

No. 713,415.

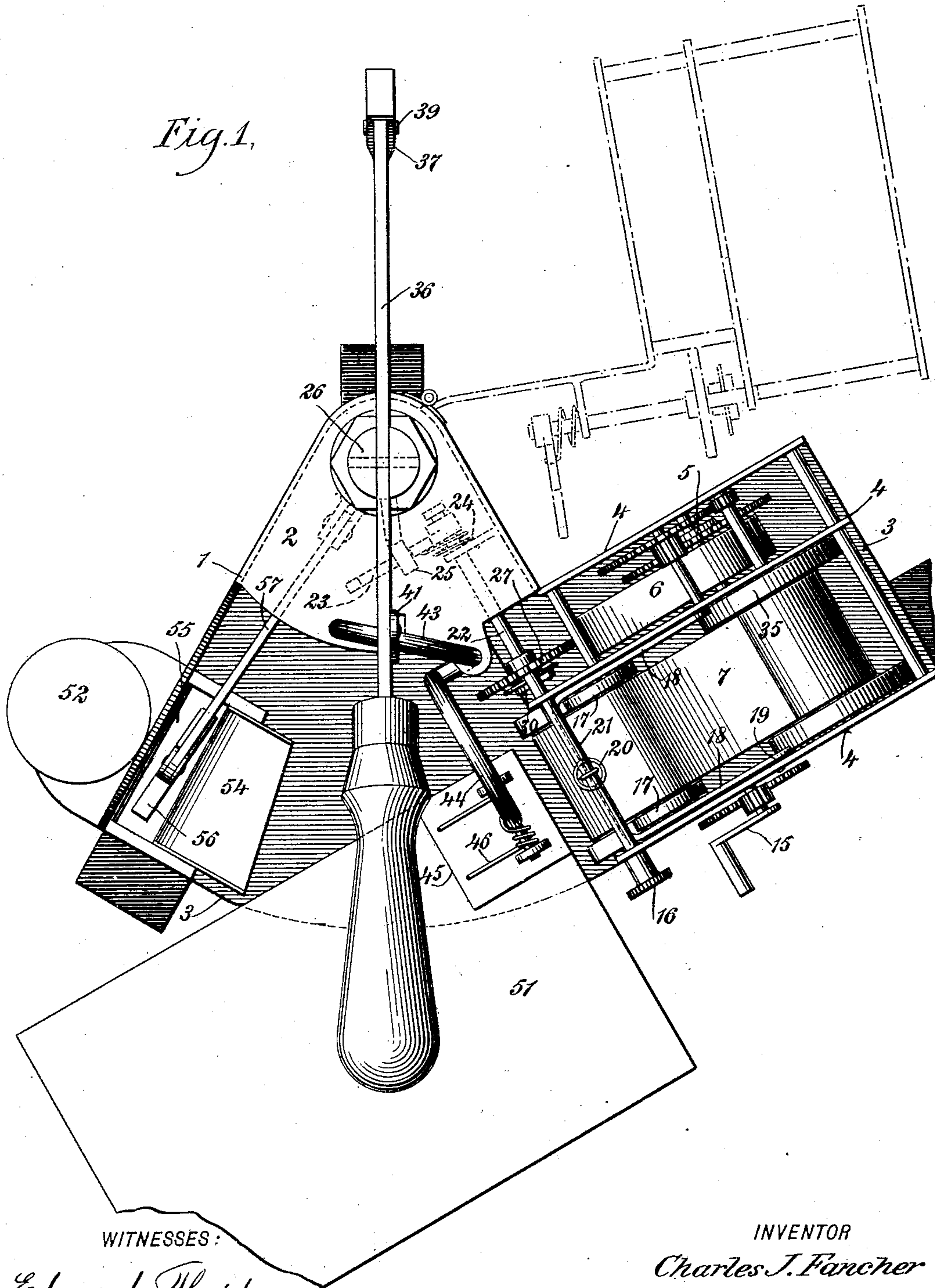
Patented Nov. 11, 1902.

C. J. FANCHER.  
STAMP AFFIXING MACHINE.

(Application filed Jan. 25, 1902.)

(No Model.)

5 Sheets—Sheet 1.



WITNESSES:

