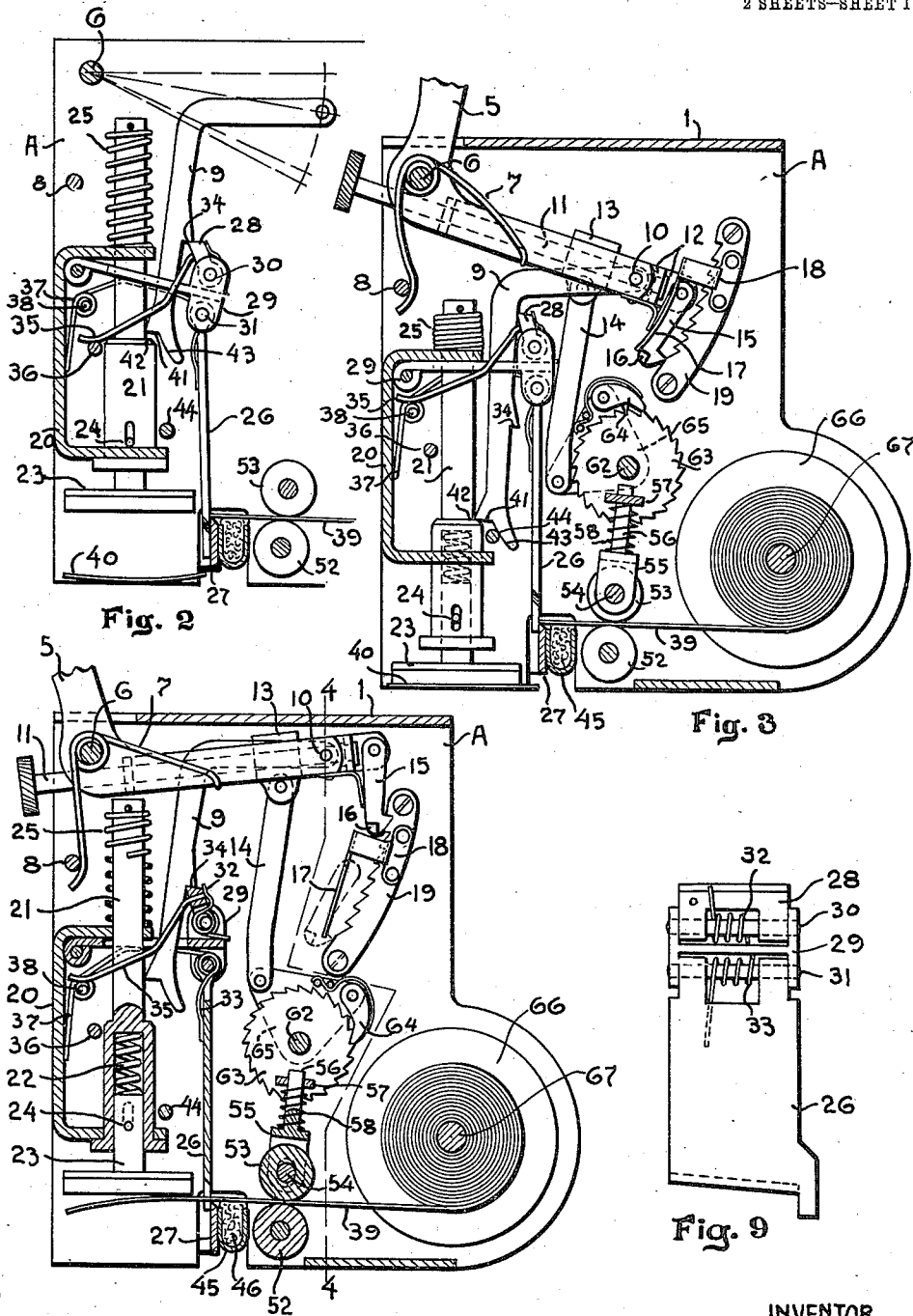


J. D. THOMPSON.
STAMP AFFIXING MACHINE.
APPLICATION FILED AUG. 7, 1912.

1,063,226.

Patented June 3, 1913.

2 SHEETS—SHEET 1.



WITNESSES
Robert N. [Signature]
Virginia C. Spratt.

