Aug. 25, 1964 H. K. GORDON ETAL 3,145,890

STAMP DISPENSING MACHINE

Filed Nov. 29, 1960 3 Sheets-Sheet 1

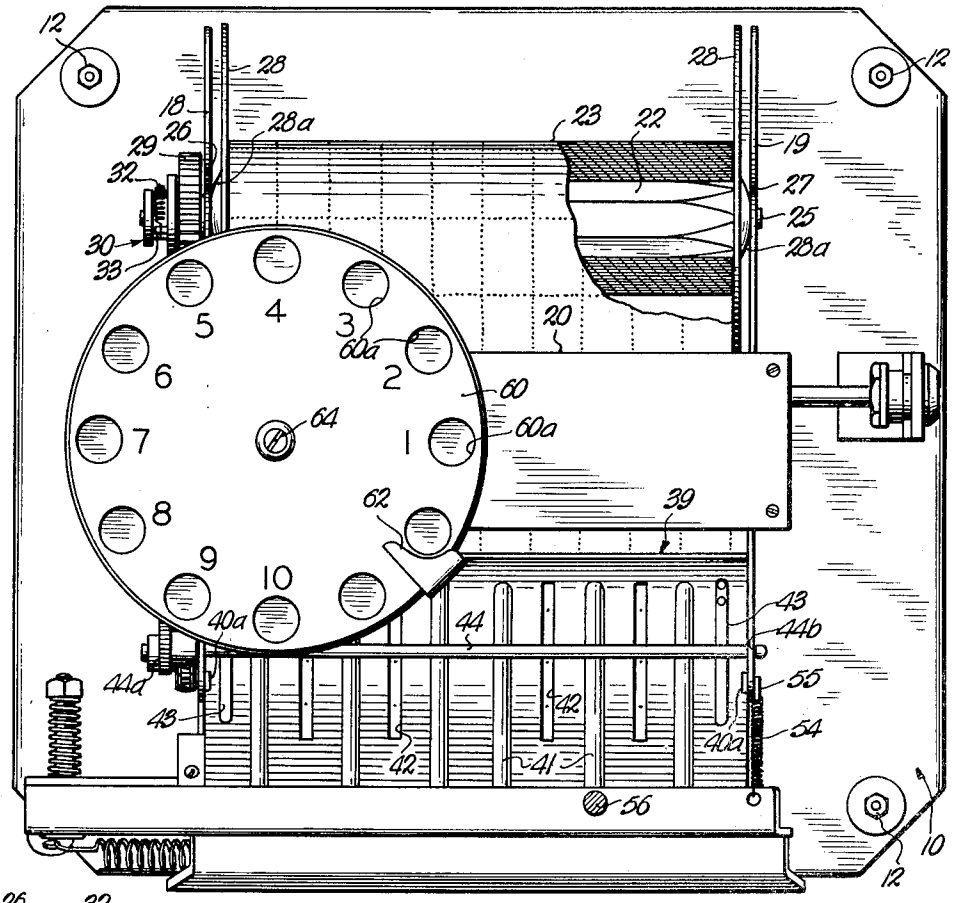


Fig. 1.

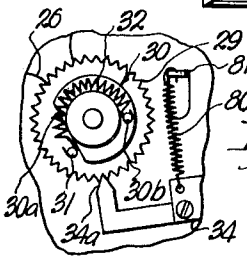


Fig. 8.

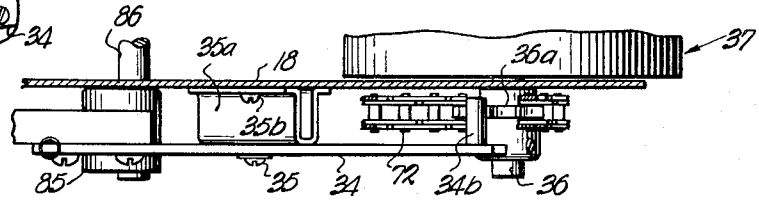


Fig. 7.

INVENTORS.
Homer K. Gordon
Andrew Morgan
BY Wm. E. Garfield
ATTORNEY.

