

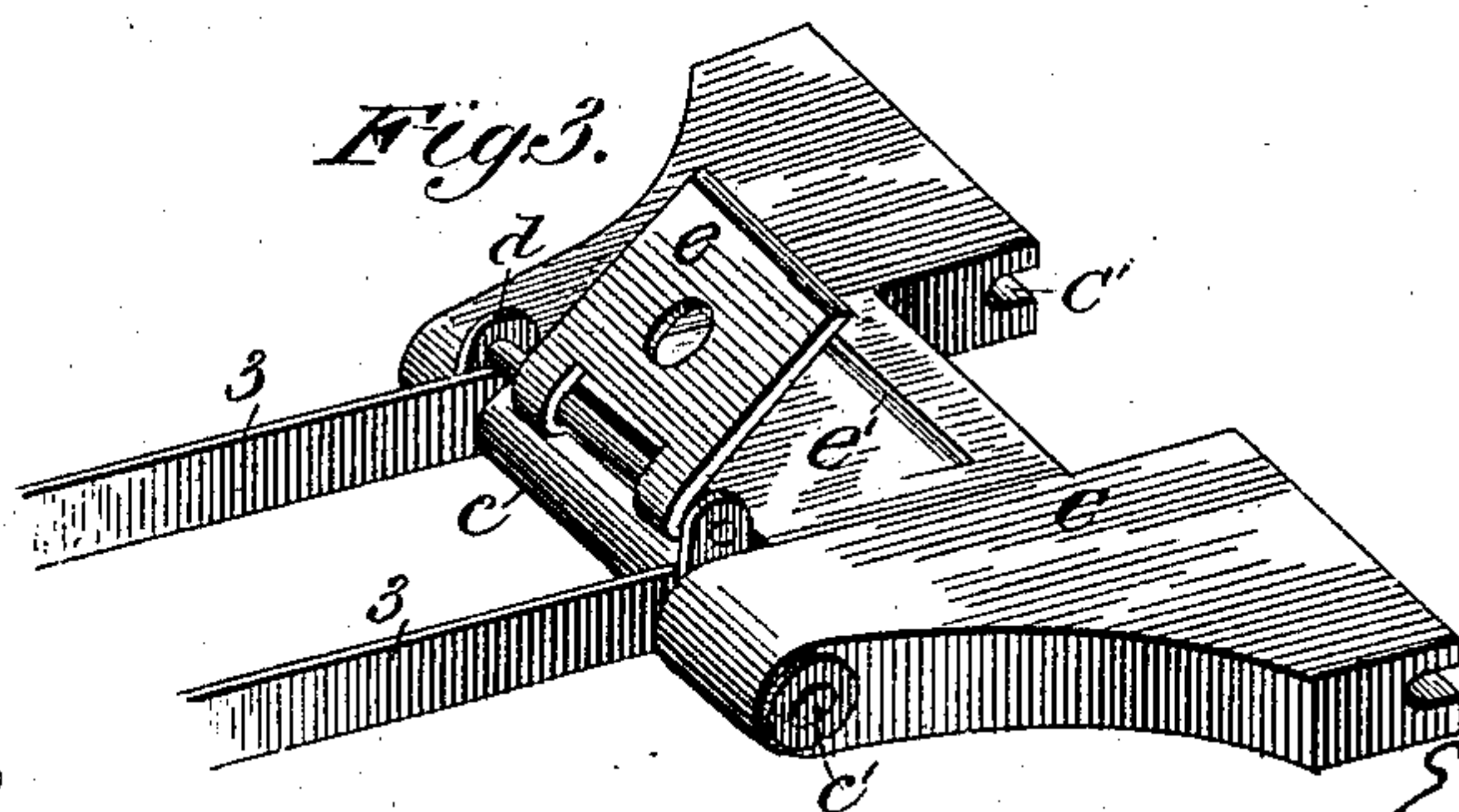
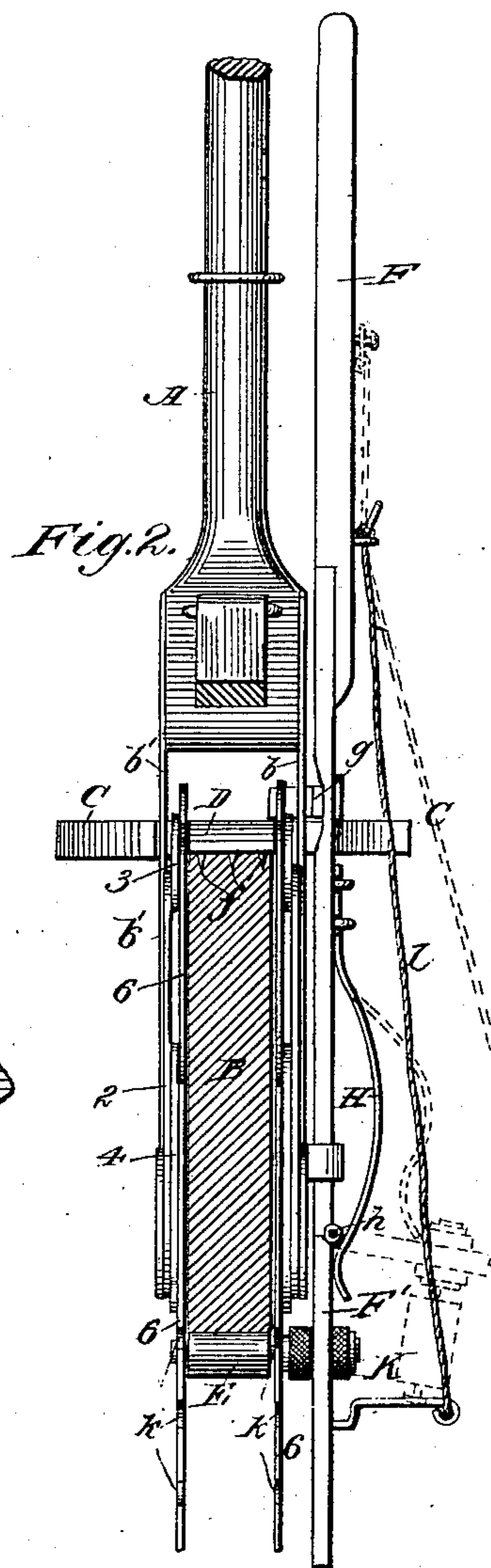
