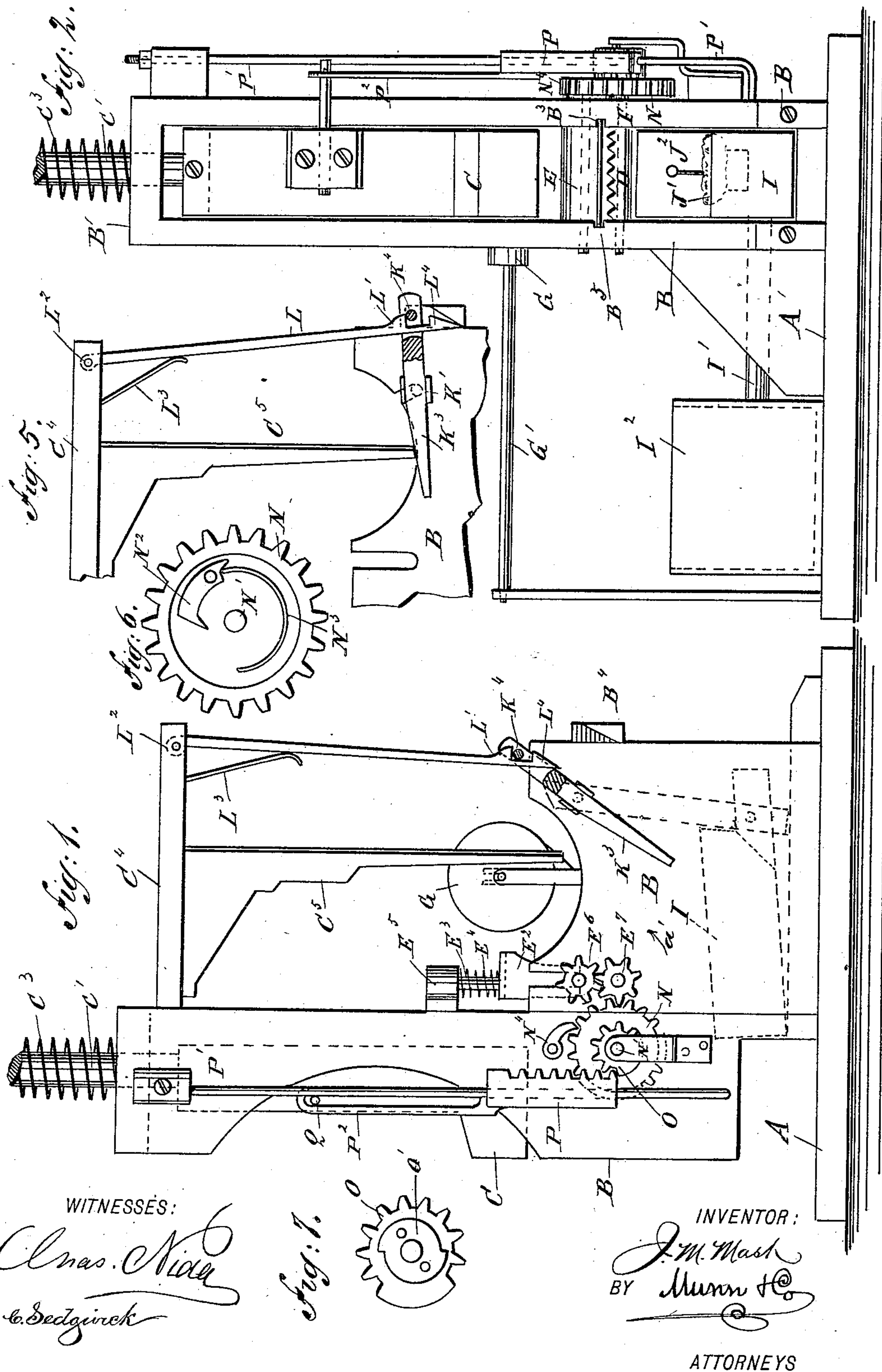


3 Sheets—Sheet 1.

No. 426,729.

Patented Apr. 29, 1890.



(No Model.)

3 Sheets—Sheet 2.

J. M. MAST.
STAMP AFFIXING MACHINE.

No. 426,729.

Patented Apr. 29, 1890.

