Oct. 14, 1947. C. WILDER 2,429,148

COIN ACTUATED RELEASING MECHANISM

Original Filed March 18, 1941 3 Sheets-Sheet 1

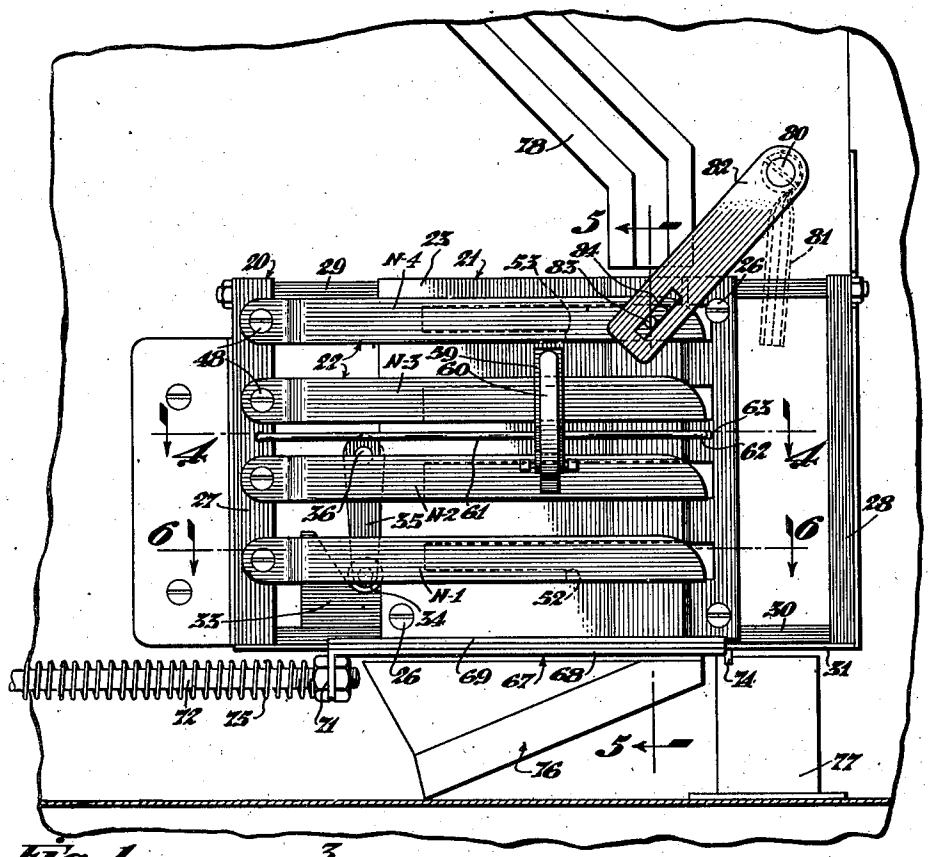



Fig. 1

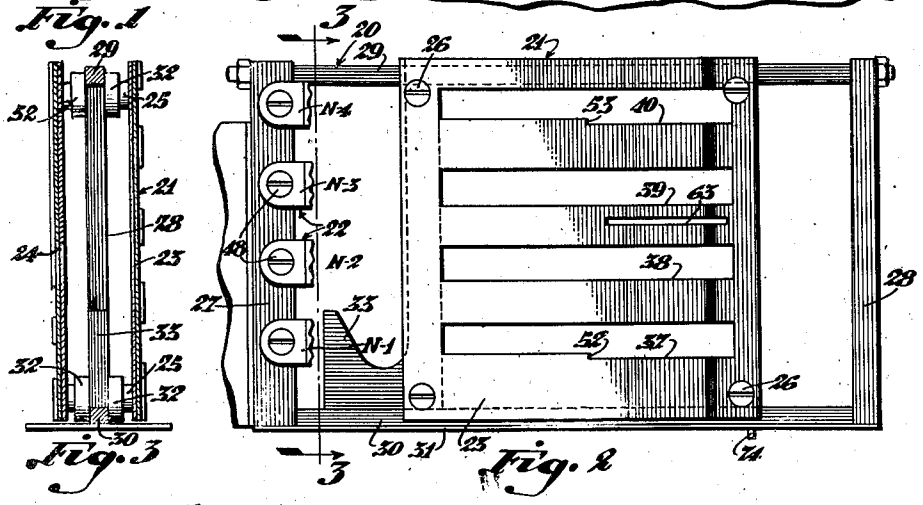



Fig. 3

Fig. 2

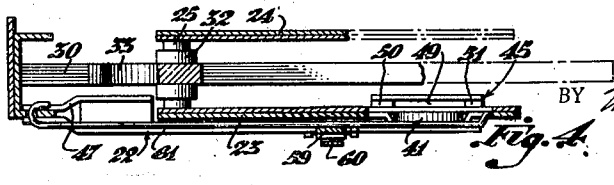



Fig. 4.

