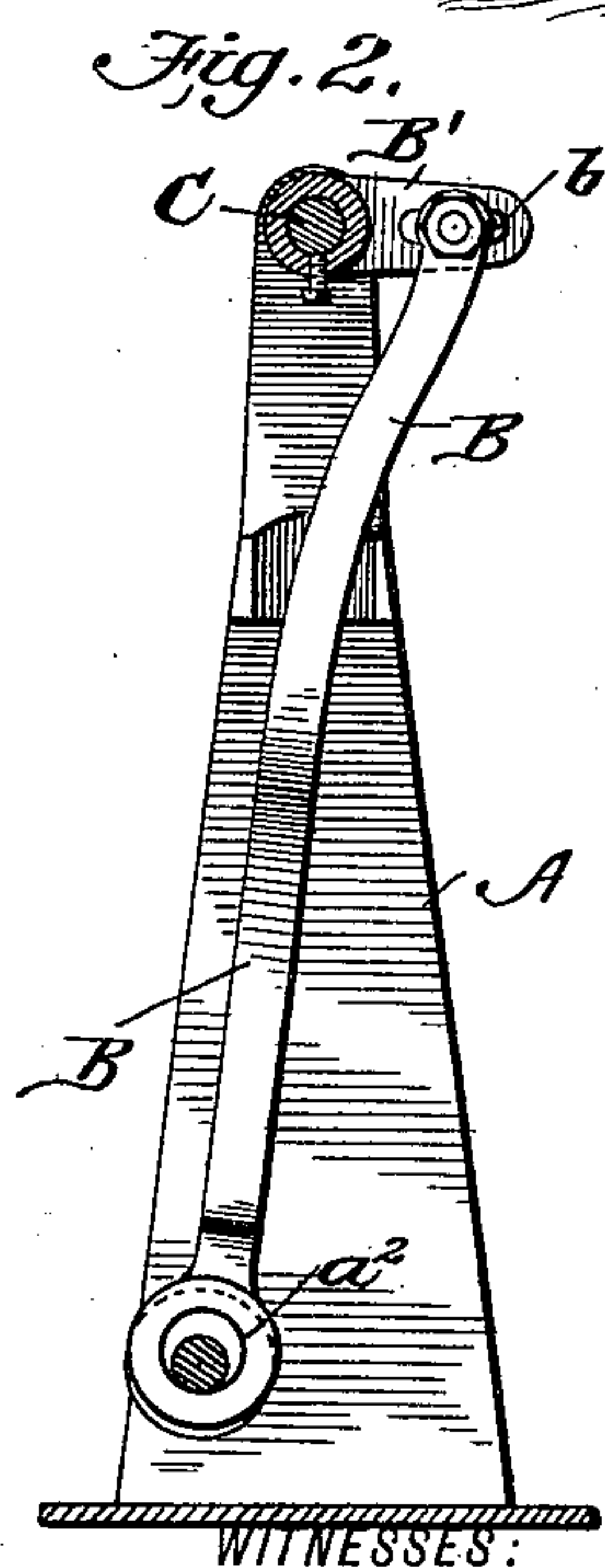
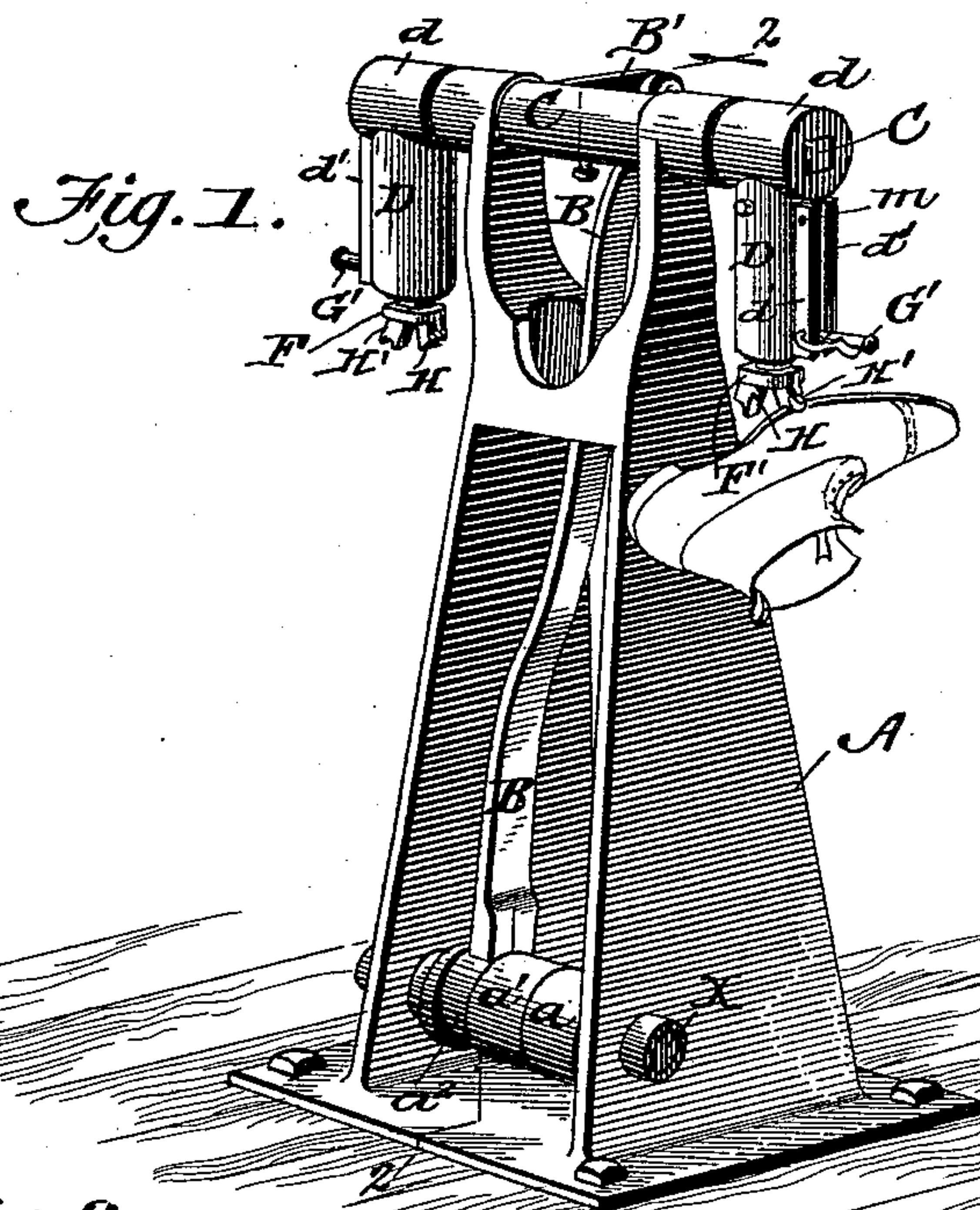


