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H. GILES.
COIN CONTROLLED VENDING MACHINE.
FILED SEPT. 9, 1921.

Fig. 1.

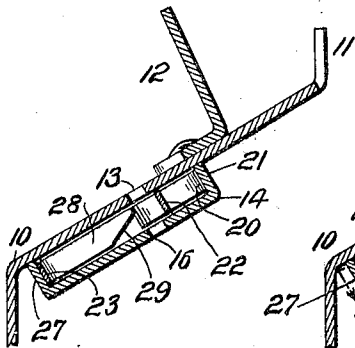


Fig. 2.

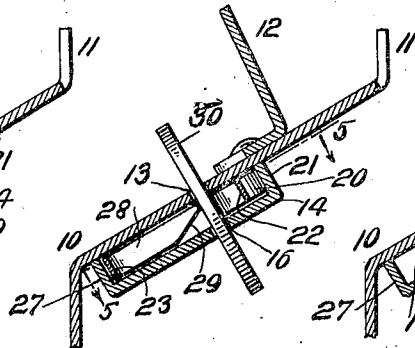


Fig. 3.

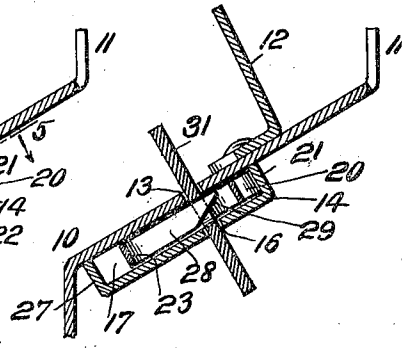


Fig. 4.

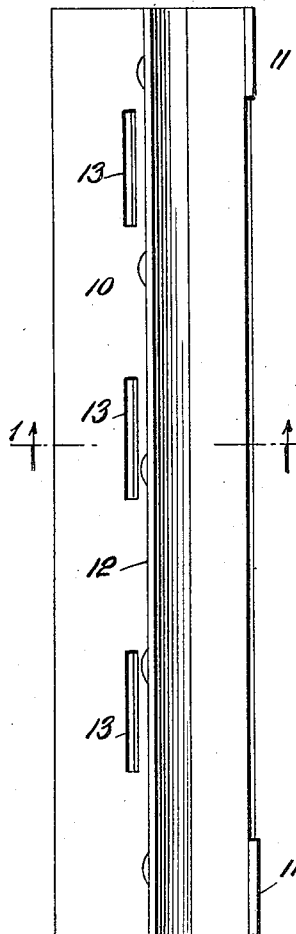
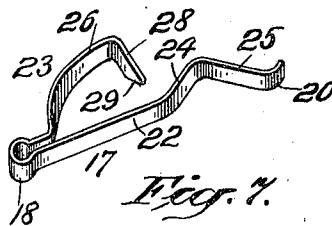
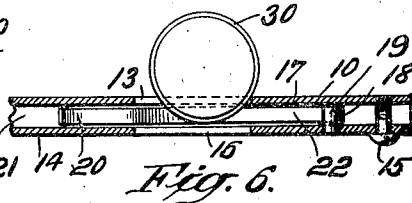
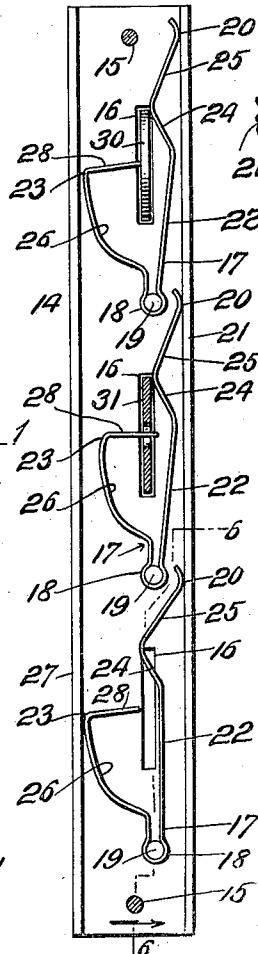


Fig. 5.



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COIN-CONTROLLED VENDING MACHINE.

Application filed September 9, 1921. Serial No. 499,463.