Aug. 25, 1964 H. K. GORDON ETAL 3,145,890

STAMP DISPENSING MACHINE

Filed Nov. 29, 1960 3 Sheets-Sheet 2

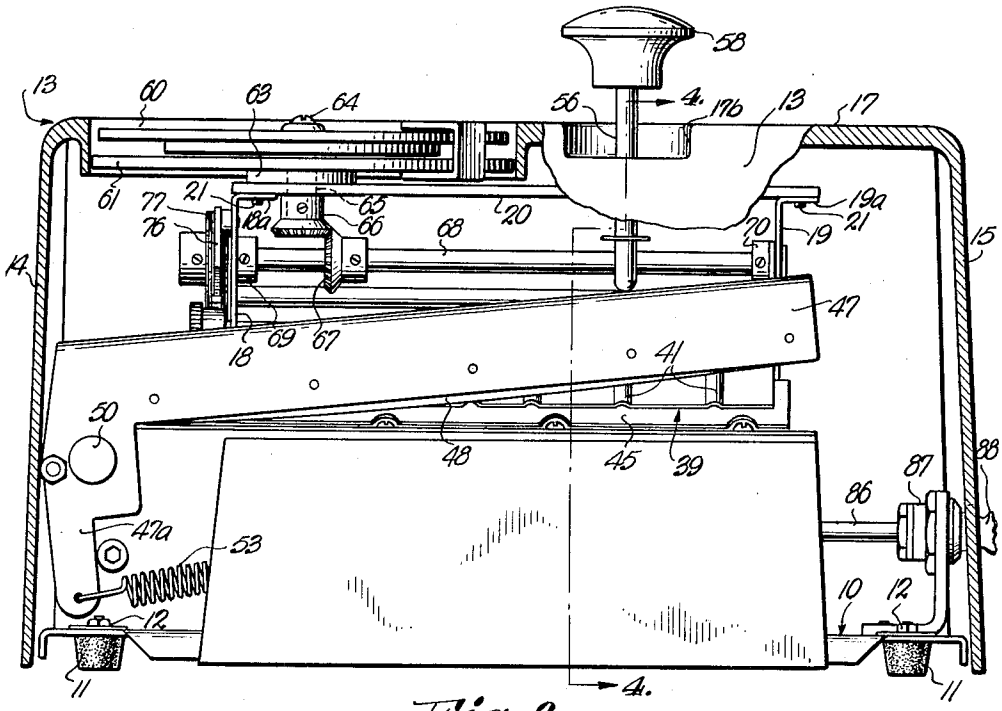


Fig. 2.

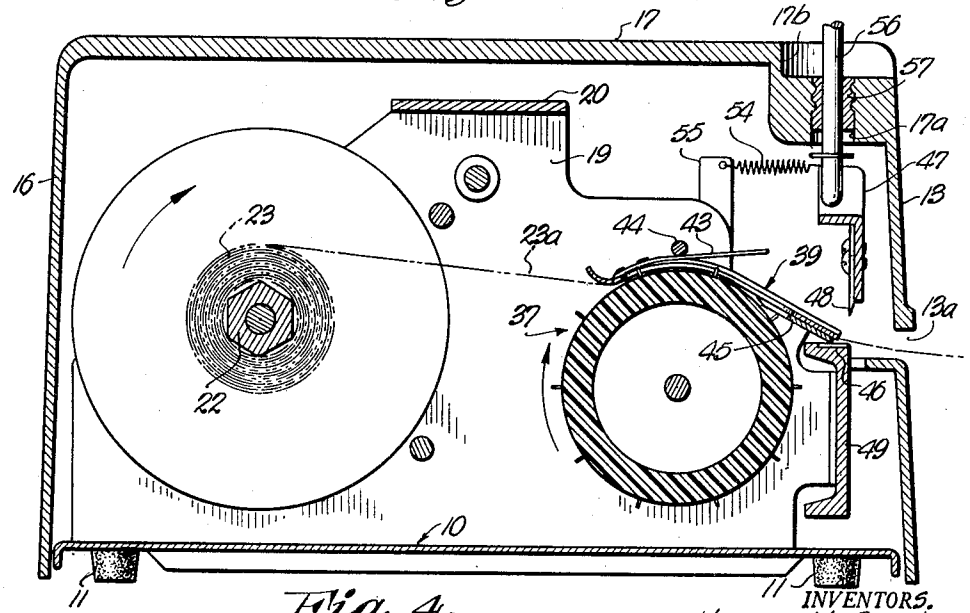


Fig. 4.

INVENTORS.
Homer K. Gordon
Andrew Morgan
BY Thos. E. Scofield
ATTORNEY.

