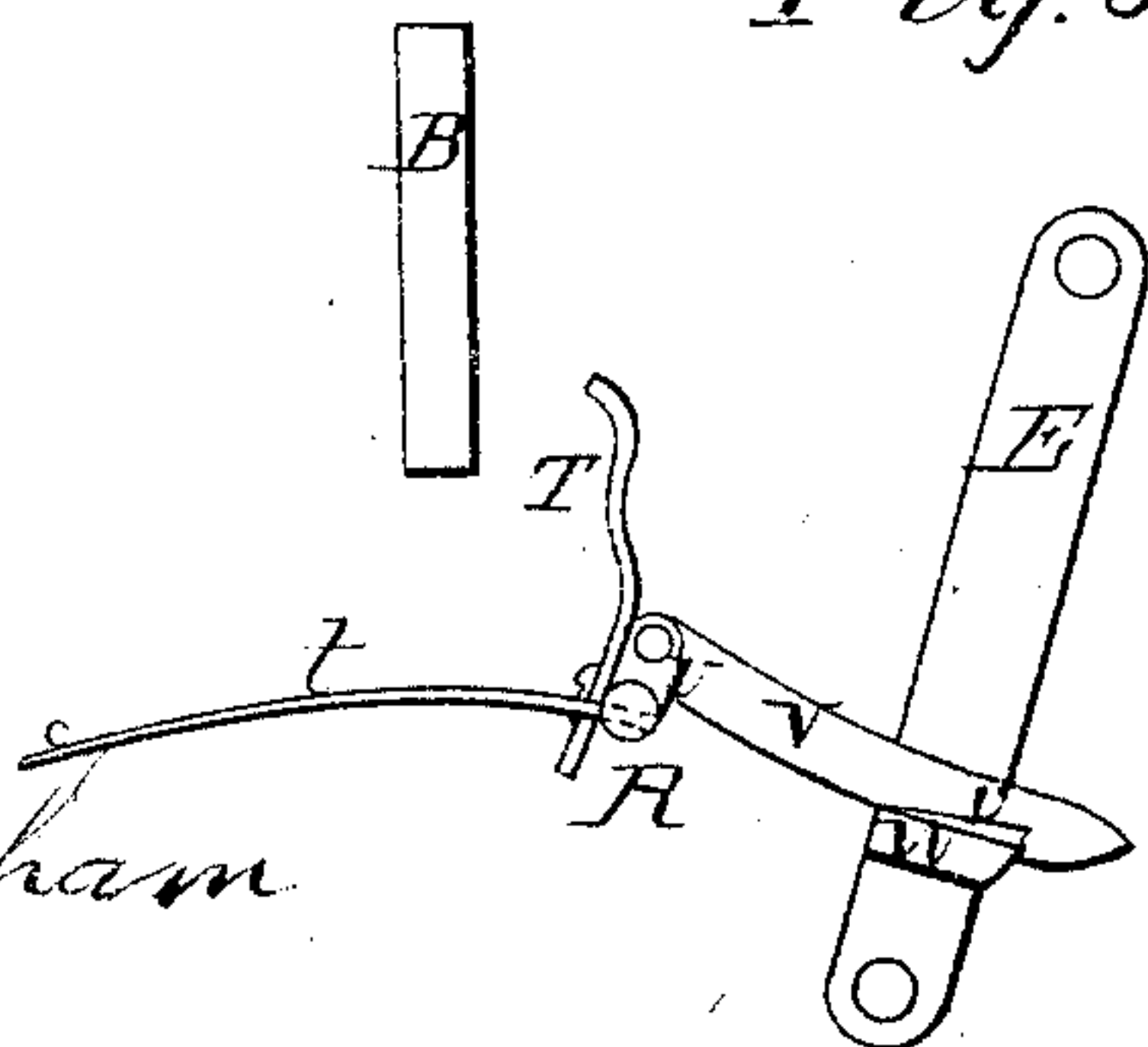
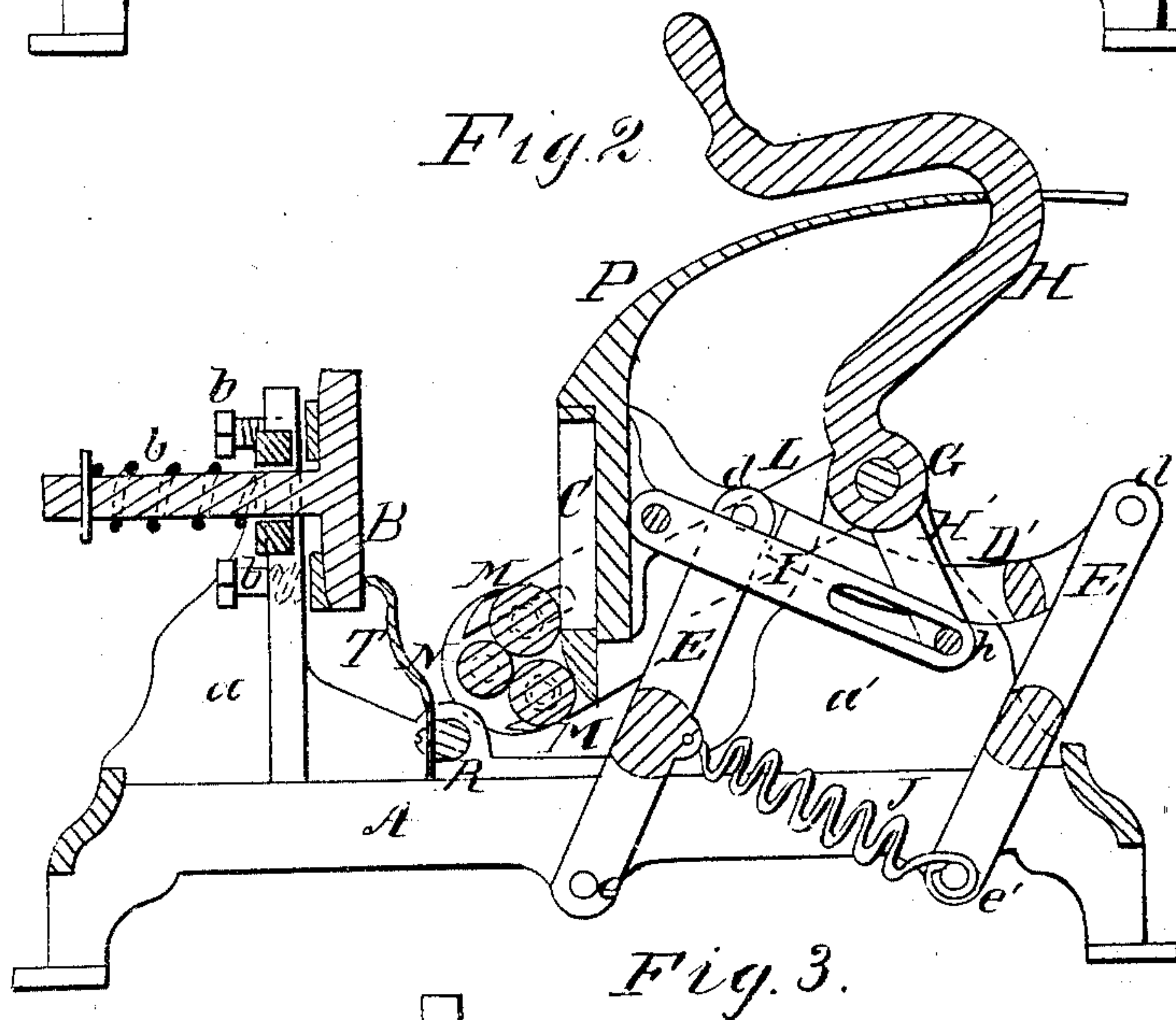
