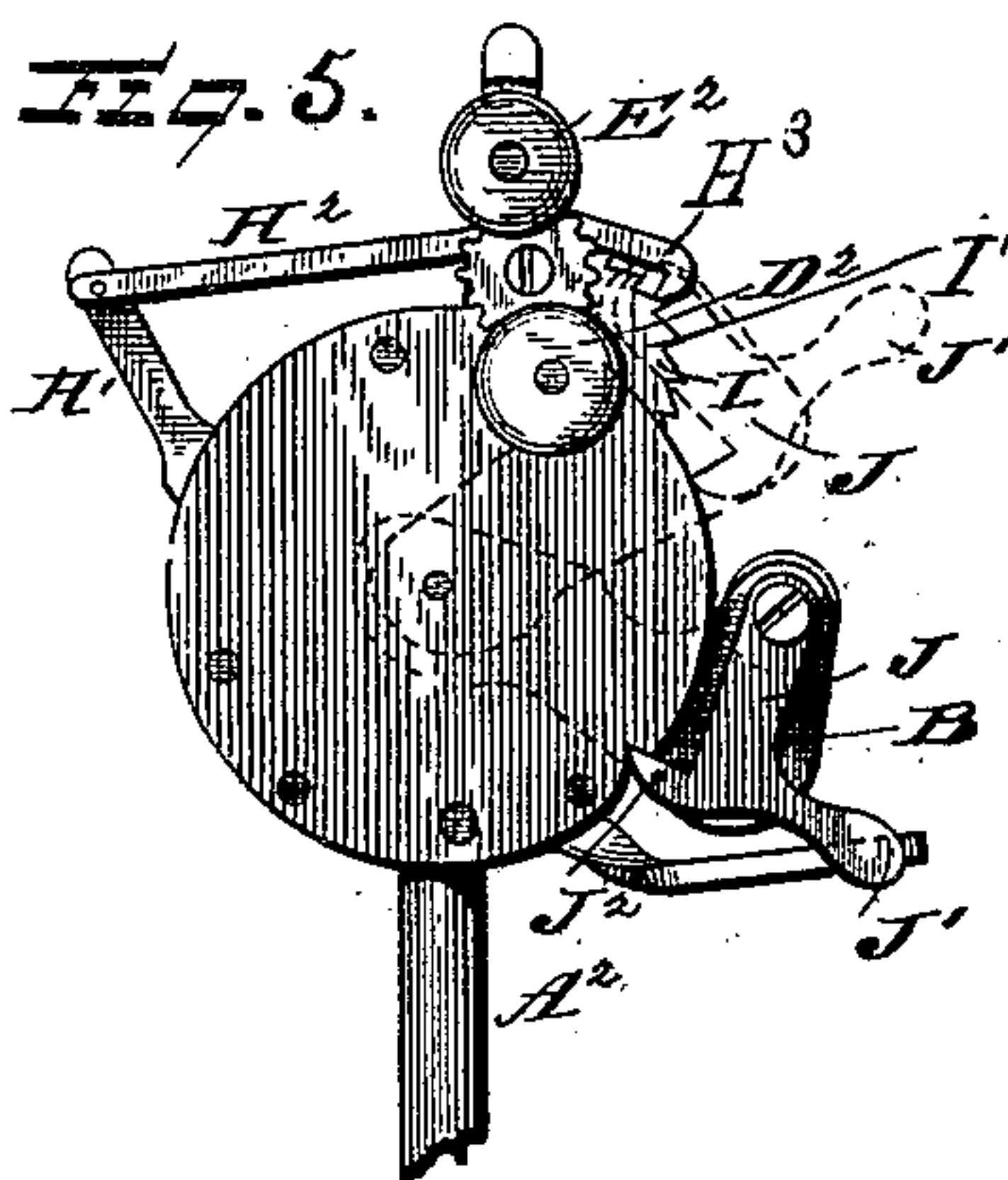
