Jan. 17, 1939. F. J. FIALKOWSKI 2,144,568

COIN CONTROL MECHANISM

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Fig. 3.

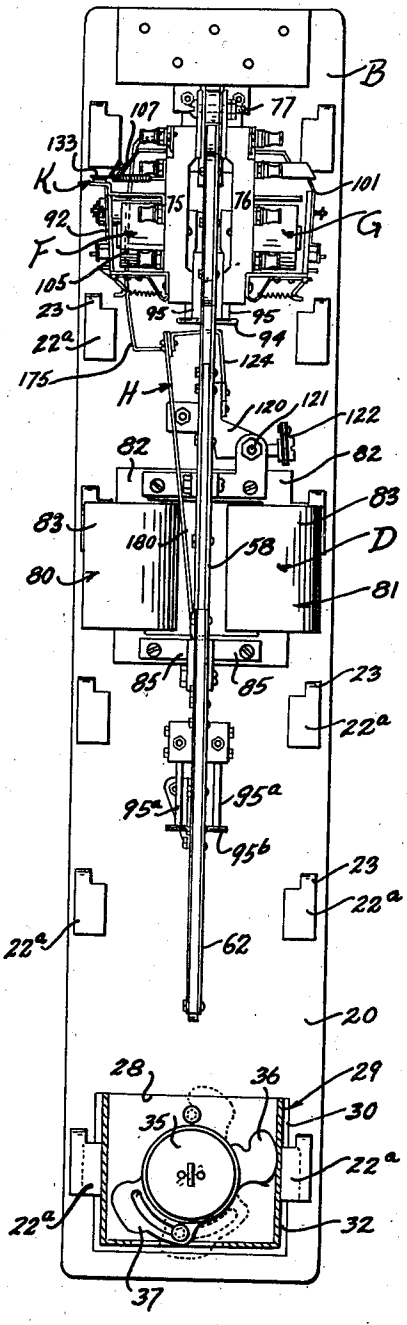


Fig. 4.

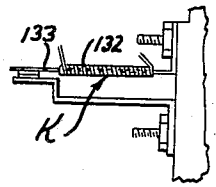


Fig. 1.

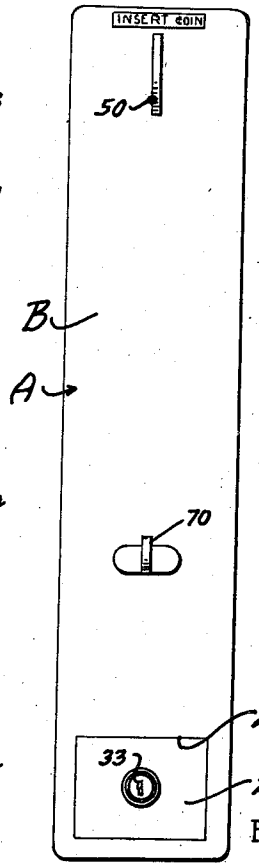
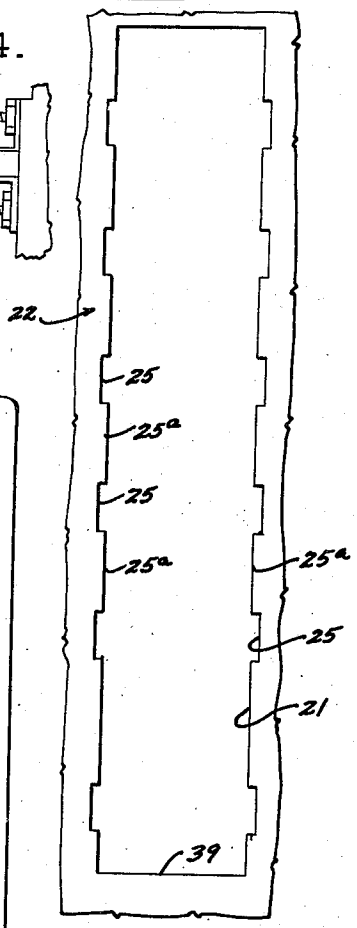


Fig. 2.



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COIN CONTROL MECHANISM

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Fig. 5.

