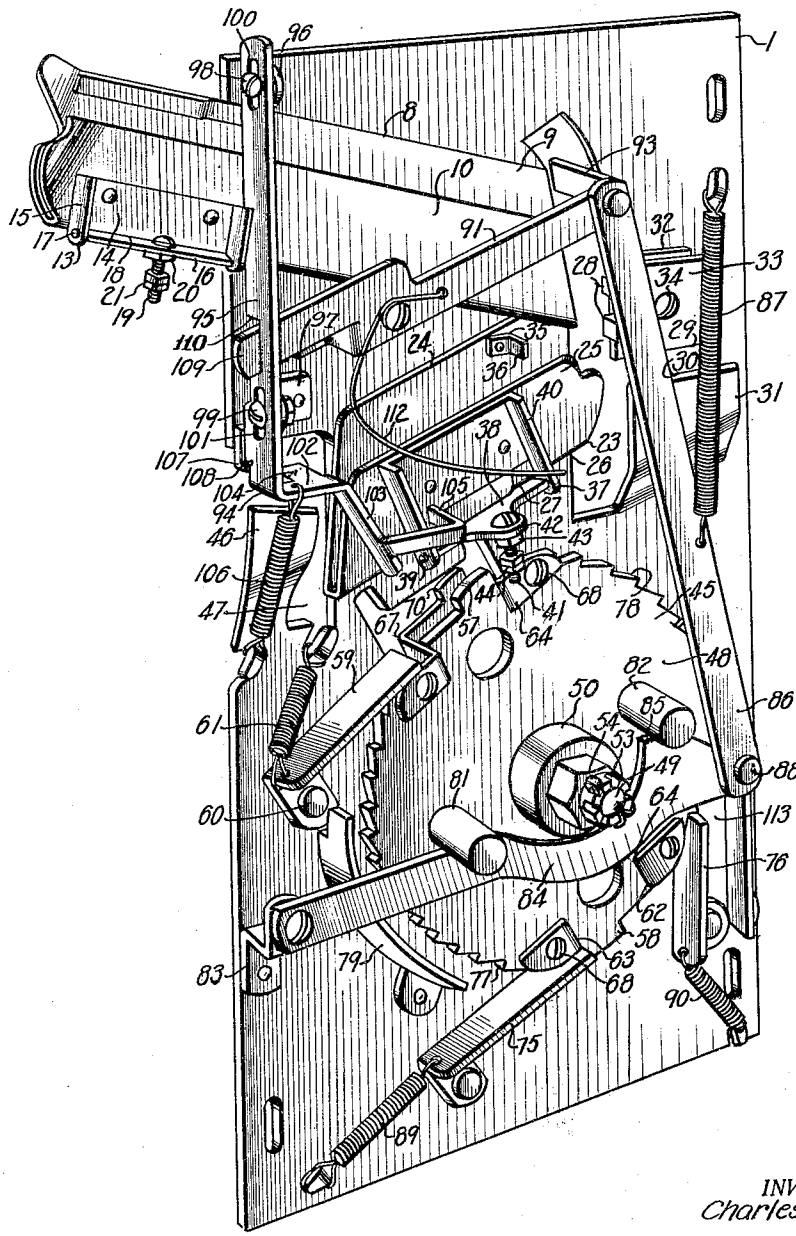
Aug. 16, 1932. C. A. MELCHERT 1,871,901

COIN MECHANISM FOR VENDING MACHINES

Filed April 2, 1931 4 Sheets-Sheet 1

Fig. 1.



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COIN MECHANISM FOR VENDING MACHINES