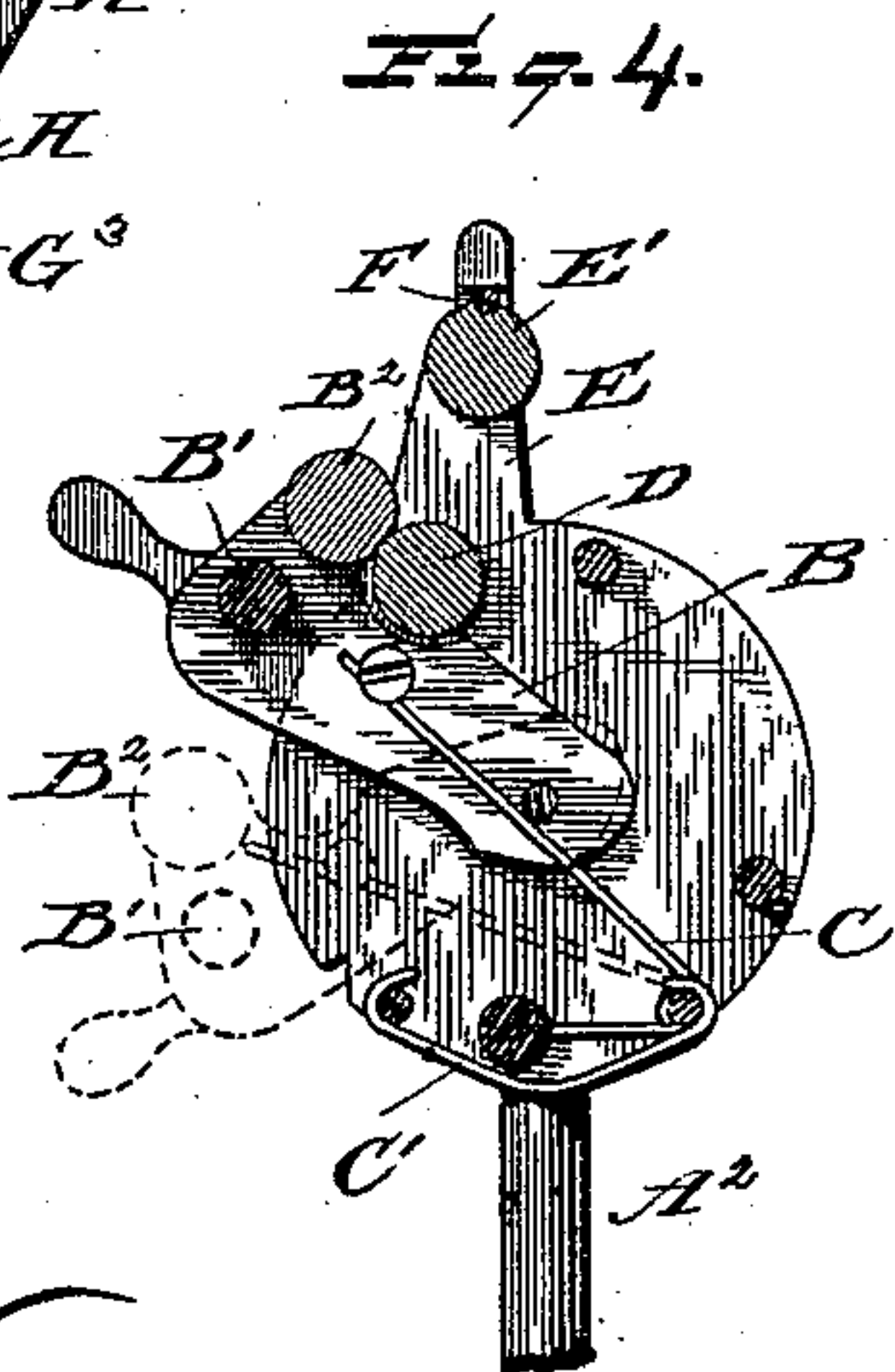
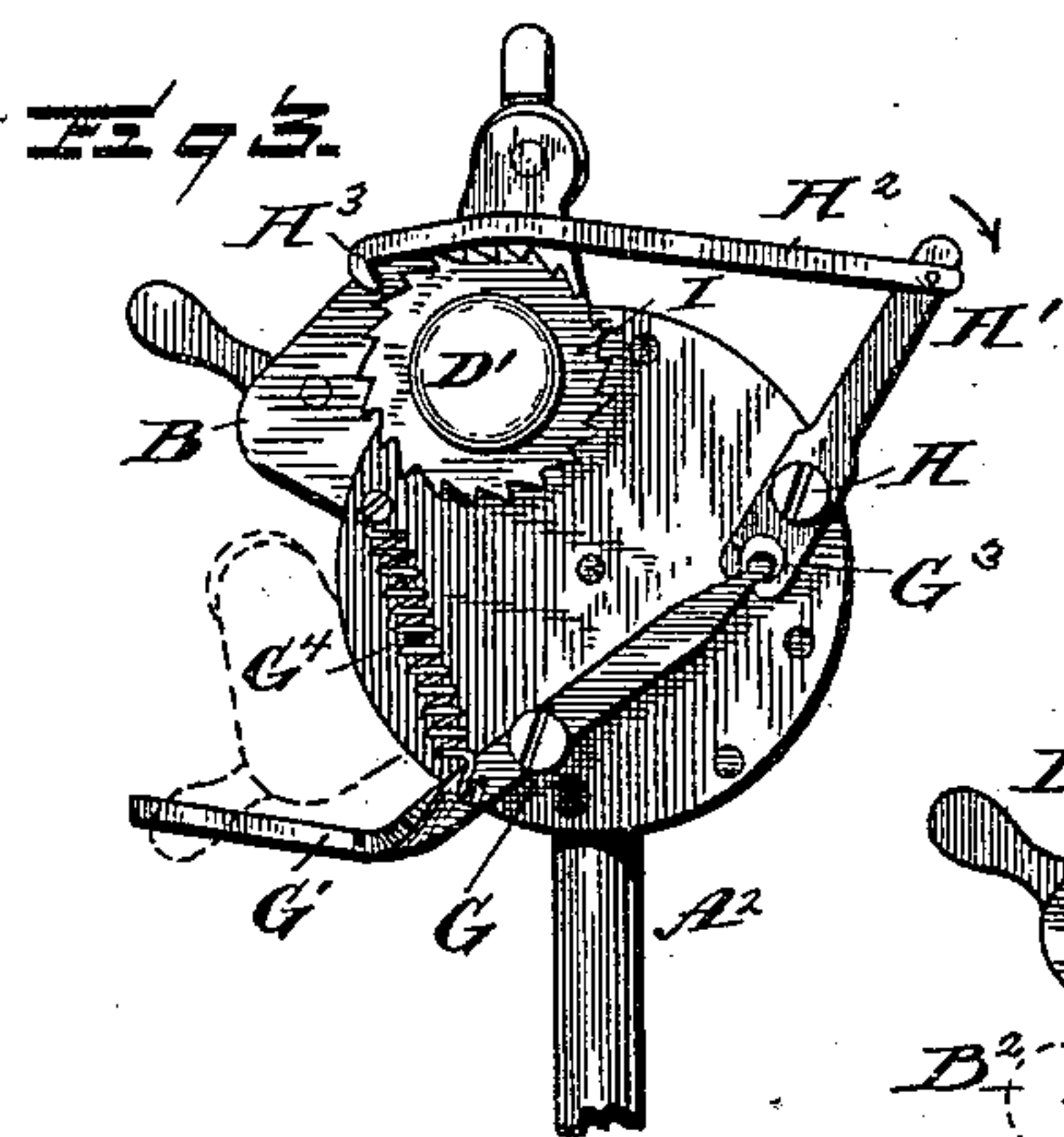