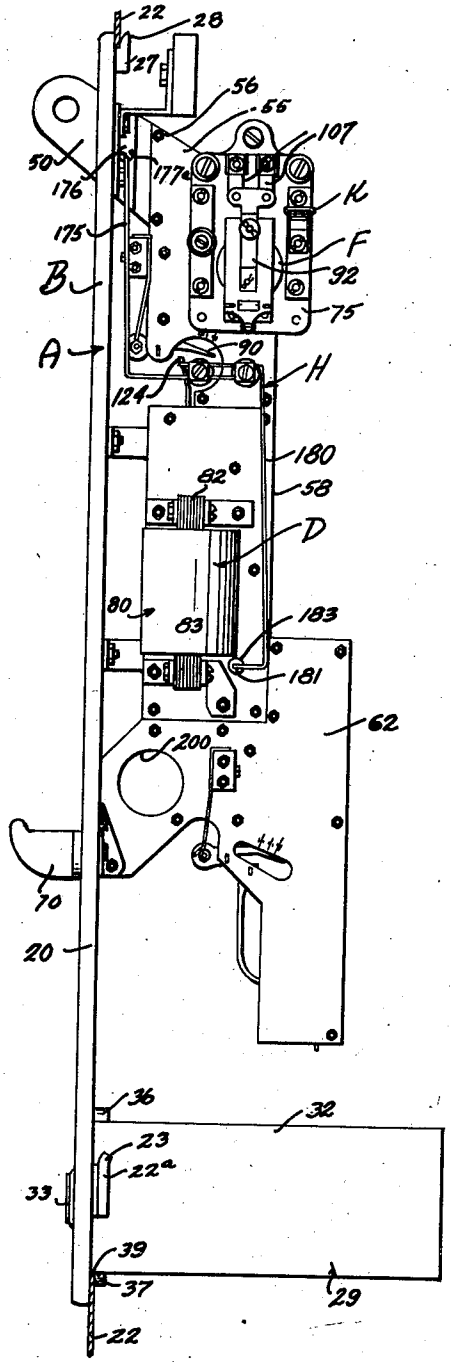
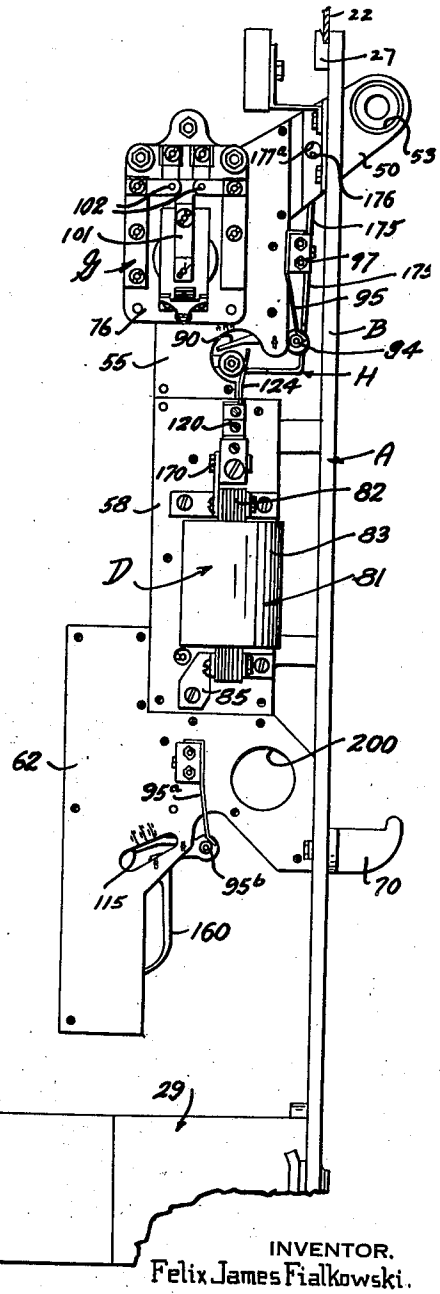


Fig. 6.



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COIN CONTROL MECHANISM

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Fig. 7.

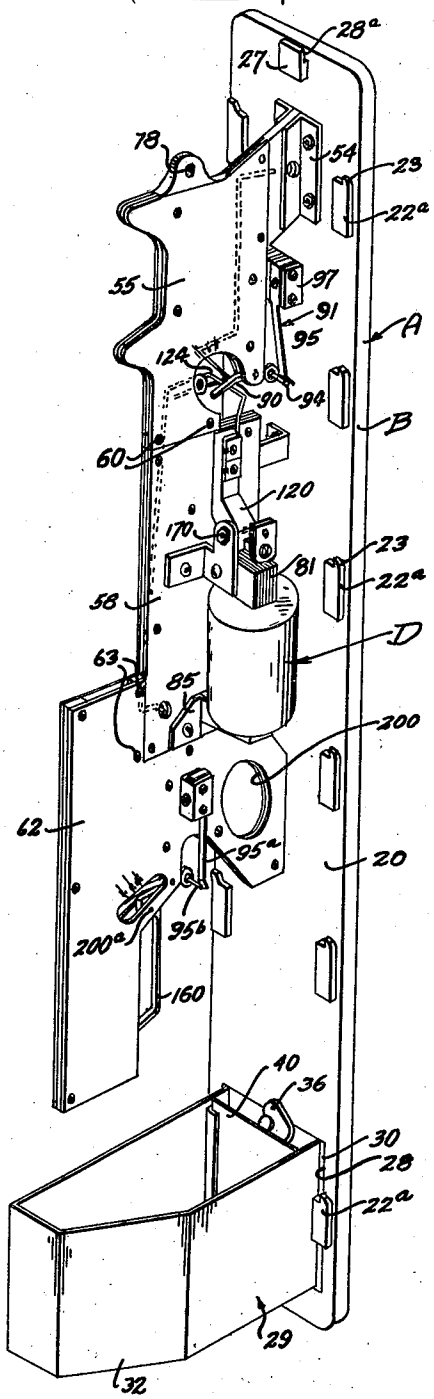


Fig. 8.

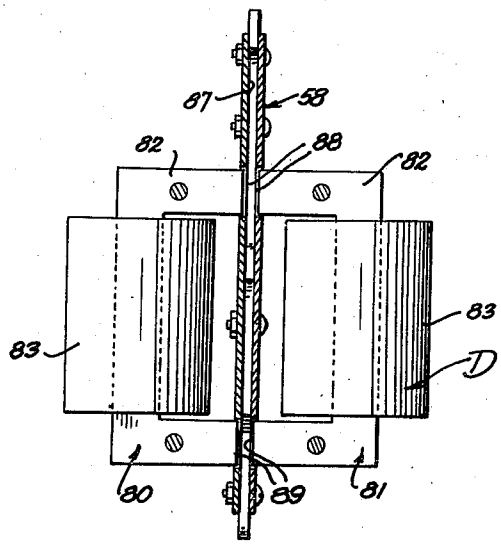
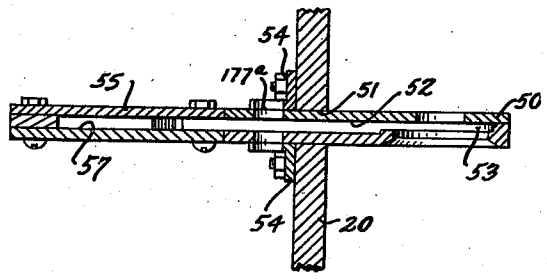


Fig. 9.



