

Aug. 17, 1943.

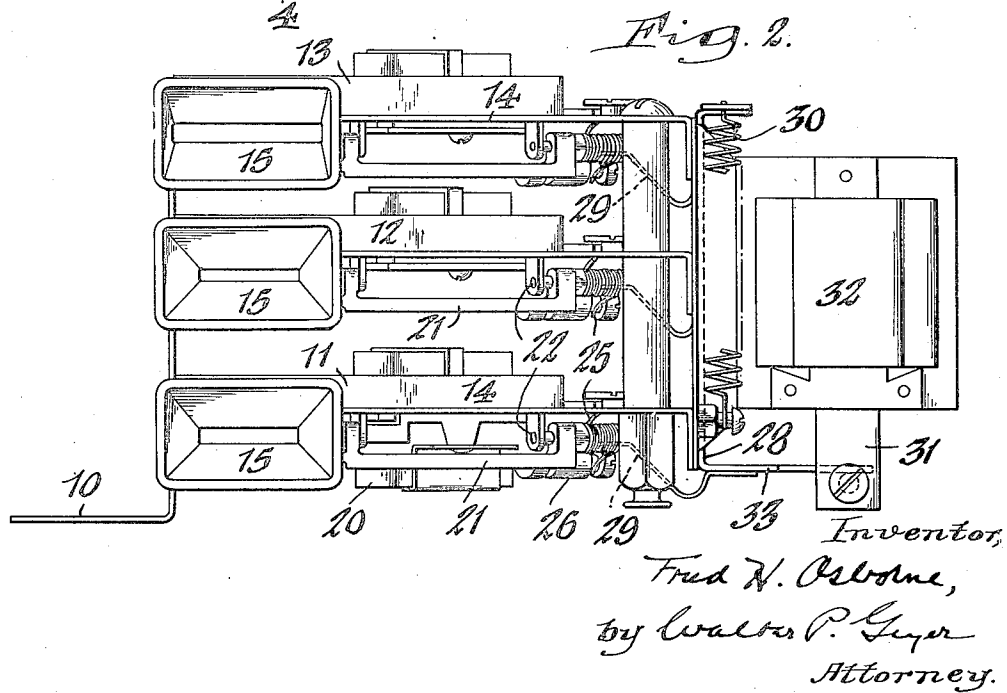
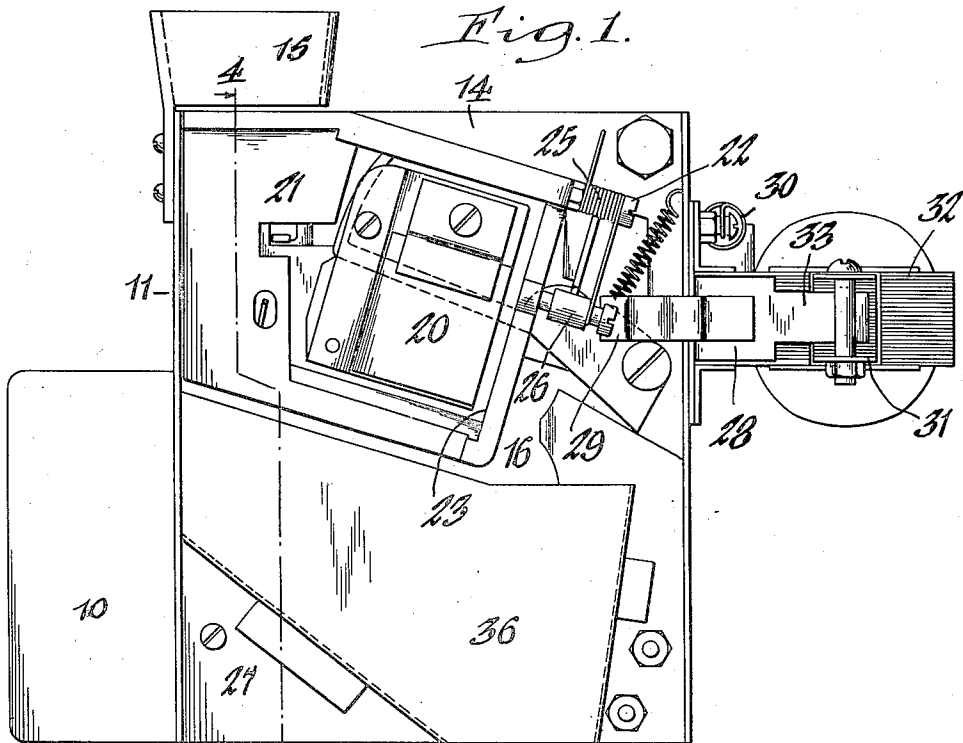
F. H. OSBORNE

2,327,154

COIN CONTROL DEVICE

Filed Nov. 23, 1940

2 Sheets-Sheet 1



Inventor,
Fred H. Osborne,
by Walter P. Luper
Attorney.

