

J. F. KINNEY.  
STAMP VENDING MACHINE.  
APPLICATION FILED SEPT. 7, 1910.

1,023,020.

Patented Apr. 9, 1912.

3 SHEETS-SHEET 1.

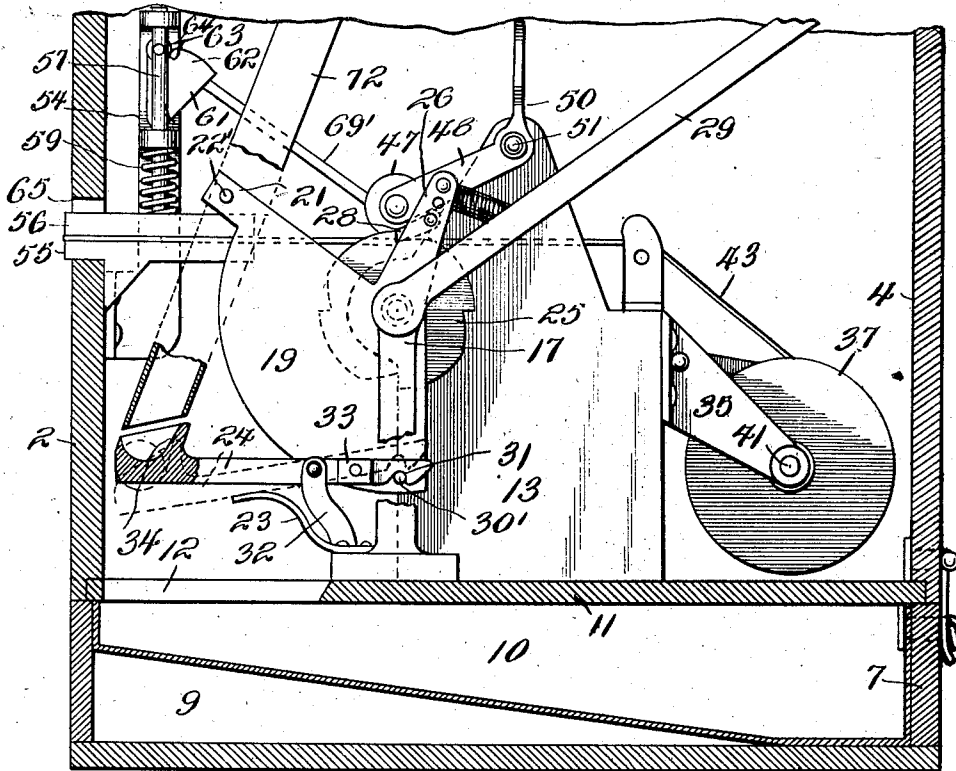
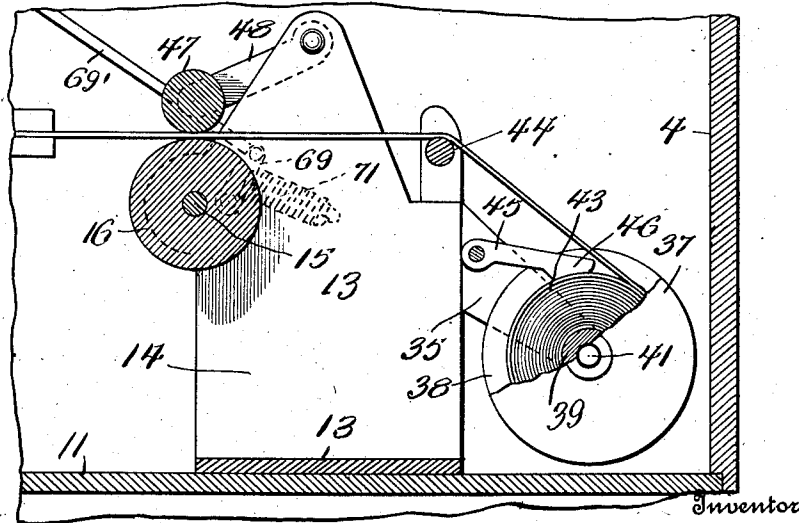


Fig. 1.

Fig. 2.