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COIN CONTROL MECHANISM

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Fig. 10.

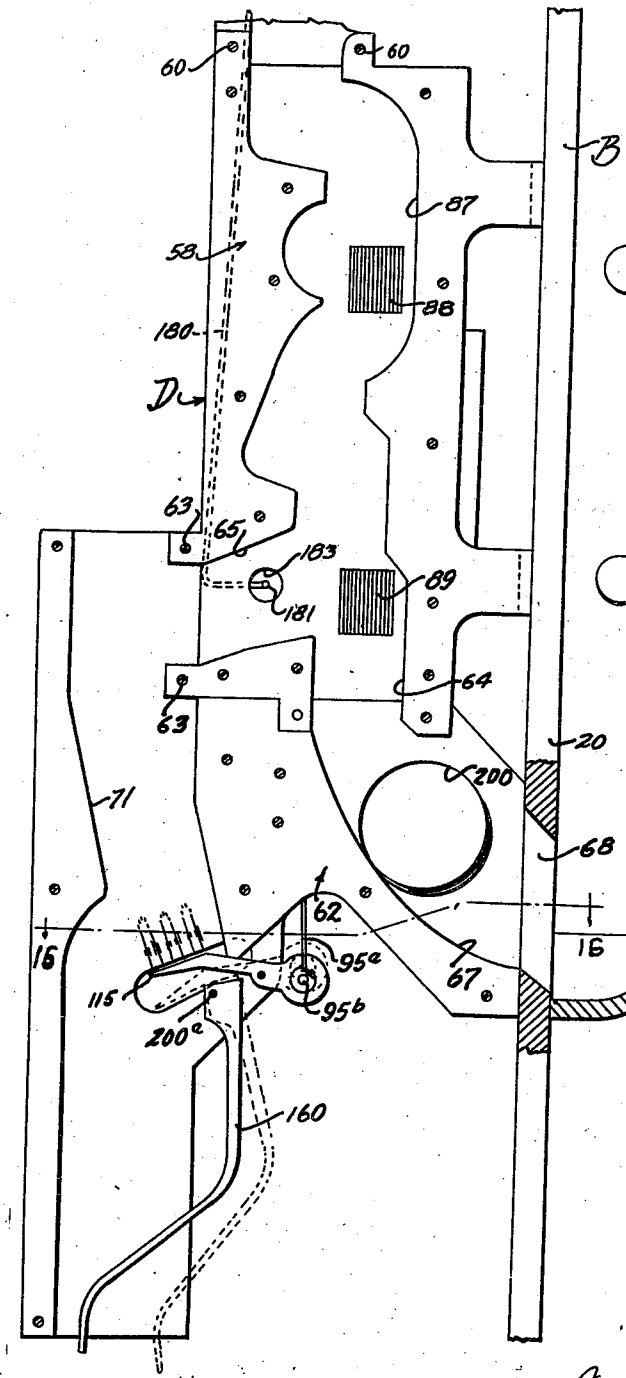


Fig. 11.

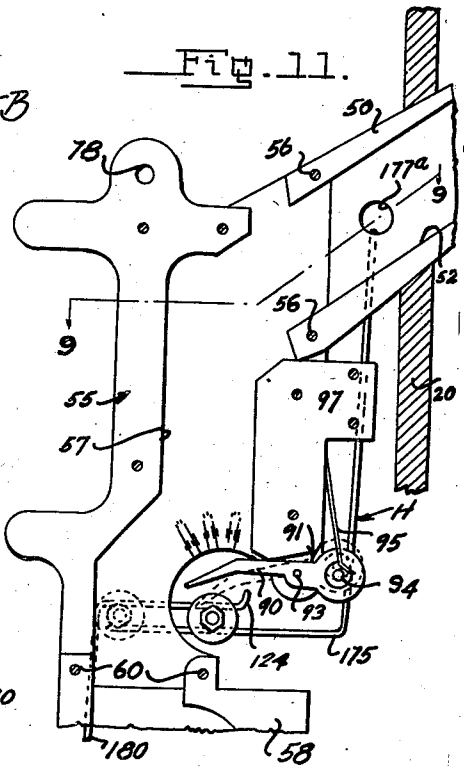
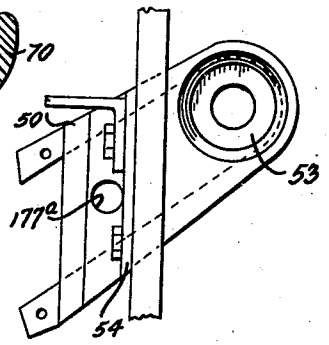


Fig. 12.



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COIN CONTROL MECHANISM

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Fig. 13.

