

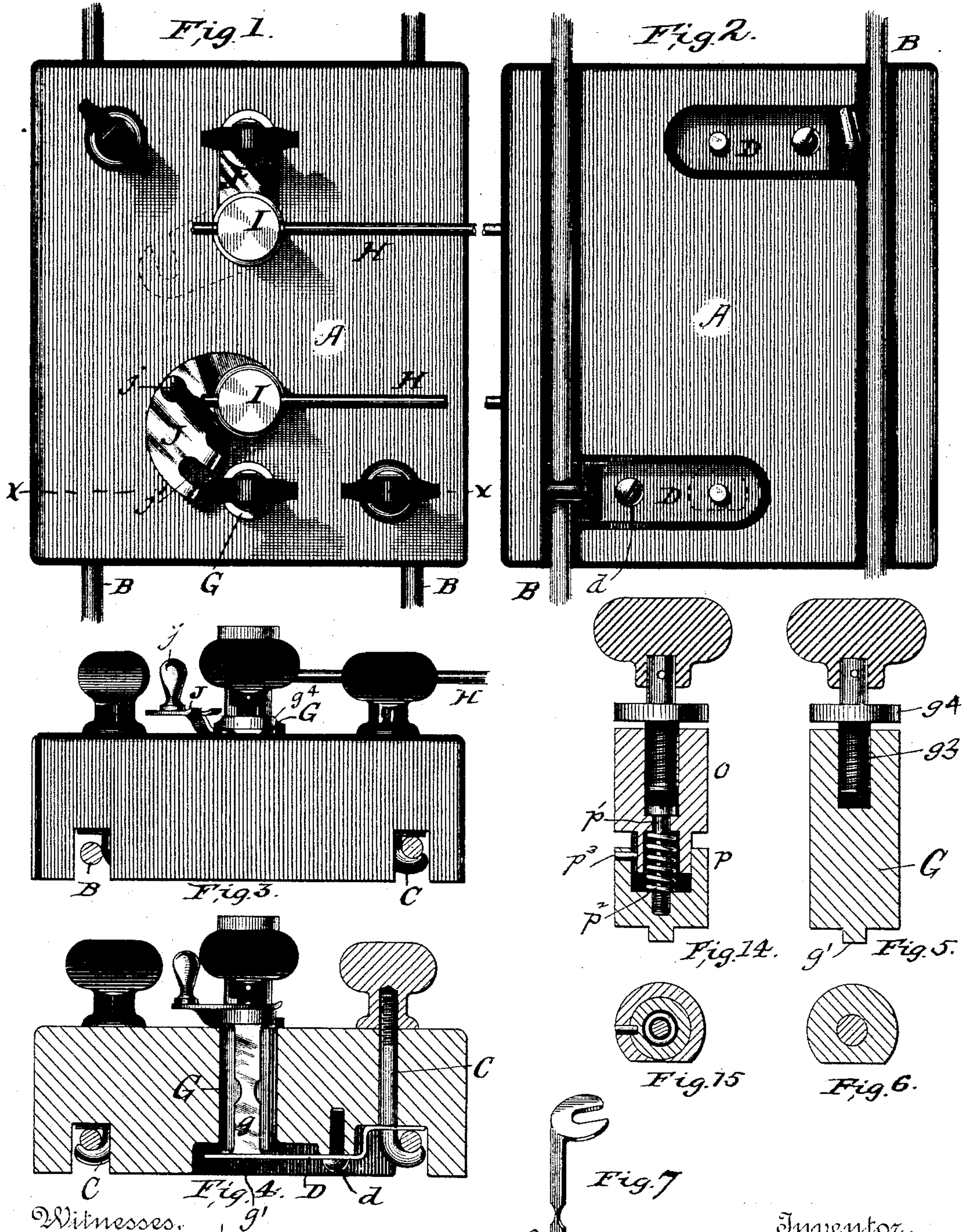
(No Model.)