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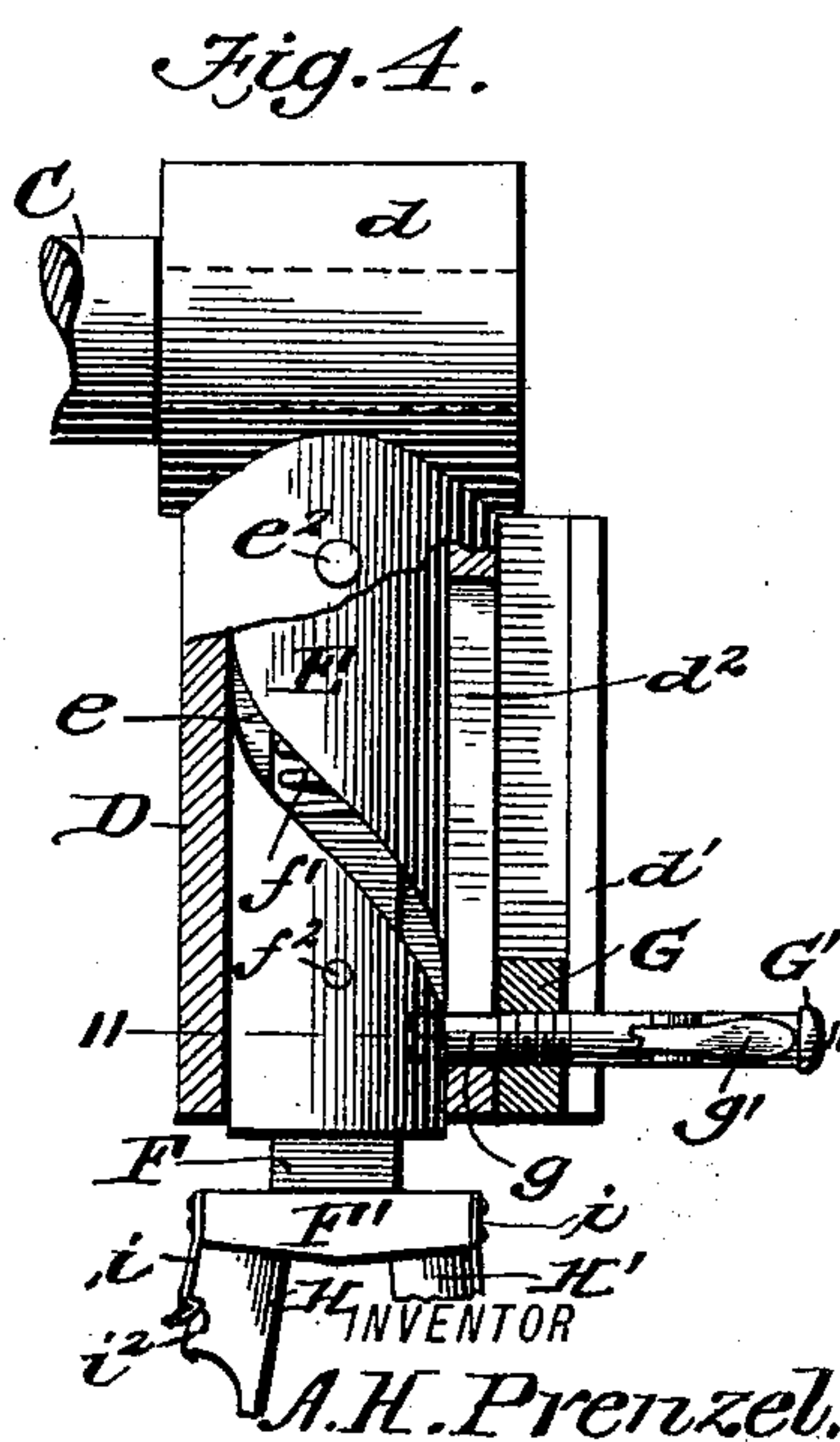
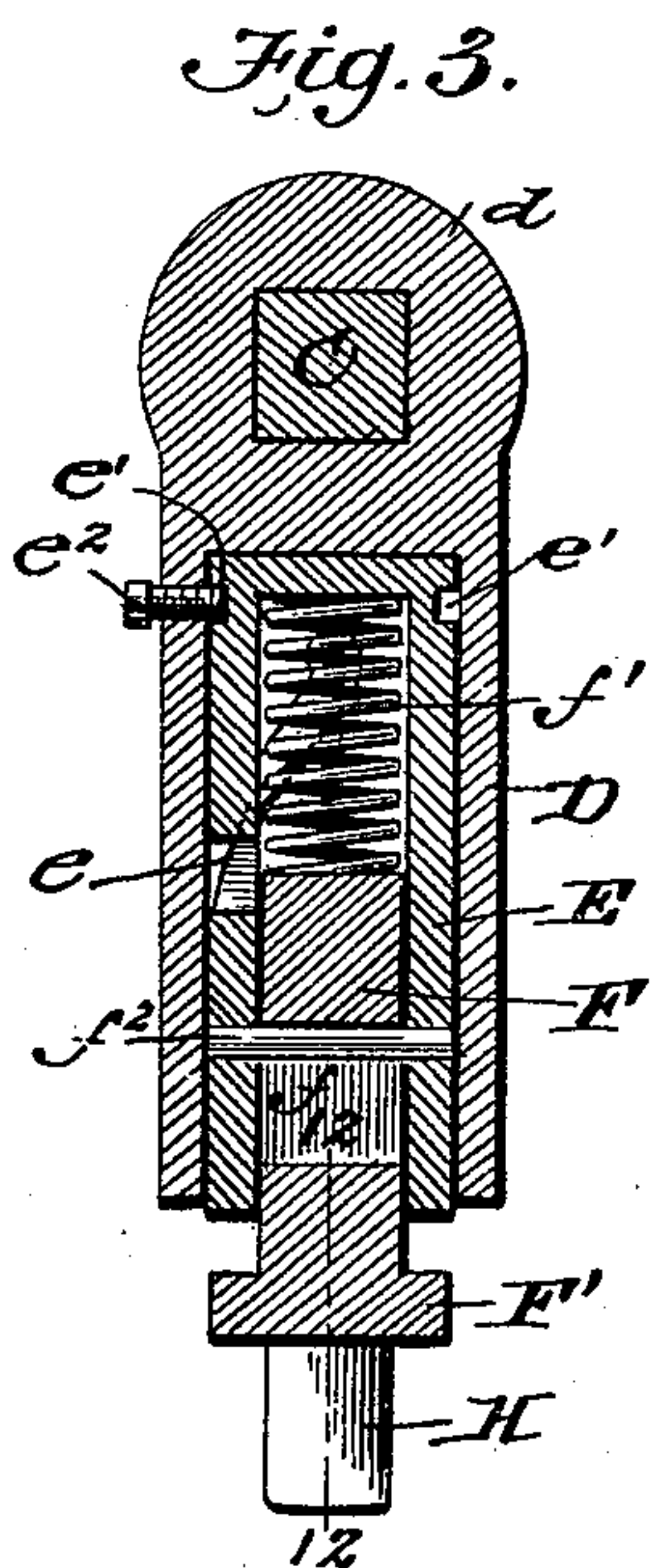
No. 594,754.

