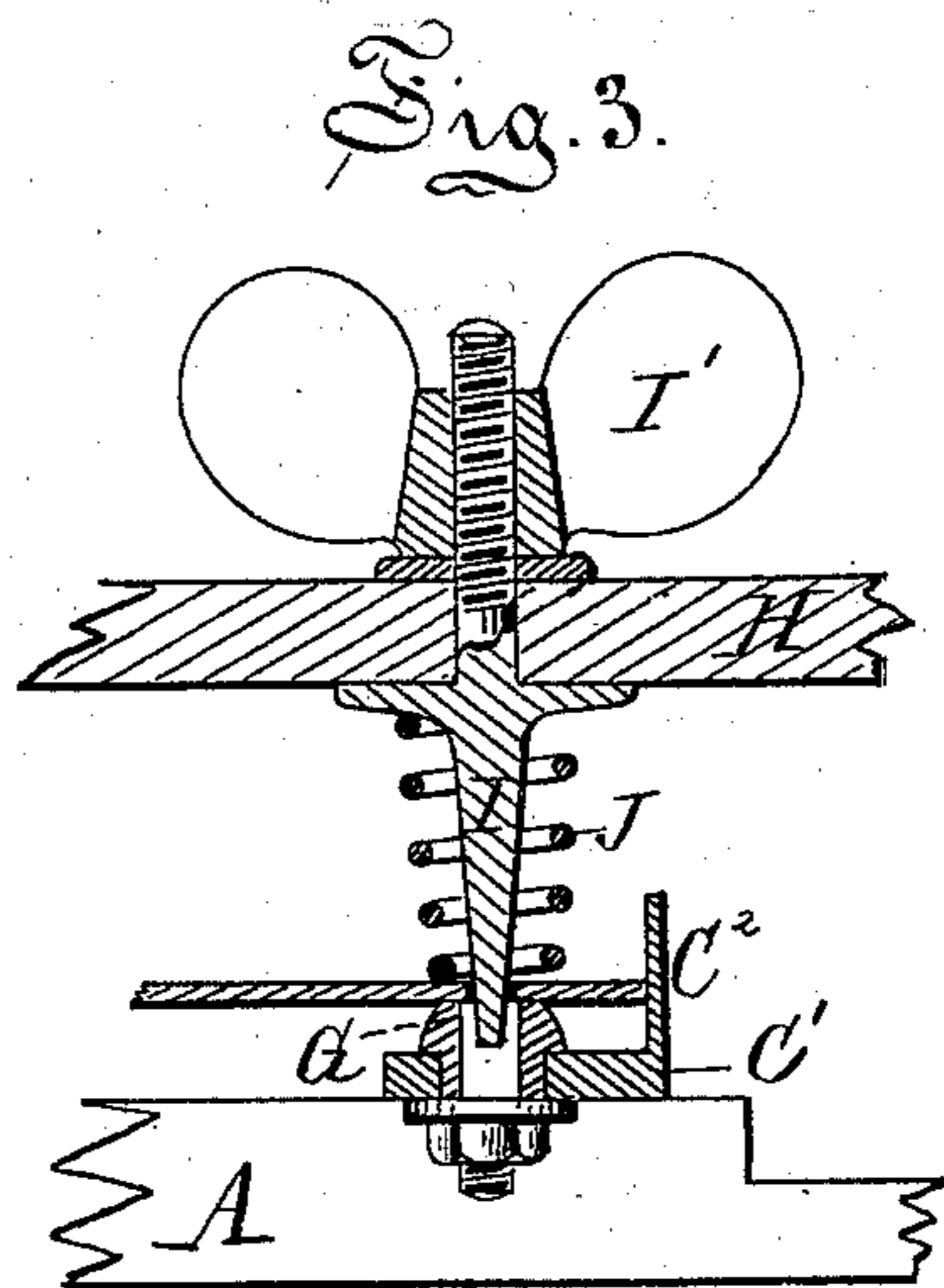