Aug. 17, 1943.

F. H. OSBORNE

2,327,154

COIN CONTROL DEVICE

Filed Nov. 23, 1940

2 Sheets-Sheet 2

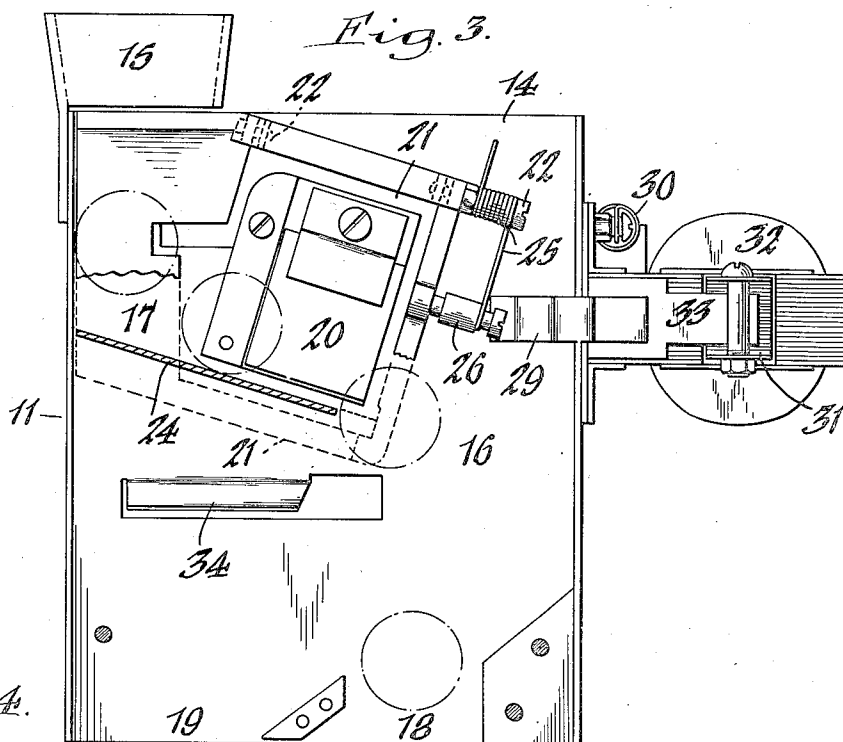


Fig. 4.

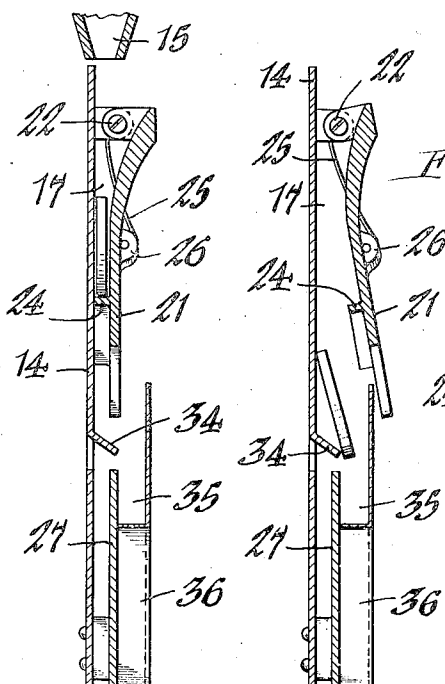


Fig. 5.

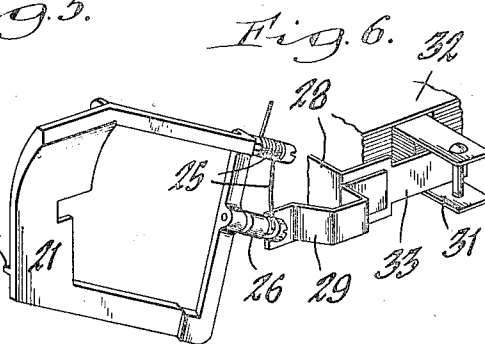


Fig. 6.

Inventor,
Fried H. Osborne,
by Walter P. Geyer
Attorney.

UNITED STATES PATENT OFFICE

2,327,154

COIN CONTROL DEVICE

Fred H. Osborne, Snyder, N. Y., assignor to The
Rudolph Wurlitzer Company, North Tona-
wanda, N. Y., a corporation of Ohio

Application November 23, 1940, Serial No. 366,900

3 Claims. (Cl. 194—101)

This invention relates generally to coin control or selector devices but more particularly to certain new and useful improvements in the magnetic type of coin devices employing a so-called scavenger for ejecting and returning coins or slugs which may become trapped in the device.

