

(No Model.)

C. R. NELSON.

Sheet Metal Notching Machine.

No. 236,613.

Patented Jan. 11, 1881.

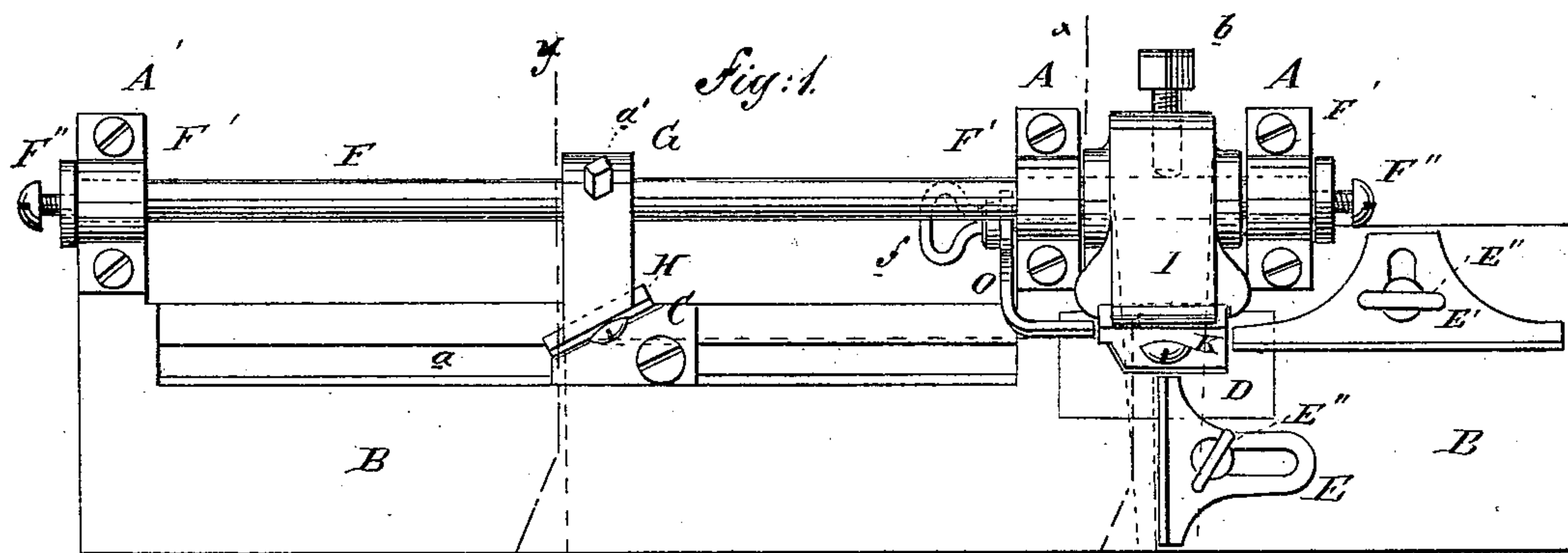


Fig. 2.

