

Jan. 12, 1937.

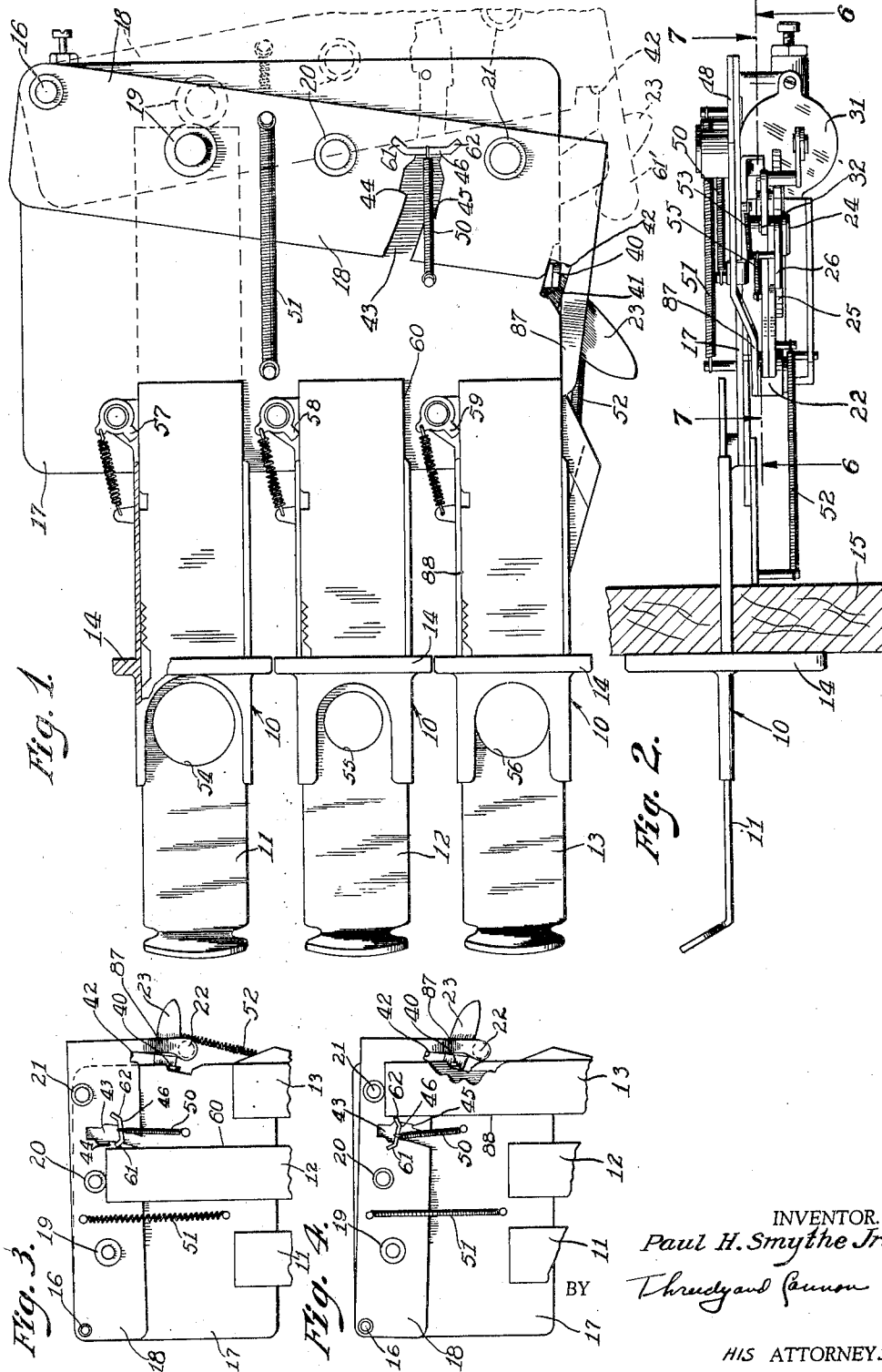
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2,067,248

COIN CONTROL DEVICE

Filed May 23, 1935

3 Sheets-Sheet 1



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Fig. 5.

