Dec. 22, 1953 C. M. GOTTSCHAU 2,663,565

STAMP ROLL FEEDING MECHANISM

Original Filed Dec. 15, 1945 2 Sheets-Sheet 1

Fig. 1.

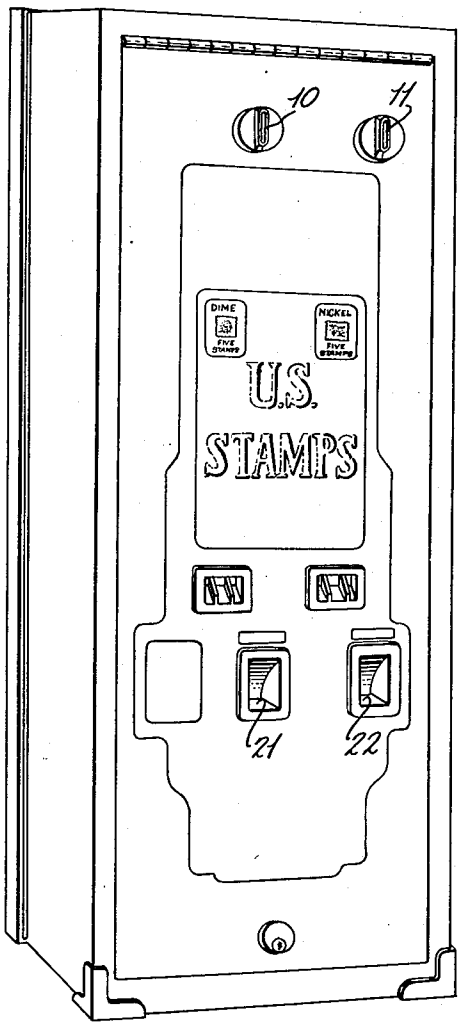
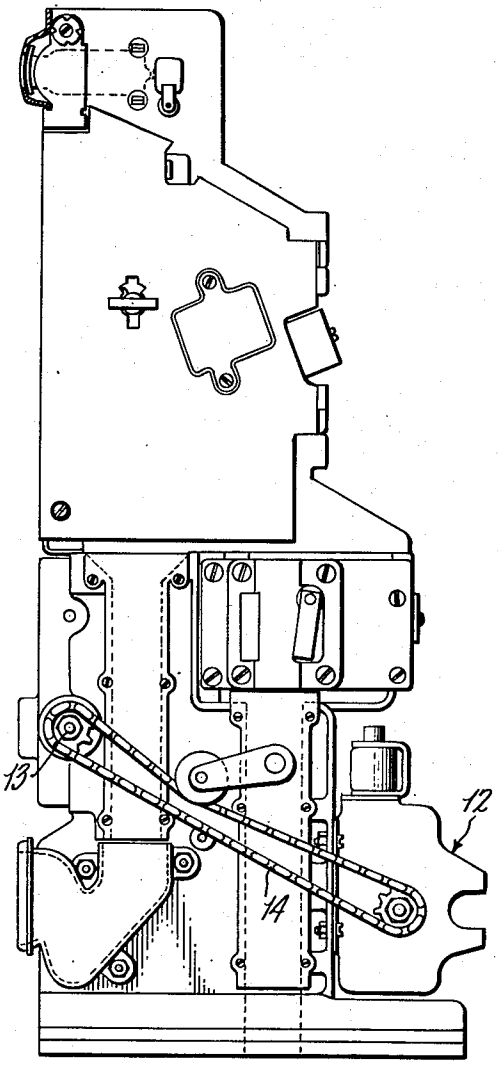


Fig. 2.



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Fig. 4.

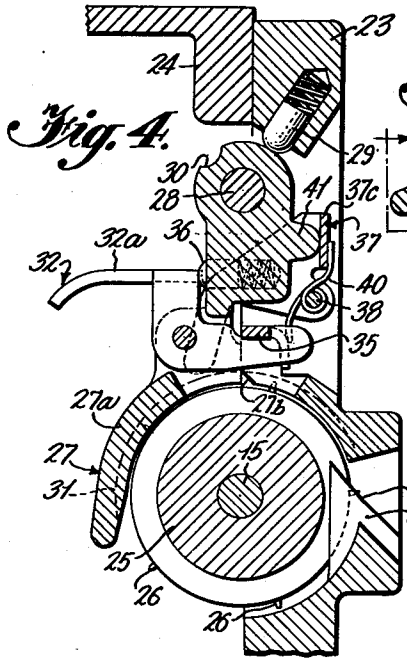


Fig. 5.

