

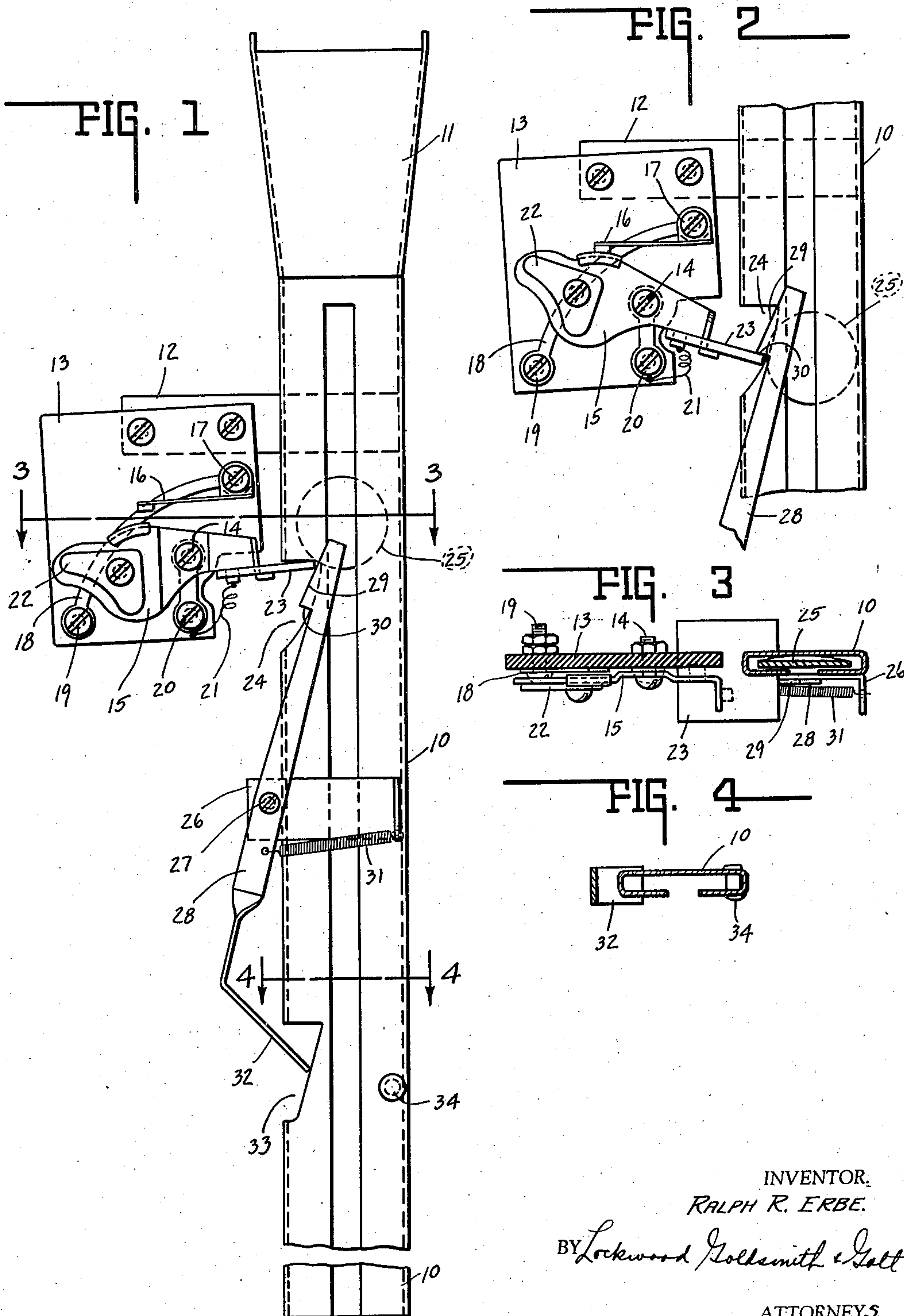
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COIN OPERATED ELECTRIC SWITCH

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COIN-OPERATED ELECTRIC SWITCH

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4 Claims. (Cl. 194—9)

This invention relates to a coin-operated elec-
tric switch which is particularly useful for coin-
operated phonographs but which may be used in
a large variety of other coin-operated machines.

In the coin control of electric machines, it is
common practice to provide a vertically mounted
trigger which is struck by a falling coin and
moved to complete an electric circuit. In
switches of this type, it is necessary to make an
accurate adjustment of the weight or inertia of
the moving parts to give a positive movement
when struck by a coin and at the same time pre-
vent a bouncing movement thereof which gives
a repeated closing of the circuit. Considerable
difficulty has been encountered with this type of
switch in providing a proper adjustment between
these two limits. In the usual application of these
switches, a bouncing movement, resulting in a
double make-and-break of the circuit, causes one
coin to be counted as two. In a coin-controlled
phonograph, this results in giving two selections
for the price of one and corresponding results
are produced with other types of coin-controlled
apparatus.

