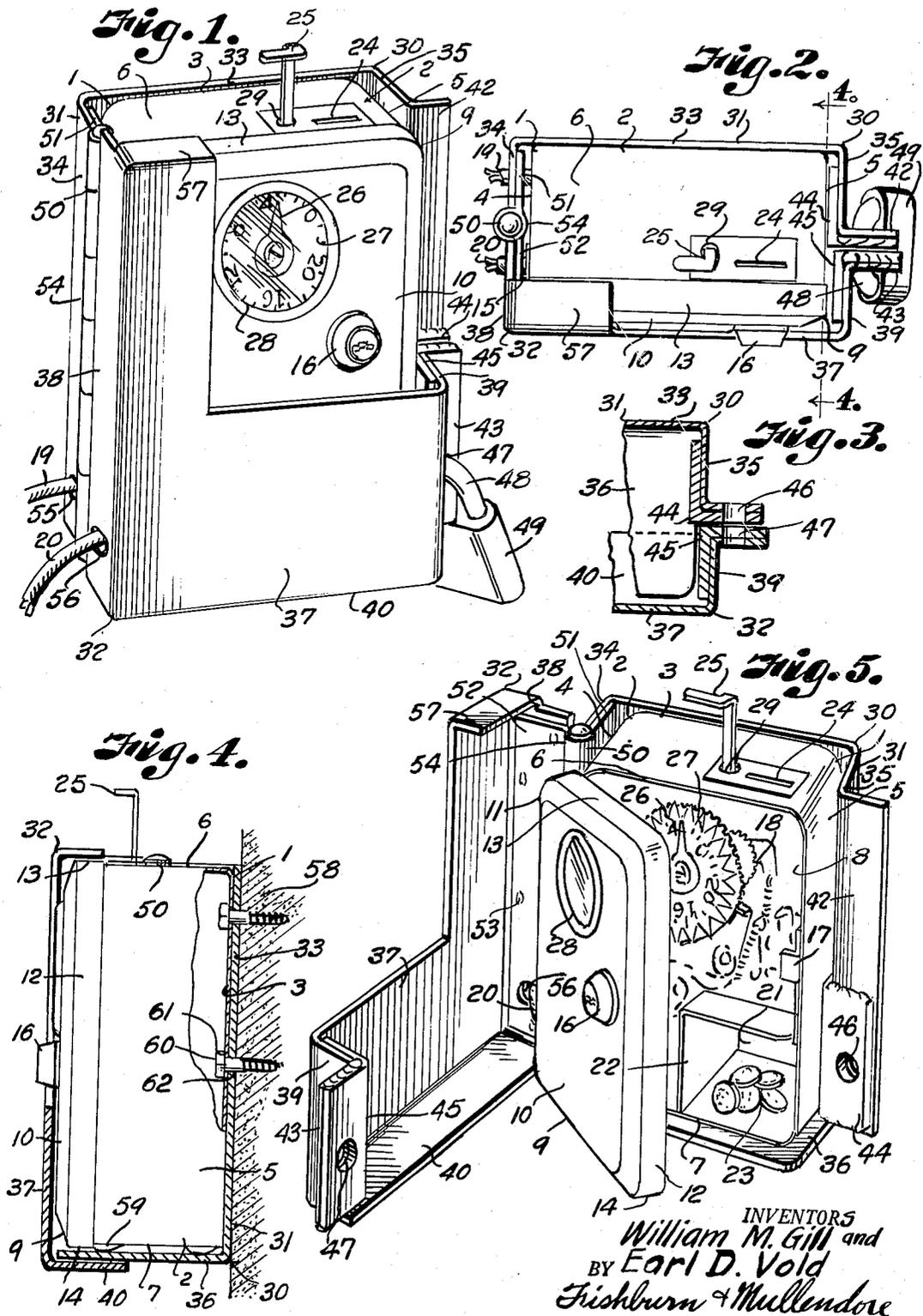


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SWITCHES AND LIKE METERING DEVICES
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GUARD FOR PROTECTING COIN OPERATED SWITCHES AND LIKE METERING DEVICES

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This invention relates to a guard for protecting coin operated switches and like metering devices from theft of coins that have been deposited therein.

The cost factor require that such switches be constructed to sell at relatively low cost, consequently, the cases thereof are formed of light gauge material and are easily bent out of shape to gain access to the coin compartment by petty thieves particularly where they are installed in relatively non-public places.

For example, such switches are used to control laundry equipment installed in the basements of apartment buildings for the convenience of the tenants. And, since such basements and like places are usually open to the prowling of petty thieves, heavy losses are encountered by the owner of the equipment in actual cash and damage to the switches or metering devices.

It is, therefore, a principal object of the present invention to provide a simple and inexpensive guard for embracing the vulnerable portions of the cases of such devices so they can not be easily opened by the petty thieves.

