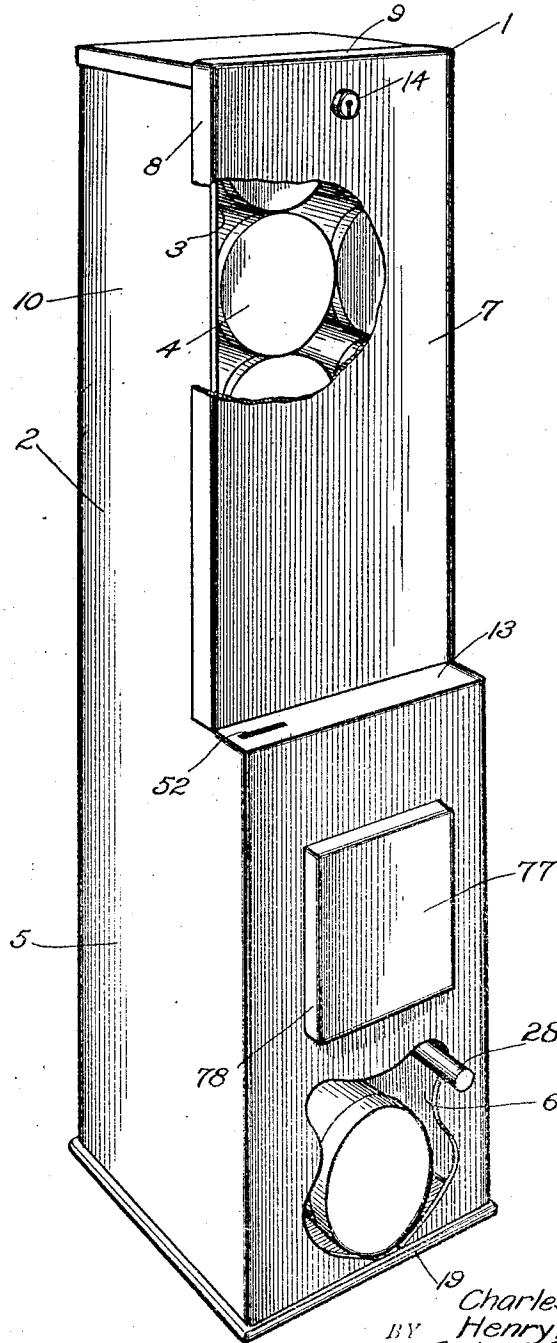


C. A. MELCHERT & H. A. KOHLS.
 PACKAGE VENDING MACHINE.
 APPLICATION FILED OCT. 4, 1916.

1,301,074.

Patented Apr. 15, 1919.
 3 SHEETS—SHEET 1.

Fig. 1.