Aug. 25, 1964 H. K. GORDON ETAL 3,145,890

STAMP DISPENSING MACHINE

Filed Nov. 29, 1960 3 Sheets-Sheet 3

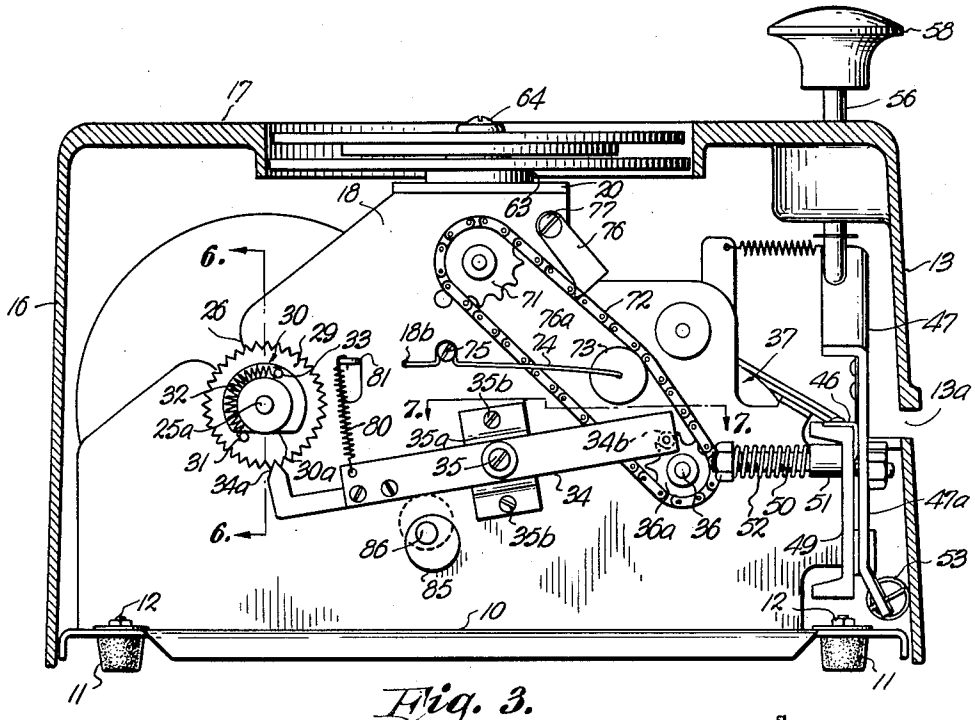


Fig. 3.

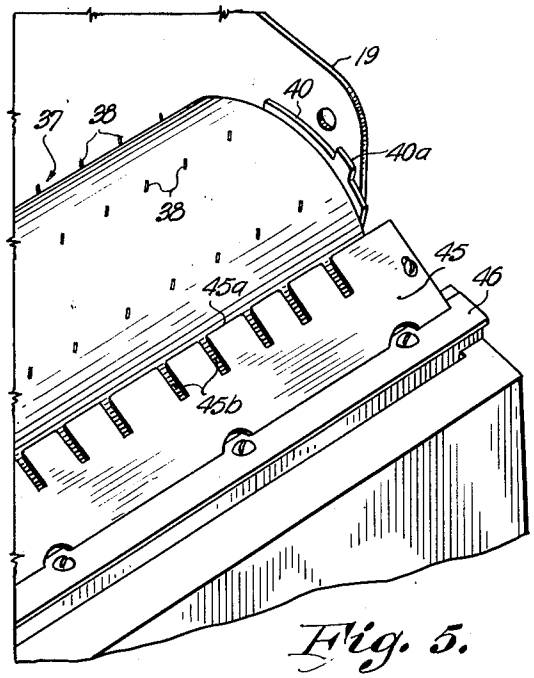
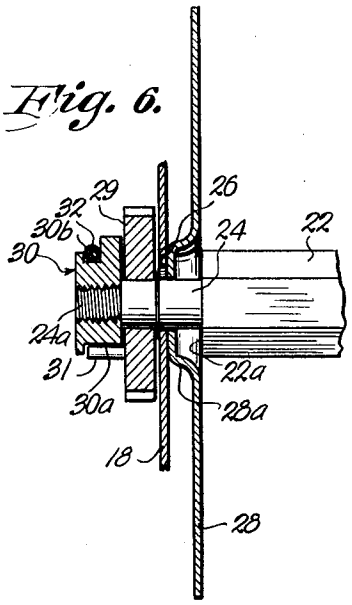


Fig. 5.

Fig. 6.



INVENTORS.
Homer K. Gordon
Andrew Morgan
BY Wm. E. Lesfield
ATTORNEY.

United States Patent Office 3,145,890 Patented Aug. 25, 1964

3,145,890

STAMP DISPENSING MACHINE

Homer K. Gordon and Andrew Morgan, both of 3725 Touzalin Ave., Lincoln, Nebr.

Filed Nov. 29, 1960, Ser. No. 72,511
7 Claims. (Cl. 225—16)

This invention relates generally to improvements in machines for intermittently dispensing selected and variable quantities of stamps from a stamp strip rolled up and stored in coil form. It is directed more particularly to machines wherein the stamps are formed into relatively wide strips, say, for example, five or more stamps wide, and consequently where the stamp coil has a substantial moment of inertia during the early stages of dispensing.

