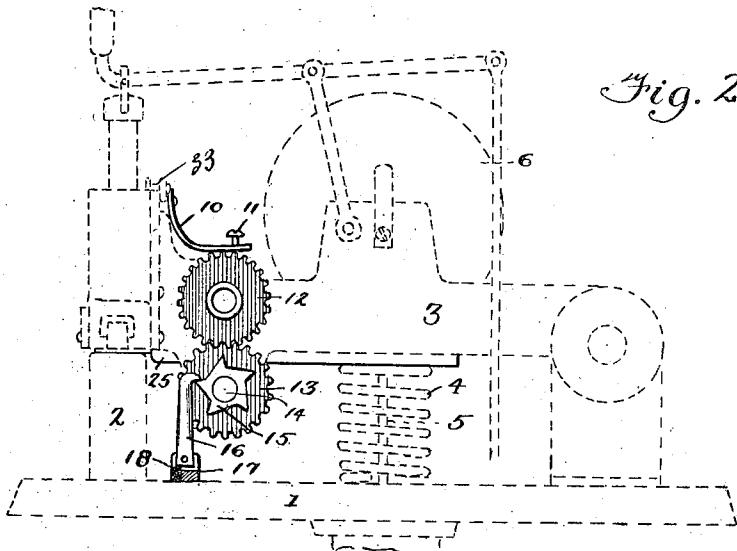
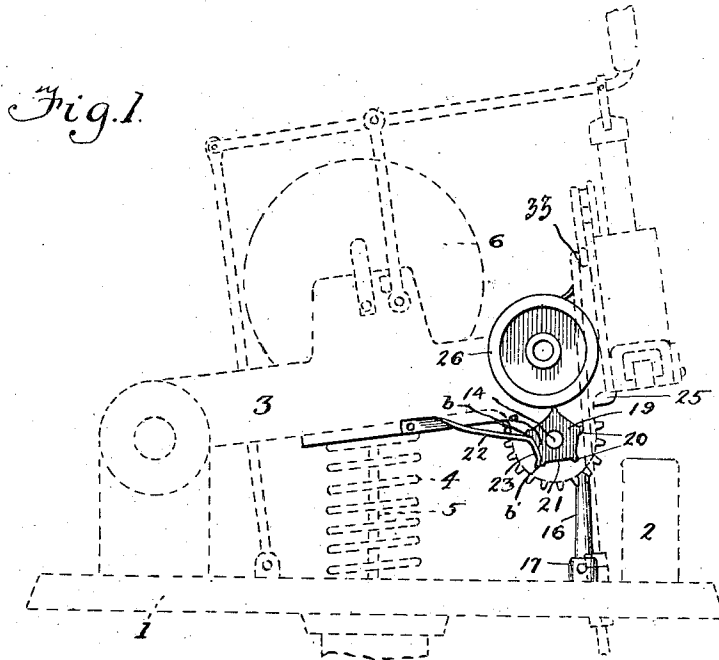


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 TAPE FEEDING MECHANISM FOR TAG FORMING AND AFFIXING MACHINES.
 APPLICATION FILED NOV. 30, 1909.

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2 SHEETS—SHEET 1.



WITNESSES

G. M. Spring
 R. F. Healy

INVENTOR

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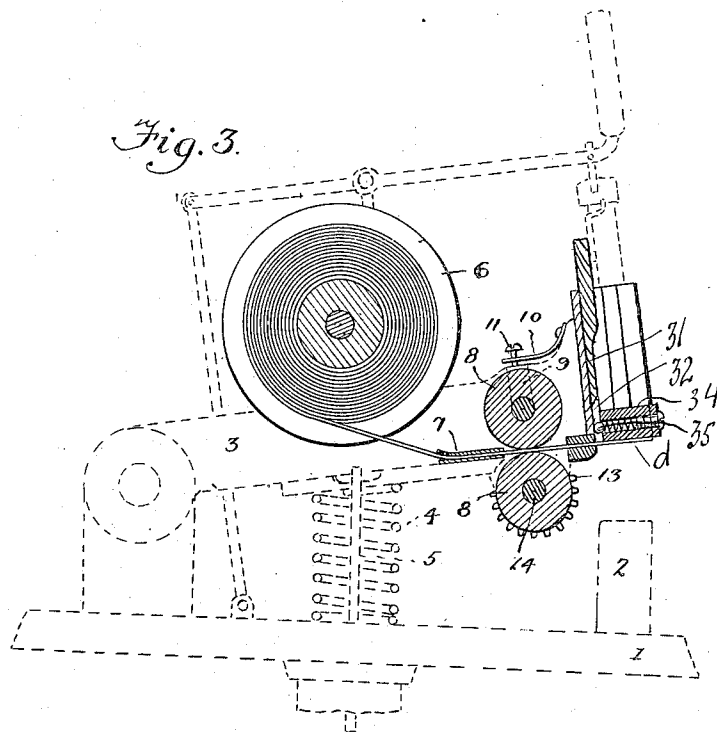
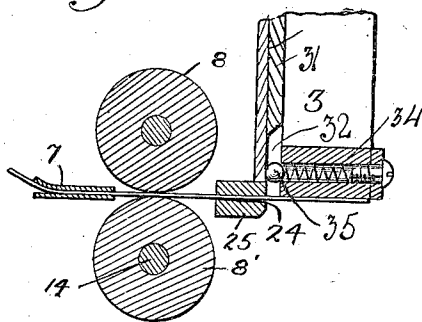