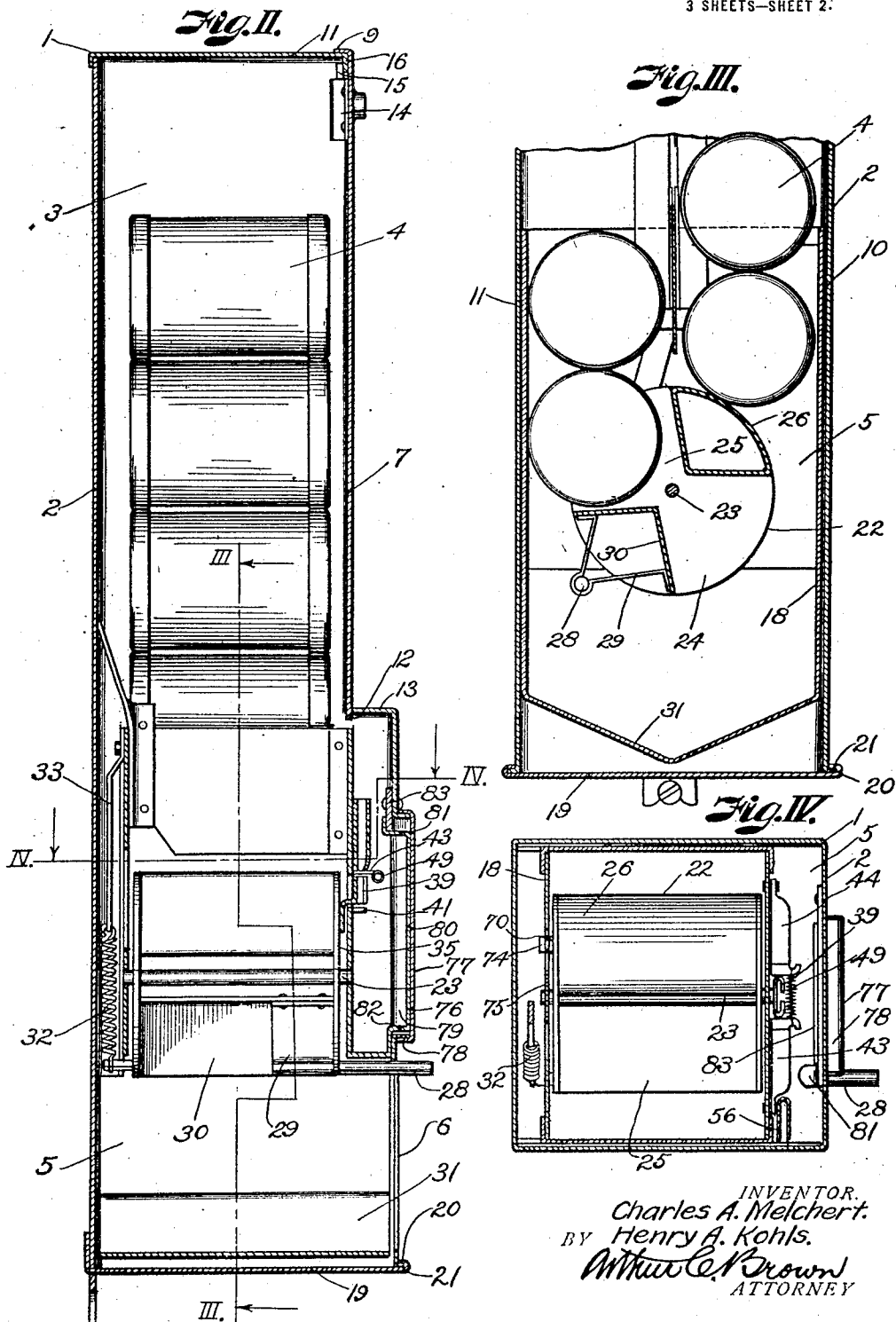
INVENTOR.
 Charles A. Melchert.
 Henry A. Kohls.
 BY *Arthur C. Brown,*
 ATTORNEY

C. A. MELCHERT & H. A. KOHLS.
PACKAGE VENDING MACHINE.
APPLICATION FILED OCT. 4, 1916.

1,301,074.

Patented Apr. 15, 1919.