To all whom it may concern:

Be it known that I, HARVEY GILES, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Coin-Controlled Vending Machines, of which the following is a specification.

The invention pertains to means arranged at the coin entrance slots of a coin controlled vending machine for arresting a washer, or a coin or disk with a hole in it, so that the same may not pass to the interior mechanism of the machine, but which nevertheless may be withdrawn outwardly from said arresting means and from the coin-slot so as to leave said coin-slot free for the entrance of proper coins. The new mechanism provided by me is located at the inner or reverse face of the coin slot plate of the machine at the coin entrance slots therein.

The washer arresting means of my invention belongs to the class of devices commonly applied to vending machines and designated as "washer catchers," and the device or washer-catcher of my invention is preferably formed from a single flat strip of spring metal bent or fashioned to provide a leg member extending approximately lengthwise and at the side of the coin-slot and crossing the same at one end thereof and a catcher member standing at a right angle to the coin-slot and adapted to be projected across said slot and into the hole in a washer introduced through said slot and effecting the movement of said catcher member by its pressure against that portion of the leg member crossing the end of the slot, the catcher member thus arresting the washer in the coin-slot but permitting the washer to be withdrawn from said slot due to the fact that said catcher member has an upwardly inclined or tapered lower edge.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Fig. 1 is a vertical section, partly broken away, through the coin slot plate of a vending machine and the features of my invention, the section being taken on the dotted line 1—1 of Fig. 4 and all of the parts being shown in normal position;

Fig. 2 is a corresponding view of the same showing the position of the parts when a coin is introduced through the coin slot, such coin being shown in position within said slot;

Fig. 3 is a corresponding section illustrating the position of the mechanism when a washer or disk with a hole in it has been passed into and partly through the coin slot, the washer being shown as having been arrested by the catcher member of my device;

Fig. 4 is a top view of the coin slot plate and adjacent customary parts;

Fig. 5 is a sectional view taken on the dotted line 5—5 of Fig. 2 and illustrating in top view the mechanism which I apply to the underside of the coin-slot plate, Fig. 5 in its upper portion illustrating a coin as having been moved into the coin-slot, as shown in Fig. 2, and in its middle part illustrating a washer or coin with a hole in it arrested upon the washer catcher, as represented in Fig. 3, the washer catcher mechanism at the lower end of Fig. 5 being shown in normal position;

Fig. 6 is a sectional view, taken on the dotted line 6—6 of Fig. 5 and extending through the coin slot plate and illustrates a coin as having been entered into a coin slot and in position to on its further inward movement engage and move past the mechanism of my invention, and

Fig. 7 is a detached perspective view of the washer catcher device I apply at each coin slot of the machine.

In the drawings, 10 designates a portion of the coin-slot plate of a vending machine, this plate being of any usual or suitable construction, 11 vertical flanges at the ends of the upper edge of said plate and 12 a bracket secured upon said plate, the parts 11 and 12 being of usual character and ordinarily employed to receive the lower end of the front plate or door of a vending machine.

The coin-plate 10 is provided with customary coin entrance slots 13, and at the inner face of said plate, in suitable relation to said slots, I apply the mechanism of my invention, said mechanism being preferably mounted in a trough-like box or casing which I secure to the inner or lower side of the coin slot plate 10 by means of screws or rivets 15. The box or casing 14 is a