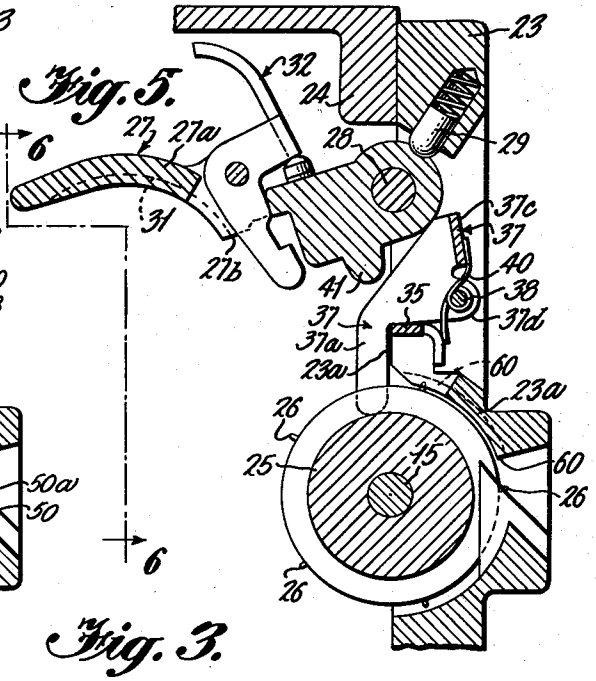
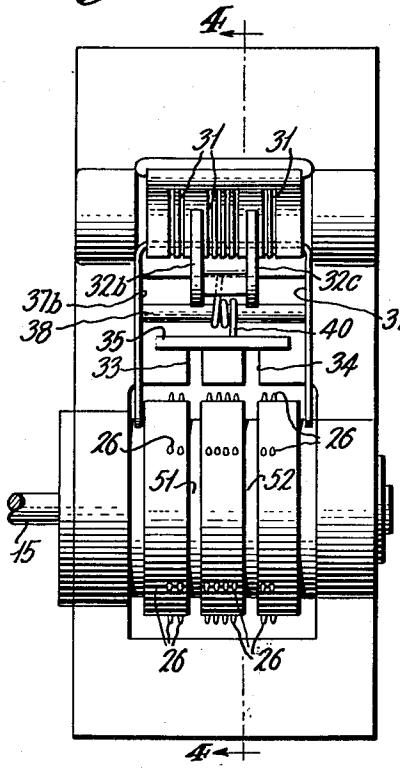
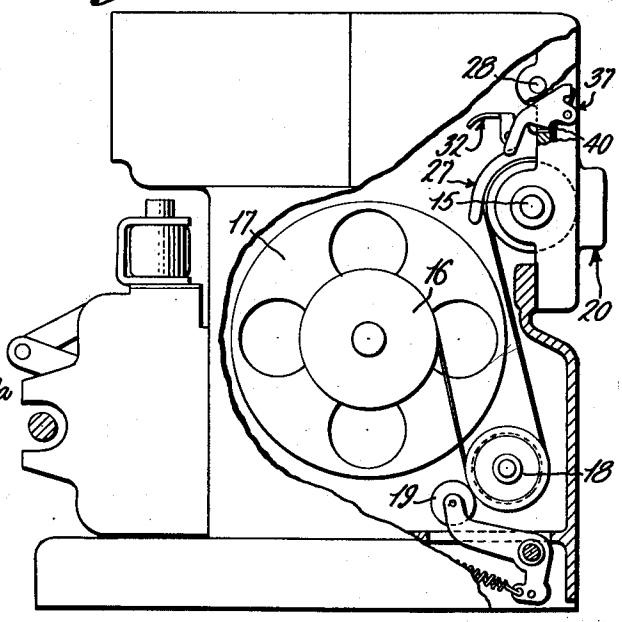


Fig. 3.

Fig. 6.





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STAMP ROLL FEEDING MECHANISM

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Original application December 15, 1945, Serial No. 635,342. Divided and this application December 14, 1950, Serial No. 200,805

6 Claims. (Cl. 271—2.3)

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This invention relates to a stamp roll feeding mechanism.