3 SHEETS—SHEET 2:



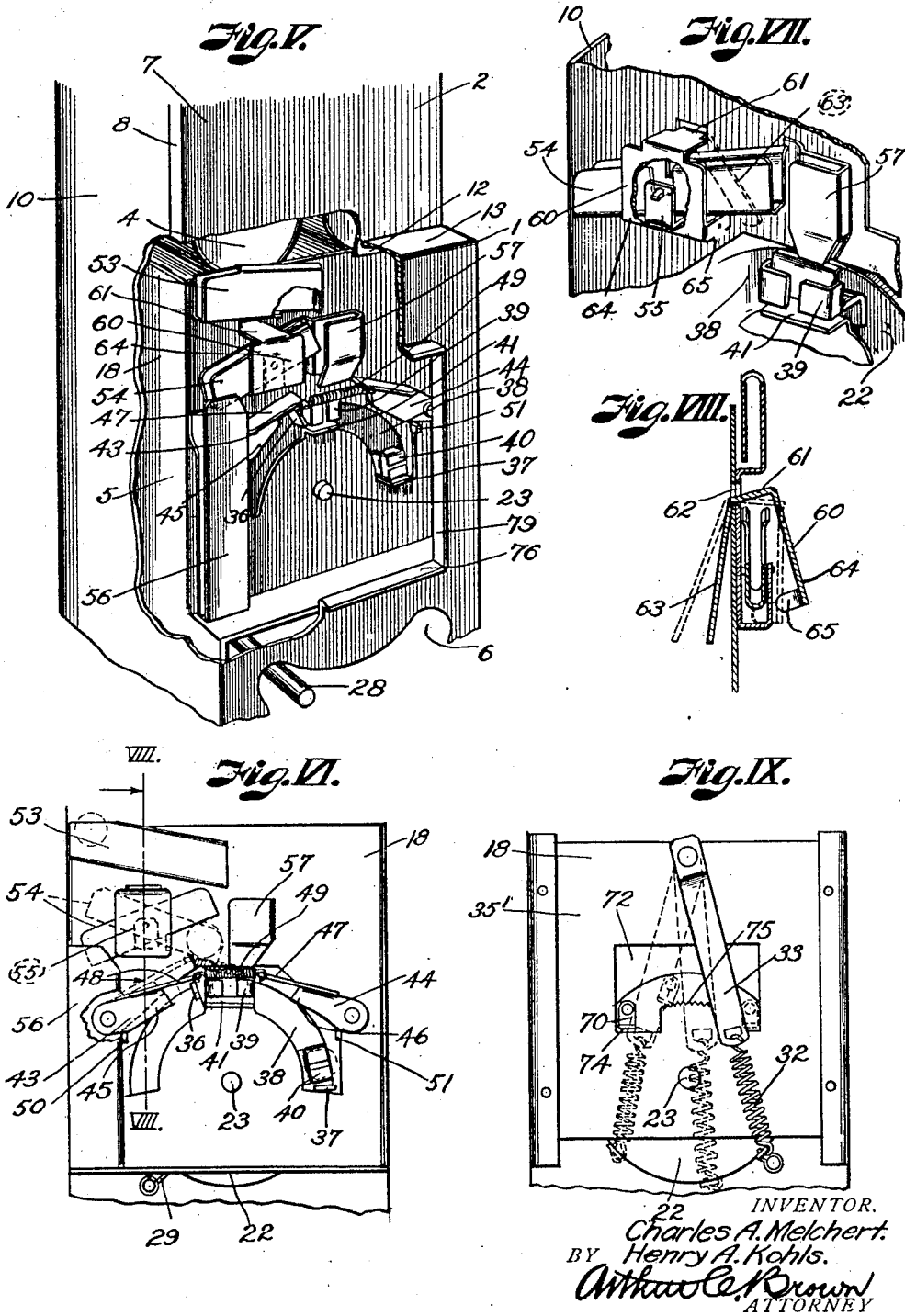
INVENTOR.
Charles A. Melchert.
BY Henry A. Kohls.
Arthur C. Brown
ATTORNEY

C. A. MELCHERT & H. A. KOHLS.
PACKAGE VENDING MACHINE.
APPLICATION FILED OCT. 4, 1916.

1,301,074.

Patented Apr. 15, 1919.

3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

CHARLES A. MELCHERT AND HENRY A. KOHLS, OF KANSAS CITY, MISSOURI, ASSIGNORS
TO AUTOMATIC MACHINE MFG CO., OF KANSAS CITY, MISSOURI, A CORPORATION OF
MISSOURI.

PACKAGE-VENDING MACHINE.

1,301,074.

Specification of Letters Patent.

Patented Apr. 15, 1919.

Application filed October 4, 1916. Serial No. 123,707.

To all whom it may concern:

Be it known that we, CHARLES A. MELCHERT and HENRY A. KOHLS, citizens of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Package-Vending Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to vending machines and more particularly to that class of vending machines which are operated by the use of a coin and wherein the packages vended are of tubular form; the principal object of the invention being to provide mechanism operable through the intermediacy of a suitable coin whereby packages may be delivered from the machine singly to a purchaser.

A further object of the invention is to so construct the mechanism that unsuitable coins or slugs will be discharged from the machine without effecting a delivery operation, and additional means whereby a retrograde movement of the delivery parts is prevented after an operation has once been started, so that repeated delivery operations cannot be performed with a single coin.

In accomplishing these objects we have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a vending machine constructed according to our invention.

Fig. II is a central vertical section of the same.

Fig. III is a vertical section on the line III—III, Fig. II.

Fig. IV is a horizontal section through the machine on the line IV—IV, Fig. II.

Fig. V is a front perspective view of a portion of the machine particularly illustrating the coin delivery mechanism.