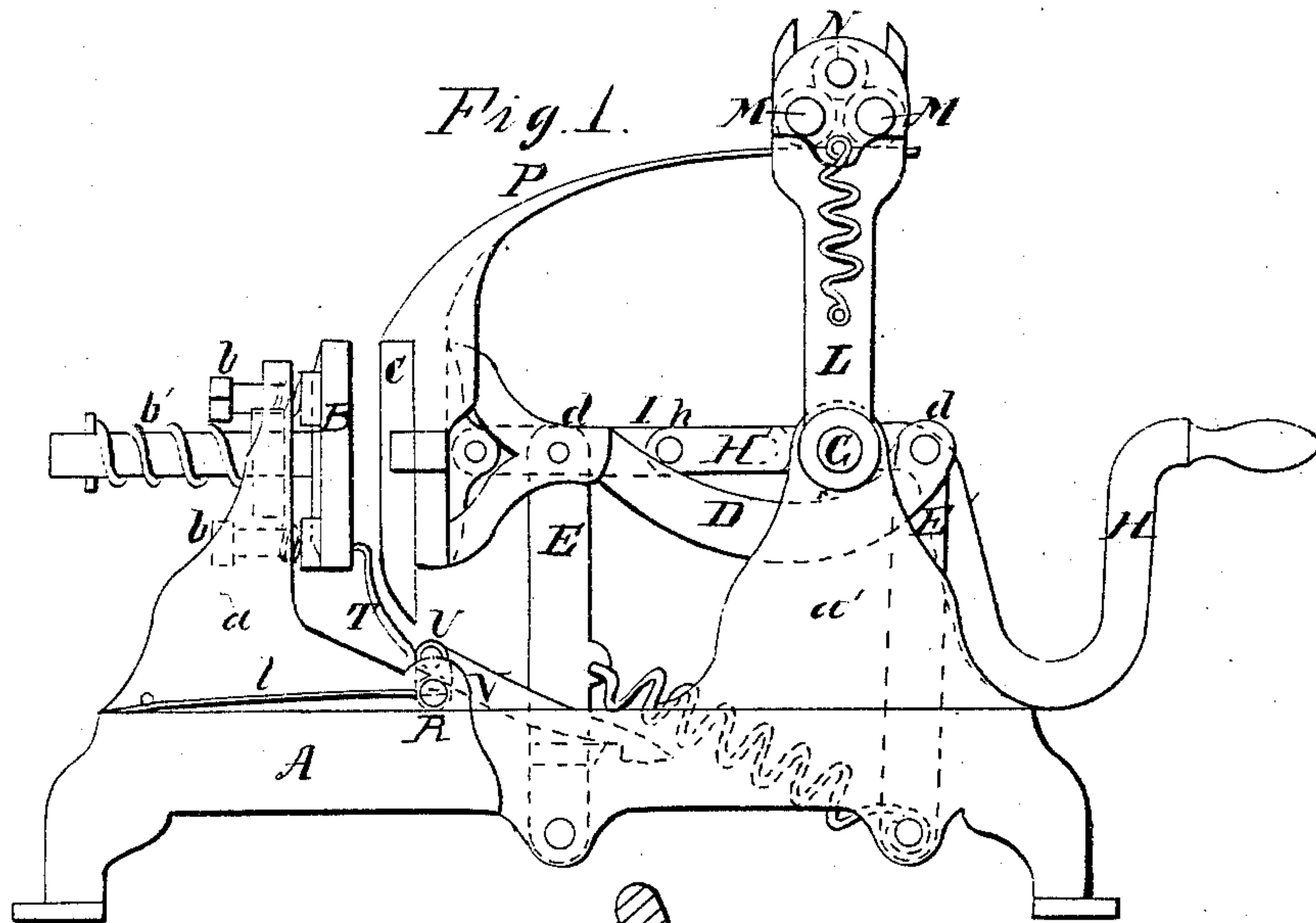


