No. 708,424. Patented Sept. 2, 1902.

R. H. STRONG.

STAMP AFFIXING MACHINE.

(Application filed Apr. 16, 1902.)

(No Model.) 2 Sheets—Sheet 1.

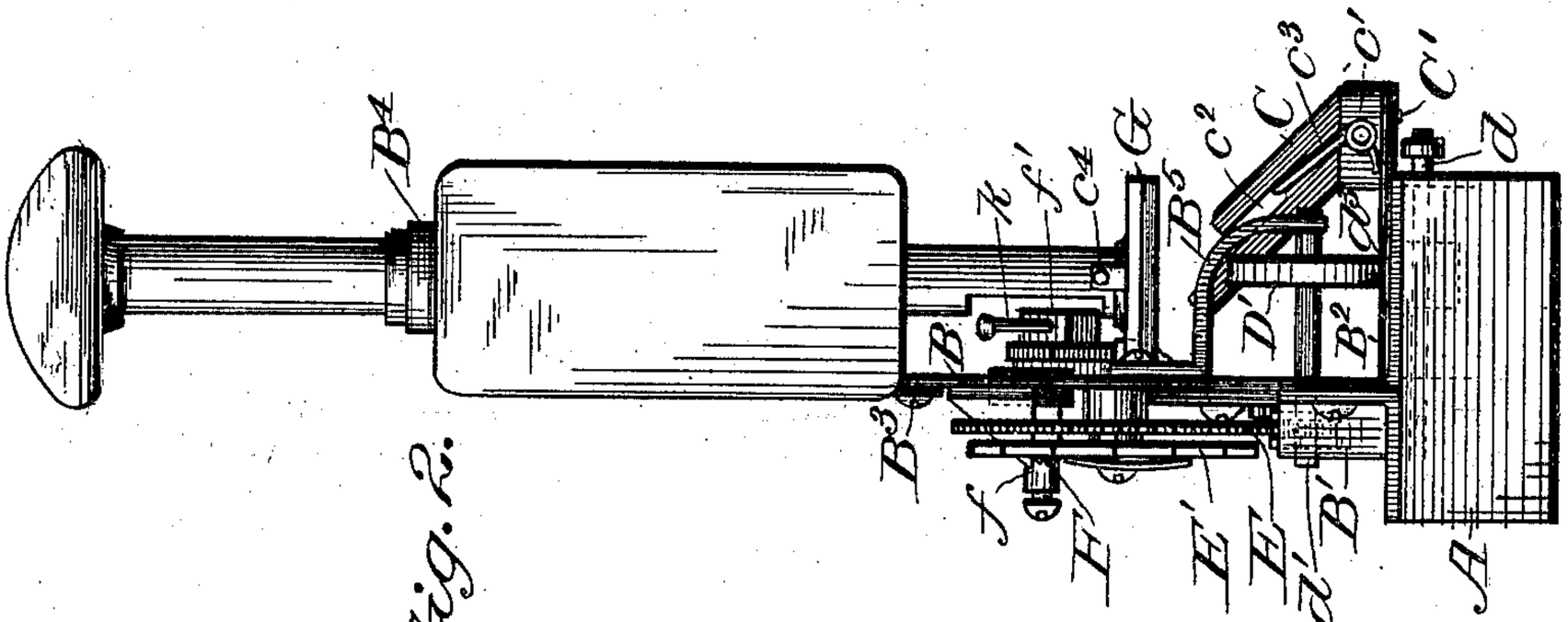

Fig. 2.