Fig. 3.

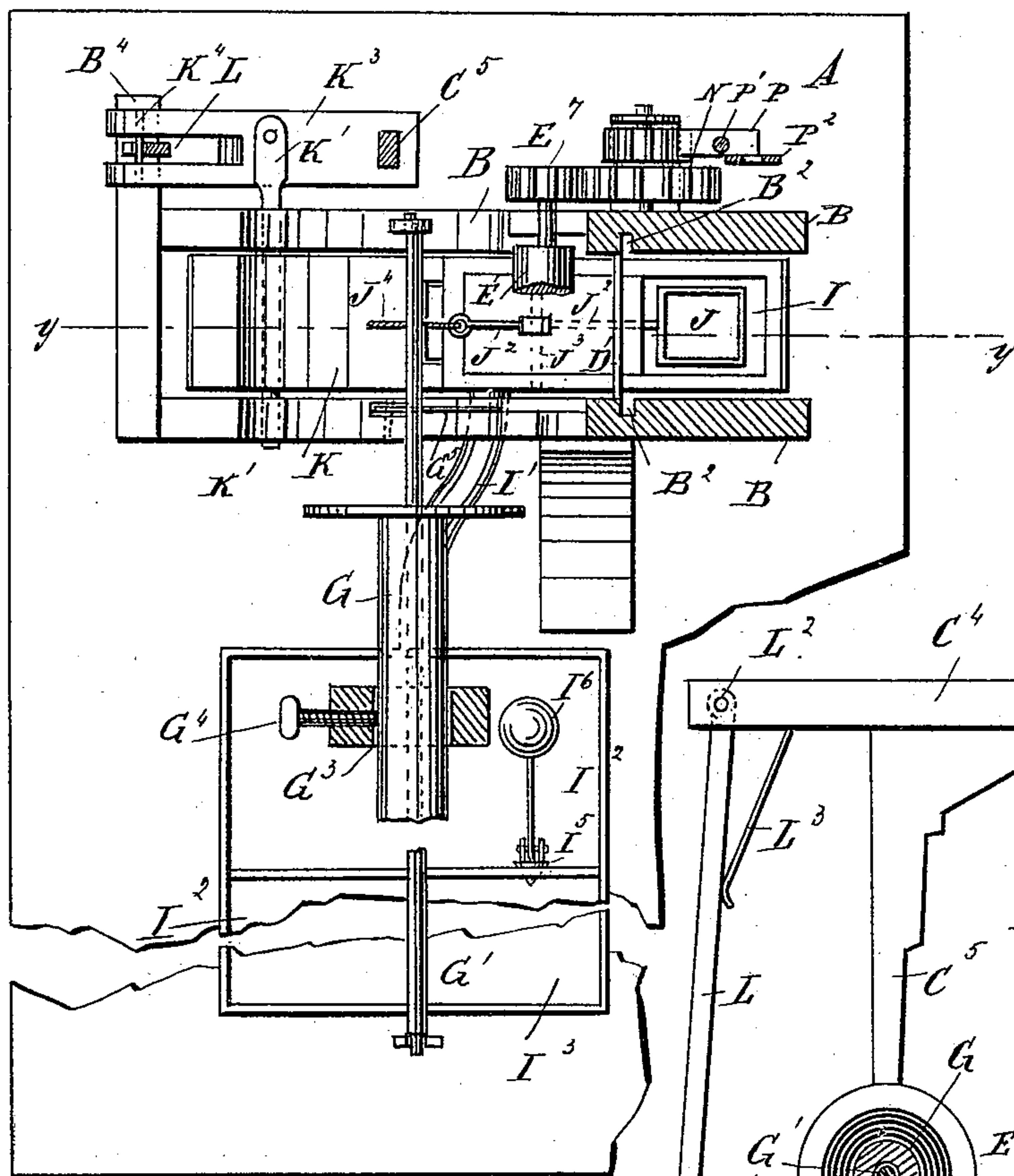