W. H. Babcock. Printing Press.

N^o 30452.

Patented Oct. 23, 1860.



Witnesses.

O. M. Burnham

J. G. Hitchcock

Inventor

W. H. Babcock

UNITED STATES PATENT OFFICE.

WILLIAM H. BABCOCK, OF HOMER, NEW YORK.

PRINTING-PRESS.

Specification of Letters Patent No. 30,452, dated October 23, 1860.

To all whom it may concern:

Be it known that I, WILLIAM H. BABCOCK, of Homer, in the county of Cortland and State of New York, have invented certain
5 Improvements in Printing-Presses; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked
10 thereon.

Figure 1 is a side elevation with the parts in position for giving the impression. Fig. 2 is a vertical section with the parts in position for feeding the card or paper. Fig. 3
15 is a view of a portion detached.

Similar letters of reference indicate like parts in all the figures.

The nature of my invention consists in supporting a bed, which vibrates in a line or
20 arc perpendicular, or nearly perpendicularly to the plane of its face, upon two or more parallel radius-rods in such a manner that the bed shall remain parallel to the face of the platen in all portions of its motion.
25 Also, in giving a peculiar form to the distributing table, in combination with a vibrating bed, and rollers which are carried in the arc of a circle, whereby the rollers are kept at about the same distance from their
30 center of motion, during their passage over the distributing table. Also, in a peculiar means of operating the card motion for liberating the cards after each impression.

To enable others skilled in the art to make
35 and use my invention I will proceed to describe its construction and operation by the aid of the drawings.

A is a frame of cast iron fitted to stand upon a table or other support, where it is
40 secured by screws at each corner. Upon projections, *a*, at one end is fixed a platen, B, made adjustable thereon, by screws, *b*, and spring *b'*, so as to vary the amount of impression. A blanket (not represented) is
45 attached to the face of, B, by any suitable means, as are also guides (not represented) for guiding and supporting the cards or paper to be printed.

C is the bed, upon which the type are
50 placed. At the back of C are firmly attached two arms D, D', which are connected by pivots *d*, *d'*, with radius rods E, E'. These radius rods are parallel and are of equal length, having their lower ends jointed
55 to the frame A at the points *e*, *e'*. This arrangement is such that the bed C may be

vibrated toward and from the platen B, and always maintain a position parallel thereto. The radius rods E, E', being attached to the rigid arms D, D', hold the bed
60 stiffly while the impression is being taken, and allows it to be vibrated to the proper position for inking the type, with little friction.