Briefly, this mechanism includes a feeding roll having rows of pins thereon longitudinally aligned with the axis of the roll. A cover is provided having a shoe positioned to hold the stamps being fed in engagement with the feeding roll. This cover is provided with slots through which the pins pass as the feeding roll turns. The cover is pivotally mounted so that it may be swung out of the way during threading of the feeding mechanism. When the cover is swung out of the way, stamp strip aligning fingers move downwardly to insure that the strip being threaded will be properly aligned with respect to the feeding roll. When the cover is swung into operative position the aligning fingers are moved upwardly so that the edges of the strip are free to move back and forth with respect to the feeding roll as the longitudinal alignment of the perforations in the stamp strip varies. Stripping fingers are provided to strip the stamps from the roll as they are fed so that the stamps cannot be drawn completely around the feeding roll.

One of the objects of this invention is to provide stamp roll feeding mechanism which is simple, practical and thoroughly durable. Another object is to provide mechanism of the above character which is accurate and efficient in operation. Another object is to provide new and improved stamp strip feeding mechanism. Another object is to provide mechanism of the above character which will not jam as the longitudinal alignment of the perforations in the stamp roll being fed varies. Still another object is to provide mechanism of the above character which may be simply and quickly threaded. A further object is to provide mechanism of the above character in which the perforations in the stamps in engagement with the feed roll pins will not be damaged when the stamps which have been fed are torn off. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, all as will be illustratively described herein, and the scope of the application of which will be indicated in the following claims.

Referring now to the accompanying drawings in which is shown one of the various possible embodiments of this invention.

Figure 1 is a perspective view of a stamp vending machine in which the stamp roll feeding mechanism described in this application can be used;

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Figure 2 is a side elevation of one of the vending units positioned within the housing shown in Figure 1;

Figure 3 is a side elevation of the lower portion of the unit shown in Figure 2, certain parts being broken away for purposes of illustration.

Figure 4 is a vertical section taken through the stamp strip feeding mechanism shown in Figure 6;

Figure 5 is a view similar to Figure 4, but with certain parts in different relative positions; and

Figure 6 is an elevation of the stamp strip feeding mechanism shown in Figure 5 taken from the direction of the line 6—6 in Figure 5.

Similar reference characters refer to similar parts throughout the several views of the drawing.

This application is a division of my copending application for a Stamp Vending Machine, filed December 15, 1945, by Christian M. Gottschau and bearing Serial No. 635,342, now U. S. Patent No. 2,581,323.

Referring first to Figures 1, 2 and 3 the stamp strip feeding mechanism may be used in a stamp vending machine of the type which automatically feeds stamps from a delivery opening after a coin is dropped in a coin slot. However, it should be understood that this feeding mechanism may be used on any machine from which roll stamps are dispensed. Briefly, the machine shown in Figure 1 has a pair of coin slots 10 and 11 in either of which the purchaser places his coin, depending upon the denomination of the stamp he desires to purchase. The coin completes a circuit to a motor (not shown) which drives a single revolution clutch, generally indicated at 12. The driven portion of the clutch drives a sprocket gear 13 (Figure 2) through a chain 14. Sprocket gear 13 is mounted on the end of the feed roll shaft 15 (Figure 6), and thus during each cycle of operation the stamp roll is driven.

The roll of stamps 16 to be fed is mounted on a reel 17 (Figure 3). The strip passes downwardly around a roller 18 against which it is held by a spring actuated roller 19. The strip then goes upwardly to the stamp strip feeding mechanism, generally indicated at 20, from which stamps are fed through one of the delivery openings 21 and 22 (Figure 1) in the front of the machine.