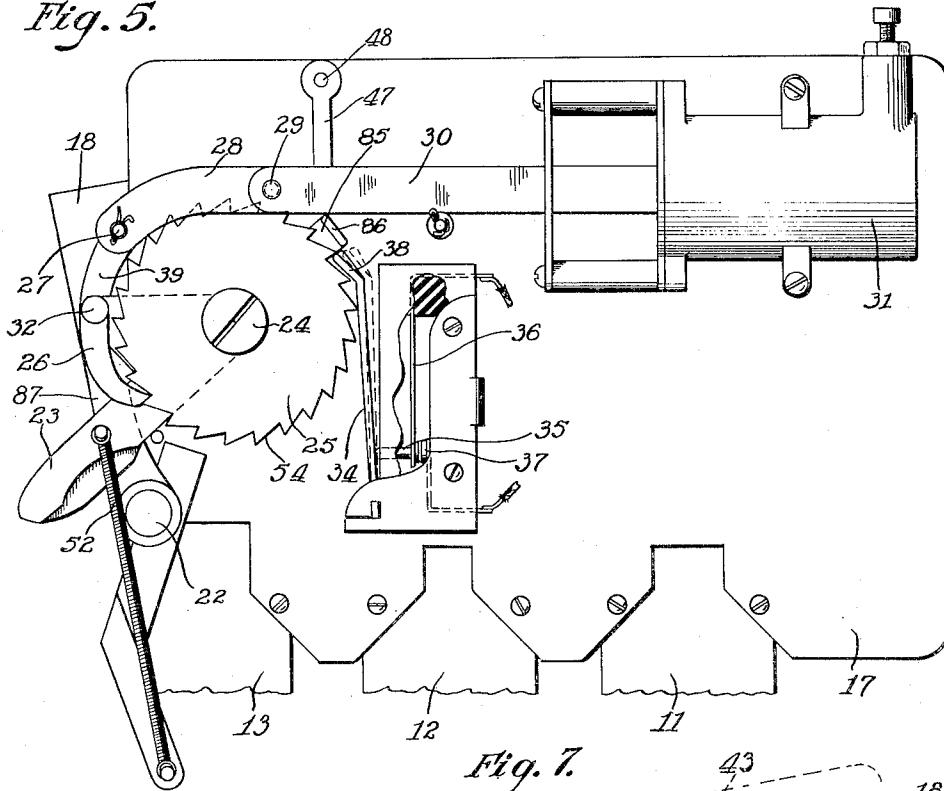


Fig. 6.

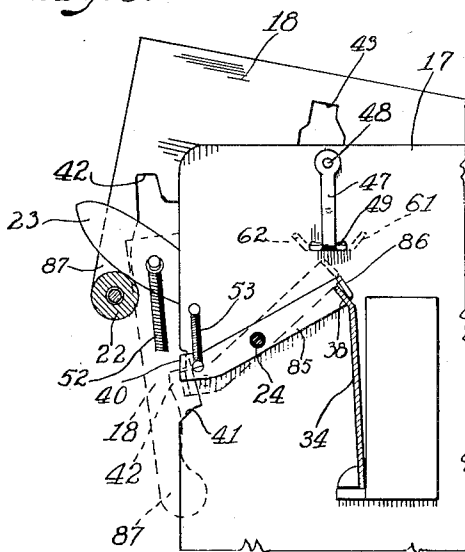
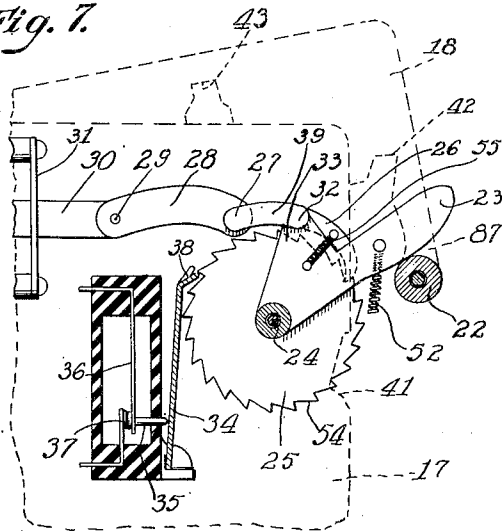


Fig. 7.



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Fig. 8.