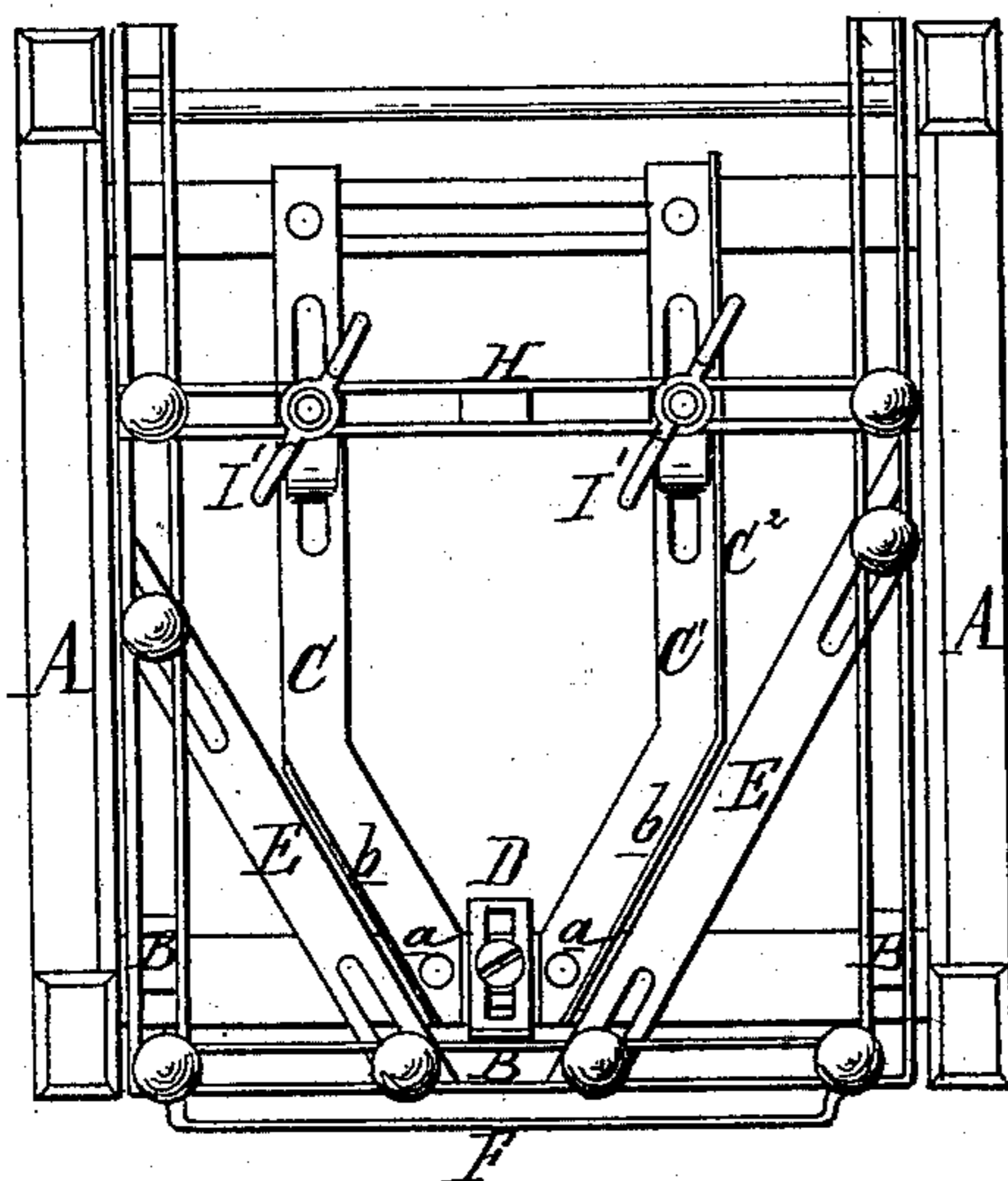
