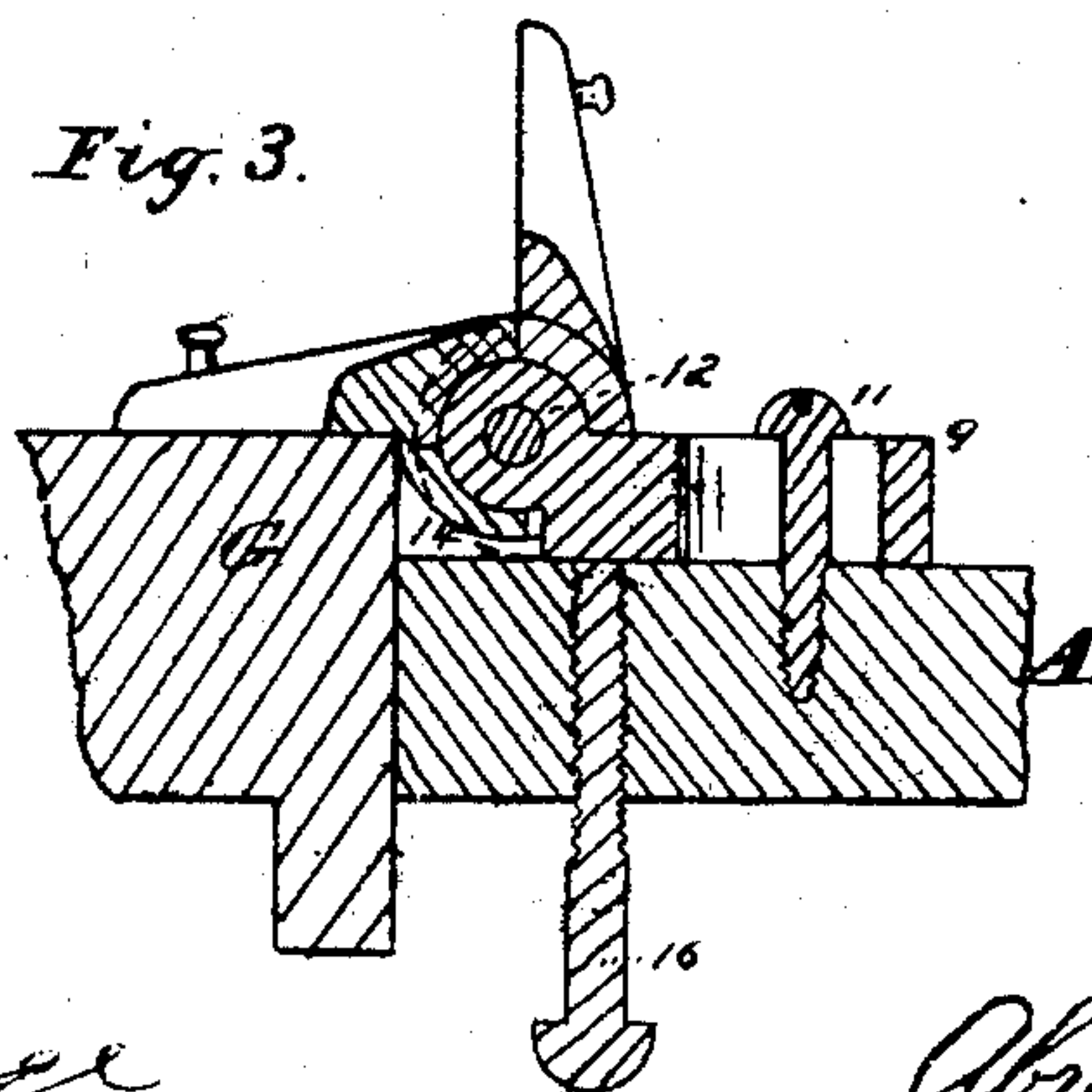
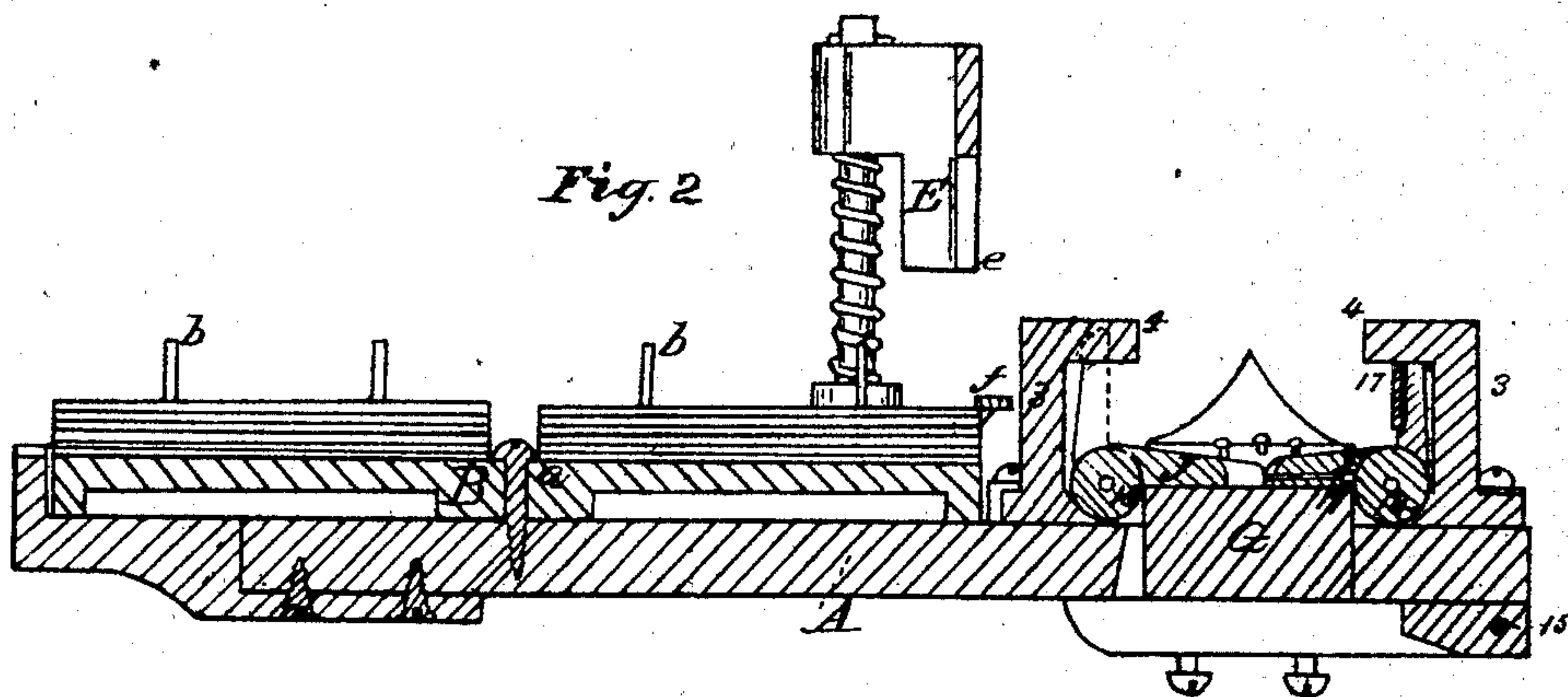