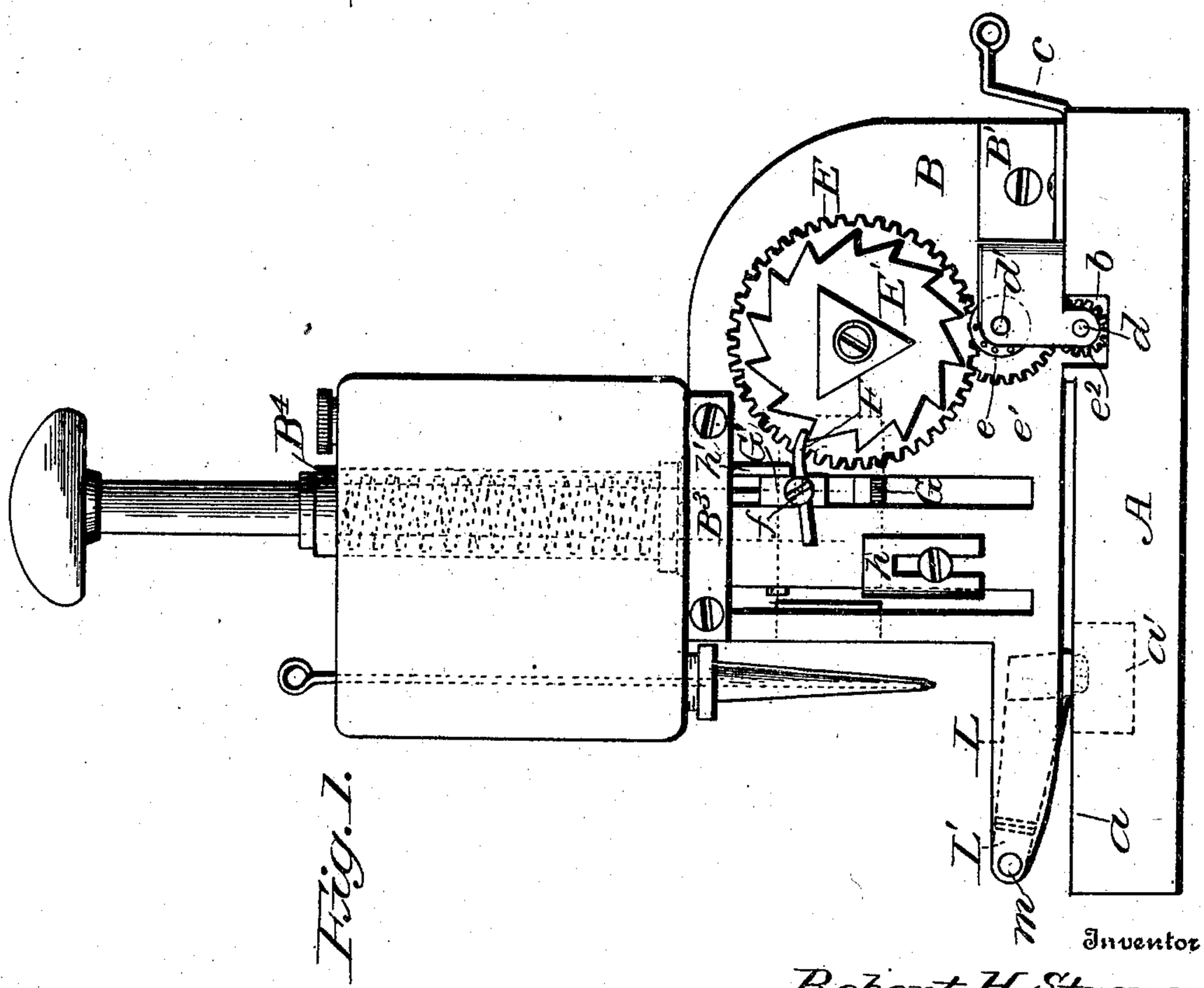

Fig. 1.

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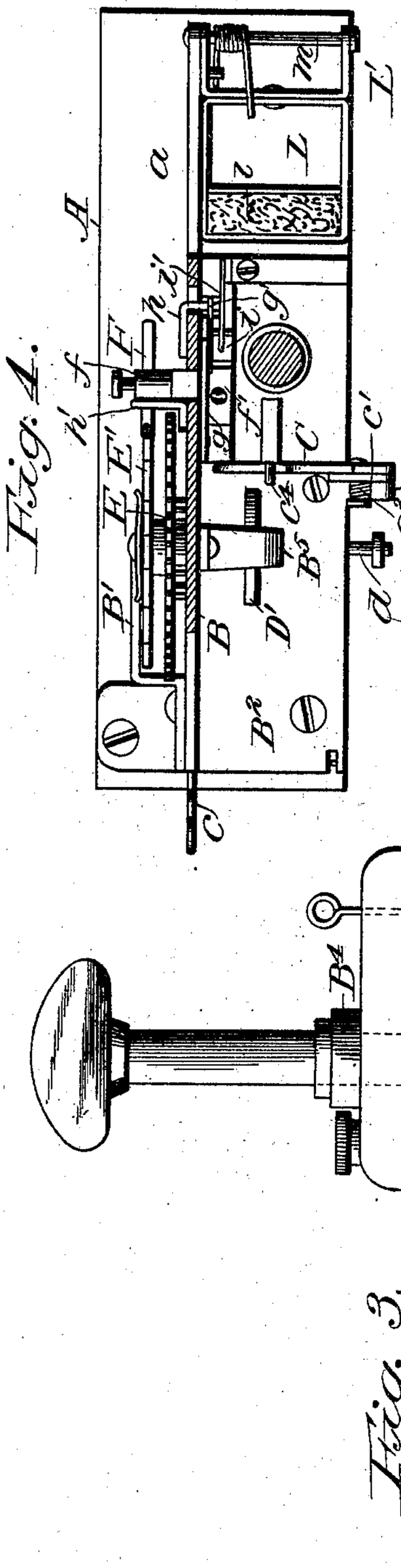