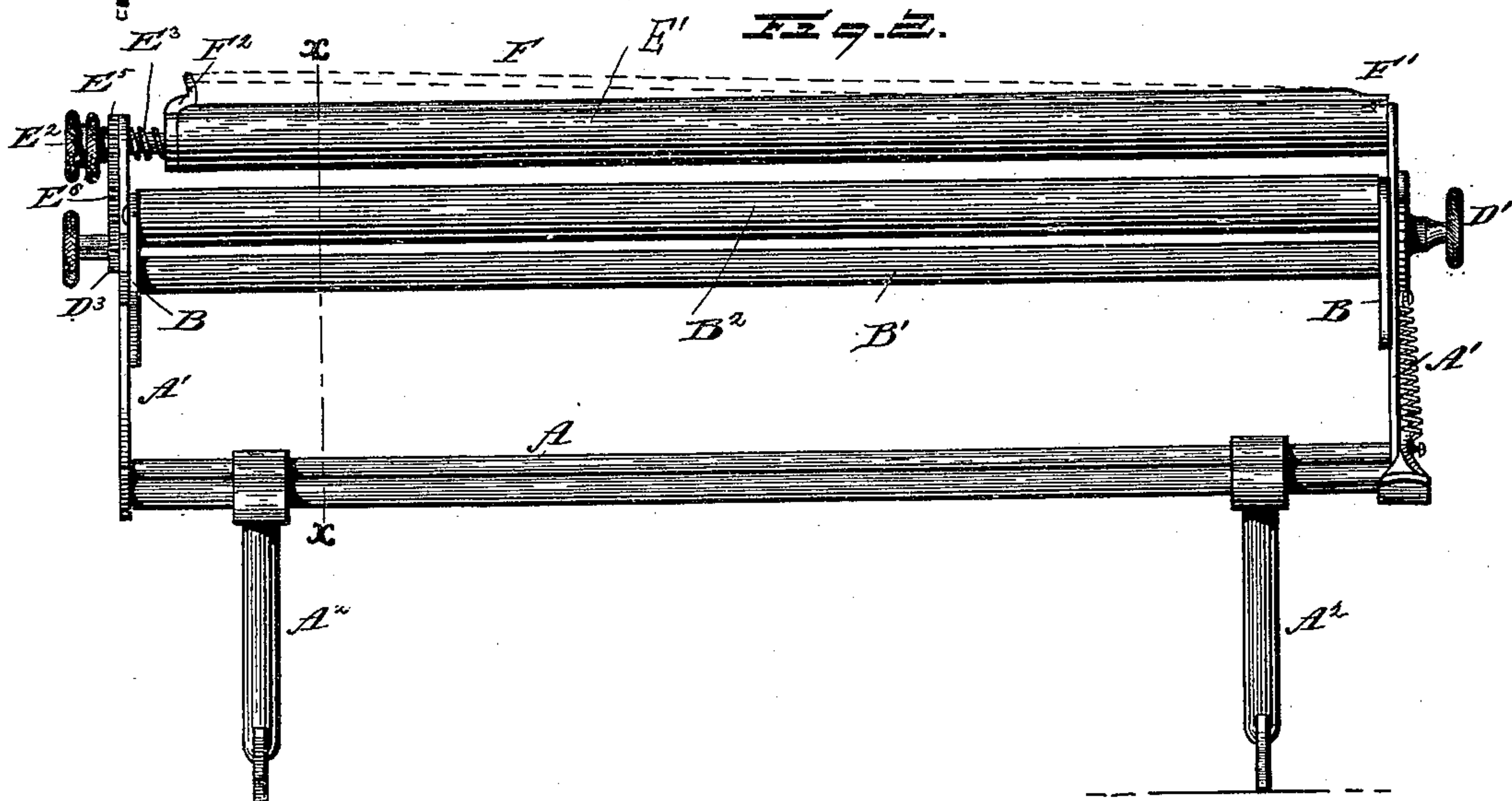
