L. ERICKSEN.

COIN CONTROLLED APPARATUS.

APPLICATION FILED NOV. 19, 1915.

1,190,881.

Patented July 11, 1916.

2 SHEETS—SHEET 1.

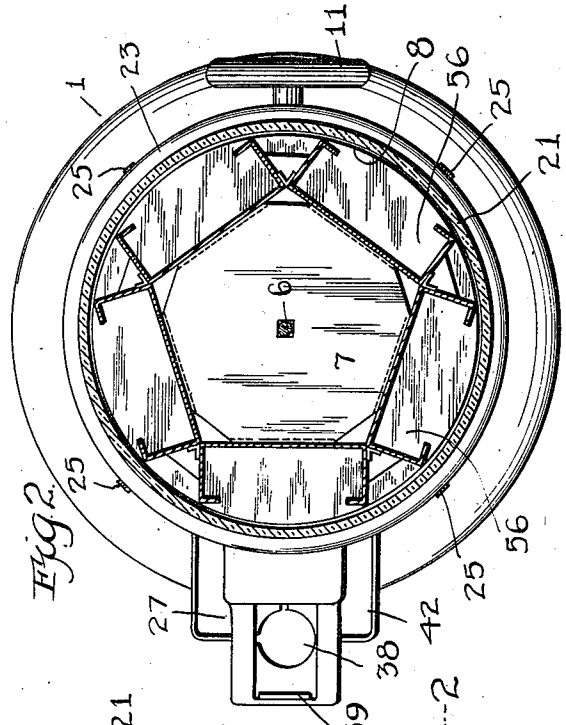


Fig. 2.

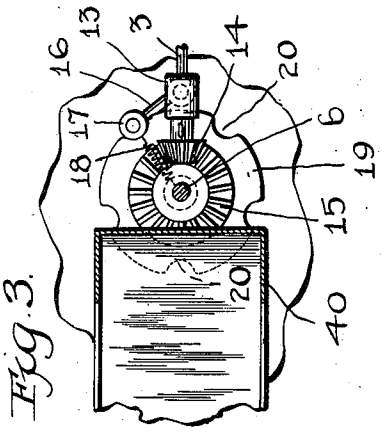


Fig. 3.

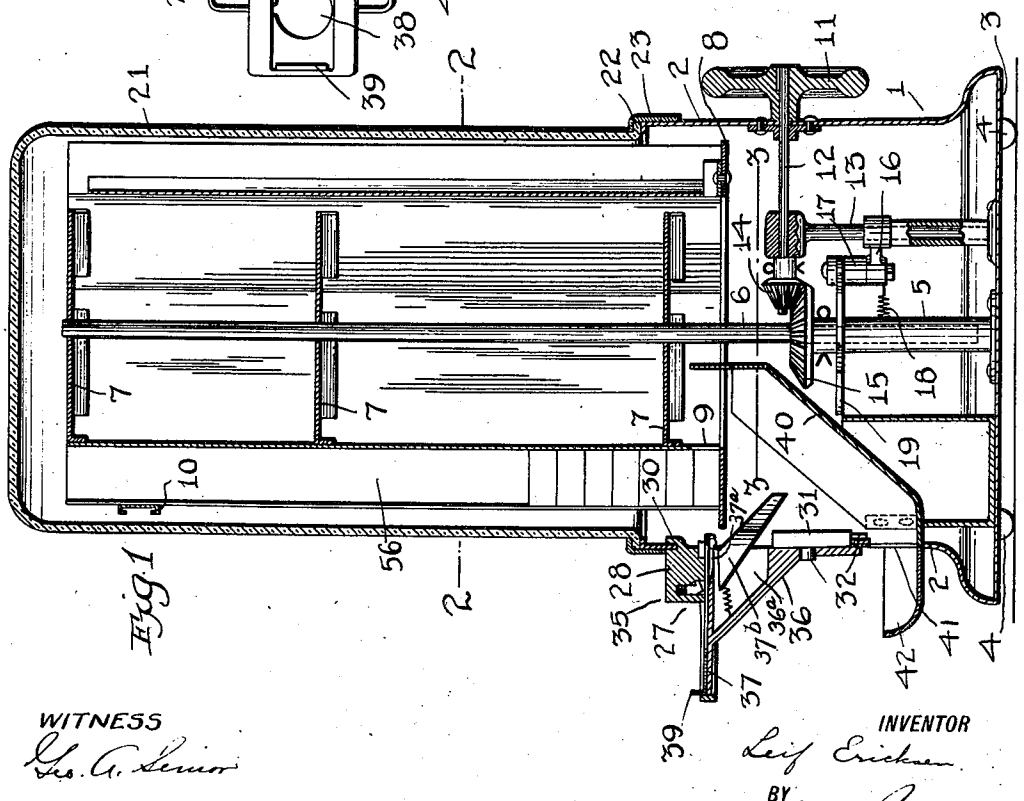


Fig. 1.