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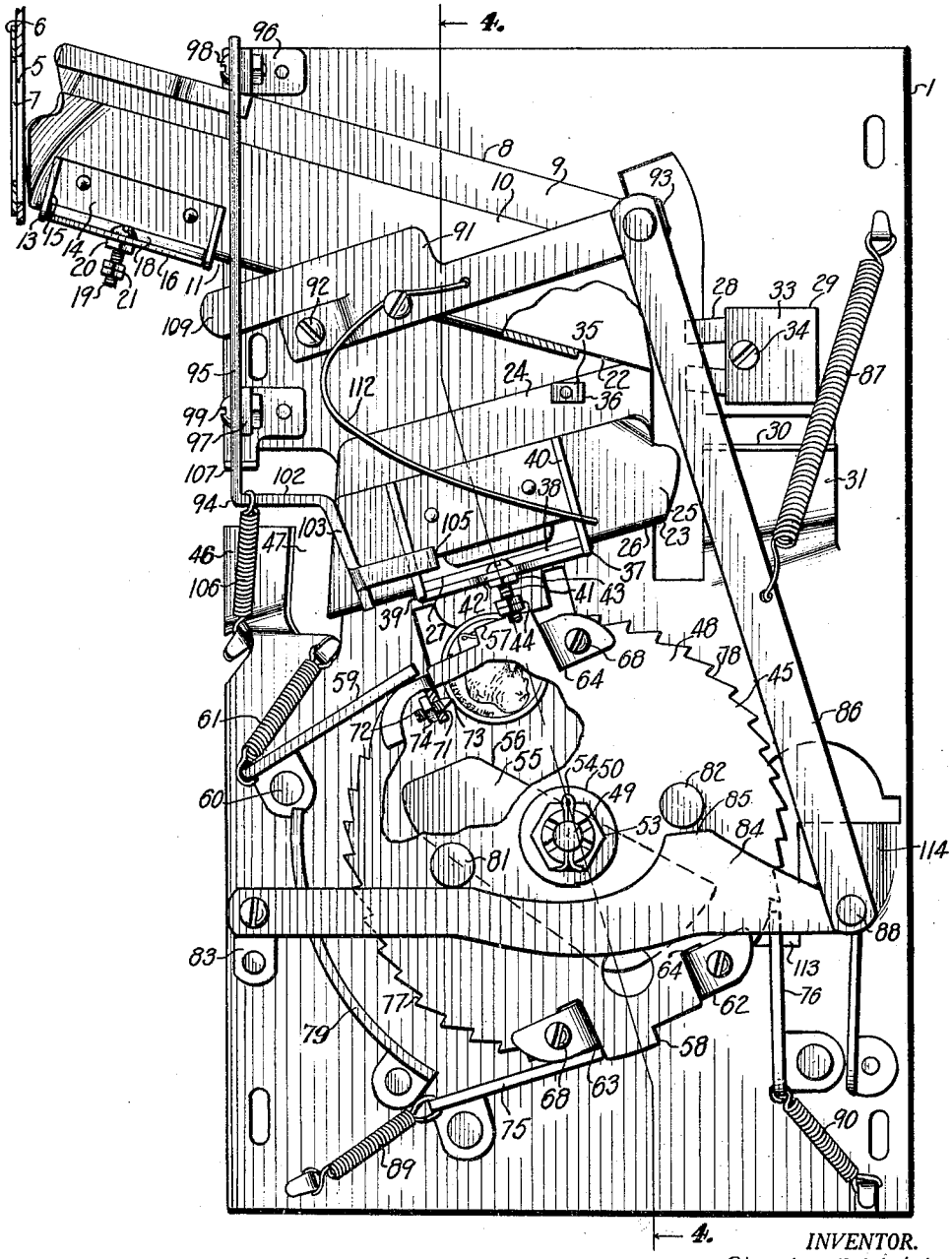
Fig. 2.



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COIN MECHANISM FOR VENDING MACHINES

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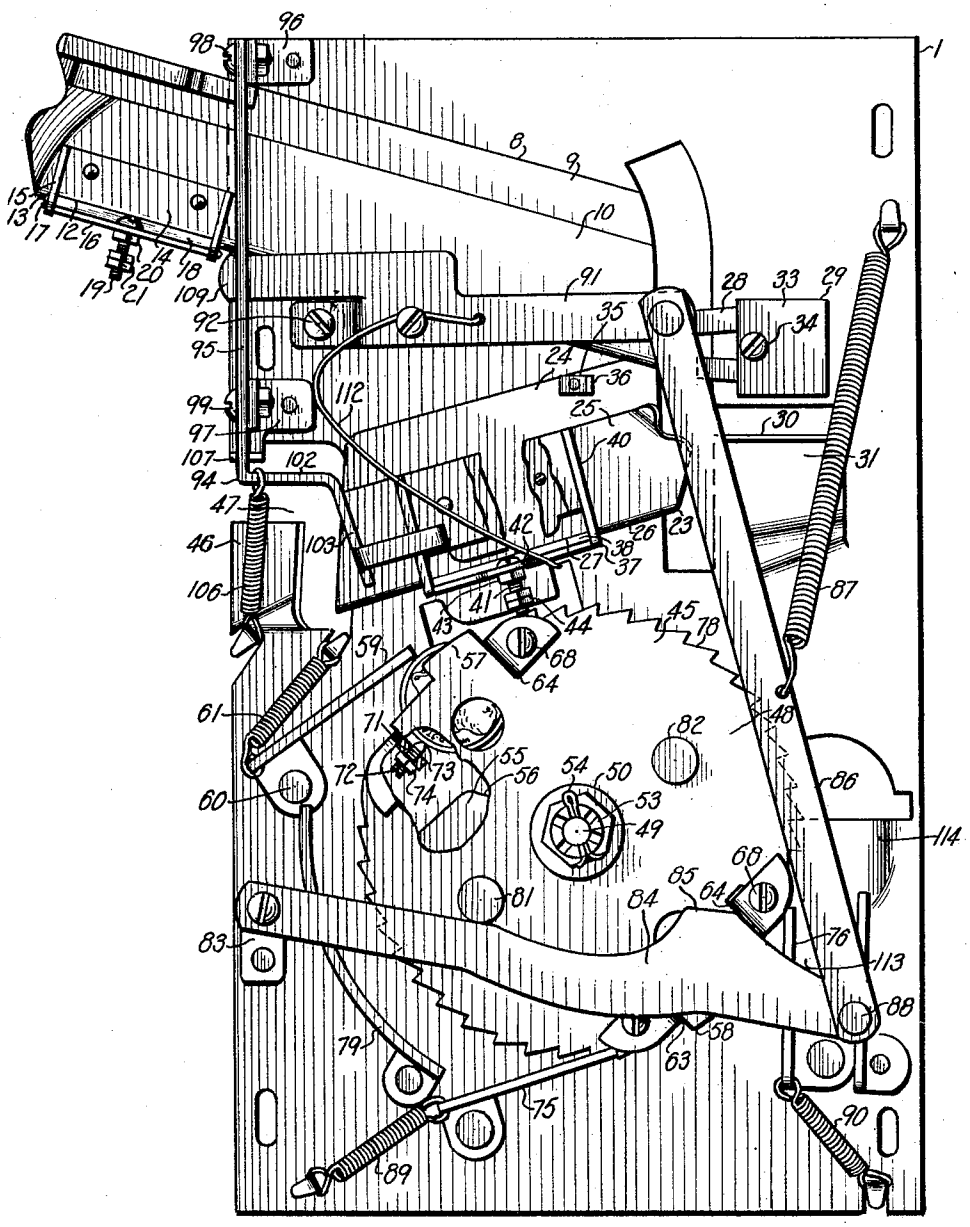
Fig. 3.