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COIN ACTUATED RELEASING MECHANISM

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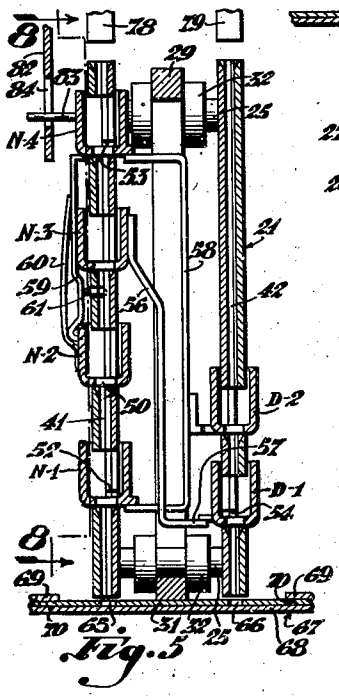


Fig. 5

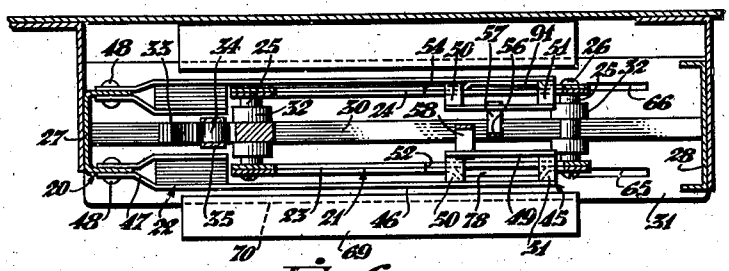


Fig. 6

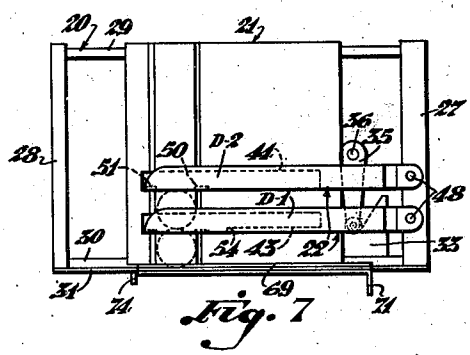


Fig. 7

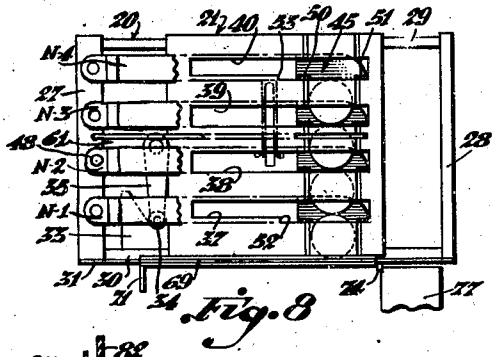


Fig. 8

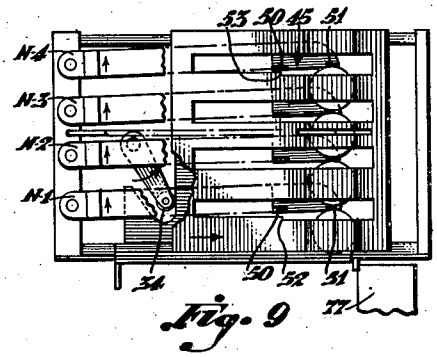


Fig. 9

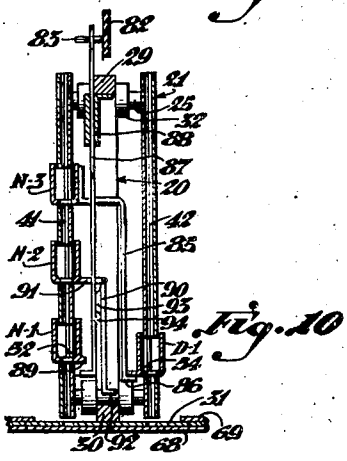


Fig. 10

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COIN ACTUATED RELEASING MECHANISM

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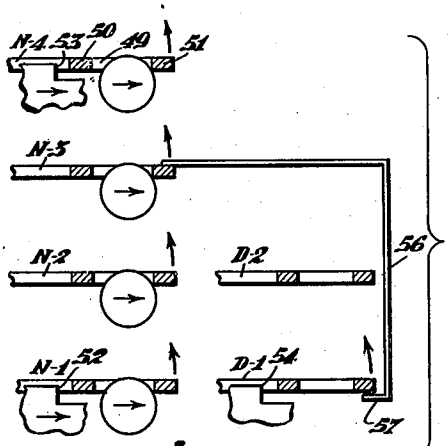



