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COUNTER OPERATING MECHANISM FOR STAMP AFFIXERS.

APPLICATION FILED NOV. 1, 1916.

1,406,435.

Patented Feb. 14, 1922.

2 SHEETS—SHEET 1.

Fig. 1

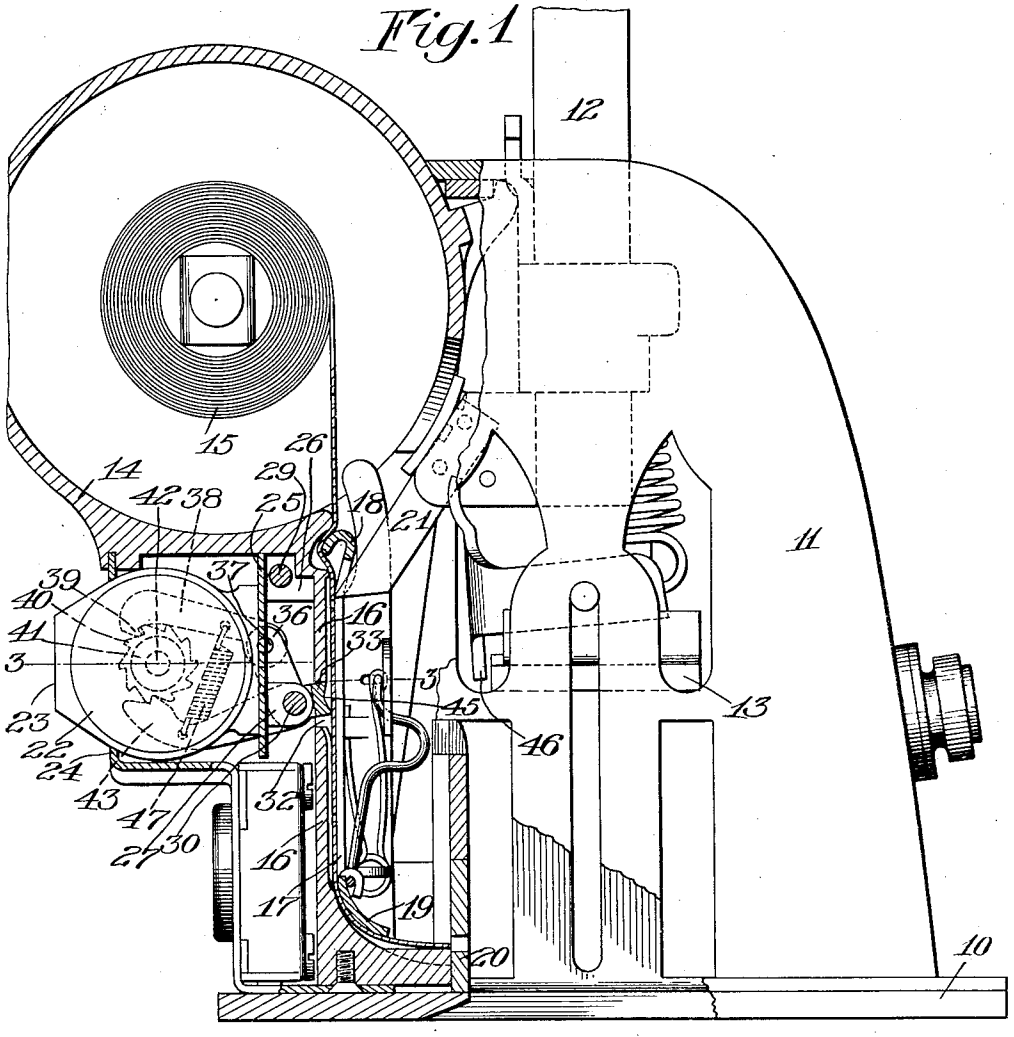

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Fig. 2

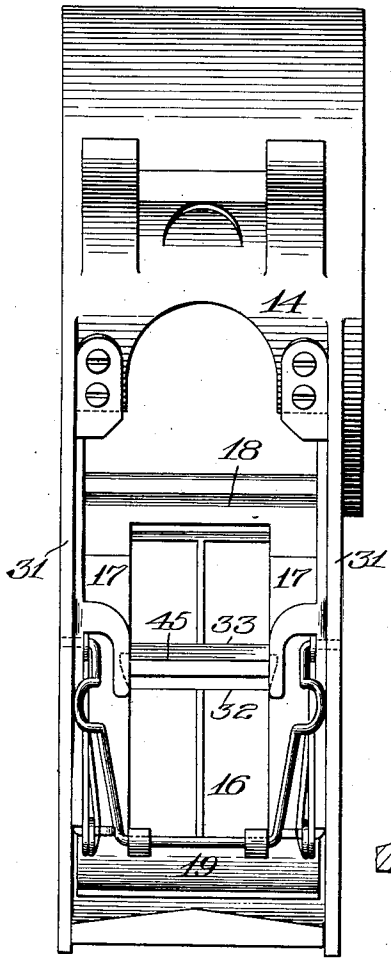


Fig. 3

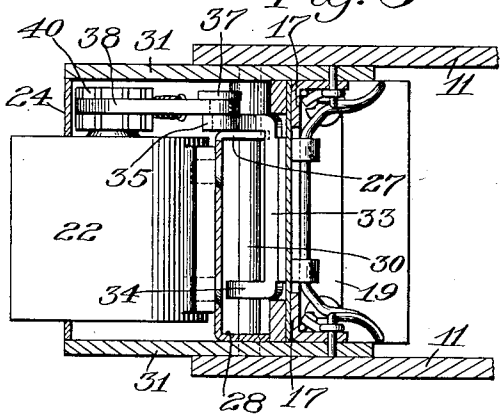


Fig. 4

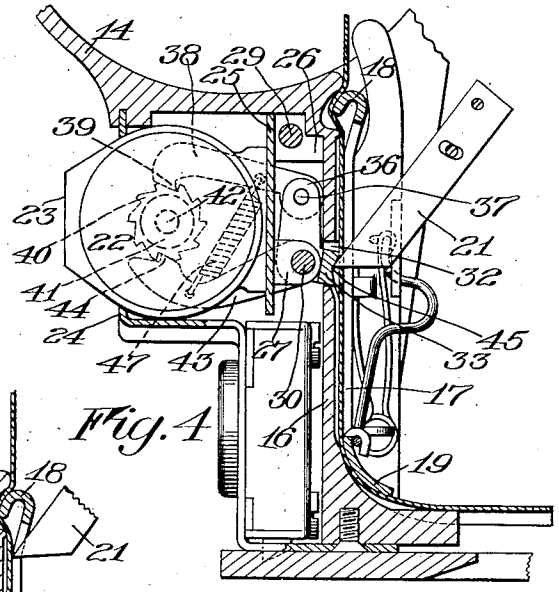
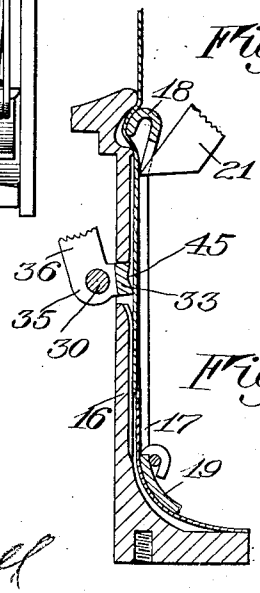


Fig. 5



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COUNTER-OPERATING MECHANISM FOR STAMP AFFIXERS.

1,406,435. Specification of Letters Patent. Patented Feb. 14, 1922.

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To all whom it may concern:

Be it known that I, WESLEY J. BALKWILL, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Counter-Operating Mechanisms for Stamp Affixers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference characters marked thereon.

My invention relates to a counter operating mechanism for stamp affixers and has for its object to provide an arrangement of counter or register actuating mechanism whereby an accurate count of the number of stamps or labels discharged from a machine may be obtained. A further object of the invention is to provide a counter operating mechanism arranged to be positively operated by a portion of the feeding or other movable mechanism of a stamp affixer or dispenser whereby an accurate record may be obtained from time to time of the number of stamps fed from the machine. To these and other ends the invention consists in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is an enlarged sectional elevation through a machine embodying the invention;

Figure 2 is a rear elevation of the stamp container and guide mechanism;

Figure 3 is a horizontal sectional view taken on line 3—3 of Figure 1;

Figure 4 is a fragmentary vertical sectional view showing the position of the counter operating mechanism after the same has been actuated by the stamp feeding fingers, and

Figure 5 is a detail sectional view through the backing of the stamp guideway showing the relative position of the feeding fingers with respect to the counter actuating bar before the machine is operated.

Similar reference characters throughout the several views indicate the same parts.

In stamp or label affixing or dispensing machines where the stamps or labels are fed from a continuous strip mounted in the machine in the form of a roll it is essential that an accurate record be kept of the number of stamps and labels fed from the machine, particularly in the case of postage stamps because of their monetary value. The mechanism by which such a record is obtained must be such that no failures or inaccuracies therein will be possible. To best insure such results I have provided a counter actuating mechanism arranged to be positively operated preferably by some movable part of the machine such as the stamp feeding fingers thereof which are so positioned as not to come in contact or operative relation with the counter actuating mechanism until the stamp or label to be registered or counted has actually been advanced a distance substantially its full length by the feeding mechanism.