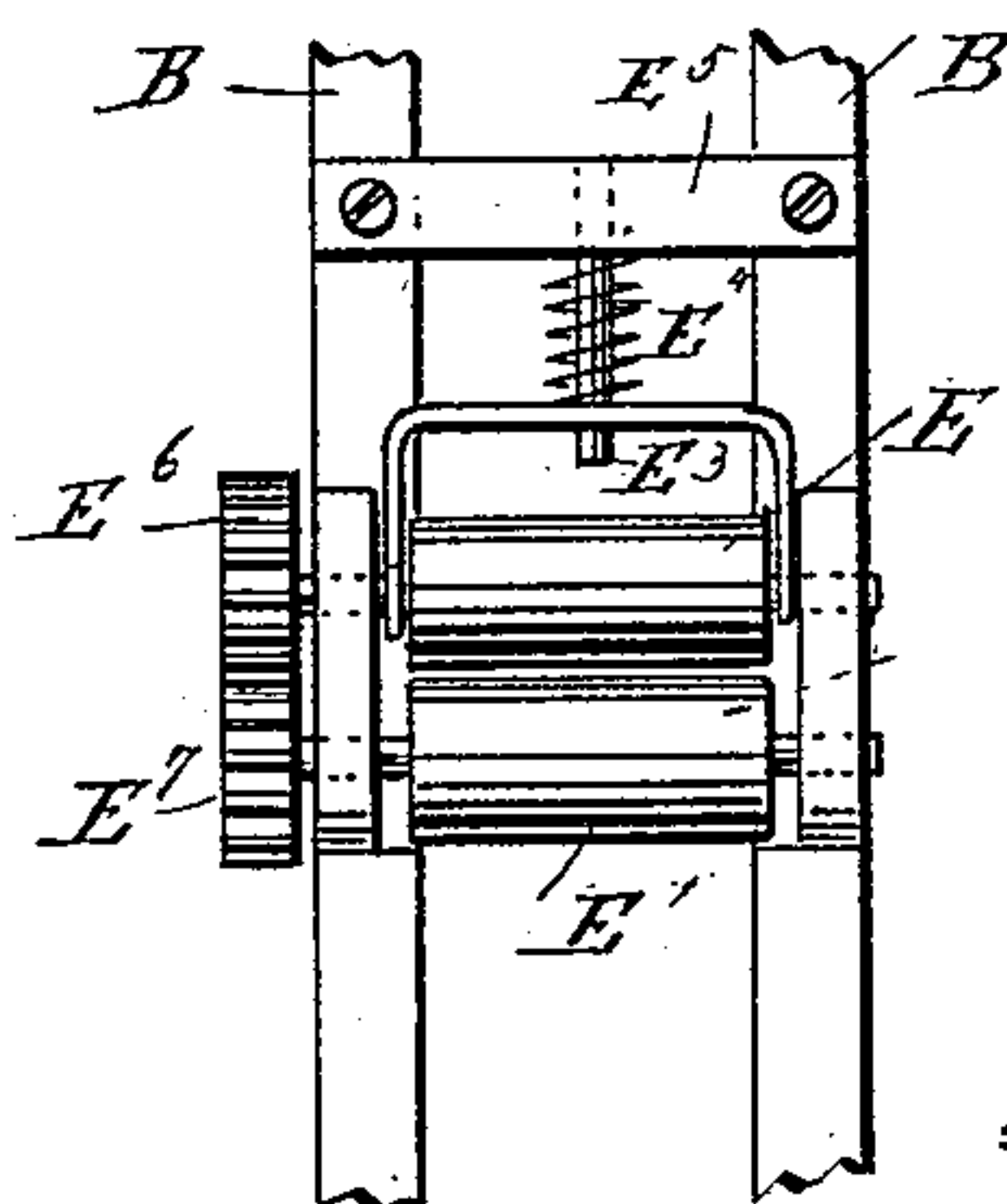