shallow elongated container having a flat bottom provided with slots or openings 16 in alignment with the coin slot openings 13 in the plate 10, and upon the bottom of the box or casing 14 and adjacent to the openings 16 therein and the openings 13 in the plate 10, I mount the washer catcher device of my invention, which is separately shown in Fig. 7, this device as a whole being numbered 17 and preferably being in one integral piece of spring metal folded upon itself and at its folded end having an eye 18 to freely engage a retaining pin 19 rigid with the casing 14 and at its other end a curved foot 20 in free engagement with an upturned flange 21 constituting the inner wall or side of the box or casing 14. The eye 18 is free on the pin 19, and the device 17 is confined on the pin 19 by the near relation of the lower surface of the coin-plate 10 to the upper end of said pin and to the upper edge of the device 17. The strip of spring metal of which the washer-catcher device is fashioned, is bent to form a leg member 22 and a washer-catcher member 23, these two members joining each other at the eye 18 and the member 22 having at its outer end the foot 20. The leg member 22 extends approximately lengthwise and at one side of the coin slots 13, 16, as shown at the lower portion of Fig. 5, and said member is bent forwardly on a V-angle to form a section 24 slantingly crossing one end of the coin slots 13, 16 and a return section 25 extending to the box-flange 21 and having on its free end the foot 20. The washer catcher member 23 curves or slants forwardly, as at 26, from near the eye 18 to the front flange or wall 27 of the box or trough 14 and thence extends rearwardly on a substantially straight line to a point at about the center of the forward edge of the coin slots 13, 16, thereby forming a washer catcher arm 28 which stands at about a right angle to the longitudinal line of said slots and has a flat upper edge and an upwardly and rearwardly inclined or tapered lower edge 29 at its free end. The section 24 of the leg member 22 normally stands in the path of one edge of a coin, disk or washer of the requisite diameter which may be introduced through the coin-slot 13, and the catcher arm 28 normally stands with its free end adjacent to the coin slot but not projecting across the same, as shown in Fig. 1 and at the lower portion of Fig. 5. In Figs. 2, 5 and 6 the coin is numbered 30, and in Figs. 3 and 5 the washer or apertured disk is numbered 31.

The device 17 normally rests freely on the bottom of the box or trough 14 and between the front and rear walls 27, 21 thereof, being unflexed and exerting no appreciable pressure against but snugly fitting between said walls.

When a proper coin 30 is moved into a coin slot 13 one edge thereof will be obstructed by the inclined section 24 of the catcher device 17 but under the manual pressure applied against the coin and exerted thereby against said section 24, the leg member 22 will be flexed rearwardly between the resistance points afforded by the pin 19 and the flange 21 at the shoe 20, as shown at the upper end of Fig. 5, and the coin will be permitted to pass through the slot 13 and its aligned slot 16 and enter the mechanism of the vending machine. The flexing of the leg member 22 by the introduction of the coin 30 is from the normal position of said member shown at the lower end of Fig. 5 to its condition shown at the upper end of Fig. 5, and during the flexing of said member the shoe 20 thereof has a limited sliding and a rocking action on the flange 21 of the box or trough 14. The aforesaid flexing of the leg member 22 tends to set up a rearward rocking movement of the catcher member 23 from the axial point represented by the pin 19 and eye 18, said eye turning slightly on said pin, and this causes the arm 28 at its free end to engage the face of the coin 30, but since the coin has an approximately smooth unbroken surface the arm 28 will not arrest the coin and the coin will by resisting the rearward movement of the arm while at the same time flexing the leg member 22 set up a tension in the member 23 tending to project the arm forcibly against the face of the coin.

When a washer or an apertured coin or disk 31 is inserted into a coin slot 13 it will flex the leg member 22 of the washer catcher in the same manner that I have explained with respect to the flexing of the same by the coin 30, and at this time the flexing of said leg member rocks or turns the catcher member 23 rearwardly and causes the arm 28 to enter the hole in the washer, as I show in Figs. 3 and 5, said arm then arresting the washer and preventing its further movement into the machine. In order that the arrested washer may be readily withdrawn from the coin slot, I provide the tapered edge 29 on the arm 28, so that an upward pull on the washer may cause the same at the edge of the hole therein to ride against said edge 29 as a cam and force the arm 28 forwardly or in a direction from the washer, allowing the washer to be withdrawn. Until the washer has been sufficiently withdrawn to leave the section 24 of the leg member 22, the flexion of said leg member will keep the arm 28 against the washer, but at this time the section 26 of the catcher member 23 will yield outwardly under the force applied against the arm 28 by the withdrawal of the washer and hence without injury to the arm 28 or other part of the mechanism the washer may be withdrawn,

but the washer will be caught again if returned into the coin slot, as is obvious.

When a washer having a reasonably large hole is inserted into the coin slot, the catcher arm 28 will be moved directly into said hole by the rocking movement of the member 23 and without any flexing of the section 26 of said member, and when a washer or disk having a small opening therein is inserted into the coin slot the free end of the arm 28 may strike the solid surface of the washer or disk below its opening, thereby flexing the section 26 of the member 23, and then spring into said opening when the washer or disk has been pressed through the coin slot to a sufficient extent for the said opening to pass into line with said arm.