Fig. 11

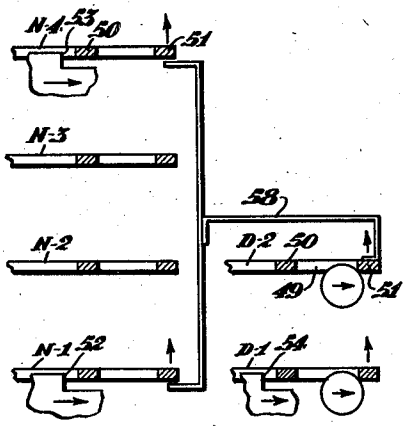



Fig. 12

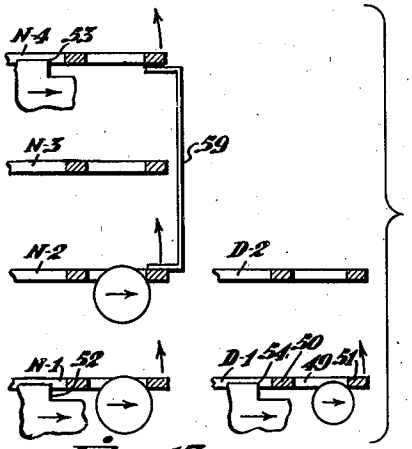



Fig. 13

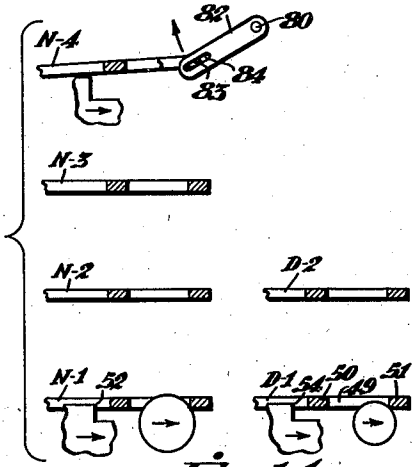



Fig. 14

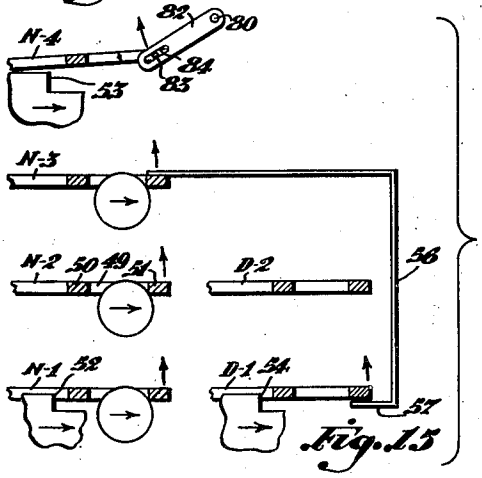



Fig. 15

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Patented Oct. 14, 1947

2,429,148

# UNITED STATES PATENT OFFICE

2,429,148

## COIN ACTUATED RELEASING MECHANISM

Charlton Wilder, Cincinnati, Ohio, assignor of fifty per cent to Albert Price, University City, Mo.

Original application March 18, 1941, Serial No. 383,991, now Patent No. 2,380,093, dated July 10, 1945. Divided and th's application March 29, 1944, Serial No. 528,558

4 Claims. (Cl. 194—55)

1

This invention relates to vending machines of the type adapted to dispense merchandise upon insertion of coins or change. This application is a division of my copending application Serial No. 383,991, filed March 18, 1941, now Patent Number 2,380,093, issued July 10, 1945, entitled Dispensing machine, and it is directed particularly to a coin actuated releasing mechanism which is operable in the pending of articles through various combinations of coins of different value. Throughout the balance of th's specification, operation with nickels and dimes is referred to whereby articles being sold at twenty cents may be purchased through insertion of two dimes, four nickels, or two nickels and one dime, while articles being sold in the same machine at fifteen cents are vended upon insertion of three nickels or one nickel and one dime. It is to be understood, however, that this reference to coins and prices is illustrative only, and that the apparatus may be constructed to operate in similar manner on coins of other value.

The device is intended for use in cooperation with a vending and ejecting machine which normally is locked and which is released only after coins of a suitable value in various combinations have been inserted into the coin actuated releasing mechanism herein disclosed. One typical vending mechanism with which the present apparatus may be used is disclosed in the aforesaid parent application.

Briefly, the present mechanism is a device for totalizing coin diameters in which a plurality of fingers for accumulating the measured coin diameters is utilized. These fingers are divided into groups, one for coins of a given value, others for coins of a different value and different diameter. The fingers are liftable by cams which are arranged to engage the coin peripheries and the fingers for the coins of different value are interconnected with one another for release of the mechanism only when coins of a predetermined total value have been inserted.

Normally the fingers of the mechanism lock it against releasing movements. However, when all of the fingers or certain of them are lifted, a releasing action is obtained through which the dispensing mechanism of the machine is unlatched and the purchaser is enable to operate it. There are further features and advantages of the present mechanism shown in the drawings in which a preferred embodiment of the improvement is illustrated, and in the following specification in which the structure of the drawings is described in detail.