It has for its primary object to provide electrically-controlled means for governing the closed and open positions of the scavenger element of coin devices of this character, so that when there is no current flowing to the apparatus on which the coin device is used, and it is therefore inoperative should coins be deposited, the scavenger will remain open and thereby enable both genuine and spurious coins or slugs to be rejected and returned to the patron.

Another object of the invention is to provide a scavenger control for coin devices which is simple and compact in construction, which is positive and reliable in operation, and which, while preventing the normal operation of the coin-governed apparatus when other than a genuine coin is deposited in the device, will assure the return of genuine coins or slugs to the user should the apparatus for any reason be out of order by reason of lack of electrical current for operating it.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings:

Figure 1 is a side elevation of a multiple coin device showing my improved scavenger mechanism associated therewith. Figure 2 is a top plan view thereof. Figure 3 is a side view, similar to Figure 1, but partly in section and with the lower cover plate removed to show the normal travel of a coin deposited in the device. Figure 4 is a transverse vertical section taken substantially in the plane of line 4—4, Figure 1, the scavenger element or gate being in its normally closed position, and the magnet 20 and the electromagnet 32 being omitted. Figure 5 is a similar section, but showing the scavenger element in its open position to permit the return of deposited coins to the patron. Figure 6 is a detached perspective view of the scavenger element and its associated actuating mechanism.

Similar characters of reference indicate corresponding parts throughout the several views.

By way of example, my improved scavenger mechanism has been shown in connection with a multiple coin device such as is used on auto-

matic phonographs for controlling the playing of as many records as there are coin or coin values deposited, and which coin-controlled device is of the type employing among other elements, a magnet which acts to separate the spurious coins from the genuine coins and thereby permit the switching on operation of the phonograph only upon the deposit of genuine coins, the spurious coins being directed to a point where they will not actuate the customary magazine switch mechanism for operating the phonograph. Normally, as when the phonograph is in proper operating condition and electric current is being supplied to the same for operation, my improved scavenger mechanism functions to permit the normal operation of the coin control mechanism to accept genuine coins and to reject spurious coins or slugs. However, should the electrical control of the phonograph become inoperative for any reason, as a lack of electrical energy to supply it for operation, then the scavenger mechanism is automatically rendered operative to prevent the normal coin passage through the coin control mechanism and cause all coins, whether genuine or spurious, to be directed to a separate coin-delivery point and be returned to the patron without taking the usual coin paths of genuine and spurious coins.

Referring now to the drawings, illustrating a standard magnetic type of coin separating device to which I have applied my scavenger mechanism, the numeral 10 indicates a bracket upon which are mounted a plurality of coin-selector devices or units 11, 12 and 13 for accommodating 5, 10 and 25 cent coins, any genuine coin so deposited successfully passing through the device and being adapted to close the usual magazine switch mechanism of the phonograph or other apparatus for assuring the playing of as many records as there are coins or coin values deposited. Each of these coin devices is identical in construction and a description of one will suffice for all.

Each coin device consists of a plate 14 suitably attached in a vertical plane to the supporting bracket 10 and having at its upper end a coin-receiving inlet or mouth 15, while in its body a laterally inclined coin chute 16 is provided, the same communicating at its upper end by a vertical passage or branch 17 with the inlet 15 and at its lower end with one or the other of two separate discharge passages 18, 19, one for the discharge of genuine coins to a point for actuating the control switch of the phonograph or other apparatus to be rendered operative,

and the other for the discharge of spurious coins or slugs. A magnet 20 is positioned in operative spaced relation adjacent the upper portion of the coin chute to create a magnetic field which acts to retard the rolling movement of spurious coins or slugs and thereby direct them to the discharge passage 19. Genuine coins are not affected by the magnet and their speed of motion through the chute causes them to be directed through the discharge passage 18 and thence to a point to trip the control switch of the phonograph or other apparatus controlled thereby.

Applied to the upper portion of the coin chute plate 14 and overlying the same for movement transversely toward and from the same is a vertically-swinging gate or scavenger member 21 which is hinged at its upper end to substantially horizontal pivot-pins 22. This gate is disposed adjacent the magnet 20 and is cut out to provide an opening 23 through which the magnet extends so as not to interfere with the swinging movements of the gate. In its normal closed operative position, this gate assumes a position in spaced parallel relation to the upper portion of the chute-plate 14 to form a cover-wall for the contiguous portion of the chute and thereby properly guide the coins during their initial travel through the chute. On its inside face and adjacent the lower edge thereof the gate has an inclined ledge or track 24 which abuts against the face of the chute-plate and along which the coins roll and are directed past the magnet 20. A spring 25 coiled about one of the pivot-pins 22 and bearing at one end against a lateral projection 26 at one side of the scavenger-gate 21 normally urges the latter to its closed position with the coin-track 24 thereof in abutting engagement with the opposing face of the chute-plate 14. The remaining lower portion of this chute-plate is provided with a cover-plate 27 which is disposed in spaced parallel relation thereto and thereby properly guides the rolling coins in a vertical plane through one or the other of the discharge passages 18, 19.