The use of the so-called trading stamps in conjunction with retail stores operations is widespread. Such stamps are supplied to the retail operator in sheets, perforations being provided to subdivide the sheets into rows of stamps. In many cases the sheets are offered in flat form. The retailer in this instance merely separates the desired number of stamps by tearing along the perforations. However, efforts have been made to provide dispensing machines which are capable of furnishing, in response to the turn of a dial or otherwise, a preselected quantity of stamps. Usually in such machines the stamps are stored with the sheet or strip in rolled up or coil form, the sheet being unwound as dispensing takes place. The present invention deals with a machine of this type.

One of the main objectives of the invention is to provide means in such a machine which overcomes, among others, two troublesome problems which have long plagued dispensing machines in which the stamp sheets are five or more stamps wide. One of these is the problem caused by overrunning of the coil during the stamp dispensing operation, which often results in blacklash of the strip and jamming of the machine. The other is the companion problem of tearing of the strip if the coil is restrained in any way during the unwinding operation, and the strip is pulled too taut.

A further and related object of the invention is to provide means of the character described in which the anti-backlash mechanism is joined with and functions as a part of the protective means for preventing tearing of the strip at the later stages of dispensing. A particular feature of the invention resides in the simplicity of the structure and the limited number of components required for achieving the desired results.

A still further object of the invention is to provide a machine in which the dispensing of stamps from a wide roll or coil is accurate and foolproof. Not only is free feed of the stamps from the machine obtained, but also the feed is accurately indexed so that the stamps are sheared and separated from the roll exactly along the perforations which subdivide the sheet or strip.

Yet another object of the invention is to provide a stamp dispensing machine of the character described in which improved means for locking the machine against dispensing, when desired, is provided.

Still another object of the invention is to provide a dispensing machine in which the stamps are accurately dispensed and which operates smoothly under all conditions of the coil, that is, from the thickest condition to the point of complete depletion.

Further objects of the invention are to provide a compact and light-weight machine for the purposes set forth; to provide a machine which requires little maintenance and service; which is capable of efficient operation even though handled and manipulated roughly by untrained operators; and which can be manufactured and sold at relatively low cost.

Other and further objects of the invention, together with the features of novelty appurtenant thereto, will appear in the course of the following description.

In the accompanying drawings, which form a part of the instant specification and are to be read in conjunction therewith, and in which like reference numerals indicate like parts in the various views;

FIG. 1 is a top plan view of a typical machine embodying our invention, the protective casing having been removed and certain parts broken away for purposes of illustration;

FIG. 2 is a front elevation of the machine, the casing now being in place, but shown in part in transverse section;

FIG. 3 is an end elevation of the machine taken from the left-hand side of FIG. 1, the casing again being shown in section;

FIG. 4 is a sectional view taken generally along the line 4—4 of FIG. 2 in the direction of the arrows;

FIG. 5 is an enlarged fragmentary perspective view showing certain details of the feed roll and guide member support, the guide member and hold down rod having been removed;

FIG. 6 is an enlarged fragmentary section taken along the line 6—6 of FIG. 3 in the direction of the arrows;

FIG. 7 is an enlarged fragmentary section taken generally along the line 7—7 of FIG. 3 in the direction of the arrows; and

FIG. 8 is a fragmentary view illustrating the condition of the clutch and ratchet wheel at a point during the operation.

Referring now to the drawings, and initially to FIGS. 1 through 4, reference numeral **10** indicates a generally rectangular horizontal base plate which forms the bottom platform for the machine. The base plate may conveniently be stamped from sheet metal and is provided at the four corners with rubber or plastic pedestal legs **11** secured thereto by bolted connection **12**.

The working mechanism is concealed by an open bottom plastic casing having the front wall **13**, opposed side walls **14** and **15**, rear wall **16** and top **17**. Although not shown, the casing in a commercial machine would be provided with a locking mechanism for holding it in place on the machine. However, since neither the details of the casing nor its manner of connection with the machine form any part of the present invention, further description thereof will not be entered into.

Rising vertically from the platform **10** and disposed in spaced apart parallel relation are a pair of side plates **18** and **19**. These plates are rigidly joined at their lower edges with the base **10** through welding or otherwise. Extending between and joining the upper ends of the plates **18** and **19** is a bridge bar **20**. In the preferred embodiment, the bridge bar rests on horizontal flanges **18***a* and **19***a* at the upper ends of the plates and is secured thereto by metal screws **21**.

Supported by and between the side plates **18** and **19** is the stamp spindle **22**. The spindle is polygonal in cross section through the major portion of its length and is adapted for the winding thereon of a sheet or strip of stamps to form a coil **23** as shown in FIGS. 1 and 4. The opposed ends of the spindle are provided with reduced diameter trunnion axles **24** and **25**, which extend, respectively, into and through inclined slots **26** and **27** and seat downwardly on the bottom edges of the slots, which are rounded to form rotary bearing surfaces for the trunnion axles. The slots **26** and **27** are such that the spindle can easily be withdrawn by simply lifting it in a rearward direction to withdraw it through the open ends thereof.