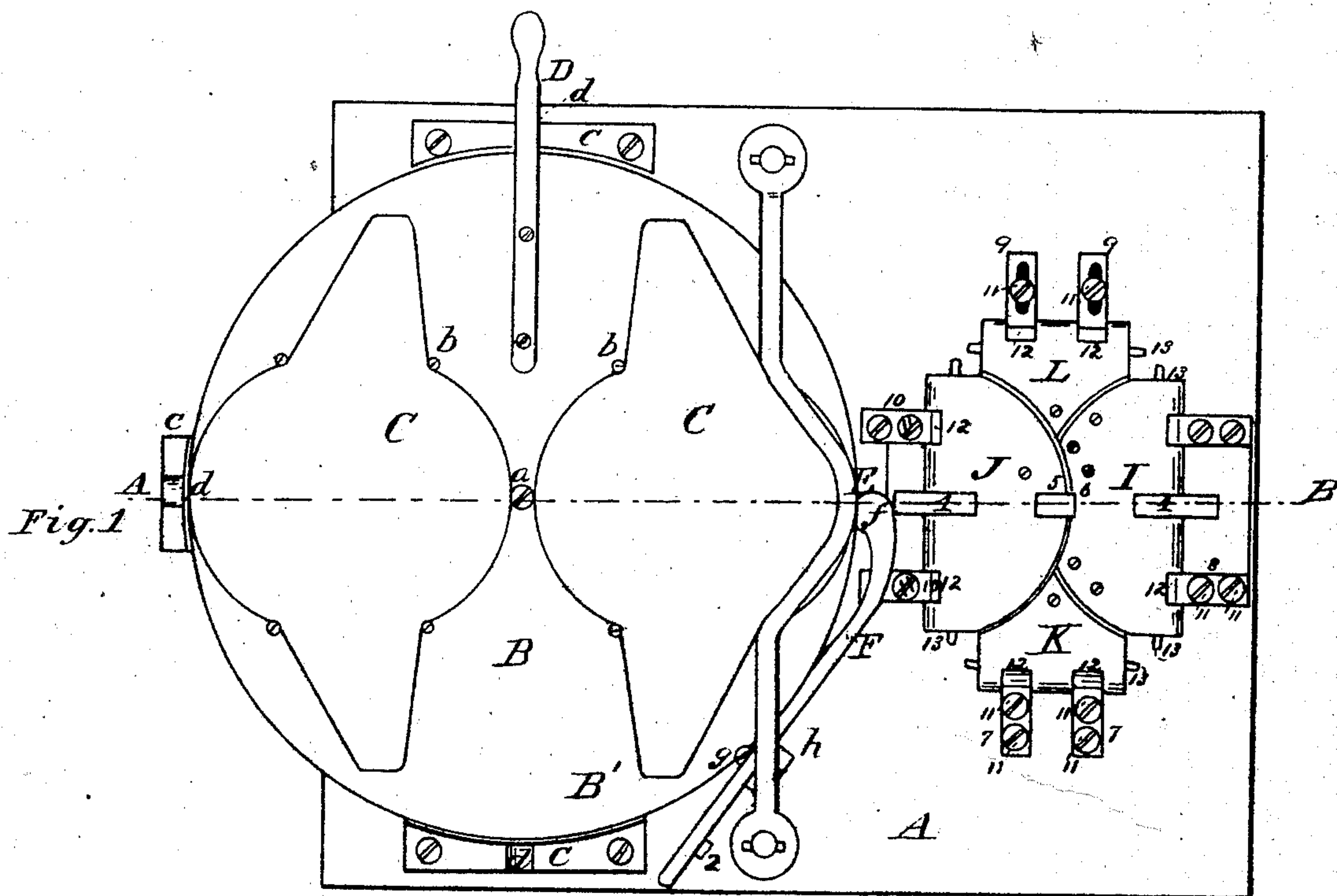