Fig. 1

INVENTOR
John D. Thompson
BY
Raymond A. Parker
ATTORNEY

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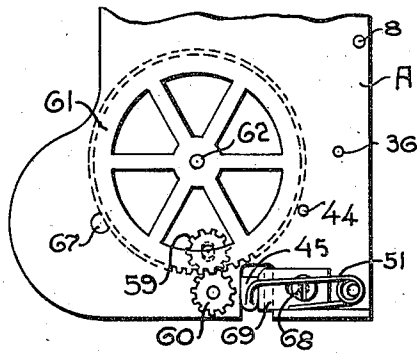


Fig. 8

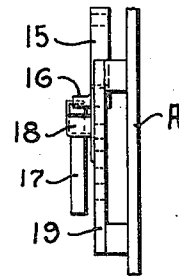


Fig. 6

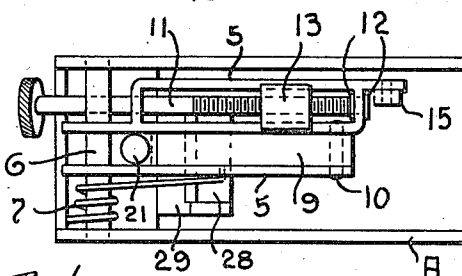


Fig. 5

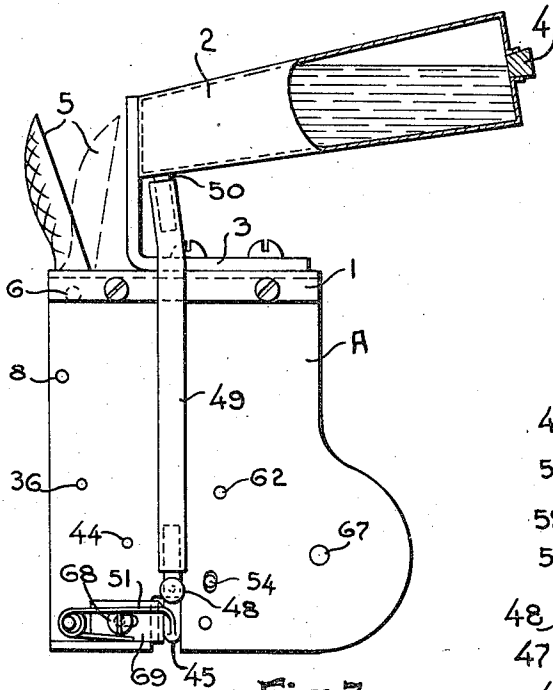


Fig. 7

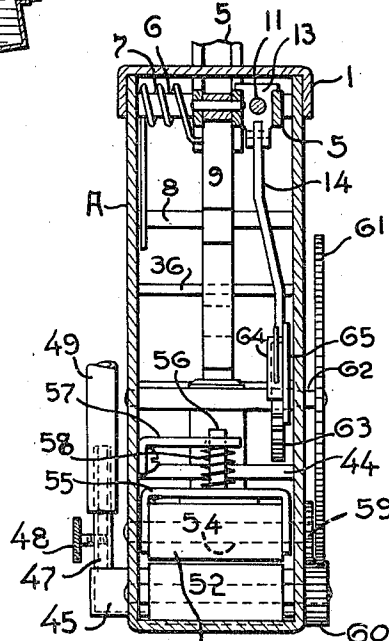


Fig. 4

WITNESSES

Robert W. Van Dine

Virginia C. Spratt.

INVENTOR

John D. Thompson

BY

Raymond A. Parker
ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN D. THOMPSON, OF TORONTO, ONTARIO, CANADA.

STAMP-AFFIXING MACHINE.

1,063,226.

Specification of Letters Patent.

Patented June 3, 1913.

Application filed August 7, 1912. Serial No. 713,742.

To all whom it may concern:

Be it known that I, JOHN D. THOMPSON, a subject of the King of Great Britain, residing at Toronto, county of York, Province of Ontario, Dominion of Canada, have invented a certain new and useful Improvement in Stamp-Affixing Machines, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to stamp affixing machines and has for its object a stamp affixing machine which is encompassed in a small space and which can be carried about and manipulated with one hand.

The novel features of this machine will more fully appear in the detailed description hereinafter following.