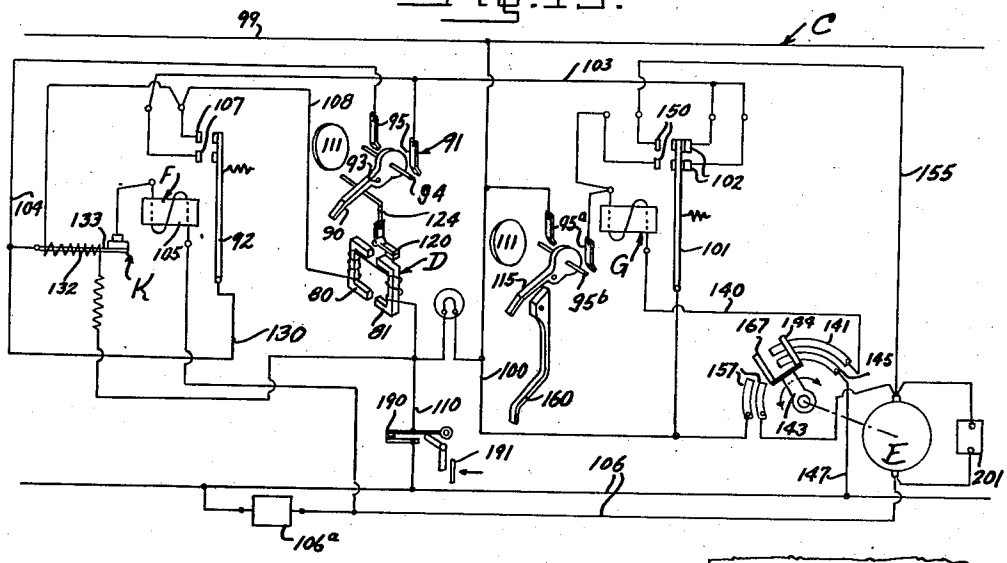


Fig. 14.

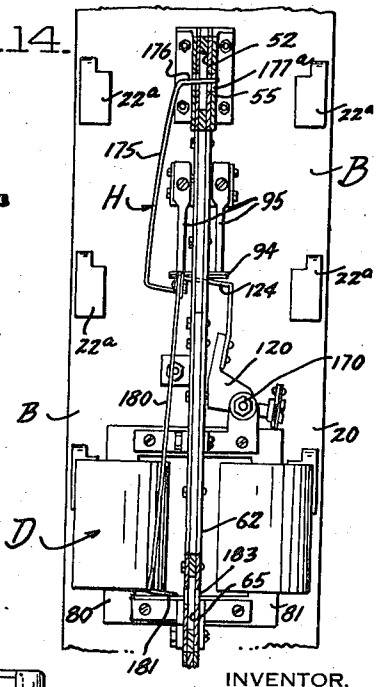


Fig. 15.

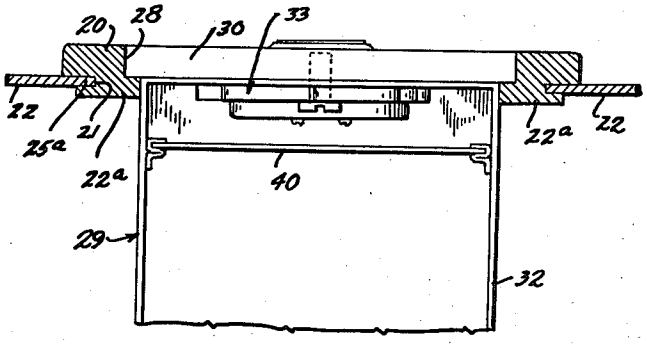
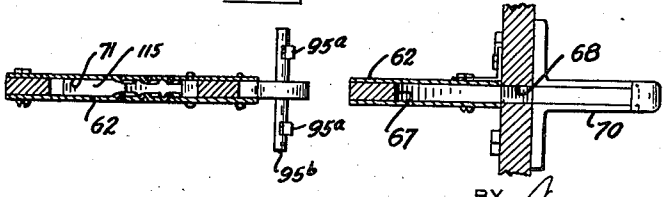


Fig. 16.



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Patented Jan. 17, 1939

2,144,568

UNITED STATES PATENT OFFICE

2,144,568

COIN CONTROL MECHANISM

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Application August 19, 1936, Serial No. 96,867

8 Claims. (Cl. 194—10)

This invention relates to improvements in coin control mechanisms for vending machines.

The primary object of this invention is the provision of an improved coin control mechanism having improved coin or check controlled switch means for actuating an electric circuit through a vending machine operating motor.

A further and important object of this invention is the provision of an improved coin control mechanism adapted to take only a selected coin of predetermined material and value in such manner as to permit the same to actuate a vending machine operating electrical circuit; the improved device acting to reject slugs and spurious coins.

A further and important object of this invention is the provision of an improved fool-proof coin control mechanism which may be universally adapted to a variety of vending machines and the like; having improved means to prevent the actuation of an electrical circuit by slugs and coins or checks of unauthorized character.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the accompanying drawings, forming a part of this specification, and wherein similar reference characters designate corresponding parts throughout the several views.

Figure 1 is a front elevation of the improved coin control device, showing more particularly the view thereof which is presented to the operator.

Figure 2 is a fragmentary view of a portion of a vending machine or other supporting framework in which the mechanism of Figure 1 is detachably mounted.

Figure 3 is a rear view of the improved mechanism, showing more particularly the details thereof.

Figure 4 is a fragmentary view showing a thermostatically controlled switch intended to open an electrical circuit after a predetermined interval.

Figure 5 is a side elevation of the improved mechanism.

Figure 6 is an opposite side view of the improved mechanism.

Figure 7 is a perspective view showing the details of the improved coin control mechanism with the relays removed.

Figure 8 is a vertical sectional view taken through an electro-magnetic device used as a part of the detector unit of this invention.

Figure 9 is a cross sectional view taken through the coin entrance chute or slot, substantially on the line 9—9 of Figure 11.

Figure 10 is a vertical sectional view taken through the improved electro-magnetic coin detector unit of the invention, showing additional circuit actuating details.

Figure 11 is a vertical sectional view taken through the coin guiding entrance slot, showing a coin operated switch.

Figure 12 is a fragmentary side elevation of the coin entrance chute of the mechanism.

Figure 13 is a diagrammatic view of the wiring circuit, showing more particularly the vending machine actuating motor and the associated relays and coin operated switches by means of which the current is directed thereto.

Figure 14 is a view showing an improved device which constitutes a part of this invention actuated upon energizing of the electro-magnetic coin detector to perform a plurality of functions, such as preventing coin or slug stuffing of the machine, and the tripping of a circuit controlling switch.