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COIN MECHANISM FOR VENDING MACHINES

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Fig. 4.

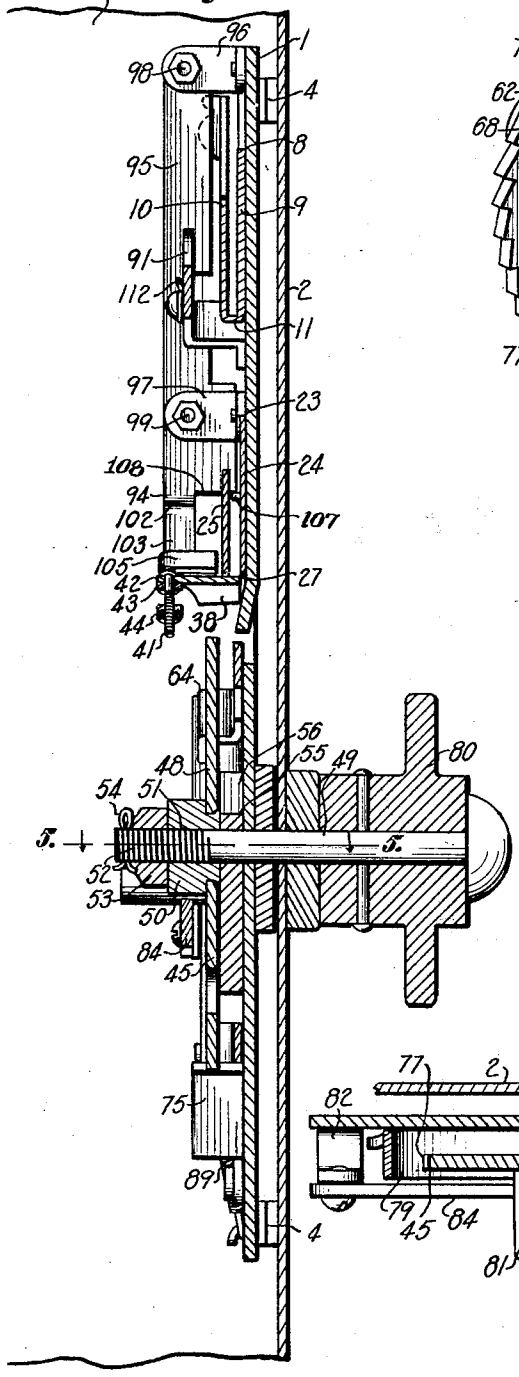


Fig. 6.

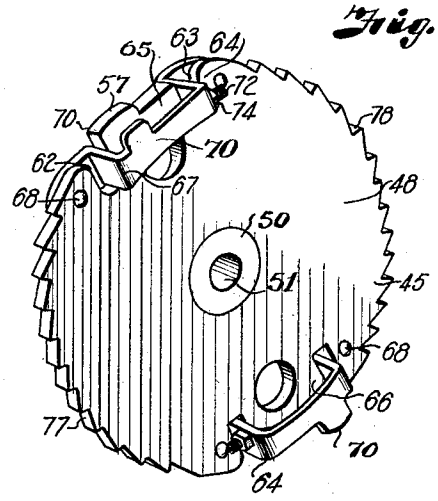


Fig. 7.

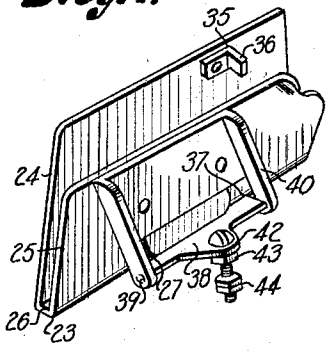
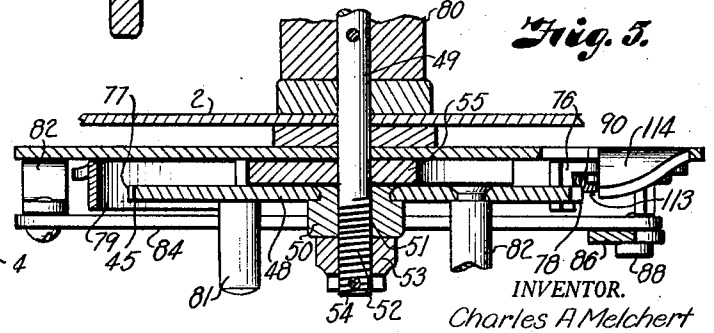


Fig. 5.



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Patented Aug. 16, 1932

1,871,901

UNITED STATES PATENT OFFICE

CHARLES A. MELCHERT, OF KANSAS CITY, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO ARCHIE O. LONG, OF KANSAS CITY, MISSOURI

COIN MECHANISM FOR VENDING MACHINES

Application filed April 2, 1931. Serial No. 527,116.

