

D. P. MOORE.
CUTTING MECHANISM FOR TAG FORMING AND AFFIXING MACHINES.
APPLICATION FILED NOV. 30, 1909.

947,202.

Patented Jan. 18, 1910.

2 SHEETS—SHEET 1.

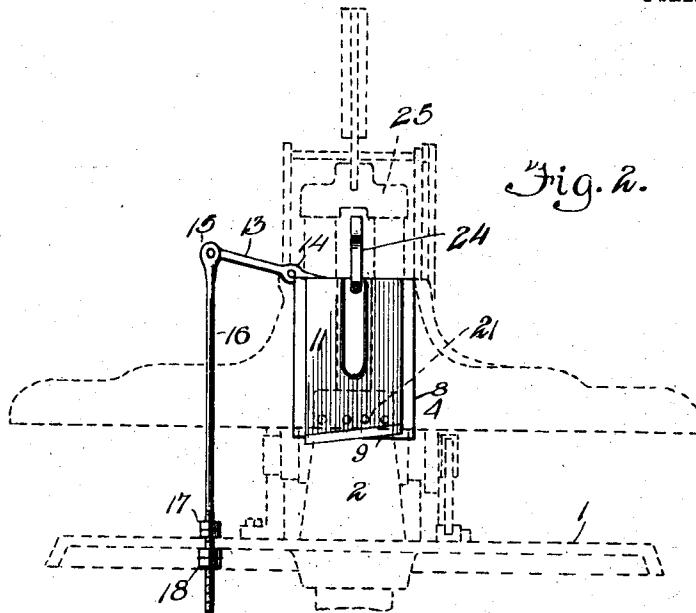


Fig. 2.

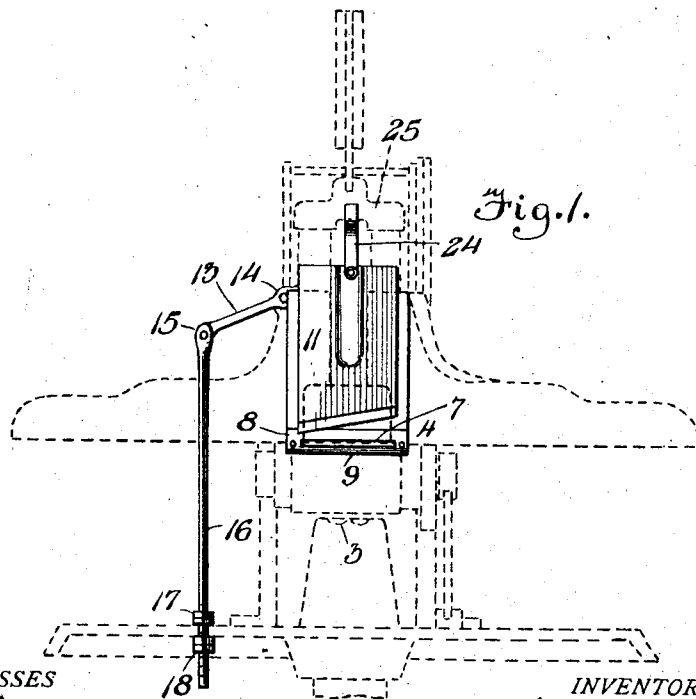


Fig. 1.

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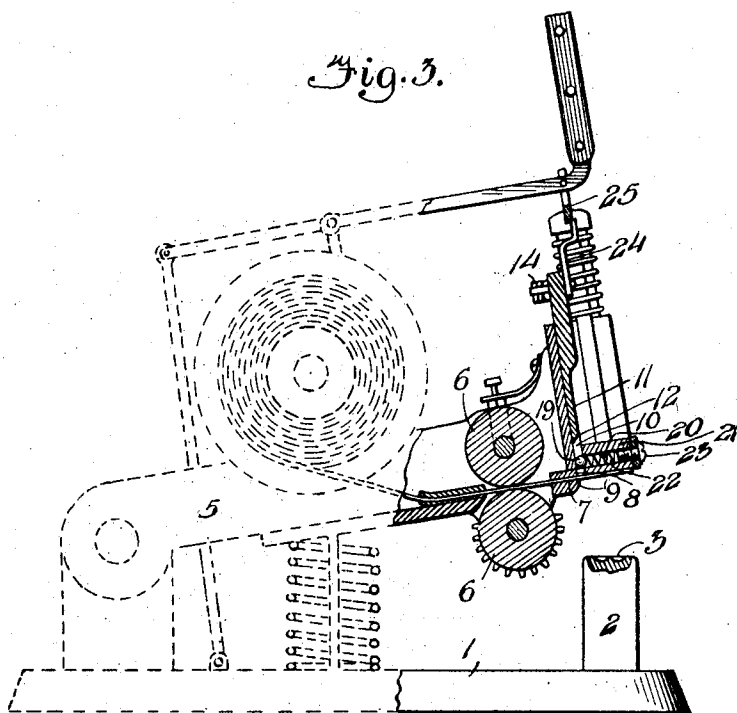
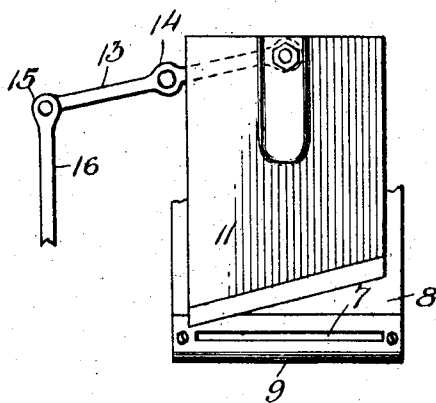