Fig. 8.



WITNESSES:

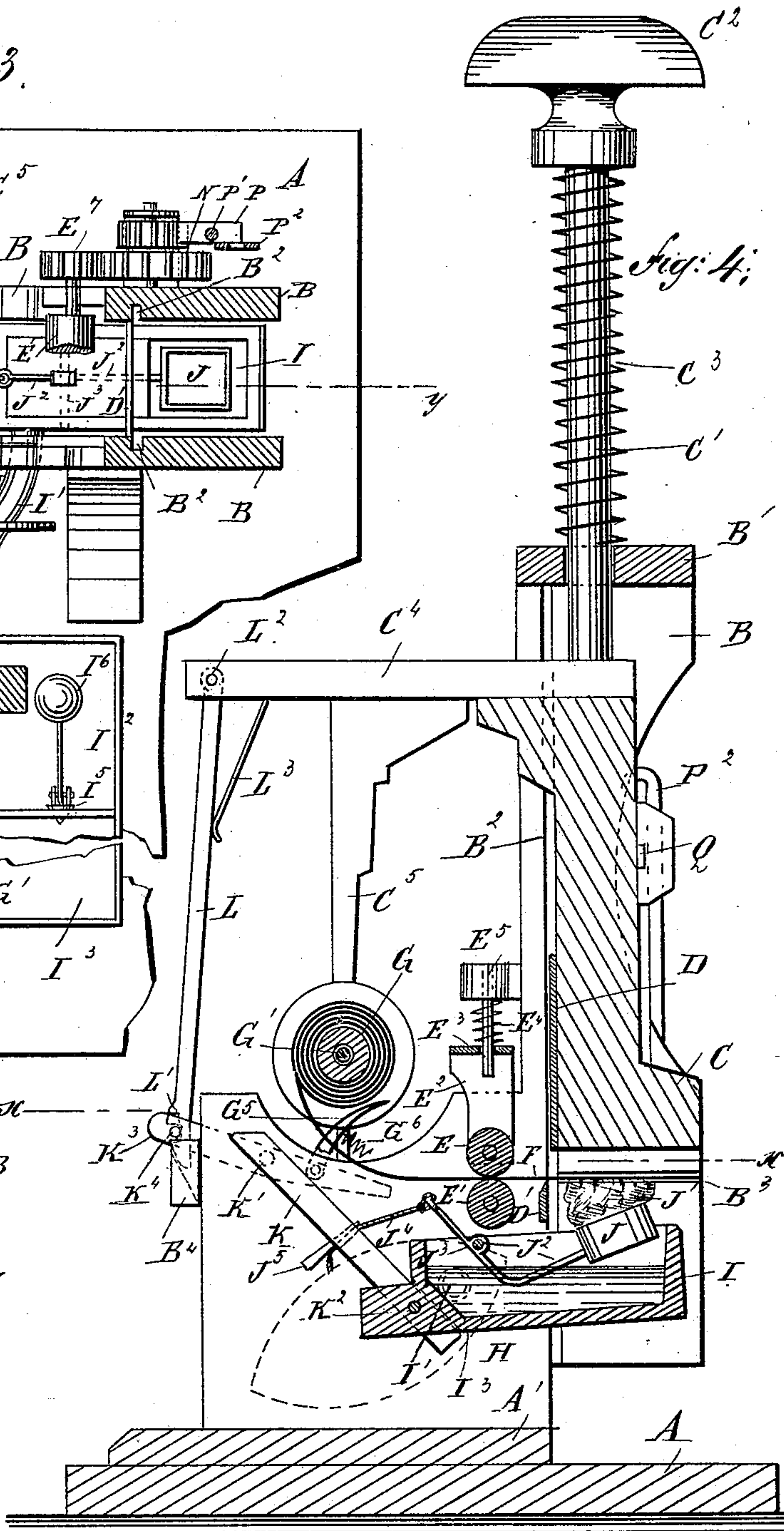
Chas. Vida
C. Sedgwick

INVENTOR:

J. M. Mast
BY *Mumy*

ATTORNEYS.

Fig. 4.



(No Model.)

3 Sheets—Sheet 3.

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Fig. 9.

