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COIN SWITCH CONTROLLED TICKET DISPENSER

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2 Sheets-Sheet 2

Fig. 2

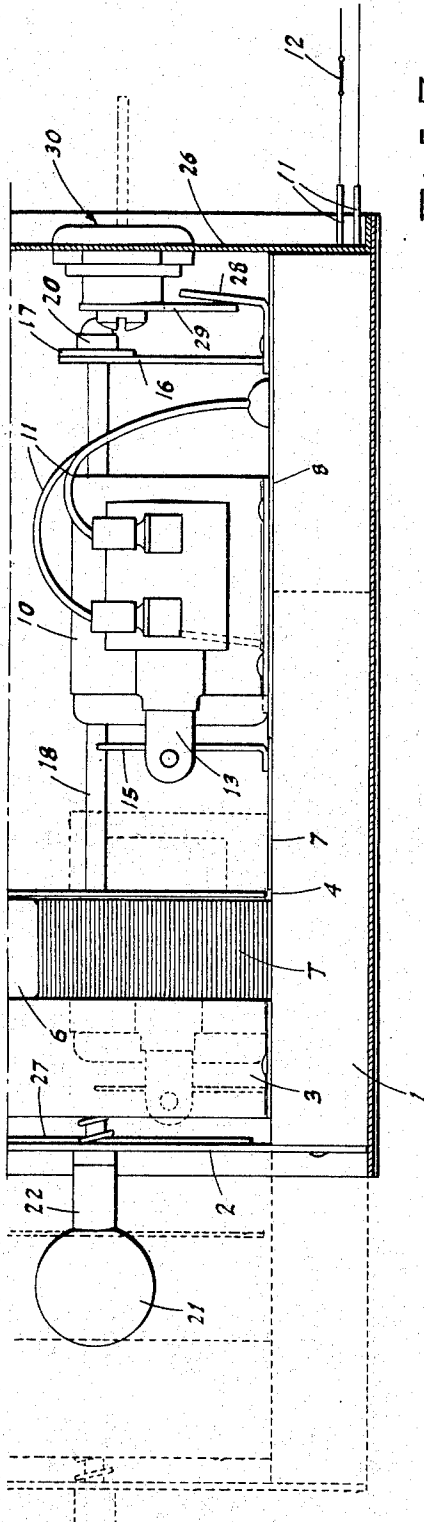
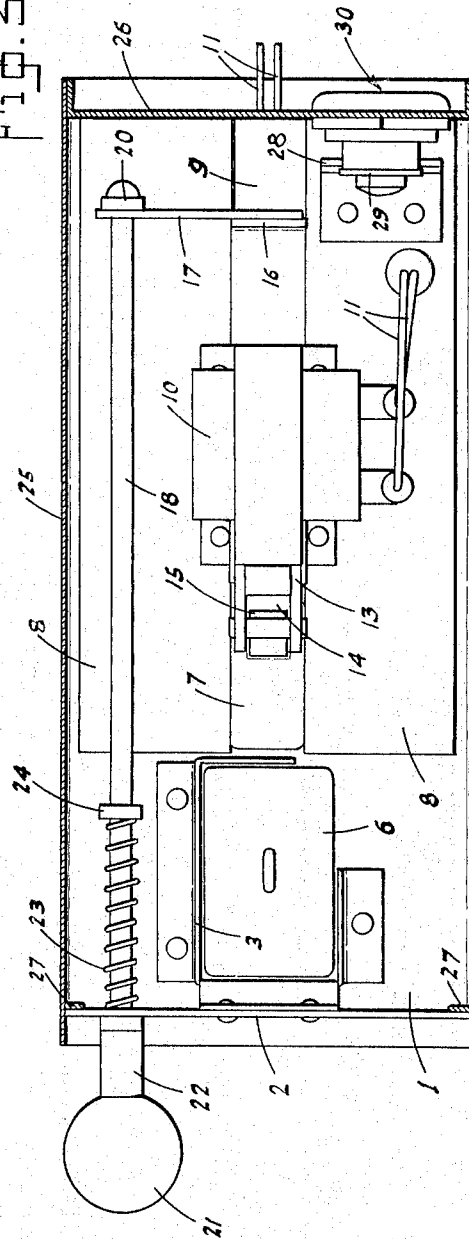


Fig. 3



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COIN SWITCH CONTROLLED TICKET DISPENSER

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ABSTRACT OF THE DISCLOSURE

A ticket dispenser embodying a magazine for a stack of tickets, and a manually operated slide arranged to dispense the tickets one at a time from the bottom of the stack; a coin-controlled electrical device being employed to reset such slide.