Fig. 3.

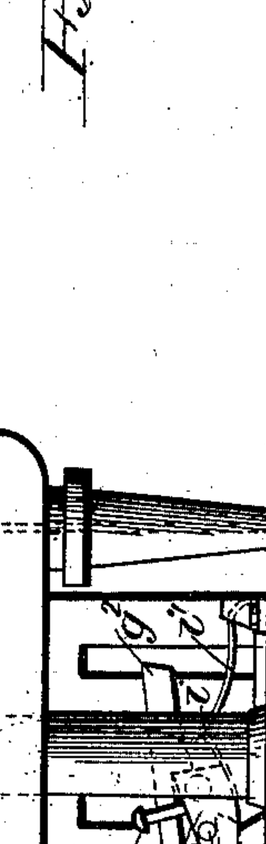

Fig. 5.

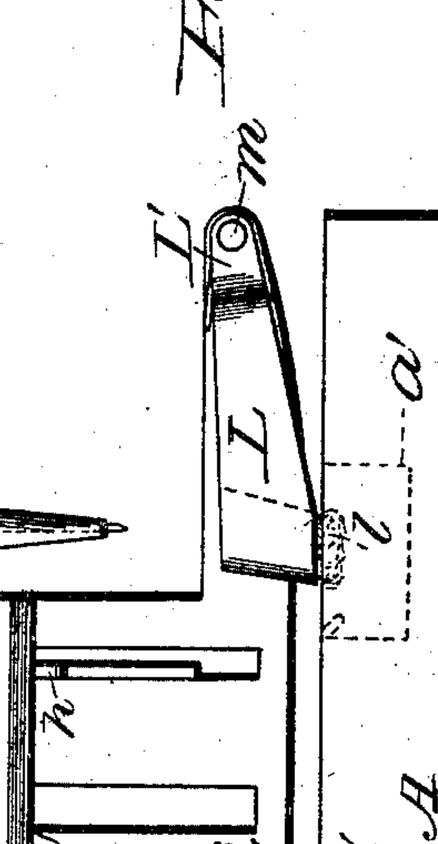

Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT H. STRONG, OF GALESBURG, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO WILLIAM O. R. BRADLEY AND JOHN P. McCAFFERY, OF GALESBURG, ILLINOIS.

STAMP-AFFIXING MACHINE.

SPECIFICATION forming part of Letters Patent No. 708,424, dated September 2, 1902.

Application filed April 16, 1902. Serial No. 103,142. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. STRONG, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Stamp-Affixing Machines, of which the following is a specification.

My invention relates to improvements in machines or devices for affixing postage-stamps or gummed labels to envelops, cards, or other objects; and the invention is designed to provide a device for the purpose set forth which comprises a plunger having to one side of the same mechanism for feeding and severing stamps or labels, so as to place them beneath the plunger, the other side of the device from the feeding mechanism having means for moistening the surface of the envelop or card to which the stamp is to be attached, such stamp being fed and severed from a strip on the downstroke of the plunger, the device being so constructed that several stamps may be applied to a card or envelop.

The invention also consists in the means for changing the movement of the feed mechanism without varying the stroke of the plunger.

In carrying out my invention I provide a base, below the upper surface of which is a water-chamber and a recess which is adapted to receive the shaft and roll of the feeding mechanism, such base having attached, near one end, a frame, the major portion of which overhangs the base, and to the end of the overhanging portion of the frame there is secured a moistening device, above which is the outlet-spout of a water-supply tank. The frame also carries a vertically-movable plunger and to one side of the same an intermittent rotary feed and a pivoted cutter, the feed and cutter being actuated by the plunger on its downstroke, the upstroke of the plunger restoring certain parts to an operative position for the next downstroke, as will be hereinafter set forth.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side elevation of a stamp-affixing device made in accord with my improvements. Fig. 2 is an end elevation. Fig. 3 is a side elevation looking toward the opposite side from Fig. 1. Fig. 4 is a horizontal sectional view. Fig. 5 is a sectional view of a modification, and Fig. 6 a horizontal sectional view thereof.