Operatively associated with the scavenger-gates 21 of the respective unit coin devices is an electrically-governed mechanism included in the operating or supply circuit of the phonograph or like apparatus and which functions to automatically control the simultaneous opening and closing movements of those gates. When such circuit is "on" or operating in the normal manner, this electrically-governed mechanism is likewise energized to assume a retracted position so as not to interfere with the action of each spring 25 to retain its companion gate in closed position. On the other hand, should the supply circuit of the apparatus fail for any reason whatever, then said mechanism assumes a projected position and acts to open the scavenger-gates against the resistance of their individual springs 25 and cause any coins deposited at such time to be returned to the patron by passing through a separate and independent coin path. For this purpose, a shiftable actuating bar 28 is provided at one side of and common to the chute-plates 14 for movement transversely thereof and having tappet or follower lugs 29 thereon in contacting or abutting relation with the rear or inner sides of the spring-engaging projections 26 of the companion scavenger gates 21. A spring 30 connected at one end to a fixed part of the device and at its other end to this tappet-bearing bar normally urges it in a direction to shift the scavenger gates to their open position,

said spring being of a greater tension than that of the springs 25. The movement of the bar 28 in the opposite direction to permit the closing of each scavenger gate is controlled by the core or plunger 31 of a solenoid 32 included in the operating circuit of the phonograph or like apparatus, said bar having a lug 33 in coupling engagement with the solenoid-plunger. By this construction, as long as electric current is being supplied to the apparatus rendered operative by the deposit of a coin, the solenoid is energized and the actuating bar 28 is shifted to a retracted position so as to not interfere with the spring-closing of each scavenger gate and the normal passage of the coins through the coin device. However, should the electric current be cut off, then the spring 30 will project the actuating bar forwardly to open the scavenger gate and thereby prevent any deposited coins taking their normal path through the coin device.

When the gate 21 is open, the coins drop downwardly past the same instead of laterally over the guide track 24, and are directed forwardly by a deflector 34 formed on the face of the chute-plate 14 into a reject pocket or passage 35 formed by a flanged member 36 applied to the cover-plate 27. From this pocket, the coins, whether genuine or spurious, are returned to the patron through a suitable chute or receptacle, not shown, thereby assuring the patron against monetary loss when the apparatus controlled by the deposit of coins is electrically inoperative.

I claim as my invention:

1. In a coin device of the character described, a coin chute having a passage for the normal travel of coins therethrough and a passage for scavenged coins, a scavenger member disposed in operative relation to said chute and movable to closed and opened positions to govern the travel of coins to said first and second-named passages, respectively, yieldable means for normally retaining the scavenger member in its closed position to direct the coins through the normal-travel coin passage, and electrically-retractable means in operative engagement with said scavenger member for permitting its movement to closed position by said yieldable means when the circuit is closed to such retractable means and causing the latter, when the circuit is open, to project said scavenger member to its open position, said retractable means including a shiftable actuating bar having a follower lug thereon engageable with the scavenger member and a spring connected thereto and of greater tension than the scavenger member yieldable means for normally urging said bar in a direction to open said member, and a solenoid having its plunger in operative coupled engagement with said bar for controlling the movement of the latter in the opposite direction.

2. In a coin device of the character described, a coin chute having a passage for the normal travel of coins therethrough and a passage for scavenged coins, a scavenger member disposed in operative relation to said chute and movable to closed and opened positions to govern the travel of coins to said first and second-named passages, respectively, a spring for urging said scavenger member to its closed position, a shiftable element in operative engagement with the scavenger member for moving it to an open position, a spring applied to said shiftable element and of a greater tension than said scavenger member spring for actuating such element in a

direction to open the scavenger member, and an electrically-responsive means operatively connected to said shiftable element and normally operative to retract the latter to a position in which the scavenger member is closed, said electrical means, when inoperative, causing the shiftable element to be urged by its spring to a projected position to open the scavenger member.

3. In a coin device of the character described, a coin chute having a passage for the normal travel of coins therethrough and a passage for scavenged coins, a scavenger member disposed in operative relation to said chute and movable to closed and opened positions to govern the

travel of coins to said first and second-named passages, respectively, said scavenger member having a projection thereon, a spring in operative engagement with said projection for normally urging the scavenger member to its closed position, a retractable, shiftable element having a portion thereon in follow-up engagement with said scavenger member projection, a spring connected to said shiftable element and of a greater tension than said scavenger member spring for urging it to a projected position and the scavenger member to its open position, and solenoid means operatively connected to said shiftable element for retaining it in its retracted position.

FRED H. OSBORNE.