March 29, 1932. L. MYERS 1,851,643

COIN CONTROLLED MECHANISM

Filed March 20, 1931

Fig. 1.

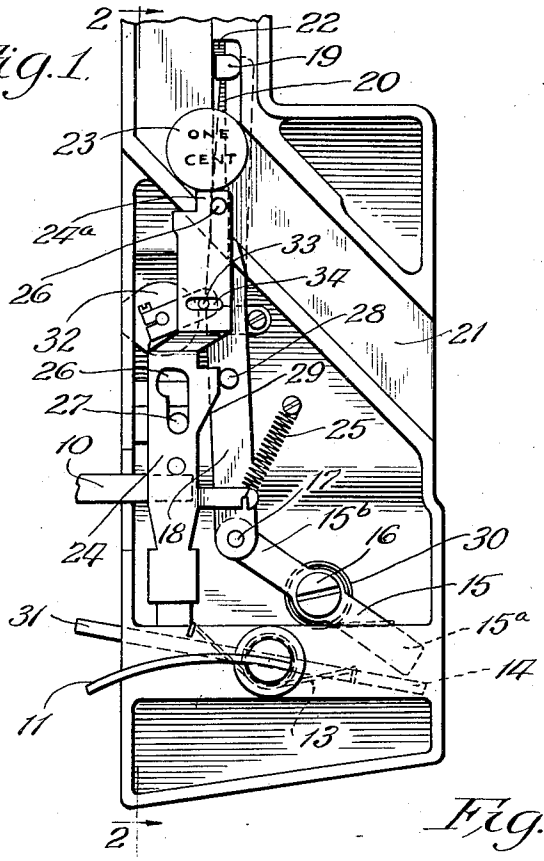


Fig. 2.

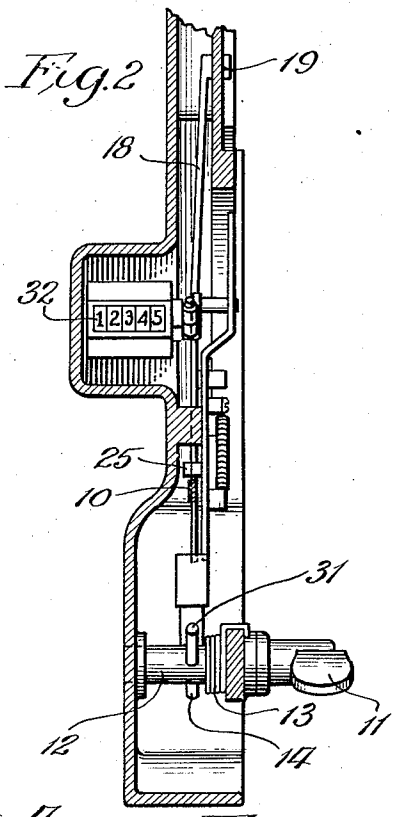


Fig. 3.

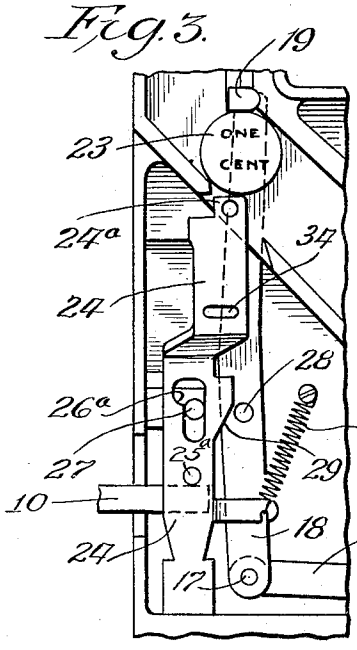


Fig. 4.

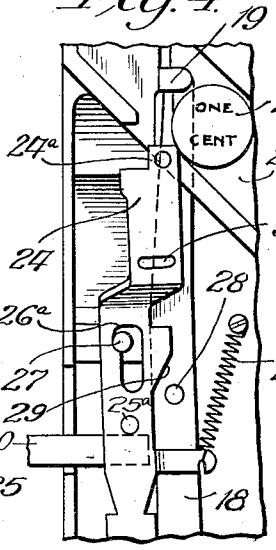
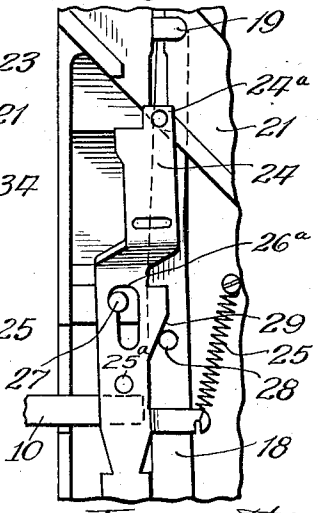


Fig. 5.