Referring to Figures 4, 5 and 6, in which the stamp feeding mechanism 20 is shown in detail, the mechanism is mounted on a casting 23 which in turn is mounted on the front of casting 24 which forms the framework of the stamp vending machine. The stamp feeding roll 25 is

mounted on shaft 15 to which it is keyed, and shaft 15 is rotatably mounted in bearings on casting 23. Shaft 15 is driven by sprocket wheel 13 (Figure 2) secured to its left-hand end, as viewed in Figure 6. The stamp roll has five sets of pins 26 thereon which are spaced the same distance apart as the spacings between the perforations in the strip of stamps which they feed. To hold the stamp strip in contact with pins 26, a stamp roll cover, generally indicated at 27, is provided. This cover is pivotally mounted by a pin 28 on casting 23 and when in a raised position, as shown in Figure 5, is held in that position by a spring pressed detent 29 which enters a notch 30 in the hub portion of cover 27. Stamp roll cover 27 has a plurality of grooves 31 (Figures 5 and 6) cut into the surface of the shoe portion 27*a* of the cover which is positioned adjacent to the stamp roll. The pins 26 on roll 25 pass through these grooves as the stamp roll rotates.

Stamp roll cover 27 is provided with a shoulder 27*b* which co-acts with the rear face 23*a* of casting 23 to limit the downward movement of the stamp roll cover. To maintain stamp roll cover 27 in a closed position, a catch, generally indicated at 32, is provided. This catch includes a finger piece 32*a* and a pair of arms 32*b* and 32*c* (Figure 6) which pass through casting 23 in slots 33 and 34. Arms 32*b* and 32*c* are provided with catches which latch under a catch plate 35 mounted on casting 23 above slots 33 and 34, and a spring and plunger 36 (Figure 4) is provided to hold catch 32 in a latched position.

The longitudinal alignment of the perforations in a strip of stamps weaves from side to side on a roll of stamps. Thus, when a strip of stamps is mounted upon pins 26, the edges of the stamp strip may move to the left or right, as viewed in Figure 6, as they are fed by roll 25. Because this weaving of the stamp strip as it is fed by the stamp roll is considerable, ample space is provided on each side of the stamp roll to permit this weaving without having the strip bind. To insure that the stamp strip will be properly aligned on the stamp roll at the beginning so that space is left at each side of the strip for weaving, a bracket, generally indicated at 37, is provided.

Bracket 37 includes a pair of legs 37*a* and 37*b* connected by a center portion 37*c*. Each of the legs of bracket 37 has a lug similar to lug 37*d* (Figure 5) thereon by means of which the bracket is pivotally mounted on a pivot pin 38. The center portion 37*c* of bracket 37 is pressed rearwardly by a spring 40 which is mounted on pivot pin 38. When the stamp cover is raised, spring 40 moves bracket 37 to the position it occupies in Figure 5 at which time the lower ends of its legs 37*a* and 37*b* extend below the outside edges of stamp roll 25 (Figure 6). At this time a strip of stamps may be mounted upon the stamp roll 25 using the legs 37*a* and 37*b* as guides.

When stamp roll cover 27 is moved to a closed position, a boss 41 (Figure 4) formed thereon strikes the rear face of the center portion 37*c* of bracket 37 pivoting the bracket in a clockwise direction (Figure 5) to move the lower ends of legs 37*a* and 37*b* upwardly so that they are no longer positioned adjacent the edges of the stamp roll 25 (Figure 4). Accordingly, bracket 37 assists the operator loading stamps into the machine by properly aligning the stamp strip upon the pins on the stamp roll 25. When the stamp roll cover is closed by the operator, then the legs of bracket 37 are moved upwardly to a position where they do not interfere with weaving of the stamp strip as it is fed by the stamp roll, thus insuring proper feeding of the stamp strip in spite of incorrect alignment of the perforations therein.

It will be noted that the shoe portion 27*a* of cover 27 holds a substantial portion of the strip of stamps against the feeding roll and that surface 23*a* of casting 23 performs a similar function. Surface 23*a* is provided with grooves similar to groove 60 (Figure 5) through which pins 26 pass as the feed roll 25 turns. This prevents the perforations in the stamp strip from being torn when the stamps which have been fed by the feeding roll are torn off.

To strip the stamps from the feeding roll a pair of stripping fingers similar to finger 50 (Figure 4) are provided. These fingers have their upper ends in two grooves 51 and 52 (Figure 6). in roll 25 and their edges, such as edge 50*a*, are inclined to the feeding roll and thus strip the stamps from the feeding roll, causing them to be fed out through opening 60.

The drive for the feed roll 25 is so regulated that a given number of stamps will be fed from the stamp feeding mechanism during each cycle of operation and that the perforations in a stamp will be positioned in the upper edge of the opening 60 at the end of each cycle.

