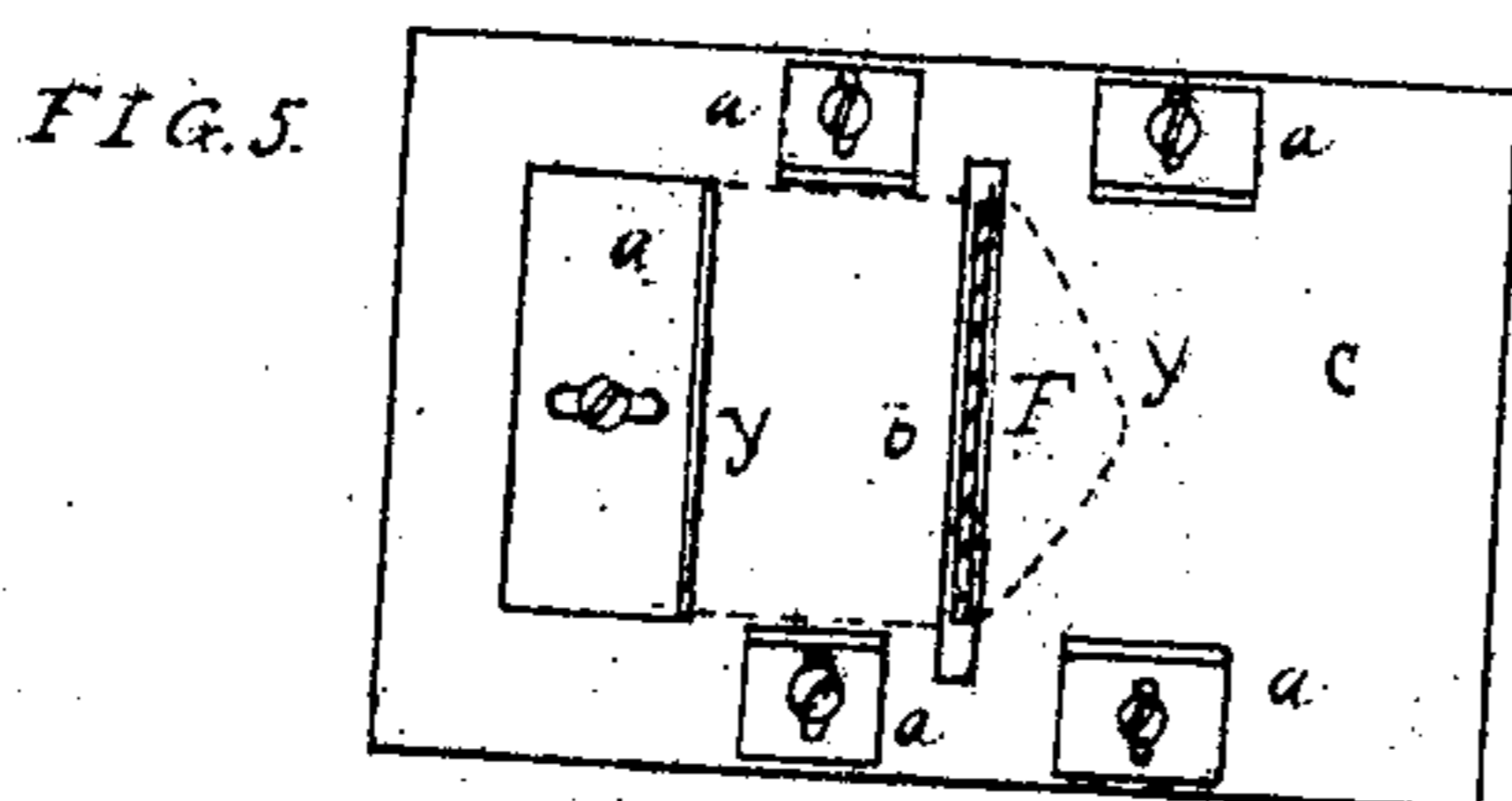