This invention may be particularly embodied in machines having generally the same characteristics, but which vary as to details of construction or assemblage of the parts.

The base A is preferably recessed near one end and has a plate a, which is cut away above a water-receptacle a', which is let into the base, the plate adjacent to the opening being bent downward, so that the edge will not engage an envelop or card when passed over the opening. A recess b extends below the top of the base to receive the shaft, gears, and roll of a portion of the feed mechanism, and to the end of the base farthest from the moistening means is a supporting-frame c, which is adapted to carry a roll upon which is wound a strip of postage-stamps or labels.

To the upper face of the base A, adjacent to one end, there is rigidly secured a vertical plate or frame B and a plate B′, having bearings for shafts d and d'. The frame B is bent at right angles to provide a horizontal portion B^2, which is attached to the base, said portion having depending lugs d^2, which serve as guides for one end of the shaft d, and such plate B^2 has in line with the lugs an opening through which the feed-roller d^3 on the shaft d projects. A plate B^3 is carried by the upper portion of the frame and supports a water-receptacle, which surrounds a tube or sleeve B^4, in which is placed a spring, such spring engaging a collar on the sleeve and one on the plunger to hold the plunger normally raised. The shaft d' is journaled at one end in the bracket B′, the other end engaging a bracket B^5 on the opposite side of the frame, such bracket spanning the feed-wheel D′. The feed-roller d^3 and the feed-wheel D′ are both rotated simultaneously to feed stamps beneath a blade C, which is pivoted to a vertical member c' of a plate C′, which forms the fixed member of the cutter. The blade C has therein a slot c^2 and is held normally raised by a spring c^3. The plunger or presser in line with the blade has an outwardly-project-

ing stud c^4, which is adapted to contact with the projecting portion of the blade and move into the slot as the plunger is depressed and the blade lowered, thus operating the blade and lifting it when the plunger moves upward. The knife or blade is depressed after the feed mechanism has come to a stop.

To one side of the frame B there is journaled a gear-wheel E, and alongside of the same, so as to be in rigid engagement therewith, there is a ratchet-wheel E′. The gear-wheel meshes with a pinion e on the shaft d', said shaft carrying the feed-wheel D′ and a gear-wheel e', which meshes with a pinion e^2 on the shaft d, so that when the ratchet-wheel is turned the feed-wheel D′ and the roller d^3 will have imparted thereto a rotary motion. The shaft d, which carries the feed-roller d^3, is movable vertically between the lugs d^2 and is forced toward the feed-wheel D′ by a spring d^4, attached to the base, so as to bear against the under side of the shaft.

The ratchet-wheel E′ is intermittently operated by a pawl F, attached to the plunger or presser G, the pawl being carried by a rock-shaft f, to which the pawl is adjustably secured, so that it can be moved to and from the teeth of the ratchet-wheel to determine the distance of the stroke that the pawl will be in engagement with a tooth of the ratchet-wheel to provide means for adjusting the feed. The pawl F is passed through an aperture in the rock-shaft f, which aperture is in line with the ratchet-wheel E, and the pawl is clamped by a set-screw which enters the end of the rock-shaft and engages the pawl. The rock-shaft passes through a block or guide-piece integral with the side of the presser and adjacent to the stem of the plunger. The rock-shaft has rigidly attached thereto a tumbler f', which is engaged by a dog which holds the pawl rigid and substantially horizontal during the downstroke of the plunger. The dog is tripped before the completion of the downstroke of the plunger to place the pawl F out of the path of the teeth of the ratchet-wheel during the up or return stroke of the plunger. A guide-block G′ is rigidly attached to the vertical portion of the plunger and passes through a vertical slot in the frame B, the rock-shaft, which carries the pawl and tumbler, being carried by this block. On a downward movement of the plunger the ratchet-wheel is actuated or turned by the pawl, which is locked, and after the wheel has been turned the end of the dog farthest from its pivot engages a trip-plate h, attached to the frame B, when the end of the pawl will be swung upward out of the path of the ratchet-teeth and will be held in such position until the pawl is engaged by the stop-plate h', which is attached to the frame and is in line with the pawl, which will turn the rock-shaft and the tumbler, so that the pawl will be held against movement until the dog is lifted by engagement with the adjustable trip-plate h. The upper plate h' is fixedly attached to the frame, and the lower trip-plate h is adjustable vertically thereon. By changing the position of the plate h the distance which the ratchet-wheel will be moved can be varied and the feed changed. It will be noted that the feed may be varied both by adjusting the pawl and the plate h.