Other objects of the invention are to provide a guard of this character that protects the case without interfering with the coin slot, starting lever and meter dial of such devices; to provide a guard which better protects the electrical connections between the source of current supply and the machine operated; and to provide a guard that is of substantially strong, rigid construction and which has reinforcement of the portions that protect the most vulnerable parts of the control switch.

In accomplishing these and other objects of the invention, as hereinafter pointed out, we have provided improved structure the preferred form of which is illustrated in the accompanying drawings wherein:

Fig. 1 is a perspective view of a time operated switch protected by a guard embodying the features of the present invention.

Fig. 2 is a plan view of switch and guard applied thereto.

Fig. 3 is a fragmentary section through the front and rear members of the guard showing reinforcement of the portions of the members to which a lock is attached and showing the overlap of the bottoms of the respective members.

Fig. 4 is a vertical section through the guard on the line 4—4 of Fig. 2, the switch casing being shown in elevation with a portion thereof broken away to better illustrate the fastening devices which secure the switch casing and guard to a wall or other suitable support.

Fig. 5 is a perspective view of the switch and guard with the front or hinged member of the guard and door of the switch casing in open position to permit authorized access to the coins that are collected in the coin compartment of the casing.

Referring more in detail to the drawings:

1 designates a coin controlled switch to meter the time during which an electrical circuit is to be closed. The device illustrated includes a casing 2 having a back

wall or panel 3 provided with marginal side walls 4 and 5, a top 6, and a bottom 7, leaving an open front 8 that is normally closed by a door 9. The door 9 includes front wall or panel 10 having marginal flanges 11—12 and 13—14 at the sides and top and bottom which are adapted to lap the terminal portion of the marginal walls of the casing. The door 9 is hinged to the side wall 4, as indicated at 15, and the opposite side has a key actuated lock 16 to engage a keeper 17 on the inner side of the side wall 5, as shown in Fig. 5. The case contains a setting and timing mechanism 18 for controlling electric switch elements that are connected with a source of current supply and with a machine to be operated by electric conductors 19 and 20. The conductors 19 and 20 extend through suitable openings in the side wall 4 of the casing. The casing also has a money compartment 21 having an open front 22 that is closed by the door 9 for collecting coins 23 inserted through a coin slot 24 in the top 6. The device also has a starting lever 25 that is effective in closing the circuit and effecting operation of a time indicator 26 which moves over a dial 27, both contained within the case and visible through a window opening 28 in the front panel 10 of the door 9 as shown in Figs. 1 and 5. The starting lever 25 projects upwardly through an opening 29 in the top wall of the case as best shown in Figs. 1 and 2.

Switches of this type are, of necessity, constructed to sell at relatively low cost, consequently, the casings are made of relatively light gauge material and it is a simple matter for a petty thief to insert some form of a tool between the flanges of the door and walls of the case to bend or pry the door open to remove the coins from the coin compartment 21. For example, laundry equipment, such as clothes washers and driers, are installed in the basements of apartment buildings and similar places for convenience of the tenants, a fee being made for use of the machines for a given period of time. The fee is collected when the tenant deposits a coin or coins in one of the time switches of the type above described. The switches are connected in circuit with the respective machines by connecting conductors 19 thereof with the current supply and the other conductor 20 to the machine to be operated. The basements or like places of installation are open and subject to entrance of prowlers and petty thieves that prey upon the money content of the control switches because the cases thereof are readily opened by some available tool or object that is readily at hand.

Therefore, the owner of the machines not only loses the money collected but the coin control switches are severely damaged and require repair or complete replacement. Thefts may be kept at a minimum through frequent removal of the coins, however, this requires considerable attention on the part of the owner and is not practicable.

Therefore, the present invention contemplates a guard 30 including a back member 31 and a front member 32 that are formed of relatively heavy gauge material having reinforced parts to restrict the activities of petty thieves. In the illustrated instance the back member 30 includes a back wall 33 of slightly larger dimensions than the back of the casing and which has marginal side walls 34 and 35 and a bottom 36. The sides 34 and 35 are preferably of a depth corresponding to substantially one-half the depth of the switch casing, but the bottom wall 36 is of greater depth and projects forwardly from the side walls. The walls of the back member are preferably integral or connected together by welding to provide a unitary structure.

The front member 32 includes a front wall or panel 37 having marginal sides 38 and 39, and a bottom 40

which are of a depth to cooperate with the corresponding side walls of the back member for covering the side walls of the switch casing as shown in Fig. 2. The panel and walls are also integrally formed and welded together to provide unitary structure similar to the back member 31.

The front member 32 has an opening 41 formed in the upper corner thereof to expose the dial 27 and lock 16. Therefore, the side wall 39 is shorter than the side wall 35 as shown in Fig. 1.