WITNESS

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2 SHEETS—SHEET 2.

Fig. 4.

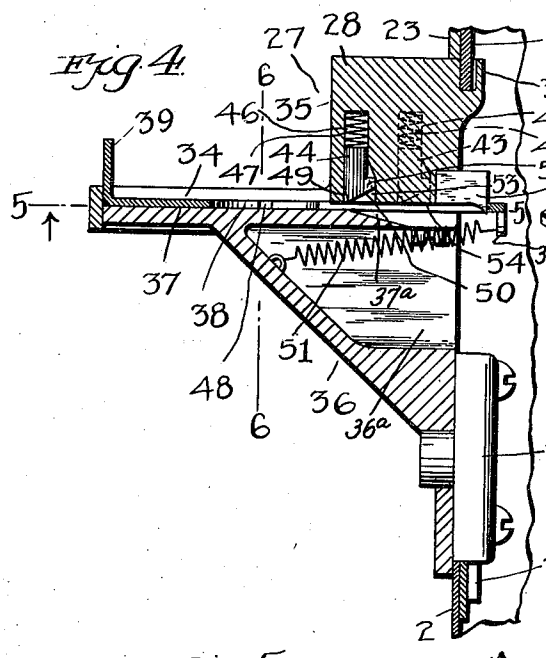


Fig. 7.

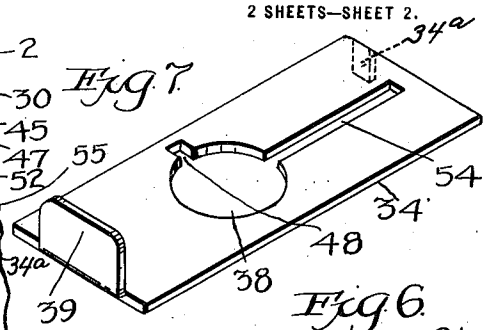


Fig. 6.

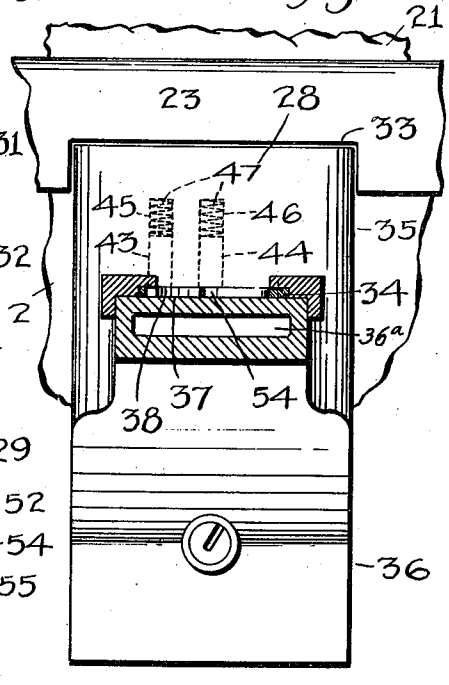


Fig. 5.

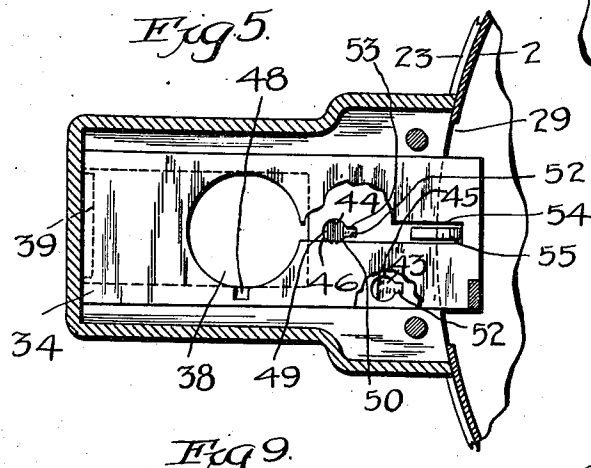


Fig. 8.

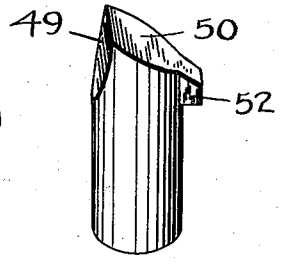
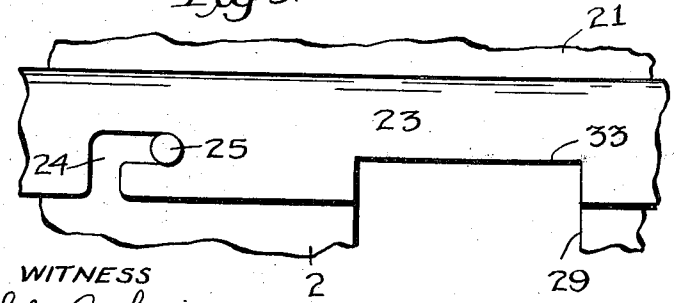


Fig. 9.