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UNITED STATES PATENT OFFICE

LOUIS MYERS, OF CHICAGO, ILLINOIS, ASSIGNOR TO GENCO, INCORPORATED, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS

COIN-CONTROLLED MECHANISM

Application filed March 20, 1931. Serial No. 524,183.

This invention relates to improvements in coin-controlled mechanism and, more especially, such mechanism adapted for use in connection with slot machines, vending machines, games of skill, and the like. In fact, the invention is adapted for use in connection with any device which is to be controlled by coin operation.

Among the features of my invention is the provision of such mechanism that is exceedingly simple in construction and operation, and yet efficient and durable.

Another feature of my invention is the provision of improved means in connection with coin-controlled apparatus or mechanism for preventing so-called "milking" of a device with which it is used. In many forms of apparatus as heretofore used, it is possible to lodge or jam a coin, slug, or other material in a certain position in the mechanism so that thereafter repeated operations of the device with which the mechanism is used can be accomplished without the insertion of additional coins. Such tampering or misuse of my device is absolutely prevented by means which will be hereinafter described more in detail.

Another feature of my improved coin-controlled mechanism is the provision of means for a delayed action. In many devices controlled by coin-operated mechanism, it is necessary or desirable to delay the return movement of a certain part after the operating lever is released. This is accomplished in my improved coin-controlled mechanism, as will be more specifically pointed out hereinafter.

Other features and advantages of my invention will appear more fully as I proceed with my specification.

In that form of device embodying the features of my invention shown in the accompanying drawings—

Figure 1 is a view in side elevation of the coin-controlled mechanism with the cover removed from the coin chute; Fig. 2 is a view taken as indicated by the line 2 of Fig. 1; and Figs. 3, 4 and 5 are fragmentary diagrammatic views similar to Fig. 1 showing a sequence of steps in the operation of the mechanism.

As shown in the drawings, 10 may indicate a part on any kind of slot machine, vending machine, game of skill, or other apparatus which is to be controlled by the coin-operated mechanism embodying my invention. For convenience, it will be assumed that in order to operate the apparatus referred to, the member 10 is to be depressed. My improved coin-controlled mechanism therefore is designed to permit depression of the member 10 once with the insertion of a single coin. Frequently, in apparatus of the character referred to, it is necessary that the return movement of the part 10 be somewhat delayed after the operating handle on the coin-controlled mechanism is released. Means are provided, therefore, in my improved coin-controlled mechanism for delaying the return movement of the part 10 after the operating lever has been released and the coin permitted to pass through the chute. It is to be understood that the apparatus of which 10 is a part is provided with a spring or other similar means (not shown) for yieldingly urging the part 10 upwardly into its normal position, as shown in Fig. 1.

My improved coin-controlled mechanism includes the operating lever or handle 11 mounted on the pivoted shaft 12 provided with a spiral spring 13 yieldingly urging the operating lever 11 upwardly into its normal position, as shown by the solid lines in Figs. 1 and 2. The shaft 12 is provided with a pin 14, the end of which engages the lower end 15^a of the lever 15 pivoted at 16. The other end 15^b of the lever 15 is pivotally connected at 17 to the lower end of the vertically reciprocable bar or operating member 18.

The upper end of the bar 18 is provided with a coin-engaging lug 19 extending through a slot 20 in the wall of the coin chute. The coin chute, as indicated by 21, is widened, as indicated by 22, to accommodate the coin-engaging lug 19 when in its normal or retracted position as shown in Figs. 1 and 2. In this position, it is outside of the path of a coin. Downward movement of the operating lever 11 operating through the pin 14

will lock the lever 15 to depress the coin-engaging lug 19 so that it will move down into the coin chute and engage a coin 23, in the position shown in Fig. 1.

Numeral 24 indicates a vertically reciprocable bar with a pin 25ª adapted to engage the part 10 when the bar is depressed. This bar has its upper end 24ª extending into the coin chute and guided in its vertical movements by a pin 26 in the slot 20. The bar 24 normally is in the position shown in Fig. 1 so that its upper end 24ª will stop the descent of a coin in the chute 21. When in this position, downward pressure of the lever 11 will depress the lug 19, as above described to engage the coin 23 in the pressure will be transmitted through such coin against the upper end 24ª of the bar 24 to depress such bar to cause the pin 25ª to engage the part 10 on any apparatus to be controlled. It will be seen that continued downward movement of the lug 19 will move the coin 23 and the bar 24 downwardly until the end of the bar 24ª is out of the coin chute 21, when continued downward movement of the lug 19 will cause the coin 23 to pass on through the chute and out of the lower end from which it may be deposited into any suitable coin receptacle (not shown).