This invention relates to a coin-controlled mechanism for vending and like machines and more particularly to a mechanism for ejecting spurious coins, slugs, and tokens, the principal objects of the invention being to provide for the ejection of slugs that may have the same dimensions as the coins for which the machine is adapted but are of different weight, to eject slugs composed of material capable of being magnetized, to eject coins and slugs that may have the same weight as the coin for which the machine is set but which are of different dimensions and to provide means for preventing spurious coins from operating the coin-controlled mechanism by vibration produced by shaking or pounding on the machine.

It is also an object of the invention to provide for automatically clearing the coin passageways of spurious coins that may become lodged therein.

In accomplishing these and other objects of the invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a coin mechanism embodying my invention.

Fig. 2 is a side elevational view of the mechanism illustrating a coin entering the coin-controlled ratchet wheel.

Fig. 3 is a similar view illustrating partial actuation of the coin-controlled mechanism and showing actuation of the clearing means for clearing the coin passageway adjacent the magnet.

Fig. 4 is a longitudinal vertical central section through the mechanism illustrating the coin-controlled ratchet wheel and its operating knob.

Fig. 5 is a horizontal sectional view on the line 5—5, Fig. 4.

Fig. 6 is a detail perspective view of the coin-controlled ratchet wheel illustrating the coin-receiving pockets.

Fig. 7 is a detail perspective view of the coin chute carrying the weighing device for ejecting coins and slugs lighter than the ones required to operate the machine.

Referring more in detail to the drawings:

The mechanism constituting my invention is supported on a rectangular plate 1 which is mounted in vertical position adjacent an inner wall 2 of a vending machine case 3, the plate being secured to the wall of the casing by spacing brackets 4 attached to the plate 1 as illustrated in Fig. 4.

Formed in the casing of the machine is a slotted opening 5 and superimposed thereover is a plate 6 having a slotted opening 7 of a size to snugly pass the desired coin for which the control mechanism is set.

Fixed on the face of the plate 1 and inclined downwardly from the opening 5 to substantially the vertical median line of the plate is a coin chute 8 comprising a plate having its lower edge bent outwardly and then upwardly to provide side walls 9 and 10 and a bottom wall 11.

Formed in the bottom wall 11 and extending longitudinally thereof is a slotted opening 12 for receiving a weighing device 13 which is set to eject coins through the opening 12 that are heavier than those intended to permit operation of the coin controlled mechanism.

The weighing device 13 includes a bracket 14 secured to the outer wall of the chute and having spaced ears 15 forming bearing brackets for supporting a pivoted leaf 16 extending substantially horizontally across and normally closing the opening 12, the ends of the plate being provided with suitable trunnions 17 received in apertures in the brackets.

In order to adjust the plate to function and eject certain weight coins, it is provided with an outwardly extending portion 18 carrying a balancing weight 19 which normally retains the leaf in position to close the opening 12. The weight 19 may comprise a screw inserted through an opening in the leaf and is retained by a nut 20 threaded onto the depending end thereof.

A plurality of nuts 21 are also applied to the depending end of the screw to form an adjustment by which the weighing device is regulated to counterbalance the weight of

the correct coin that is inserted through the opening 5. Thus it is apparent that by regulating the position of the nuts 21 on the depending end of the screw, the weighing device, consisting of the pivotal leaf 12, may be adjusted to counterbalance the weight of any desired coin so that coins heavier than the ones desired may rock the leaf on its pivot to allow those coins to drop from the chute. Coins having the exact weight of the counterbalance will continue to roll to the lower end of the chute where they will drop through a notch 22 into a second chute 23 mounted on the plate below the first named chute and inclined in the opposite direction toward the forward edge of the plate. This chute is substantially of the same construction as the chute previously described and includes side walls 24 and 25 and a bottom wall 26 having an opening 27 formed therein, about midway of its length.

Positioned at the end of the chute 8 in line with the coin rolling therefrom, are the arms 28 of a permanent magnet 29 that is adapted to divert slugs composed of magnetic metal into a pocket 30 and through a slot formed by pressing a tongue 31 from the plate 1 as shown in Figs. 1 and 2, the pocket being in the plane of the chutes previously described.

The magnet 29 may be of the ordinary horseshoe type and is retained on the plate 1 by non-magnetic plates 32 and 33 engaging the opposite sides of the magnet and secured by a screw 34 extending therethrough at a point between the arms of the magnet.

Fixed to the rear wall 24 of the chute 23 at a point below the forward edge of the notch 22 is a lug 35 having a laterally projecting ear 36 for directing the coin into contact with the arms of the magnet.

Received in the opening 27 of the second chute is a similar weighing device 37 which includes a pivotal leaf 38 having trunnions 39 pivoted adjacent the outer wall of the chute in spaced ears 40 complementary to the ears 15 of the weighing device, previously described. The leaf is counterbalanced by a screw 41 secured in a laterally extending ear 42 on the leaf by a nut 43 and having its free end depending below the plate to receive adjusting nuts 44 whereby the plate may be balanced to pivot when a coin of the proper weight passes thereover to allow the coin to drop through the opening 27 into the coin controlled ratchet wheel 45, later described.

Stamped from the plate 1 and extending angularly toward the forward lower end of the chute 23 is an ear 46 for diverting coins which are not of sufficient weight to pivot the leaf 38, the coins being diverted by the ear through an opening 47 formed in the plate adjacent the end of the chute.