Patented Nov. 30, 1897.



WITNESSES:

WITNESSES.  
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**ATTORNEYS.**

(No Model.)

2 Sheets—Sheet 2.

A. H. PRENZEL.  
EDGE SETTING MACHINE.

No. 594,754.

Patented Nov. 30, 1897.

Fig. 5.

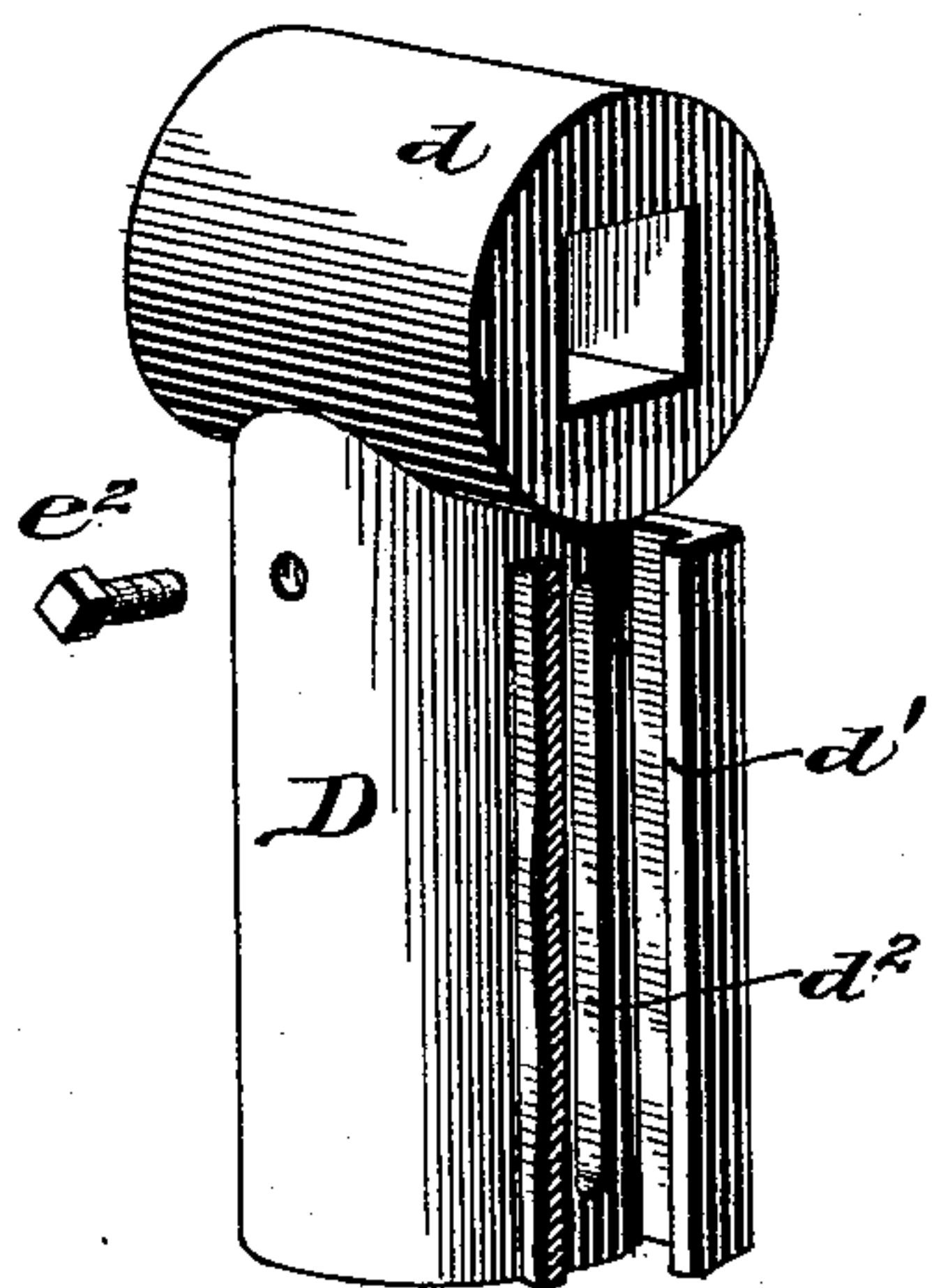


Fig. 6.

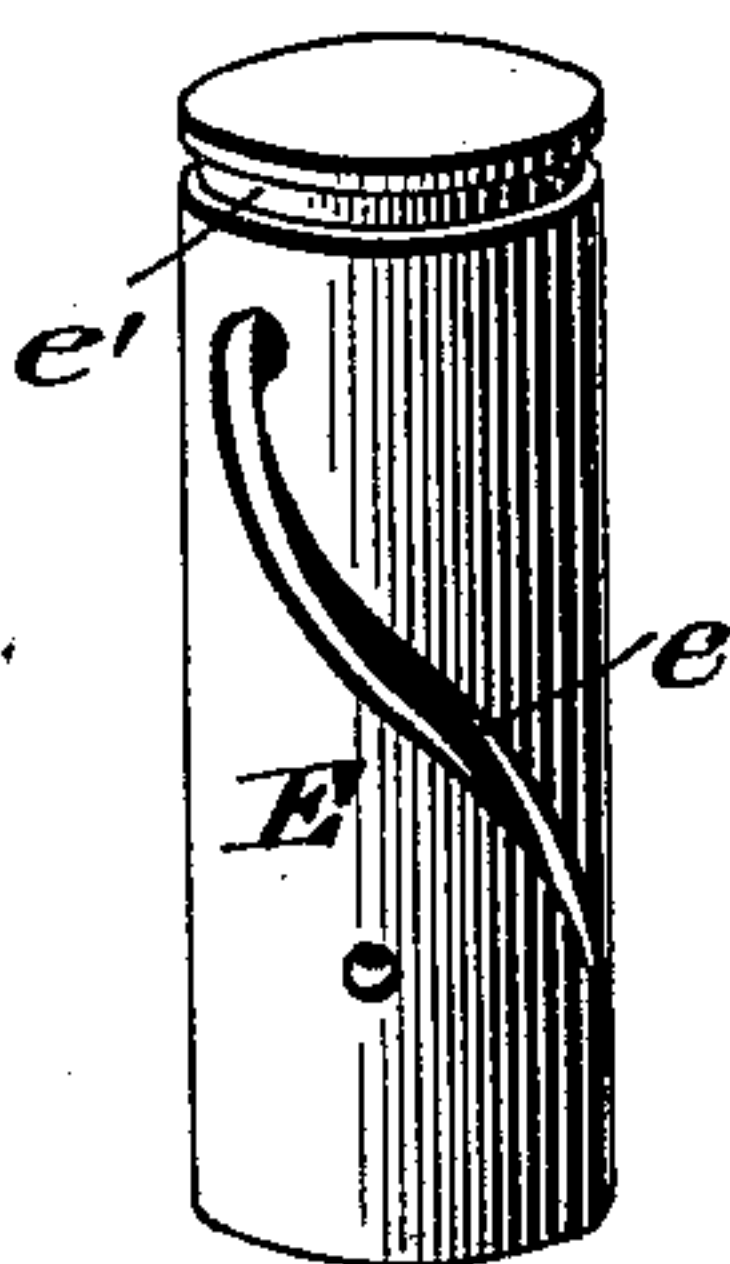


Fig. 7.