To provide for maintaining the ends of the stamp coil substantially normal to the spindle axis, a pair of circular guide disks **28** are supported by the spindle, one near

each end. As best seen in FIG. 6, each guide disk is interposed between the shoulder 22*a* at the end of the polygonal section of the spindle and the adjacent side plate, in this case, side plate **18**. The center area of the disk is dished outwardly to form a boss **28***a* which in turn is provided with a central aperture adapted to fit loosely over the trunnion axle. The loose fit is to permit a limited degree of wobble of the disk so that the coil is not tightly constricted at its end. While we have shown in FIG. 6 only one of the disks **19**, it will be understood from FIG. 1 that the same arrangement is employed at the other end of the spindle.

Again referring to FIG. 6 and also to FIGS. 1 and 3, it will be noted that the trunnion axle **24** extends well to the outside of plate **18** and has rotatably mounted thereon on the outside of plate **18** a toothed ratchet wheel **29**. Ratchet wheel **29** is capable of rotation relative to the axle **24**. The axle **24** terminates in a threaded axial extension **24***a*. Screwed onto the extension **24***a* is a clutch member **30**.

As will be explained in greater detail at a later point herein, the clutch member **30** forms part of a lost motion connection between the spindle **22** and the ratchet wheel **29**. The latter is provided with a pin or dog **31** extending in an axial direction from the outer face thereof and and offset from the axis of rotation. The clutch member is provided with a flat chord-like, dog-engaging surface **30***a* having opposed end portions which are capable of engaging the dog **31** upon relative rotation of the clutch member with respect to the ratchet wheel.

The ratchet wheel **29** is resiliently biased in a clockwise direction (as viewed in FIG. 3) relative to the cltuch member **30**, and thus toward the position shown in FIG. 3, that is, with the pin **31** engaging the left-hand end of the chord-like surface **30***a*. The biasing force is supplied by a tension spring **32** connected at one end with pin **31** and at the other end with a pin **33** secured to and extending from the clutch member **30**. Preferably the spring **32** is partially received within and guided by a channel or groove **30***b* formed in the clutch member (see FIG. 6).

Positioned adjacent the ratchet wheel **29** and normally engaging between a pair of the teeth thereof is the detent portion **34***a* of a pawl **34**. Pawl **34** is pivoted intermediate its ends to the side plate **18** through the medium of a screw **35** and spacer bracket **35***a*, the latter being secured to the side plates as at **35***b*. At its forward end, pawl **34** is provided with a laterally extending lug **34***b* (see FIG. 7) which engages between the teeth of a sprocket **36***a*. The sprocket **35** is secured to the stub axle **36** of the feed roll **37** which extends between side plates **18** and **19** forwardly of and parallel with the spindle **22**. While not shown in detail, a stub axle similar to axle **37** is located on the opposite end of the feed roll and both axles extend through corresponding, aligned apertures in side plates **18** and **19** to support the feed roll for rotation about a fixed axis parallel with the spinning axis.

The feed roll may be of any construction desired so long as it is capable of positively engaging with the extending end portion **23***a* of the coiled stamp strip and is operable to feed the strip forwardly and outwardly through the dispensing stamp opening **13***a* of the casing. In the particular machine here used for purposes of describing the invention, the feed roll is of molded plastic and is provided on its periphery with spaced longitudinal rows of radial pins **38**. The pins **38** are so spaced as to register with perforations in the stamp sheet as the sheet is advanced. Preferably the pin rows are spaced from one another around the feed roll a distance equal to the length of an individual stamp. Thus, the pins will strike the sheet on the perforated cross rows. The number of pins in any given row will depend upon the strength of the sheet being handled. We prefer to have one or more pins per stamp.

The perforations of the stamp sheet or strip are maintained in engagement with the pins **38** of the feed roll as the latter is rotated through the medium of a guide member **39**. This member extends substantially the length of the feed roll between the side plates **18** and **19** and, as shown in FIG. 4, is generally arcuate in construction with a forward portion projecting substantially tangential to the feed roll. The opposed ends of the guide member **39** rest on and are supported by arcuate shoulders such as shown at **40** in FIG. 5, which conveniently can be formed by welding or joining a thickness of metal to the corresponding side plate **18** or **19**. The underside of the guide member **39** between the shoulders is spaced just sufficiently above the feed roll as to permit free travel of the stamp strip therebetween. To accommodate movement of the pins, the guide member is provided with alternating ribs **41** and slots **42**, each rib defining on the underside of the guide member a groove through which a pin is free to move as the feed roll turns. The use of ribs alternating with the slots rather than a continuous series of slots provides additional strength for the guide member and assists in preventing warping.