Witnesses

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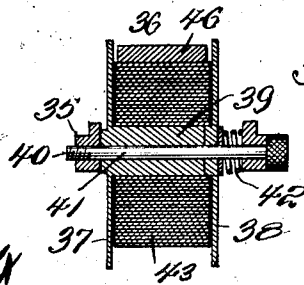
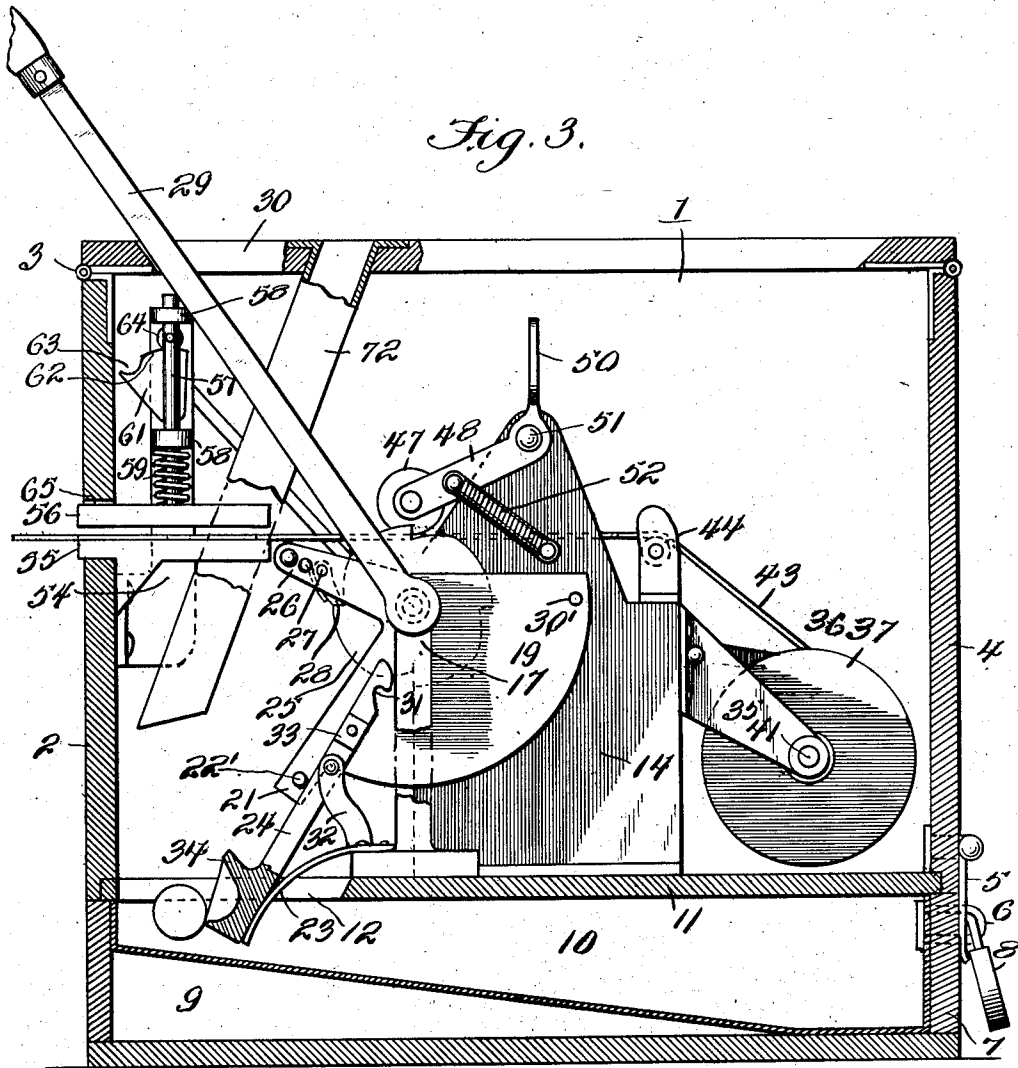
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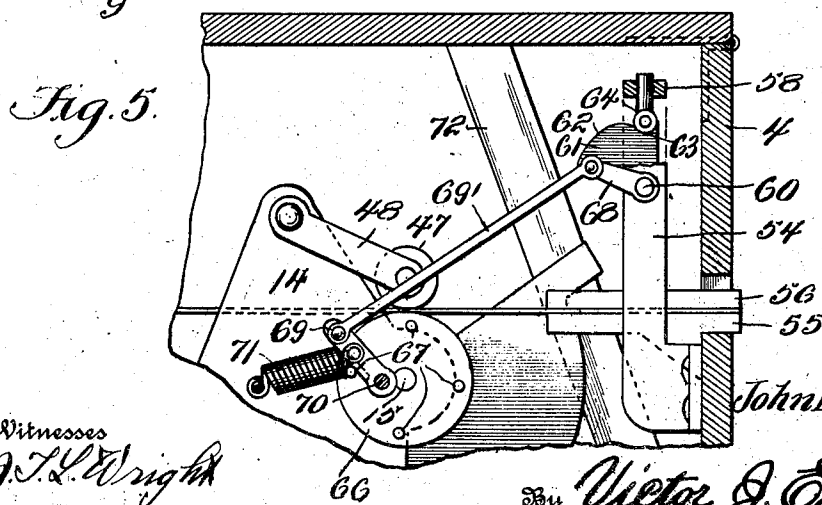