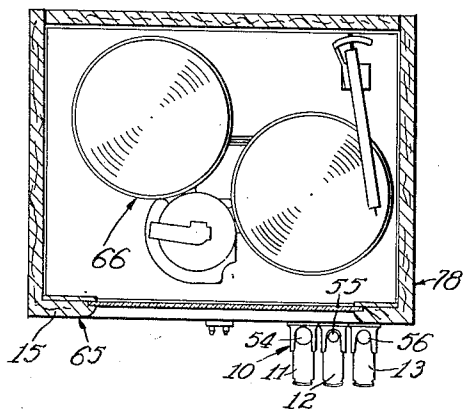
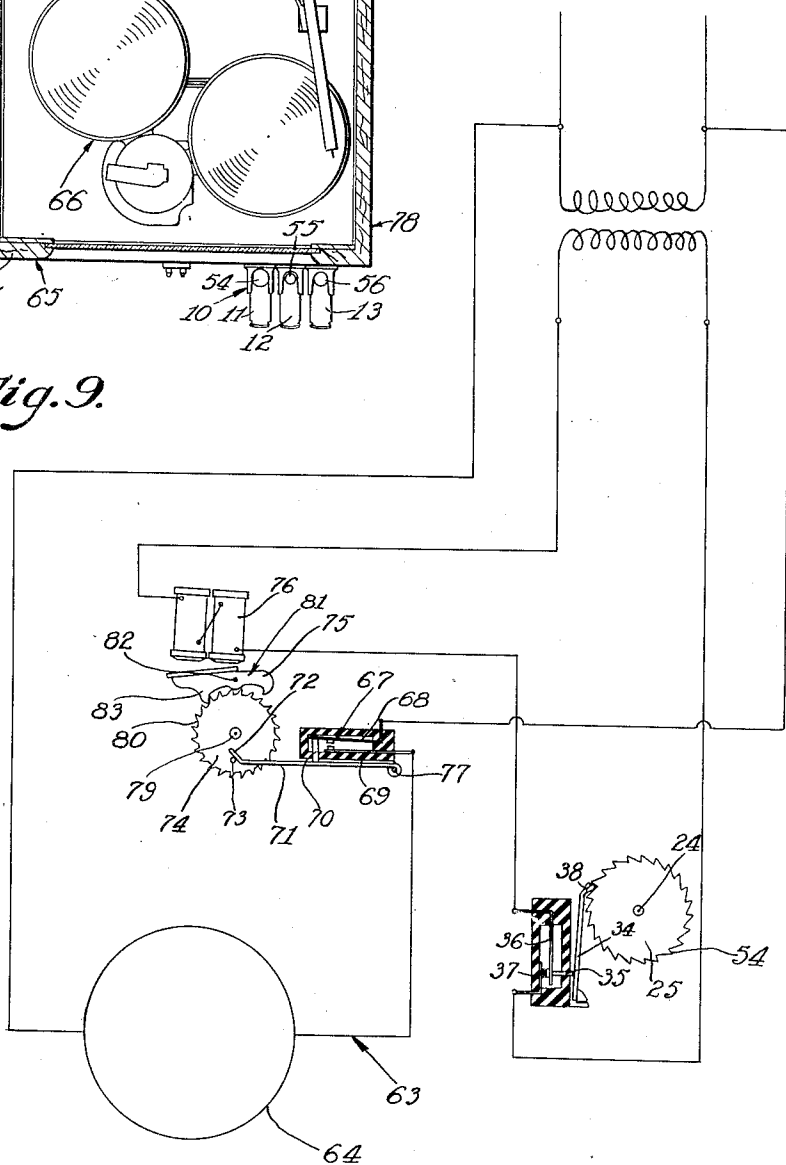


Fig. 9.



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UNITED STATES PATENT OFFICE

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COIN CONTROL DEVICE

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Application May 23, 1935, Serial No. 22,962

7 Claims. (Cl. 200—35)

This invention relates to a coin control device. It is an object of this invention to provide an improved coin control device which is relatively simple and inexpensive in construction and efficient in use.

Another object of the present invention is to provide a new and improved multiple or gang coin chute which is especially adapted for use in conjunction with coin-controlled phonographs in which a predetermined number of records may be played for each coin inserted into the coin control device, this device being so constructed that, for example, five records may be played for a quarter inserted into the coin-receiving aperture of the twenty-five cent or quarter coin slide, two records may be played for a dime inserted into the coin aperture of the dime slide, and one record may be played for a nickel inserted into the coin aperture of the nickel slide.

Another object of the invention is to provide a novel mechanism for preventing fraudulent operation of the coin slides having coin apertures adapted to receive coins or tokens of the smaller denominations, that is to say, to prevent the operator of the device from fraudulently operating, for example, the nickel and dime coin slides in such a manner as to enable him to play the same number of records as he is allowed for the insertion of a coin or token into the aperture of the quarter slide and operation of the latter.

A further object of the present invention is to provide in a coin control device, the combination of: a plurality of gang of coin slides having coin-receiving apertures provided therein for the reception of coins or tokens of various sizes or denominations; a device for controlling an operating mechanism of a machine, apparatus or the like with which the said first-named coin control device may be associated; and means coacting selectively and at different times with each of said coin slides for operating said second-named control device a predetermined number of times when a coin or token of the proper size or denomination is inserted into the coin-receiving aperture of a preselected one of said coin slides and the latter is moved to complete its operative stroke; the number of times said second-named device is operated depending upon which of the said coin slides is operated and having a predetermined relationship to the denomination of the coin or token inserted into the coin-receiving aperture of the preselected and actuated slide.