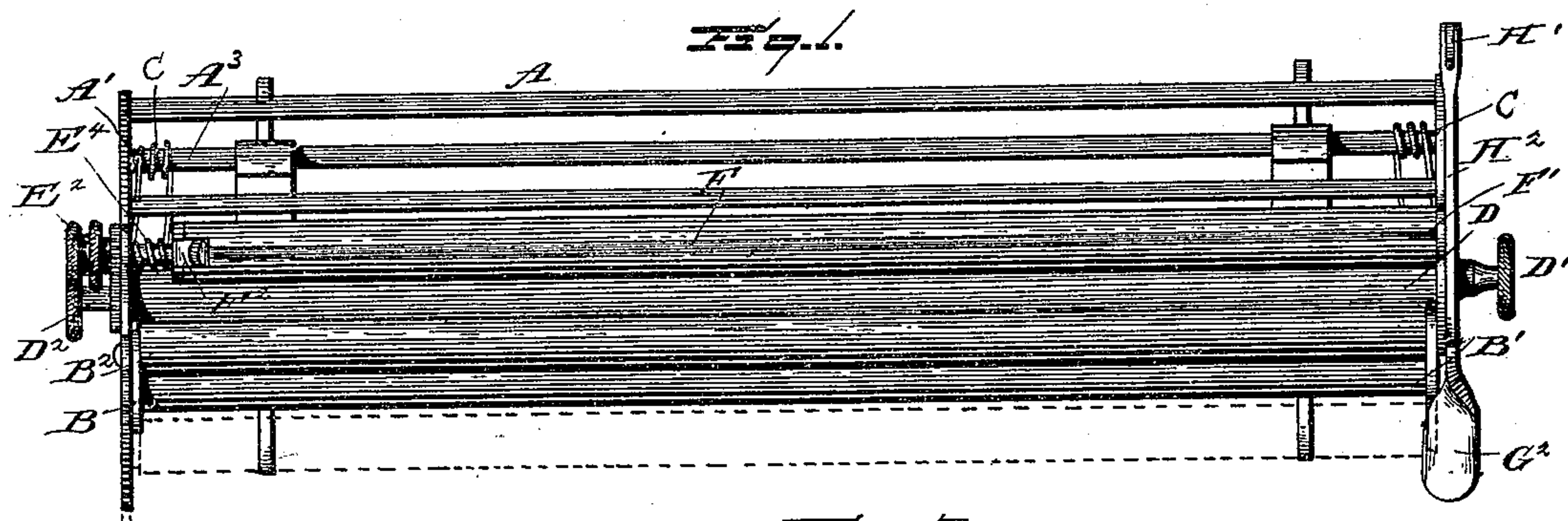