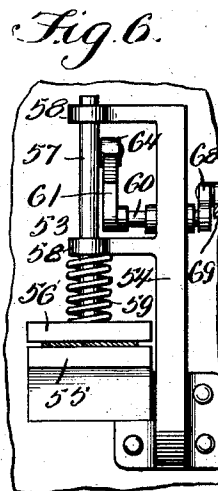
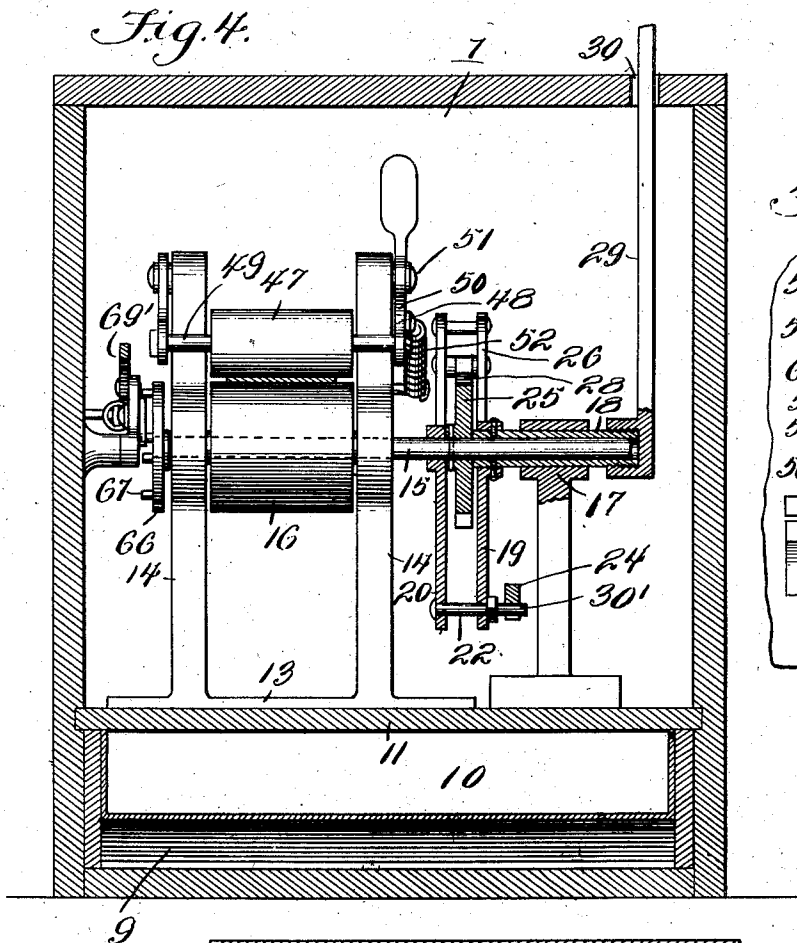
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Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN FRANKLIN KINNEY, OF SHELBY, NEBRASKA.