An additional object of the present invention is to provide, in combination with an automatic coin-controlled phonograph, a coin control de-

vice which includes a plurality of separate and independent manually operated coin slides for controlling the number of times that the record-selecting or operating mechanism of the phonograph may be actuated for the payment of a coin into the phonograph.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be understood best by reference to the accompanying drawings, showing the preferred form of construction and in which:

Fig. 1 is a top plan view of a preferred form of the new coin control device;

Fig. 2 is a side elevational view of the same;

Fig. 3 is a fragmentary top plan view thereof;

Fig. 4 is a fragmentary view similar to Fig. 3, but showing the parts in a different position;

Fig. 5 is a bottom plan view showing in detail the switch and control mechanism therefor embodied in the present invention;

Fig. 6 is a fragmentary bottom plan view, on line 6—6 in Fig. 2;

Fig. 7 is a fragmentary top plan view, on line 7—7 in Fig. 2;

Fig. 8 is a top plan view, partly in section, of an automatic phonograph, showing the present coin control device associated therewith; and

Fig. 9 is a diagrammatic view of an electric circuit which embodies the operating or control motor for a phonograph, such as that shown in Fig. 8, and with which the present coin control device may be associated.

A general description of the construction of the present coin control device per se, will first be given, followed by a detailed description of the same, per se, following which will be given a short description of one specific use to which the present coin control device may be put, namely, as used in conjunction with the operating mechanism of an automatic phonograph such as is shown in Figs. 8 and 9, and which is generally indicated therein at 65.

A preferred form of the new coin control device as shown in the drawings, is therein generally indicated at 10, and comprises a plurality or gang of coin slides 11, 12, and 13, which are slidably mounted in guide structures 14, and the latter are, in turn, for the purpose of illustration, shown as attached to the front wall 15 of the cabinet of a coin controlled device which may be for example, a coin-controlled phonograph, such as is shown in Figs. 8 and 9 and which is generally indicated therein at 65. Pro-

vided in the coin slides 11, 12, and 13 are coin or token-receiving apertures 54, 55, and 56, respectively, which are adapted, respectively to receive coins or tokens of various sizes or denominations, thus, for example, the coin aperture 54 in the coin slide 11 may be adapted to receive quarters, the coin aperture 55 in the coin slide 12 may be adapted to receive dimes, and the coin aperture 56 in the coin slide 13 may be adapted to receive nickels.

Pivotally mounted at one end, as at 16, upon a supporting member or plate 17 which is arranged below the coin slides 11, 12, and 13, is a bar 18 and carried by this bar 18, on the upper side thereof, is a series of cam rollers 19, 20, and 21 with which the inner end portions of the coin slide 11, 12, and 13 are, respectively, engageable when the coin slides 11, 12, and 13 are moved from coin-receiving position toward coin-discharging position, (left to right, Fig. 1).

The bar 18 has an angled and depending arm 61' and this arm 61' carries a cam roller 22 which is engageable with the pawl-operating arm 23; this pawl-operating arm 23 being mounted loosely upon, that is "floating", on a shaft 24 upon which is mounted a ratchet 25.

Engageable with the teeth 54 of the ratchet 25 is an operating pawl 26 which is pivotally connected at one end, as at 32, to the pawl-operating arm 23; and pivotally connected to the pawl-operating arm 23, as at 32, is a link 39, which, in turn, is pivotally connected, as at 27, to a second link 28, this link 28 being pivotally connected, as at 29, to a slide rod 30 which is slidably mounted in a dash pot or timing device 31.

Engageable with the teeth 54 of the ratchet 25 is an angled end portion 38 of a switch member 34 which is engageable with an arm 35 of a contact member 36; and the contact member 36 is, in turn, engageable with a contact 37; this switch or circuit-closing device 34—35—36—37 being adapted to control a circuit 63 (Fig. 9) which includes a motor 64 which, in turn, controls the record-selecting or operating mechanism, generally indicated at 66 (Fig. 8), for the automatic phonograph 65.

Engageable with the angled end portion or arm 38 of the switch 34 is a latch member 85 which is pivotally mounted, between its ends, upon the shaft 24, (Fig. 6). This latch member 85 has an angled end portion 86 which is engageable with the angled end portion or arm 38 of the switch member 34, and this latch member 85 also has an angled end portion 40 which works in, and projects upwardly through a cut-out or notched portion 41, which is formed in one edge of the supporting plate 17 (Figs. 1 and 6), to a point above the latter; and this upwardly projecting portion 40 of the latch member 85 is engageable with a notched portion 42 which is formed in the angled or depending arm 61 of the pivotal bar 18, (Fig. 1).

Provided in the pivotal bar 18 is a slot 43, (Fig. 1), and formed in the bar 18 on opposite sides of, and as extensions of, the slot 43, are notched portions 44 and 45, (Fig. 1). Projecting into, and operating in, the slot 43 is an upwardly extending portion or arm 46 of a latch member 47 which is pivotally mounted, at one end, as at 48, (Fig. 6), on the supporting plate 17, on the bottom side of the latter, (Fig. 6); the upwardly extending end or latch portion 46 of this latch member 47 working in a slot 49 which is provided in the supporting plate 17, (Fig. 6), and this upwardly extending end portion 46 of the latch member 47

has oppositely angled or extending arms 61 and 62, (Fig. 1) which project over the pivotal bar 18 on opposite sides of the slot 43.