(No Model.)

W. A. MORTON.  
COPY HOLDER.

No. 420,913.

Patented Feb. 4, 1890.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. MORTON, OF LEAVENWORTH, KANSAS, ASSIGNOR OF ONE-HALF  
TO NEWTON MANN, OF SAME PLACE.

## COPY-HOLDER.

SPECIFICATION forming part of Letters Patent No. 420,913, dated February 4, 1890.

Application filed March 29, 1889. Serial No. 305,245. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM A. MORTON, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth, State of Kansas, have invented certain new and useful Improvements in Copy-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has relation to that class of copy-holders in which the copy is held in an approximately-upright position.

The object of my invention is to provide a copy-holder in which there shall be a line-by-line movement for the gradual disclosure of the copy.

To this end I have constructed my device as described in the following specification, and with the novel features particularly set forth in the claims at the end of the same.

In the drawings, Figure 1 is a plan of my copy-holder. Fig. 2 is a side elevation of the same. Fig. 3 is an end view on the side of the rotator. Fig. 4 is a vertical transverse section of my copy-holder through the line  $x$  of Fig. 2. Fig. 5 is an end elevation of the same from the side opposite to that shown in Fig. 3.

A is the frame of my copy-holder, consisting of a number of longitudinal rods set into end pieces  $A'$ , as shown, and supported by the legs  $A^2$ . These longitudinal rods are so placed as to make a cradle approximately circular in transverse section for the reception of the roll of paper and the proper holding of the same during the unrolling and exposure of the same. Pivoted approximately at the centers of the two side plates of the frame are the hangers B, which are placed one on each side of the copy-holder. Extending from end to end of the holder from these two hangers are the rod  $B'$  and the roller  $B^2$ . The latter is journaled between the two hangers, and is adapted to be rotated for the purpose hereinafter described.

Wound around the bar  $A^3$  is a spiral spring, the end of which projects forward and under the hanger B at either end or under some portion of said hanger or under a screw, as shown, or any other detachable portion. The rear end of this spring C projects beneath

the frame for the purpose of fastening it firmly in position, this projection being shown at  $C'$ .

It is evident that C may be any form of spring properly placed to uphold the hangers, as shown, and need not necessarily be wound around any part of the frame, nor need it be spiral. There may be one or more of these springs; but I have shown two as the preferable form of construction.