Figure 1, is a vertical section of the machine, most of the working parts being shown in elevation while some of them are broken away or sectioned for the purpose of showing the interior construction. Fig. 2, is a detail elevation of the plunger that affixes the stamp, the severing knife and the actuating parts for both. In this figure the actuator is shown as it is about to leave engagement with the knife and engage the plunger. Fig. 3, is a vertical section similar to Fig. 1 except that it is taken nearer to that wall of the housing that is removed and the working parts are not broken away or sectioned. In this figure, the actuator is shown in the position that it assumes just before it leaves engagement with the plunger. Fig. 4, is a vertical cross section on the line 4-4 of Fig. 1. Fig. 5, is a top elevation of the machine, the cover being removed. Fig. 6, is a detail elevation of the ratchet and pawl which compels a complete stroke of the actuating lever. It is a view taken from the right of Fig. 3. Fig. 7, is a side elevation of the complete machine, the container-handle of the machine being broken away to show its contents. Fig. 8, is a detail elevation of the gear wheels which operate the feed rollers. Fig. 9, is a detail of the knife.

A, is the housing of the machine which is provided with a cover 1 that screws to the housing and a handle 2 that is screwed to the cover by a bracket 3. This handle is a container for holding water, as shown in

Fig. 7, and its end is provided with a nipple into which fits a stopper 4.

5 is the actuating lever, which is a bell-crank lever and pivots upon the stud 6 attached to the housing A. The spring 7, one end of which bears against the resistance arm of the lever and the other against a pin 8, serves to return the lever, upon its actuation, to the position shown in the full lines of Fig. 7. The actuator 9 is pivoted to the resistance arm of the lever 5 by means of the pin 10. The resistance arm of the lever 5 is tripartite (Fig. 5) there being three strips of metal, two of which pivot upon the stud 6 and a third of which is connected with one of these strips. Between this third strip and the strip to which it is attached is located a screw 11 whose end is provided with a pair of collars 12 that engage on either side of the connecting piece that joins the two strips. The screw is journaled in a second connecting piece that joins the two strips at the opposite end. Upon this screw is threaded a nut 13 to which is attached pivotally a link 14 whose function will appear later.

The resistance arm end of the lever 5 carries a pawl 15 provided with a laterally projecting lug 16, which, on the downward stroke, is engaged by the flat spring 17 that is supported by a bracket 18. This flat spring serves to keep the pawl in contact with the segmental rack 19, so that it will be readily seen that after the lever 5 has been actuated that its actuation must be completed before the lever can be returned to its initial position. In Fig. 3 the spring 17 is shown engaging the lug 16, the latter of which is just about to slip out from under the spring. Fig. 1 shows the position of the pawl in dotted lines immediately after the spring has dropped from the lug 16. It is there seen that the pawl is then in position to allow the spring 7 to return the lever to its initial position. This device is useful in connection with the feeding mechanism hereinafter to be described as it guards against partial actuation of the lever which would serve to throw the feed out and cut the stamps at points that would injure them.

The plunger guide 20 is secured to the housing and is in a form of a double bracket provided with perforations through which may reciprocate a plunger 21, which has an enlarged and hollowed lower end in which engages the spiral spring 22 that

tends to force the impact member 23 downward. This impact member 23 has a pin and slot connection 24 with the plunger 21. This gives the impact member 23 a yielding connection and serves to cushion this member. The plunger 21 is normally held in uppermost position by the expansion spring 25.

The knife 26 reciprocates vertically across the shearing piece 27. A full view of the knife 26 is shown in Fig. 9. It comprises a blade which has a cutting edge and a hinging piece 28. The two are connected by a double knuckle-pin member 29 carrying pins 30 and 31. The springs 32 and 33 that are coiled about the knuckle pins 30 and 31, respectively, tend to keep the hinging piece 28 in vertical position, but allow the hinging piece to be yieldingly forced out of this position as shown in Figs. 1 and 2 by the contact of the shoulder 34 on the actuator 9. This hinging piece 28 carries a trip rod 35 (Fig. 1). As the knife 26 is forced down by the contact of the shoulder 34 of the actuator 9, the trip rod 35 engages the trip pin 36 (Fig. 2) and this serves to throw the hinged piece 28 out of engagement with the shoulder 34. The knife 26 then immediately flies back to its initial position through the agency of the spring 37 that is coiled about the spring supporting pin 38. The descent of the knife 26 serves to cut the stamp strip 39, as shown in Fig. 2, leaving the stamp 40 in position to be affixed to the envelop or package by the impact member 23 of the plunger.