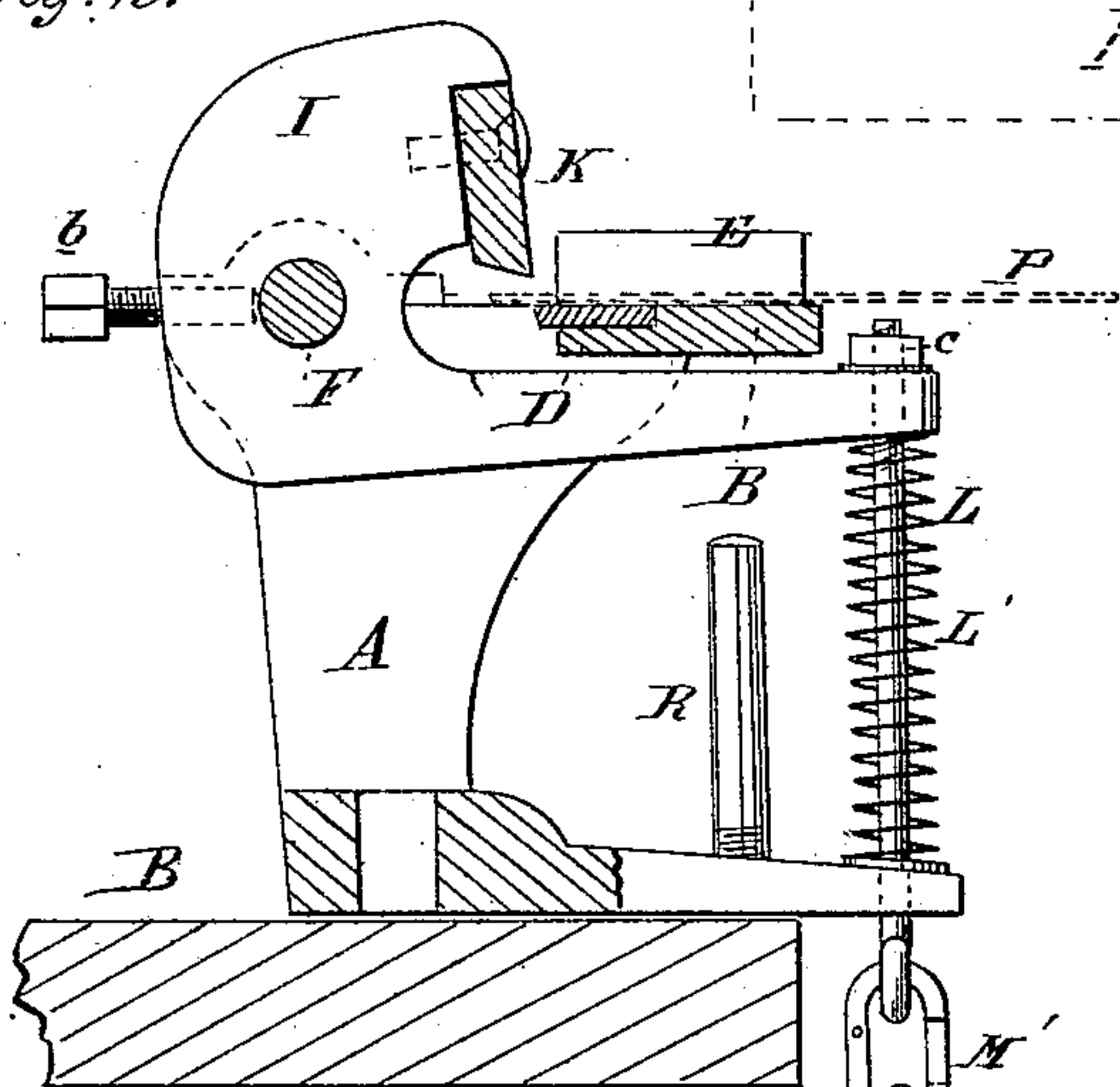


Fig. 3.

