

(No Model.)

2 Sheets—Sheet 1.

F. BLANDING.
BOAT DETACHING APPARATUS.

No. 557,475.

Patented Mar. 31, 1896.

Fig. 1.

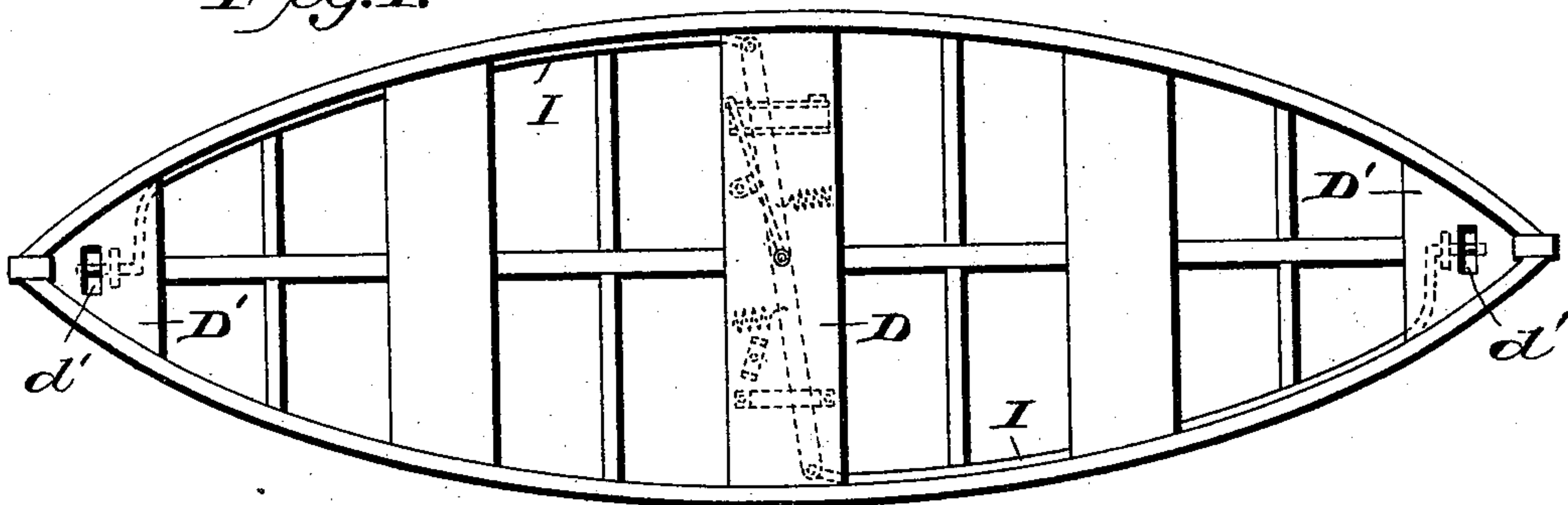


Fig. 5.