2 Sheets—Sheet 1.

C. G. PERKINS.  
ELECTRIC CUT-OUT.

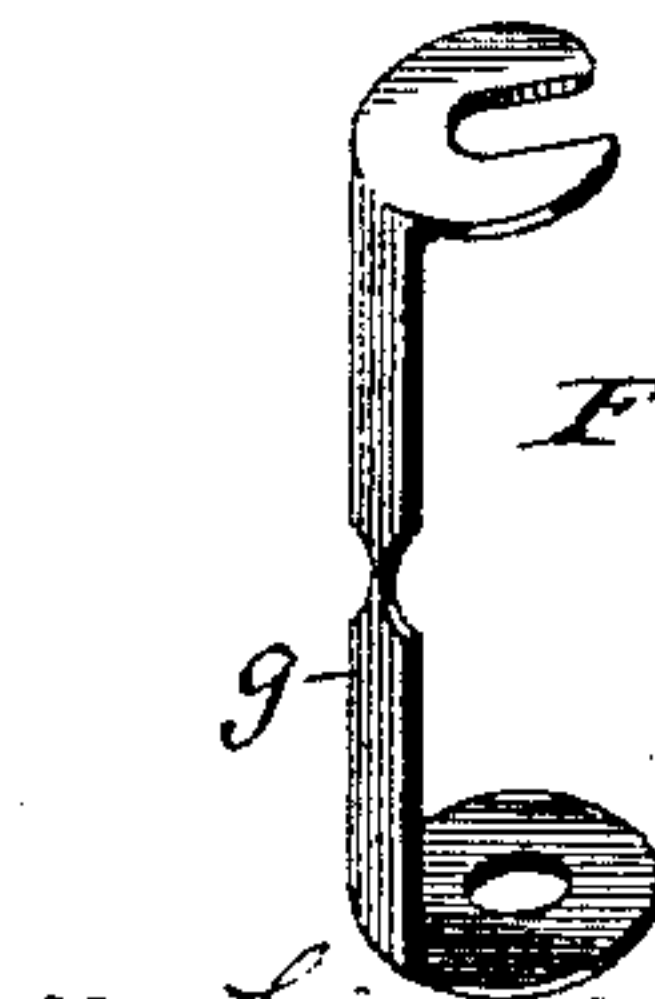
No. 385,067.

Patented June 26, 1888.



Witnesses.

Frank H. Pierpont.  
Wm. H. Rosenthal



By his

Attorneys.