Fig. 4.



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UNITED STATES PATENT OFFICE.

DAVID PELTON MOORE, OF WASHINGTON, DISTRICT OF COLUMBIA.

CUTTING MECHANISM FOR TAG FORMING AND AFFIXING MACHINES.

947,202.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Original application filed June 2, 1909, Serial No. 499,797. Divided and this application filed November 30, 1909. Serial No. 530,655.

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 Cutting 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 cutting 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.

The cutting mechanism must be simple, durable and inexpensive, and toward this end, I have provided a stationary blade mounted in the pivoted casing of the machine and through which the tape to be cut is fed, so that upon the downward movement of the casing upon the anvil, a slidingly mounted knife co-acts with the stationary blade to shear or cut-off the predetermined length of tape to form the tag, which is thus deposited upon the article to receive the tag, said article having been previously placed upon the anvil.

In mounting the sliding knife, I employ an adjustable and practically self-sharpening device, and provide a mechanism, which is also adjustable, which as the casing is moved away from the anvil returns the slidable knife to allow the tape to be fed through the stationary blade, and which as the casing is moved toward the anvil is operated to cut the tape and form the tag.

To clearly understand the cutting mechanism, attention is invited to the accompanying drawings, in which:—

Figure 1 is a front elevation of the cutting mechanism in the position it assumes when the casing, which is in dotted lines, is up, the base also being in dotted lines. Fig. 2 is a similar view, the cutting mechanism being at its lowermost cutting position. Fig. 3 is a longitudinal section through the forward end of the casing and showing a portion of the base. Fig. 4 is an enlarged detail view of the stationary blade and the sliding blade, the sliding blade being in its uppermost position.

Referring to the drawings:—The numeral 1 designates the base of the machine, upon which is mounted the stationary anvil 2, which in turn is provided with the staple-clenching means or recesses 3, while pivoted to the base and in line with the anvil and so as to swing in an arc of a circle with the pivot as a center, is the pivoted casing 5, whose outer end 4, is adapted, when the casing is in its lowermost position, to rest upon the top of the anvil. Carried by this casing are the two tape feeding rollers 6, which feed the tape forwardly upon the upward-movement of the casing through the horizontal slot 7, of the stationary knife or blade 8, which is secured removably to the outer lower face of the casing, and is provided with the lower rounded surface 9, which will not injure the article to be tagged, when the casing is brought down upon the article and anvil. Just forward of the outer face of the stationary knife or blade 8, is the vertical knife guiding and receiving slot 10, into which from the upper end is inserted the vertically reciprocating or sliding knife blade 11, whose cutting edge 12, is formed at an angle so that as the knife blade 11 descends in front of the stationary blade 8, a shear cut is given the tape, thus forming a tag and delivering it upon the article upon the anvil. To operate this knife blade 11, I employ the rod or beam 13, whose inner end is pivotally secured centrally of the rear face of the blade 11, while the center of the rod or beam 13, is pivoted to the rear of the casing as at 14, the outer end of the beam 13, being pivotally secured to the adjustable actuating rod 16, whose lower end is threaded and carries the upper and lower adjusting nuts 17 and 18, respectively. This threaded end of the rod 16 passes through an opening in the base, so that the nut 17 is above the base, while the nut 18 is below the base, and in order to cause the knife blade 11 to be operated at the proper time, these nuts are adjusted upon the rod. By this means it will be seen that as the casing is moved away from the anvil, the rod 16 pulls downwardly upon the beam 13, raising the knife blade 11, and as the casing descends or moves toward the anvil, the knife blade 11 is caused to descend and cut the tape projected through the slot of the stationary blade 8. In the returning of the

knife blade 11, the knife blade passes upwardly in front of the stationary blade 8 just prior to the projection of the tape through the slot of the blade 8, thus preventing any stoppage of the machine.