Figure 15 is a plan view of the coin drawer of the improved mechanism, showing more particularly the manner in which the same is assembled in the frame of the machine.

Figure 16 is a sectional view taken through certain details of the coin and slug chutes of the mechanism, substantially on the line 16—16 of Figure 10.

In the drawings, wherein for the purpose of illustration is shown only a preferred embodiment of the invention, the letter A may generally designate the improved coin control mechanism, which may include a frame B. The device A is used with an electrical circuit C. It furthermore includes an electro-magnetic detector unit D; a vending machine actuating motor E; coin actuated relay means F to electrically energize the unit D; and relay means G actuated only by a coin of predetermined value to energize the vending machine operating motor E. Means H is provided, actuated upon energizing of the electro-magnetic detector unit D to perform a plurality of functions, such as preventing stuffing of the detector unit with slugs; the tripping of a switch, and the removal of an obstruction to the passage of coins of predetermined value. Thermostatic means K is provided to open a circuit through the detector unit D under certain circumstances to be subsequently mentioned.

The improved device A in the assemblage illustrated is intended to be removably mounted in a vending machine casing. The particular machine may vary widely, but one example of adaptation thereof is to the ice cream or refrigerated article dispensing machine set forth in a co-pend-

ing application, Serial No. 96,874, filed August 19, 1936.

The frame B preferably comprises a mounting wall 20, which may be of any approved material, although preferably cast aluminum. The entire mechanism is mounted upon this wall, mainly upon the rear thereof. The wall is of vertical rectangular shape and is adapted to be removably attached in a suitable opening 21 provided in a wall 22 of the vending machine, such as shown in Figure 2. In order to effect the peripheral attachment of the wall 20, the inner surface thereof is preferably provided with a plurality of lugs 22a along each side, the sides and an upper end portion 23 of which are outstanding in facing relation with the inside surface of the frame wall 20. The side marginal edges of the opening 21 in the vending machine wall 22 are recessed at 25 to receive the lugs 22a therein so that the mounting wall 20 may be slipped into the opening 21 against the wall 22 of the vending machine; the upstanding lugs 23 slipping into position behind the wall extensions 25a at the upper ends of the recesses 25, in a manner which is perfectly apparent. The upper marginal portion of the mounting wall 20 is also provided with a lug 27 having an upstanding free end 28a which slips into position behind the upper marginal portion of the vending machine wall 22 at the top of the opening 21, to lock the top of the wall 20 in place.

The mounting wall 20 at its lower end is provided with a coin drawer opening 28 therein, adapted to receive a drawer 29 which may be removably slid into the opening. This drawer 29 includes a front wall portion 30, shown best in Figure 15 of the drawings, which has the drawer body 32 secured to the rear surface thereof. A lock 33 is mounted upon this wall 30. It may be of the pin tumbler type and is key controlled. It has an actuating cam 35, best shown in Figure 3 of the drawings, provided with an upper lug 36 which moves into projecting relation at the rear of the wall 20 above the drawer opening 28, and a diametrically opposed lug 37 moves into locking position behind the inner surface of the wall 20 below the drawer opening 28. The locking positions of these cam extensions are shown in Figure 3 of the drawings, in dotted lines. In this position the drawer body 32 rests at its lower surface on the lower edge 39 of the opening 21 in the vending machine wall 22, so that it is impossible to move the mounting wall 20 of the frame B downwardly to free the lugs from their positions behind the extensions 25a, until the drawer is entirely removed. To prevent the drawer from moving too far into the opening 28 it will be noted from Figures 3 and 15 of the drawings that a pair of the lugs 22a provide obstructions for the side margins of the wall 30 which extend beyond the outer surfaces of the side walls of the drawer body 32, as shown in Figure 15. If desired a removable partition 40 may be provided in the drawer body 32 to prevent the coins which drop into the drawer from impeding proper actuation of the lock.

Referring to the guide chute arrangement for controlling the path of travel of the coin, a coin entrance chute 50 extends through an opening 51 in the supporting wall 20, as shown in Figures 9 and 12 of the drawings. This chute has a passageway 52 therealong which inclines downwardly so that the coin will drop by gravity. The end portion of the chute 50 which projects from the front of the wall 20 has a coin entrance opening 53 to the passageway into which coins of the proper size may be dropped for travel along the passageway 52. The chute 50 is secured by angle clips 54 attached upon the inner surface of the wall 20, as shown in various views of the drawings. An upper portion 55 is attached by screws 56 to the inner end of the entrance chute 50, for directing the coin through a passageway 57 therein to the chute portion 58 of the detector unit D. This chute portion 58 is detachably connected at 60 to the lower end of the chute portion 55. A lower coin guiding chute portion 62 is detachably secured at 63 to the lower end of the detector chute portion 58. The latter as will be subsequently described has an exit slot 64 into which slugs are passed, and a second outlet chute or passageway 65 into which coins of predetermined value are directed into the path of mechanism which will subsequently actuate a vending machine. The lower chute portion 62 is provided with a chute passageway 67 connecting with the outlet 64 for directing coins and slugs which travel therealong through an opening 68 in the front wall 20, into a pocket or receptacle 70, from whence the operator may receive the spurious slug, or even the proper coin in event the machine is empty. The chute portion 62 also has a chute passageway 71 connecting with the outlet 65, into which the coins of predetermined value are directed, and from whence they fall into the coin box 29.