WITNESS

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UNITED STATES PATENT OFFICE.

LEIF ERICKSEN, OF BROOKLYN, NEW YORK, ASSIGNOR TO SIDNEY M. HARRINGTON, OF BROOKLYN, NEW YORK.

COIN-CONTROLLED APPARATUS.

1,190,881. Specification of Letters Patent. Patented July 11, 1916.

Application filed November 19, 1915. Serial No. 62,342.

To all whom it may concern:

Be it known that I, LEIF ERICKSEN, a subject of the King of Norway, and a resident of the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Coin-Controlled Apparatus, of which the following is a specification.

This invention relates to coin-controlled apparatus, and more particularly, though not necessarily exclusively, to coin-controlled vending apparatus.

The improvements are particularly applicable to that type of vending machine wherein a magazine structure carrying a plurality of stacks of articles or packages is rotatable about a vertical axis relatively to a delivery slide having coin-released locking or detent means which prevents operative movement of the slide in the absence of a coin or in event of the presence of a coin or token of an improper character.

The object of the invention is generally to simplify and improve the mechanism and especially to provide a simple and effective detent mechanism for the purposes above indicated.

In the accompanying drawings illustrating the preferred embodiment of the invention: Figure 1 is a vertical longitudinal section through the machine; Fig. 2 is a horizontal section on the line 2—2 of Fig. 1; Fig. 3 is a horizontal section on the line 3—3 of Fig. 1; Fig. 4 is a vertical longitudinal section through the operating or delivery slide and its associated parts; Fig. 5 is a horizontal section on the line 5—5 of Fig. 4; Fig. 6 is a transverse vertical section on the line 6—6 of Fig. 4; Fig. 7 is a perspective view of the delivery slide; Fig. 8 is an enlarged perspective view of one of the detents; and Fig. 9 is a fragmentary elevation of the ring which fastens the glass dome.

The machine has a hollow base 1 comprising side walls 2, preferably circular, and a bottom 3, having feet 4.

Rising from the bottom is a central vertical bearing 5, wherein is journaled a shaft 6 which extends upward to a substantial distance above the base and carries the rotatable plural magazine structure. This structure comprises a suitable number of vertical compartments 56, preferably open at the outer side to display the contents, and united with each other and to the shaft by means of plates 7. The bottoms of the magazines are closed by an annular plate 8, suitably secured thereto, and above this bottom plate the back walls of the compartments are open for a sufficient distance, as shown at 9, to permit the lowermost article to be ejected from the stack in an inward direction.

Channeled slides 10 fixed to the fronts of the several magazine compartments serve for the reception of signs indicating the character of the goods.

The rotary magazine structure is turned by means of a handwheel 11 outside of the base 1, the same being fixed on a horizontal shaft 12 journaled in the wall 2 and in the upper end of a member 13 rising from the bottom 3 and having a bevel pinion 14 at its inner end which meshes with a bevel gear 15 on the vertical shaft 6.

A horizontally swinging arm 16 is pivoted on the member 13 and carries at its outer end a roller 17, which is urged by a spring 18 connected with the arm against the periphery of a disk 19, the said disk being fixed on the shaft 6 and provided with a series of equidistant curved notches 20 equal in number to the compartments of the magazine structure and so positioned as to be engaged by the roller 17 when the corresponding compartments are opposite the delivery device presently to be described. In this way the rotary structure, when turned by means of the handwheel, tends to come to rest as each of the compartments arrives in operative position, and proper registry with the coin slide is thereby insured.

The magazine structure is inclosed by a glass dome 21, having a basal flange 22 which rests on top of the wall 2 and is engaged by a flanged retaining ring 23. This ring encircles the upper part of the wall 2 and is provided with bayonet joint slots 24 which receive studs 25 projecting from the wall. When the ring is turned so that the studs are freed from the horizontal portions of these slots, the ring and the dome may be lifted off the base, in order to afford access to the magazines and the general interior of the machine. In the position shown in Fig.

9, however, the ring is locked against vertical movement so as to hold the dome firmly in place.