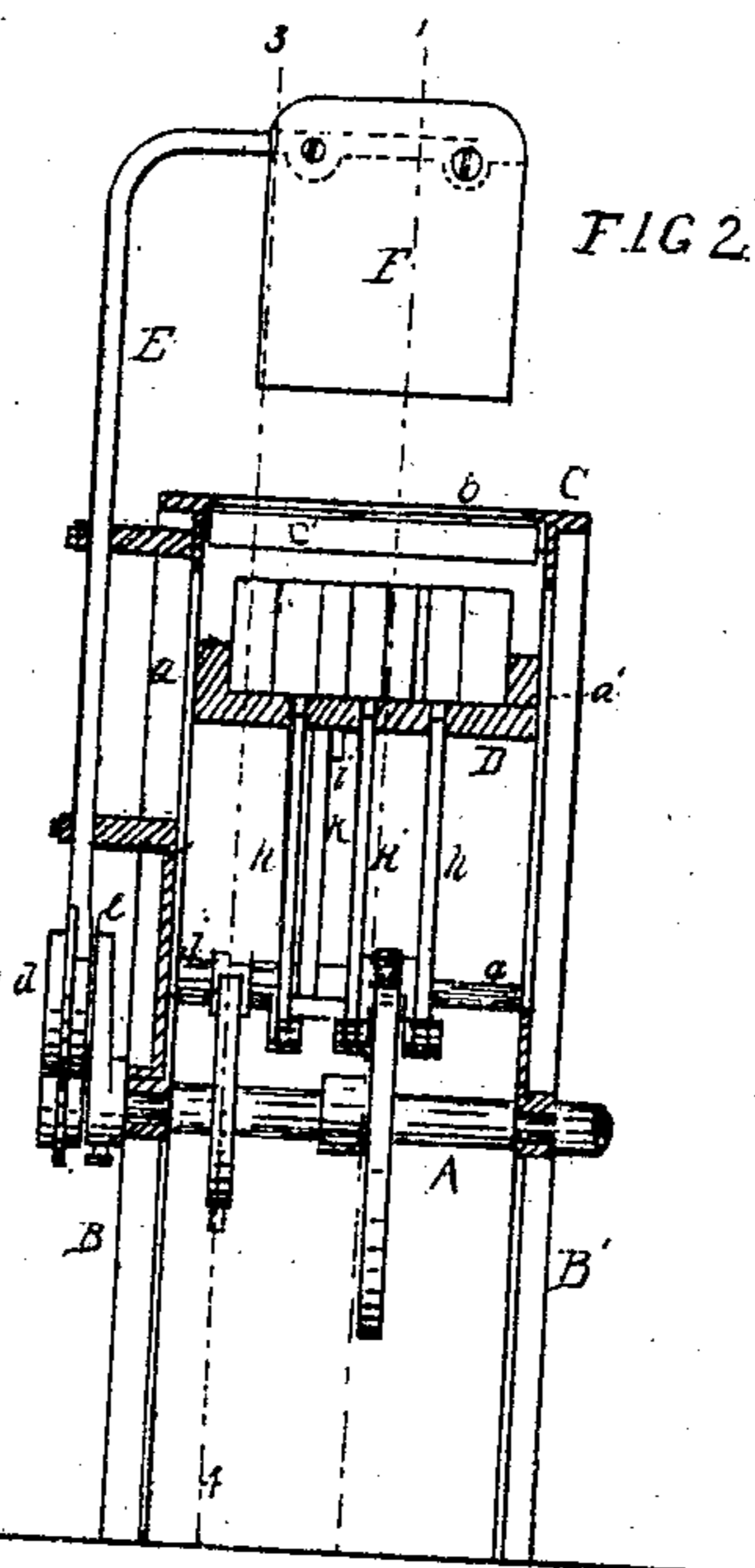