Fig. VI is a front elevation of the same.

Fig. VII is a detail perspective view of the coin delivering chute particularly illustrating its pivotal mounting.

Fig. VIII is a vertical section on the line VIII—VIII, Fig. VI, showing the chute locking device.

Fig. IX is a back view of the delivery mechanism showing the means for preventing retrograde movement thereof.

Referring more in detail to the drawings:—

1 designates a vending machine constructed according to our invention which comprises a casing 2 forming an upper compartment 3 of such dimensions that it will house a double column of superimposed tubular packages 4, which are to be vended from the machine, and a lower compartment 5 wherein the coin controlled delivery mechanism is located; the lower housing being provided with a front opening 6 through which articles after being vended may be removed by the purchaser.

To permit placing of the packages within the upper compartment, the casing is provided with a removable front plate 7, having back turned side and top flanges 8—9 which fit snugly over respective side and top walls 10—11 of the casing, and an extended lower end 12, which seats back of a shelf 13, to lock the lower end of the plate to the housing; the upper end being secured to the housing by a key lock 14 having a bolt 15 adapted for seating back of a downturned lip 16 at the front of the top plate 11.

Located within the lower compartment 5 is a housing 18, which contains the delivery mechanism later described; the said housing being separate from the outer casing but snugly contained therein and is inserted within the outer casing through the lower end opening which is afterward closed by a plate 19 having edge sockets 20 whereby it is keyed to outturned flanges 21 at the base of the casing.

The delivery mechanism comprises a cylinder 22 that is mounted on a shaft 23 revolutely carried by the housing 18 and contains oppositely disposed pockets 24—25 separated by a segmental plate 26 and which are adapted for alternately receiving the lowest of the superimposed packages 4 from each column; the pockets and separating plate 26 being so arranged that when one of the pockets is in position to receive an article from one of the columns the other column

is supported on the plate 26, and when the cylinder is revolved to deliver the article from the first pocket the supported column is allowed to drop into the second pocket and the first column is caught by the plate 26. On the next operation the cylinder is moved in the opposite direction to deliver the article from the second pocket and the first pocket receives an article from the supported columns so that it in turn will deliver on a repeated operation.

Means for revolving the cylinder to effect the delivery of the articles, comprises a handle 28 which extends forwardly through the front opening 6 in the casing 2, and is mounted at its inner end in a bracket 29 secured to the plate 30, which forms side walls of the cylinder pockets; the outer end of the handle extending sufficiently that it may be grasped by a purchaser and moved to partially rotate the cylinder so that a package which may be contained in one of the said pockets will be delivered onto a centrally sloping base 31 of the housing 18 and may be removed through the opening 6; the cylinder being limited in its revoluble movement by the limited movement of the handle in the opening 6, but is urged and yieldingly held at its limit by means of a coil spring 32 which is attached at its lower end to a side of the cylinder directly back of the handle and at its opposite end to a link 33 which is in turn pivoted at its upper end to the back plate of the casing 18 at a point perpendicularly above the cylinder axis so that the tension of the spring draws the delivery cylinder toward its limit and retains it in proper position to receive articles within the delivery pockets.

Attached to the outer edge of the front end plate 35 of the delivery cylinder are spaced stop members 36—37 (Figs. V and VI), which are adapted for movement in a circular slot 38 in the front of the housing 18 and also mounted on the cylinder adjacent the said stops are coin cups 39—40, which are so spaced that when the cylinder is moved to its limit in one direction one of said cups will be positioned over an out-turned catch lip 41 located at the front of the housing perpendicularly above the shaft 19 and on moving the cylinder to its opposite limit the other cup will be moved to position over the lip 41.

In order to prevent movement of the delivery cylinder only at times when a suitable coin is deposited in the mechanism, we provide stop latches 43—44, which are pivoted at opposite sides on the front of the housing 18 and have arms 45—46, the ends of which are directed inwardly to lie in the path of the stops 36—37 and have extensions 47—48 which are turned laterally from the arms to overlie the path of the coin cups carried on the cylinder, and which are yield-

ingly held in such position by a coil spring 49 which joins the free ends of the arms; downward movement of the latches is limited by stops 50—51 which are stamped from the housing to engage the lower edge of the latch arms.