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In the drawings:

Figure 1 is a side view of the coin released lock.

Figure 2 is a side view of the lock similar to Figure 1 but with some of the bars broken away to show the carriage.

Figure 3 is a sectional view taken on the line 3—3 of Figure 2 further illustrating the slide carriage.

Figure 4 is a fragmentary view taken on the line 4—4 of Figure 1.

Figure 5 is a sectional elevation taken on the line 5—5 of Figure 1 showing the arrangement of the link elements for the bars.

Figure 6 is a horizontal sectional view taken on the line 6—6 of Figure 1.

Figure 7 is a side view of the lock showing the dime side of the mechanism.

Figure 8 is a view similar to Figure 1 with the carriage in the forward or locked position showing coins of a smaller value, for example nickels, in operating position.

Figure 9 is a view similar to Figure 8 showing the carriage moved rearwardly and thus unlocked.

Figure 10 is a sectional view similar to Figure 5 showing a modified form of the lock.

Figure 11 is a diagrammatic view illustrating the interlinkage of the latch fingers for twenty-cent operation, for example, with four nickels.

Figure 12 is a diagrammatic view illustrating operation similar to that disclosed in Figure 11 but with only two coins each of twice the value, for instance twenty-cent operation with two dimes.

Figure 13 is a diagrammatic view showing operation with two coins each of smaller value and one coin twice their value, for example, twenty-cent operation with two nickels and one dime.

Figure 14 is a diagrammatic view illustrating a modified form of operation with one coin of smaller value and one coin of larger value, for instance, fifteen-cent operation with one nickel and one dime.

Figure 15 is a diagrammatic view showing an operation similar to Figure 14 with three coins of smaller value, for example, fifteen-cent operation with three nickels.

In general, the coin actuated release is comprised of a stationary member and a movable member. There are a series of latches, one or all of which prevents movement of the movable member with respect to the stationary member until they are released. The coins are stacked upon one another in the mechanism, and, as previously described, the peripheries of the coins

are utilized to lift fingers which release the latches.

In the preferred structure there are three latches: two of these are operable by nickels, the other by a dime, and the latch-releasing fingers are arranged to totalize the coin diameters. However, to accommodate different combinations of coins, making up, say, a total of twenty cents, the latch fingers at the nickel and dime sides of the mechanism are cross connected so that a dime may exert the equivalent function of two nickels in latch-releasing at the nickel side, and two nickels may exert the equivalent latching-releasing function of a dime at the dime side of the machine.

The latching mechanism is adapted to be fastened to an inner wall at one side of a package dispensing machine on appropriate brackets. In the instance shown, the mechanism is positioned at the right hand side of the machine. It is believed that specific installation of the mechanism, in relation to the operating mechanism of any dispensing machine to which the latch is adaptable, will be readily apparent to those skilled in the art.

The mechanism comprises, generally, a frame **20**, a slide carriage **21** which is slidable on the frame, and a plurality of latch fingers or bars **22** pivotally journalled at their forward ends on the frame. The slide carriage **21** comprises two side members **23** and **24** formed in each instance by a pair of plates. The slide carriage is preferably rectangular in shape and the two side members are fixed in spaced relationship at the four corners thereof by four spacer elements **25** secured to the side members by bolts **26**.

The frame of the latch mechanism comprises two vertical end channels **27** and **28**, one at each end, two horizontal guide bars **29** and **30**, at the top and bottom, and a base plate **31**. The upper guide bar **29** is threaded at both ends and is held to the two end channels by appropriate nuts. The lower guide bar **30** may be fixed to the base plate **31** and to the two end channels **27—28** by welding, bolts, or other means.

The carriage is slidably mounted between the upper and lower guide bars **29** and **30** on the spacer elements **25**. The spacer elements are short stub shafts, each having a pair of collars **32—32** which straddle the guide bars. A cam plate **33** is fixed at the forward end of the slide carriage. The cam plate is disposed centrally of the two side members **23** and **24** and is fixed to the carriage on the forward pair of spacer elements **25**. The lower edge of the cam plate **33** may ride on the lower guide bar **30**.

Cam plate **33** is adapted to be engaged by a roller **34** rotatively journalled in the end of a swingable arm **35**. The swingable arm **35** is in turn keyed to the end of a rod **36**. When the slide carriage is unlatched, it is free to be moved by the arm **35**. The cam surface of the plate **33** is of U shape so that the reverse movement of the swingable arm will return the slide carriage to the "lock closed" position. In the copending application, Serial No. 383,991, filed March 18, 1941, by the present inventor, the connection of the swingable arm **35** with a package dispensing mechanism through the rod **36** is disclosed. Thus, rod **36**, as shown in that application, comprises the axle of a lock bar which extends longitudinally of the vending machine in front of a plurality of dispensing carriages to act as a gate. When the lock plate is in the upright position, the swingable arm **35** is in the position shown in Figure 1; that is, locked. In this position, the lock bar blocks withdrawal of any one of the dispensing carriages. When the slide carriage is unlatched and free to move, the lock bar is free to be swung out of the way by withdrawal of one of the carriages. After the dispensing carriage is returned to its inward position, the lock bar, and consequently the slide carriage, since they are interconnected by the swingable arm **35**, may be returned to the locked position by appropriate springs or a counterbalance.