## STAMP-VENDING MACHINE.

1,023,020.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed September 7, 1910. Serial No. 581,698.

*To all whom it may concern:*

Be it known that I, JOHN FRANKLIN KINNEY, a citizen of the United States, residing at Shelby, in the county of Polk and State of Nebraska, have invented new and useful Improvements in Stamp-Vending Machines, of which the following is a specification.

This invention relates to stamp vending machines and particularly to an actuating mechanism controlled by the coin and operable to deliver to the purchaser a single stamp, the object of the invention being to provide novel and improved mechanism of this character adapted for positive operation on deposit of a coin and embodying means operated simultaneously on discharge of the stamp for engaging the stamp strip to prevent the fraudulent removal of the stamp from the machine.

In the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a longitudinal section through my improved stamp vending machine, parts being broken away. Fig. 2 is a detail section through a portion of the machine showing the feed rolls and the reel, a portion of the reel being broken away to clearly disclose the invention. Fig. 3 is a view similar to Fig. 1 showing the controlling lever in a position to discharge a single stamp. Fig. 4 is a detail transverse section through the machine taken on a line with the feed shaft. Fig. 5 is a detail longitudinal section through a portion of the machine showing the pin wheel and the connections between the wheel and the gripping member. Fig. 6 is a rear view of the gripping member. Fig. 7 is a detail section through the reel.

I contemplate providing a casing such as the one shown at 1 in the drawings. This casing is provided with a front wall 2 which is hinged to the top wall, as at 3. A door 4 closes the rear of the machine, and as illustrated, it is provided with a suitable hasp 5 to receive the staple or keeper 6 on the fixed bottom portion 7 of the casing. This staple is designed to receive a lock 8 or any other suitable well known and equivalent retaining device. The receptacle is formed to provide a coin compartment 9 in

which a coin drawer 10 is removably mounted. A partition 11 extends throughout the receptacle at a point immediately above the coin drawer, and as illustrated, the said compartment is formed to provide a slot 12 through which the coin will be conveyed to the coin drawer.

A supporting frame 13 is mounted on the partition 11 of the receptacle. This frame is provided with upstanding arms 14 through which a feed roll shaft 15 extends. The shaft 15 has secured thereto a feed roll 16 which is disposed immediately between the arms 14. A bearing 17 is supported by the partition 11, and as illustrated, said bearing is designed for the reception of a loose sleeve 18 on the shaft 15. The sleeve 18 supports a sector-like element 19 which is located immediately opposite an identically formed element 20 which is mounted to revolve on the shaft 15. The elements 19 and 20 are suitably connected with each other and as illustrated, each element is formed at its upper end to provide a forwardly extending short arm 21. The arms 21 are connected with each other by a pin 22'. A leaf spring 23 is supported by the bearing 17, and as illustrated, it is located immediately in the path of movement of the rock arm 24. A four-tooth ratchet wheel 25 is fixed to the shaft 15 and it is located immediately between the elements 19 and 20. These elements 19 and 20 are provided with arms 26 which are connected with each other by a pin 27 on which a spring controlled pawl 28 is pivotally mounted and adapted for engagement with the ratchet wheel in a manner to be hereinafter described. The sleeve 18 is provided with an actuating lever 29 which extends upwardly through a longitudinal slot 30 in the top of the casing 1. The pin 22 95 on the elements 19 and 20 is extended beyond the element 19 as at 30', so as to be engaged normally in the notch 31 in the keeper end of the rock lever 24. The rock lever 24 is mounted on the fulcrum bracket 32 which extends upwardly from the partition 11. An adjustable counterbalancing weight 33 is mounted to slide longitudinally on the keeper end of the rock lever 24 and it is designed to normally hold the lever in a horizontal position. The rock lever 24 is

provided at its forward end with a coin cup 34 which is located immediately above the coin discharge slot 12 in the partition 11.