Attached to the latch member 46—47 is a spring 50; and attached to the pivotal bar 18 is a resetting spring 51; while attached to the pawl-operating arm 23 is a resetting spring 52. Attached to the latch member 85 in a direction (clockwise, Fig. 6) to engage the angled end portion or arm 86 thereof with the angled end portion or arm 38 of the switch member 34.

As has been stated hereinbefore, the present coin control device is especially adapted for use in conjunction with automatic phonographs such as that shown in Figs. 8 and 9, and generally indicated therein at 65.

By reference to Figs. 8 and 9 it will be noted that there is embodied in the circuit 63, which includes the motor 64, a switch, generally indicated at 67 (Fig. 9), and which includes a pair of contacts 68 and 69.

The contact 68 has an extension 70 which is engageable with a latch arm 71 which is pivotally mounted at one end, as at 77, in the cabinet 78 of the phonograph 65. This latch arm 71 has an angled end portion 72 which is engageable with a pin 73 which is, in turn, carried by and projects laterally from a ratchet 74.

The ratchet 74 is rotatably mounted, as at 79, in the cabinet 78 of the phonograph 65, and engageable with the teeth 80 of the ratchet 74 is one arm 75 of an operating pawl 81. This pawl 81 is pivotally mounted between its ends, as at 82, and has a second arm 83 which is likewise engageable with the teeth 80 of the ratchet 74. Associated with, and arranged adjacent to, the ratchet 81 is a pair of electromagnets 76 which are likewise embodied in the circuit 63.

The operation of the switch 67 and associated parts will be explained in detail following the detailed description of the operation of the present coin control device, per se, and which will now be given; the purpose of illustrating the switch 67 and associated parts of the phonograph 65, which is shown in Figs. 8 and 9, being to illustrate a preferred and typical use of the present coin control device.

Associated with the coin slides 11, 12, and 13 respectively, are conventional full stroke devices 57, 58 and 59 (Fig. 1).

Operation

The coin-receiving apertures in the coin slides 11, 12, and 13 are designed to receive coins or tokens of various or different sizes or denominations. Thus, the coin aperture 54 in the coin slide 11 may be designed to receive, for example, quarters or twenty-five cent coins; the coin aperture 55 in the coin slide 12 may be designed to receive, for example, ten cent pieces or dimes; and the coin aperture 56 in the coin slide 13 may be designed to receive, for example, nickels or five cent pieces; and these coin slides may be operated selectively by the operator of the machine, apparatus or the like with which the present coin control device is associated and which may be, as hereinbefore stated, a coin-controlled phonograph, such as that generally shown in Fig. 8.

Thus, for example, assuming that the present coin-control device is associated with a coin-controlled phonograph, such as that generally shown in Fig. 8, and assuming further the player pays five cents into the coin control device for each record selected; and assuming, additionally, that the player desires to pay in advance for

five preselected records, that is, for five record-playing operations.

In this event, the operator or player may insert a quarter or twenty-five cent piece into the coin aperture 54 of the coin slide 11; whereupon, when the player pushes the coin slide 11 inwardly from coin-receiving, toward coin-discharging position, (left to right, Fig. 1), the inner end portion of the coin slide 11 will engage the cam roller 19 which is mounted on the pivotal bar 18, thereby pivoting the bar 18, at 16, (counterclockwise, from full to dotted line position, Fig. 1), against the action of its resetting spring 51.

During this movement of the bar 18 (from full to dotted line position, Fig. 1) the cam or roller 22 which is carried by the angled and depending arm 87 thereof engages the pawl-operating arm 23 and thereby pivots the latter (in a counterclockwise direction, as seen in Fig. 7). This movement of the pawl-operating arm 23 causes the pawl 26, which is pivotally attached thereto, at 32, to ride over the teeth 54 of the ratchet 25, against or into engagement with which the pawl 26 is urged by the spring 55; and during this movement of the pawl 26 the links 39 and 28 act upon the rod 30 to slide the latter (right to left, Fig. 7) in the dash pot or timing device 31.

When the coin slide 11 has thus been pushed in from coin-receiving position to coin-discharging position, and is released, it is returned to its initial or coin-receiving position by action of a resetting spring (not shown), and during this resetting movement of the coin slide 11 the resetting spring 52 for the pawl-operating arm 23 acts upon the latter to pivot the same (clockwise, Fig. 7), thereby causing the pawl 26 to engage the teeth 54 of the ratchet 25 and thus advance the latter a predetermined circumferential distance (clockwise, Fig. 7); this distance being equal to the circumferential distance represented by five of the teeth 54 on the ratchet 25.