The relays F and G are mounted upon suitable insulation blocks 75 and 76 respectively which are suspended at opposite sides of the upper chute portion 55, from their upper ends, by means of a single bolt 77, which is detachably mounted in an opening 78 at the top of the chute portion 55. This rather loose and pivotal mounting of the relays F and G tends to prevent any actuation of the switches thereof, as might be occasioned by unauthorized vibration or hitting of the frame B of the mechanism. It is noted that the bolt 77 is mounted on an axis transverse to the line at which a person would normally hit the front wall of the frame B in an attempt to operate the machine in an unauthorized manner. Such attempted operation will merely result in a slight swinging of the blocks 75 and 76, due to their pivotal mounting at 77, as can readily be understood.

Referring at this time to the electro-magnetic detector unit D, the same comprises a pair of electro-magnets 80 and 81, mounted upon the chute portion 58 at opposite sides thereof. Each of them includes a U-shaped core 82 and a winding 83; the cores being attached upon the chute portion 58 by means of suitable brackets 85. The upper ends of the cores 82 are exposed in the coin slot or passageway 87 of the chute portion 58, at 88, shown in Figure 10 of the drawings, and the lower ends of said cores are exposed in the coin passageway of the chute portion 58, at 89, above the outlet 64 and at the lower inner end of the outlet 65, as shown in Figure 10. Generally, the actuation of the detector unit will be understood, since energizing of the coils creates two alternating magnetic fields shooting back and forth across the chute passageway between the two poles of the transformers, the first field in the vicinity of the ends 88, and the other field in the vicinity of the ends 89. When the coin reaches the field at 88 it is charged with a certain amount of the current according to the resistance of the specific metal of which the coin is formed. Low resistance metals, such as alu-

minum and copper, become heavily charged, and are held in suspension in the chute at the location 88, and remain there until the current is broken, when they drop by gravity through the passageway of the chute 58 and are discharged through the spurious coin outlet 64; passing along the chute-way 67 and into the delivery pocket 70, at which point the operator may see that the spurious coin or slug has been rejected. The higher resistance metals being less affected by the magnetic field at 88, drop partly therethrough and are also discharged through the spurious coin outlet 64. Silver coins pass through the upper magnetic field at 88, but at the lower field 89 they are deflected into the outlet 65 into the chute passageway 71 for operating mechanism to be subsequently described in order to set the vending machine in operation.

It is thought best to describe the remaining features of the mechanism and the tracing of the circuit to the vending machine operating motor E by referring to a typical cycle of operation. The operator desiring to operate the vending machine, or any mechanism actuated by the coin control mechanism A, will drop the proper coin into the chute 50. It will first roll along the chute passageway 52 (see Figure 11) and drop into the chute passageway 57, hitting a switch arm 90, which is interposed in its path for closing a switch 91 in order to direct the current through the relay F for attracting the armature 92 thereof. The switch arm 90 is pivoted at 93, as shown in Figure 11 of the drawings, at a lower front portion of the chute frame 55. This switch arm 90 is provided with a conductor pin 94 having oppositely extending ends which are moved by the coin actuation of the lever 90 into switch closing engagement with a pair of contacts 95 which are suitably mounted in relatively insulated relation upon an insulation block 97 attached to the chute frame portion 55, as shown in Figure 6 of the drawings and elsewhere. These contact arms 95 are of conductive material and they are springy so as to be tensioned upon engagement with the pin 94 in order to hold the latter thereagainst for maintaining the switch 91 closed.

Referring to Figure 13, the current flows through a line 99 of the circuit C and through a branch line 100 directly into the movable armature 101 of the relay G. The latter is normally inoperative. The armature 101 thereof is a conductor and at its free end is provided with a pair of contacts normally bridging the relatively spaced contacts 102 for directing the current from the line 99 through the armature 101 into a line 103, through the switch 91 which has been closed by the coin, as above mentioned, and thence into a line 104, through the electro-magnet 105 of the relay F to the other main line 106 of the circuit C. Energizing of the electro-magnet 105 of the relay F will attract the armature 92 thereof and move the contacts thereof into switch closing relation with the relatively spaced contacts 107. One of these contacts 107 is connected in the line 103 above described, and a line 108 leads from the other contact 107 through the transformers 80 and 81 comprising the electro-magnetic means of the detector unit D, energizing the coils thereof and creating the two magnetic fields above described; the circuit being completed through the transformers 80 and 81 through a line 110 leading to the main line 106. This operation occurs instantaneous with the dropping of the coin in the mechanism; the coin being shown at 111 in Figure 13 of the drawings, and it will be tested in the unit D through energizing of the transformers thereof and either rejected and discharged through the outlet 64 or deflected into the outlet 65 for further operation of the vending machine circuits.

Assuming that the coin 111 which has thus energized the detector unit D is a proper coin, it will be directed through the outlet 65 into the passageway 71 and will fall therethrough by gravity, hitting a switch closing lever or arm 115 for closing a circuit through the second relay G. Prior to this operation, however, one circuit has been broken through the first relay F and the transformers of the unit D in the following manner:—

The device H is in fact an armature. It comprises the armature body proper 120 pivoted at 121, in position so that an end 122 thereof may be attracted by the core 82 of the electro-magnet 81 upon energizing of the latter. The means H furthermore includes a wire trip arm 124 rigidly connected with the lever 120 which, as best shown in Figure 7, extends upwardly and across beneath the switch lever arm 90 so that upon energizing of the electro-magnet 81 the said portion 124 will be thrown upward by reason of attraction of the armature lever 120 for engaging beneath the lever 90 and throwing the contact pin 94 thereof out of engagement with the contacts 95. Actuation of the armature body 120 by the electro-magnet 81 is shown in Figure 14. In this manner, so far as the switch 91 is concerned, the circuit is broken through the relay F. However, due to the fact that the armature 92 has been attracted to bridge the contacts 107 current will be directed from the line 103 across the contacts 107 and through the armature 92 and through a line 130 across the contacts of the thermostatically controlled switch K, through the coil of the relay F, and the latter will act as an electro-magnet to hold the armature 92 in place for continuing the current through the windings of the detector unit D. If the coin which has been inserted is spurious, and of high resistance metal, it will drop promptly through the detector and discharge into the pocket 70. If of low resistance metal it will be held in the detector by the electro-magnetism therein until the resistance winding 132 of the thermostat switch K moves the switch arm 133 to disengage the contacts of the switch K, opening the circuit through the winding of the relay F and releasing the armature 92. The spring of the latter then breaks the current across the contacts 107; the circuit is broken through the windings of the detector unit D, and the spurious coin is dropped into the slot 67 and discharges into the pocket 70.