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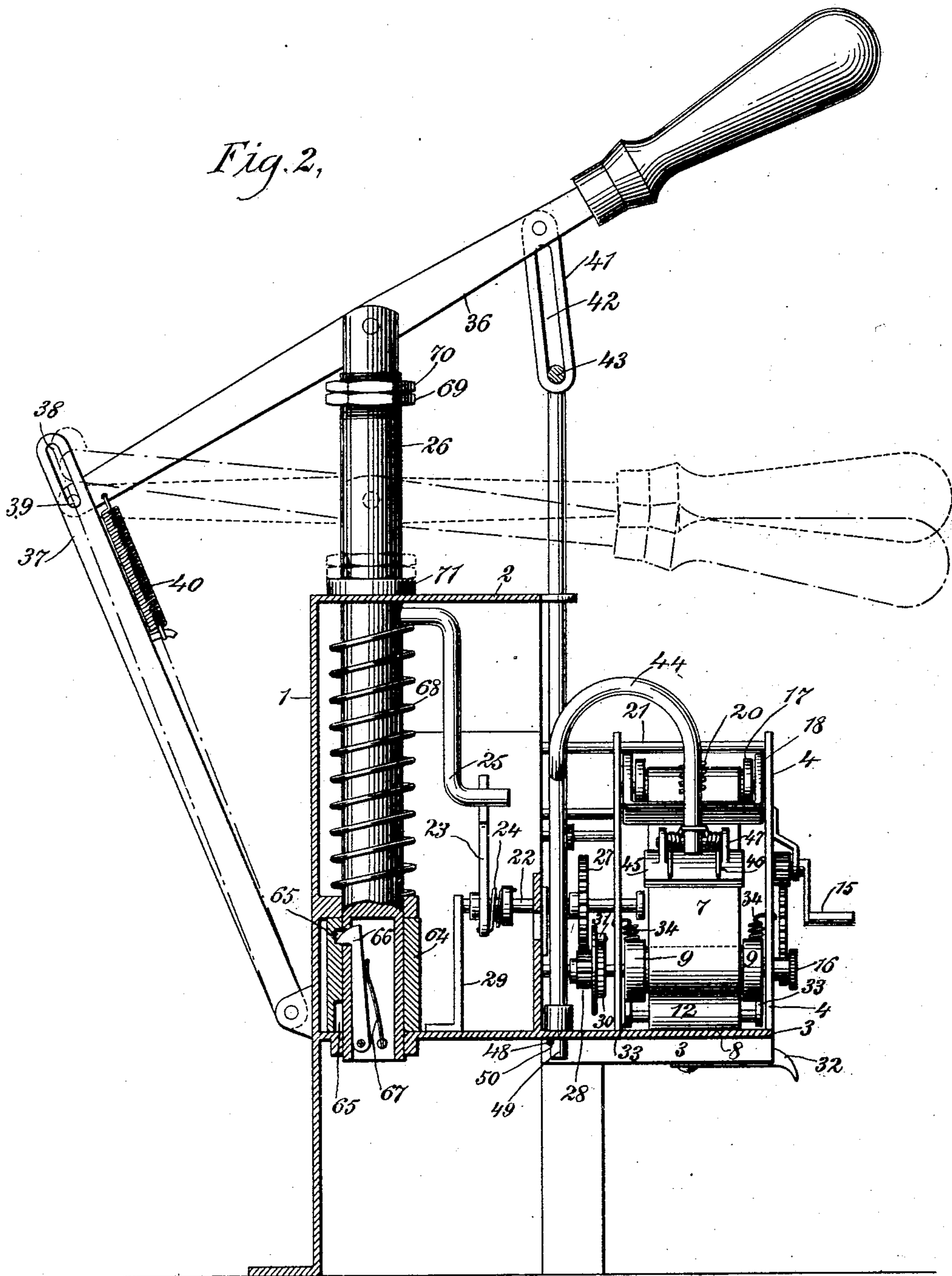
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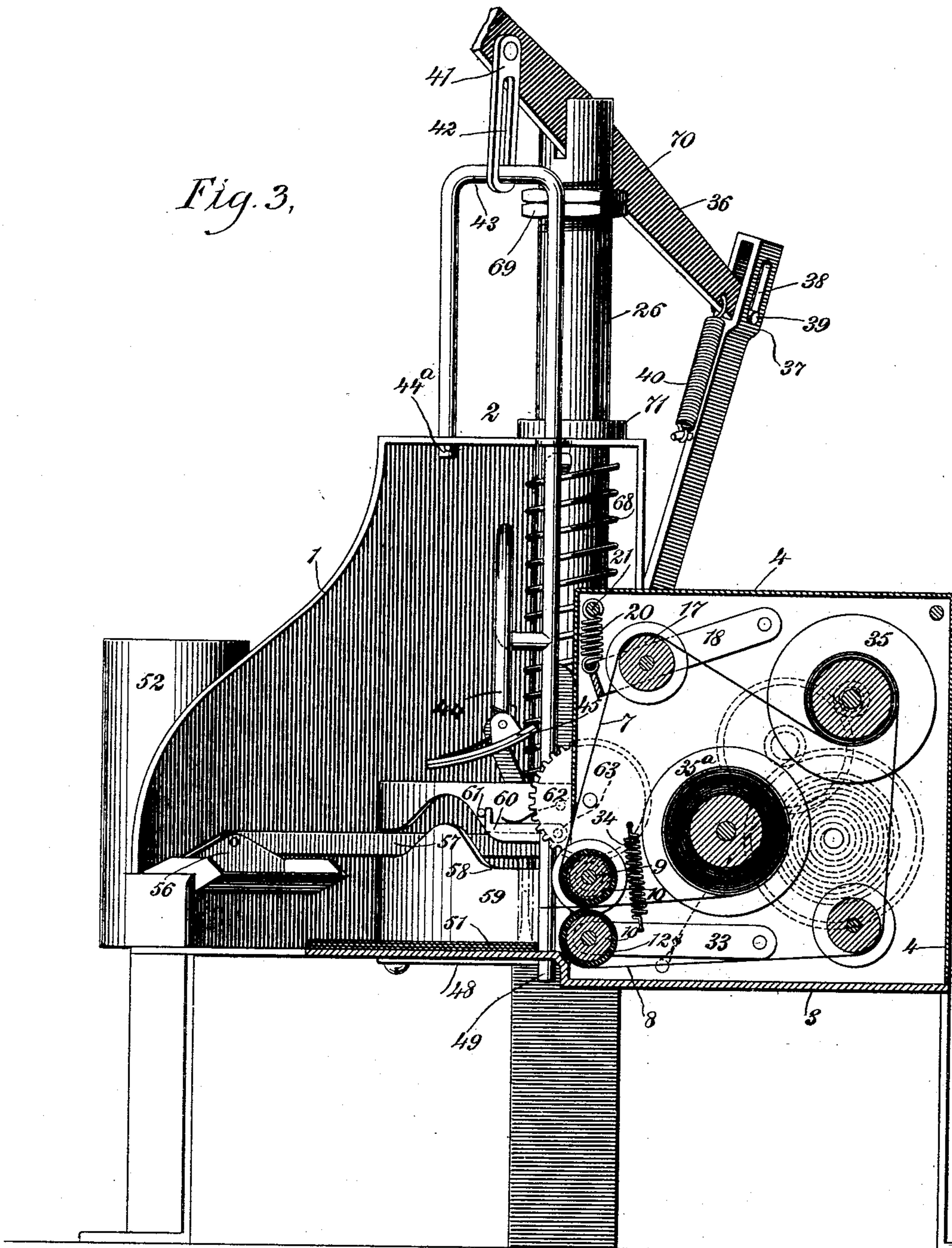
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*Fig. 3.*