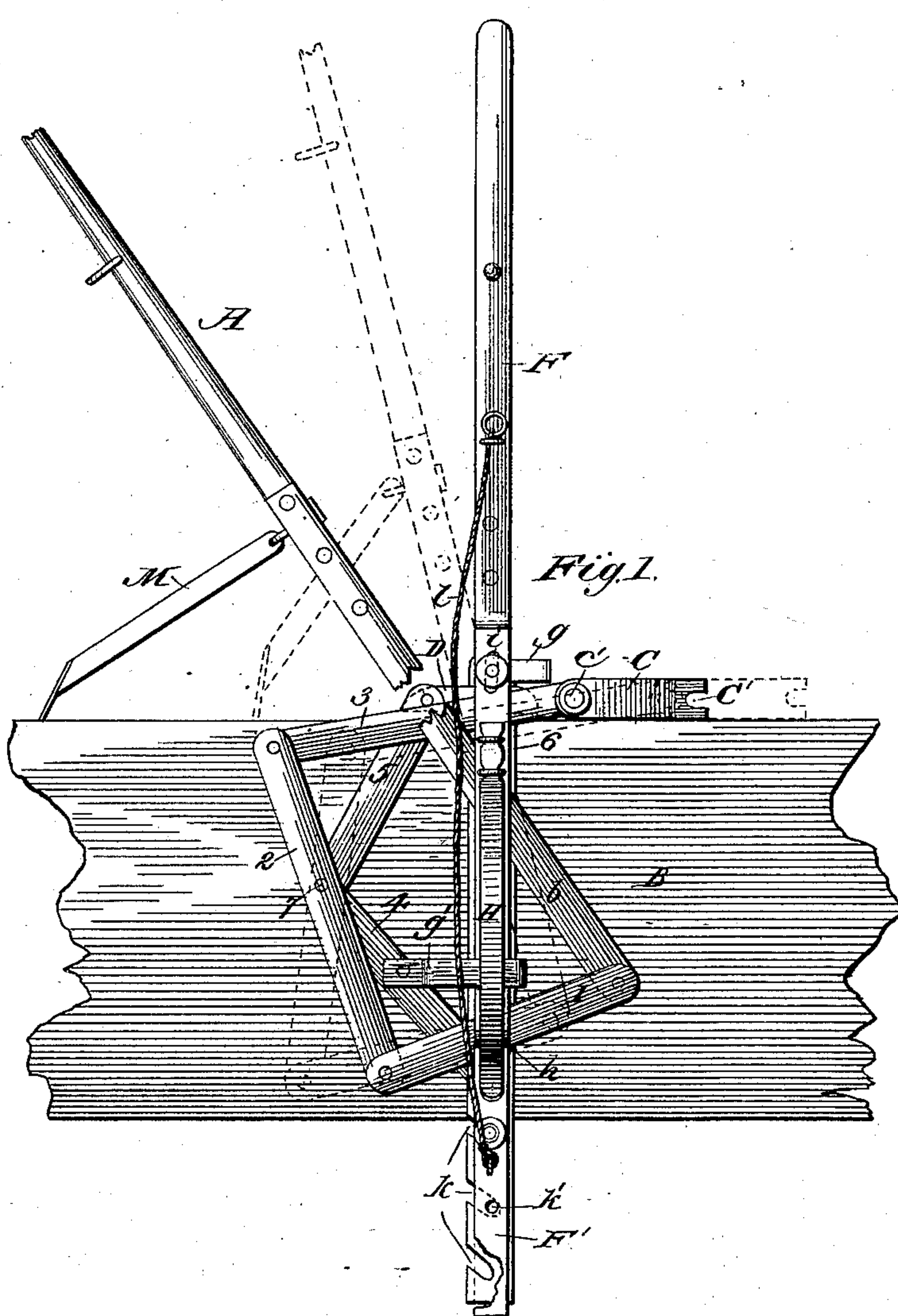
(No Model.)