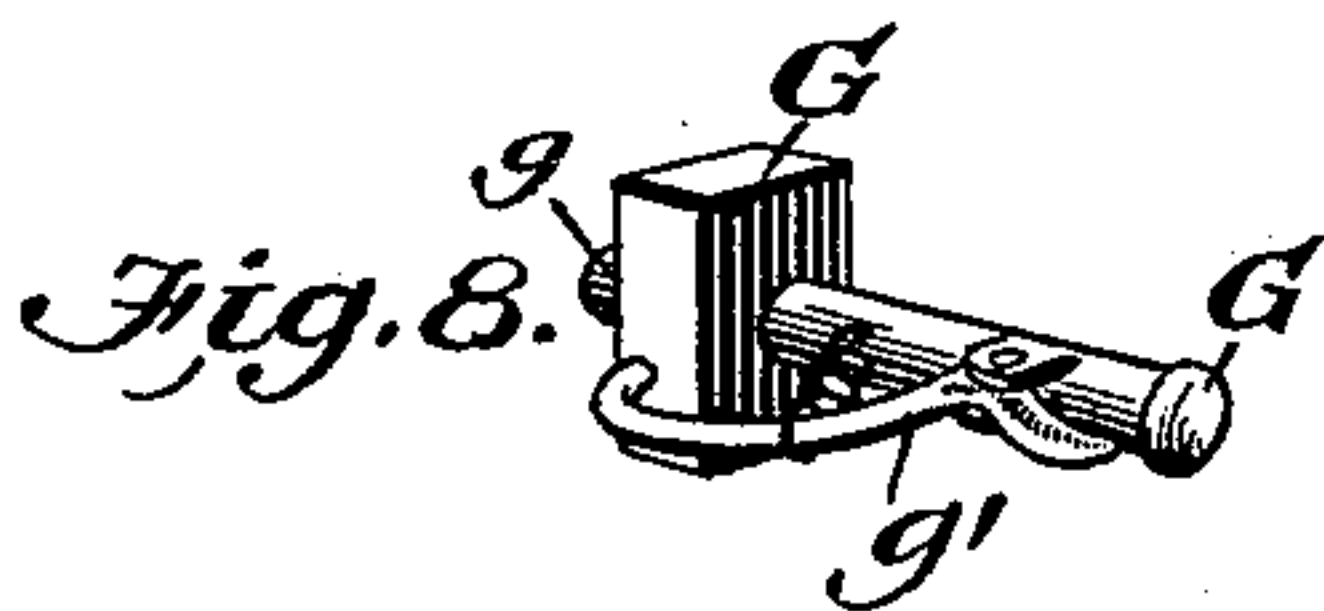
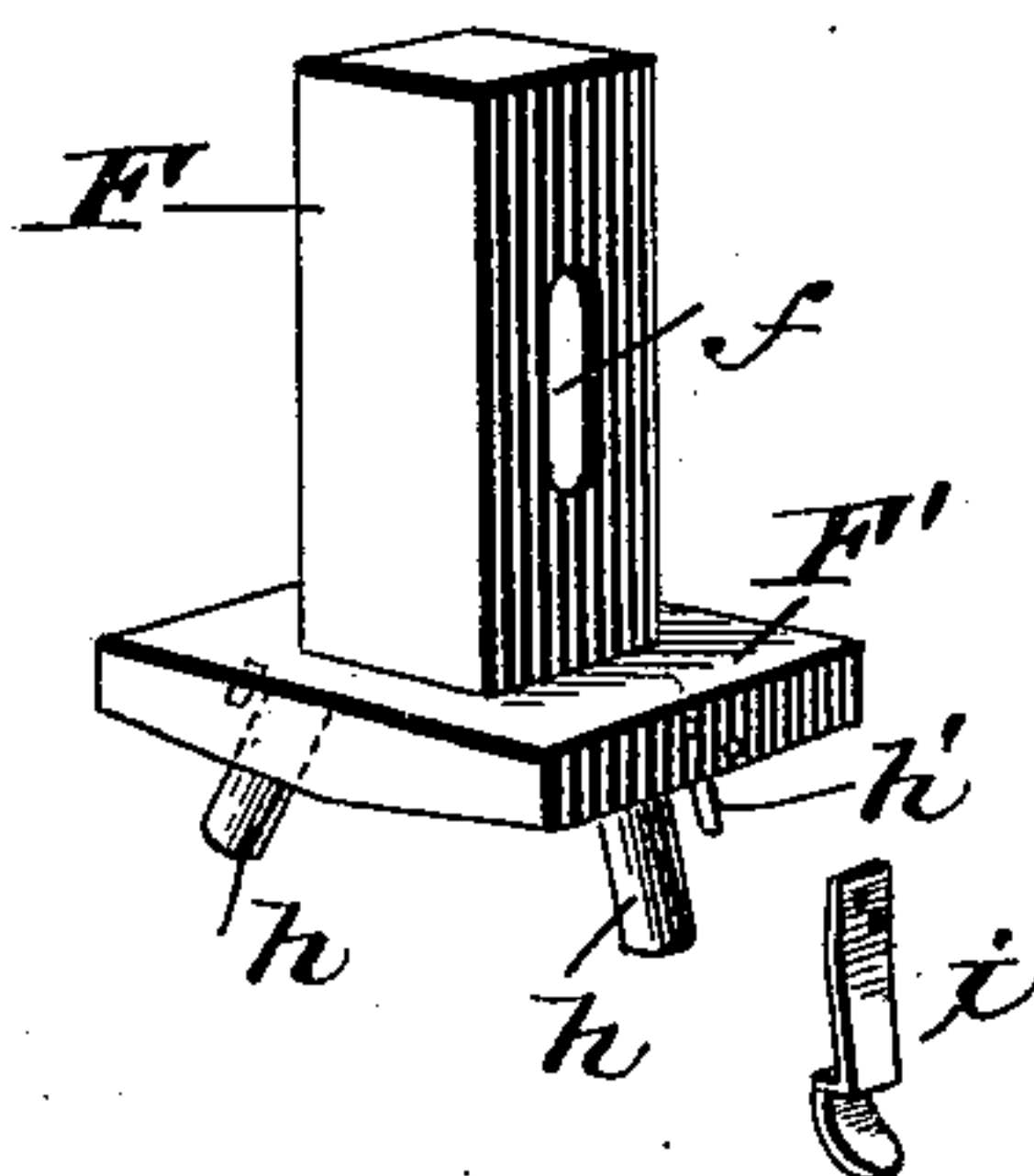