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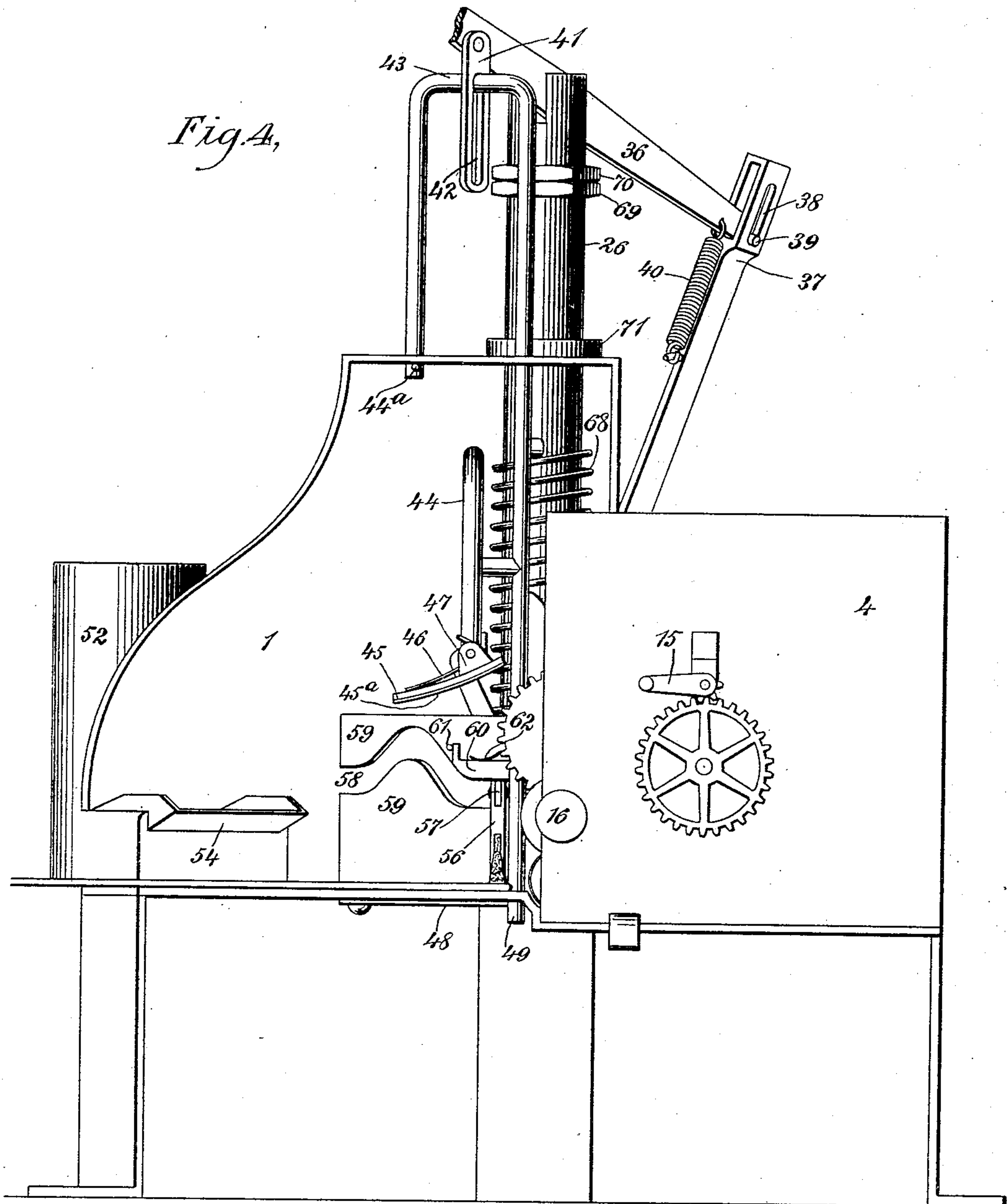
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5 Sheets—Sheet 4.