A bracket 35 extends rearwardly from the base member 13, and as illustrated, it is designed for the reception of the reel 36. This reel comprises disks 37 and 38 and a hub 39. One arm of the bracket 35 is formed with a threaded passage to receive the threaded extremity 40 of the supporting shaft 41. A spring 42 is interposed between the other arm of the bracket and the disk 38 so as to hold said disk yieldingly engaged against one side of the stamp roll 43. A guide roller 44 is mounted immediately above the bracket 35 and it is located immediately in advance of the reel 36 so that the stamps may be passed thereover and guided thereby as clearly illustrated in Figs. 1 and 3 of the drawings. The bracket 35 is provided with a pivoted follower 45 whose end 46 is designed to bear against the stamp roll so as to prevent the wound portions of the roll from casual separation.

A laying roll 47 is revolubly mounted in bracket arms 48 which are pivotally supported on the base member 14. The shaft 49 of the laying roll is provided at one end with an actuating lever 50. This lever is pivoted as shown at 51, to the base member and is designed to be operated manually to lift the laying roll out of contact with the feed roll 16. An extensile spring 52 is operatively connected with the base member 13 and with the lever 50 so as to exert its tension against the latter to hold the laying roll normally yieldingly against the stamps, as shown in Fig. 4 of the drawings.

A locking or gripping mechanism 53 is located in advance of the feed mechanism. This mechanism comprises a bracket 54 on which is mounted a fixed horizontally disposed jaw 55 which is located immediately beneath the movable jaw 56. A stem 57 is slidable in superimposed bearings 58 on the bracket 54, and as shown in Fig. 6 of the drawings, this stem is secured to the movable jaw 56. A spring 59 is interposed between the movable jaw and the lowermost bearing 58 and it exerts its tension against the movable jaw to hold it normally against the stamps. A rock shaft 60 is supported by the bracket 54 and at one end, said shaft is provided with an actuating element 61 on which is formed a cam surface 62. At one end the surface 62 is formed to provide a concavity 63 in which the roller 64 on the stem 57 is normally seated. The forward end of the jaws 55 and 56 extend through a feed or discharge passage 65 in the front wall of the casing.

The shaft 15 has fixed thereto at one end a pin wheel 66 on which pins 67 are arranged at suitable spaced intervals from

each other. The shaft 60 is provided with a crank arm 68 which is operatively connected with a similar arm 69 preferably by the link 69' on a stub shaft 70. The shaft 70 has its arm 69 disposed directly in the path of the actuating pin 67 on the wheel 66. The shaft 70 is mounted in a suitable bearing which extends from one side of the casing 1. A helical retractile spring 71 has one of its ends fixed to a suitable point and its opposite end is fixed to the arm 69 so that under tension of the spring the actuating element 61 will be normally held in a position where the head 56 will assume its lowermost position. The casing 1 is provided with a suitable coin chute 72 whose lower end is disposed immediately above the coin cup 34. The upper end of the chute extends through the top of the casing and is disposed in convenient reach of the operator of the machine.

Having specifically described the various elements of the machine, a brief operation thereof will be described as follows. It will of course be understood that the machine is designed as a vending apparatus for merchandise, preferably stamps of continuous tape-form, the machine being designed especially for the distribution or sale of stamps of any denomination. It will also obviously appear that in lieu of the four-point ratchet element 25, a two-point element may be substituted therefor for the purpose of increasing the number of stamps to be discharged at each purchase. The stamp strip is of roll form and is operatively associated with the reel 36 as particularly shown in Figs. 2 and 3 of the drawings. The outer end of the strip is extended over the guide roller 44 and between the rolls 16 and 47 and then through the head members 55 and 56. These members are preferably of a length coextensive with the stamp and after the strip has been associated with the elements of the structure as just described, the outermost edge of the strip is flush with the outer edge portions of the said heads 55 and 56 so that under tension of the spring 59 the head 56 will be held into effective gripping engagement with the stamp strip to prevent the fraudulent removal of the stamps. The machine as constructed herein is designed for the sale of one cent stamps. The purchaser drops his coin into the chute 72 where it will be conveyed to the coin cup 34. The weight of this coin will overbalance the lever 24 and will rock the same to cause it to assume the dotted line position shown in Fig. 1 of the drawings. On rocking movement of the lever as just described, it will be released from the pin 22 so as to allow for the required rocking movement of the controlling lever 29. The lever is moved