The tumbler f' and the dog or latch g may be constructed as shown, the tumbler having a tailpiece i, which is engaged by a spring i' and, if desired, with a pin k to overbalance the tumbler. From one side of the tumbler there projects a stud k', which is engaged by a projecting portion on the lower portion of the dog or pivoted latch-plate, so that when the dog is lifted it will throw the tumbler in an opposite direction from what it is moved by the spring i', such movement taking place when the end of the dog farthest from its pivot is raised, and when the end of the dog is raised the notch will be moved out of engagement with the tumbler and a further movement of the rock-shaft and pawl will be prevented.

In Figs. 3 and 4 the tumbler f' is shown as having a tailpiece i, which is engaged by a spring i' to move the tumbler out of the notch in the upper member of the dog when the spring g^2, attached to said member, engages the plate h. The plate h has a horizontal upper portion and a curved side, the curved side being present, so that the spring g^2 may be bent to one side and ride over the trip-plate h. As soon as the dog is raised by engagement with the plate h the notch in its upper member will be released from the tumbler f', the stud k', which projects from the side of the tumbler, will be engaged by the projecting lower portion of the dog, and the spring i', engaging the tailpiece i, will hold the tumbler f' and the pawl F, both being carried by the rock-shaft f, the pawl F being held in an inclined position and out of line with the teeth of the ratchet-wheel E′, so that when the plunger is moved upward by its spring the pawl will be out of line with the teeth of the ratchet-wheel. When the pawl engages the upper plate h', it will be moved in line with the teeth of the ratchet-wheel and the dog will engage the tumbler and hold it against movement, so that when the plunger is being forced downward the pawl will turn the ratchet-wheel.

In a modified form, as shown in Figs. 5 and 6, the dog g has an end integral therewith which projects beyond one side of the plunger for engagement with a plate having a projecting pin h, the plate being carried by the lower portion of the frame, so that the projecting end of the dog will engage the pin and lift the dog before the plunger reaches the limit of its downstroke. When the end of the dog g engages the pin h, the lug g^4 will engage a tooth f^2 on the tumbler, and as the tumbler is fast on the shaft f the shaft will be rocked, which will incline the pawl F and place the same out of the path of the teeth of

the ratchet-wheel. The turning of the tumbler and shaft is limited by the stop-pin f^3, attached to the tumbler, which stop-pin engages the upper side of the horizontal plate of the plunger. When the plunger approaches the limit of its upward stroke, the pawl F will engage the trip-plate h', rock the shaft f and tumbler carried thereby, and the tooth f^2, engaging the lug g^4, will lower the dog g, so that the notch or recess will engage the upper corner of the tumbler and hold the same and shaft against movement, the pawl F being held in a horizontal position to engage the teeth of the ratchet-wheel during the downstroke of the plunger. The dog and tumbler are in locked engagement until the dog is lifted by engagement with the pin h. The sleeve which incases the plunger is preferably surrounded by a water tank or receptacle which has a discharge-spout located over the pad l of a moistening device L, said moistening device consisting of a rectangular frame which is pivoted to a bail L', said bail being pivotally attached to a horizontal supporting-pin m. The frame is normally forced downward by a spring, and excessive downward movement may be prevented by a stud with which the bail engages. By the construction shown the lower end of the moistening-pad will enter the water-tank a', and the pad-holding frame may have an oscillatory movement on the bail.

In use an envelop or card is passed beneath the moistening-pad, so that the upper surface thereof will be wetted, the envelop being passed beyond the pad and beneath the overhanging portion of the frame. As the plunger is moved downward the pawl will turn the train of gears, which actuates the feed wheel and roll, projecting a stamp or label beneath the plunger and above the wetted surface of the envelop. When the pawl leaves the ratchet-wheel, the feed is stopped and the pin on the plunger engages the pivoted blade, which will sever a stamp or label from the strip, a further downward movement pressing the stamp upon the envelop, upon which it adheres. When pressure is removed from the plunger, the parts will be automatically restored to their initial position. In case it is desired to place a second stamp or label on an envelop the same is passed under the moistening device to one side of where the stamp has been affixed.