*Fig. 4,*



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Fig. 5,

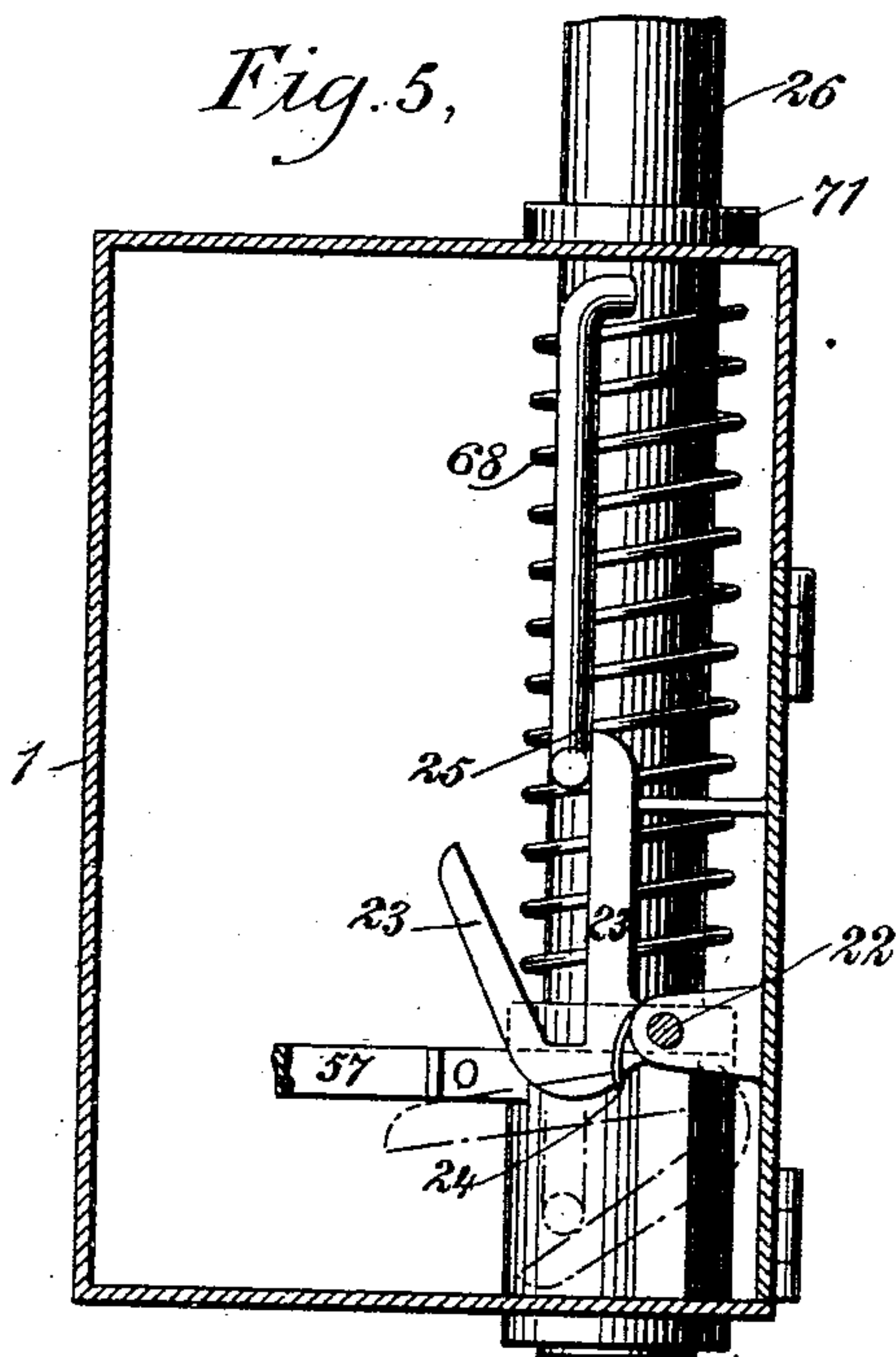


Fig. 6,

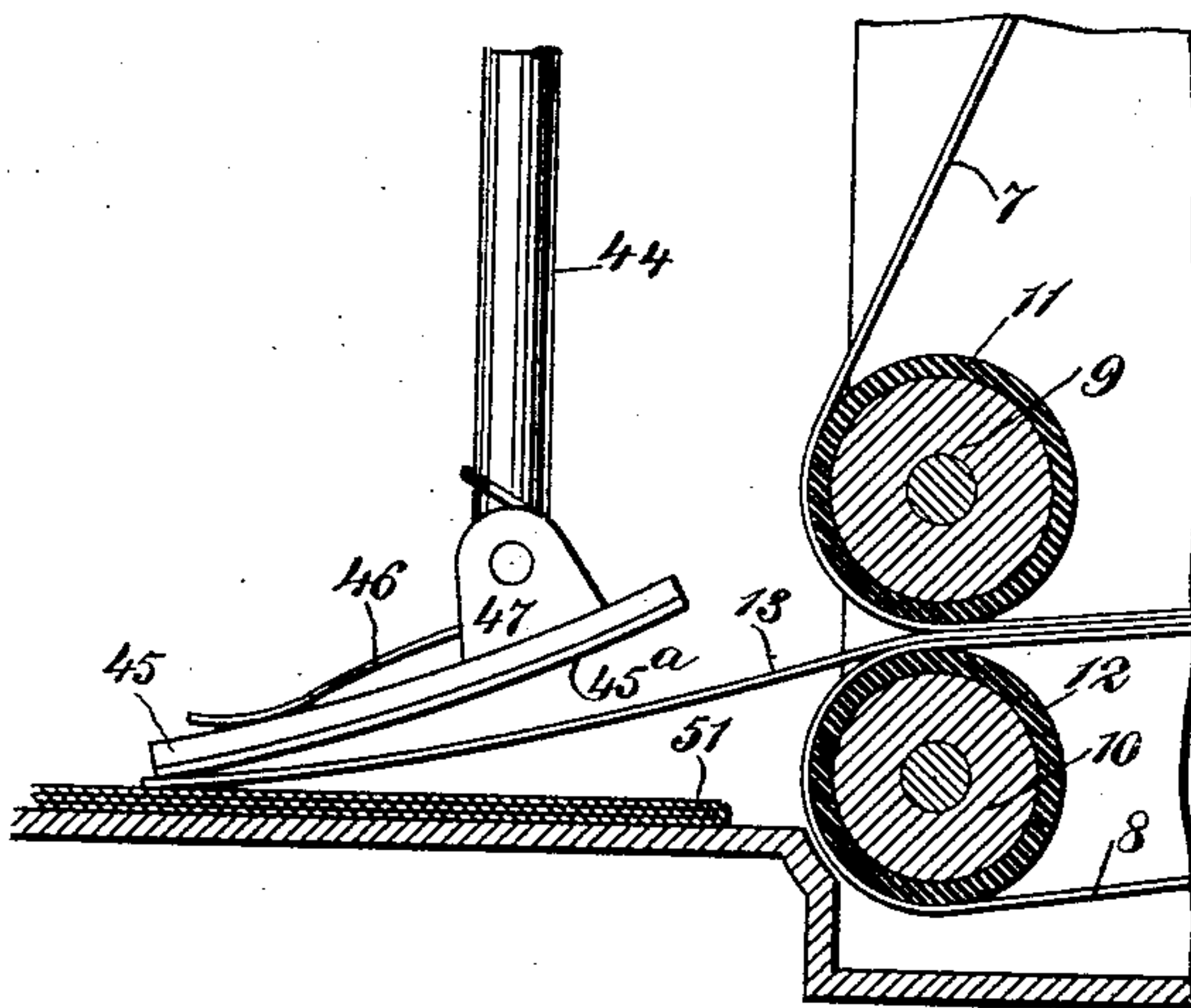


Fig. 7,

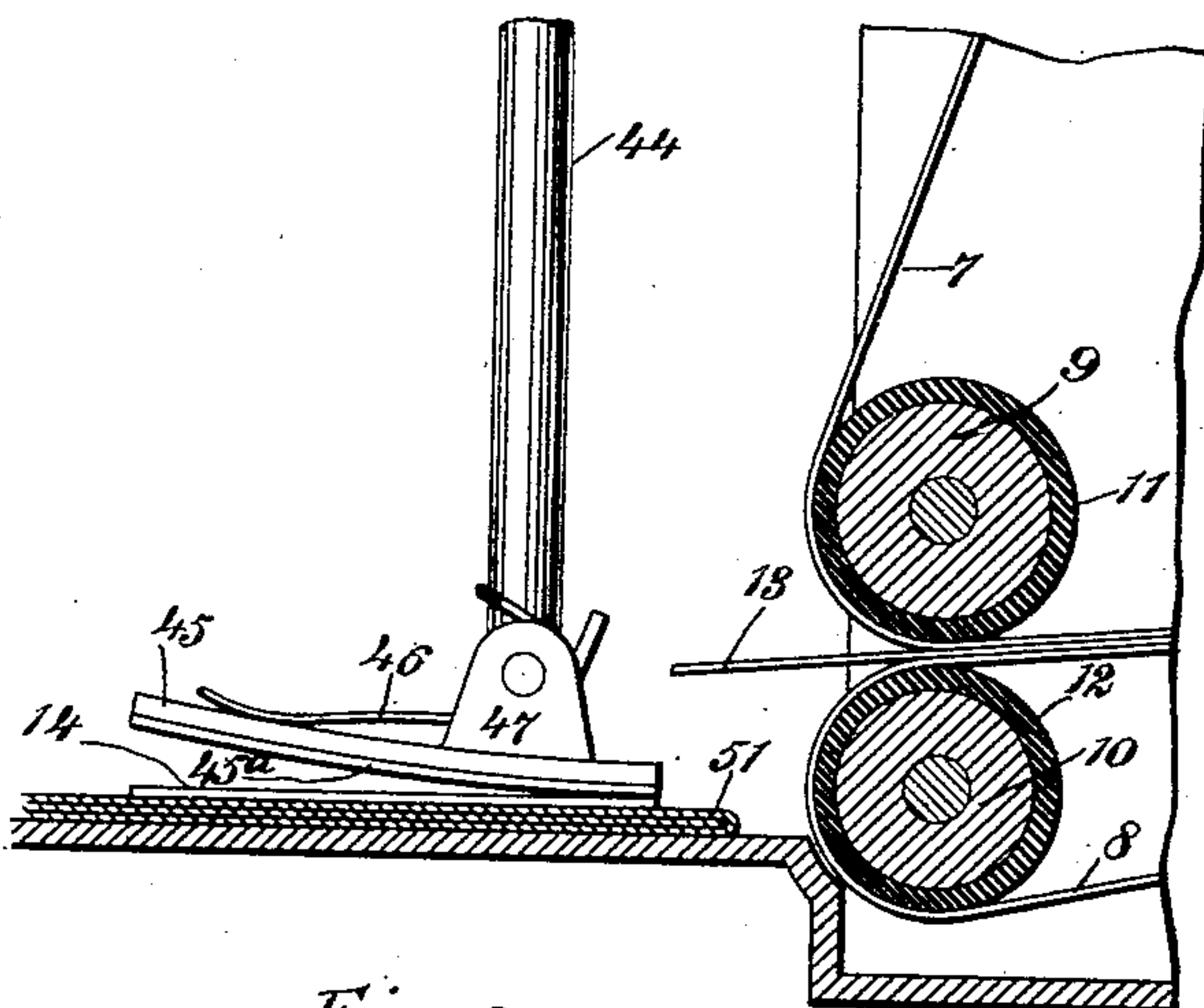


Fig. 8,

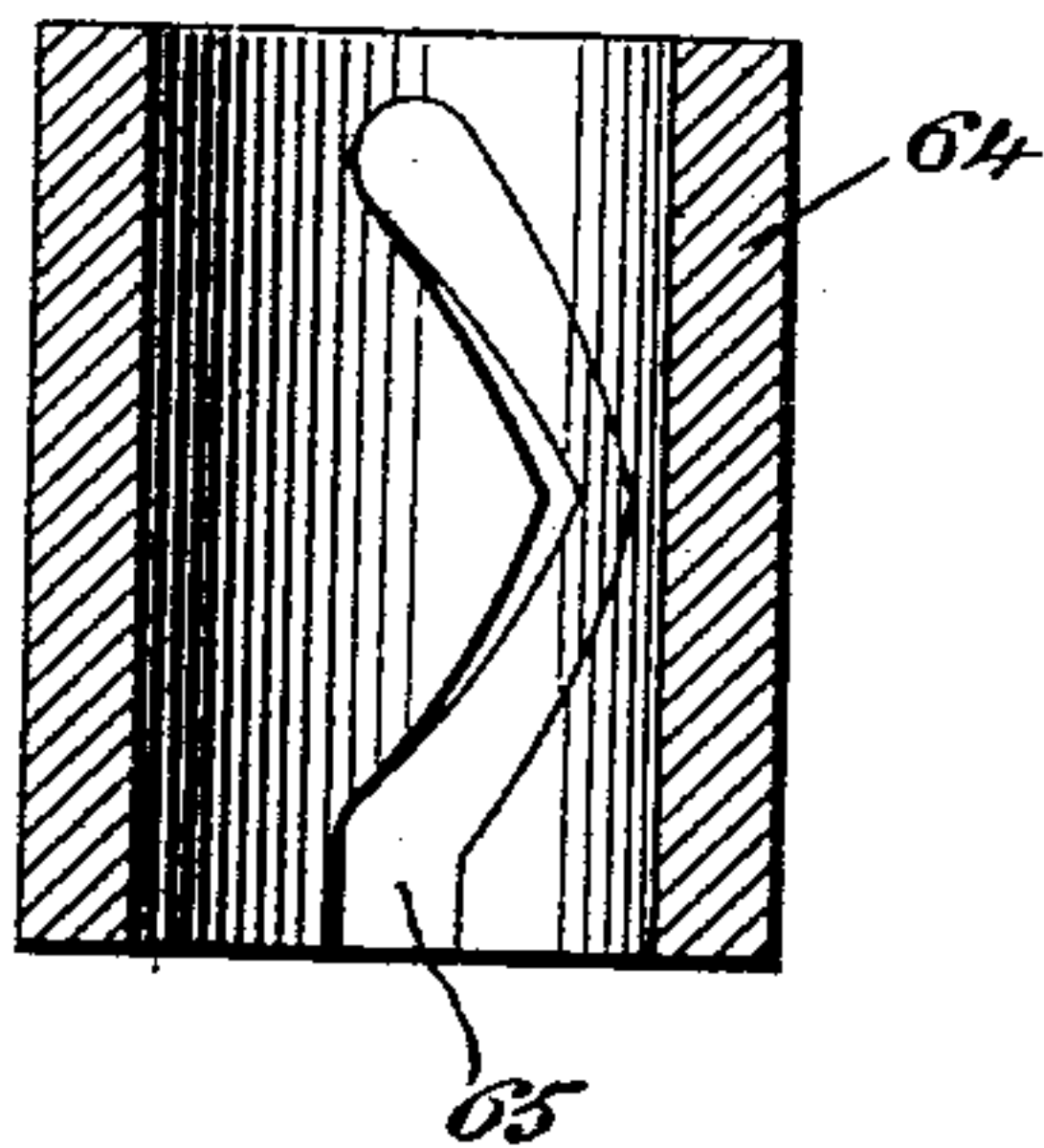
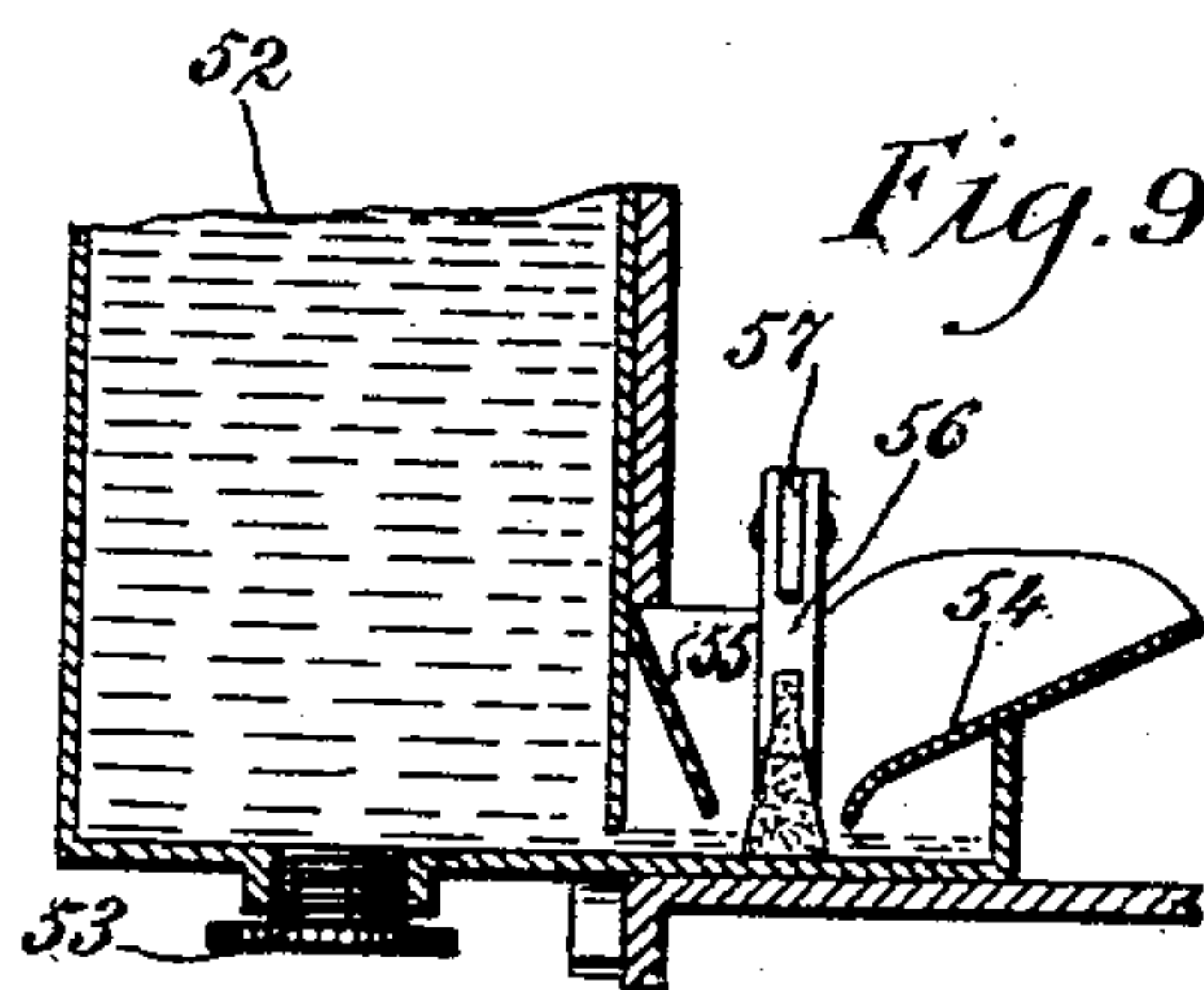


Fig. 9,



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# UNITED STATES PATENT OFFICE.

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## STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 713,415, dated November 11, 1902.

Application filed January 25, 1902. Serial No. 91,195. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES JAMES FANCHER, a citizen of the United States, residing at Granby, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Stamp-Affixing Machines, of which the following is a full, clear, and exact description.