During this circumferential movement of the ratchet 25, (clockwise, Fig. 7), the aforementioned five teeth 54 thereof successively engages the angled end portion 38 of the switch member 34 and thereby pivot the latter (Fig. 7) into engagement with the pin 35; thus forcing the contact 37 into engagement with the contact 36, and thereby closing the circuit 63 to the electromagnets 76 and motor 64 so as to actuate the operating mechanism 66 of a phonograph or other machine or mechanism, with which the present coin control device may be associated.

The circumferential movement thus imparted to the ratchet 25, (clockwise, Fig. 7), by the operator of the coin slide 11, moves the ratchet 25 a circumferential distance corresponding to five teeth 54 on the ratchet 25 and the circuit-closing or controlling switch member 34, and associated contacts 36 and 37, are thus moved into and out of closed circuit position five successive times by operation of the coin slide 11, the coin aperture 54 in which is adapted to receive, for example, quarters or twenty-five cent coins, and in this manner the record-selecting mechanism of the phonograph, or other machine or mechanism with which the present coin control device may be associated, is operated, or is predisposed to operate, five successive times for each coin inserted into the coin aperture 54 of the coin slide 11 and operation of the latter.

The notched portion 42 of the depending or angled arm 87 of the pivotal bar 18 is disposed in engagement with the angled end or upwardly extending portion 40 of the latch member 85

when the bar 18 and the coin slides 11, 12, and 13 are disposed in their normal or initial position (as in full lines, Fig. 1), thereby holding the angled end portion 86 of the latch member 85 against the action of the spring 53, out of latching engagement with the angled end portion 38 of the switch member 34 (as in dotted lines, Fig. 6).

When one of the coin slides 11, 12, or 13 is pushed in, the inner end portion thereof engages the corresponding cam roller 19, 20, or 21 on the pivotal bar 18, thereby pivoting the bar 18 (from dotted to full line position, Fig. 6). During this movement of the bar 18, the notched portion 42 thereof moves out of engagement with the angled end or upwardly extending portion 40 of the latch member 85, whereupon the spring 53 acts upon the latch member 85 to pivot the latter (clockwise, from dotted to full line position, Fig. 6), thereby moving the angled end portion 86 of the latch member 85 into engagement with the angled end portion 38 of the switch member 34, and thus holding the angled end portion 38 in engagement with the teeth 54 of the ratchet 25, and thus preventing operation of both the ratchet 25 and the switch member 34 during the inward movement or operative stroke of the preselected coin slide and in this manner preventing the operator of the device from fraudulently operating the same by making an incomplete movement or operative stroke of the coin slide.

When the preselected coin slide (11, 12, or 13) is reset into its initial or coin-receiving position (as in Fig. 1) by the action of its resetting spring (not shown), and the pivotal bar 18 is reset into its initial position (from full to dotted line position, Fig. 6) by the action of its resetting spring 51, the notched portion 42 of the bar 18 again engages the angled end portion or arm 40 of the latch member 85, thereby pivoting the latter, against the action of the spring 53, back into its initial position (from full to dotted line position, Fig. 6), thereby moving the angled end portion or arm 86 of the latch member 85 out of engagement with the angled end portion or arm 38 of the switch member 34, so as to permit operation of the switch member 34, and the ratchet 25.

It will be noted, (Fig. 1), that the coin slide 11 (the coin aperture 54 in which is designed to receive coins or tokens having a higher denomination than the coins or tokens intended to be inserted into the coin aperture 55 and 56 of the coin slides 12 and 13, respectively), requires a shorter operative stroke, in order for it to move the pivotal bar 18 into effective position, than does either of the other two coin slides 12 and 13 in the group or gang of the same, by reason of the fact that the cam or roller 19 carried by the pivotal bar 18 and which is engaged by the inner end portion of the coin slide 11, is positioned closer to the axis or pivot point 16 of the bar 18 than are the cam rollers 20 and 21, and hence the radius of the operative stroke of the cam roller 19 is shorter than those of the rollers 20 and 21 (Fig. 1).

When a coin of proper size, denomination, etc., (which may be, for example, a dime) is inserted into the coin aperture 55 of the coin slide 12 and the latter is operated, the inner end portion of the coin slide 12 engages the cam or roller 20 which is carried by the pivotal bar 18, thereby pivoting the bar 18 (counterclockwise, from full to dotted line position, Fig. 1); and during this movement of the coin slide 12, the lateral or side

edge 60 of the same engages the angled end portion 61 of the upwardly extending arm 46 of the latch member 47 (Figs. 1, 3, and 6) and thereby pivots the latter (left to right, Fig. 3), against the action of the resetting spring 50 which normally tends to hold the latch member 45—46 in the position in which it is shown in Fig. 1 and in which position it is centrally disposed relative to the axis of the slot 43 (as shown in Fig. 1). This lateral movement of the latch member 45—47 positions the stem portion 47 thereof (Fig. 6) in the path of the notched portion 45 of the pivotal bar 18, and when the latter is pivoted (from full line position, Fig. 1, toward full line position, Fig. 3) by the engagement of the coin slide 12 with the cam roller 20, the notched portion 45 of the bar 18 engages the stem portion 47 of the latch member 45—47, and this latching engagement of the stem portion 47 of the latch member 45—47 in the notched portion 45 of the pivotal bar 18 prevents further operation of the said bar 18 (counterclockwise, as seen in Fig. 1).