In order to effect a delivery operation, presuming the parts to be positioned as in Fig. VI, a coin is inserted through a slot 52 in the shelf plate 13 and is carried downward in a chute 53 mounted on the housing 18 beneath the slot 53 and delivered onto the upper end of a chute 54 that is pivotally mounted on a bracket 55; the lower end of the chute 54 delivering into a chute 56 which leads to the exterior of the machine.

When the coin is delivered onto the pivoted chute 54 the said chute due to the weight of the coin will be tilted on its pivotal mounting in an opposite direction and the coin delivered into a guide chute 57 from which it is deposited in the coin cup 39, and will rest in an upright position on the shelf 41.

As the cylinder 22 is then revolved by means of the handle 28 the coin will be moved along the lip 41, so that its upper edge will be brought into engagement with the outturned flange 47 of the latch 43, causing the latter to be raised sufficiently to allow the stop 36 to pass the latch arm 45, so that movement of the cylinder may be completed.

As soon as the cylinder moves sufficiently to allow passage of the stop member past the latch arm, the coin drops from the cup and is deposited on a shelf 58.

It will be seen that by so arranging the pivoted chute 54 that a slug, or coin which is lighter than a coin designated to operate the machine, will not be of sufficient weight to tilt the chute on its pivotal mounting and therefore will be delivered into the chute 56 and discharged from the machine, but a coin of the desired denomination, being of sufficient weight, will rock the chute and the coin will be delivered ultimately into a catch cup in such position that on revolving the cylinder it will release the delivery mechanism.

In order to prevent the machine from receiving coins when there are no articles contained within the machine we provide a latch 60 having a neck 61 by which it is pivotally mounted in a slot 62 at the front of the housing, and has an arm 63 extending inwardly into the machine to be engaged by the packages 4 in the casing, and an outer portion 64 overlying the side of the chute 54 having an inturned tooth 65 adapted for projection beneath the said coin chute. When in normal position, or when there are packages contained within the machine the arm 63 is pressed outwardly to rock the latch plate 64 outwardly to allow free piv-

otal movement of the chute, but, should the casing become empty, the arm 63 being free, the latch 64 is allowed to drop down and the tooth 65 projected beneath the chute 54 thus preventing the chute from rocking in its pivotal mounting, so that a coin deposited in the machine is delivered into the chute 56 and returned to the purchaser.

In order to prevent a retrograde movement of the delivery cylinder in either direction and to insure a complete operation before possibility of return, to prevent repetition of a delivery operation on a single coin and to insure the delivery of an article from the machine we provide a latch pawl 70 which is pivotally mounted on the back end plate 35' of the cylinder 22 and has radial movement within a cutout opening 72 in the back plate of the housing 18; the free end of the pawl having an outturned tooth 74 adapted for engaging a rack surface 75 in the back plate and the said latch is of such length that when rocked by engagement with the rack teeth a retrograde movement would cause a flush engagement of the end of the pawl with the rack face and prevent the backward movement until the pawl has been carried completely across the rack.

To permit removal of the coins from the machine we provide the casing at the front with an opening 76 which is closed by a door 77 having inturned edge flanges 78, which fit over outturned flanges 79 about the opening. The door 77 also has a plate 80 secured to its inner face having offset flanges 81—82 at its upper and lower edges; the flange 81 being adapted for seating back of the lower edge of the opening and the upper flange to seat back of a latch lever 83 that is pivoted to the front plate of the housing.

To remove the door 77, the plate 7 is first removed by unlocking the same so that an operator may reach within the machine to raise the latch 81 from the upper edge of the door so that it may be drawn outwardly and the coins removed.

Presuming the parts to be so constructed after removing the front plate 7, the articles to be vended are placed within the housing, so that the packages are superimposed in a double row upon the delivery cylinder 22.

A purchaser when desiring one of the packages places a coin of suitable denomination in the slot 52, the coin being delivered through the chutes 53—54 and 57 and into a cup 39 or 40. The handle 38 is then moved across the housing to revolve the cylinder 22 and a package which is contained in one of the pockets is delivered into the base of the machine and may be removed by the purchaser.

Should a slug or undesirable coin of lesser weight be inserted in the machine, the chute 45 which is properly balanced will not be tilted on its pivotal mounting and the said

slug will be delivered through the chute 56, to the base of the machine, so that a delivery operation will not be effected.