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

DAVID PELTON MOORE, OF WASHINGTON, DISTRICT OF COLUMBIA.

TAPE-FEEDING MECHANISM FOR TAG FORMING AND AFFIXING MACHINES.

948,944.

Specification of Letters Patent.

Patented Feb. 8, 1910

Original application filed June 2, 1909, Serial No. 499,797. Divided and this application filed November 30, 1909. Serial No. 530,656.

To all whom it may concern:

Be it known that I, DAVID PELTON MOORE, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Tape-Feeding Mechanisms for Tag Forming and Affixing Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in tape feeding mechanisms for tag forming and affixing machines, this application being a divisional application of my application filed June 2nd, 1909, Serial No. 499,797, for the complete tag forming and affixing machine. This feeding mechanism, and also a tape cutting mechanism, more particularly set forth in my application filed of even date herewith, Serial No. 530,655, are both carried in a casing, which is mounted upon a base carrying an anvil, said casing having movements to and from the anvil, whereby the feeding mechanism is operated to feed a predetermined length of tape from a spool of tape upon the movement of the casing away from the anvil, so that the said length may be formed into a tag by the aforementioned cutting mechanism as the casing is moved toward the anvil and attached to the article by a plurality of metal staples, either as the casing is moved upon the anvil or by operating a hand lever to sever, deliver and clench staples through the cut tag and the article while they rest upon the anvil.

To clearly understand the invention, attention is invited to the accompanying drawings, in which:

Figure 1 is a side elevation in dotted lines of my tag forming and affixing machine with the casing up, the feeding mechanism being in full lines. Fig. 2 is a similar view from the opposite side with the casing down. Fig. 3 is a longitudinal section through the feeding mechanism, the remainder of the machine being in dotted lines. Fig. 4 is an enlarged detail section of the feed rollers, the forward tape guide and the stationary tape guide and blade.

Referring to the drawings:—the numeral 1 designates the base of the machine carrying the stationary anvil 2, and to which is pivotally mounted the casing 3, which is normally held upwardly by the spring 4,

and pulled downwardly upon the anvil by means of the rod 5, which is connected preferably to a foot treadle, not shown.

The tape which is to be fed and cut into tags, is carried upon a spool or reel 6, the free end being passed through the forward guide 7, and between the upper and lower feed rollers 8 and 8', respectively. The lower roller 8', is journaled in the plates or side walls of the casing 3, so as not to change its relative position, while the upper roller 8, is mounted in slots 9, and held in a spring tensioned adjustment at each side by means of the flat springs 10, and the set-screws 11, each one of which is threaded into its respective spring 10. In order to operate the feed rollers, I provide them with the meshing gears 12 and 13, and the lower roller's shaft 14, with the ratchet wheel 15, which is operated upon the upward movement of the casing 3, by the pawl 16, which is mounted in the lug 17, carried upon the base 1. To hold the pawl toward the ratchet and in engagement therewith, I mount the spring 18 in the lug, as shown. In order to insure the proper movement of the rollers, and more particularly an even feed of wide tapes, and also lock the rollers against a retrograde movement, I mount upon the other end of the shaft 14, the ratchet wheel 19, whose teeth 20, are rounded and separated by the substantially flat surface 21, the spring plate 22, carried upon the casing 3, having its free end 23, in engagement with said ratchet, so that normally the flat portion *a* rests upon one of the surfaces 21, while the abutments *b* and *b'* abut the teeth. I have found by using this construction, that the plate 22 greatly assists the pawl 16, in giving an even feed to the rollers and tape, this arrangement being more advantageous than having the wheels 19 and 21 upon the same end of the lower roller. In order to manually operate the feed rollers when the tape is being introduced through the guide 7, between the rollers 8 and 8', and through the horizontal slot 24, of the stationary guiding blade 25, I mount the milled wheel 26, upon the upper roller's shaft, as shown in Fig. 1.