My invention relates to machines for affixing stamps to letters.

The machine comprises mechanism for moistening the corners of the envelopes, for feeding the stamps to a point adjacent to said corners, for detaching the stamps from each other, and for pressing the stamps upon the moistened corners of the envelopes by a peculiar rolling motion.

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

Figure 1 is a plan view of my machine. Fig. 2 is a side elevation viewed from the left and showing certain parts in section. Fig. 3 is a side elevation viewed from the right and showing certain parts in section. Fig. 4 is a side elevation somewhat similar to Fig. 3, but showing nearly all details in elevation. Fig. 5 is a fragmentary section of a part of the motor mechanism of the machine. Fig. 6 is a fragmentary section showing the means for applying the stamps to the envelopes. Fig. 7 is a somewhat similar view showing the stamp as detached and being placed upon the envelop. Fig. 8 is a detail section showing the cam for operating the moistening-brush. Fig. 9 is a fragmentary section showing the pneumatic feed for moistening the brush.

A sector-shaped main frame 1, having at its top and bottom sector-shaped plates 2 3, is provided for the purpose of mounting the several movable parts. A swinging frame 4 is connected with the main frame and is normally free to move into the position indicated by dotted lines in Fig. 1. This swinging frame carries the stamp-feeding mechanism, and the swinging movement referred to is for the purpose of recharging this mechanism with stamps.