In assembling the features of my invention, the washer catcher devices 17 are slipped upon the pins 19, and thereupon the box or frame 14 is secured to the coin-plate 10 by means of the screws or rivets 15.

I have illustrated a coin slot plate 10 of the slanting type, but frequently these coin slot plates are horizontal and in many instances they are vertical, and hence my invention is not limited to the shape of the coin slot plate or the manner in which it may be mounted.

What I claim as my invention and desire to secure by Letters Patent, is:

1. In a coin-controlled machine having a plate containing a slot for the entrance of coins into the machine, washer catcher mechanism located at the reverse side of said plate adjacent to said slot comprising a folded strip of spring metal forming a leg member extending from the fold of the strip approximately lengthwise of said slot and at one side thereof and crossing the same at one end thereof and a washer catcher member extending from said fold along the other side of said slot and having a washer catcher arm standing about at right angles to and centrally of said slot, means holding said folded strip at its fold and a flange engaged by the free end of said leg member, said leg member being adapted to be flexed between its end portions by the engagement of a washer against that portion thereof normally crossing the end of said slot and to thereby turn said washer catcher member toward the washer and thrust said arm through the hole therein or against the washer to spring into the hole thereof when said hole reaches said arm.

2. In a coin-controlled machine having a plate containing a slot for the entrance of coins into the machine, washer catcher mechanism located at the reverse side of said plate adjacent to said slot comprising a folded strip of spring metal forming a leg member extending from the fold of the strip approximately lengthwise of said slot and at one side thereof and crossing the same at one end thereof and a washer catcher mem-

ber extending from said fold along the other side of said slot and having a washer catcher arm standing about at right angles to and centrally of said slot, means holding said folded strip at its fold and a flange engaged by the free end of said leg member, said leg member being adapted to be flexed between its end portions by the engagement of a washer against that portion thereof normally crossing the end of said slot and to thereby turn said washer catcher member toward the washer and thrust said arm through the hole therein or against the washer to spring into the hole thereof when said hole reaches said arm, said washer catcher arm having a tapered inner edge to serve as a cam and permit the withdrawal of the washer from the coin slot.

3. In a coin-controlled machine having a plate containing a slot for the entrance of coins into the machine, washer catcher mechanism located at the reverse side of said plate adjacent to said slot comprising a folded strip of spring metal forming a leg member extending from the fold of the strip approximately lengthwise of said slot and at one side thereof and crossing the same at one end thereof and a washer catcher member extending from said fold along the other side of said slot and having a washer catcher arm standing about at right angles to and centrally of said slot, means holding said folded strip at its fold and a flange engaged by the free end of said leg member, said leg member being adapted to be flexed between its end portions by the engagement of a washer against that portion thereof normally crossing the end of said slot and to thereby turn said washer catcher member toward the washer and thrust said arm through the hole therein or against the washer to spring into the hole thereof when said hole reaches said arm, said leg member being bent slantingly where it crosses the end of the coin slot, and then returned slantingly to said flange whereat the free end of said leg member is curved to form a foot engaging said flange.

4. In a coin-controlled machine having a plate containing a slot for the entrance of coins into the machine, washer catcher mechanism located at the reverse side of said plate adjacent to said slot comprising a frame secured to said plate and open in line with said slot, a folded strip of spring metal on said frame forming an eye at its fold, a leg member extending from said eye approximately lengthwise of said slot and crossing the same at one end thereof and a washer catcher member extending from said eye having a washer catcher arm standing about at right angles to and centrally of said slot, a pin on said frame on which said eye is mounted and a flange on said frame engaged by the free end of said leg member,

said leg member being adapted to be flexed between its end portions by the engagement of a washer against that portion thereof normally crossing the end of said slot and to
5 thereby turn said washer catcher member toward the washer and thrust said arm through the hole therein or against the

washer to spring into the hole thereof when said hole reaches said arm.

Signed at New York city, in the county of 10
New York and State of New York, this 6th
day of September, A. D. 1921.

HARVEY GILES.