimensions and weight of the side plates A' A and of the clutch or jaws B B and bolt C' C need be no greater than is requisite for the work to be performed, and a space of a few inches between the two parallel semicircular plates, with jaws adapted to work snugly and smoothly therein, would seem to be sufficient both for strength and efficiency. These side plates also serve to prevent any lateral motion or dislocation of the jaws, which should fill laterally the space between the plates.

I do not claim the broad construction of a securing and releasing apparatus by means of loose jaws engaging a spear-head; but my invention is based on the relative positions of these two devices and their peculiar construction and operation by means of gravity. Neither do I confine myself to the exact conformation or position of the foregoing devices, as shown in the drawings.

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

In an automatic clutch for securing, holding, and releasing boats, the combination of the slotted side plates A' A, secured to a boat at suitable positions, the jaws B B, pivoted between said plates and crossing each other and having V-shaped hooks, the bolt C' C, having shoulders adapted to interlock with the V-shaped hooks on the jaws B B, and the screw-threaded pin D, adapted to engage and operate within the screw-threaded openings *h i* in said plates, all constructed and arranged to operate as and for the purpose shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

B. ASHBOURNE CAPEHART.

Witnesses:

H. W. HUGHES,  
A. S. CHATFIELD.