D is a roller pivoted in the side pieces, as shown in Figs. 1 and 4, and at the end of the said roller there is a milled head  $D'$ , for the purpose of rotating the roller by the fingers, there being also a second milled head at the other end of the same, if desired, as shown in Fig. 1, at  $D^2$ . A projection E at the top of each of the side pieces is used for bearing the roller  $E'$ . At one end of this roller there is a milled head  $E^2$ , also for the purpose of rotating this roller for the paper.

The end of the axle at  $E^3$  is tightly inserted into the end of the roller; but it is not fast to the same, and there is a spring  $E^4$ , preferably spiral, as shown, for the purpose of keeping the roller normally away from the side piece next which the spring lies. Next the side piece and just outside of the same there is a gear-wheel  $E^5$ , which meshes with a second gear-wheel  $E^6$ , which in turn meshes with the wheel  $D^3$  at the end of the roller D, whereby the last-named roller is made to rotate in the same direction as the roller  $E'$ .

The end of the axle  $E^3$  may be partly withdrawn from its position in the end of the roller  $E'$ , in order to take the wheel  $E^5$  out of mesh with  $E^6$ , in order that the roller  $E'$  may be rotated independently of the other rollers in the device. A light rod F is pivoted at the end of a longitudinal groove in the periphery of the roller  $E'$  at  $F'$ , and a spring  $F^2$  at the other end of said roller is so fixed as to wedge the end of said rod into the groove when it is depressed past said spring into said groove. This rod is for the purpose of fastening the end of the copy onto the roller  $E'$ , whereby said copy is withdrawn, as further described, from the cradle into which it is first placed. As will be seen by Fig. 4, the roller  $B^2$  upon the hanger B, when said hanger is raised, rests against the periphery of the roller D. Piv-



oted at the outside of the end piece at the right of the operator, as shown in Fig. 3, at G, is the arm G', at the front end of which is the thumb-piece G<sup>2</sup>, Fig. 1. The front end of said arm is upheld by the spring G<sup>4</sup>, and at the rear end there is a rounded portion G<sup>3</sup>.

Pivoted at H there is a lever H', at the lower end of which there is a socket for the reception of the end G<sup>3</sup> of the arm G'. By means of the depression of the end of the arm at the thumb-piece the rear end of the same is raised, and the lever H' is rotated in the direction shown by the arrow in the figure. At the top end of the lever there is pivotally fastened a top link H<sup>2</sup>, provided with a hook at the end thereof, as at H<sup>3</sup>, which hook engages with the teeth on the periphery of the wheel I, fastened to the end of the roller D, and by the pulling of this link by the rotation of the lever, as described, this roller is rotated in the same direction as said lever, and thus the paper is drawn by the action of the two rollers D and B<sup>2</sup>. By this means the copy is advanced line by line, in order to facilitate the inspection of the same.

At the outer or left-hand surface of the hanger, at the left of the operator preferably, there is hung a catch J, as shown in Fig. 5 particularly, said catch being provided with a bearing-piece projecting from the same at J', and having a point J<sup>2</sup> adapted to be forced into a notch in the periphery of the side piece at that side of the frame.

In using my device the copy is first rolled up and placed all together into the cradle or crib, the rods of the same running in the direction of the length of the paper. In order to facilitate this placing of the copy, the hangers are depressed by means of pressure upon the back of the catch J, and when these hangers have reached their open position, as shown in Fig. 5, this pressure upon the projection J' forces the point J<sup>2</sup> into the notch in the side piece, as shown, and thus the crib is held open while the paper is being adjusted. When the copy is once in place, the catch J is released, and the crib closes by the action of the springs C; but before this closure the first sheet of the copy is taken up and the edge of the same brought past the front of the roller D, the top of the said sheet being secured to the top roller E' under the rod F, as above described. Now, when the hangers are allowed to take their closed position the roller B<sup>2</sup> will clip the paper between its periphery and that of the roller D, and the paper will be in readiness for reading. One line being copied, the operator has only to press upon the thumb-piece G<sup>2</sup>, when the hook H<sup>3</sup> will rotate the wheel I, and through it the rollers D and E' through the medium of the gear-wheels at the other end of the device. Since E' rotates in the same direction as the roller D, the paper will be rolled up upon the former and carefully advanced by the latter in connection with the roller B<sup>2</sup>. When one sheet has been once exhausted, another is brought up

and fastened in its turn to the roller E', and the operation repeated.