Thus, mechanism has been described which will feed a strip of stamps in an efficient and practical manner. Threading is easily accomplished after the cover has been raised and aligning fingers 37*a* and 37*b* so align the stamp strip with respect to the feeding roll that the edges of the stamp strip cannot bind as the strip moves back and forth with respect to the feed roll during feeding. It will thus be seen that the several objects hereinabove mentioned, as well as many others, have been successfully accomplished.

As many possible embodiments may be made of the above invention and as many changes might be made in the embodiment above set forth, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

I claim:

1. In stamp strip feeding mechanism for feeding stamps having transverse rows of perforations therein, in combination, a framework, a feeding roller having a plurality of transverse rows of pins thereon for feeding a perforated stamp strip, means rotatably mounting said feeding roller on said framework, the portion of said framework adjacent said roller being shaped to fit said roller, said portion being grooved to accommodate said pins, and a movable cover pivotally mounted on said framework, said cover including a shoe portion having a surface conforming to the curved surface of said roller and having grooves therein to accommodate said pins, and said cover having pivotally mounted thereon a latch member for locking the cover in effective position provided with a finger piece adapted to be grasped for releasing the latch and swinging the cover to an open position, said grooved framework and shoe portions holding said stamp strip in engagement with at least two rows of pins at all times.

2. In stamp strip feeding mechanism for feeding stamps having transverse rows of perforations

therein, in combination, a framework, a feeding roller having a plurality of transverse rows of pins thereon for feeding a perforated stamp strip, means rotatably mounting said feeding roller on said framework, the portion of said framework adjacent said roller being shaped to fit said roller, said portion being grooved to accommodate said pins, a movable cover pivotally mounted on said framework, locking means for locking said cover in feeding position, means for holding said cover in an inoperative position, said cover including a shoe portion having a surface conforming to the curved surface of said roller and having grooves therein to accommodate said pins, said grooved framework and shoe portions holding said stamp strip in engagement with at least two rows of pins at all times, movably mounted aligning fingers on said framework for centrally aligning said stamp strip on said feed roll, and means on said cover engaging said aligning fingers and moving them away from the edges of said roller when said cover is moved into operative position.

3. In stamp strip feeding mechanism for feeding stamps having transverse rows of perforations therein, in combination, a feeding roller having a plurality of transverse rows of teeth thereon for feeding stamps, a cover having open and closed positions and arranged when in closed position to hold said stamp strip in feeding relationship with said roller, movable aligning means positioned at the sides of said roller, and means on said cover to move said aligning means away from the edges of said roller when said cover is closed to provide space at the sides of said roller for said stamp strip to move transversely of said roller as it is being fed.

4. In stamp strip feeding mechanism for feeding stamps having transverse rows of perforations therein, in combination, a feeding roller having a plurality of transverse rows of teeth thereon for feeding stamps, a cover having open and closed positions and arranged when in closed position to hold said stamp strip in feeding relationship with said roller, aligning means including a leg positioned at each side of said roller and extending below the edges of said roller, means pivotally mounting said aligning means, and means on said cover to move said aligning means away from the edges of said roller when said cover is closed to provide space at the sides of said roller for said stamp strip to move transversely of said roller as it is being fed.

5. In stamp strip feeding mechanism for feeding stamps having transverse rows of perforations therein, in combination, a feeding roller having a plurality of transverse rows of teeth thereon for feeding stamps, a cover having open and closed positions and arranged when in closed position to hold said stamp strip in feeding relationship with said roller, aligning means including a leg positioned at each side of said roller and extending below the edges of said roller, means pivotally mounting said aligning means, means on said cover to move said aligning means away from the edges of said roller when said cover is closed to provide space at the sides of said roller for said stamp strip to move transversely of said roller as it is being fed, and resilient means urging said aligning means toward the position in which its legs are in aligning position.

6. In a strip feeding mechanism, in combination a frame, a feed roller mounted thereon having means for interengaging with said strip to feed the strip, a pivotally mounted cover having open and closed positions and arranged when in closed position to hold said strip in feeding relationship with said roller, pivotally mounted aligning means having a leg located at each side of said roller and when in effective position extending below the peripheral edge of said roller, and means operative by movement of said cover to move said aligning means to retract said legs from the peripheral edge of said roller to provide space permitting movement of said strip transversely of said roller as the strip is being fed.

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