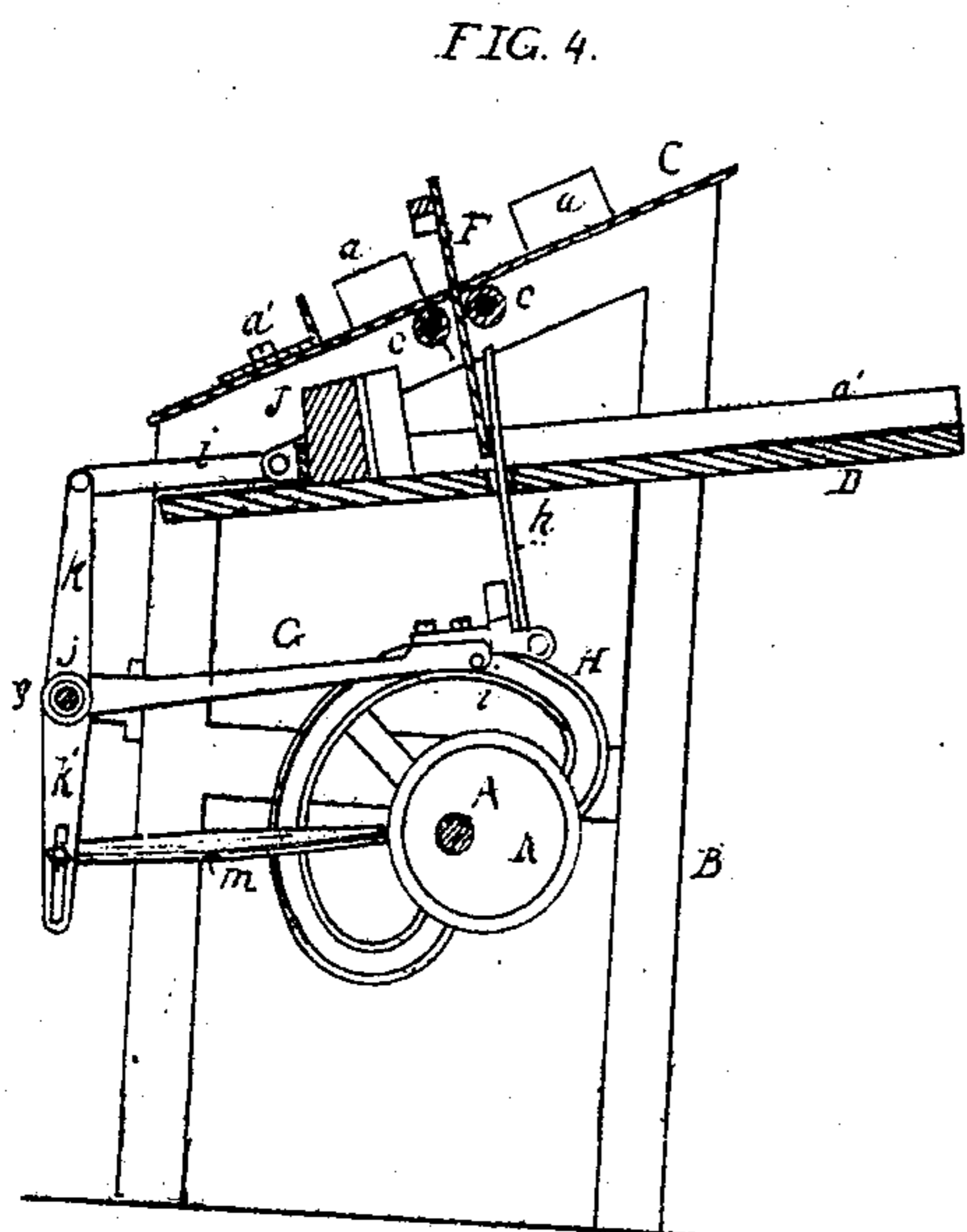