The ticket dispenser of the present invention is especially designed, but not limited, for use to dispense "prize" or "bonus" tickets, or tickets which—in the form of a folder—contain merchandise redemption stamps or the like.

It is the major object of this invention to provide a ticket dispenser which is manually operated to dispense a single ticket at a time, and electrically reset in response to a coin-controlled switch. The arrangement is such that once a ticket has been dispensed, no other ticket can be subsequently dispensed until a deposited coin closes the switch; the latter in turn closing a circuit which energizes an electric mechanism incorporated in and which resets the dispenser.

Another object of the invention is to provide a ticket dispenser, as above, which is particularly useful in connection with coin-controlled utility apparatus such as a washing machine in a laundromat. The dispenser is attached to or mounted adjacent such apparatus, and the circuit of the dispenser is wired to include the coin-controlled switch of said apparatus. Thus, when a patron uses the coin-controlled apparatus and its switch is closed by a coin, the dispenser automatically resets and the patron can actuate the latter to obtain a single ticket; the dispenser then being in a condition such that another ticket cannot be dispensed until the coin-controlled apparatus is again used.

A further object of the invention is to provide a ticket dispenser which is designed for ease and economy of manufacture, ready installation, and convenience of use.

A still further object of the invention is to provide a practical, reliable, and durable ticket dispenser and one which is exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

FIG. 1 is a side elevation of the ticket dispenser showing the position of the parts when a ticket is being dispensed; the casing and the base of the dispenser being in section.

FIG. 2 is a partial side elevation of the ticket dispenser as set for use and with the dispensing slide retracted; the casing being in section.

FIG. 3 is a top plan view of the ticket dispenser set as in FIG. 2; the casing being in section.

FIG. 4 is a perspective view of the dispensing slide, detached.

Referring now more particularly to the drawings and to the characters of reference marked thereon, the ticket

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dispenser comprises a hollow rectangular base 1 to the front end of which a rigid full-width upstanding rectangular wall 2 is secured. An upstanding rectangular magazine 3 for a stack of tickets T is secured against the back side of the front wall 2 intermediate its side edges. The magazine, at its lower end, is also secured to the flat floor of the base but—as shown—only at the sides and in a manner to leave a space 4 between the floor and the lower edge of both the front and back walls of the magazine. The forward space 4 is of a height to receive only a single ticket T therethrough; the rear space 4 being of the same height. The front wall 2 is provided with a ticket-passing slot 5 in alignment with the forward magazine space 4.

The top of the magazine is open for the placing of tickets therein, and a weight 6—removable from the upper end of the magazine—is disposed therein and bears on the top of the stack of tickets.

The lowermost ticket T of the stack (which ticket rests on the floor of the base 1 and is thus horizontally aligned with the spaces 4 and the slot 5) is adapted to be dispensed from the magazine 3 and fed forwardly through the slot 5 by the following means:

Longitudinally slidably supported on the floor of the base 1 (to the rear of magazine 3 but movable forwardly to project in part beneath said magazine) is a rigid elongated strip or ticket-dispensing slide 7. The slide 7, which is narrower than the width of the magazine 3 and the tickets T therein and has a thickness no greater than that of any such ticket, is disposed in a position centrally of the width of said magazine, and is guided in its longitudinal movement by means of side plates 8 fixed on the base 1 and leaving a groove 9 therebetween for the slide.