The vertically slidable blade 31, is removably mounted in the slot 32 of the casing, and co-acts with the stationary tape guiding blade 25 to sever the length of tape *d*, Fig. 3, projected below the outer end of the

casing, said blade 31, being controlled in its vertical reciprocating movement by means of the operating mechanism 33. To hold the slidable blade 31 toward the blade 25, I employ the spring actuated and screw adjusted ball 35, all of which cutting mechanism is more particularly described in the above mentioned application Serial No. 530,655.

By this construction it will be seen that as the casing 3, is moved away from the anvil or upwardly, that the pawl 16, operates the ratchet 15, causing both rollers to rotate and project a predetermined length of tape through the slot 24 of the stationary guiding blade 25 and below the outer end of the casing, so that as the casing descends the cutting mechanism, briefly herein stated but more particularly set forth in an application filed of even date herewith, Serial No. 530,655, will cut the length of tape in front of the stationary guiding blade and allow the tape thus cut to be deposited upon the article and the anvil at which time, the staple severing, delivering and clenching mechanism is operated to staple the tag to the article at a plurality of points. Upon the movement of the casing toward the anvil, the pawl 16 is moved and is ready to engage the next succeeding tooth of the ratchet wheel 15. The peculiar construction of the ratchet wheel 19 and the locking spring plate 22, prevents the pawl 16 from causing the feed rollers to be moved too far and also should it not move far enough, will itself move the feed rollers the proper distance, as the abutments *b* and *b'*, by the snapping action of the spring of the plate 22, will snap into and between the two teeth and thus at all times insure the proper action of the rollers.

What I claim, as new, is:—

1. In a tag forming and affixing machine, the combination with a base, a casing mounted upon the base and capable of movements toward and away from the base, and cutting mechanism for forming a tag, of a tape feeding mechanism, comprising a pair of co-acting feed rollers journaled in the casing, a ratchet carried upon each end of one of the rollers, a pawl carried by the base adapted to operate one of said ratchets as the casing moves away from the anvil, and a spring actuated stop carried by the casing and at all times engaging the other ratchet to regulate the exact distance of rotation of the rollers.

2. In a tag forming and affixing machine, the combination with a base, a casing mounted upon the base and capable of movements toward and away from the base, and

cutting mechanism for forming a tag, of a tape feeding mechanism, comprising guides mounted in the casing, a pair of feed rollers journaled in the casing intermediate of the two guides, a ratchet carried upon one end of the lower roller, a pawl carried upon the base and co-acting with said ratchet to operate the feed rollers, another ratchet carried upon the other end of the lower roller, and a spring plate carried by the casing and having its free end in engagement at all times with the last mentioned ratchet.

3. In a tag forming and affixing machine, the combination with a base, of a casing mounted thereon and capable of movements to and from the base, a pair of feed rollers journaled in the forward end of the casing, a ratchet carried upon each end of the lower roller, a pawl carried by the base adapted to operate one ratchet as the casing moves upwardly, and a spring actuated stop carried by the casing and at all times engaging the other ratchet to regulate the exact distance of rotation of the rollers.

4. A tape feeding mechanism for tag forming and affixing machines, comprising a forward guide, a pair of feed rollers, the upper roller being spring actuated and held toward the lower one, a ratchet upon each end of the lower roller, means to act upon one ratchet to cause both rollers to feed, another guide to guide the tape after leaving the feed rollers, and means operating upon the other ratchet for preventing a retrograde movement of the feed rollers.

5. In combination with a tag forming and affixing machine having a base and a casing mounted upon the base and capable of movements to and away from the base, of a tape feeding mechanism, comprising a guide mounted in the casing, another guide mounted in the extreme lower end of the casing, a pair of feed rollers journaled in the casing intermediate of the two guides, a ratchet carried upon one end of the lower roller, a pawl carried upon the base and co-acting with the ratchet to operate the feed rollers, another ratchet carried upon the other end of the lower roller, and a spring plate carried by the casing and having its free end in engagement at all times with the last mentioned ratchet.

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

DAVID PELTON MOORE.

Witnesses:

E. H. PARKINS,
R. F. HEALY.