In illustrating the features of the present invention I have shown them applied to a stamp affixing machine, but it will be understood that the mechanism is applicable to other types of stamp or label feeding machines upon which no affixing mechanism is used. The machine shown in the drawings comprises a base 10 supporting a frame 11 upon which is guided a vertically mounted reciprocating shaft or plunger 12 carrying an affixing head 13. At one side of the machine the frame 11 is open and removably fitted in said opening is a circular stamp or label case 14 containing a roll of stamps or labels 15 shown passing downwardly through the guideway consisting of the backing 16 and the removable clamping and guiding member 17 terminating in the laterally curved portions 18 and 19 respectively, which are adapted to direct the free end of the stamp strip over the cutting edge 20 and into the path of the affixing head 13. The stamp or label strip is fed downwardly and successively by a suitable feeding mechanism mounted on the shaft or plunger 12 and in the present instance, comprises a plurality of adjacently mounted feeding fingers 21, the pointed ends of which are adapted to engage the perforations between the successive stamps during their downward movement. A counter 22 of any preferred type is preferably mounted upon the stamp case, the window section or front 23 projecting through an aperture in the front wall 24 of the casing, so that the counter

may be conveniently read from time to time. The rear of the counter is supported by a plate 25 having at one side upper and lower rearwardly extending projections 26 and 27 respectively, and at the other side a rearwardly extending flange 28 through which supporting pins 29 and 30 are passed, the opposite ends of which are seated in the side walls 31 of the stamp casing. An elongated horizontally positioned aperture 32 is formed through the backing 16 at a point spaced from the point at which the lower ends of the feeding fingers normally rest, substantially equal to the distance the fingers are made to travel on their downward stroke in feeding the stamps successively from the machine. Extending into the aperture 32 is an actuating member 33 for the counter operating mechanism preferably in the form of a rocker bar provided with forwardly extending arms 34 and 35 pivotally mounted upon the pin 30. The arm 35 is extended upwardly and outwardly at 36 and is inclined with respect to the backing 16. Pivotally mounted upon the extension of the arm at 37 is a forwardly extending pawl 38, the catch 39 of which is adapted to engage the teeth 40 of a ratchet wheel 41 for actuating or rotating the same step by step to drive the central shaft 42 which is connected with the ratchet wheel.

The construction of the counter mechanism has been omitted, but it will be understood that the numeral wheels and devices for operating them are driven by the central shaft. Pivotally mounted upon the pin 30 is a pawl 43 which is provided with a shoulder 44 arranged to engage the teeth of the ratchet wheel beneath the ratchet bar for the purpose of preventing rotation of the shaft 42 in a direction opposite to that in which it is rotated when actuated by the ratchet bar. The pawls 38 and 43 are held in their respective positions upon the ratchet wheel by means of a coil spring 47, the opposite ends of which are connected with the pawls at points intermediate said wheel and arm 36. The pawl 43 is free to move only upon its pivot, while the pawl 38 is both pivotally and bodily movable with respect to the ratchet wheel. Consequently by inclining the spring 47 rearwardly above the pawl the same will act to normally hold the pawl 38 in the position shown in Figure 1 which causes the bottom edge of the operating bar 33 to project through the aperture 32 farther than the top edge, or in other words, serves to normally hold the bar inclined relatively to the guideway or backing 16. The rear face of the bar is provided with a groove 45 into which the pointed ends of the feeding fingers 21 are adapted to pass upon the downward stroke of said fingers as shown in Figure 4, after which time the stamp on the free end of the strip will be advanced to proper position to be severed by the cutter 46 and affixed by the head 13. As the bar 33 is moved by the fingers 21 from the position shown in Figure 1 to that shown in Figure 4, the extension of the arm 36 will be moved to a vertical position, thus bodily moving the pawl 38 to cause the rotation of the ratchet wheel and counter operating shaft 42 a predetermined amount sufficient to cause the proper registration of the forwardly fed stamp. As soon as the plunger 12 is released the feeding fingers are returned to their normal position, previous to which time the spring 44 carries the catch 39 of the pawl over into engagement with the next succeeding or forwardly positioned tooth upon the ratchet wheel thereby actuating the arm 36 to reset the bar 33 as shown in Figure 1. The bar is preferably grooved on its rear face as shown to positively insure its operation by the pointed ends of the feeding fingers as they are moved downwardly. This is accomplished by inclining the lower half of the face of the groove so that its bottom edge projects slightly in advance of the face of the backing 16 along which the stamp strip is fed.