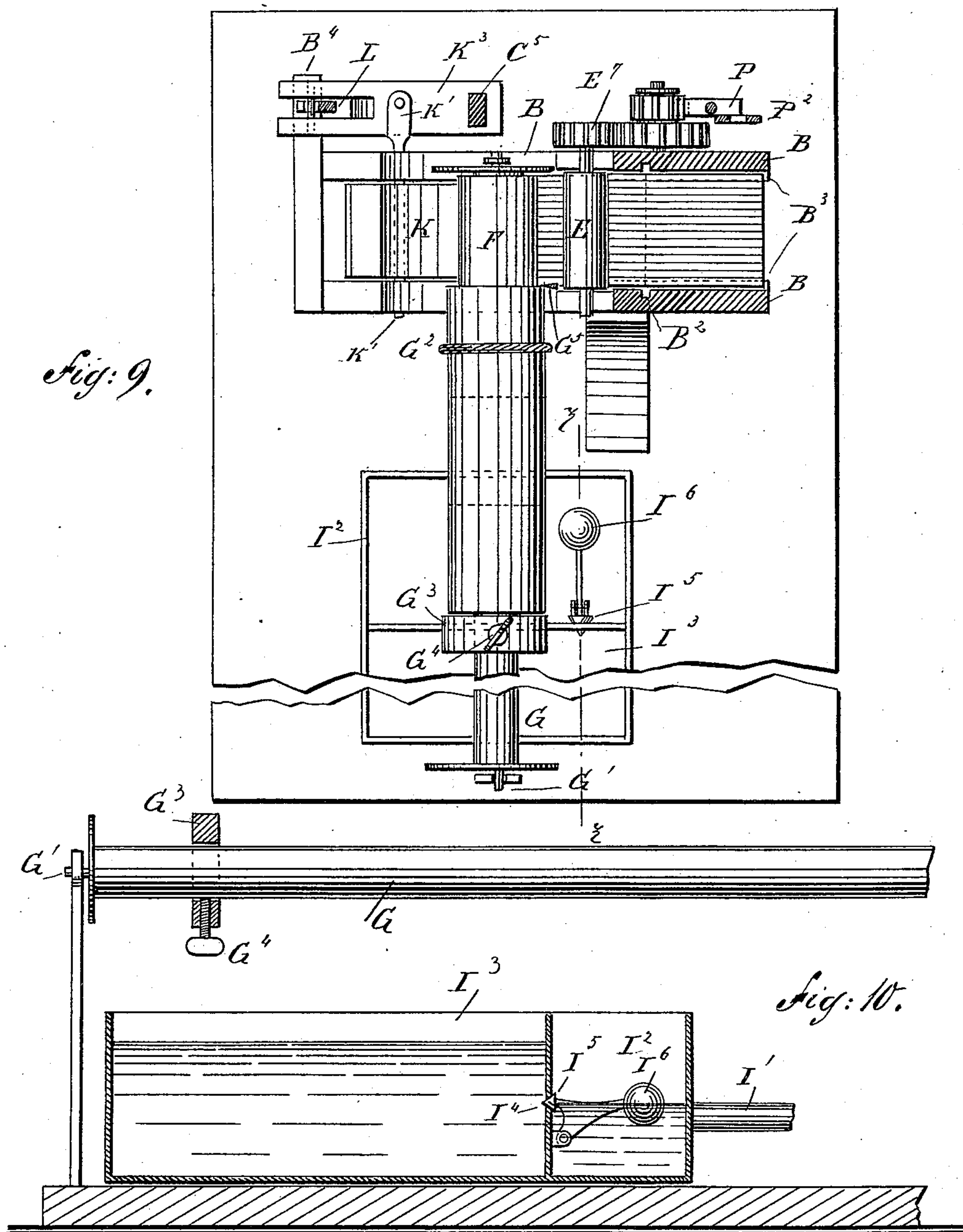


Fig. 10.

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UNITED STATES PATENT OFFICE.

JOHN M. MAST, OF CAMBRIDGE, PENNSYLVANIA.

STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 426,729, dated April 29, 1890.

Application filed June 4, 1889. Serial No. 313,064. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. MAST, of Cambridge, in the county of Lancaster and State of Pennsylvania, have invented a new and Improved Stamp-Affixing Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved machine for quickly and conveniently attaching postage-stamps to envelopes, wrappers, &c.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a front view of the same. Fig. 3 is a sectional plan view of the same on the line xx of Fig. 4. Fig. 4 is a sectional side elevation of the same on the line yy of Fig. 3. Fig. 5 is a side elevation of the sponge-operating mechanism. Fig. 6 is an enlarged face view of one of the gear-wheels for the feeding mechanism. Fig. 7 is a like view of a pinion for the same. Fig. 8 is an end elevation of the stamp-feeding rollers. Fig. 9 is a sectional plan view of the improvement similar to Fig. 3, and with the roll of stamps in place; and Fig. 10 is a transverse section of the water-reservoir on the line zz of Fig. 9.