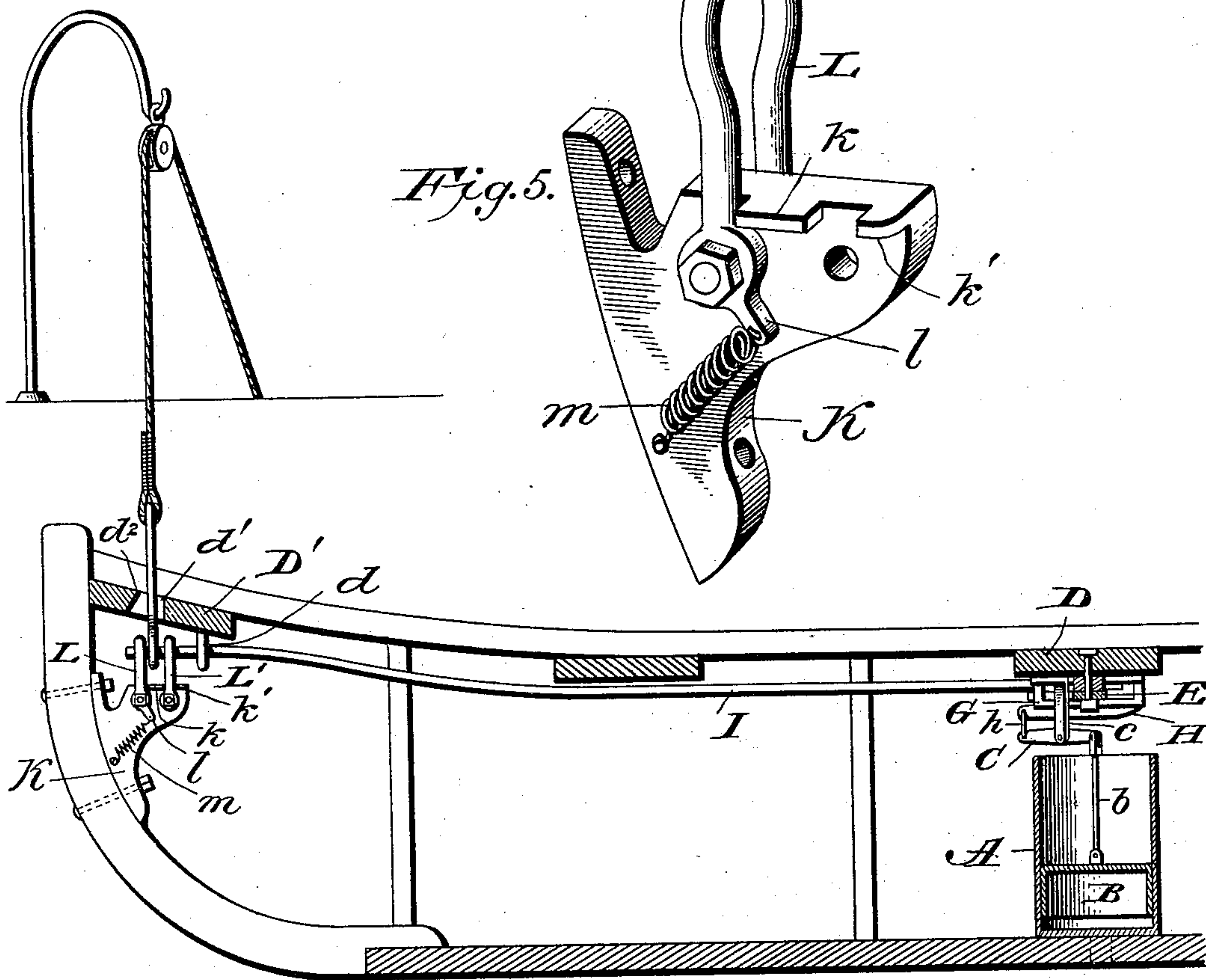
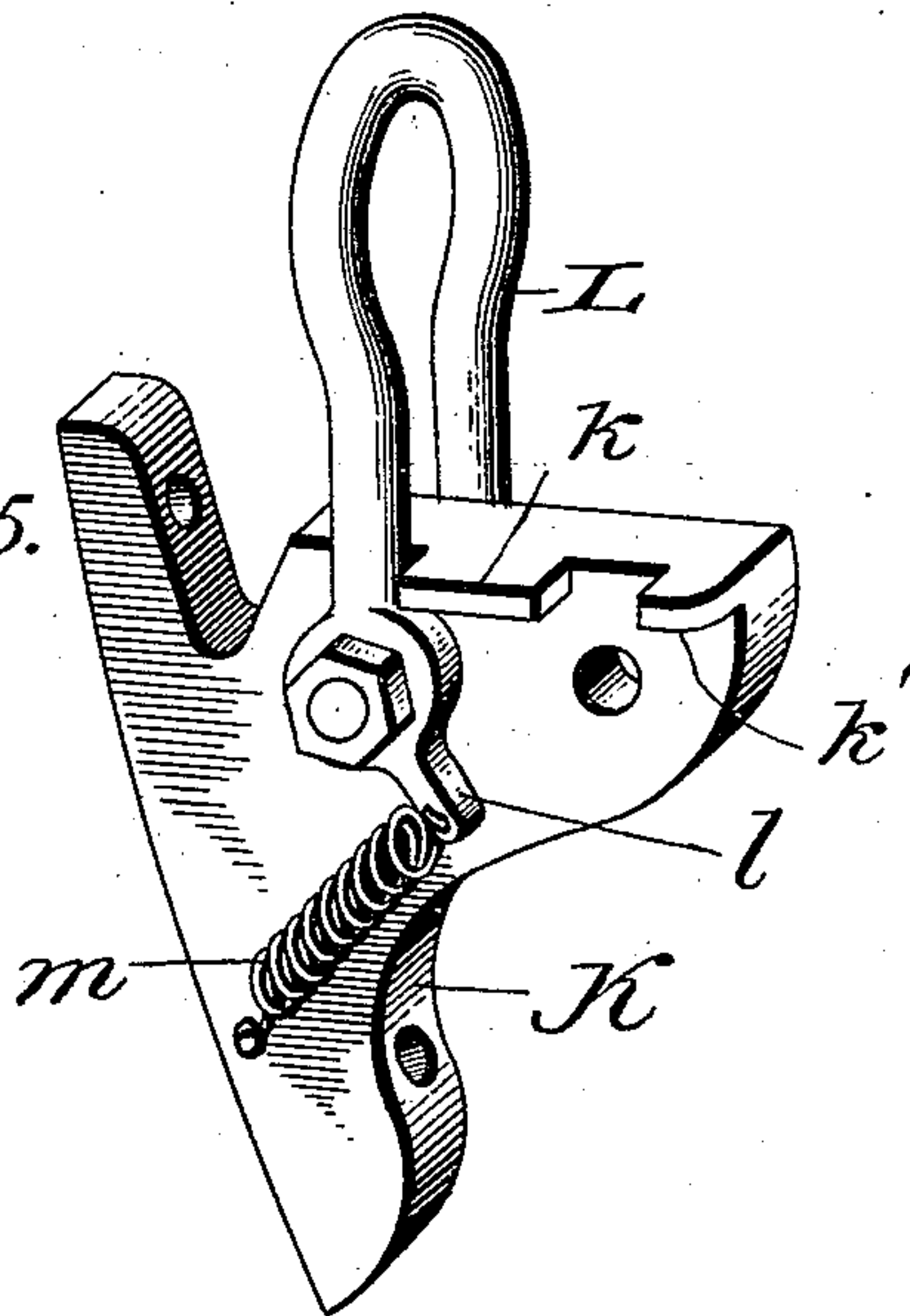