If the coin deposited by the operator has the predetermined characteristics, it will be deflected into the outlet 65, drop into the slot 71; close the switch comprising the arm 95^b and contacts 95^a. This will send the current from the line 99 through the last mentioned switch; through the winding of the relay G and through a line 140 into a contact 141 of a circuit maker and breaker located upon the vending machine. The motor E is provided with an oscillating switch arm 143 which swings through an arc of less than 180° which has a contact 144 bridging the contact 141 above mentioned and a second contact 145 so that the current is completed through the contacts 141 and 145; the latter having a line 147 connecting with the main circuit line 106. This energization of the relay G attracts the armature

101, breaking the circuit across the contacts 102. This of course breaks the circuit through the winding of the relay F and the armature 92 will be released thereby.

Closing of the circuit through the relay G in the above described manner moves the armature 101 for bridging a pair of contacts 150, momentarily directing the circuit through the line 100 into the armature 101 across the contacts 150 and through the line 155 into the motor E; the other line of the motor E being connected in the line 106 as shown in Figure 13. This starts the motor E operating; the arm 143 moving in the direction of a pair of relatively spaced contacts 157, shown in Figure 13. The armature 101 will of course be held to bridge the contacts 150 by the holding circuit passing through the winding of the relay G so long as the contact 144 bridges the contacts 141 and 145, notwithstanding that the coin 111 will drop and engage a trip lever 160 to open the switch comprising the arm 95^b and contacts 95^a. The motor control switch arm 143 will move until its contact arm 167, which is insulated from the other contact arm 144, bridges the contacts 157. This directs the current from the line 99 through the line 100 across the contacts 157 and through the motor E to the line 106, for a continuation of operation of the motor E, but immediately after the contacts 157 are bridged in this manner the arm 144 will move out of bridging relation with the contacts 141 and 145, opening the circuit through the winding of the relay G and the armature 101 will spring back into normally open relation with respect to the contacts 150, but bridging the contacts, 102, ready for another coin operation.

Referring again to the additional function served by the device H, it will be remembered that upon energization of the windings through the detector unit D the entire device H was moved upon the pivot 170 of the armature body 120. The first function served is to trip the switch 91 as above described. The tripping arm 124 has connected therewith a wire or member 175 which has a coin restraining end 176 normally inoperative, but so long as the electro-magnetic coils in the detector unit D are energized this coin restraining end 170 will lie in openings 177^a projected across the entrance slot 52 rearwardly of the frame wall 20, to prevent additional coins or slugs from being inserted. This insures that the operator will not needlessly waste his money in event a proper coin is inserted too quickly after one had previously been inserted. Also, the operation will prevent stuffing of the coin slot with slugs in an attempt to fraululently operate the machine. Another function served by the device H is to insure a return of the operator's money in event the vending machine or other machine actuated by the coin control device cannot supply the operator with that which is intended. Thus, a second wire or member 180 is provided having a restraining end 181 which, so long as the windings through the detector D are de-energized, is interposed through suitable openings 183 across the outlet 65, preventing any good coins from dropping into the coin box, in event the machine is inoperative or empty, and insuring a return of the good coin to the operator by shunting it into the ejecting chute passageway 67, as can well be understood from Figure 10 of the drawings. As will be noted from Figure 14 of the drawings energization of the coils of the unit D will rock the device H on the pivot 170 to perform the three functions above attributed to it.

As will be noted from Figure 13 of the drawings a circuit breaking switch 190 is provided, which is normally closed in the line 110, but which may be actuated by a pin or suitable portion 191 upon a movable part of the vending machine to throw said switch open when the machine is empty; thus breaking the circuit through the line 110, and preventing an energization of the transformers in the detector unit D. Thus, as above mentioned, any coins inserted by an operator will be deflected by the detent 181 into the pocket 70.

Figure 10 shows the manner in which the trip lever 160, which is pivoted at 200^a, trips the switch lever 115; the coin passing through the slot 71 actuating the lever 160 to trip the switch.

The portion 62 immediately rearward of the wall 20 is provided with a coin discharge opening 200 transversely intersecting the coin guide passageway 67 with its peripheral edge arranged tangential with the lower surface along which the coin rolls by gravity so that an attempted operation of the machine by stuffing lugs through the discharge slot 68 will be ineffective; the coins when so reaching the opening 200 dropping laterally out of a vertical position through the opening 200 into the coin box.

A normally closed circuit switch 106^a is provided in the line 106, intended to open through the placing of an overload upon the motor. If desired a magnetic counter 201 may be connected in operating circuit with the motor E.

Various changes in the shape, size, and arrangement of parts may be made to the form of invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

I claim:

1. In a coin control for electrically operated vending machines, the combination of an electric circuit, an electro-magnetic coin detector, a relay, a coin actuated normally open switch for closing said electric circuit through said relay for energizing said detector, a second normally open relay switch including an armature acting as a normally closed switch in directing the circuit through said first mentioned relay, and upon energizing of the second relay being attracted thereby to open the circuit through the first mentioned relay, a vending machine actuating motor, said second relay circuit including a switch actuated by dropping of a good coin subsequent to actuation of the first mentioned switch thereby to close a circuit through said second relay and motor, means actuated by further dropping of the coin to open the coin actuated switch last mentioned, said motor having an auxiliary circuit thereto normally open at the time of closing of the motor circuit by the second relay switch, and motor control switch means to operate the motor by directing the circuit therethrough immediately prior to the breaking of the motor circuit through said second relay switch.