V. D. Stockbridge & Co.



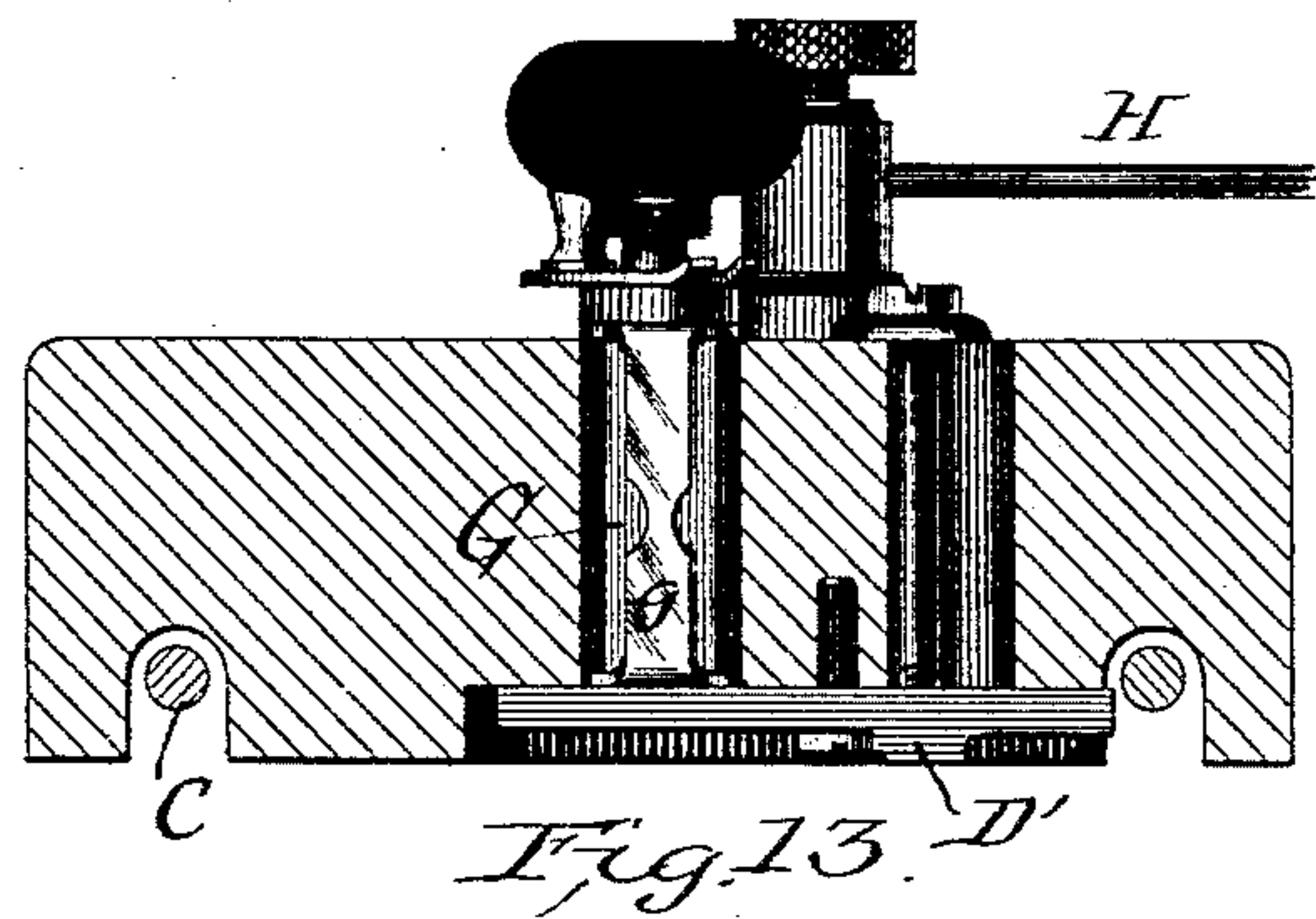