For illustrative purposes, the two side members **23** and **24** of the slide carriage will be termed "nickel" and "dime" sides respectively. The nickel side **23** is best shown in Figure 2. The nickel side has four longitudinal slots cut through it. These slots, from bottom to top, are designated as **37**, **38**, **39** and **40** respectively.

Toward the back edge of the nickel side member, the outer plate of the two comprising the side member **23** is bent outwardly to constitute a vertical chute **41** running from the top to the bottom of the member. This chute **41** is only large enough to permit a nickel to pass through and allow enough clearance to prevent jamming. The other side member **24** of the carriage is similarly configurated providing a dime chute as at **42**, but in this instance, there are only two longitudinal slots **43** and **44**.

A latch finger **22** is installed in each of the longitudinal slots. Each latch finger comprises a U- or channel-shaped head piece **45**, one wall of which is extended forwardly constituting an arm **46** which terminates in a fork **47**. The fork of each latch finger straddles a side wall of the forward vertical end channel **27** and is pivotally journalled thereon as at **48**.

The bottom of each latch finger at the head **45** of its channelled portion, is cut out intermediate the ends thereof to provide a slot **49**, leaving two marginal strips **50** and **51** at the forward and rear edges. The latch fingers are installed so that the slots **49** are aligned with the vertical coin chutes **41**, on the nickel side, and **42**, on the dime side, when the slide carriage **21** is in the forward or locked position. At this time, the head pieces **45** rest on the bottom edge of the respective longitudinal slots.

The nickel side latch fingers are opposites of those at the dime side of the unit; that is, the arms **46** of both the nickel and the dime bars extend along the outside of the side members **23** and **24** and the head pieces extend toward each other into the respective longitudinal slots. For reference purposes, the latch fingers will be indicated at N—1, N—2, N—3, and N—4 from bottom to top on the nickel side, and D—1 and D—2 from bottom to top on the dime side.

On the nickel side of the slide carriage, it will be noted that the lowermost longitudinal slot **37** and the uppermost longitudinal slot **40** are provided with shoulders **52** and **53**, respectively, in their lower edges intermediate the ends thereof. On the dime side a similar shoulder **54** is provided in the lowermost slot **43** only. These three shoulders **52**, **53** and **54** constitute the lock elements of the latch mechanism. The shoulders are forwardly of the head pieces of the latch fingers. With all or any one of the three latch fingers N—1, N—4 or D—1 resting on the lower edges of their respective longitudinal slots, upon slight rearward movement of the slide carriage the shoulders abut the marginal strips **50** of the head pieces and lock the slide carriage against substantial rearward movement. Therefore, to un-

lock the slide carriage so that it is free to be moved completely rearwardly, it is necessary for all three of the latch bars N—1, N—4 and D—1 to be raised above the level of the shoulders 52, 53 and 54.

The present inventor has provided links between the various latch fingers. By this arrangement, different combinations of coins have equivalent functions in unlatching the three locks constituted by the three shoulders 52, 53 and 54. Three links are provided. A link 56 is fixed to the head of latch finger N—3 and extends downwardly to carry a foot 57 which engages under the head of latch finger D—1. Therefore, when latch finger N—3 is lifted, finger D—1 is also lifted (Figure 11). A link 58 is fixed to the head of latch finger D—2 and extends into liftable engagement with latch finger N—1 and finger N—4. Therefore, when latch finger D—2 is lifted, fingers N—1 and N—4 are also lifted (Figure 12). A link 59, journalled on the head of latch finger N—2, extends upwardly and is turned over at its upper end to liftably engage the head of latch finger N—4. Therefore, when finger N—2 is lifted, finger N—4 is also lifted (Figure 13). Link 59 is pivotally journalled on latch finger N—2 and is urged inwardly for engagement with the latch bar N—4 by a leaf spring 60. The leaf spring is fastened to the latch bar N—2 below the pivot for the link 59 and extends upwardly on the outside of the link, then inwardly to engage the link near its upper end.

The link 59 is effective only when less than three nickels are utilized. When a third nickel is in the vertical coin chute 41, a lock-out rod 61 is actuated to swing the pivoted link outwardly against the pressure of spring 60. This lock-out rod 61 is secured to the forward vertical end channel 27 and extends horizontally across the face of the side member 23 between the latch bars N—2 and N—3 behind the link 59 (Figure 1). The rod 61 terminates just to the rear of the vertical slot 41 and is bent inwardly at 62 into a slot 63 which runs parallel to and between the longitudinal slots 38 and 39. The end 62 of the rod 61 that extends into the slot 63 constitutes a cam. When the slide carriage 21 is moved inwardly slightly, the cam 62 extends into the vertical coin chute 41 (Figure 4), and when a third nickel is in the chute, the cam is engaged by it and the rod is moved outwardly, thus locking out the rod 61 and disengaging the link 59.