2. In a coin control for electrically operated vending machines, the combination of an electric circuit, an electro-magnetic coin detector, a relay, a coin actuated normally open switch for closing said electric circuit through said relay for energizing said detector, means actuated by energizing of said detector to open said switch, means to shunt the circuit through the relay upon attraction of its armature in order to hold the latter in circuit closing relation through said detector, a second normally open relay switch including an armature acting as a normally closed switch in directing the circuit through said first

mentioned relay, and upon energizing of the second relay being attracted thereby to open the circuit through the first mentioned relay, a vending machine actuating motor, said second relay circuit including a switch actuated by dropping of a good coin subsequent to actuation of the first mentioned switch thereby to close a circuit through said second relay and motor, means actuated by further dropping of the coin to open the coin actuated switch last mentioned, said motor having an auxiliary circuit thereto normally open at the time of closing of the motor circuit by the second relay switch, and motor control switch means to operate the motor by directing the circuit therethrough immediately prior to the breaking of the motor circuit through said second relay switch.

3. In a coin control for electrically operated vending machines, the combination of an electric circuit, an electro-magnetic coin detector, a relay, a coin actuated normally open switch for closing said electric circuit through said relay for energizing said detector, means actuated by energizing of said detector to open said switch, means to shunt the circuit through the relay upon attraction of its armature in order to hold the latter in circuit closing relation through said detector, thermostatic means for opening the circuit through said relay and detector after the circuit thereof has ben closed for a predetermined interval, a second normally open relay switch including an armature acting as a normally closed switch in directing the circuit through said first mentioned relay, and upon energizing of the second relay being attracted thereby to open the circuit through the first mentioned relay, a vending machine actuating motor, said second relay circuit including a switch actuated by dropping of a good coin subsequent to actuation of the first mentioned switch thereby to close a circuit through said second relay and motor, means actuated by further dropping of the coin to open the coin actuated switch last mentioned, said motor having an auxiliary circuit thereto normally open at the time of closing of the motor circuit by the second relay switch, and motor control switch means to operate the motor by directing the circuit therethrough immediately prior to the breaking of the motor circuit through said second relay switch.

4. In a coin control for electrically operated vending machines, the combination of an electric circuit, an electro-magnetic coin detector, a relay, a coin actuated normally open switch for closing said electric circuit through said relay for energizing said detector, a second normally open relay switch including an armature acting as a normally closed switch in directing the circuit through said first mentioned relay, and upon energizing of the second relay being attracted thereby to open the circuit through the first mentioned relay, a vending machine actuating motor, said second relay circuit including a switch actuated by dropping of a good coin subsequent to actuation of the first mentioned switch thereby to close a circuit through said second relay and motor, means actuated by further dropping of the coin to open the coin actuated switch last mentioned, said motor having an auxiliary circuit thereto normally open at the time of closing of the motor circuit by the second relay switch, motor control switch means to operate the motor by directing the circuit therethrough immediately prior to the breaking of the motor circuit through said second relay switch, and a vending machine actuated cut-out switch to open the circuit through the detector at the time of a predetermined happening, such as the emptying of the vending machine.

5. In a coin control mechanism the combination of an electrically operated detector unit, coin actuated relay means to energize the detector unit, a motor, and other relay means actuated by the passing of a good coin from the detector unit to operate said motor and break the circuit through said first mentioned relay and detector unit.

6. In a coin control mechanism the combination of an electrically operated detector unit, coin actuated relay means to energize the detector unit, a motor, other relay means actuated by the passing of a good coin from the detector unit to operate said motor and break the circuit through said first mentioned relay and detector unit, and thermostatic means to open the circuit through the first mentioned relay and detector unit after a predetermined interval in event the coin detected by the detector unit is found to be spurious.

7. In a coin control mechanism the combination of a supporting framework having an electromagnetically operated detector unit thereupon including a movable armature, means providing a coin entrance slot to the detector unit, means providing an outlet slot from the detector unit for discharging spurious coins to an operator attempting to operate an operating mechanism thereby, means providing a second outlet from the detector unit for guiding proper coins from the detector unit to an operating mechanism, a coin actuated switch for closing a circuit through the detector unit, means normally forming an obstruction to passage of a good coin through the outlet leading from the detector unit to the operating mechanism, said means being connected with the armature above mentioned whereby upon energizing of the detector unit the said obstruction will be removed from said outlet, and means connected with said armature to obstruct the coin entrance slot so long as the detector unit is energized in order to prevent an operator from inserting another coin or check into the entrance slot.

8. In a coin control mechanism the combination of a supporting framework having an electro-magnetically operated detector unit thereupon including a movable armature, means providing a coin entrance slot to the detector unit, means providing an outlet slot from the detector unit for discharging spurious coins to an operator attempting to operate an operating mechanism thereby, means providing a second outlet from the detector unit for guiding proper coins from the detector unit to an operating mechanism, a coin actuated switch for closing a circuit through the detector unit, means normally forming an obstruction to passage of a good coin through the outlet leading from the detector unit to the operating mechanism, said means being connected with the armature above mentioned whereby upon energizing of the detector unit the said obstruction will be removed from said outlet, means connected with said armature to obstruct the coin entrance slot so long as the detector unit is energized in order to prevent an operator from inserting another coin or check into the entrance slot, and means connected with the armature for tripping said switch after the detector unit has become energized.

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