The coin-controlled ratchet wheel 45 comprises a circular disk 48 fixed on an actuating shaft 49 rotatably mounted in the plate and in the wall of the casing 2 as illustrated in Figs. 4 and 5, the disk being provided with a hub 50 having an axial opening 51 for receiving a threaded end 52 of the shaft and is prevented from rotation thereon by a lock nut 53 threaded on the projecting end of the shaft and engaging the end of the hub, the nut being secured by a cotter pin 54 extending through an opening in the shaft.

The disk 48 is spaced from the plate to accommodate a block 55 having an upper inclined edge 56 which forms a track for discharging a coin which is smaller in diameter than the required coin.

Formed in the disk 45 at opposite diametric points are stop shoulders 57 and 58 adapted to alternately engage a ratchet pawl 59, pivoted on a stud 60 which projects from the plate 1, the pawl being held in engagement with the disk by a spring 61 having one end secured to the plate and its opposite end to the pawl. The pawl 59 is spaced from the normal position of the upper shoulder to provide an initial free movement of the ratchet wheel for purposes hereinafter described.

Extending inwardly from the outer periphery of the disk at points spaced laterally from the shoulders 57 and 58 are notches 62 and 63 for receiving a coin-supporting yoke 64 which cooperates with the face of the disk to form coin receiving pockets 65 and 66. The yoke 64 comprises a strip of metal having its ends bent laterally as at 67 to extend through the notches 62 and 63 and the projecting ends of the yoke are bent laterally to overlie the face of the disk to be secured thereto by fastening devices 68. The central portions of the yokes are spaced from the opposite face of the disk to form the coin-receiving pockets 65 and 66, and their outer upper edges are provided with shoulders 70 complementary to the shoulders 57 and 58 formed in the disk and are adapted to cooperate therewith for engagement with the pawl 59.

Threaded in an opening 71 in one of the arms of the yoke is a set screw 72 having a pointed end 73 forming a stop which cooperates with the other arm of the yoke to support a coin in position for engaging under the end of the pawl 59 as shown in Fig. 2. The set screw 72 may be adjusted to support coins of the desired size and may be locked in adjusted position by a lock nut 74 engaging against the face of the yoke.

It is thus apparent that when a coin drops through from the weighing device and is seated in the yoke, rotation of the disk will cause the coin to cam the pawl 59 upwardly to permit the shoulder 57 to pass under the pawl, and the disk may continue to rotate in an anti-clockwise direction, Fig. 2.

In order to prevent retractive rotation of the disk after it has been released by the pawl 59, I provide pivoted pawls 75 and 76 adapted to engage a series of notches 77 and 78 formed in the periphery of the disk between the shoulders 57 and 58.

The coin is retained in position in the yoke during its rotation by an arcuate guide 79 projecting from the face of the plate 1. When a coin rides off of the lower end of the guide 79 it is then free to drop from the yoke into a coin receptacle adapted to receive it, (not shown). The disk may continue its rotation until stopped by the pawl 59 engaging the other stop shoulder 58. At this point the opposite coin pocket will be in the same position as that previously occupied by the other pocket. The actuating shaft may be operated by any suitable knob or lever designated at 80, Fig. 4.

In order to complete rotation of the disk after it has been released by the pawl 59 and to retain the disk so that one of the pockets stops directly under the opening in the lower chute, I provide the disk with laterally projecting pins 81 and 82 positioned at opposite diametric points on the disk substantially midway between the coin pockets, as best illustrated in Figs. 2 and 3.

Pivoted adjacent the forward edge of the plate 1 on a bracket 83 below the pins 81 and 82, is a lever 84 having its free end 85 pivotally supported in engagement with the pins by a link 86 which is supported by a coil spring 87 having one end fixed to the plate 1 and its opposite end in an opening formed in the link 86, the link 86 being pivoted to the free end of the lever 84 by a pin 88.

It is thus apparent that when the disk is rotated in a clockwise direction the pin 81 on the left hand side cams the lever downwardly, as shown in Fig. 3, against the tension of the spring 87. As soon as the pin 81 passes the vertical median line of the disk the stored up energy in the spring 87 causes the disk to continue rotation to move the pocket 66 in position to receive a coin. The pawls 75 and 76 are retained in engagement with the notches by springs 89 and 90 similar to the spring 61 for the pawl 59.

It sometimes happens that coins may lodge in the passageway between the chutes 8 and 23 or they may stick to the arms of the magnet and to clear the passageway, I provide a lever 91 which is pivoted to the plate 1 below the chute 8 on a pin 92. The free end of the lever 91 projects to a point adjacent the ends of the chutes and is provided with a laterally extending finger 93 adapted to operate across the ends of the chute and the projecting ends of the magnet. The lever is connected with and operated by the link 86 upon initial rotation of the disk or until one of the shoulders 57 or 58 engage the pawl 59.

When the actuating knob is released by the operator in attempting to work the machine with a spurious coin, the spring 87 restores the disk 45 to its original position, due to the fact that the pin 81 is in engagement with the lever 84. When the disk is in normal position the other pin 82 also engages the lever and the disk is retained thereby so that one of the coin pockets always aligns with the opening in the chute 23.

Often times when slugs and counterfeit coins are inserted in the machine, the operator will attempt to shake the machine to cause the spurious coins to operate the weighing device 37 and to prevent operation of the pivoted plate I provide a mechanism actuated by shaking of the machine to latch the plate against movement.

The mechanism comprises a reciprocating latch bar 94 having a vertical portion 95 slidably mounted on ears 96 and 97 projecting from the plate 1 adjacent its forward edge, the arm being secured by screws 98 and 99 projecting through slots 100 and 101 in the arms and into threaded openings in the ears. The lower end of the arm is bent laterally toward the end of the chute 23 and then downwardly at an angle to provide a horizontal and an inclined portion 102 and 103 respectively.