A. A. Rheutan.
Envelope-Machine.

N^o 74140

Patented Feb. 4, 1868



Witnesses

Thos. H. Dodge
Geo H. Miller

Inrentor

Abram A Rheutan.

United States Patent Office.

ABRAM A. RHEUTAN, OF WORCESTER, MASSACHUSETTS.

Letters Patent No. 74,140, dated February 4, 1868.

IMPROVEMENT IN ENVELOPE-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. A. RHEUTAN, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Envelope-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a plan or top view of so much of an envelope-machine as is necessary to illustrate my invention.

Figure 2 represents a section on line A B, fig. 1, and

Figure 3 represents a section on line C, fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

My improvements relate, first, to an improved table for supporting the blank envelopes; second, to an improved device for separating the blank envelopes when lifted; third, to an improved device for supporting the blanks above the folding-table; fourth, to an improved mode of hinging the folding-flaps, and adjusting the same; fifth, to an improved mode of making the gumming folding-flap.

In the drawings, A represents the top or main table of the machine, upon which is placed the rotary table B, which turns upon the centre *a*, the table in this instance being provided with two separate sets of pins, *b b*, to hold the blanks C. The table is also provided with a catch-handle, D, by which the table can be turned at will, to bring either of the packages of blanks under the gumming and lifting-bar E. Upon the front and each side of the rotary table B is arranged a notched piece, *c*, each piece being fastened to the top of table A, as fully indicated in the drawings. Lever D is made so as to spring into the notches *d* in the pieces *c*, whereby the table B is retained in proper position when once adjusted, as shown in the drawings.

It will be seen that the operator can arrange one package of blanks upon table B while the other is being taken up and fed to the folding-apparatus. By this arrangement, the operator is enabled to turn the table B to bring a fresh package of blanks under the gumming and lifting-bar E after the bar has lifted a blank, and before it descends for another, and hence there is no necessity of stopping the machine to replenish the blanks, nor is there danger of causing improper folding of any of the blanks, as is often the case with the old plan of placing the blanks upon the same part of the table at each time. Again, table B can be turned around so as to bring a blank space, B', under the lifting-bar, in which case the machine can run without injury, no blanks being fed to the machine so long as the table remains in such a position. Table B may be provided with one, two, or more places for holding blanks C. As the gumming-bar E lifts the blanks, there is danger of one or more extra blanks adhering to the under side of the blank in contact with the gumming-lips *e* of the bar E, and to prevent this, I employ a lever, F, the lip or end *f* resting upon the package of blanks at the point *l* between the lips *e*, so that when the blank is raised, and part *l* drawn out from under the point *f* of lever F, if an extra blank is being raised, it will be separated from the one in contact with the lips *e*, and held down by the point *f*.