In this manner the pivotal operating bar 18 is moved far enough (counterclockwise from full line position toward dotted line position, Fig. 1) to permit the pawl 26 to travel over two teeth 54 on the ratchet 25, and hence when the pawl 26 is moved in the opposite direction (clockwise, Fig. 7), during its operative stroke, by action of the spring 52 and the pawl-operating arm 23, the pawl 26 will move the ratchet 25 a circumferential distance (clockwise, Fig. 7) corresponding to two of the teeth 54 on the ratchet 25; thus causing two teeth 54 on the ratchet 25 to move successively into engagement with, and past, the angled end portion 38 of the switch-operating member 34, and thus effecting two successive operations of the switch-operating member 34 and the control switch 35—36 and 37 associated therewith.

It will therefore be seen that the operation of the coin slide 12 (the coin aperture 55 in which is adapted to receive, for example, ten cent coins or tokens) permits two successive operations of the control switch 34—35—36—37 and the mechanism controlled thereby.

When the coin slide 12 is released and is reset into its initial or coin-receiving position (as in Fig. 1) by action of its resetting spring (not shown), the lateral or side edge 60 of the coin slide 12 moves out of engagement with the arm 61 of the latch member 47—46 (Fig. 1); and during this operation the pivotal bar 18 is moved back into its initial position by operation of its resetting spring 51, whereupon the notched portion 45 of the bar 18 moves out of latching engagement with the stem portion 47 of the latch member 46 (note Figs. 1 and 6), thus allowing the spring 50 to reset the latch member 47—46 back into its initial position (as in Fig. 1).

Similarly, when a coin of proper denomination, which may be, for example, a nickel, is inserted into the coin aperture 56 of the coin slide 13 and the latter is operated, the inner end portion of the coin slide 13 engages the cam roller 21 which is carried by the pivotal bar 18 and thereby pivots the latter (counterclockwise, from full toward dotted line position, Fig. 1); and during this movement the lateral or side edge 60 of the coin slide 13 engages the angled end portion or arm 62 of the upwardly extending arm 46 of the latch member 47, and thus moves the latter (bottom to top as seen in Fig. 1), thereby positioning the stem portion 47 of the latch member 45—47 in the path of the notched portion 44 of the pivotal bar 18, so that when the bar 18 moves, dur-

ing its operative stroke, (from full line position, toward dotted line position, Fig. 1), the notched portion 44 of the pivotal bar 18 will engage the stem portion 47 of the latch member 45—47, thereby preventing further movement of the bar 18 (counterclockwise, Fig. 1) and thus limiting the movement or operative stroke of the pivotal bar 18 in such a manner that the pawl 26 is moved a circumferential distance (counterclockwise, Fig. 7) corresponding to only one tooth 54 of the ratchet 25; and, accordingly, when the pawl-operating arm 23 is moved in the opposite direction (clockwise, Fig. 7) during its operative stroke, by the action of the spring 52, the pawl 26 will move or advance the ratchet 25 a circumferential distance corresponding to only one tooth 54 on the ratchet 25; thereby effecting only one operation of the switch-operating member 34, and the mechanism controlled thereby, for each operation of the coin slide 13, and for each coin or token inserted in the coin aperture 56 thereof, which is adapted to receive, for example, five cent coins or nickels.

From the foregoing description it will be seen that the number of times the control device or switch 34—35—36—37 is operated by operation of the preselected and actuated coin slide (11, 12 or 13), and associated means 18—22—23—26, etc., depends upon which coin slide 11, 12 or 13 is operated; and it will also be noted that the device or switch 34—35—36—37 is operated a greater number of times by certain coin slides (11 and 12) than by certain other coin slides, (12 and 13); and it will furthermore be noted that the latch mechanism 45—47—61—62—44—46, etc., prevents the operator of the present coin control device from operating the control device switch 34—35—36—37 as many times by operation of the nickel and dime coin slides 12 and 13 as the control device or switch 34—35—36—37 is operated by means of the quarter slide 11, so that the operator of the device cannot fraudulently operate or cheat the same and the machine, apparatus or the like controlled thereby.