Fig. 9. Fig. 10.



Fig. 11.

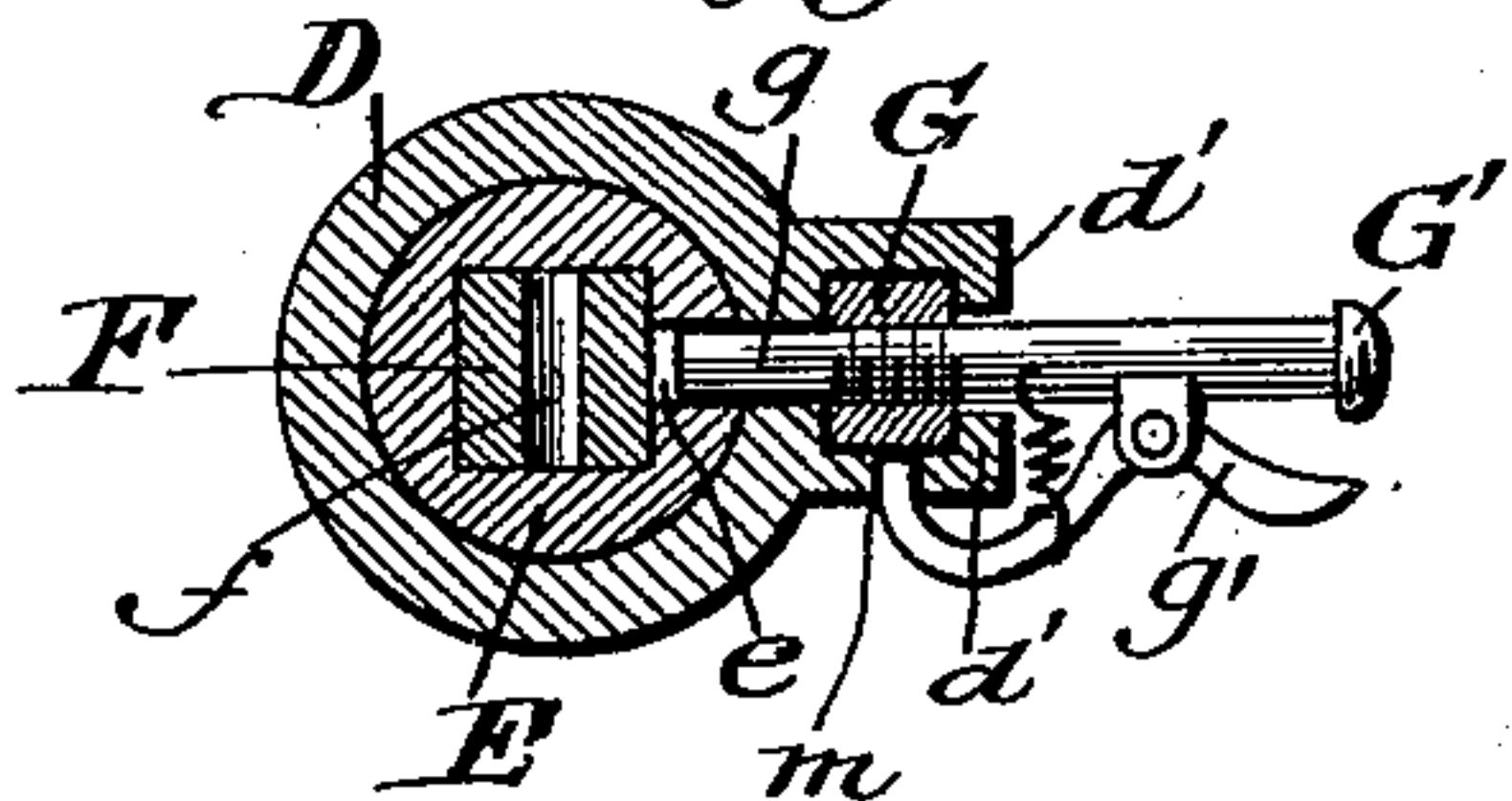
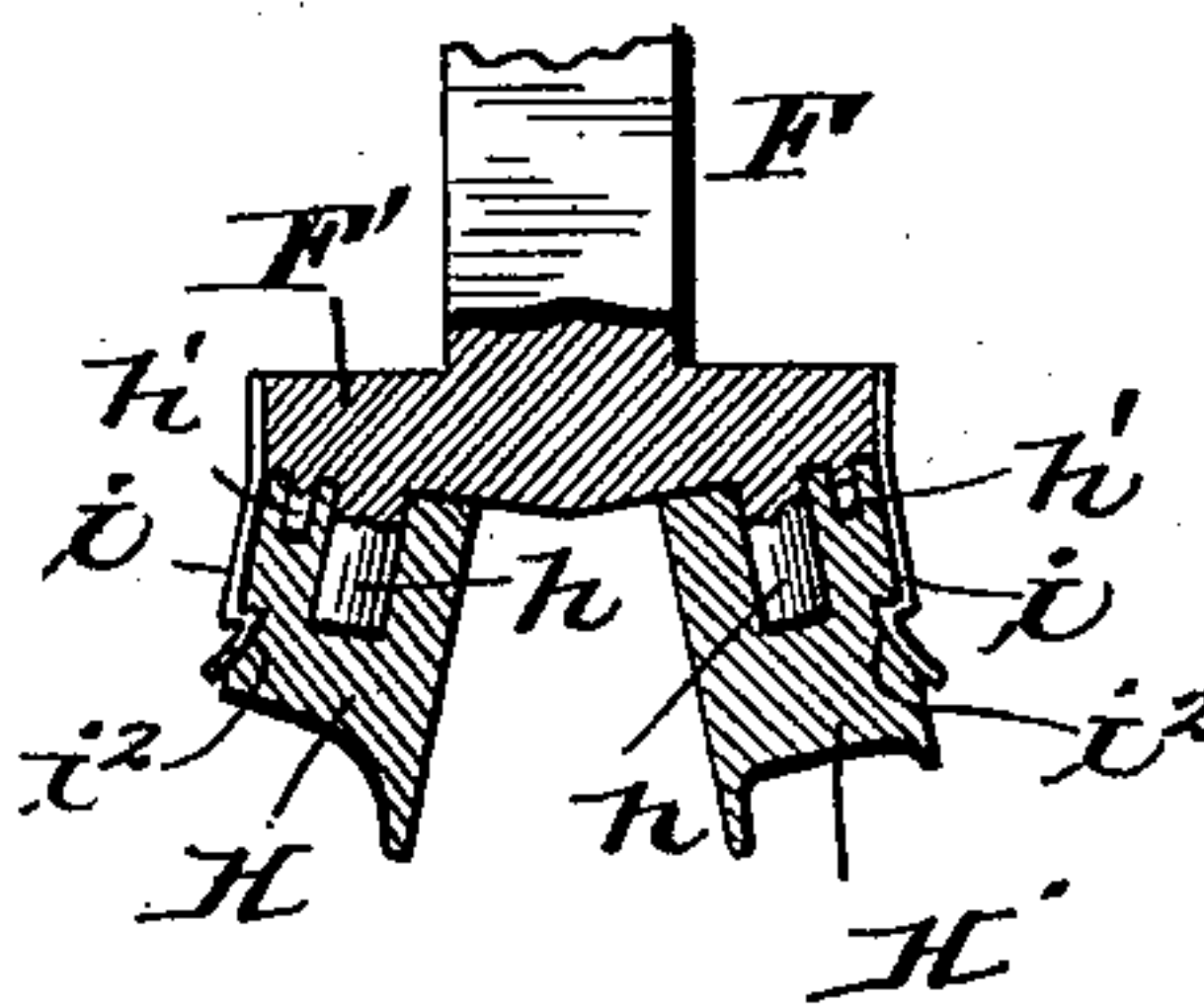


Fig. 12.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ADAM H. PRENZEL, OF READING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF  
TO KATIE V. ZUBER, OF SAME PLACE.

## EDGE-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 594,754, dated November 30, 1897.

Application filed October 14, 1896. Serial No. 608,804. (No model.)

*To all whom it may concern:*

Be it known that I, ADAM H. PRENZEL, of Reading, in the county of Berks and State of Pennsylvania, have invented a new and useful Improvement in Edge-Setting Machines, of which the following is a specification.

My invention is in the nature of an improved edge-setting machine, or machine for setting and polishing the edges of the soles of boots and shoes; and it consists, chiefly, in the peculiar construction, arrangement, and adjustment of the reversible head carrying the setting and polishing tools, as will be hereinafter fully described.

Figure 1 is a perspective view of the entire machine with a shoe shown applied in position for treatment by the machine. Fig. 2 is a vertical section on line 22 of Fig. 1. Figs. 3 and 4 are sections of the vibrating head, taken at right angles to each other. Figs. 5, 6, 7, 8, 9, and 10 are views in perspective of detached parts of the head shown in detail. Fig. 11 is a horizontal section on line 11 11 of Fig. 4, and Fig. 12 is a vertical section on line 12 12 of Fig. 3.