Extending laterally from the portion 102 is a tongue 104 adapted to overlie the chute and the inclined portion 103 has a finger 105 having its free end bent toward and overlying the pivoted leaf 38 of the weighing device 37. The latch is normally urged into position for engaging the plate by a spring 106 having one end attached to the horizontal portion 102 of the latch and its opposite end attached to the plate 1.

In order to retain the latch in normal position, that is with the tongue 104 above the chute and the finger 105 clearing the pivoted leaf to permit actuation of the weighing device, I provide the plate 1 with a laterally bent tooth 107 adapted to engage a shoulder 108 on the latch as illustrated in Figs. 1 and 4 to support the latch against tension of its spring 106.

It is thus apparent that should the operator attempt to shake the machine the latch will be jarred from engagement with the tooth 107 and the spring will pull the latch into position for engaging and actuating the plate 38 and the tongue 104 will extend across the end of the chute. It is then apparent that since the weighing mechanism cannot operate, the coins cannot pass into the coin-controlled disk, but must pass on down the chute 23 until stopped by the tongue 104 on the latch lever.

It is therefore necessary to provide means for restoring the latch to normal position and to accomplish this object I have provided the lever 91 with a forwardly extending por-

tion 109 extending through a notch 110 formed in the vertical portion of the latch and which, upon initial actuation of the ratchet wheel will engage the upper edge of the notch to raise the latch into engagement with the tooth carried on the plate 1.

Attention is directed to the fact that the spring 106 is positioned to draw the latch toward the plate 1 and into seating engagement with its supporting tooth. Upon restoring the latch to normal position the tongue 104 permits the coin to drop out of the machine through the slot 47.

There may be times when the pivoted plate 38 is actuated it will remain in pivoted position and to return the plate to normal position for closing the opening in the bottom of the chute I provide the lever 91 with a spring finger 112 adapted to engage the ear 42 on the plate when the lever is moved by the link 86 upon actuation of the coin-controlled disk. Should a coin of small diameter pass through the machine and drop into one of the coin pockets in the control disk it will drop on through and roll down the inclined face of the block 55 previously described, and be directed thereby toward a slot 113 formed in the rear edge of the plate adjacent the periphery of the control disk, the coin being guided through the slot by a tongue 114 pressed from the plate 1.

Assuming that the coin-controlled mechanism is set for passing a nickel into the coin pockets of the ratchet wheel for releasing the latch 59 the operation of the mechanism is as follows:

If a nickel is inserted through the slot 7 it will roll down the chute 8 across the weighing device 13 without operating the leaf 16, since the adjusting nuts 21 on the counterbalancing screw are adjusted to counterbalance the weight of a nickel rolling down the chute.

When the nickel reaches the lower end of the chute it will drop through the notch 22 into the chute 23 and roll onto the weighing device 37 and since the adjusting nuts 44 are regulated to permit pivoting of the leaf 38 the nickel will overbalance the weight of the adjustment and drop into the upper coin pocket 65. The operator then grasps the knob 80 and rotates the ratchet wheel 45 in an anti-clockwise direction, Fig. 2, so that the nickel which is supported in the pocket between the set screw 72 and the arm of the yoke cams the pawl 59 upwardly to permit passage of the stop shoulder 57.

The operator will continue rotation of the handle through an arc of approximately 90° at which point the pin 81 which has been acting to move the lever 84 downwardly for storing up tension in the spring 87 will be passing dead center position, Fig. 2, and the stored up tension of the spring will cause the lever arm 84 to continue the rotation of the wheel through an additional arc of 90° which brings the opposite coin pocket into position underneath the opening in the chute 23.

Should the operator attempt to continue rotation of the handle, the stop shoulder 58 will engage the end of the pawl 59 and stop its rotation, moving the coin pocket out of position from alignment with the opening in the chute 23. However, as soon as the handle is released the stored up tension in the spring 87 will cause the lever 84, due to its engagement with the pin 82, to rotate the ratchet wheel reversely until the coin pocket again aligns with the opening in the chute at which time the other pin also engages the lever so that the coin pocket is yieldingly retained by the spring in proper position for receiving another coin.

Should a person attempt to operate the machine with a coin or slug smaller than a nickel the coin may reach the weighing device 37 and if it is the weight of a nickel it will actuate the leaf 38 to drop into the coin pocket, but since it is smaller in diameter than a nickel it is free to drop through the space between the point of the set screw and the arm of the yoke and it will roll down the track 56 for discharge through the slot 113.

If the coin had been lighter than a nickel it would not have actuated the weighing device 37 but would have continued to roll down the chute 23 and out through the slot 47.

Should it have been heavier than a nickel it would have actuated the weighing device in the chute 8 and have been discharged directly from the machine.

Should it have been composed of a metal capable of being magnetized it would have been attracted by the arms of the magnet and diverted through the slot 30.

It is obvious that a coin larger than the required coin could not be inserted through the opening in the plate 6 since the opening is of the exact size to receive a nickel.

Should it be desired to adjust the machine so that a dime will permit rotation of the ratchet wheel the adjusting nuts 21 and 44 on the weighing devices will be adjusted, in the case of the weighing device 14, to counterbalance the weight of a dime and in the case of the weighing device 37, the adjusting nuts will be regulated to permit a dime to pivot the plate 38 to permit passage into the coin pocket of the ratchet wheel, the adjusting screw 72 in the coin pocket being adjusted to support a dime in position for engagement with a pawl 59.