The lower end of the actuator 9 has a shoulder 41 which engages the shoulder 42 of the plunger just as the hinging piece 28 flies out of engagement with the shoulder 34. This serves to drive the plunger down until the projection 43 at the end of the actuator 9 strikes the pin 44 (Fig. 3) and as it travels on said pin, the shape of the projection serves to pull the shoulder 41 out of engagement with the shoulder 42 and the plunger flies back to its uppermost position under the influence of the spring 25. In the meantime the impact member 23 has struck the stamp (Fig. 3) and affixed it to the envelop or package. The stamp previous to this has been moistened by passing over the U-shaped container 45. This U-shaped container is provided with a spungy material 46 which holds the moisture that is furnished it in the form of water from the handle 2. The conduit from the handle to the moistener comprises a nipple 47 attached to the moistener and carrying a screw 48 by which the flow of water may be regulated, a rubber hose 49 fitting over the nipple 47, and a nipple 50 that is attached to the handle. The moistener 45 is yieldingly thrust upward by the spring arms 51 on either side of the housing. This serves to

press it firmly against the stamp strip and insures proper moistening of the stamp. Upon the return stroke of the lever 5 the next succeeding stamp is fed over the moistener, across the point of descent of the knife and under the impact member by the feeding mechanism, which comprises a pair of feed rollers 52 and 53, the upper feed roll 53 is loosely journaled in the housing by a stud 54 which is also journaled in a yoke 55 and provided with an integral upright pin 56 which engages through a perforation in a bracket 57 that is attached to the side wall of the housing. A spiral expansion spring 58 engages between the bracket and the yoke 55 and serves to press the upper roller 53 securely against the lower roller or the stamp strip passing between the rollers. This insures a grip of the stamp strip so as to feed the strip the prescribed distance each time.

The roller 53 is connected with a gear wheel 59 that is attached to the end of the stud 54 at the outside of the housing. This gear wheel 59 meshes with a pinion 60 that is attached at the outside of the housing to the end of the stud that carries the feed roll 52. The pinion 60 also meshes with a large gear wheel 61 at the outside of the housing and which is connected by the stud 62 to the ratchet wheel 63. A spring pressed pawl 64 rides over the ratchet teeth upon the downward stroke of the plunger or the one-way actuation of the lever 5, but upon the return stroke of the lever, the pawl engages with the teeth of the ratchet wheel and turns it a prescribed distance each time, which is communicated through the aforementioned gearing to the feed rolls and serves to feed the stamp strip precisely the length of one stamp. The pawl 64 is carried upon a triangular crank member 65 that is pivoted to the stud 62, the pawl 64 being carried at one angle of the triangular member, the pivoting being at the second angle and the link 14 being connected to the third angle. As already described the link 14 is attached to the nut 13 that runs on the screw 11. By turning the screw 11, the nut may be run along the screw serving to change the length of the resistance arm of the lever 5 that actuates the link 14. It is, therefore, seen that the amount of actuation given to the triangular crank member 65 is thus altered and hence the amount of turn given to the ratchet wheel 63. This serves as an adjusting device to regulate the feed so that, when it is found that the feed is not working so as to bring the stamps for the knife to descend accurately on the line of perforations between the stamps, the screw 11 may be resorted to and the error in the feed be corrected.

The stamp strip 39 is carried on a storage roll 66 which revolves on a pin 67, journaled

in the housing. The shearing piece 27 may be adjusted with respect to the housing by unscrewing the screws 68 that are on either side of the housing on the outside and which engage through slots of the bent ends 69 of the shearing piece. This will also serve as a means for correcting any error in the feed.

The operation of the machine in brief is as follows:—The strip of stamps having been inserted and one of them pulled through so the knife will descend directly upon the line of perforations, the orifice in the bottom of the housing is placed directly over the point on the envelop or the package where it is desired to affix the stamp. The lever 5 is then forced backward with the thumb, causing the actuator 9 to descend and forcing the knife 26 across the shearing piece 27, thereby severing the stamp. The actuator 9 continues on its downward path forcing the plunger downward and causing the impact member 23 to strike the stamp and press it against the envelop or package. The stamp having been previously moistened by passing over the spongy material 46 of the moistener, the lever starts upon its return movement and the pawl 64 engages with the ratchet which communicates the rotative movement to the feed rolls which feed the stamp strip the length of one stamp across the moistener and below the knife. The operation is then repeated. As already explained, the pawl 15 and the rack 19 serve to prevent the lever 5 from returning to its initial position until it has been completely actuated.