When for any reason, as when the first sheet is to be removed, the roller E' is to rotate backward, the wheel E<sup>5</sup> is drawn out of mesh with E<sup>6</sup>, and the roller E' turned back by the fingers by means of the milled head E<sup>2</sup>.

I do not wish to be understood as limiting myself to the exact construction shown and described, as there are many details of this device which may be modified by the exercise of mechanical arrangement and skill without departing from the spirit of my invention.

What I claim is—

1. A frame for holding the copy and an auxiliary roller journaled into the ends of the same, in combination with a roller having means and a spring, substantially as described, for holding the end of the copy.

2. A frame for holding the copy and an auxiliary roller journaled into the ends of the same, in combination with a paper-roller having means, substantially as described, for attaching the end of the paper thereto, and intermeshing gear-wheels whereby said rollers are made to rotate together, substantially as described.

3. A frame for holding the paper, hangers pivoted to the ends thereof, said hangers having a roller pivoted between the same, in combination with a second roller pivoted to the ends of the frame in contact with said roller on the hangers, substantially as described.

4. A frame for holding the paper, hangers pivoted to the ends thereof and bearing a roller pivoted between them, and a spring for holding said hangers in a raised position, in combination with a roller pivoted between the ends of said frame in such a position as to be in contact with the roller on said hangers when in a raised position, substantially as described.

5. In combination with a frame and a roller journaled between the ends thereof, a pair of hangers, also pivoted between said ends and bearing a roller adapted to come into contact with said roller on the frame, a spring for holding said hangers in a raised position, and a catch attached to the side of one of said hangers for the purpose, as described, of holding the same in a depressed position, substantially as described.

6. In combination with a frame and a roller journaled between the ends thereof, a pair of hangers, also pivoted to said ends and bearing a roller adapted to come into contact with said roller on the frame, a spring for holding said hangers on the frame in a raised position, and a catch pivoted to the side of one of said hangers, said catch being provided with a point adapted to engage with a notch upon the edge of the end of the frame, and a finger-piece opposite the same for the purpose of depressing said catch, substantially as described.



7. A frame for holding the copy and a paper-roller journaled between the ends of the same, in combination with an auxiliary roller, also journaled between said ends, a gear-wheel 5 fixed on the end of said roller, a gear-wheel fixed to the end of said paper-roller, and a third gear meshing with both of said gears, substantially as described.

10 8. In a copy-holder, a paper-roller having the end of the axle of the same capable of sliding within the end of the roller and having a spring for keeping said roller away from that end of the bearing of the same at which said axle slides, substantially as described.

15 9. A frame for holding the copy and an auxiliary roller journaled into the ends of the same, in combination with a paper-roller having means, substantially as described, for attaching the end of the paper thereto, gearing 20 whereby said rollers are made to rotate together, and a sliding axle end for said paper-roller, to which the gear is attached and whereby said gear may be drawn out of action, substantially as described.

25 10. In a copy-holder, a paper-roller having a longitudinal groove in the periphery thereof, in combination with a rod pivoted at one

end within said groove, and a spring fixed to the end of said roller in the path of the end of said rod, substantially as described. 30

11. A frame for holding the paper and a paper-roller journaled between the ends of the same, in combination with an auxiliary roller geared to said paper-roller, a toothed wheel at the end of said auxiliary roller, and a 35 hooked link adapted to reciprocate in a path approximately tangential to said toothed wheel, substantially as described.

12. A frame for holding the paper and a set of rollers journaled between the ends of 40 the same, in combination with a toothed wheel at the end of one of said rollers, a hooked link for rotating said wheel, an arm pivoted to the outside of said frame, a lever, also pivoted to the same and provided with a socket, 45 into which the end of the arm works, said lever having its other end attached to said link, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. MORTON.

Witnesses:

NEWTON MANN,  
C. C. KESINGER.