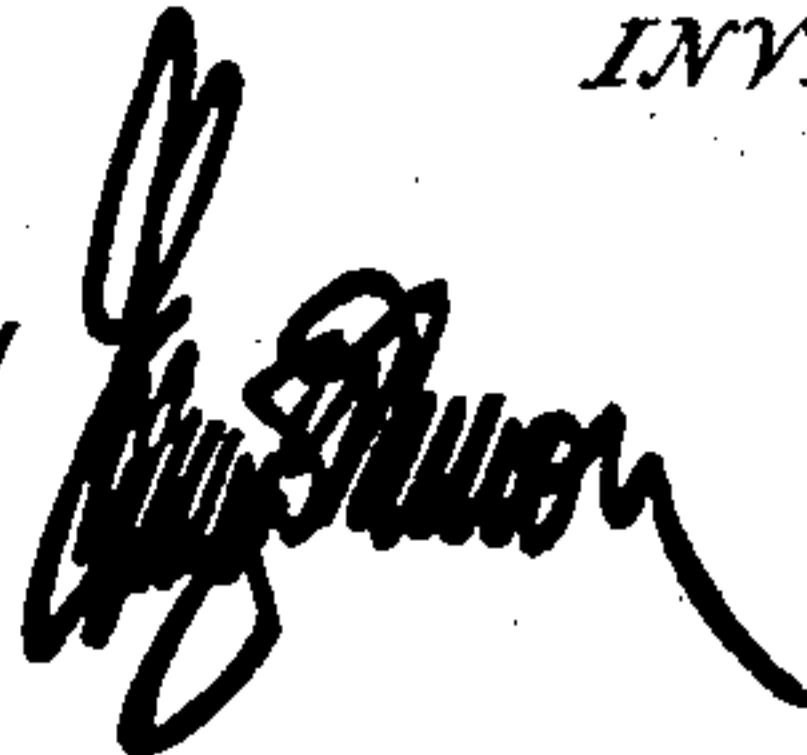