The improved stamp-affixing machine is mounted on a base A, supporting the standards B B, connected with each other on top by a transverse plate B'. In the front of the standards B is held to slide vertically a block or head C, provided with an upwardly-extending rod C', passing through the top plate B', and provided at its extreme upper end with a knob or handle C², for conveniently moving the block C up and down between the standards B. A spring C³ is coiled on the rod C' and rests at one end on the top plate B' and at its other end against the under side of a knob C². The coil-spring C³ serves to hold the block C in an uppermost position.

At the back of the block C is secured a metallic knife D, flush at its lower end with the

bottom of the block C. The sides of the knife D extend into vertical grooves B², formed on the insides of the standards B. The knife D operates over a fixed knife D', extending transversely and secured at its ends in the standards B. (See Fig. 4.) The cutting-edge of the fixed knife D' may be straight or V-shaped, as illustrated in Fig. 2.

Directly behind the fixed knife D' are located the feeding-rollers E and E', of which the latter is mounted to turn in fixed bearings in the standards B. The shaft of the top roller E is mounted to turn in a U-shaped frame E², extending upward and engaging with a pin E³, secured at its upper end in a lug E⁵, fastened to the rear of the standards B. A spring E⁴ is coiled on the pin E³ and rests at its upper end against the under side of the lug E⁵, its upper end pressing against the top of the U-shaped frame E², so that the roller E is always pressed firmly in contact with the top of the roller E'. The contact-surfaces of the two rollers E and E' are in line with the top cutting-edge of the fixed knife D', and also in line with the horizontally-extending grooves B³, formed on the insides of the standards B B.

Between the feed-rollers E and E' passes a strip of postage-stamps F, of which one is to be detached at a time and affixed to the envelope or wrapper placed on top of the base A under a recess formed in the lower front ends of the standards B B. The sheet or several sheets of stamps left entire or separated lengthwise through the middle are jointed at the end and wound on a drum G, of corresponding length and mounted to turn loosely on a rod G', held on suitable supports erected on the base A and one of the standards B. The sheets of stamps are held firmly on the drum G by a band of steel or rubber G², held flush, or nearly so, with the edge of a second row of stamps from the end next to the standards B and the first row or strip of stamps F separated from the sheets far enough to be placed between the feed-rollers E and E'. When the latter feed the strip of stamps forward, the strip or row is separated from the sheet of stamps on the drum G.

A collar G³ is held adjustably by a set-screw G⁴ on the outer end of the drum G and abuts against the outer edge of the shelf of

the stamp, as shown in Fig. 9. When one row or strip of stamps F has been used up, the rolled sheet of stamps is moved inward, the band G² is moved outward to the now second row of stamps, and the collar G³ is moved inward against the end of the rolled sheet of stamps on the drum G.

A curved knife G⁵ may be secured to the standard B directly under the inner edge of the row of stamps F, and is to be held with its cutting-edge against the perforated part of the stamps by a spring G⁶, (see Fig. 4,) so as to readily separate the strip of stamps F from the rolled sheet of stamps on the drum G.

Between the standards B is held a moistening device H, provided with a water-receptacle I, connected by a flexible tube I' with a reservoir I², set on the base A and filled with a sufficient amount of water at all times from a second larger reservoir I³, located alongside the reservoir I² and connected with the same by an aperture I⁴, adapted to be opened and closed by a valve I⁵, connected with a float I⁶ or other device for automatically operating the valve to keep the water-level in the reservoir I² constant. (See Figs. 9 and 10.) The receptacle I by these means is constantly filled with water, and it contains a cup J, adapted to dip into the water in the receptacle I, and containing a sponge J', which serves to moisten the under side of the postage-stamp to be cut off from the strip F when the block C slides downward. The cup J is secured on a rod J², pivoted at J³ in the receptacle I and connected at its outer end with a rope J⁴, extending rearward and passing through an aperture in the lever K, in which the said rope is secured by a wedge J⁵, as is plainly shown in Fig. 4. By adjusting the rope J⁴ in the lever K the sponge J' will be pressed with more or less force against the under or gummed side of the postage-stamp.