It is thus apparent that the mechanism described may be adjusted to operate with any size of the coin desired.

Should the operator of the machine attempt to insert some form of spurious coin into the machine and in order to prevent actuation of the weighing devices he should pound or jar

the machine in an attempt to make the coin operate, the latch bar 95 will be jarred from latched engagement with the tooth 107 and the spring 106 will draw the latching lever downwardly so that the finger 105 engages the upper face of the leaf 38 to prevent actuation thereof so that the coin or the like will continue down the chute and lodge against the tongue 104.

Should he attempt to rotate the knob 80 the initial movement of the ratchet wheel 45 will cause the pin 81 to move the lever 84 downwardly until the ratchet wheel is stopped by the pawl 59. Downward movement of the lever 84 will cause the link 86 to operate the lever 91 to raise the latching lever upwardly so that the spring 106 can draw the latching lever into engagement with the tooth 107 to again latch the bar so that the leaf 38 can operate.

Should the leaf 38 tend to stick after it is pivoted, the spring 112 attached to the lever 91 will wipe against the arm 42 on the leaf 38 and move it to position for closing the slot in the chute 23.

The ratchet mechanism may be connected up with the operating mechanism of the vending machine by means of the pins 81 and 82 through any suitable mechanism such as a shaft provided with a yoke for operably exchanging the pins.

What I claim and desire to secure by Letters Patent is:

1. In a coin-controlled mechanism comprising a support, an inclined chute carried by the support, a pivoted weighing device associated with the chute for ejecting coins of a predetermined weight, a second chute related to the first named chute, a magnet located adjacent the ends of said chutes for diverting coins capable of being magnetized from passage into the last named chute, a weighing device in the last named chute for diverting coins having determined weights, a coin-controlled mechanism located below the last named weighing device for receiving the coins diverted thereby, and means actuated by the coin-controlled mechanism for clearing the magnet.

2. In a coin-controlled mechanism comprising a support, an inclined chute carried by the support, a pivoted weighing device associated with the chute for ejecting coins of a predetermined weight, a second chute related to the first named chute, a magnet on the support for diverting coins capable of being magnetized from passage into the last named chute, a weighing device in the last named chute for diverting coins having determined weights, a coin-controlled mechanism located below the last named weighing device for receiving coins therefrom, and means actuated by the coin-controlled mechanism for clearing the magnet of coins diverted thereby.

3. In a coin-controlled mechanism comprising a support, an inclined chute carried by the support, a pivoted weighing device associated with the chute for ejecting coins of a predetermined weight, a second chute related to the first named chute, a magnet located adjacent the ends of said chutes for diverting coins capable of being magnetized from passage into the last named chute, a weighing device in the last named chute for diverting coins having determined weights, a coin controlled mechanism located below the last named weighing device for receiving coins therefrom, means actuated by the coin-controlled mechanism for clearing the magnet of coins diverted thereby, latching means operable by vibration of the support for preventing actuation of said last-named weighing device, and means operable by the controlled mechanism for restoring the latching means to non-functional position.

4. In a coin-controlled mechanism comprising a support, an inclined chute carried by the support, a pivoted weighing device associated with the chute for ejecting coins of a predetermined weight, a second chute related to the first named chute, a magnet located adjacent the ends of said chutes for diverting coins capable of being magnetized from passage into the last named chute, a weighing device in the last named chute for diverting coins having determined weights, a coin controlled mechanism located below the last named weighing device for receiving coins therefrom, means actuated by the coin-controlled mechanism for clearing the magnet of coins diverted thereby, and means operable by vibration of the support for preventing actuation of the last named weighing device.

5. In a coin-controlled mechanism comprising a support, an inclined chute carried by the support, a pivoted weighing device associated with the chute for ejecting coins of a predetermined weight, a second chute related to the first named chute, a weighing device in the last named chute for diverting coins having determined weights, a coin-controlled mechanism located below the last named weighing device for receiving coins therefrom, latching means operable by vibration of the support for preventing actuation of the last named weighing device when the support is vibrated, and means operable by the controlled mechanism restoring the latching means to non-functional position.

6. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device associated with the coin chute operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for latching the weighing mech-

anism to prevent operation thereof when the support is vibrated, and means for restoring the latching means on initial actuation of the coin-controlled mechanism.

7. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device associated with the coin chute operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for latching the weighing mechanism to prevent operation thereof when the support is vibrated, means for restoring the latching means on initial actuation of the coin-controlled mechanism, and yielding means for restoring the weighing mechanism to functional position when it has operated to pass a coin to the coin-controlled mechanism.

8. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device associated with the coin chute operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for latching the weighing mechanism to prevent operation thereof when the support is vibrated, and means for restoring the latching means.

9. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device associated with the coin chute operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for automatically latching the weighing mechanism to prevent operation thereof when the support is vibrated, means for restoring the latching means on initial actuation of the coin-controlled mechanism.

10. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device in the coin chute operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for latching the weighing mechanism to prevent operation thereof when the support is vibrated, and means for restoring the latching means on actuation of the coin-controlled mechanism.

11. In a coin-controlled mechanism, a weighing device on the support operable by coins of a determined weight, a coin-controlled mechanism carried by the support for receiving coins from the weighing mechanism, means for actuating the coin-controlled mechanism, means responsive to vibration of the support for automatically latching the weighing mechanism to prevent operation thereof when the support is vibrated, and means for restoring the latching means on initial actuation of the coin-controlled mechanism.