It will be observed that the feeding fingers 21 are inclined in the direction of their movement toward the stamp guideway and yieldingly engage with the stamp strip therein, so that during the feeding movement they exert a tendency to push toward the back wall of the guideway. Consequently, the stamp strip, as it reaches the aperture 32, is deflected slightly, thus permitting the operating device for the counter to be actuated. The member for effecting movement of the counter is displaced laterally out of its normal position by the pressure applied through the stamp strip and this displacement, in the parts as shown, is a rocking action of the end of the lever which extends transversely in rear of the stamp strip and is pivoted in proximity to the rear wall of the guideway.

I claim as my invention:

1. In a stamp dispensing mechanism comprising a frame arranged to support a stamp strip, a guideway connected with the frame, a counter operating mechanism and means for feeding the strip through the guideway, said means serving to directly actuate the counter operating mechanism by pressure exerted transversely through said stamp strip.

2. In a stamp dispensing mechanism comprising a guideway having an aperture therethrough, a counter operating mechanism and a movable feeding member arranged to be advanced over the aperture for feeding a strip upon the guideway, said feeding member serving to actuate the counter operating mechanism when passing said aperture.

3. In a stamp dispensing mechanism comprising a support for a stamp strip and a backing over which the strip is adapted to be fed, the combination of a counter operating mechanism, and means for feeding the strip in contact with the backing and with the counter operating mechanism, said means serving to actuate said counter operating mechanism.

4. In a stamp dispensing machine having a stamp strip guideway comprising a backing having an aperture and means on one side of the backing for feeding a stamp strip along the guideway, and across the aperture on one side of the backing, of a counter mechanism provided with an operating member, a ratchet wheel connected therewith, a pawl for driving the ratchet, and a pivoted actuating member connected with the pawl and projecting through the aperture in said backing from the opposite side thereof and adapted to be operated by said feeding means acting transversely through the path of the stamp strip.

5. The combination in a stamp dispensing machine comprising a stamp strip backing having an aperture, of means for feeding a stamp strip past said aperture, a counter provided with an operating member, a pivotally mounted rocker in the aperture and in the path of said feeding means, and means operatively connecting the rocker with the counter operating member.

6. The combination in a stamp dispensing machine comprising a stamp strip backing having an aperture and means for feeding a stamp strip in contact with the backing and over the aperture, of a counter adjacent the backing provided with an operating member, a movably mounted projection extending into the aperture in the path of said feeding means, means operatively connecting the projection with the counter operating member for moving the latter in one direction, and means for preventing the movement of said counter operating member in an opposite direction.

7. In a stamp dispensing mechanism comprising a support for a stamp strip and a guideway over which the strip is adapted to be fed, of a counter operating mechanism, a rocker positioned upon one side of the stamp strip and arranged to actuate said counter operating mechanism and means upon the opposite side of the strip from the rocker for feeding said strip over the guideway, said feeding means serving to act transversely through the path of the stamp strip to actuate the rocker while advancing the strip.

8. In a stamp affixer having a stamp guideway and means on one side thereof for engaging and advancing a stamp strip therein, of a counter mechanism and an actuating member therefor positioned on the opposite side of the stamp strip and designed to be rocked by pressure applied laterally through the stamp strip during its longitudinal movement.

9. In a stamp affixer having a stamp guideway and means on one side thereof for advancing a stamp strip therein and arranged to press the strip against the guideway, from said side of a counter mechanism and an actuating member therefor positioned on the opposite side of the stamp strip and adapted to be displaced laterally of the guide by the said pressure applied through the stamp strip.

10. In a stamp affixer having a stamp guideway and feeding fingers pressing against the front of the stamp strip on the guideway and movable longitudinally thereof, the combination of a counter mechanism and an actuating member therefor comprising a lever arm pivoted adjacent the guideway and having an end extending across the latter in rear of a stamp strip and adapted to be operated by means arranged in front of the stamp strip.

11. In a stamp affixer having a stamp guideway and feeding fingers movable longitudinally of the guideway and pressing against the forward side of a stamp strip in the guideway, the combination of a counter mechanism and a pivoted actuating lever therefor having an end located transversely in the rear of the stamp strip in a position to be operated through perforations in the strip as the feeding fingers approach the limit of their feeding movement.

12. The combination with a counter operating device, of a strip feeding mechanism embodying a strip engaging member adapted to also directly and simultaneously cooperate with said device at substantially the same point of contact.

13. The combination with a counter operating device and a reciprocatory strip feeding mechanism embodying a strip engaging member adapted to also cooperate with said device, of a guideway arranged to direct the strip in a path intermediate said member and the counter operating device.

WESLEY J. BALKWILL.