The guide member **39** is locked in place against fore and aft movement of two upstanding ears **40***a* which extend upwardly from the support shoulders **40** (FIGS. 1 and 5) and which are arranged to interfit with corresponding notches cut into the ends of the guide member. Downward contact of the ends of the guide member with the shoulders is maintained by a pair of leaf springs **43**, one near each end of the guide member. The leaf springs are secured at one end thereof to the guide member and are engaged and flexed downwardly by a locking rod **44** extending between the side plates **18** and **19** and through aligned apertures therein. One end of the locking rod is provided with a knob **44***a* by which it can be inserted and withdrawn from the apertures. The other end is provided with an annular groove **44***b* (FIG. 1) adapted to engage the margin of its adjoining aperture and is held in engagement therewith by the leaf springs whereby to prevent longitudinal withdrawal of the rod unless the groove is disengaged by lateral pressure on the rod.

As the stamp sheet is moved over the top portion of the feed roll **37** by rotation of the latter is a clockwise direction (as viewed in FIG. 4) it is striped from the feed roll and directed toward the dispensing opening **13***a* by the stripper plate **45**. This plate has one edge **45***a* (FIG. 5) positioned closely adjacent the surface of the feed roll and is inclined downwardly and outwardly to merge with a stationary horizontal shear member **46**. The edge **45***a* of the stripper is provided with spaced pin slots **45***b* to permit the passage of the pins. The forward portion of the guide member **39** overlies the stripper plate and cooperates therewith to provide a confined path for the sheet after transfer from the feed roll to the stripper plate.

When the stamp sheet emerges from between guide **39** and stripper **45** it passes over the stationary shear blade **46**. Cooperating with the stationary blade is the movable shear arm **47** having the curved or arcuate blade **48**. Arm **47** is pivoted to the front cross piece **49** of the frame through the medium of an elongate pin **50** secured to the arm and which extends through a sleeve bearing **51** formed as a part of the cross piece. A compression spring **52** surrounds the pin **50**, bearing at one end against the sleeve bearing, and at the other against a nut threaded onto the pin **50**. This arrangement is to accommodate slight longitudinal movement of the pin in the bearing during the shearing stroke, in the manner of known shears of this type.

The shear arm is yieldably maintained in the raised position illustrated by the spring **53** which connects at one end with the downwardly extending leg **47***a* of the shear arm, and at the other (not shown) with the cross piece **49**. Further, the free end of the arm **47** is loaded lightly toward the shear plane by the spring **54** which connects at one end with the arm and at the other with a bracket **55** secured to the forward portion of side plate **19**.

The shear is actuated from outside the casing through the medium of a vertical plunger **56** having its lower end disposed above and resting on the upper flange of the arm **47**. The plunger is longitudinally slidable in a bearing **57** press fitted or otherwise secured in an aperture **17***a* in the forward top portion of the casing. A depressor knob **58** is secured to the upper end of the plunger and during the downward stroke is adapted to enter a recess **17***b* formed in the top of the casing.

The rotation of the feed roll, and thus the feeding of the sheet outwardly through the shear and dispensing opening, is caused by the manipulation of a dial **60** which is located in an opening **17***c* formed in the top of the casing. The dial is provided with a series of finger holes **60***a* spaced circumferentially around the dial near the rim thereof. Preferably the dial is constructed of a transparent synthetic resin, for example, polystyrene or methylmethacrylate. Spaced below the dial and out of rubbing contact therewith is a rigid nonrotatable backing plate **61** on which are inscribed digits which are located in conformity with the openings in the dial. To prevent wear on the inscribed digits they are located away from the hole **60***a*, being visible through the transparent body of the dial. A stationary dial stop **62** lies in the path followed by a finger engaged in one of the holes and serves to control the extent of movement clockwise for any given turn of the dial.

The dial is supported for rotation about a vertical axis through the medium of a bearing **63** mounted on the bridge bar **20**. Connected to the dial, as by screw **64**, is a downwardly extending shaft **65** which extends through the bearing and a suitable opening (not shown) in the bridge bar. A bevel gear **66** is secured to shaft **65** for rotation therewith and with the dial.

Gear **66** meshes with a second bevel gear **67** which is keyed to a cross shaft **68** journaled in bearings **69** and **70**. The latter are carried by the side plates **18** and **19**. Shaft **68** extends to the outside of side plate **18** and has mounted thereon on the outwardly extending portion a toothed sprocket **71**. This sprocket is drivingly connected with the feed roll sprocket **36***a* by an endless link-type drive chain **72** trained over the respective sprockets and engaged by the teeth thereof.