What I claim is:—

1. A stamp affixing machine, having in combination, moistening means, severing means, stamp impacting means, an actuator operating to actuate the severing means and then the impacting means, feeding means and an actuating lever for operating the actuator and the feeding means, substantially as described.

2. A stamp affixing machine, having in combination, a moistener, means for feeding the stamp strip a prescribed distance across the moistener, a severing knife adapted to cross the stamp strip, a stamp affixing plunger, and an actuator provided with a shoulder adapted to engage the knife and cause it to cross the stamp strip, and a second shoulder adapted to engage the stamp affixing plunger and cause it to strike the stamp after it has been severed by the knife, substantially as described.

3. A stamp affixing machine, having in combination, a moistener, feeding mechanism, a stamp affixing plunger, a knife crossing the path of the stamp, an actuator provided with a shoulder for engaging the knife, means for disengaging the shoulder and the knife at a predetermined time, a

second shoulder on the actuator for engaging the plunger and forcing the same against the stamp, means for disengaging the plunger and the second shoulder at a predetermined time, means for returning the plunger to initial position and means for returning the knife to initial position, substantially as described.

4. A stamp affixing machine, having in combination, a moistener, stamp severing means comprising a knife having a blade, a hinge member and a double knuckle-pin member connecting the hinge member to the blade, springs for holding the hinge member yieldably in a given position with respect to the blade of the knife, an actuator having a shoulder adapted to engage with the hinge piece to drive the knife across the path of the stamps, means for returning the knife to its initial position when the hinge piece and the shoulder of the actuator disengage, and means for impacting the stamp to the package or envelop, substantially as described.

5. A stamp affixing machine, having in combination, a moistener, severing means comprising a knife having a hinge piece, yieldably connected with the main portion of the knife, a stamp affixing plunger yieldably held in uppermost position, an actuator provided with a pair of shoulders, one of which engages the hinge piece of the knife, means for returning the knife to its initial position when the shoulder and the hinge piece disengage, the said actuator being provided with a second shoulder for engaging the plunger and causing it to descend upon the stamp and means for disengaging the second shoulder from the plunger to allow the plunger to return to its initial position and feeding mechanism for advancing the stamp strip, substantially as described.

6. A stamp affixing machine, having in combination, a moistener, severing means, comprising a knife provided with a hinging piece having a yieldable connection therewith, an actuator provided with a shoulder adapted to engage the hinging piece to cause the knife to cross the path of the stamps, a plunger for affixing the severed stamp, yieldably held out of contact with the stamp, the said actuator being provided with a second shoulder for engaging the shoulder on the plunger, a trip rod and a trip pin for causing the hinging piece to disengage with the shoulder of the actuator, means for returning the knife upon such disengagement to its initial position, a projection on the actuator, a pin engaged by the projection for releasing the second shoulder from engagement with the plunger and feeding mechanism for advancing the stamp strip, substantially as described.

7. A stamp affixing machine, having in

combination, a moistener, severing means, stamp impacting means, a lever for actuating the stamp-impacting means and severing means upon its initial stroke, and feeding mechanism comprising a pair of feed rolls, a ratchet wheel, driving connections between the ratchet wheel and feed rolls, an actuating pawl connected with the lever for actuating the ratchet wheel upon its return stroke and means for adjusting the connection of the pawl with the lever to change the movement of the ratchet wheel and regulate the feed, substantially as described.

8. A stamp affixing machine, having in combination, a moistener, severing means, stamp-impacting means, a lever for actuating the severing means and stamp-impacting means upon its initial stroke and feeding

mechanism comprising feed rolls, a ratchet wheel, driving connections between the feed rolls and ratchet wheel, an actuating pawl for rotating the ratchet upon the return stroke of the lever, a screw attached to the lever arm and a nut running on said screw and connections between the actuating pawl and the nut, whereby the lever arm length may be varied to change the actuation of the ratchet wheel and regulate the feed, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN D. THOMPSON.

Witnesses:

ARTHUR W. RABY,
D. S. TOVELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."