toward the operator and the ratchet element constructed and proportioned to eject a single stamp on the deposit of one coin. On movement of the controlling lever to the full extent of its actuating movement the pin 22 will engage the lever 24 forwardly of its fulcrum and the lever will be depressed so as to cause the coin to fall from the pocket 34 into the coin drawer 10. Through provision of the counterbalancing weight 33 the lever 24 will automatically assume its operative position on release of the coin as just described and the lever when moved to its return position will cause the keeper pin 22 on the sector-like elements 19 and 20 to be again engaged with the lever. This holds the shaft 15 against rotation until the deposit of the next coin. Through the connection 69' between the arms 68 and 69 it will be seen that immediately on rotation of the actuating wheel 66 to cause one of its pins to engage the arm 69, motion will be transmitted to the stem 57 to move the head 56 thereof upwardly to its released position to allow for the free passage of the stamp. The adjustable counterbalancing weight 33 can be adjusted by the operator should it be desired to place on sale two cent stamps. In this event it would only require moving the weight on the rock lever 24 to a position to require the combined weight of two one cent coins to raise the rock lever.

I claim:

1. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a sleeve loosely mounted on the shaft, a member fixed to the sleeve, a member loose on the shaft and disposed opposite the first member, a ratchet wheel fixed to the shaft intermediate the said members, a pawl carried by the said members and engaging the ratchet wheel, a rock lever, means on said members for tilting the lever, means for holding the members and the lever respectively against movement, a gripper normally engaged with the merchandise, and means actuated by the feed roll shaft to release the gripper on movement of the feed roll shaft, to feed position.

2. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a pawl and ratchet mechanism for operating said shaft, means for locking said pawl and ratchet mechanism against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith upon the operation of said feed shaft, said gripper mechanism comprising a fixed bracket arranged in advance of the feed shaft, a horizontally disposed stationary jaw rigidly secured to said bracket, superimposed bearings carried by

said bracket, a movable jaw slidably disposed in said bearings, a rock shaft carried by said bracket, a cam carried by said rock shaft and in engagement with said jaw, a pin wheel carried by said feed shaft, a crank arm disposed in the path of movement of the pin wheel, and a connection between said crank arm and said rock shaft whereby in the operation of the feed shaft the gripper mechanism is released from the merchandise.

3. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a pawl and ratchet mechanism for operating said shaft, means for locking said pawl and ratchet mechanism against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith upon the operation of said feed shaft, said gripper mechanism comprising a fixed bracket arranged in advance of the feed shaft, a stationary jaw rigidly secured to said bracket, superimposed bearings carried by the bracket, a movable jaw slidably disposed in said bearings, a spring intermediate said movable jaw and one of said bearings normally holding said jaws in engagement with the merchandise, a roller carried by said movable jaw, a rock shaft carried by the bracket, an actuating element secured to the rock shaft and engaging the roller, a crank arm operatively connected with said rock shaft, a pin wheel mounted upon said feed shaft, a crank arm arranged in the path of movement of the pin wheel, and a link connection between both of said crank arms, said pin wheel being adapted to actuate the last named crank arm in the operation of the feed shaft whereby the gripper mechanism is released from the merchandise.

4. In vending apparatus for merchandise the combination with a casing, of a feeder for the merchandise including a shaft, means for operating the shaft, means for locking said first named means against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith on the operation of the feed shaft, said gripper mechanism comprising a bracket fixed to the casing and arranged in advance of the feed shaft, a horizontally disposed stationary jaw secured to the bracket, superimposed bearings carried by the bracket, a movable jaw, a stem for said movable jaw slidably disposed in said bearings, a roller carried by said stem, a rock shaft carried by said bracket, an actuating element mounted upon one end of said rock shaft and engaging the roller, a crank arm journaled upon the opposite end of the rock shaft, a pin wheel mounted upon one end

of the said feed shaft, a crank arm jour-  
naled in said casing and disposed in the path  
of movement of the pin wheel, and a link  
connection between both of said crank arms  
5 whereby in the operation of the feed shaft  
the gripper mechanism is released from en-  
gagement with the merchandise.

In testimony whereof I affix my signa-  
ture in presence of two witnesses.

JOHN FRANKLIN KINNEY.

Witnesses:

C. GRANT KINGSOLVER,  
W. E. KINNEY.