Fig. 2.

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by 

Attorney

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Fig. 3.

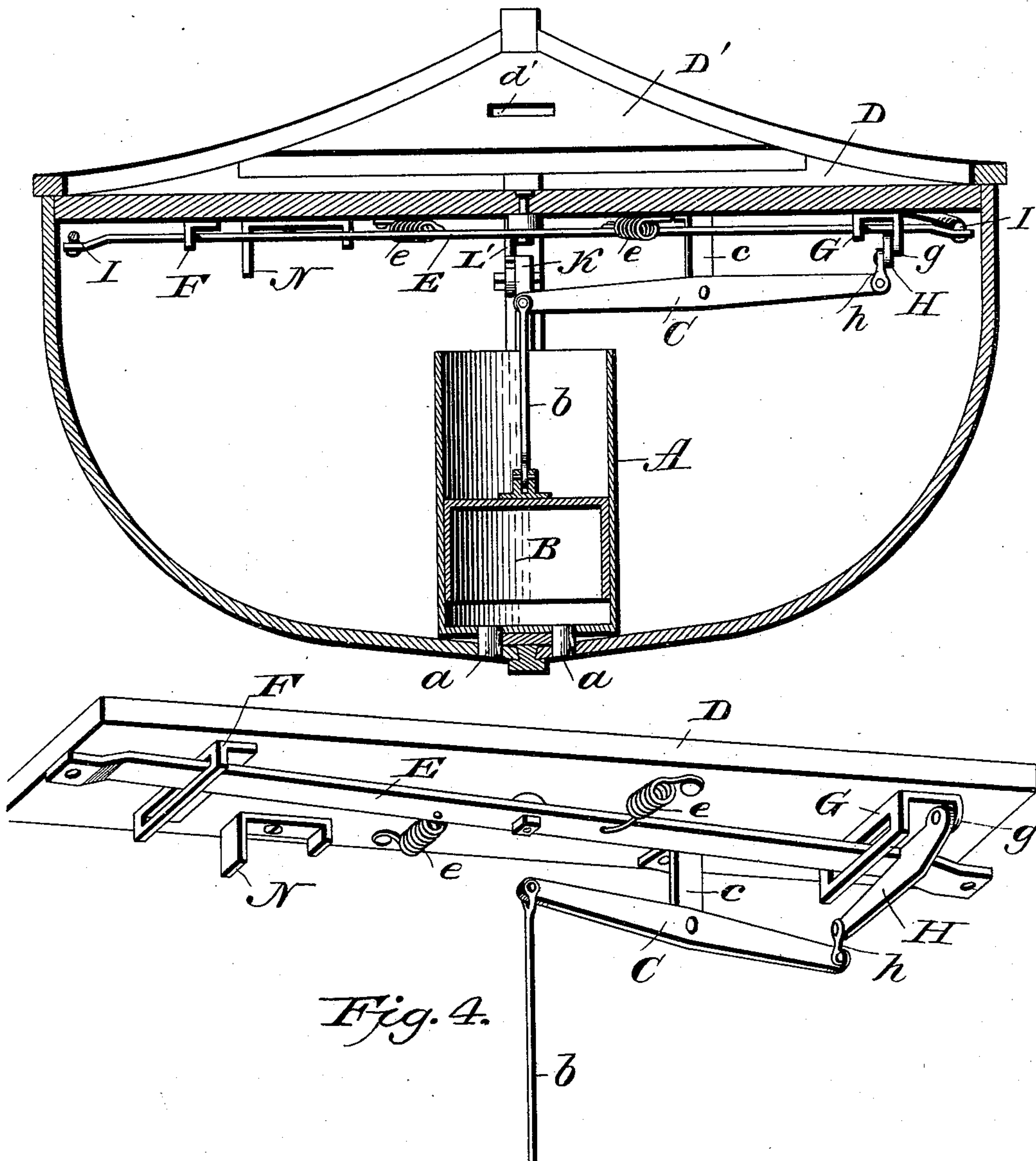


Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANCIS BLANDING, OF PUTNAM, CONNECTICUT.

BOAT-DETACHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 557,475, dated March 31, 1896.

Application filed October 5, 1895. Serial No. 564,707. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS BLANDING, a citizen of the United States of America, residing at Putnam, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Boat- Detaching Apparatus; and I do hereby 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide means for automatically releasing the lowering-tackle from the connecting-rods carried by the boat when the latter rests upon the water.

With the above end in view the invention consists in providing the boat with a cylinder opening through the bottom of the boat and provided with a piston, the piston-rod being connected to the detaching means so that when the boat reaches the water the water will enter the cylinder and raise the piston to automatically release the lowering-tackle.

The invention further consists in providing the releasing mechanism with a catch for holding the same out of operative position and also in the approved means for connecting the hoisting and lowering tackle to the rods carried by the boat, as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a boat, showing the application of my invention thereto. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse section. Fig. 4 is a detail perspective view of the mechanism carried by a seat or thwart of the boat, and Fig. 5 is a detail perspective view of one of the brackets which are attached to the stem and stern posts of the boat.

A designates a cylinder which is attached to the bottom of the boat and is of sufficient height to extend a considerable distance above the water-line. The cylinder is provided at its lower end with short tubes *a a*, which extend through the bottom of the boat to permit the water to enter the lower part of the

cylinder for the purpose hereinafter set forth. Within the cylinder is located a piston B, which is provided with a piston-rod *b*, said piston-rod being connected at its upper end to one end of a lever C, which is centrally pivoted to a bracket *c* depending from the midship-thwart D of the boat.