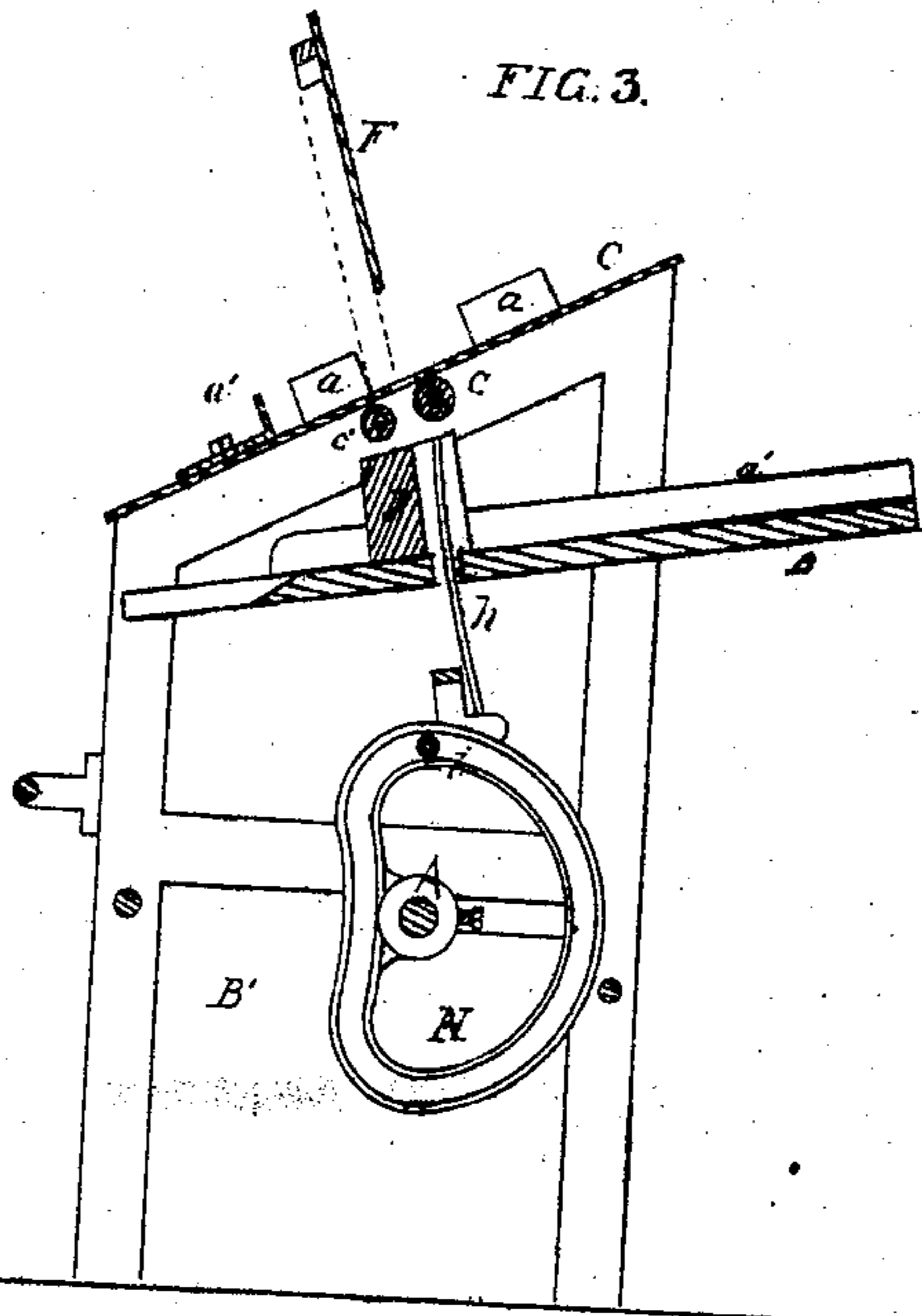