E. SAGE.

CLAMP.

No. 279,601.

Patented June 19, 1883.



Witnesses.

J. G. Hinkel  
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# UNITED STATES PATENT OFFICE.

EUGENE SAGE, OF JACKSBOROUGH, TEXAS, ASSIGNOR OF ONE-HALF TO  
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## CLAMP.

SPECIFICATION forming part of Letters Patent No. 279,601, dated June 19, 1883.

Application filed November 21, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE SAGE, a citizen of the United States, residing at Jacksborough, in the county of Jack and State of Texas, have invented certain new and useful Improvements in Flooring Jacks or Clamps; 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 and figures of reference marked thereon, which form a part of this specification.

This application is for an improvement upon that class of inventions known as "flooring jacks" or "clamps," and has for its object the lessening of labor for the attainment of the object or result which this is intended to perform, and the readiness and ease with which it can be manipulated.

In the drawings, Figure 1 is a side elevation, showing the position of the device when in use. Fig. 2 is a rear view, and Fig. 3 is a perspective view, of the clamp or plunger detached to more clearly show its construction.

The use for which my apparatus is intended is to aid in laying flooring or boards upon joists, and its particular function is to tighten each board upon the other and to hold the boards while they are nailed to the joist. Many patents have been granted for the same end; but it is thought by my construction of the several parts, as herein shown, the effectiveness of the apparatus is increased beyond that of any now in use.

Referring more particularly to the drawings, I will now describe the several parts, the same letters of reference denoting like parts throughout the entire specification.

A is the lever by which the power is applied to the machine.

B represents the joist, and C is the plunger or clamp, which is forced against the board.

b and b' are two extensions of the lever A, forming, as it were, a bifurcated lever. To the ends of these forks or extensions b and b' are loosely connected by rivets the parts 1, 2, and 3, the said several parts being each joined to the other, also, by rivets. These constitute what I term a "moving frame." Between the two

ends 3 of the frame is a friction-roller, e, turning upon a pin, e', on which pin the plunger C also works. (See Fig. 3.) Working upon the same pin is an eccentric, d, having upon it a hinge-like plate, e. The plunger C is U or mouth shaped, and its front end, C', is grooved to fit over the corresponding tongue in the board, against which it is forced. The advantage of the U or mouth shape is to enable the operator, after he has tightened the board, to nail it, and to allow room for the descent of the hammer upon the nail. The plunger is also provided on its top with a flange or rib, e', formed by hollowing it out a little, or otherwise. The plate e is pushed down against this flange, and serves to lend strength to and prevent the clamp from flying up through an excess of power.

The parts lettered 4, 5, and 6 constitute what may, for convenience, be called a "stationary frame," upon which the moving frame works, they being joined by a rivet, as at 7. The other end of the portion 6 is fastened to a base block or plate, D, which rests on the top of the joist, said plate being provided on its under surface with short spikes or teeth f, which take hold on the joist, and the greater the power applied to lever A the tighter it hugs the joist. That portion 6 of the stationary frame is also fastened at one end to the base-block D, and, leading straight down from the sides thereof, is joined below the middle of its length to the part 4. It is provided with niches or grooves for holding a second roller, E, which works underneath the joist and furnishes leverage, and is operated by a second lever, which I will now proceed to describe, the manner of operation being best shown in Fig. 2.