In the normal condition of the machine the ring 26 is locked against turning, so as to render it impossible for an unauthorized person to remove the dome. This is accomplished by means of a device 27, which as a whole may be termed the lock. The said device comprises a block or casting 28 adapted to be placed over an opening 29 in the upper part of the wall 2, and having one or more hook lugs 30 at its upper end to take behind the upper edge of the said opening, and a key lock 31 on its lower portion, the bolt 32 of which lock may be projected behind the lower edge of the opening. In this way the block may be locked in place or removed, and when in position it bars rotary movement of the ring 26, because the latter has a cut-out portion 33 which just fits over the top of the block. The said block 28 constitutes a frame part wherein the coin slide or operating device 34 is mounted. To this end the block is preferably made in two parts, an upper part 35 and a lower part 36, which are so formed and assembled as to afford a flat slideway 37 having an opening 37^a therethrough, at its rear end. Said lower part 36 is also provided with a chambered portion 36^a, beneath said slideway 37, which is closed at its front and open at its rear, as shown. Projecting into said chambered portion 36^a and supported therewithin is a coin-chute 37^b. On the slideway 37 reciprocates a slide-pusher 34 provided with a circular coin opening 38 for the purpose of receiving a coin flatwise. When pushed in to the limit determined by the contact of its finger piece 39 with the front wall of the block, the slide-pusher acts to eject the bottom package of one of the stacks, which package thereupon falls into a delivery chute 40 leading through an opening 41 in the wall 2 to a recipient 42. Sufficient movement of the slide to accomplish this result is prevented, however, by detents 43 and 44, unless the proper coin is in the slide. The said detents consist of vertically movable pins mounted slidably in bores or chambers 45 and 46 in the upper half 35 of the block, and acted upon, downwardly, by springs 47 also housed in said chambers. These pins are spaced from each other transversely with reference to the movement of the slide, and also, preferably, longitudinally. The pin 43 which is disposed more laterally of the two is positioned to engage the side of the coin opening 38, while the other, 44, is adapted to drop into the opening and contact with the rear wall thereof. For better coöperation with the pin 43 the coin opening is provided at the side with a notch 48, the extent of which transversely of the slide is less than the width of the operative extremity of the pin, so that the latter will be prevented from entering the notch when a coin of proper diameter fills the coin opening, but will do so if the coin is too small. The detent pins are formed at their sides opposing the inward movement of the slide with holding faces 49 and at their opposite sides with oblique latching surfaces 50, which permit the slide to return freely to initial position under the action of a spring 51, disposed in said chambered portion 36^a and secured, at one end, to a downward-projecting lug 34^a carried at the inner end of the slide 34 and, at its other end, to the front wall of said chambered portion, as shown in Figs. 1 and 4. The pins are prevented from turning by means of lugs 52 formed on them and operating in notches 53 in the block. The pin 44, it will be understood, acts to bar the movement of the slide if there is no coin in the slide, or if the coin is too thin or too thick. In the latter case the pin abuts, not against the rear side of the coin opening, but against the forward edge of the coin itself.

The coin slide is further provided with a longitudinal slot 54, which communicates at one end with the coin opening; and in this slot there is received a fixed coin ejector or tooth 55 firmly fastened to the upper half 35 of the block at the inside. This tooth operates positively to displace coins which may be jammed in the coin opening of the slide, and prevents the same coin being used more than once.

While I have illustrated the preferred embodiment of the invention, it will be understood that numerous changes and omissions may be made without departing from the scope of the appended claims. The handle for turning the magazine structure has been shown at the rear of the cabinet for convenience in illustration, but in practice it will preferably be located at one side. It will also be understood that the coin slide and its associated parts may be employed in connection with other kinds of coin-controlled apparatus.

What I claim as new is:

1. In a coin-controlled apparatus, a member having a flat, apertured slideway and a chambered portion, beneath said slideway, closed at its front and open at its rear; a slide-pusher movable on said slideway and having a coin-receiving aperture registrable with the slideway aperture when the slide-pusher is moved inward; a second member disposed over said slide-pusher and having spring-pressed detents coöperable with said slide-pusher to limit movement thereof, when an improper coin is deposited in the said coin-receiving aperture, or when no coin is disposed therein; a coin-chute supported in said chambered portion to receive coins dropping through said two apertures when they register; and spring means disposed in

said chambered portion and secured to the front wall thereof and to the rear end of said slide-pusher, for automatically returning the latter to normal position after manual actuation thereof.

2. In a coin-controlled apparatus, a member having a flat apertured slideway and a chambered portion, beneath said slideway, closed at its front and open at its rear; a slide-pusher movable on said slideway and having a coin-receiving aperture registrable with the slideway aperture when the slide-pusher is moved inward; a second member disposed over said slide-pusher and having spring-pressed detents coöperable with said slide-pusher to limit movement thereof, when an improper coin is deposited in said coin-receiving aperture, or when no coin is disposed therein; a coin-chute supported in said chambered portion to receive coins dropping through said two apertures when they register; spring means disposed in said chambered portion and secured to the front wall thereof and to the rear end of said slide-pusher, for automatically returning the latter to normal position after manual actuation thereof; and means carried by said second member for positively ejecting the coin from the coin-receiving aperture when said slide-pusher has been moved to the limit of its rearward movement.

LEIF ERICKSEN.