Two slots 65 and 66 are cut through the base plate 31; these provide discharge passages for the respective coins through the base plate and extend longitudinally in a line with the vertical coin chutes over the length of their horizontal travel. At the forward end of the slots 65 and 66 the passage through the slots is blocked by a coin release member 67 comprising a bottom plate 68 which lies flatly against the lower face of the base plate 31, and marginal bracket strips 69—69 which engage the side edges of the base plate 31 to provide guide channels 70—70 for sustaining the plate 68 in sliding relationship therewith. Normally, the coin release 67 is in the forward position shown in Figure 1; that is, the coin discharge openings 65—66 are blocked by the slidable release plate.

A flange 71 is turned down from the forward edge of the plate 68 and is engaged by a rod 72, the end of which is threaded to carry two nuts for locking the flange between them. The forward end of the rod 72 may extend through an appropriate aperture in the front of the housing



cabinet (not shown) and have a knob pinned thereto so that it can be grasped. The release plate is held at its inward position, against stop pins 74, by a spring 75 around the rod 72 positioned between the flange 71 and the front wall of the cabinet. To release the coins from the vertical chutes without operating the dispensing mechanism, the operator pulls out on the rod 72, moving the plate 68 out from under the chutes. The coins then fall through the slots 65 and 66 into a slide, indicated generally at 76, which communicates with the delivery tray (not shown) at the front of the housing cabinet to return the coins to the operator.

To the rear of the coin release plate 68 beneath the ends of the coin slots 65 and 66 in the base plate 31, a coin chute 77 is provided which communicates with a coin collection box (not shown). Therefore, when the carriage is released and then moved rearwardly, the coins in the vertical coin chutes 41 and 42 are moved off the support provided by the coin release plate 68 and fall into the chutes communicating with the coin collection box.

The coin chutes, by which the coins reach the latching device from the conventional openings (not shown) at the front of the machine, in which the coins are inserted by the purchaser, and a coin testing device, installed in these chutes, for detecting slugs and counterfeit coins, are not shown here since their construction and use are well known in the art. The ends of the nickel and dime chutes are shown only fragmentarily at 78 and 79 respectively. They are positioned above the vertical coin chutes in the slide carriage when it is in the forward or locked position.

The latch mechanism, shown in Figures 1 to 9, is adapted to operate on all possible combinations of coins for either twenty-cent or fifteen-cent packages. The latch operates in the following way: When the operator pulls out on one of the package delivery carriages, the lock bar rod 36 is rotated. This moves the swingable arm 35 to push the latch slide carriage inwardly. If no coins are in the vertical coin chutes 41 and 42 when the slide carriage moves in slightly, the shoulders 52 and 53 on the nickel side and 54 on the dime side abut the forward edges of the marginal strips 50 of the respective head pieces 45 of the latch fingers and the slide carriage is locked against dispensing movement.

When the proper number of coins is inserted, the following takes place: In twenty-cent operation with four nickels, the nickel side of the carriage is the only one used. The operation with these four coins is shown diagrammatically in Figure 11. The four nickels come into the vertical chute 41 and stack up one above the other. The nickel latch fingers are so spaced that as the slide carriage is moved rearwardly, the forward edge of the marginal strip 51 on each head piece 45 engages the periphery of the coin adjacent it, substantially above the center thereof, and rides up on it lifting the latch finger; thus, all nickel latch fingers are lifted, and the shoulders 52 and 53 in the longitudinal slots 37 and 40 are cleared by the respective marginal strips 50. The four nickels, therefore, unlatch the two locking shoulders 52 and 53. The remaining locking shoulder 54 in the lower longitudinal slot 43 on the dime side is freed by the link 56 which is fixed to the head of latch bar N—3 and extends under latch D—1. Consequently, when latch bar N—3 is moved up by the third nickel,

latch bar D—1 also is lifted, clearing the shoulder 54.

When all three latch shoulders are cleared by the respective movable latch members, the slide carriage can be moved rearwardly as far as the swingable arm 35 will permit. At the end of its movement, the coins in the vertical slots, being beyond the end of the latch bars and being beyond the end of the coin release plate 68, fall from the vertical chutes through the slot 65 and into the collection box.

Upon insertion of the two dimes, the operation is as follows: (Figure 12) The first dime causes latch bar D—1 to be lifted in the manner previously described. The upper dime latch bar D—2 is lifted by the second dime. Lock shoulders 52 and 53, are locked by fingers N—1 and N—4. These fingers are lifted by the link 58 which is fixed to the head of latch bar D—2 and extends into engagement with them. Thus, lifting finger D—2 raises fingers N—1 and N—4. Therefore, the first dime frees shoulder 54 on the dime side and the second dime, through the link 58, frees the two shoulders 52 and 53 on the nickel side.