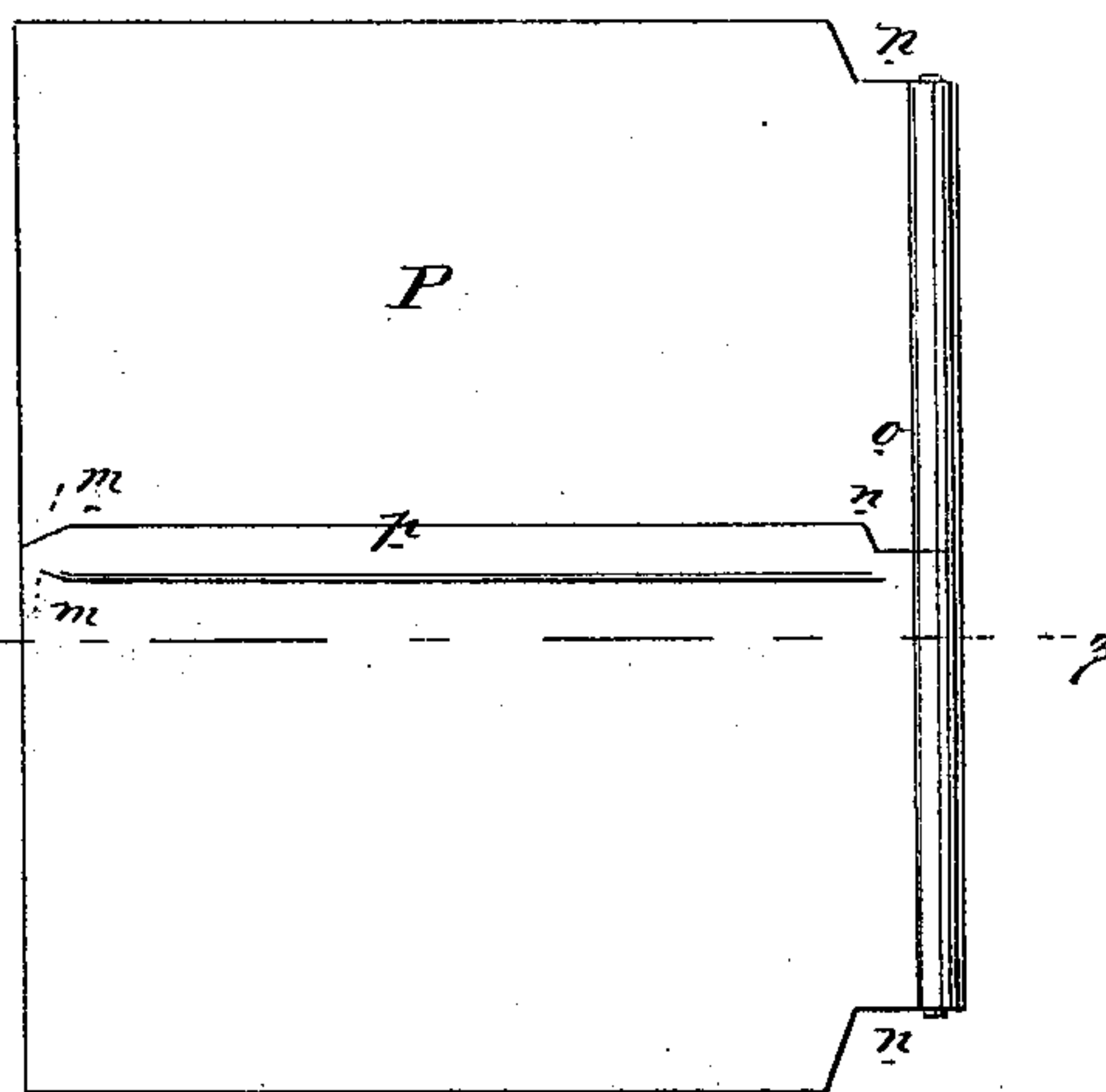
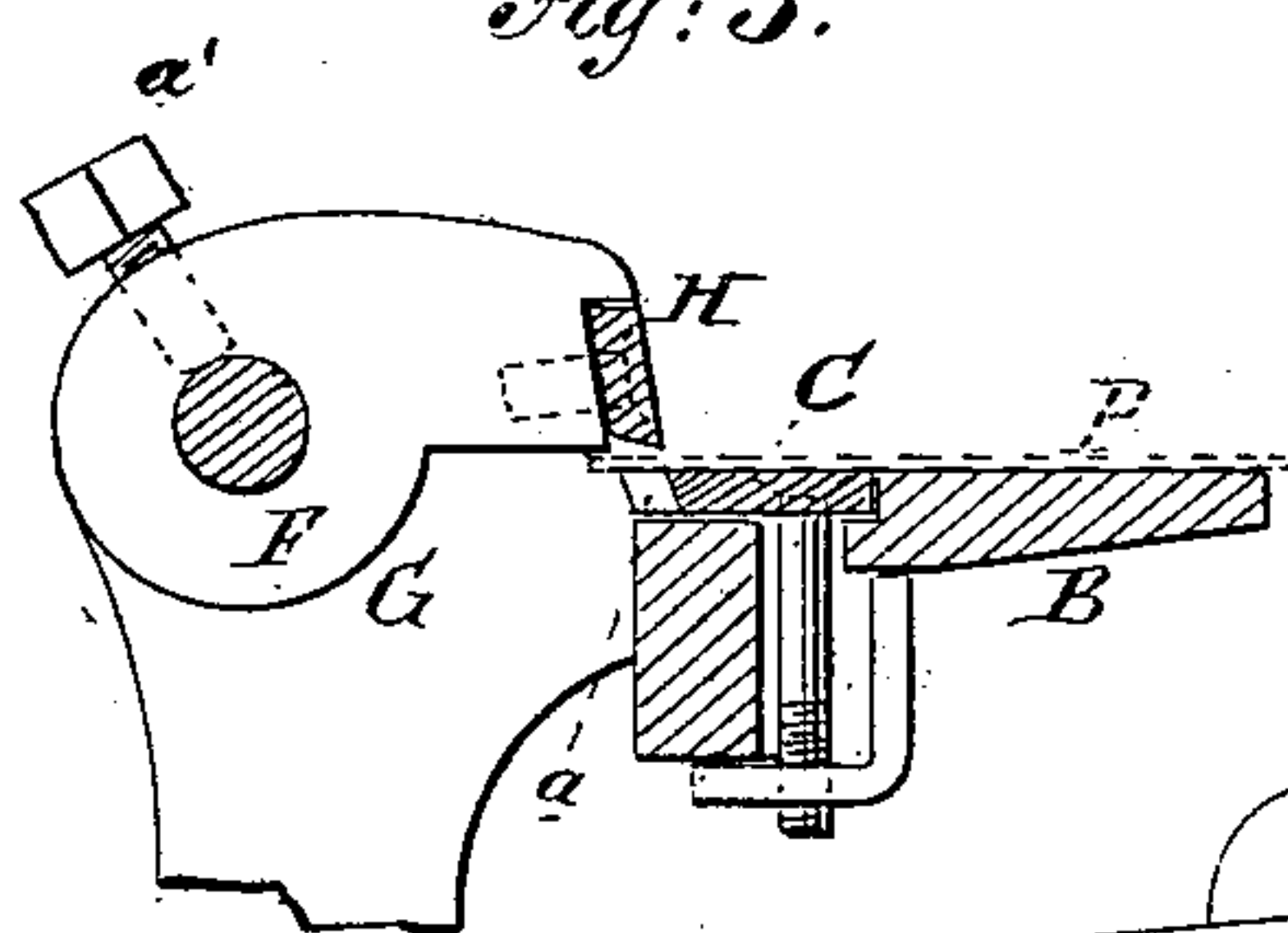