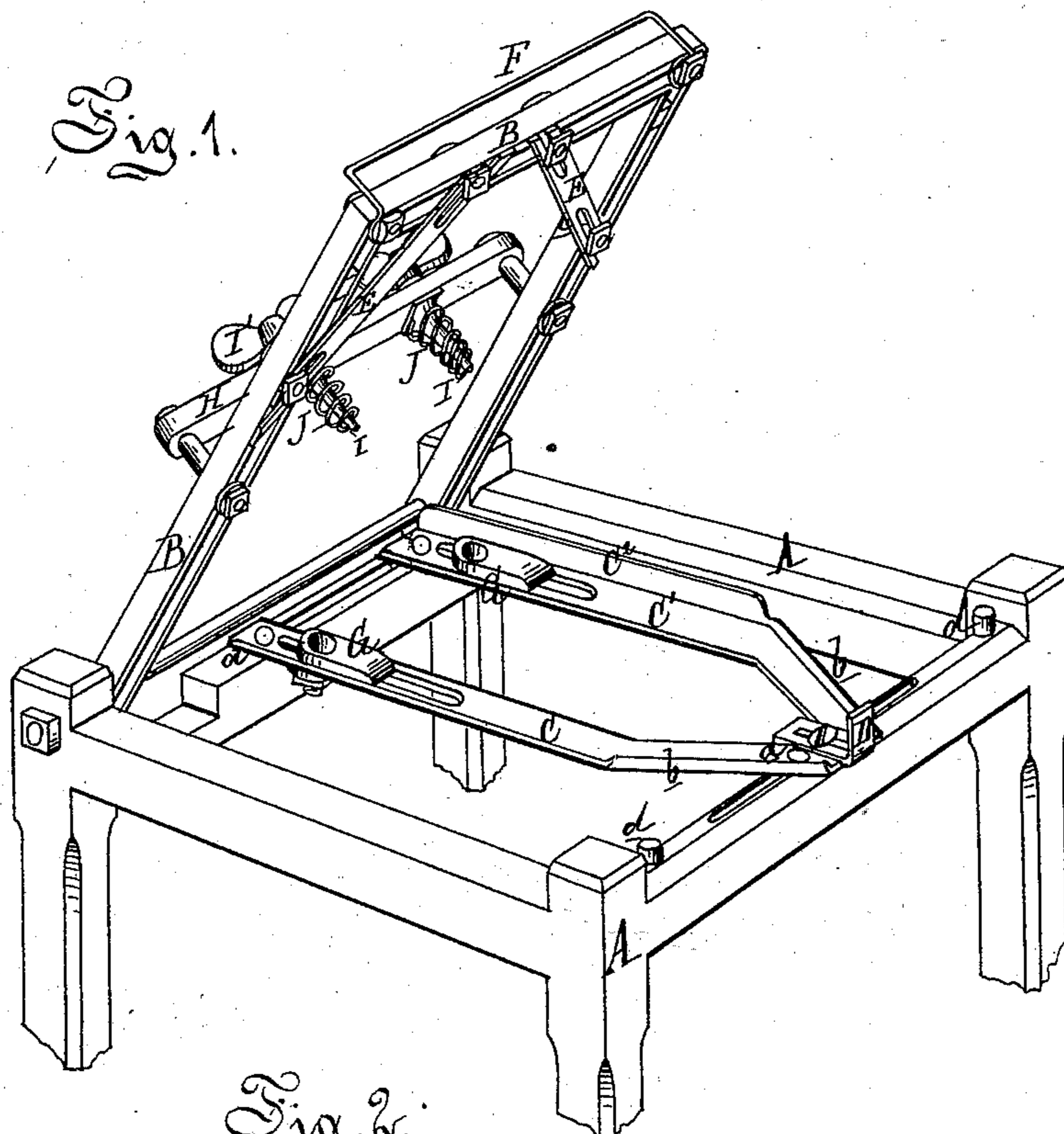


