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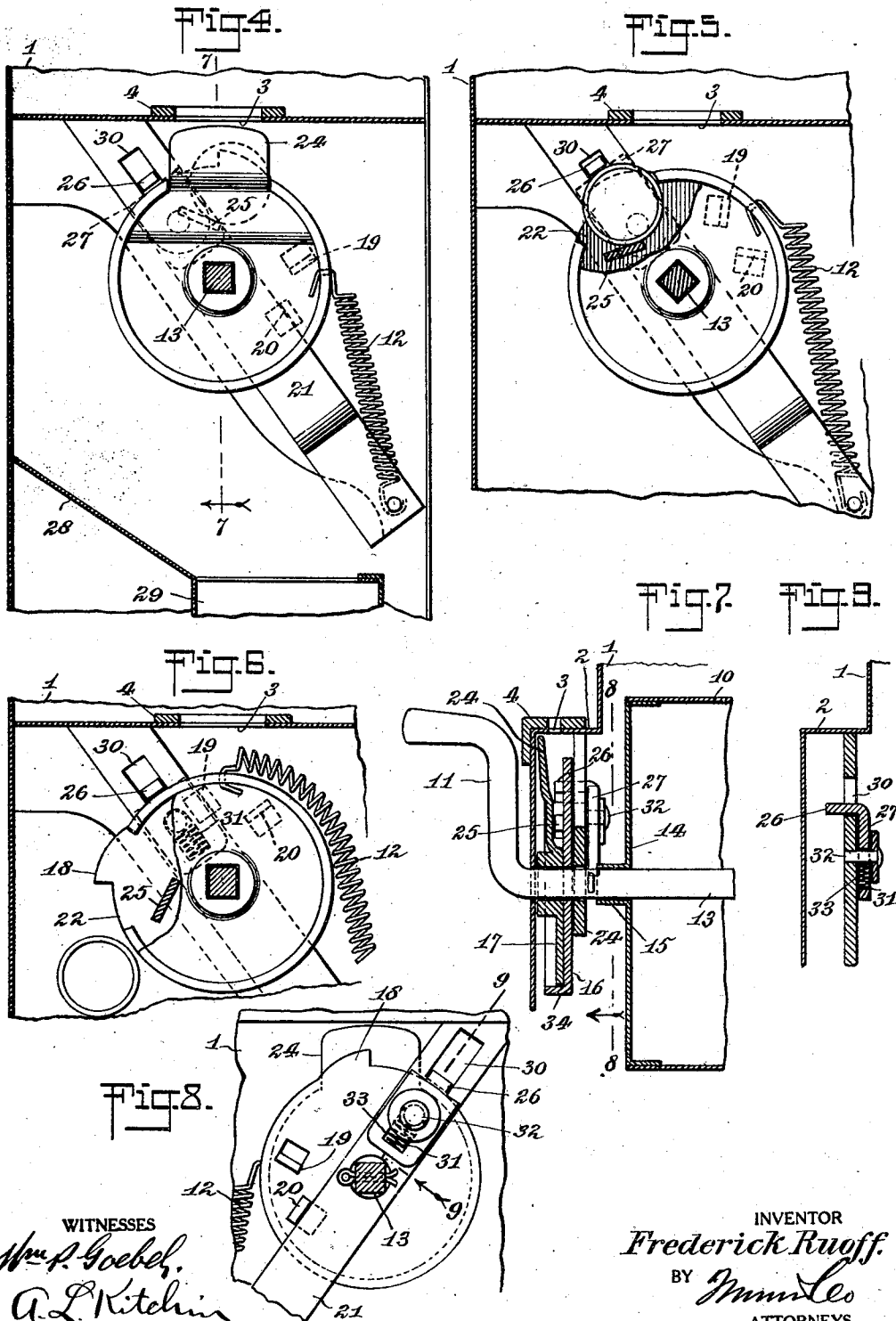
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VENDING MACHINE

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VENDING MACHINE.

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This invention relates to vending machines and has for an object to provide an improved construction wherein packages are vended, the arrangement being such that a package is vended after each insertion of a coin.

Another object of the invention is to provide a vending machine in which the coin control mechanism is so arranged as to cause the coin to shift the locking mechanism as the mechanism is manually rotated.

A further object, more specifically, is to provide a vending machine in which there is a rotating part for ejecting an article and a single sliding part for normally locking the rotating part against actuation.

In the accompanying drawings—

Figure 1 is a perspective view of a vending machine, disclosing an embodiment of the invention.

Figure 2 is an enlarged fragmentary sectional view through Figure 1 on line 2—2.

Figure 3 is a sectional view through Figure 2, approximately on line 3—3.

Figure 4 is an enlarged fragmentary sectional view through Figure 2, approximately on line 4—4.

Figure 5 is a view similar to Figure 4 but showing the parts moved to a partially operated position.

Figure 6 is a view similar to Figure 5 but showing the parts moved to a completely operated position.

Figure 7 is a sectional view through Figure 4, approximately on line 7—7.

Figure 8 is a sectional view through Figure 7, on line 8—8.

Figure 9 is a fragmentary sectional view through Figure 8 on line 9—9.