A train of clockwork 5 is provided for feeding the stamps, and a spring 6 is connected with this train of clockwork, but is not used

for propelling the same. The object of the spring is to exert more or less tension upon the train for the purpose of overcoming its friction and of taking up the slack in the ribbons as the stamps are fed out. In loading the machine with stamps the spring 6 is coiled, whereas in unloading the same the spring is uncoiled. Ribbons 7 8 are mounted upon spools 9 10, covered with relatively fixed sleeves 11 12, the sleeve 11 being preferably of soft rubber. The stamps, either singly or appended together in the form of long fillets, are fed between these ribbons, the fillet being indicated at 13 and the individual stamp at 14. (See Fig. 7.)

A handle 15 is provided for the purpose of feeding stamps into the machine, and a thumb-screw 16 is provided for the purpose of feeding them out when desired, and also for the purpose of adjusting the feed mechanism so that the stamps will be delivered at a predetermined distance from the ribbons. A spool 17 is revolutely mounted within a yoke 18, said yoke being pivoted at 19 and engaged by the spiral spring 20, which is secured to the rod 21. This arrangement is for the purpose of tensioning the ribbon 7, as indicated more particularly in Fig. 3.

The feed mechanism further comprises a revoluble shaft 22, provided with a substantially V-shaped dog 23, which is normally held in the position indicated in Fig. 5 by means of the spring 24. A hook 25 of the shape shown in Fig. 5 is rigidly secured to the sliding shaft 26, and when said shaft is depressed said hook 25 engages said dog 23 and causes the same to rock to the left. The dog 23, being rocked in the manner just stated, and thereby rocking the shaft 22, actuates the feed mechanism to a degree commensurate with the length of one stamp, so that a stamp is fed each time the dog 23 is rocked to the left. A gear-wheel 27 is mounted upon the shaft 22. This shaft, by means of the spring 24, (shown more particularly in Fig. 2,) is normally pressed to the left, so as to cause the wheel 27 to disengage the wheel 28 immediately below it. This engagement is maintained when the parts are in the position indicated by full lines in Fig. 1. When, however, the feed mechanism is swung around into the position indicated by dotted lines in



Fig. 1, the spring 24, by pressing the dog 23 to the left, draws the wheel 27 out of engagement with the wheel 28, and thereby disconnects the gearing. In this connection see also Fig. 2. A stationary post 29 forms a stop for the abutting end of the shaft 22. The disengagement of the gearing does not cause the spring 6 to operate the feed mechanism, for the reason that the tension of the spring is barely sufficient to overcome the friction and take up the slack of the ribbons as the stamps are fed out.

By adjusting the thumb-screw 16 the stamp-fillet 13 can be caused to protrude to any desired distance, and when the dog 23 is worked automatically by the movement of the sliding shaft 26 the adjustment will be maintained—that is to say, each succeeding stamp will protrude the same distance as its predecessor, the feed being automatic.

A ratchet-wheel 30 is engaged by a pawl 31 in the usual manner for preventing any undesirable back movement of any of the revolvable parts. A spring-catch 32 is located at the bottom of the swinging frame 4 for retaining the same in its normal position. Near the bottom of the swinging frame are located a pair of rocking arms 33 for supporting the lower spool 10, and to these arms are connected spiral springs 34 for the purpose of tensioning the lower spool 10. The ribbons 7 8 are wound upon a spool 35, connected with the clockwork actuated by the spring 6 to take up the slack of the ribbon as the stamps are fed out, and the same ribbons, with the fillet of stamps between them, are wound upon the spools 35<sup>a</sup>, as indicated more particularly in Fig. 3. A hand-lever 36 is pivoted upon the sliding shaft 26, and its outer end is connected with a link 37, provided with a slot 38 for engaging the pivot 39. A spiral spring 40 normally retains the end of the lever in the position indicated in full lines in Fig. 2. When, however, the lever is depressed beyond a certain limit, it occupies the position indicated by dotted lines in Fig. 2.

Upon the hand-lever 36 is pivoted a swinging link 41, provided with a slot 42, which engages the U-shaped sliding rod 43. One end of this rod is provided with a stop 44<sup>a</sup> for limiting its upward movement. A presser-foot 45, having a face of slightly-rounded form and provided with a soft pad 45<sup>a</sup>, is mounted upon the rod 44, which is in turn rigidly connected to and supported by the rod 43, as indicated more particularly in Fig. 3. The spring 46 normally depresses the presser-foot 45 into the position indicated in Fig. 6; but when the presser-foot makes contact with a stamp and the rod 44 is further depressed the presser-foot assumes the position indicated in Fig. 7. In doing this the pressure beginning at the left, as shown in Fig. 6, is gradually transferred to the right, as shown in Fig. 7. This, in effect, applies the stamp by means of a rolling motion and at the same time severs the stamp from the fillet if it be connected

therewith. The ears 47 on the presser-foot are for the purpose of loosely pivoting the presser-foot upon the rod 44. A spring 48 is provided to normally maintain the rod 43 and consequently the presser-foot 45 in their uppermost positions. For this purpose a notch 50 is provided in the extreme lower end 49 of the rod 43, as indicated in Fig. 2.

The envelop to be stamped is shown at 51. (See Figs. 6 and 7.) A pneumatic fountain 52 is provided for the purpose of supplying water for moistening the envelops. This pneumatic fountain is provided with a watertight stopper 53 of the usual pattern. A pair of slanting surfaces 54 55 are provided adjacent to this fountain for the purpose of guiding the brush 56 and of wiping any excess of water from the same as the brush moves toward the envelop. The brush 56 is mounted upon the outer or free end of a radially-movable arm 57, which is further guided by the cam-like slot 58, which is made by mutilating the arc-shaped partition 59 for the purpose. Substantially flush with the top of this cam-like slot and located at one end of the same is a short lever 60, which engages a stop 61 on the partition 59 and is pressed downward by means of a spring 62, the lever being pivoted at 63, as indicated more particularly in Fig. 3. The object of this lever is to present its lower surface to the top of the swinging arm 57, depressing the same more or less, for the purpose of forcing the brush 56 into contact with envelops of different thicknesses.