E designates a horizontally-swinging bar which is centrally pivoted to the under side of the thwart D, and the ends of this bar pass through slots in guide-plates F and G, which limit the swinging movement of said bar. The guide-plate G has a depending portion *g*, to which is pivoted a catch-plate H, the catch of which engages the bar E to hold the same against the tension exerted by springs *e e*, which are attached to the thwart D and to the bar on either side of its pivot. The outer end of the catch-plate H is connected by a link *h* to the end of the lever C opposite that to which the piston-rod *b* is connected, so that when the piston B is raised in the cylinder A the catch-plate H will be operated through the interposition of the lever C to release the bar E and permit the springs *e* to swing or turn the same upon its pivot for the purpose hereinafter set forth.

I I designate rods which are connected to the ends of the swinging bar E and extend along the inner side of the boat, one forward and the other aft, the ends of the rods being bent, as shown, to extend on a line with the keel and pass through staples or eyes *d* secured to the under side of the end thwarts D' of the boat. The end thwarts D' are each provided with an opening *d'*, through which the lower end or eye of the hoisting and lowering tackle pass to engage the ends of the rods I, one edge of the opening *d'* being inclined or beveled, as shown at *d''*, to permit the end of the hoisting and lowering tackle to be swung over the ends of the rods I when said rods are projected and held by the catch-plate H, as hereinbefore described.

K K designate suitable brackets, one being attached to the stern-post and the other to the stem-post at a suitable distance beneath the end thwarts, and to these brackets are connected eyebolts L and L', the eyebolt L' being held in a rigid upright position by lugs *k* and *k'* formed on the bracket, while the eyebolt L is allowed to swing in one direction

upon its pivot, being normally held in an upright position by a helical spring *m*, which is attached to the bracket and to the depending end *l* of the eyebolt. The outer ends of the rods *I I* pass through the eyes of the bolts *L* and *L'*, and when the eye of the hoisting and lowering tackle is connected to its rod it will lie between the eyebolts, so that the weight of the boat will come upon said eyebolts. The eyebolt *L* is pivoted to the bracket, so that it can be swung to one side when it is desired to pass the eye of the hoisting and lowering tackle over the end of the rod *I*, as hereinbefore mentioned.