The above-mentioned progressive movements are illustrated diagrammatically in Figs. 3 and 4. In Fig. 3, the lug 19 has been depressed to engage the coin 23 and the bar 24 has been depressed to a point where the coin is just about to pass and escape through the chute. Fig. 4 shows further movement of the lug 19. In this position, the bar 24 has been depressed to its fullest extent and the coin is escaping downwardly in the chute 21.

The following means are provided for preventing operation of the bar 24 until the operating member 11 is released. The bar 24 is yieldingly pulled upwardly by the spring 25 which also is mounted to pull the lower end of the bar toward the right, as viewed in Fig. 1. The bar 24 is provided with a bayonet slot or hole 26 embracing the pin 27. When the bar 24 reaches the lower extremity of its movement, the spring 25 rocks the lower end slightly to the right until the pin 27 catches on the shoulder 26ª of the bayonet slot. Return movement of the bar 24 is prevented by this locking engagement even after the coin passes on downwardly in the chute. The bar 24 is shown in Fig. 5 in this locked position. As long as the lever 11 is held depressed, the bar will remain in this position and, consequently, the part 10 will remain depressed. When the operating lever 11 is released, the pin 28 on the member 18 strikes the cam surface 29 on the bar 24, moving the lower end of the bar to the left (as viewed in Fig. 1) to release the pin 27 from the shoulder 26ª, whereupon the bar 24 will be moved upwardly by the spring 25 to its normal position ready for another operation.

Numeral 30 indicates a spiral spring on the pivot pin 16 yieldingly rocking the lever 15 to urge the member 18 upwardly into its normal position, as shown in Fig. 1.

The shaft 12 may also be provided with a forwardly projecting pin 31 serving to operate any desired mechanism by movement of the operating member 11. It will be seen that when no coin is inserted, the operating lever 11 may be freely depressed to move the pin 31. When thus operated, the lug 19 moves downwardly into the coin chute, but the member 24 is not depressed since there is no coin to transmit the power from the lug 19 to such member 24.

Numeral 32 may indicate an odometer or counting mechanism provided with a pin 33 embraced by the slot 34 in the bar 24, said counter 32 serving to count and record the movements of the bar 24.

In the operation of the mechanism, the coin is inserted in the chute at the top and moved downwardly by gravity until it is stopped by the upper end 24ª of the power-transmitting member 24 which lies in its path. It is then in the position shown in Fig. 1. When thus located, depression of the operating member 11 will lower the coin-engaging lug 19 to engage the coin and the coin will transmit power from the lug 19 to the upper end of the member 24, causing said member to be depressed until the upper end 24ª of the same moves downwardly out of the chute where it is out of the path of the coin. The parts are shown in this position in Fig. 4. The coin is then permitted to pass on downwardly through the chute by gravity. At this point, the member 24 is locked in its lowermost position by the pin 27, as shown in Figs. 4 and 5. The member 24 will, therefore, remain depressed until the operating member 11 is released when upward movement of the pin 28 will engage the cam surface 29, as shown in Fig. 5, to release the pin 27 from the shoulder 26ª, permitting the spring 25 to raise the member 24 to its normal position, as shown in Fig. 1.

In the claim, I may refer to the power-transmitting member 24 as the actuating member, since it is the member in the coin-controlled mechanism that actuates the part 10 of any apparatus being controlled by the mechanism.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claim, in which it is my intention to claim all novelty inherent in my invention as broadly as permissible, in view of the prior art.

What I regard as new, and desire to secure by Letters Patent, is:

Coin-controlled mechanism, including; a coin chute; a movable actuating member, in its normal position, having a part in the coin chute lying in the path of a coin, said actuating member being provided with a locking shoulder and a cam surface; a locking pin; means yieldingly urging the locking shoulder on the actuating member into locking engagement with said locking pin; a movable operating member provided with a coin engaging lug and a release pin, said lug adapted to engage a coin to move the actuating member forwardly in the forward movement of said operating member, and said release pin adapted to engage the cam surface on the actuating member in the reverse movement of said operating member to release the locking shoulder on the actuating member from the locking pin; manually operable means connected to the operating member for moving the same; means for actuating an associated mechanism; and a part on the actuating member adapted to engage said last-mentioned means and move the same in the forward movement of said actuating member.

In witness whereof, I have hereunto set my hand, this 14th day of March, 1931.

LOUIS MYERS.