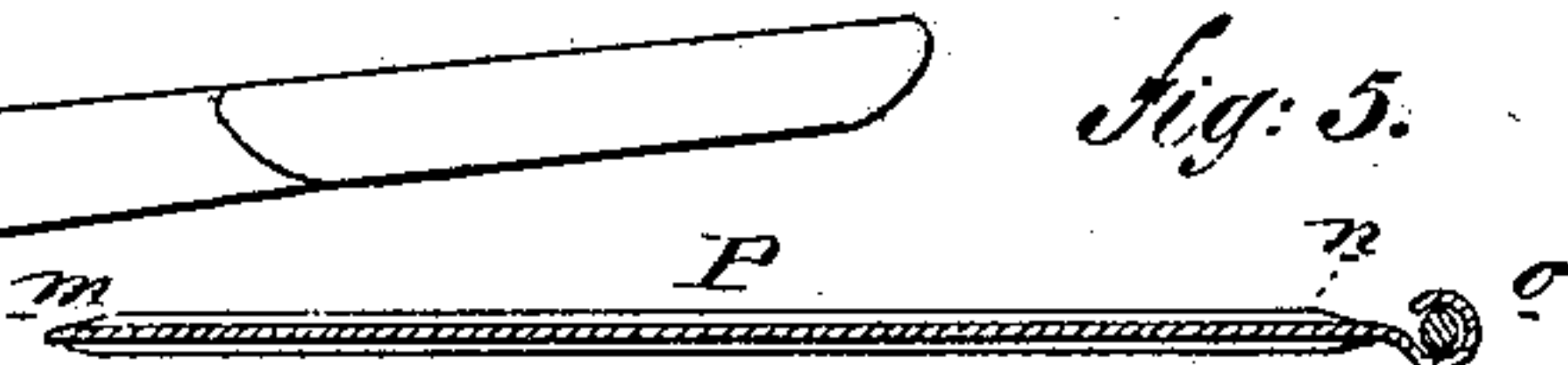