E. R. DAVIS.

MACHINE FOR TRIMMING AND PUNCHING ROOFING-SLATE.

No. 171,358.

Patented Dec. 21, 1875.



Witness:  
Edward Barthel.  
Thos. S. Day.

Inventor:  
E. R. Davis  
By Atty  
Thos. S. Sprague.

# UNITED STATES PATENT OFFICE

EBENEZER R. DAVIS, OF DETROIT, MICHIGAN.

## IMPROVEMENT IN MACHINES FOR TRIMMING AND PUNCHING ROOFING-SLATES.

Specification forming part of Letters Patent No. **171,358**, dated December 21, 1875; application filed October 19, 1875.

*To all whom it may concern:*

Be it known that I, EBENEZER R. DAVIS, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Machines for Trimming and Punching Roofing-Slates, of which the following is a specification:

My invention has for its object to furnish a machine with which a roofing-slate may be trimmed, and the nail-holes punched at a single operation.

The invention consists, principally, in securing the adjustable cutters and punches to a single hinged frame; further, in combination, with the main stationary frame carrying adjustable bearers and punch-holes, of the hinged frame carrying the adjustable cutters and punches, and adapted to be operated by hand; and, further, in the combination of the operative parts, all as more fully hereinafter explained.

Figure 1 is a perspective view. Fig. 2 is a plan view. Fig. 3 is an enlarged vertical section of one of the punches.

In the drawing, A represents the main frame, to the rear upper part of which the cutting-frame B is hinged. C C' are two bearers, adjustably secured across the front and back girts of the frame by bolts *a*, through slots in said girts, so that the said bearers can be adjusted to or from each other, according to the width of the slates to be trimmed. The bearer C<sup>1</sup> has one side turned up, as at C<sup>2</sup>, forming a guide-flange for one side of the slate, which is laid against it. D is a guide, adjustably secured to the front girt between the bearers, whose front ends may be beveled to cut half-hexagon slate, as shown, or any other form desired. The outer edges of the beveled ends of the bearers are flanged upwardly, and sharpened to form cutting-edges *b*. The cutting-frame B is a structure composed of two parallel iron bars set up edgewise, bent to form three sides of a frame, with spacer-blocks between the bars, which are tied by bolts through the said spacer-blocks. E E are the cutters, adjustably secured under the frame diagonally across its corners, so as to bring their cutting-edges C just outside the cutting-edges of the bearers below. F is a handle across the front edge of the cutting-frame, which can thereby be lifted up or thrown

forcibly down, the impact upon the front girt of the main frame being eased by rubber buffers *d* on the upper surface of said girt.

To trim a slate the latter is laid on the bearers, one edge bearing against the guide C<sup>2</sup>, and the front end against the guide D, when the cutting-frame may be thrown down, whereupon its knives E E will shear off the corners of the slate in line with the cutting-edges *b* of said bearers. To punch the nail-holes in the slate at the same operation each bearer is provided with an anvil, G, longitudinally adjustable in a slot therein, each anvil having an oval hole through it. Across the top of the cutting-frame a cross-beam, H, is jacked, said beam being constructed like the cutting-frame of two parallel iron-bars set up edgewise, and may be moved forward or back by loosening its jack-bolts. I are nail-hole punches, each having a screw-shank, which is inserted up through the slots of the cross-beam, where it receives a wing-nut, I', which secures it in position to have the point enter the anvil-hole, first passing through the slate, as seen in Fig. 3. A spring, J, spirally coiled about the punch, forces off the slate when the punch is raised.

What I claim as my invention is—

1. In a machine for cutting and punching roofing-slates the combination of the adjustable cutters and punches secured to a single hinged frame, substantially as described and shown.

2. In a machine for cutting and punching roofing-slates the combination of the frame A, carrying adjustable bearers and punch-holes, with the hinged frame B, carrying adjustable cutters and punches, and adapted to be operated by hand, in the manner substantially as described and shown.

3. In a machine for cutting and punching roofing-slates the combination of the frame A, carrying the adjustable bearers C C', adjustable guide D, and adjustable anvils G of the hinged frame B, carrying the adjustable cutters E, adjustable punches I, springs J, and handle F, all substantially as described and shown.

EBENEZER R. DAVIS.

Witnesses:

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H. S. SPRAGUE.