In the drawings, A represents an upright stand, in the lower portion of which is journaled a horizontal drive-shaft X, carrying a loose pulley  $a$  and a tight pulley  $a'$ . On this shaft is arranged an eccentric  $a^2$ , which imparts a reciprocating motion to an upright pitman B. This pitman at its upper end connects by a wrist-pin with a crank-arm B, rigidly attached to a rock-shaft C, which is journaled in bearings in the upper part of the stand. The connection of this crank to the pitman is an adjustable one, being made so through the medium of a slot  $b$ , so as to impart a greater or less oscillation to the shaft.

The rock-shaft C is provided at each end with an oscillating head with burnishing-tools for setting and polishing the edge of the shoe-sole; but as these heads are exactly alike it will only be necessary to describe one. The ends of the shaft are squared and have seated thereon the sleeve  $d$  of an oscillating head D. This head is in the nature of a hollow case, Figs. 3, 4, and 5, of cylindrical bore, having an open lower end and a radial slot  $d^2$ , with guideways  $d'$   $d'$  on each side of the same. Within this case there is swiveled a sleeve E,

Fig. 6, which at its upper end has a peripheral groove  $e'$ , into which there penetrates a screw  $e^2$ , Fig. 3, which allows it to rotate, but prevents it from dropping out. In this sleeve there is formed a spiral cam-slot  $e$ , into which protrudes the inner end  $g$  of a stem  $G'$ , secured on a sliding block G, which moves vertically in the guideways  $d'$   $d'$  of the outer case. (See Figs. 4, 6, and 11.) When this stem  $G'$  on block G is raised or lowered it imparts a semirevolution to the sleeve E through its spiral slot  $e$ . Within the sleeve E there fits the shank F of the tool-holder F', said shank being slotted vertically at  $f$  and retained in the sleeve by a pin  $f^2$ , Fig. 3. Within the sleeve E and above the shank of the tool-holder there is a coil-spring  $f'$ , that makes the tool-holder yielding in vertical direction. The tool-holder F' (see Figs. 7 and 12) has two downwardly-projecting and slightly-divergent pins  $h$   $h$ , adapted to enter the sockets of the burnishing-tools H H', Figs. 9 and 10, which act upon and set and polish the edge of the shoe-sole. The lower faces of these tools are the ones which act upon the sole edge, and one of them, H', is for the edge of the fore part of the sole, and the other one, H, is for the shank of the shoe, which is finished with a slightly-different contour or greater bevel. These tools are secured upon the pins  $h$   $h$  of the tool-holder by means of locking-springs  $i$ , Figs. 4, 7, 9, 10, and 12, which enter notches  $i^2$  in the tools to prevent the latter from dropping, while the small pins  $h'$  on the tool-holder enter other sockets in the tool and prevent the latter from turning on the pins  $h$ .

Now when the shoe edge is applied to the tool, as shown in Fig. 1, the oscillation of the head D with the shaft C about its axis causes the rubbing-tools to oscillate longitudinally over the edge of the sole to give the proper set and polish, the pressure being rendered elastic by the spring above the tool-holder shank. When the fore part of the sole edge is finished and the shank is to be done, then the tool-holder is to be reversed, so as to throw out of action the tool H' and bring into action the shank-tool H. For this purpose the stem  $G'$  is raised, and this, through the agency of the spiral slot  $e$ , turns the sleeve



and the within tool-holder a semirevolution. The stem and block G are held and locked in this elevated position by a spring-latch  $g'$  on said stem, Figs. 4 and 11, the end of which  
 5 latch is made to enter a hole  $m$ , Fig. 1, in the upper part of the case D. A similar hole in the lower part of the case locks the stem in its lower position. In this way the two tools may be alternately brought into use or thrown out  
 10 in a very convenient and practical manner for the workman. If desired, a hand-rest may be employed below the shoe's position to hold it steady in turning the tool, and a lamp or gas flame is also placed adjacent to the  
 15 tool not in use to alternately heat the tools; but I make no special claim to these features and have not illustrated them.

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

1. The combination with the rock-shaft of the hollow radial oscillating head having radial slot and guide, a sleeve with spiral slot within the same carrying a tool-holder with  
 25 two kinds of tools and a slide with handle and pin moving in the radial guides and spiral slot to reverse the position of the tool-holder

substantially as and for the purpose described.

2. The combination with the rock-shaft, of 30 the hollow radial oscillating head having radial slot and guides, a sleeve with spiral slot within the same, a tool-holder within the sleeve having a coil-spring above it, two edge-tools carried by the holder, and a slide with 35 pin entering the spiral slot, and locking devices for holding said slide to its two positions substantially as and for the purpose described.

3. The combination of oscillating head D 40 having slot  $d^2$ , guides  $d'$ , and screw  $e^2$ , and locking-holes  $m$ , the sleeve E with peripheral groove  $e'$ , spiral slot  $e$ , and pin  $f^2$ , the tool-holder F' with slotted shank F and pins  $h h'$ , the spring  $f'$  arranged within the sleeve above 45 the tool-holder shank, the tools H H' with sockets and locking-springs  $i$ , and the slide G with operating-stem  $G'$ , pin  $g$ , and locking-latch  $g'$ , substantially as and for the purpose described.

ADAM H. PRENZEL.

Witnesses:

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FRANCIS C. CLEMONS.