The operation on one dime and two nickels is as follows: (Figure 13) The first dime is positioned to lift latch finger D—1 and thereby free shoulder 54 when the carriage is moved. The first nickel is positioned to lift finger N—1 and free shoulder 52. The second nickel lifts latch finger N—2 and consequently lifts finger N—4 through link 59, thereby freeing shoulder 53.

The latch mechanism is also adapted for operation on fifteen cents. The means for adapting the mechanism to fifteen-cent operation is disclosed and claimed in the above-mentioned copending application, Serial No. 383,991, filed March 18, 1941. The adaptation is simple and it is believed that it will be understood from the following description. On those delivery carriages which are to be utilized to dispense fifteen-cent packages, a round-headed bolt is fixed. The bolt extends at right angles from the side of the delivery carriage at the rear thereof. A shaft 80, extending the length of the casing, journalled in the end walls thereof, carries a number of downwardly extended fingers. One of these fingers is shown in dotted lines in Figure 1 at 81. Each finger 81 depends from the shaft to the right of the carriage in front of the bolt. When the delivery carriage is withdrawn slightly, the finger is engaged and the shaft is rotated.

The shaft 80 extends through the right wall of the casing and carries an arm 82 (Figure 1) pinned to the extended end thereof. A pin 83 fixed to the head of latch bar N—4 extends at right angles from the outer wall of the head pin and is engaged in a slot 84 in the arm 82. The arm 82 projects forwardly from the shaft 80 to the pin 83, and, therefore, when a bolt on one of the dispensing carriages swings one of the downwardly extended fingers 81 forwardly, the latch bar N—4 is lifted (Figure 1). Preferably, one of the downwardly extended fingers is provided for each fifteen-cent carriage; the installation of a bolt then adapts any one of the dispensing units for fifteen-cent operation.

It is only necessary for the arm 82 to remain up long enough for the slide carriage to be moved rearwardly for the shoulder 53 to clear the latch bar N—4. Fingers 81 are V-shaped with the inclined surfaces of the V engageable by the rounded head of the bolt carried on the dispensing carriage. The shaft 80 is cushioned by a



spring which surrounds the shaft and has its one end abutting the wall of the casing and a collar on the shaft. The movement of the shaft is limited by a second collar which abuts the opposite wall of the casing. The shaft 80 has sufficient longitudinal play to permit the bolt to move past the finger after swinging it enough to clear the latch bar N—4 of the shoulder 53. On the return stroke of the delivery carriage, if the fingers 81 do not return by their own weight, the bolt returns them and snaps by them when the limit of the travel of the fingers is reached to lie behind them ready for the next operation.

On three nickels the fifteen-cent operation is as follows: (Figure 15) the first nickel lifts latch finger N—1 freeing shoulder 52. The third nickel lifts latch finger N—3 and, through the link 56, lifts latch bar D—1 freeing shoulder 54. The latch finger N—4 is lifted by the arm 82 as described above.

It will be noted that the second nickel, in lifting latch bar N—2, also lifts the link 58; but, since a third nickel is in the vertical chute 41 at this time, the lock-out rod 61 is moved to disengage the link 59 from the latch finger N—4. The lock-out rod 61 is utilized to lock out the latch finger N—2 from its connection with latch finger N—4 so that the twenty-cent packages cannot be dispensed on three nickels. If the lock-out were not provided, the first nickel would free latch finger N—1 from shoulder 52, the second nickel would free latch finger N—4 from shoulder 53 through link 59, and the third nickel would free finger D—1 from shoulder 54 through link 56.

Fifteen-cent operation on one dime and one nickel is as follows: (Figure 14) The first dime frees latch finger D—1 from shoulder 54, the first nickel frees latch finger N—1 from shoulder 52, and the latch finger N—4 is freed from shoulder 53 by the arm 82 as outlined above.

As a modification, a latch may be arranged for operation on ten or fifteen cents. This modification is shown in Figure 10. It will be noted that it is identical to the twenty-cent latch with the exceptions that the latch bars N—4 and D—2 are omitted and that different linkages between the latch bars are provided.

Fifteen-cent operation on three nickels is as follows: The first nickel is positioned to lift latch finger N—1, thus freeing shoulder 52. Shoulder 54 is likewise freed by the third nickel through a link 85 attached to the latch finger N—3 and engaged under a flange 86 on the head of latch bar D—1. Operation of the carriage upon insertion of a dime and a nickel causes the two bottom fingers N—1 and D—1 to be lifted to free the respective shoulders 52 and 54.