Lever F is fulcrumed at *g* to a standard, *h*, upon table A. A spring-catch, 2, is arranged near the end of lever F for the purpose of holding the end *f* up, when desired, for changing the position of table B, or for any other purpose. In lieu of a lever, a weight or ball may be employed to rest upon the edge or points *l* of the blanks. For instance, a ball having a hole through it might be slipped upon a wire fastened in a vertical position to the machine, so that the side of the ball would rest upon the part *l* of the blank. By this last arrangement, the part *l* of the blank, being raised by the gumming-lips *e*, is drawn from under the side of the ball, which prevents the blank next below from being raised, and thus renders the operation of lifting and feeding the blanks to the machine very accurate and perfect. After the blank has been raised by the gumming-lips *e*, it is drawn forward, by the common mechanism in use in envelope-machines, to be folded.

In my machine, two stands, 3 3, are arranged, as shown in the drawings, for supporting the blank over the folding-table, in front and back, the ends of the blank being supported in the usual manner by the fingers by which it is drawn forward. Stands 3 3 have projections 4 4, which extend in over the folding-flaps I and J, so as to give support to the blank up nearly to the line of the fold on each side. Flaps I and J are recessed or

notched out, as seen at 5 and 6, so as not to strike the projections 4 4 when turned back, as shown in red lines, fig. 2. The folding-flaps I J K L are supported and held in place by the bearing-pieces 7, 8, 9, and 10, said pieces being fastened to the table A by screws 11, and having circular projections 12, which enter circular recesses in the base of the flaps, forming knuckle-joints, the journals 13 passing through both the bearing-pieces and the base of the flaps, as fully shown in the drawings. By this mode of hinging the folding-flaps, the latter can be readily adjusted either back, forward, or laterally, which could not be conveniently done if the journals 13 had stationary bearings at their ends. Again, as the folding-flaps have to be moved only about forty-five degrees, the base of the flap does not have to be cut away so much as to expose the envelope to injury from the oil used in lubricating the joints. The under sides or beads 14 of the folding-flaps are made eccentric, so that when they are turned down, the beads fit close up to the edges of the hinged table G, upon which the envelope is pressed and folded, as shown in dark lines, figs. 2 and 3, while, when the folding-flaps are turned up, a space is left between the edges of the table G and the beads, as shown in red lines, same figures.

Two important advantages may be named as resulting from making the beads 14 eccentric: first, when the flaps commence to fold in the sides and ends of the envelope, the folding of the edges is gradual, and hence is more perfect than it is when the beads 14 are made on a true circle; second, after the envelope has been folded, and the flaps are turned up, the beads 14 turn away from the envelope, and leave it free to fall with the table G, which is hinged at the point 15.

By my arrangement and construction of the beaded portions of the folding-flaps, the envelopes never stick or catch, but are always discharged perfectly by the simple lowering of the table G. It sometimes happens that it is desirable to adjust the flaps up, as well as in other directions, and for this purpose a screw, 16, may be inserted in the table A, as shown in fig. 3, whereby the base of the flaps can be raised up at pleasure, the screw 11 being loosened for the purpose. The gumming-flap I, so called because it forces down the gummed flap, is made with a spring-face, 17, which extends from the front of the flap back to near the bead, as fully shown in black and red lines, fig. 2. The spring-face may be so combined with springs that it can be adjusted to yield more or less, as occasion may require. By this mode of construction, the flap of the envelope is pressed the most just over where the gum is applied, and consequently the union of the parts is rendered more certain, while the edge of the envelope is left round, and more perfect than it would be if subjected to the same pressure applied to the gummed part of the flap.

It will be understood that the various parts of the machine above described are to be operated by proper and any well-known mechanism. I have only described and shown so much of an envelope-machine as was necessary to illustrate my improvements, which may be applied with advantage to most, if not all, of the envelope-machines in common use.

Having described my improved envelope-machine, what I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

1. The rotary table B, having one or more receptacles for blanks, substantially as and for the purposes set forth.
2. The lever F, arranged for operation substantially as and for the purposes set forth.
3. The use and employment, in an envelope-machine, of a weight-separator, for preventing the lifting of more than one blank at a time, substantially as set forth.
4. The combination, with the base of the folding-flaps, of central bearings, substantially as and for the purposes set forth.
5. The combination, with the folding-flaps I, J, K, and L, of the bearing-pieces 7, 8, 9, and 10, substantially as and for the purposes set forth.
6. The combination and arrangement, with the standards 3 3, of the projections 4 4, for the purposes stated.
7. Making the beaded portions 14 of the folding-flaps eccentric, substantially as and for the purposes set forth.
8. The combination, with the flap I, of an adjustable or spring-face, substantially as and for the purposes set forth.
9. The combination, with one or more of the bearing-pieces, of adjusting-screws 16, for the purposes set forth.

ABRAM A. RHEUTAN.

Witnesses:

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