Mounted on the plates 8 (which may be considered as being part of the base 1) intermediate the ends of the slide 7 and in straddling relation thereto and to the groove 9, is a solenoid 10. The circuit wires 11 for such solenoid 10 extend from one side thereof through the adjacent plate 8 and the floor of the base into the space below, as shown in FIG. 1. From this point, the circuit wires 11 extend from the dispenser to a normally open switch 12. The switch 12 may be the one included in coin-controlled utility apparatus to which the ticket dispenser is attached.

The solenoid 10 includes a plunger 13 which projects forwardly some distance from said solenoid when it is de-energized, as shown in FIG. 1. At its forward end, the plunger 13 is formed with a vertical slot 14 through which a rigid arm 15 projects; said arm being fixed on and upstanding from the slide 7 a substantial distance from the forward end thereof.

At its rear end, the slide 7 is formed with a rigid upstanding arm 16 spaced behind the solenoid, and at its upper end said arm 16 is provided with a lateral extension 17.

A horizontal longitudinal pull rod 18 slidably projects through an opening 19 in said extension (see FIG. 4); the rod having an enlarged head 20 thereon rearwardly of the extension. From said extension 17, the rod 18 projects forwardly and through the front wall 2 to a termination in a pull knob 21; the shank 22 of which abuts against the outer face of said front wall when the rod 18 is fully retracted—a position normally assumed by reason of a compression spring 23 about the rod 18 between the rear face of wall 2 and a stop 24 on the rod.

When slide 7 and rod 18 are fully retracted, the extension 17 abuts against the rod head 20. The forward end of the ticket-dispensing slide 7 is then disposed a

slight distance back from the magazine 3, as clearly shown in FIG. 3.

Operation

With the ticket-dispensing slide 7 and pull rod 18 in their retracted positions as shown in FIGS. 2 and 3, and with the solenoid de-energized, a pull on the knob 21 to advance the rod 18 will also advance the dispensing slide 7. When this occurs, the forward portion of the slide moves through the rear space 4 and engages the lowermost ticket T and shoves the same out of the magazine and partially through the slot 5 as shown in FIG. 1. This enables said ticket to be manually grasped and fully withdrawn from the dispenser by the patron. Forward movement of the ticket dispensing slide 7 is limited by engagement of the arm 16 with the rear end of the solenoid as shown in FIG. 1.

After a ticket is dispensed, as above, and upon the knob 21 being released, the spring 23 functions to retract the pull rod 18, but the slide 7 does not retract and remains in its advanced position; this for the reason that said rod 18 moves freely in a rearward direction through opening 19 in lateral extension 17. Thus, until the dispenser is reset, any additional advancing movement of the rod 18 will not affect the position of the slide 7 one way or the other and no ticket will be dispensed.

The only way in which the dispenser can be reset with the slide 7 retracted—is by closing of the switch 12 in response to deposit of a coin. This causes the solenoid 10 to be energized which in turn retracts the plunger 13 and the plunger-engaged arm 15 of slide 7. When this occurs, the slide 7 is shifted rearward and pulled out from under the magazine and until the lateral extension 17 abuts against the rod head 20. Such retractive movement of the slide 7 resets the dispenser and allows another ticket T to move down (under the influence of weight 6) onto the floor of the base 1 in position to be dispensed. As the solenoid 10 remains energized for a very short time (the coin-controlled switch conventionally closing and then opening rapidly), the solenoid plunger 13 does not resist forward movement of slide 7 during a ticket-dispensing operation.

The tickets T must, of course, be stiff and relatively thick so that only one ticket at a time will be engaged by the dispensing slide 7. If the dispenser is used with thin stamps such as merchandise redemption stamps, they are encased in folder type covers or tickets of a total thickness sufficient to insure proper dispensing thereof.

The ticket dispenser, as hereinbefore described, is removably enclosed in a rigid, rectangular casing 25 initially open at the front and on the bottom of which casing the base 1 is slidably supported. The rear end of the casing 25 comprises a rigid wall 26, while the front of the casing is initially open but is normally closed by the wall 2 which, in its fully seated position in the casing, abuts against stop flanges 27 projecting inwardly from the side walls of said casing.