The slack upper flight of the chain is maintained substantially taut by a chain tightener which includes the roller **73** carried on the free end of a spring arm **74**. The other end of the spring arm is affixed to side plate **18** by an inturned portion extending through a small hole **18***b* in the side plate and a screw **75** which clamps a loop offset in the arm against the side plate.

In order to prevent rotation of the dial in a direction other than that which will produce rotation of the feed wheel in the stamp dispensing direction, we have provided the chain lock escapement pawl **76**. This is a pivotal member located just above the upper chain flight. It is pivoted at one end to side plate **18** by the shoulder screw **77**. The other end has a downwardly extending tooth **76***a* adapted to fit between the links of the chain. The tooth is so curved on its rearward edge as to permit it to ride upwardly the cross links and fall by gravity back to locking position between the links as the upper flight advances downwardly. The forward edge is preferably straight and substantially normal to the pivot axis of the pawl so that a wedging action will occur should reverse movement of the chain be attempted.

The radial offset of the hole **60***a* of the dial and the kinematics of the gear and chain drive are such that for each unit of movement of the dial the feed roll **37** will be rotated a distance sufficient to feed one cross row of stamps past the shearing edge of the stationary shear blade **46**. In other words, should the finger hole beside the digit "1" be engaged and the dial advanced until the finger strikes the dial stop **63**, one cross row of stamps will extend past the shear. If the dial be moved five units, the feed roll will turn sufficiently to feed five cross rows past the shear. The stamps are severed by depressing the plunger knob **56**. It will be evident that the feed roll thus serves not only to position the stamps for shearing along a perforated cross row, but also to draw the sheet from the coil **23** as stamps are dispensed.

The dial is indexed to move in unit increments by means of the pawl **34** and the lug **34***b* carried thereby, the latter of which engages between the teeth of the feed roll sprocket **36***a*. The pawl lug **34** is always urged into the tooth-engaging position by the spring **80** which connects at one end with the pawl **34** and at the other with a spring bracket **81** secured to side plate **18**. The number of teeth on the sprocket **36***a* is such that for each unit displacement of the dial **60**, that is the displacement to move any given hole one digit, the teeth will advance one position. Thus the pawl lug **34***b* will ride out of one depression into the next for each unit of movement of the dial. To facilitate movement of the pawl lug **34***b*, the tips of the teeth are slightly rounded.

The movement of the pawl lug **34***b* over a tooth of the sprocket **36***a* is accompanied by rocking of the pawl in a direction to disengage the detent **34***a* thereof from the teeth of the ratchet wheel **29**. Care should be taken to insure that the teeth of the ratchet wheel **29** are sufficiently shallow that the detent **34***a* will be disengaged long before the pawl lug **34***b* reaches the crest of a sprocket tooth. The quicker the detent can be disengaged, the smoother the operation will be.

As is believed evident, the pawl detent **34***b* is maintained out of engagement with the ratchet teeth until the pawl lug **34***b* returns again to the depression between a pair of sprocket teeth.

From the description thus far given, it will be evident that whenever the pawl lug **34***b* is engaged centrally between a pair of sprocket teeth, the detent **34***a* is engaged with the teeth of the ratchet wheel. Thus, upon the completion of any given dial turn, the ratchet wheel is engaged and yieldably restrained against further rotation by the detent **34***a*. The spindle **22**, however, is not stopped immediately. It may continue under its own inertia momentum, particularly if the dial has been moved quickly, until the right-hand end of the dog engaging surface **30***a* on clutch member **30** moves into engagement with the dog **31**. The relative positions of the clutch member **30** and ratchet wheel **29** at this point are illustrated in FIG. 8. While the spring **32** tends to decelerate the spindle before the right hand portion of surface **30***a* strikes the dog, nevertheless, when the coil is large there is sufficient momentum as to cause the wheel to advance slightly against the resistance imposed by the pawl detent **34***a* and its spring **80**. In other words, the momentum of the coil causes the detent at this instant to serve as a braking ratchet. The additional movement of the spindle is, however, only a small fraction of a revolution, so overrunning is effectively prevented.

Though the clutch member **30** and dog **31** have stopped in the position illustrated in FIG. 8, the initial movement of the dial in the next dispensing operation causes them to resume the relative position shown in FIG. 1. This is because as the detent **34***a* is disengaged from the teeth of ratchet wheel **29**, the spring **32** pulls the ratchet wheel clockwise to bring dog **31** back to engagement with the left-hand portion of surface **30***a*.