F is an auxiliary lever, which is connected to one side of the base-plate by a bent connection, g, and works in a guide, g', on the part 4 of the stationary frame. The connection g serves as a guide for the extension b' of the lever A to work in. This auxiliary lever is made in two pieces, the shorter being hinged to the longer piece, as at h, and the two being connected by a spring, H. The longer piece of the lever F has a slot in it, as shown at i, working on the pin which joins it by the bent connection to the base-plate. In the



shorter piece,  $F'$ , are a series of holes,  $k$ , which hold one end of the pin of the roller  $E$ .

$K$  is a nut, the unscrewing of which will enable the roller  $E$  to be taken out and adjusted to any thickness of joist. When the apparatus is in operation the bottom roller cannot come out of the niches  $k$  until the lever  $F$  is pushed down on the slot, then pushed forward, which releases it, when by drawing on the cord  $l$  the small piece  $F'$  is brought to the position as shown in dotted lines, Fig. 2, and the device can be lifted from the joist. The spring  $H$  serves to retain the smaller piece of the lever in place.

$M$  is a pawl or stop having saw-like teeth at the end, and, resting on the joist, is for holding purchase against.

In describing the different parts of the "frames," let it be remembered that where reference is made to a part on one side of the joist there is a corresponding part on the other. This arrangement of frames, besides performing the functions described, also acts to retain the device in position and to prevent a lateral or sidewise action of the lever. One operator is all that is required to manage the apparatus.

Having described the several parts, I will now describe the operation.

The device is placed on the joist, the frames embracing each side and the proper adjustment made to the roller  $E$ , so as to travel on the bottom of the joist. Then the apparatus is moved up to the board and the plunger placed against it, when by exerting sufficient power to the lever  $A$  it is imparted by its extensions  $b$  and  $b'$  to the parts 1, 2, and 3 of the frame, to the plunger, and thence by the plunger to the board. As the power is applied the iron points in the bottom of the base-plate bite into the joist and prevent the device from slipping back, and as the lever is raised or pushed forward the stop  $M$  falls along with it, and when the operator lets go to nail the board this serves to hold the "purchase." Of course previous to applying the power the plate  $e$  is pushed down against the flange  $e'$  to prevent the plunger from flying up.

Having thus described my invention and its operation, what I claim is—

1. In combination, the lever  $A$ , having extensions  $b$  and  $b'$  and rest  $M$ , the movable frame 1 2 3, the plunger  $C$ , pivoted to said frame, and means, substantially as described, for attaching said frame to a joist, as set forth.

2. The combination of the bifurcated lever

$A$ , the movable frame 1 2 3, with the plunger  $C$ , the stationary frame 4 5 6, with the base block or plate  $D$ , connected to said stationary frame, and means, substantially as described, for engaging the under side of a joist, as and for the purposes set forth.

3. The combination of the lever  $A$ , the moving and stationary frames, the latter being constructed substantially as described, whereby it may be attached to a joist, the U-shaped plunger  $C$ , pivoted to said moving frame, said plunger being provided with the flange  $e'$ , and the plate  $e$ , hinged above the pivot of plunger  $C$ , and groove  $C'$ , substantially as and for the purposes described.

4. The base-plate  $D$  and frame-pieces 6, provided with slots, as set forth, in combination with the lever  $F$ , provided with slot  $i$ , and pivoted to said base-plate by a pin passing through said slot, and a device to engage the slots in the frame-pieces connected to said lever, substantially as and for the purposes set forth.

5. The combination of the auxiliary lever  $F$ , made in two pieces and hinged together, the shorter piece,  $F'$ , having a series of holes therein, the holes being on a line with the niches in part 6 of the stationary frame for the reception and adjustment of the roller  $E$ , with the spring  $H$ , base-plate  $D$ , guide  $g'$ , and cord  $l$ , to operate substantially as specified.

6. The combination of the bifurcated lever  $A$ , pawl or rest  $M$ , moving frame composed of the parts 1 2 3, plunger  $C$ , roller  $e$ , eccentrically-hinged plate  $e$ , with the auxiliary lever  $F$ , in two pieces and hinged, the spring  $H$ , stationary frame composed of the parts 4 5 6, base-plate  $D$ , guide  $g'$ , roller  $E$ , and cord  $l$ , all operating together substantially as and in the manner described.

7. In a floor-clamp, the combination, with a frame constructed substantially as described, whereby it may be attached to a floor-joist, of a lever pivoted to said frame, a plunger to engage a floor-board, connected to said lever by a pivotal connection, as described, and provided with a flange, as set forth, bearings rigidly attached to said plunger, and a pawl pivoted in said bearings, substantially as described.

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

EUGENE SAGE.

Witnesses:

P. E. WOLFFARTH,  
JOHN MELCH.