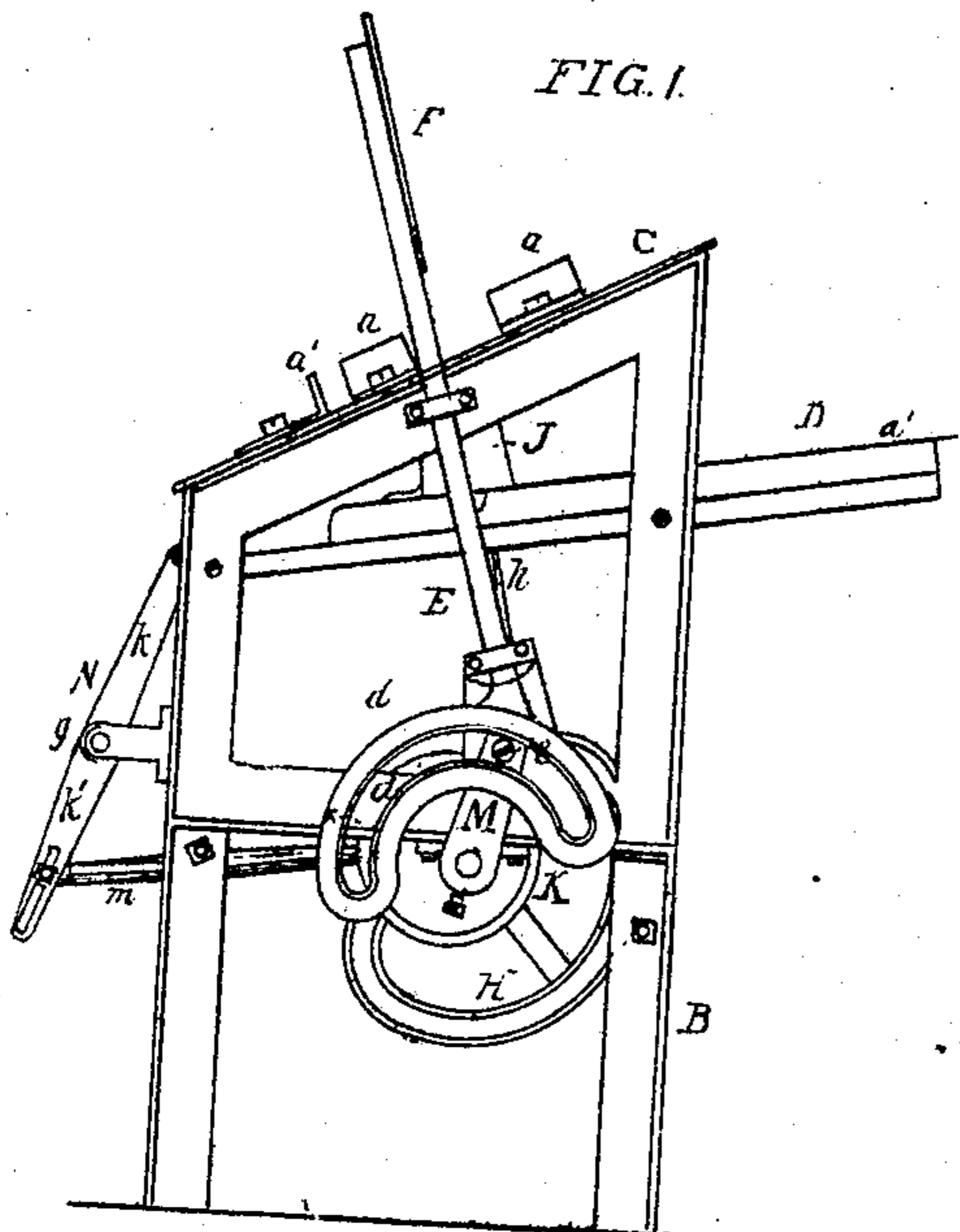