12. A coin-controlled mechanism comprising a support, a coin chute on the support, a second coin chute associated with the first named chute, weighing devices in said chutes for ejecting certain coins passed through the chutes, a coin-controlled ratchet wheel for receiving coins ejected from one of said weighing devices, a magnet associated with said chutes, means for permitting initial free movement of the ratchet wheel, a lever associated with the ratchet wheel, a pin engaging the lever for moving the lever during initial movement of a cycle of the ratchet wheel, a spring operably connected with said lever for completing the cycle of the ratchet wheel, means actuated by said lever during initial movement of the ratchet wheel for clearing the magnet of spurious coins that may be attracted thereto, and means actuated during initial movement of the ratchet wheel to restore one of said weighing mechanisms to functional position after a coin has been ejected thereby.

13. A coin-controlled mechanism comprising a support, a coin chute on the support, a second coin chute associated with the first named chute, weighing devices in said chutes for ejecting coins passed through the chutes, a coin-controlled ratchet wheel for receiving coins ejected from one of said weighing devices, a magnet associated with said chutes, means for providing initial rotation of the ratchet wheel, a lever associated with the ratchet wheel, a pin engaging the lever for moving the lever during initial rotation of the ratchet wheel, a spring associated with said lever for completing the cycle of the ratchet wheel, and means actuated by said lever during initial rotation of the ratchet wheel for clearing the magnet of spurious coins that may be attracted thereto.

14. A coin-controlled mechanism comprising a support, a coin chute on the support, a second coin chute associated with the first named chute, weighing devices in said chutes for ejecting coins passed through the chutes, a coin-controlled ratchet wheel for receiving coins ejected from one of said weighing devices, a magnet associated with said chutes, means for providing initial rotation of the ratchet wheel, a lever associated with the ratchet wheel, a pin engaging the lever for moving the lever during initial rotation of the ratchet wheel, a spring for completing the cycle of the ratchet wheel, and means actuated during initial movement of the ratchet wheel to restore one of said weigh-

ing mechanisms to functional position after a coin has been ejected thereby.

15. In a coin-controlled mechanism, a support, a downwardly inclined coin chute on a support, an oppositely inclined coin chute having an opening therein for receiving coins passed from the first named chute, a magnet carried by the support adjacent the ends of said chutes, a pivoted plate normally closing the opening in the last named chute, means for adjustably retaining said plate in closed position, a coin-controlled ratchet wheel rotatably mounted on the support, a coin pocket on the ratchet wheel, a laterally extending pin on the ratchet wheel, a latch bar operable for preventing operation of the pivoted plate, a lever pivoted to the support and adapted to be engaged by the pin on the ratchet wheel, a second lever pivoted on the support and engageable with the latch bar, a link connecting the levers, a spring for retaining the first named lever in engagement with the pin on the ratchet wheel, and means for providing initial movement of the ratchet wheel to cause the pin to move the lever and tension the spring for continuing movement of the ratchet wheel to complete its cycle.

16. In a coin-controlled mechanism, a support, an inclined coin chute having an opening therein, a pivoted plate normally closing the opening, means for adjustably retaining said plate in closed position, a coin controlled ratchet wheel rotatably mounted on the support, a coin pocket on the ratchet wheel, a laterally extending pin on the ratchet wheel, a latch bar operable for preventing operation of the pivoted plate, a lever pivoted to the support and adapted to be engaged by the pin on the ratchet wheel, a second lever pivoted on the support and engageable with the latch bar to move the latch bar, a link connecting the levers, a spring for retaining the first named lever in engagement with the pin on the ratchet wheel, and means for providing initial movement of the ratchet wheel to move the lever and tension the spring for continuing movement of the ratchet wheel to complete its cycle.

17. In a coin-controlled mechanism, a support, a downwardly inclined coin chute on a support, an oppositely inclined coin chute having an opening therein for receiving coins passed from the first named chute, a magnet carried by the support adjacent the ends of said chutes, a pivoted plate normally closing the opening but adapted to pivot to pass a coin through the opening in the last named chute, means for adjustably retaining said plate in closed position, a coin controlled ratchet wheel rotatably mounted on the support, a coin pocket on the ratchet wheel to receive the coin passed through said opening, means adapted to be released by said coin for preventing rotation of the ratchet wheel, a laterally extending pin on the ratchet wheel, a latch bar operable for preventing operation of the pivoted plate, a lever pivoted to the support and adapted to be engaged by the pin on the ratchet wheel, a second lever pivoted on the support and engageable with the latch bar, a link connecting the levers, a spring for retaining the first named lever in engagement with the pin on the ratchet wheel, and means for providing initial movement of the ratchet wheel to cause the pin to move the levers and actuate the latch bar and tension the spring for continuing movement of the ratchet wheel to complete its cycle.

18. In a coin-controlled mechanism, a support, a coin chute on the support, a weighing device associated with said chute, and means for controlling actuation of the weighing device operable upon vibration of the support.

19. In a coin-controlled mechanism, a support, a coin weighing device carried by the support including a pivoted plate, a latch bar slidably mounted on the support and operable under vibration of the support, means on the support for retaining the latch bar for preventing pivotal movement of the plate when the latch bar is in functional position.

In testimony whereof I affix my signature.

CHARLES A. MELCHERT.