Unauthorized removal of the ticket dispenser from the casing 25 is prevented by means of the following:

A rigid lip 28 is mounted on and upstands from one of the plates 8 near the wall 26, and which lip is engaged on its forward face by a locking dog which projects downwardly and radially from the turnable barrel of a key-controlled cylinder-type lock 30 mounted on the wall 26 above the lip 28. Release of the locking dog 29 from the lip 28, by key-rotation of the lock barrel, enables the dispenser to be drawn out from its casing; the slack in the circuit wires 11 between the solenoid 10 and the switch 12 being sufficient to permit said dispenser to be withdrawn a sufficient distance to dispose the magazine 3 clear of the casing 25, as indicated in dotted lines in FIG. 2, for ready and convenient refilling of said magazine with tickets.

From the foregoing description, it will be readily seen that there has been produced such a ticket dispenser as

substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the ticket dispenser, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful and upon which Letters Patent is desired:

1. A ticket dispenser comprising a base, a magazine upstanding from the base to hold a stack of tickets, the magazine having horizontally alined openings at the front and rear at the bottom, the front opening being of a size to receive the bottom ticket of the stack therethrough, a rigid slide mounted on the base rearwardly of the magazine for longitudinal reciprocating movement, the slide being positioned and of a size at its forward end to enter the rear opening of the magazine so as to engage and push the bottom ticket of the stack through the front opening upon advance of the slide from a predetermined retracted position, a manual pull element operatively connected to said slide to so advance but incapable of retracting the same, and a normally de-energized electrical device mounted on the base and including means operatively connected to the slide to move the same to said retracted position when the device is energized.

2. A dispenser, as in claim 1, in which said electrical device, when de-energized, permits of free advance of the slide.

3. A dispenser, as in claim 1, with a circuit for said electrical device, and a normally open coin-controlled switch in the circuit.

4. A dispenser, as in claim 1, in which the electrical device is a solenoid which includes a plunger projecting forwardly therefrom when said solenoid is de-energized, and said means comprises an arm rigid with the slide rearwardly of the magazine-entering portion thereof; said arm being operatively connected to the plunger adjacent the forward end thereof.

5. A ticket dispenser comprising a rigid rectangular base, a rigid front wall upstanding from the forward end of the base, a magazine upstanding from the base immediately to the rear of the wall and disposed intermediate the sides of the base, said magazine being adapted to hold a stack of tickets and having horizontally alined openings at the front and rear thereof at the base, the front opening being of a size to receive the bottom ticket of the stack therethrough, the front wall having a ticket-passage slot therethrough alined with said front opening, a ticket-dispensing slide mounted on the base rearwardly of the magazine for horizontal reciprocating movement between a retracted and an advanced position, the slide being of a size and disposed in a position such that the forward end portion of the slide can enter the rear opening of the magazine in alinement and engagement with the bottom ticket of the stack upon advance of the slide from a retracted position, a rigid arm upstanding from the rear end of the slide, a lateral extension on the arm at the upper end thereof, said extension having a hole therethrough adjacent its outer end, a spring-retracted pull rod extending between the extension and front wall, the pull rod slidably projecting through said hole in the extension and through a hole in said front wall, a knob on the rod ahead of the front wall, a head on the rod rearwardly of the extension and adapted to engage the same when the rod and slide are both fully retracted, and a normally de-energized electrical device mounted on the base and operatively connected to the slide to move the same from an advanced to a retracted position when said device is energized.

6. A dispenser, as in claim 5, in which the electrical device comprises a solenoid mounted on the base in straddling relation to the slide intermediate the ends thereof, the solenoid including a plunger projecting from

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the forward end thereof in overlying relation to the slide when said solenoid is de-energized, and an arm upstanding from the slide rearwardly of the forward end portion thereof and projecting through a vertical slot in the forward end portion of the plunger.

7. A dispenser, as in claim 5, with a rectangular casing in which the dispenser is enclosed; said casing being closed at one end and initially open at the other end, and said front wall closing said other end of the casing.

8. A dispenser, as in claim 7, with a locking unit between the dispenser and said one end of the casing and key-operable from outwardly of the latter.

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