Fig. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHARLES R. NELSON, OF CORINNA, MAINE.

## SHEET-METAL-NOTCHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 236,613, dated January 11, 1881.

Application filed September 25, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES R. NELSON, of Corinna, in the county of Penobscot and State of Maine, have invented a new and Improved Sheet-Metal-Notching Machine, of which the following is a specification.

The object of this invention is to provide a machine for making both square and bevel notches, and at the same time clipping the lower corners of sheet-metal plates preparatory to seaming and wiring the same.

The invention consists of a flat bed-plate supported on suitable standards, and having secured upon it a fixed and an adjustable stationary cutting-jaw and adjustable guide-plates, and, further, of a rocking shaft journaled in the said standards parallel with the bed-plate, and having keyed upon it a stationary and an adjustable dog, each of which carries a cutting-jaw corresponding and operating with the stationary jaws of the bed-plate.

Figure 1 is a plan of the device. Fig. 2 is a vertical sectional elevation on line *x x*, Fig. 1. Fig. 3 is a vertical sectional elevation on line *y y*, Fig. 1. Fig. 4 is a plan of a sheet of metal, showing notches made by the machine. Fig. 5 is a cross-section of the same on line *z z*, Fig. 4.

Similar letters of reference indicate corresponding parts.

In the drawings, A A' represent the standards supporting the bed-plate B, the rear edge of which is sunken and longitudinally slotted, as shown at *a*, for the adjustment therein of the adjustable diagonal cutting-jaw C, which is flush with the top of the bed-plate B.

D is a jaw or jaw-plate rigidly secured in the bed-plate B and flush with the top thereof, which is cut away for that purpose opposite the standard A, the cutting-edge of said plate or jaw D being three-sided and presenting a right angle and an obtuse angle, as shown in Fig. 1, whereby a square or a beveled notch, or both, may be made in a sheet of metal.

E E' are slotted guide-plates, adjustably secured on the top of the bed-plate B by thumb-screws E'' E'' in proximity to the plate or jaw D.

F is the shaft, journaled in suitable boxes F' on the standards A A', and slightly adjustable endwise for the accurate setting of the

cutters H K by means of the adjusting-screws F''. Adjustably secured on this shaft F, by a set-screw, *a'*, or other suitable device, is a dog, G, that carries, fixed diagonally on its face, a cutter or cutting-jaw, H, whose cutting-edge corresponds and co-operates with the edge of the jaw C, and said jaws C H can be adjusted at any desired distance from the jaws D and K.

Secured on the shaft F, by a set-screw, *b*, or other suitable device, between the forks of the standards A, is a dog, I, that carries fixed on its face the vertical cutter or cutting-jaw K, whose cutting-edge corresponds and co-operates with the edge of the jaw D. The tail of the dog I is extended forward under the bed-plate B, and has a bolt-hook, L, passed vertically down through it and through a foot projecting from standard A', the said bolt-hook being held in place by a nut, *c*, on its upper end, and being encircled by a spiral spring, L', between the tail of the dog I and the foot of the standard A, whereby the said dog I is thrown upward and the jaws D K opened on the release of the pressure on the treadle N. The bolt-hook L is connected with the treadle N by rod and link M M', as shown.

R is an upright stud extending upward from the bed-plate B, to limit the downward movement of the dog I.

The device is operated by moving the treadle N up and down, whereby the shaft F is rocked back and forth, and the cutters H K are thereby alternately raised and brought down.

O represents a slotted guide-plate, adjustably secured to a side of the standard A by a thumb-screw, *f*, and having its free end bent at right angles, so as to extend over an end of the plate or jaw D, for the purpose of guiding and holding a sheet of metal thereon.

A square sheet of metal is shown in dotted lines at P, Fig. 1, in position for being notched, wherein it is seen that said sheet P is suitably guided beneath the jaws or cutters H K by having one edge set against the guide E and another edge against the guide-plate O. In moving the treadle the cutters or jaws H K are simultaneously brought down upon said sheet P and the corners cut or notched, as



shown in Fig. 4, wherein *m* represents the notch made by the cutting-jaw H, and *n* the notch made by the cutting-jaw K. The sheet P is then turned over and its opposite corners  
5 notched or clipped in the same manner, so that it is ready to be wired, as shown at *o*, and seamed, as shown at *p*, Fig. 4.

This machine is simple in construction, works with great rapidity and accuracy, and can be  
10 operated by any power, other attachments being substituted for the treadle, if desirable.

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

15 1. A machine for notching sheet metal, constructed substantially as herein shown and described, consisting of slotted bed-plate B, provided with adjustable and fixed cutters C D, rocking shaft F, carrying dogs G I, pro-  
20 vided with cutters H K, respectively, and suitable guide-plates, as set forth.

2. In a machine for notching and clipping

sheet metal, the combination, with the fixed jaws or cutters C D, of the rocking jaws or cutters H K, arranged and operated substan- 25  
tially as herein shown and described.

3. In a machine for notching and clipping sheet metal, the combination, with the bed-plate B, of the adjustable guides E E' O, sub-  
stantially as herein shown and described, 30  
whereby the metal plate to be operated upon is correctly guided under the cutting-jaws, as set forth.

4. In a machine for notching and clipping sheet metal, the combination, with the rocking 35  
dog I, provided with an elongated tail, of the bolt-hook and nut L c, spiral spring L', and treadle and connections N M M', substantially as and for the purpose described.

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Witnesses:

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