It will also be seen that should the machine become empty the latch arm will be released and the catch tooth will prevent the delivery of a coin to the machine so that a purchaser cannot deposit a coin without receiving an article in return.

Having thus described our invention what we claim as new therein and desire to secure by Letters Patent, is:—

1. A vending machine comprising a housing, a pocketed delivery cylinder rotatably mounted in the housing, movable in either direction through a limited arc and adapted to receive an article therein and deliver an article therefrom by actuation in either direction, coin controlled latch members pivotally mounted on the housing for locking the cylinder when at its opposite limits, coin cups fixed on the cylinder, means for delivering a coin into one of said cups, and means for actuating the cylinder to move the coin into engagement with a locking latch to effect the release of the delivery cylinder.

2. A vending machine comprising a package containing casing, a delivery cylinder rotatably mounted within the casing having oppositely opening peripheral pockets adapted for alternately receiving and delivering packages from the casing, stop members mounted on the said cylinder for limiting its rotatable travel in opposite directions, stop latches adapted for engaging said stops to normally prevent rotation of the delivery cylinder, coin cups mounted on said cylinder, means for delivering coins into said cups, and means for carrying said coins into contact with said stop latches whereby the latter are moved out of contact with the cylinder stop members to permit rotation of the delivery cylinder.

3. A vending machine comprising a casing adapted for containing a double column of superimposed packages, a delivery cylinder revolubly mounted in said casing for supporting said packages and having peripheral pockets opening from opposite faces adapted for alternately receiving and delivering packages from said column, stop members on said cylinder whereby said cylinder is limited in its rotatable movement and positioned for receiving articles from the container within said pockets, stop latches pivotally mounted at opposite sides of said delivery cylinder to engage said stops to normally prevent rotation of the delivery cylinder, coin cups on the said cylinder, means for delivering coins into said cups, and means for carrying said coins into contact with said latches to release said delivery cylinder, for the purpose set forth.

4. A vending machine comprising a casing, having a closed upper compartment for

containing a double column of superimposed packages, and an exteriorly opening lower compartment, a delivery cylinder revolubly mounted within the casing for supporting
5 said column of packages and having peripheral pockets at opposite faces for alternately receiving and delivering packages from the upper into the lower compartment, stop
10 members on said delivery cylinder for limiting said cylinder in its rotatable movement, stop latches pivotally mounted at opposite sides of said cylinder, a spring joining the ends of said latches to normally hold the latter in the path of said stops to prevent a
15 delivery operation of the cylinder, coin cups in said cylinder, a chute for delivering coins into said cups, and means for revolving said cylinder to carry said coins into contact with said stop latches to move the
20 latter from the path of the said stops, for the purpose set forth.

5. In a vending machine, a housing having an arcuate slot therein, a delivery cylinder revolubly mounted within the housing co-
25 axially with said slot, stop members fixed in spaced relation on said cylinder extending through and adapted to move within said slot and to engage opposite ends thereof to limit the movement of said cylinder, latches
30 pivotally mounted on the housing and having stop portions extending within the paths of said cylinder stop members to normally prevent rotation of the delivery

cylinder, coin cups mounted on said cylinder, means for delivering coins into said 35 cups, and means for actuating the cylinder to forward said coins to release the retaining latches to permit a delivery operation of the cylinder.

6. In a vending machine, a housing having 40 an arcuate slot therein, a delivery cylinder revolubly mounted within the housing co-axially with said slot, stop members fixed in spaced relation on said cylinder extending through and adapted to move within said 45 slot and to engage opposite ends thereof to limit the movement of said cylinder, latches pivotally mounted on the housing and having stop portions extending within the paths of said cylinder stop members to normally 50 prevent rotation of the delivery cylinder, open bottom coin cups mounted on said cylinder, a coin supporting flange extending from said housing to underlie the receiving cups when the cylinder is at one 55 of its opposite limits, means for delivering a coin into said cup and into said flange, and means for actuating the cylinder to move the coin into engagement with the adjacent stop
60 latch to release the latch and to deliver the coin from the supporting latch.

In testimony whereof we affix our signatures.

CHARLES A. MELCHERT.
HENRY A. KOHLS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."