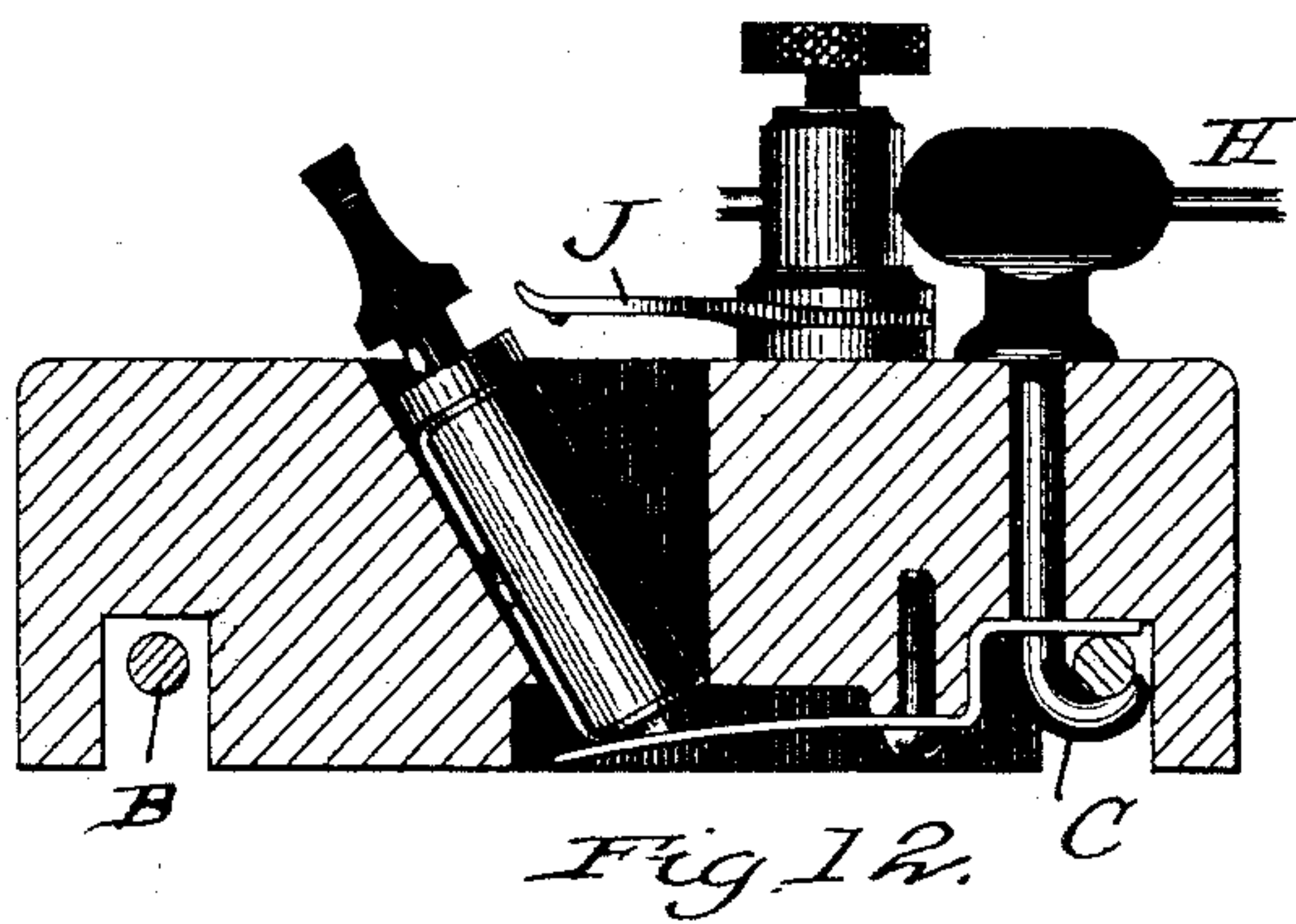
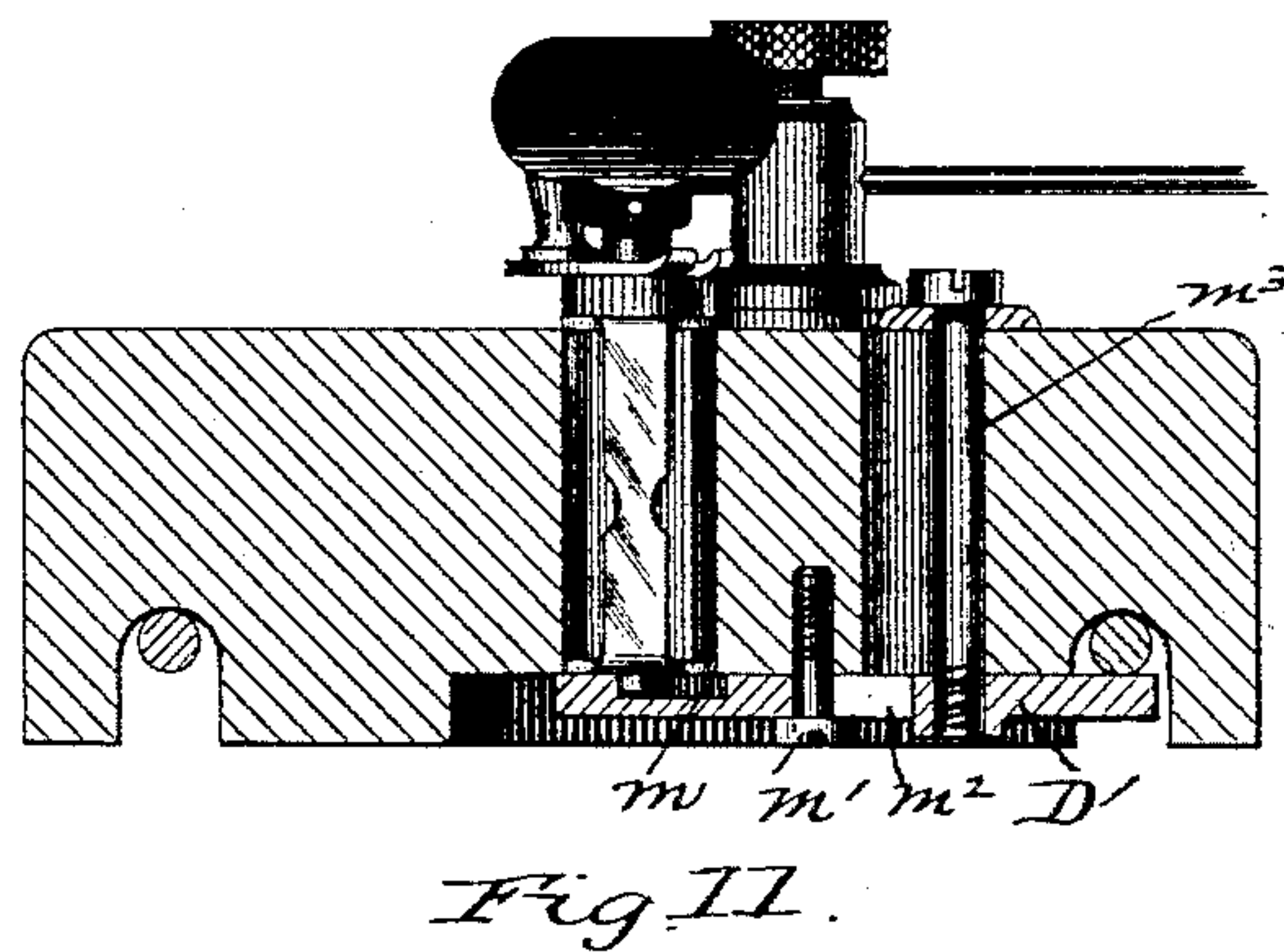
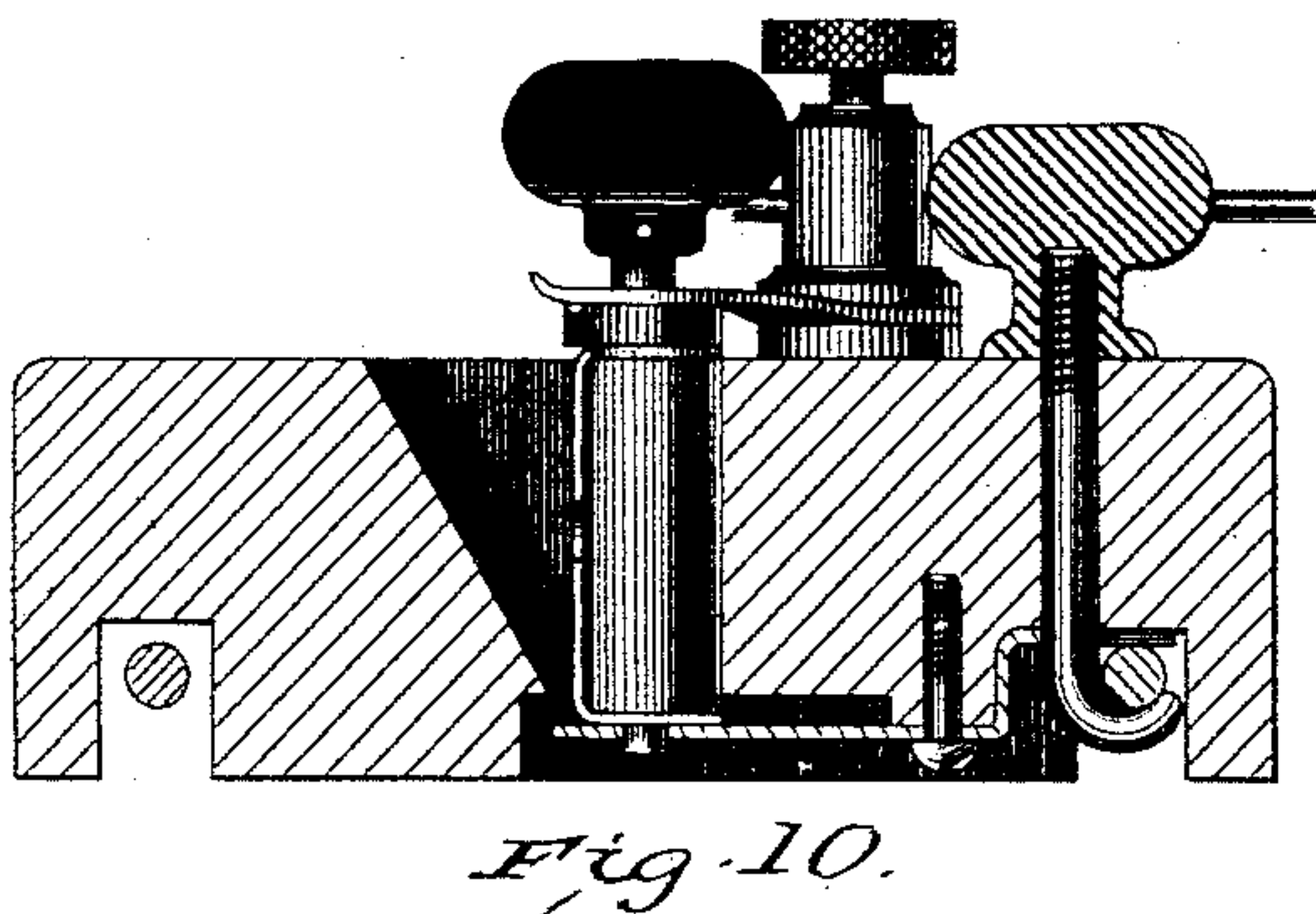