5 In order to hold the knife blade 11 properly against the outer face of the stationary blade 8, as it ascends and descends, I employ the two balls 19, which are mounted in the channels 20 of the block 21, and are provided with springs 22, and adjusting screws 23, whereby the balls are given a spring tension, so that as these springs are compressed the balls recede within the channels, where, as the knife blade 11 descends and ascends, said balls ride upon and press the knife toward the stationary blade 8, this action upon the ascending of the knife blade 11, forming a self-sharpening means, as the inner face of the cutting edge of the knife blade 11 is given a whetting action against the outer face of the stationary blade 8. I have found by tests, that this combination automatically sharpens the blade 11, the action produced being the same as when shears are opened with a tension against the blades.

Upon the outer face of the knife is carried the right-angled inverted L-shaped lug 24, which permits the stapling device bar 25 to ascend, only far enough when the casing is up, to prevent its plungers from cutting and delivering the staples.

What I claim, as new, is:—

1. In a tag forming and affixing machine, the combination with a base, and an anvil carried thereby, of a casing mounted upon the base and capable of movements toward and away from the anvil, tape feeding means adapted to feed the tape upon the movement of the casing away from the anvil, a knife slidably mounted in the casing beyond the feeding means, and means for operating the knife to sever the feed tape as the casing is moved toward the anvil, and return the knife when moved away from the anvil.

2. In a tag forming and affixing machine, the combination with a base, and an anvil carried thereby, of a casing mounted upon the base and capable of movements toward and away from the anvil, tape feeding means, a stationary blade mounted in the casing for guiding the tape toward the anvil, a knife blade vertically reciprocatory in front of the stationary blade and adapted to co-act with said stationary blade to sever the tape as the casing moves toward the anvil, and means for operating the reciprocatory blade, the movement of the casing away from the anvil returning the reciprocatory blade to inoperative position while the movement toward the anvil causes the blade to co-act with the stationary blade to sever the tape.

3. In a tag forming and affixing machine, the combination with a base and an anvil

carried thereby, of a casing mounted upon the base and capable of movements toward and away from the anvil, tape feeding means, a stationary blade mounted in the casing for guiding the tape toward the anvil, a knife blade vertically reciprocatory in the casing and adapted to co-act with the stationary blade to sever the tape, adjustable means for holding the knife blade toward the stationary blade, and means for operating the reciprocatory blade, the movement of the casing away from the anvil returning the blade to inoperative position while the movement of the casing toward the anvil causes the blade to co-act with the stationary blade to sever the tape.

4. In a tag forming and affixing machine, the combination with a base, of a casing mounted thereon and capable of movements toward and away from the base, said casing being provided with a vertical slot in its forward end, a knife blade slidably mounted in said slot, a stationary blade mounted in the casing and at the lower end of the slot adapted to co-act with said sliding blade, and means for operating said sliding blade in the slot as the casing is moved.

5. In combination with a casing having a vertical slot in its outer end, of a stationary blade mounted at and to one side of the lower end of the slot and provided with a slot through which tape to form a tag is projected, a blade slidably mounted in the vertical slot and capable of being inserted in or withdrawn through the upper end of the vertical slot, adjustable means for holding the sliding blade toward the stationary blade, and means for operating said sliding blade.

6. In combination with a casing having a vertical slot in its outer end, of a stationary blade mounted at and to one side of the lower end of the slot and provided with a slot through which tape to form a tag is guided, a blade slidably mounted in the vertical slot and capable of being inserted in or withdrawn through the upper end of the vertical slot, and means for operating the sliding blade.

7. In combination with a casing having a vertical slot in its outer end, of a stationary blade mounted at and to one side of the lower end of the slot and provided with a slot through which tape to form a tag is fed, a blade slidably mounted in the slot and capable of being inserted in or withdrawn through the upper end of the vertical slot, spring actuated means for holding the sliding blade toward the stationary blade, and means for operating the sliding blade.

8. In combination with a casing having a vertical slot in its outer end, of a stationary blade mounted at and to one side of the lower end of the slot, a blade slidably mounted in the slot and capable of being

inserted in or withdrawn from the upper end of the vertical slot, and means for operating said sliding blade.

5 9. In combination with a casing having a vertical slot in its outer end, of a stationary blade mounted at and to one side of the lower end of the slot, a blade slidably mounted in the slot, a block provided with a plurality of channels therein, a spring
10 actuated ball mounted in each channel and adapted to bear upon the outer face of the sliding blade to hold it toward the stationary blade, and means for varying the tension of the spring.

15 10. In combination with a casing and a base, said casing being capable of movements

toward and away from the base, of a stationary blade carried by the casing, a blade slidably mounted in the casing and adapted to co-act with the stationary blade to sever 20 tape, a beam pivotally connected intermediate of its ends to the casing and having one end pivoted to the sliding blade, and a rod pivoted to the other end of the beam and adjustably connected to the base, as 25 set forth.

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

DAVID PELTON MOORE.

Witnesses:

E. H. PARKINS,

R. F. HEALY.