The lever K is secured on a shaft K', mounted to turn in suitable bearings in the rear part of the standards B B. The lower end of the lever K is forked and is pivotally connected at K² with the rear end of the receptacle I. The latter is provided with inclined shoulders I³, adapted to engage the lower top ends of the forks of the lever K, as shown in Fig. 4, so that the receptacle I is always held in a horizontal position. When the receptacle I is in its lowermost position, it rests on the top of an offset A', held on the base A between the standards B B.

On one end of the shaft K', carrying the lever K, is secured an arm K³, having its outer end forked and provided with a pin K⁴, adapted to be engaged by a shoulder L', formed on a lever L, pivoted at its upper end at L² on a bracket C⁴, extending rearward from the head C. A spring L³, secured on the bracket C⁴, presses with its free end against the said lever L, so as to hold the outer edge of the same in contact with the pin K⁴. (See Figs. 1, 4, and 5.) On the lower end of the lever L is

formed a wedge-shaped offset L⁴, located opposite the shoulder L' and adapted to engage an incline B⁴, projecting rigidly from the rear ends of the standards B B. From the bracket C⁴ extends downward a rigid arm C⁵, adapted to be engaged at its lower end by the inner end of the arm K³.

The feed-rollers E and E' are geared with each other by the gear-wheels E⁶ and E⁷, (see Fig. 1,) and the gear-wheel E⁷ meshes into a larger gear-wheel N, mounted to turn loosely on a shaft N', turning in suitable bearings secured to one of the standards B. On one face of the gear-wheel N is pivoted a pawl N², (see Fig. 6,) pressed in contact by a spring N³ with a cam O', secured on the face of the gear-wheel O, fastened on the said shaft N'. In the gear-wheel O meshes a rack P, mounted to slide vertically on a guideway P', secured to the outside of one of the standards B. From the rack P extends a slotted arm P², into which projects a pin Q, secured to the head C. A pawl N⁴, fulcrumed on one of the standards B, engages the gear-wheel N to prevent the latter from making a return motion.

The operation is as follows: The head C is held in an uppermost position by the spring C³. The moistening device H is then in the position shown in Figs. 1 and 2—that is, the receptacle I rests on the offset A' of the base A. A stamp from the strip of stamps has previously been passed beyond the fixed knife D', so that the inner end of the stamp is on the cutting-edge of the said knife. Now when the operator presses on the knob C² the head C moves downward. This downward movement of the head C causes the spring-pressed lever L to act, by its shoulder L', on the pin K⁴ of the arm K³, whereby the lower end of the lever K is swung forward, moving the receptacle I in the same direction—that is, under the head C, the lower end of which head is now above the stamp, extending in the grooves B³. At this moment the forward motion of the lever K has taken up the slack in the rope J⁴, so that the latter pulls on the rod J², whereby the cup J, carrying the moistened sponge J', swings upward on the under side of the stamp held on the bottom of the head C. When the head C is in this position, the arm L is in the position shown in Fig. 5—that is, the wedge L⁴ now engages the incline B⁴, whereby the shoulder L' at the slightest downward motion of the head C is disengaged from the pin K⁴. A further upward motion of the inner end of the arm K³ is prevented by the said inner end striking against the bottom of the arm C⁵, extending from the bracket C⁴. As soon as the pin K⁴ is released from the shoulder L' of the arm L the weight of the receptacle I causes the lever K to swing rearward to its former position. (Shown in dotted lines in Fig. 1.) In this position the front end of the receptacle I is flush with the rear face of the knife D, secured on the head C. The moment the receptacle I swings rearward, as previ-