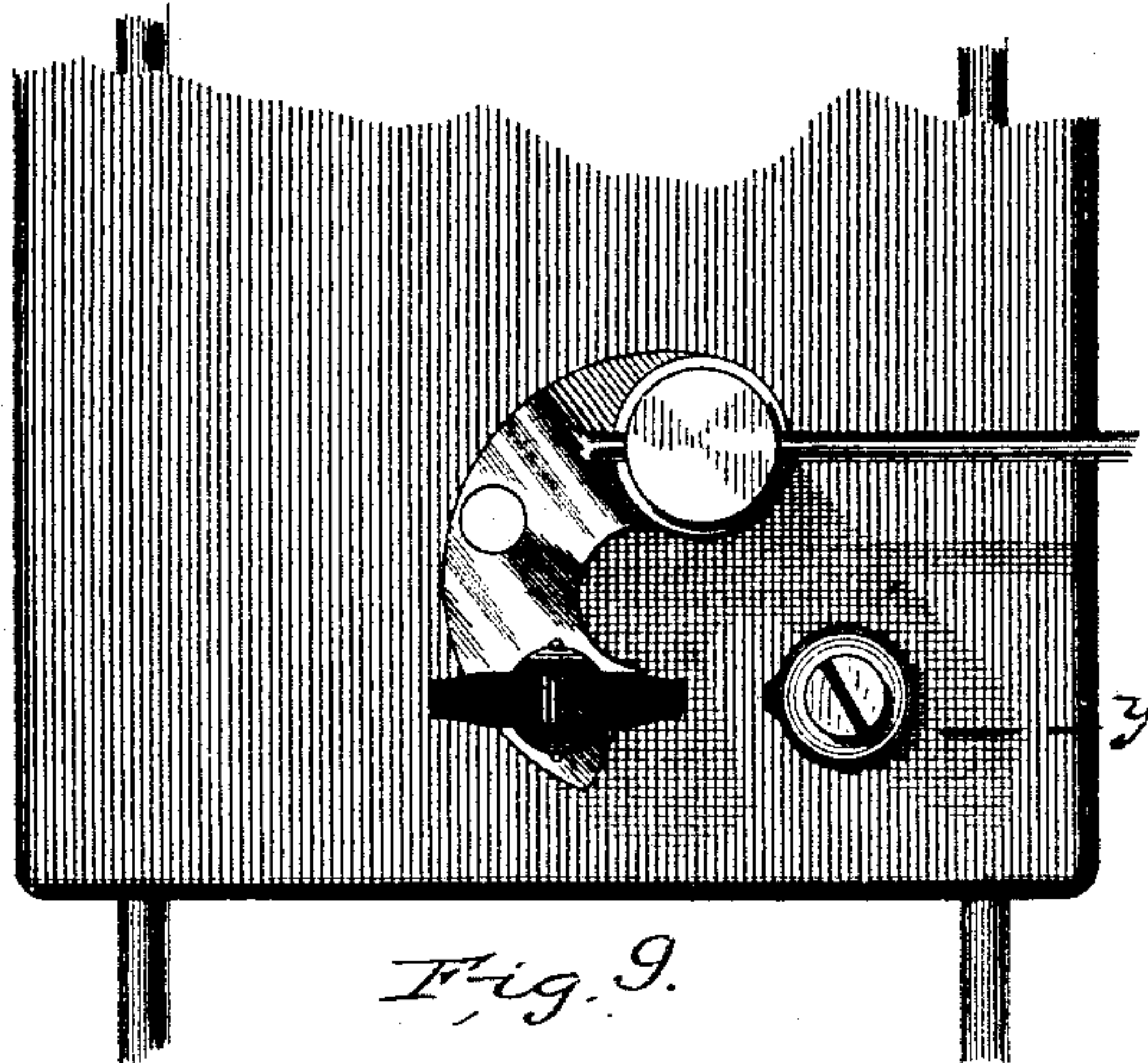
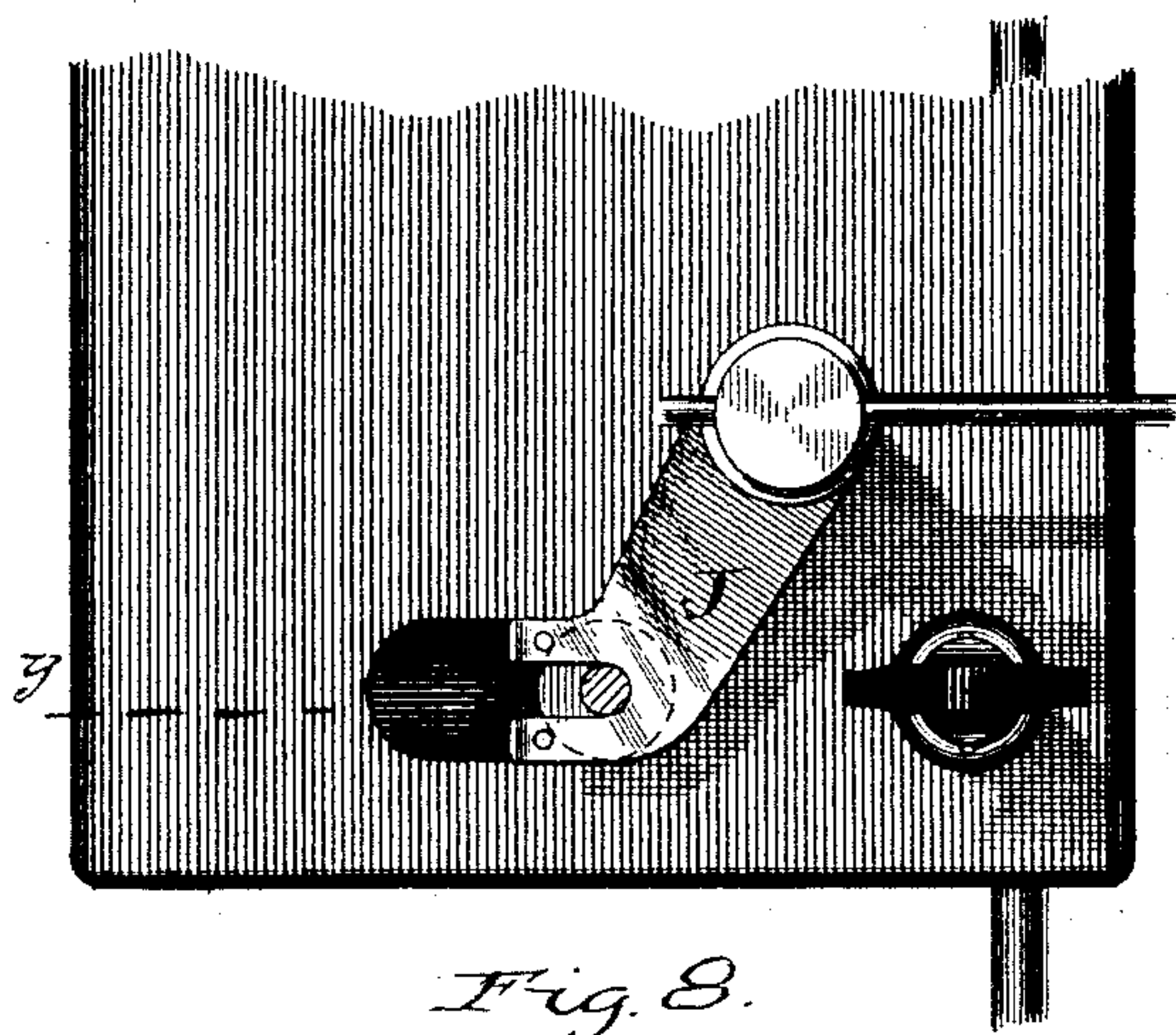
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2 Sheets—Sheet 2.