Application of the present coin control device to an automatic phonograph

For the purpose of illustrating a preferred and typical use to which the present coin control device may be put, its use in conjunction with an automatic phonograph, such as that shown in Figs. 8 and 9, will now be explained:

When the contact 36 is moved into engagement with the contact 37, by the action of the ratchet 25 and switch-operating arm 24, the circuit 63 to the electromagnets 76 is closed, whereupon the pawl 81 is attracted by the electromagnets 76; thus causing the arm 75 thereof to engage the teeth 80 of the ratchet 74. This engagement of the arm 75 of the pawl 81 with the teeth 80 of the ratchet 74 causes the latter to rotate a predetermined distance (clockwise, Fig. 9), thereby moving the latch pin 73, which is carried by the ratchet 74, out of engagement with the angled end portion or arm 72 of the latch arm 71, whereupon the contact 68 moves, into engagement with the contact 69, thereby closing the circuit 63 to the motor 64 which controls the operating mechanism 66 of the phonograph 65; it being noted that the contact 68 of the switch 67 is normally latched out of engagement with the contact 69 by the engagement of the pin 73 with the angled end portion 72 of the latch arm 71 and the consequent bearing action of the latch arm 71 against the extension 70 of the contact 68.

The circuit 63 for the control or operating motor 64, being thus once closed, will remain closed until the ratchet 74 has been moved a predetermined circumferential distance (clockwise, Fig. 9), by successive operations of the switch 34—35—36—37 and the electromagnets 76 and pawl 81, whereupon the ratchet 74 is reset (by a resetting device, not shown) in a counterclockwise direction, as seen in Fig. 9; and at the end of this resetting operation the pin 73 on the ratchet 74 will again engage the angled end portion 72 of the latch arm 71 and thus pivot the latter, at 77, back into engagement with the extension 70 of the contact 68, thereby moving the contact 68 out of engagement with the contact 69 and thus opening the circuit 63 to the motor 64 which controls the operating or record-selecting mechanism 66 of the phonograph 65 (Figs. 8 and 9).

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification, without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. A device of the class described comprising a switch structure including cooperating contact elements, an arm pivotally mounted for closing the contact elements of said switch structure, a ratchet wheel movable to engage said arm to cause said arm to close the said contact elements of said switch structure, a plurality of independently movably mounted slides, and mechanism for operating said ratchet wheel including an actuating member adapted for engagement and actuation by any one of said slides.

2. A device of the class described comprising a switch structure including cooperating contact elements, an arm pivotally mounted for closing the contact elements of said switch structure, a ratchet wheel movable to engage said arm to cause said arm to close the said contact elements of said switch structure, a plurality of independently movably mounted slides, mechanism for operating said ratchet wheel including an actuating member adapted for engagement and actuation by any one of said slides, and latch mechanism for releasably latching the said contact elements during operation of said mechanism in one direction with respect to the ratchet wheel.

3. A device of the class described comprising a switch structure including cooperating contact elements, a ratchet wheel movable to close said contact elements, a plurality of independently movably mounted slide members, mechanism for operating said ratchet wheel including an actu-

ating member adapted for engagement by any one of said slides, and latch mechanism for releasably latching the said arm against operation upon said contact elements during operation of said mechanism in one direction with respect to the ratchet wheel.

4. A device of the class described comprising a supporting plate, a pair of spaced contact elements carried by the plate, an arm pivotally supported by the plate and movable to close said contact elements, a ratchet wheel for operating said arm, a plurality of independently movable slides mounted on said plate, mechanism operated independently by said slides for actuating said ratchet wheel, said mechanism including a pawl engageable with the ratchet wheel to move the ratchet wheel in one direction, means for moving said pawl in said one direction, and means for retarding the movement of said pawl in said one direction by said pawl moving means.

5. A device of the class described comprising a supporting plate, a plurality of independently movable slides mounted upon said plate, a member pivotally supported by the plate and adapted to be engaged by any one of said slides, a ratchet wheel, a pawl engageable with the ratchet wheel for moving the ratchet wheel in one direction, an operative connection between said pawl and said member for moving the pawl in one direction, and means for moving the said pawl in a direction to rotate the said ratchet wheel.

6. A device of the class described comprising a supporting plate, a plurality of independently movable slides mounted upon said plate, a member pivotally supported by the plate and adapted to be engaged by any one of said slides, a ratchet wheel, a pawl engageable with the ratchet wheel for moving the ratchet wheel in one direction, operative connection between said pawl and said member for moving the pawl in one direction, means for moving the said pawl in a direction to rotate the said ratchet wheel, and means for retarding movement of said pawl in an opposite direction.

7. A device of the class described comprising a supporting plate, a plurality of independently movable slides mounted upon said plate, a member pivotally supported by the plate and adapted to be engaged by any one of said slides, a ratchet wheel, a pawl engageable with the ratchet wheel for moving the ratchet wheel in one direction, operative connection between said pawl and said member for moving the pawl in one direction, means for moving the said pawl in a direction to rotate the said ratchet wheel, means for retarding movement of pawl in an opposite direction, a switch actuating arm pivotally supported by the plate and having operative engagement with the ratchet wheel, and latch means for said arm when said pawl is moved in said one direction.

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