ously described, the knife D cuts the stamp off from the strip F at the fixed knife D'. The operator having previously placed the wrapper, envelope, &c., under the cut-out parts of the standards B, the head C now carries the stamp downward, the edges of the stamps in the grooves B³ turning upward against the sides of the head, whereby the latter is held in place on the further downward motion of the head. The latter now presses the stamp onto the envelope or wrapper held on the base A under the cut-out ends of the standards B. As the under or gummed side of the stamp had previously been moistened, the stamp can readily adhere to the wrapper, envelope, &c. The moment the operator releases his pressure on the knob C² the spring C³ forces the head C upward, whereby the fixed pin Q, striking against the upper end of the slotted arm P², is carried along, so that the rack P engages the gear-wheel O and causes the same to turn, whereby a similar motion is imparted to the gear-wheel N by the cam O', engaging the pawl N². The gear-wheel N, on account of being in mesh with the gear-wheel E⁷, turns the latter in the direction of the arrow a', whereby the feed-rollers E' and E are rotated and the strip of stamps F is fed forward, so that another stamp passes into the grooves B³. The feeding stops as soon as the end of the stamp is over the edge of the knife D'. When the head C moves upward, as previously described, the outer edge of the arm L travels on the pin K⁴ until the pin finally passes over the shoulder L' to again assume the position shown in Fig. 1, the arm being pressed outward by the spring L³. When the operator moves the head C downward, the pin Q of the head strikes the lower end of the slotted arm P², so that the rack P turns the gear-wheel O; but no motion is imparted to the gear-wheel N, as the spring-pressed pawl N² now slides over the cam O' without being taken along by the latter. Thus it will be seen that the feeding takes place only on the upward motion of the head C, and not when the latter moves downward. The feeding takes place soon after the lower end of the head is above the grooves B³.

Thus it will be seen that a very simple device is provided for quickly attaching postage-stamps to envelopes and wrappers, the device being self-feeding, self-moistening, and detaching the stamp from a strip of stamps.

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

1. In a stamp-affixing machine, the combination, with a block mounted to slide, of a fixed knife in the rear of the head and over which passes the strip of stamps, a feeding device for feeding the strip of stamps forward at each upward stroke of the said head, and a moistening device mounted to swing to and from the under side of the said block when

the latter is pressed downward, substantially as shown and described.

2. In a stamp-affixing machine, the combination, with a sliding head, of a swinging moistening device and mechanism for swinging the moistening device under the head when said head is pressed downward, substantially as described.

3. In a stamp-affixing machine, the combination, with a sliding head, a knife secured to the head, and a stationary knife in rear of the head in alignment with the knife carried by the said head, of a swinging moistening device and mechanism between the moistening device and sliding head for swinging the moistening device under the said head, substantially as herein shown and described.

4. In a stamp-affixing machine, the combination, with a sliding head, of a swinging receptacle, mechanism between the receptacle and sliding head for swinging the receptacle under the head when the latter is depressed, and a sponge-holder mounted in the receptacle and connected to and operated by the receptacle-operating mechanism, substantially as described.

5. In a stamp-affixing machine, a moistening device comprising a receptacle for water, a lever mounted to swing and carrying the said receptacle, and a sponge-cup held in the said receptacle and carrying a sponge to moisten the under side of the stamp, substantially as shown and described.

6. In a stamp-affixing machine, a moistening device comprising a receptacle for water, a lever mounted to swing and carrying the said receptacle, a sponge-cup held in the said receptacle and carrying a sponge to moisten the under side of the stamp, and a reservoir containing water and connected by a flexible tube with the said receptacle, substantially as shown and described.

7. In a stamp-affixing machine, the combination, with a vertically-sliding block, of a receptacle carrying a sponge-cup, a lever carrying the said receptacle, and a spring-pressed arm pivoted on a bracket secured to the said sliding block, the said arm serving to operate the said lever, substantially as shown and described.

8. In a stamp-affixing machine, the combination, with the lever K, carrying the receptacle I, of the arm K³, secured on the shaft carrying the said lever, and the spring-pressed arm L, mounted to slide up and down and provided with a shoulder adapted to engage a pin on the said arm K³, substantially as shown and described.

9. In a stamp-affixing machine, the combination, with the lever K, carrying the receptacle I, of the arm K³, secured on the shaft carrying the said lever, the spring-pressed arm L, mounted to slide up and down and provided with a shoulder adapted to engage a pin on the said arm K³, and a fixed incline adapted to be engaged by the wedge-shaped end of

the said arm L to disconnect the latter shoulder from the said pin, substantially as shown and described.

5 10. In a stamp-affixing machine, the combination, with the pivoted lever K and the receptacle I, carried by said lever, of the rod J², pivoted to the receptacle and provided with

the cup J on one end, and the flexible connection J⁴ between the rod J² and the lever K, substantially as described.

JOHN M. MAST.

Witnesses:

J. B. ANDES,
J. G. MAST.