The principal object of the present invention
is to obviate the necessity for the fine adjust-
ment heretofore necessary to prevent the double
closing of the circuit. In the preferred form of
the invention disclosed herein, this object is at-
tained by providing a latch member which locks
the switch in closed circuit position as soon as
it has been closed by the receipt of a coin. The
switch is maintained in this position until the
coin has passed an appreciable distance beyond
the switch. Whereupon the coin strikes a second
trigger which releases the latch and permits the
switch to return to open circuit position. By this
means a double movement of the switch is pre-
vented and one coin is never counted as two.

Other objects and features of the invention
will be readily understood from the accompany-
ing drawing and the following description and
claims:

Fig. 1 is an elevational view of a coin chute
having the invention applied thereto in a pre-
ferred form. Fig. 2 is a fragmentary elevational
view of a part of Fig. 1 with the parts shown in
the latched position. Fig. 3 is a sectional view
taken substantially on the line 3—3 of Fig. 1.
Fig. 4 is a sectional view taken on the line 4—4
of Fig. 1.

In the drawing there is shown a coin chute 10
preferably formed of sheet metal shaped as best
seen in Figs. 3 and 4. The chute is provided
with a hopper 11 at its upper end which may

receive the coin from a slug-rejecting mechanism
of any well known form. A bar 12 secured to
the back of the chute 10 has secured thereto a
block 13 of insulation material upon which there
is pivotally mounted, by means of a screw 14, a
movable contact member 15. A fixed contact
member 16 in the form of a flexible finger is se-
cured to the insulation block by means of a screw
17 and is connected by a conductor 18 to a ter-
minal screw 19. The movable contact member 15
is connected to a terminal screw 20 by means
of a flexible conductor 21. A counterweight 22 is
secured to the movable contact member 15 and
serves to maintain said member in the position
shown in Fig. 1. A trigger 23 of insulating ma-
terial is secured to the movable contact member
15 and projects into a slot 24 in the edge of the
chute 10 in position to be struck by a coin 25
descending through said chute.

When so struck by a coin of sufficient weight
to overbalance the counterweight 22, the contact
member 15 is tilted about its pivotal mounting
and strikes the contact member 16 as shown in
Fig. 2. A circuit is thus completed between the
terminal screws 19 and 20 which will cause the
operation of any electrical device connected in
circuit with these terminals.

Secured to the chute 10 below the switch con-
struction just described there is a bar 26 to which
there is pivotally attached by means of a screw 27,
a latch lever 28. The upper end of the latch le-
ver is provided with an inclined face 29 and a
shoulder 30. The lever is positioned outside of
the chute with its inclined face 29 in contact with
the edge of the trigger 23 and is maintained in
contact therewith by a tension spring 31 secured
to the lever and to an outwardly turned portion of
the bar 26. When the trigger 23 is moved down-
wardly by a coin, it presses the lever 28 in a clock-
wise direction until it passes the shoulder 30, at
which time it is latched beneath the shoulder as
shown in Fig. 2. The movable contact member 15
is thus maintained in engagement with the con-
tact member 16 and is prevented from erratic
movements which would cause a repeated contact.

The lever 28 is provided with an intumed finger
32 which projects within a notch 33 in the chute
10. The descending coin, after passing the trig-
ger 23, strikes the finger 32, moving the lever 28
in a clockwise direction, releasing the trigger 23
and permitting the switch to return to the open
circuit position. A rivet 34 in the chute 10 oppo-
site the notch 33 insures that the coin will strike
the finger 32 at the proper angle to give sufficient
movement thereto for release of the trigger.

The foregoing specification describes a preferred form of the invention but it is obvious that the details thereof may be varied by one skilled in the art without departing from the scope of the invention as defined by the appended claims.

The invention claimed is:

1. A coin-controlled switch including movable and stationary contact members, a trigger adapted to move the movable contact member into engagement with the stationary contact member when struck by a coin, a latch securing said contact members in engagement thereafter, and coin-operated means operable thereafter for releasing said latch.

2. A coin-controlled switch including a stationary contact member, a movable contact member normally disengaged therefrom, a trigger adapted to move said movable contact member into engagement with the stationary member when struck by a coin, a latch lever adapted to maintain the contact members in engagement thereafter and having a portion projecting into the path of the coin in position to be struck thereby for release of the latch.

3. A coin-controlled switch including contact members relatively movable between open and closed circuit positions, coin-operated means for moving the same to one of said positions, retaining means holding said members in said last-mentioned position thereafter, and means operated thereafter by the coin for releasing said retaining means to permit return of said contact members to the other of said positions.

4. Coin-controlled electrical apparatus including a chute through which a coin may be dropped, a trigger projecting into said chute in position to be struck by a coin, contact members relatively movable to open and closed circuit positions, said members being moved to one of said positions by said trigger when struck by a coin, a latch retaining said members in said last-mentioned position thereafter, and a second trigger projecting into said chute at a point below said first trigger and operating to release said latch when struck by a coin.

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