C. G. PERKINS.  
ELECTRIC CUT-OUT.

No. 385,067.

Patented June 26, 1888.



2 Witnesses.

Frank H. Pierpont.  
Wm. A. Rouben

Inventor.

Charles G. Perkins.

By *Luis* Attorney &.

V. D. Stockbridge & Co.



# UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT.

## ELECTRIC CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 385,067, dated June 26, 1888.

Application filed August 27, 1887. Serial No. 248,018. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Electric Cut-Outs; 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.

My invention relates to electric cut-outs, and it has reference more particularly to that class of cut-outs wherein is used a strip of fusible material which melts and breaks the current whenever the line becomes charged abnormally high.

The object of the invention is to provide a cut-out block of the class described in which the fusible strip and its mounting attachments may be readily inserted in their proper position in the block, and after the strip has been destroyed the parts may be easily removed for the adjustment of a new strip.

The invention consists in a block provided with suitable devices for attaching and sustaining the main and branch wires, in combination with a removable plug carrying a fusible strip.

The invention also consists in other details, which will be fully described, and pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 represent, respectively, top and bottom plans of my improved cut-out block; Fig. 3, an end elevation of same; Fig. 4, a vertical section on line *x x* of Fig. 1; Figs. 5 and 6, vertical and horizontal sections, respectively, of the removable plug; Fig. 7, a view of the fusible strip; Figs. 8 and 9, plans of modified forms of my invention; Figs. 10 and 11, sections taken on line *y y* of Figs. 8 and 9; Figs. 12 and 13, the same section, showing the position of parts during one stage of adjustment; Figs. 14 and 15, vertical and horizontal sections of the plug used in the arrangement shown in Figs. 9, 11, and 13.