The radially-movable arm 57 is loosely pivoted upon a sleeve 64, mounted upon the vertical shaft 26 and provided with a cam 65, as indicated in Fig. 8. This cam is engaged by a hook 66, which is normally pressed outward by a spring 67, as indicated more particularly in Fig. 2. The object of this arrangement is to cause the brush to make a stroke from the pneumatic fountain to the envelop, thus moistening the envelop and returning to the pneumatic fountain, all while the sliding shaft 26 is making its descent. In making its ascent, however, the rounded end of the hook 66 leaves the cam and merely follows the general direction of the sleeve until it reaches a point adjacent to the top thereof, when it again engages the cam. It will thus be seen that the cam is not actuated, and consequently that the brush is not disturbed except when the sliding rod descends.

A spiral spring 68 retains the sliding shaft 26 in its normal position. (Shown in Fig. 2.) A pair of lock-nuts 69 70 are provided for the purpose of engaging the fixed collar 71 on the shaft 26 and of adjusting the stroke of the lever 36.

The operation of my device is as follows: An envelop 51 is placed in the position indicated in Fig. 1, and the hand-lever 36 is depressed and then allowed to resume its normal position. The descent of the lever actuates the cam and the brush 56, as above de-



scribed, and the brush, guided by the slot 58, travels obliquely upward and then obliquely downward, applying moisture to the corner of the envelop. It then quickly returns to its normal position. By virtue of the slot 42 the rod 43 is not depressed until the brush 56 has done its work as just described. The feed of the stamp occurs during this interval while the lever is descending and before the rod 43 is actuated. The rod 43, continuing its descent and carrying with it the rod 44, causes the outer end of the presser-foot 45 to engage the stamp, as indicated in Fig. 6. Suppose now that the stamp coheres to the fillet, of which it forms a part. The farther descent of the rod 44 tears the stamp asunder from the fillet, as indicated in Fig. 7, and presses the stamp firmly upon the envelop, beginning at one of its edges and going directly across to its other edge. The action of the machine in applying a stamp is somewhat like that of applying pressure by means of a cylinder, the area of actual pressure being reduced to a mere line and this line extending laterally across the stamp. I find that this method of applying a stamp is far more effective than any method by which the stamp is applied by sheer main strength and that stamps thus attached are much more likely to adhere to the envelop than when applied by other means. If the envelop happens to be abnormally thick or thin, the difference is taken up by the lever 60, which under the tension of the spring 62 causes the brush to make contact with the envelop.

The pneumatic fountain can be removed from its fastenings and refilled when desired, which is done by inverting it. When the stamp-feed mechanism is to be recharged with stamps, the frame 4 is swung around into the position indicated by dotted lines in Fig. 1, as above stated, and the stamps, which are normally sold in sheets, are fed into the machine by tearing the sheets into fillets of the width of a single stamp and passing the fillets longitudinally between the ribbons 7 and 8. If there be any loose stamps, they are placed so that their ends abut the ends of the fillet. The machine feeds a single stamp by merely passing it out and dropping it upon the envelop.

The advantages of this machine will be readily apparent to people engaged in the postal service. Aside from the saving of time in affixing stamps a certain element of danger is avoided—to wit, the chance for accidental or malicious poisoning due to placing stamps upon the tongue and also the chance for the spread of disease from the same cause. The several parts are easily replaced when broken and are interchangeable.

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

1. A stamp-affixing machine, comprising a frame provided with a surface for engaging articles to be stamped, means for moistening

portions of said articles, mechanism for automatically feeding stamps to a point adjacent to said surface, a presser-foot mounted adjacent to said surface and free to move to and from the same, said presser-foot being rounded for the purpose of applying a rolling pressure to the stamp, and means for actuating said presser-foot.

2. A stamp-affixing machine, comprising a frame provided with a surface for receiving articles to be stamped, means for moistening said articles, mechanism for feeding stamps to a point adjacent to said surface, a member normally free to move to and from said surface, and a presser-foot loosely mounted upon said member and normally free to move relatively thereto, said presser-foot being rounded for the purpose of applying a rolling pressure to the stamp.

3. A stamp-affixing machine, comprising a frame provided with a surface for receiving articles to be stamped, means for moistening said articles, mechanism for feeding stamps to a point adjacent to said surface, a member normally free to move to and from said surface, and a presser-foot loosely mounted upon said member and normally free to move relatively thereto, said presser-foot being rounded for the purpose of applying a rolling pressure to the stamp, and also being normally inclined relatively to the surface for receiving the articles to be stamped, for the purpose of first applying one of its edges to the edge of a stamp and then gradually applying a rolling pressure to successive portions of said stamp.

4. A stamp-affixing machine, comprising a frame provided with a surface for receiving articles to be stamped, a brush for contacting with said articles, means for moistening said brush, mechanism for feeding stamps to a point adjacent to said surface, a member loosely mounted and normally free to move to and from said surface, and a presser-foot loosely mounted upon said member for applying said stamps, said presser-foot being normally inclined toward said surface for the purpose of disengaging said stamps from each other when fed in the form of a continuous fillet.

5. A stamp-affixing machine, comprising a frame provided with a surface for receiving articles to be stamped, means for moistening said articles, mechanism for automatically feeding stamps in continuous fillets to a definite point adjacent to said surface, a member mounted adjacent to said surface and free to move toward and from the same, means for actuating said member, a presser-foot pivoted upon said member and having a predetermined size and shape depending upon the size and shape of a stamp, and means for tentatively holding said presser-foot inclined at an abnormal angle relative to said surface, the arrangement being such that said stamps are engaged by said presser-foot while the same is thus abnormally inclined, for the pur-



pose of disengaging said stamps individually from the fillets.

6. A stamp-affixing machine, comprising a frame provided with a flat surface for receiving articles to be stamped, a slidably-mounted member free to reciprocate in a direction at right angles to said surface, a radially-movable arm provided with a brush for moistening said articles, means for periodically moistening said brush, a cam for actuating said radially-movable arm, a lever for actuating said slidably-mounted member and said cam, said lever having a positive connection with said cam and a lost-motion connection with said slidably-mounted member, a presser-foot loosely mounted upon said slidably-mounted member and provided with a round-

ed face normally inclined toward said flat surface, and means for feeding stamps to a point between said presser-foot and said flat surface, the arrangement being such that one stroke of said lever suffices to moisten the article to be stamped, affix a stamp thereto and apply a rolling pressure to said stamp, moving from one of its edges to the opposite edge.

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

CHARLES JAMES FANCHER.

Witnesses:

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PORTER M. REED.