Though I have shown and described the bolts *L* and *L'* as eyebolts, it is apparent that they could be substituted by *U*-bolts having eyes at their lower ends through which the connecting-pins pass.

To the under side of the thwart *D* is pivoted a turn-button *N*, having a bent end which is adapted to be turned against the swinging bar *E* to prevent said bar being accidentally turned by accidentally releasing the catch *H*.

I have shown the device provided with a cylinder and piston, but it is obvious that any suitable mechanism may be substituted for these parts to operate the lever *C* by water entering the bottom of the boat.

The device hereinbefore described is automatic in operation, for as soon as the boat settles upon the water a quantity of the water will enter the cylinder *A* through the openings *a* and pressing against the piston *B* will raise the same, which, through its connection with the lever *C*, will operate said lever to release the catch-plate *H* from engagement with the swinging bar *E*, thus allowing the springs *e* to turn the bar which draws the rods *I* out of engagement with the hoisting and lowering tackle.

A device of this character operates much more efficiently and quicker than a releasing mechanism operated by hand. Should the crest of a wave enter the cylinder before the boat is fairly settled upon the water, the weight of the boat would prevent the springs acting to withdraw the rods.

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

1. In an automatic boat-detaching apparatus, the combination, of a spring-actuated swinging bar connected to rods to which the lowering-tackle is attached, a catch in engagement with the swinging bar to hold it against the action of the springs, and means substantially as shown for releasing the catch.

2. In a boat-detaching apparatus, the combination, of a spring-actuated swinging bar

connected to rods to which the lowering-tackle is attached, a catch for holding the swinging bar against the action of the springs, and a water-chamber connected to the catch for operating the same by the water-pressure when the boat is lowered, substantially as shown and for the purpose set forth.

3. In a boat-detaching apparatus, the combination, of brackets *K* secured to the boat, eyebolts *L* and *L'* connected to the brackets, the eyebolts *L* being in swinging engagement with the brackets, rods *I I* adapted to pass through the eyebolts to engage the lowering-tackle; together with a spring-actuated swinging bar *E* connected to the rods *I*, a catch for holding the bar against the action of the springs, and means for releasing the bar when the boat settles upon the water, substantially as shown and for the purpose set forth.

4. In a boat-detaching apparatus, the combination with the end thwarts having openings, one of the side walls of each opening being inclined or beveled, of brackets *K* rigidly secured to the boat, eyebolts *L* and *L'* attached to the bracket, one of the eyebolts having a swinging movement, springs for holding the swinging eyebolts in an upright position; together with a spring-actuated swinging bar *E*, a catch for holding the bar against the action of the springs, and a float or piston connected to the catch so as to release the bar when the boat rests upon the water, substantially as shown and described.

5. In a boat-detaching apparatus, the combination, of brackets *K* having upwardly-projecting eyebolts, rods *I* having bent ends which pass through the eyebolts, and a spring-actuated bar to which the rods *I* are connected, said bar being pivoted to one of the thwarts; together with a catch-plate *H* adapted to engage the bar to hold it against the action of the springs, a lever *C* connected to the catch-plate, and a piston or float *B* connected to the lever, the parts being organized substantially as shown and for the purpose set forth.

6. In combination with the brackets *K* having upwardly-projecting eyebolts, of a spring-actuated bar *E* connected to rods which pass through the eyebolts, a catch-plate for holding the bar against the action of the springs, means for operating the catch-plate to release the bar, and a turn-button adapted to hold the bar against accidental movement, substantially as shown and described.

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

FRANCIS BLANDING.

Witnesses:

JOHN MURRAY,

CHARLES L. TORREY.