Referring to Sheet 1 of the drawings, A represents a block of any suitable insulating material provided on its under side with grooves *a a*, in which the main wires B B lie. The wires are held in place by means of the clamping-hooks C. These hooks consist of a

hooked bolt threaded at the upper ends and provided with a cross-head or handle. To adjust the wire in position, the cross-head is unscrewed and the bolt dropped and turned. The wire is then placed in the groove, the hook turned back, and its cross-head screwed down to tighten it. I do not claim these hooks as a part of this invention, because they are already patented to me. The hooks pass through slots in the end of bent metallic springs D, which are secured to the bottom of the block, the block being cut away laterally to accommodate them, as shown. The spring is held in place by a screw, *d*, and the wire B is clamped in contact with the spring by the said hook C. The free end of the spring is perforated, for a purpose hereinafter described. The block is provided with a cylindrical chamber, in which loosely fits a plug, G. This plug is shown in detail in Figs. 5 and 6. One side is flattened to accommodate a fusible strip, *g*. The plug is of insulating material, and at the lower end is provided with a nipple or lug, *g'*, which is adapted to pass through the perforation in the spring above mentioned. The upper end of the plug is bored centrally and threaded to receive an adjustable screw-bolt, *g''*. This bolt carries a cross-head and a metallic collar, *g'''*. The fusible strip has formed upon it at each end a lateral extension, the lower one being a perforated disk and the upper a slotted disk. The strip is adjusted in the plug by inserting the nipple *g'* into the perforation of the lower disk, and the upper disk is then pushed under the collar *g'''* and around the bolt. When the plug is in position, it rests upon the free end of spring D and makes contact between said spring and the fusible strip.

The branch wires H H are secured to the block by clamps I I. To these clamps are swiveled circuit-closers J J'. The circuit-closer J is of general semicircular shape and provided with a handle, *j*. It is also provided with a slot, *j'*, and the lips on each side of said slot are curved slightly upward. The closer J is for the purpose of making electrical connection between post I and plug G. When the plate is swung around, the slotted portion slides across the top of collar *g'''* and makes contact therewith. Bolt *g''* is adjustable vertically in order that the plug may be made to



press upon spring D with any required force when the circuit-closer slides upon the collar  $g^1$ . The circuit-closer J' acts in the same manner as J, the only difference being in its shape.

5 Figs. 8, 10, and 12 illustrate a modification of my invention. The circuit-closer in this instance is stationary. The chamber carrying the plug has an inclined side. To insert the plug, it is slid down the incline until the nipple at the lower end passes into the perfora-  
10 tion in the spring. It is then tilted up and pushed under the lips of the circuit-closer until it snaps into position. It is held in place by two lugs on the under side of the lips.

15 Figs. 9, 11, 13, 14, and 15 illustrate still another modification. In this instance the circuit-closer is movable, as in the first form described; but the spring D is replaced by a rigid bar, D', which acts in the nature of a  
20 bolt to hold the line-wire in place and make contact therewith. The nipple at the base of the plug slides in a groove,  $m$ , and screw  $m'$  passes through a slot,  $m^2$ . The adjusting-bolt  $m^3$  is secured to the bar and passes up through  
25 a slot in the block. It has a head and washer, by means of which the bar may be moved back and forth.

In order to get the spring-contact at the ends of the plug, in this case the plug is constructed as shown in Figs. 14 and 15. It is  
30 formed of two parts,  $o$  and  $p$ , telescoped together. The parts are adapted to slide on

each other, the limit of movement being determined by bolt  $p'$ . Spring  $p^2$  tends to force them apart, and pin  $p^3$  prevents the parts turning on each other. 35

When the plug is out of the block, it is extended; but when in place it is more or less contracted and exerts its force to keep the end of the fusible strip in contact with bar D'. 40

Having described my invention, I claim—

1. The combination of a plug carrying a safety-strip and a block for electrical cut-out provided with a chamber having a lateral enlargement, whereby the plug may be readily  
45 inserted to close and removed to break the circuit, substantially as described.

2. The combination, with the main wire, of bolt C, springs D, plug G, carrying the fusible strip  $g$ , circuit-closer J, and branch line  
50 H, all arranged as described.

3. In a cut-out, a plug of insulating material carrying a fusible strip, said plug formed of two parts telescoped together and having a spring between the parts, which tends to force  
55 them away from each other in order to maintain good contact at the ends of the plug, as described.

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

CHARLES G. PERKINS.

Witnesses:

ALBERT H. WALKER,  
HENRY L. RICKARD.