Referring to the accompanying drawings by numerals, 1 indicates a casing which may be made of sheet metal and which is provided with an offset portion 2 whereby the slot or opening 3 may be arranged to permit a coin to be deposited and moved vertically into the mechanism. A slot plate 4 is arranged to surround the slot 3 and assist in guiding the coin as it drops into the proper place. The casing 1 is provided with an open portion 5 at the lower end whereby when any of the articles 6 are released they will fall to a position adjacent this open space and may be readily grasped by a person. From Figure 3 it will be noted that there is provided a hopper 7 for receiving

a number of articles 6 which move down under the action of gravity so that they may be fed one at a time into the recess 8 of the rotating ejector 9. This ejector is provided with arc-shaped sections 10 and the uppermost arc-shaped section 10 moves to close the lower end of hopper 7 as the lowermost article 6 is discharged. After the discharge of an article 6, the ejector 9 is moved back to substantially the position shown in Figure 3 and another article 6 drops into the recess 8 so that the device may be operated again if desired. The ejector 9 is moved in one direction by a manual actuation of handle 11 and in the opposite direction by the action of the spring 12. It will be noted that the ejector 9 is connected with a shaft 13 in any desired manner, said shaft merging into the crank or handle 11. Preferably, the ejector 9 is provided with an end structure 14 having a square portion 15 fitting the shaft 13, which shaft is square as shown in Figures 4 to 6 inclusive.

Arranged beneath the shoulder or offset portion 2 is a coin control mechanism which normally prevents the actuation of the ejector 9 but permits the actuation of this ejector when a coin of proper size has been deposited. This coin control mechanism includes plates 16 and 17 which have square openings fitting over the square shaft 13 whereby they turn with this shaft. Plate 16 is provided with a tooth or projection 18 acting as a stop and with pressed out ears 19 and 20 also acting as stops. The stops 19 and 20 coact with the bar 21 secured to the casing 1 and extending over plate 16 and associated parts. The plate 17 is provided with a recess 22 adapted to receive a coin, said recess being much larger than the coin so that a stop 25 is connected to plate 16 and extends into the opening 22. A guiding flange 24 extends upwardly from plate 17 when this plate is in its normal position. The flange 24, as clearly indicated in Figures 4 and 7, acts to guide the coin from the slot 3 so that it will fall into the opening 22 between plates 16 and 17.

When a coin is first inserted, it moves to the position shown in dotted lines in Figure 4 and then handle 11 is turned manually. The first part of the movement causes the parts to be shifted to the position shown in Figure 5 whereupon the coin engages the

projection 26 of the locking plate 27 and raises the same so that the stop or abutment 18 will not strike the extension 26. As the abutment 18 does not strike extension 26, the parts may freely move around to the position shown in Figure 6 or until the abutment 19 strikes against the bar 21. The ejector 9 has been turned by this time until the article in the socket 8 has been ejected and also the coin has been turned until it may freely drop out of the opening 22 into the chute 28 and pass down said chute into the coin box 29. It will be noted that the locking plate 27 is slidably mounted on the bar 21 and extension 26 moves in the slot 30 while the plate is provided with a slot 31 which accommodates the pin 32 and also the spring 33. The spring 33 tends at all times to hold the extension 26 in its lowered position as shown in Figures 4 and 9. When in this position and no coin in the opening 22, abutment 18 will strike the extension 26 and, therefore, prevent a sufficient rotation of ejector 9 to force an article 6 therefrom. The spring 12 at one end is connected to the annular flange 34 extending from plate 16 and at the opposite end is connected to the bar 21 by a pin or other suitable means. The rotation of plate 16 and associated parts by spring 12 is limited by the stop 20 engaging bar 21. It will be noted that handle 11 may be pulled back and forth a short distance without the use of a coin but the movement is not sufficient to permit the proper actuation of the ejector 9. When a coin of the proper size has been inserted, it will in a certain sense, cover the abutment 18 and, therefore, cause the locking plate 27 to be raised so that the abutment 18 cannot function.

What I claim is:

1. In a vending machine a coin control mechanism including a stationary bar, a sliding catch formed with a projection extending through said bar, a pair of rotatable disks,

one disk having a coin guiding flange, the second mentioned disk having a coin receiving notch, means for supporting the coin in said notch so that it will project beyond the disk, the first mentioned disk having an abutment adapted to strike the sliding catch when the disk is rotated, said notch being so positioned that when a coin of the proper size is positioned therein the coin will act as a cam for moving said catch out of the way of said abutment and permit the disk to rotate, manually actuated means for moving the disks in one direction, and spring means for moving the disks in the opposite direction.

2. In a vending machine, a coin controlled apparatus and a manually actuated shaft for actuating said apparatus, said coin controlled apparatus including a stationary bar, a pair of rotatable disks connected to said shaft so as to be rotated thereby, one of said disks having a coin receiving socket of such a depth that a coin therein will project beyond the periphery of the disk an appreciable distance, the other of said disks having a radial abutment extending beyond the periphery of its disk a less distance than the projection of said coin, said other disk being provided with two stops on one face thereof, said stops being arranged at right angles to each other in position to strike said stationary bar, one stop striking said stationary bar when said shaft has been moved an extreme distance in one direction and the other stop striking the said bar when the shaft is moved to the extreme distance in the opposite direction, and a locking plate normally arranged in the path of movement of said abutment, said locking plate being capable of movement out of the path of movement of said abutment when a coin of the proper size is positioned in said socket.

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