R. Parks.
Folding Envelopes.
N^o 72225
Patented Dec. 17, 1867.



Witnesses
H. H. H.
John Parker

Inventor
R. Parks
By H. H. H.
H. H. H.

United States Patent Office.

ROBERT PARKS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO E. J. SPANGLER, OF SAME PLACE.

Letters Patent No. 72,225, dated December 17, 1867.

IMPROVED MACHINE FOR FOLDING ENVELOPES.

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, ROBERT PARKS, of Philadelphia, Pennsylvania, have invented a Machine for Folding and Packing Envelopes; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of certain mechanism, fully described hereafter, for folding the gummed flaps of envelopes, and packing the same after they have been folded.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a side elevation of my improved machine for folding and packing envelopes.

Figure 2, a transverse sectional elevation of the same.

Figure 3, a sectional elevation on the line 1 2, fig. 2.

Figure 4, the same on the line 3 4, fig. 2, and

Figure 5, a plan view of the top plate of the machine.

Similar letters refer to similar parts throughout the several views.

The main driving-shaft A turns in suitable bearings on the opposite side frames, B and B', of the machine, which are connected together at the top by an inclined plate, C, and to the upper surface of the latter are secured adjustable guide-plates, *a* and *a'*, as shown in fig. 5, for a purpose described hereafter. Beneath the plate C, and also secured to the side frames, is an inclined platform or envelope-receiver, D, having raised sides, *a'*, as best observed in fig. 2. A bar, E, situated at right angles, or thereabouts, to the inclined plate C, is arranged to slide in guides secured to the side frame B, and the upper end of this bar is bent as shown in fig. 2, and to the bent end is secured the folding-blade F, which, when the bar E is operated, may be depressed until almost in contact with the upper surface of the inclined receiver D, and in its descent passes through a narrow slot, *b*, in the plate C, and between rollers *c* and *c'*, the journals of which turn loosely, and independently of each other, in the opposite side frames. A plate, *d*, having a curved slot, *d'*, is secured to the lower end of the rod F, this slot, when the plate is in the position shown in fig. 1, being in the arc of a circle described from the centre of the driving-shaft A, which has a crank, M, the pin *e* of the latter carrying a small anti-friction roller contained within the slot *d'*. An arm, G, is secured to a spindle, *g*, which is arranged to vibrate in the opposite side frames, and to the outer end of this arm are hinged three or more rods, *h*, each of which passes through a small opening in the bottom of the receiver D. A pin, *i*, projects from one side of the arm G, near the outer end of the same, and enters the groove of a cam-wheel, H, which is secured to the driving-shaft A, and by means of which an intermittent reciprocating motion is imparted to the arm, and to its rods *h*. A lever, N, having two arms, *k* and *k'*, is hung loosely to the spindle *g*, the arm *k* being connected by a rod, *r*, to a block, J, which is arranged to slide upon the receiver D, and which is recessed, as shown in figs. 2 and 3, to permit the free play of the rods *h*. A uniform reciprocating motion is imparted to the block J by an eccentric, K, on the driving-shaft, and eccentric-rod, *m*, which is connected to the arm *k'* of the lever N, the said arm being slotted, as shown in fig. 4, so that the rod may be adjusted on it, and the extent of the motion of the block J thereby regulated at pleasure.

Heretofore it has been customary to fold the flaps of envelopes either by hand or by passing them between rollers, the latter being geared together, and revolving in contact with each other, so as to impart an abrupt compressed fold to the paper, and fracture the fibres of the same—an objection which I obviate by the use of a blade which has a rounded or blunt edge, and which carries the papers between rollers not geared together or driven, but moving freely and independently of each other, as fully described in a separate application which I have made for a patent for folding paper.

The envelope *y*, shown in red lines, fig. 5, is placed flat upon the plate C, its position in respect to the blade F being determined by the guiding-plates *a a'*, which, as before described, are made adjustable on the plate C, so that they may suit any size of envelope to be folded.

The several moving parts of the machine being in the position illustrated in figs. 1 and 3, the driving-shaft is turned in the direction of its arrow, fig. 1, but the blade F remains stationary for an instant, (owing to the

position of the curved slot d' in respect to the centre of the shaft,) while the arm G is elevated by the cam-wheel H, its rods h entering the recesses of the block J; as shown in fig. 2. The rods h remain in this elevated position, and the blade F begins to descend, the block J being at the same time carried back by the appliances above described. The descending blade F first turns the flap of the envelope, by thrusting it through the slot b , and the fold is completed by the rollers c and c' , which press the flap and the body of the envelope against opposite sides of the blade F as it descends. The envelope thus folded is carried down by the blade, behind the rods h , (which prevent the flap from falling,) until it rests with its edge on the receiver D (fig. 4.) As soon as the blade F reaches the limit of its downward movement, the direction of its motion is changed, and it begins to rise to its first position. Simultaneously with this movement, the rods h , operated by their cam-wheel H, are depressed until below the surface of the receiver, and the block J moves forward towards the folded envelope, which, by reason of the inclination of the receiver D, falls against the face of the block, and is pushed forward by the same, to a point in advance of the rods h , and against a mass of other previously-folded envelopes. The moving parts of the machine are again in the position shown in fig. 1, and a second envelope is laid upon the plate C', to be operated on by a repetition of the above-described movements.

It will be evident that the above machine may be connected with and fed automatically by an envelope-machine, and that when thus connected, it will fold the gummed flaps of the envelopes with rapidity and precision.

Without confining myself to the precise construction and arrangement described, of mechanism for operating the blade F, block J, and rods h ,

I claim as my invention, and desire to secure by Letters Patent—

1. The blade F, the recessed or grooved block J, rods h , and receiver D, the whole being combined and arranged for joint action, substantially as and for the purpose herein set forth.

2. The sliding bar E, its blade F, and plate d , with curved slot d' , in combination with the crank M, the whole being arranged and operating substantially as and for the purpose described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT PARKS.

Witnesses:

J. P. DELANEY,

C. B. PRICE.