Operation on ten cents in this modified form is similar to operation on fifteen cents in the latch shown in Figures 1 to 9 in that the arm 82 is utilized. The same arrangement of the shaft 80, fingers 81 and round-headed bolts is utilized for the delivery carriages carrying ten-cent packages. In this instance, the arm 82 lifts a link bar 87 when a delivery carriage carrying a bolt is withdrawn. The link 87 is slidably journaled in a guide block 88 fixed to the upper guide bar 29 and depends between the side members 23—24 of the carriage where it is bent over at the lower end to liftably engage a flange 89 on the head of latch finger N—1. When the link 87 is lifted, the latch finger N—1 is also lifted. A swinging link 90 is pivotally journalled at the end of an arm 91 fixed to the head of latch finger N—2. The free end of the swinging link 90 is bent over to

provide a foot 92. Near the upper end of the swinging link 90 a raised portion on the arm provides a cam 93. A similar cam 94 at the side of the link bar 87 is adapted to engage with the cam 93 when the link bar 87 is raised to swing the link 90 to engage the foot 92 under the head of the latch finger D—1. The foot 92, as shown, is long enough and the cams 93 and 94 long enough so that as the latch finger N—2 is raised, the end of the foot 92 remains under the head of the latch finger D—1. When the link bar 87 is lowered again after a dispensing operation, the swinging link disengages from latch finger D—1 by its own weight, or a spring may be provided.

For operation on two nickels, the link bar 87 is raised by the arm 82 as described above. This raises the latch finger N—1 and engages the foot 92 on the swinging link 90 under the head of latch finger D—1. The second nickel, therefore, in raising latch finger N—2 also raises latch finger D—1 through the link 90. For ten-cent operation on one dime the latch finger D—1 is lifted, freeing shoulder 54 while the link bar 87 raises latch bar N—1 to free shoulder 52.

Having described my invention, I claim:

1. A coin actuated release mechanism comprising a stationary member, a movable member, a chute for containing coins of one denomination, a second chute for containing coins of another denomination, said chutes being disposed on opposite sides of said movable member adjacent one end thereof in side by side relationship, a plurality of fingers pivoted to said stationary member relatively at the end of said movable member opposite said chutes, said fingers constituting latches for restraining movement of said movable member with respect to said stationary member, said fingers being adapted to engage the peripheries of coins contained within said chutes so as to be lifted thereby to unlatching positions upon movement of said movable member, means for interconnecting the fingers for engaging the coins in one chute with the fingers for engaging the coins in the other chute, in such manner that a coin of one denomination in one chute can lift the fingers which otherwise would be lifted by coins of an equivalent total value in the other chute, gate means at the bottom of said chutes for supporting the coins therein, and means for opening said gate means to effect removal of the coins from the chutes prior to latch releasing operation.

2. A coin controlled release mechanism, comprising a track, an operating carriage adapted to be moved along said track, said carriage including vertically disposed coin slots arranged at opposite sides of said track in side by side relationship adjacent one end of said operating carriage, each slot adapted to receive and stack coins of a different denomination, a series of superposed fingers for each coin slot, said fingers being pivotally mounted in cooperative relation to said track and carriage, said fingers being arranged in sets, one set for each coin slot, each finger constituting a latch for holding said operating carriage against movement, and all fingers being positioned to engage the peripheries of coins in said slots so as to be lifted thereby to unlatching positions upon movement of said carriage, means for interconnecting the fingers for engaging coins in one chute with the fingers for engaging coins in the other chute, in such manner that a coin of one denomination in one chute can lift the fingers which otherwise would be lifted by coins of an equivalent total value in the other chute, whereby the movement to unlatching position of all of the fingers in either group by coins in said coin slots is effective for effecting total release of said carriage.



3. A coin controlled release mechanism comprising a track, an operating carriage adapted to be moved along said track, said carriage including vertically disposed coin slots arranged at opposite sides of said track in side by side relationship adjacent one end of said carriage, each of said slots being adapted to receive coins of a denomination different from the other, a series of locking elements pivotally mounted on said track adjacent the opposite end of said operating carriage from said coin slots and extending toward said coin slots for operation thereby of coins in said slots, said locking elements having a multiple locking action on the carriage, each locking element being effective either through its own movement or interconnected movement with another locking element for releasing the carriage when coins aggregating a predetermined total are inserted in the slots.

4. A coin actuated release mechanism which comprises a frame, a carriage slidable within the frame and including means constituting a pair of coin chutes arranged in side by side relationship adjacent one end of said frame, one of said chutes being adapted to receive coins of a given denomination, and the other of the chutes being adapted to receive coins of a different denomination, a set of fingers arranged to ride upon the peripheries of coins stacked in one of the chutes, another set of fingers arranged to ride upon the peripheries of coins stacked in the other of said chutes, said fingers being pivoted to said frame at the end thereof opposite said coin chutes, said fingers constituting latches having a multiple latching action on said carriage and movable through riding engagement of coins in said chutes to unlatching positions for effecting release of said carriage upon insertion in said chutes of coins aggregating a predetermined total.

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