This device may be used without operating the plunger for moistening the flaps of envelops, and it will be noted that the moisture is applied to the surface of the envelop which is uppermost.

I claim—

1. In a stamp or label affixing machine, the combination with a base provided at one end with a spring-depressed moistening-pad, a water-supply tank above the pad, and a water-receptacle below the pad, of a frame provided with feed-rolls and actuating mechanism therefor, such mechanism including a ratchet-wheel, trips carried by the frame, a plunger having a flat plate at its lower end, an oscillating pawl carried by the plunger to engage one of the trips on its upward movement and the ratchet-wheel on its downward movement, a pivoted dog carried by the plunger to engage the other trip and release the pawl, and a blade which is raised by a spring and depressed by engagement with a stud on the plunger as the plunger is moved downward, substantially as shown and for the purpose set forth.

2. In a stamp or label affixing machine, the combination with a reciprocating plunger, a frame having an overhanging portion one end of which carries a spring-depressed moistening device, feed-rollers on the opposite side of the overhanging frame from the moistening device, a flat portion between the feed-rolls and the moistening device, of a train of gears for actuating the feed-rolls, a ratchet-wheel included in the train, trips on the frame, a plunger provided with a rock-shaft, a tumbler on the rock-shaft and a pawl also thereon, a dog pivoted to the plunger and provided with portions which engage the tumbler to hold it and the pawl against movement, the dog engaging one of the trips on the frame to release it from the tumbler, the pawl engaging the other trip to lock the pawl and position it in the path of the ratchet-wheel before a downward movement is imparted to the plunger, substantially as shown and for the purpose set forth.

3. In a stamp-affixing device, means for feeding and pressing a stamp upon a moistened surface, a moistening device comprising a pivotally-supported and spring-depressed frame, a pad-carrying frame pivoted to the spring-depressed frame to be susceptible of an oscillating movement thereon, and means for applying water to the moistening-pad, substantially as shown.

4. In a stamp-affixing machine, the combination with a base, of a frame attached to the base to overhang the major portion of the same, a moistening device pivotally attached to one end of the overhanging frame, and a plunger carried by an intermediate part of the overhanging part of the frame, feed mechanism to one side of the overhanging portion of the frame, the feed mechanism having feed-rollers above and below the base, a fixed cutter adjacent to the feed-rolls, and a pivoted cutter-spring actuated in one direction and depressed by the plunger when the same is lowered, substantially as shown and for the purpose set forth.

5. In a stamp-affixing machine, the combination of a plunger which is spring-actuated in one direction, an oscillating pawl attached to a rock-shaft which is carried by the plunger, a dog pivoted to the plunger, a tumbler on the rock-shaft with which the dog engages, stops carried by the frame with which the dog and pawl engage, and a ratchet-wheel for operating the feed mechanism said ratchet-

wheel being turned by the pawl on its downward stroke, for the purpose set forth.

6. In combination with a plunger having on one side a projecting stud, of a blade-spring actuated in one direction, an open-ended slot through the blade into which the stud passes to depress the blade on the downward movement of the plunger and raise the same on the upward stroke thereof, and a spring which engages the slot in the blade and the base to hold the blade normally raised, substantially as shown.

7. In a stamp-affixing machine, the combination of a frame having a vertical slot, a reciprocating plunger attached to the frame, a rock-shaft carried by the plunger, a tumbler on one end of the rock-shaft, a pawl attached to the other end, a dog pivoted to the plunger to engage the tumbler, a stop with which the pawl engages to set the same and limit the upward movement of the plunger, a trip in line with the dog, feed-rollers actuated by the pawl, and a cutter which is depressed by the plunger, the parts being organized substantially as shown and for the purpose set forth.

8. In a stamp-affixing machine, the combination of a frame having a vertical slot therethrough, a stop-plate adjacent to the upper end of the slot, an adjustable trip-plate carried by the frame, a rock-shaft having on one end an adjustable pawl and on the other end a tumbler which is engaged by a dog, one end of the dog being in line with the adjustable trip-plate, and a feed mechanism operated by a ratchet-wheel which is engaged by the pawl during a part of the downstroke of the plunger, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of April, 1902.

ROBERT H. STRONG.

Witnesses:
J. E. MALEY,
J. P. MCCAFFERY.