The means by which the bed receives its
65 vibratory motion are as follows: In standards, *a'*, on the frame A, a shaft G is hung so that it is free to rotate. Upon the middle of this shaft is fixed a lever H, forked at the end H' with a pin *h* connecting the ends
70 of the fork. The other end of H is formed into a handle as represented. A link I is hinged to the center of the bed C, having a slot at the other end, through which the pin *h* passes, the link I extending between
75 the two forks of H'. A spiral spring J attached to the radius rod E and the frame A, tends to draw the bed back into the position shown in Fig. 2. If now the lever H is forced down into the position shown in
80 Fig. 1, the pin *h*, striking into the end of the slot in I, and the latter together with H', form a progressive leverage, by which the bed is forced toward the platen and an impression given. On lifting the lever H,
85 the bed is drawn back by the action of the spring J into the former position.

Upon the ends of the shaft G, outside of the frame, I attach two arms L, L, which are
90 slotted at their outer ends to receive the inking rollers M, M and a distributing roller N. These rollers are held in their places, and drawn toward the shaft G by spring *m*, one on each of the arms L. These arms L, are keyed to the shaft G in such a relative
95 position to the lever H, that when the latter is in the position shown in Fig. 1 or when the impression is being given, they are in nearly a vertical position as represented, but when H is in the position shown in Fig.
100 2 they are at such a position as to hold the rollers, M, M, at a little distance below the form of type. The slot in the link I is of such dimensions that, while the pin *h* is passing its length and the bed is at rest, the
105 rollers M, M, pass across the whole face of the bed to ink the type, and while the bed is going forward to give the impression and returning, the rollers, M, M, are traversing the distributing table, P, attached to the
110 upper side or edge of the bed, whereby the ink is distributed. It will be observed that

this distributing table moves forward with the bed, while the rollers move in the arc of a circle. This necessitates a peculiar form for the distributing table in order to
 5 allow the rollers to touch its surface at all points of their motion, without calling into play to a great extent, the elasticity of the springs *m*. If the motion of the bed was
 10 uniform for a given motion of the lever *H*, then this proper form would be a cycloidal curve, but as such motion is not regular, but variable, the curve approaches the elliptical form. It is readily described by laying out
 15 the positions of the bed and rollers for a number of points in the motion of *H*, and through the points so obtained drawing a curve which will be the one required.

The means by which the cards are released after being printed are as follows: A shaft
 20 *R* is hung on the frame below the platen, and to this shaft is attached an adjustable guide *T* against which the edge of the card rests while being printed. This guide is pressed against the face of the platen by a
 25 spring *t*. An arm *U* is also attached to or formed on the shaft *R*, and to its end a link *V* is jointed by a pin *u*. At the opposite end of *V* is formed a notch *v* as represented. A wide projection *W* extends from the side of
 30 the radius rod *E* in such a position that when the impression is being taken, the notch *v* falls over its edge, and when the bed retires the link *V* is carried with it, lifting the gage, *T*, from the face of the platen, and
 35 allowing the card to fall into a receptacle beneath. As the bed continues to recede, however, the other side of the projection, *W*, strikes the heel of the notch *v*, as shown in Fig. 3, whereby *V* is released and *T* is
 40 forced back into position by the spring *t*, ready for the reception of another card.

In operating the press, the pressman takes

hold of the lever *H*, and brings it into the position shown in Fig. 2, whereby the rollers are passed across the type, and the latter
 45 are inked. He then drops a card through suitable guides upon the gage *T*, and depresses the lever *H* to the position shown in Fig. 1, whereby the rollers are again passed
 50 across the type and over the distributing table, where they receive a fresh supply of ink, the bed and type are forced up against the card, and the impression given. Then, by elevating the lever *H*, again, the gage *T*
 55 is lifted by the catch *V* and projection *W*, the card released, the type inked, and all the parts are ready for another card. Ink is supplied to the distributing table *P*, by hand, as required.

Having now fully described my invention, 60 what I claim as new therein, and desire to secure by Letters Patent, is—

1. Supporting the vibrating bed, *C*, upon one or more parallel radius rods, *E*, *E*, substantially as and for the purpose herein 65 described.

2. The peculiar form of the distributing table, *P*, attached to the vibrating bed, *C*, and arranged relatively to the sweep motion of the inking rollers, *M*, substantially as 70 herein described, and for the purpose set forth.

3. Operating the gage, *T*, to release the printed card, by means of the catch, *V*, and tripper, *W*, substantially in the manner here- 75 in specified.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

W. H. BABCOCK.

Witnesses:

WM. H. BURNHAM,
 S. G. HITCHCOCK.