The lost motion connection afforded between the spindle and ratchet wheel by the clutch member **30** and dog **31** is also important in situations where the dial is operated to feed out more than one cross row of stamps at a time. It will be remembered that for each unit of movement of the dial the detent **34***a* returns to a tooth engaging position. This tends to stop the wheel **29** momentarily. However, the spindle can continue to turn freely. As soon as the detent **34***a* is again disengaged, the spring **32** draws the dog **31** back to the relative position of FIG. 1. The critical point to note is that the detent **34***a* must be so constructed and arranged as to

again disengage before the right hand portion of surface **30***a* reaches the dog **31**.

From the foregoing it should be evident that even should the strip portion **23***a* be stretched tightly between the feed roll and coil, the coil is free to advance a limited distance even though the ratchet wheel **29** be momentarily restrained by the detent **34***a*. This avoids any danger of parting of the strip because of excess tension.

The pawl **34** is also utilized as a part of the mechanism for locking the unit to prevent dispensing when so desired. Referring to FIGS. 1 and 3, it will be noted that located beneath the pawl is a cam **85** mounted eccentrically on a shaft **86** which extneds through the side plates **18** and **19** and terminates in a key lock barrel **87**. When the machine is being used, the cam is in the position shown in solid lines in FIG. 3. To lock the dispensing mechanism key **88** is inserted in the lock barrel and turned to bring the cam to the broken line position of FIG. 3. When in this position, pawl **34** is immobilized and thus the dispensing mechanism is firmly locked.

The successful operation of the unit depends in large part on their being a firm nonslipping connection between the stamp coil **23** and spindle **22**. We have found that providing the spindle with a polygonal cross section achieves this remarkably well. However, it is not our intention to limit the invention to a polygonal spindle alone, since various configurations involving ridges or knurling will adequately serve the purpose.

From the foregong it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described our invention, we claim:

1. In a stamp dispensing machine, the combination of a rotatable spindle adapted to carry a coil of stamps with the outer end portion of the coil extending away from the coil, a feed roll spaced from and parallel with said spindle with the end portion of the coil trained thereover, means on the feed roll providing tractive engagement with the portion trained over the feed wheel, feed wheel operating means connected with said feed roll and operable to cause selective advance of said end portion whereby to impart rotation to said spindle through drawing on the coil, a toothed ratchet wheel connected with the spindle and rotatable therewith, a detent resiliently biased toward and into engagement with said ratchet wheel, and means connecting said feed wheel operating means with said detent and operable responsive to said operating means at the start of rotation of said feed wheel to disengage said detent from said ratchet wheel whereby to free said feed wheel for rotation.

2. The combination as in claim 1 wherein said spindle is polygonal in cross section to provide sharp edges for engaging the inside turn of the stamp coil.

3. The combination as in claim 1 including mechanism providing a lost motion connection between ratchet wheel and said spindle whereby to permit said spindle to advance a short distance independently of said ratchet wheel whenever said ratchet wheel is restrained against movement by said pawl.

4. In a stamp dispensing machine the combination of rotatable spindle having a strip of stamps wound thereon in coil form with the outer end portion of the strip leading away spaced from and parallel with the coil, a stamp feed roll from the spindle with the end portion of the strip trained over a portion of said roll, said feed roll having means for engaging the stamps trained thereover and operable upon rotation of the feed roll to unwind the coil and rotate the spindle, a toothed circular member connected with one end of said feed wheel for rotation therewith, a second toothed circular member connected with the corresponding end of said spindle, a pawl member pivoted intermediate its ends and having one end adjacent the teeth of said first circular member and the other end adjacent the teeth of said second member, said respective ends of the pawl member having portions adapted to engage with the teeth of the adjacent circular members, means resiliently biasing said portions of the pawl member into engagement with the teeth of the circular members, feed roll drive means operable to initiate rotation of the feed roll and thereby rock the pawl to disengage the pawl portion engaged with the teeth of said second circular member, the connection between said second circular member and said spindle so constructed as to permit limited movement of the spindle relative said second circular member whenever said teeth on said second circular member are engaged by the adjacent pawl portion.

5. The combination as in claim 4 including resilient means connecting said spindle and said second circular member and arranged to yieldably resist said limited movement.

6. The combination as in claim 4 wherein said second circular member is rotatably supported on the spindle, said connection including a dog on one of said members and a dog engaging surface on the other.

7. The combination as in claim 4 including manual locking means operable to releasably engage said pawl member and urge said portions thereof into locked engagement with said teeth.

References Cited in the file of this patent

UNITED STATES PATENTS

2,258,912	Steen et al.	Oct. 14, 1941
2,601,062	Singer	June 17, 1952
2,710,063	Krueger	June 7, 1955
2,712,442	Hanson	July 5, 1955
2,720,262	Hanson	Oct. 11, 1955
2,740,581	Komusin	Apr. 3, 1956
3,061,162	Adams	Oct. 30, 1962