The side walls 35 and 39 of the respective members have laterally extending stiffening flanges 42 and 43 which in turn are reinforced by angle members 44 and 45 respectively which are coextensive with the shorter flange 43 and one flange thereof is welded to the face sides of the respective flanges and the other flange is welded to the innerface side of the respective walls 35 and 39, as best shown in Fig. 3. The flanges in the reinforcing angles of the respective members have openings 46 and 47 for passing the hasp 48 of a padlock 49 as later described. The opposite side walls 34 and 38 of the guard members are interconnected by a hinge 50. The hinge 50 is coextensive with the side walls and has leaves 51 and 52 welded to the innerface sides of the side walls by spot welding or the like as indicated at 53, Fig. 5. The barrel portion 54 of the hinge is positioned between the free edges of the side walls to close the space therebetween and prevent entrance of any form of prying tool. The hinge element also reinforces the side flanges 34 and 38 and enhances the over all rigidity of the guard.

The lower ends of the side flanges 34 and 38 have openings 55 and 56 that register with the openings in the side 4 of the casing as previously described.

The front member is also provided at the top thereof at the hinged side of the opening 41 with an in-turned flange 57 that engages over the upper flange 13 of the door 9 as shown in Fig. 1 to cooperate with the bottoms 36 and 40 to better protect the door 9 in the vertical direction thereof.

In mounting the switch and guard on a suitable support, such as the basement wall 58, the mechanism 18 is removed from the casing and the casing is inserted within the guard member 31 with the back 3 of the casing engaging the back 33 of the guard and with bosses 59 on the bottom of the casing resting upon the bottom 36. Fastening devices, such as screws 60, are inserted through registering openings 61 and 62 in the respective back walls 3 and 33 and the shanks thereof are driven into the support to tighten the back 3 of the casing against the back 33 of the guard and the back of the guard firmly against the support. The conductors 19 and 20 are passed through the openings 55 and 56 and through the openings of the case for connection to the terminals (not shown) of the switch mechanism. The mechanism 18 is replaced within the casing and the door 9 is closed and secured by the lock 16. The hinged front 32 of the guard is then closed over the casing to cooperate with the back member in embracing the casing after which the hasp 48 of the lock 49 is passed through the opening 46 and 47 to lock the guard about the casing. When the hinged member of the guard is closed, the projecting portion of bottom 36 overlaps the bottom 40 as shown in Fig. 4 to guard against entrance of a tool by which the hinged elements of the guard may be pried open.

The angles 44 and 45 reinforce the flanges 42 and 43 of the guard members so that they can not readily be deformed or moved apart to break the hasp of the lock.

It is obvious that the guard constructed as described and mounted about the casing affords adequate protection for the switch casing and the contents of the coin compartment from petty thieves. It is also impossible to gain access to the electrical connections without opening up of the guard.

When coins are to be collected, the padlock is removed and the hinged member of the guard is swung open after which the lock 16 is actuated to release the door 9 which

then can be swung open to permit removal of the coins 23 after which the door 9 is closed and locked. The hinged member of the guard is then moved into position and secured to the back member by the padlock.

What we claim and desire to secure by Letters Patent is:

1. A guard for a coin control switch of the type including, a casing having marginal walls one of which has a coin slot and a starting lever projecting from said wall, a door having marginal flanges lapping said marginal walls and having a dial and a lock for securing said door, said guard including a back member having back, sides, and bottom and an open top to pass said starting lever and to expose the coin slot, a front member having a front, sides, and bottom corresponding with front, bottom and sides of the back member to cooperate with the back member for embracing the casing, a hinge connecting one of the sides of the front member with the corresponding side of the back member, flanges extending laterally and outwardly from the opposite sides of the front and back members and having registering openings for passing the hasp of a padlock to lock the members together, said front having an opening to expose the dial, and a lateral flange on the front member and extending inwardly of the open top for overlapping the top flange of said door at a point offset relatively to the starting lever and said coin slot to cooperate with said bottoms of the front and back members in securing the casing therebetween.

2. A guard for a coin control switch of the type including, a casing having marginal walls one of which has a coin slot and a starting lever projecting from said wall, a door having marginal flanges lapping said marginal walls and having a dial and a lock for securing said door, said guard including a back member having back, sides and bottom and an open top to pass said starting lever and to expose the coin slot, a front member having a front, sides, and bottom corresponding with front, bottom and sides of the back member to cooperate with said front, bottom, and sides of the back member for embracing the casing, a hinge connecting one of the sides of the front member with the corresponding side of the back member, flanges extending laterally and outwardly from the opposite sides of said front and back members and having registering openings for passing the hasp of a padlock to lock the members together, said front having an opening to expose the dial, a lateral flange on the front member and extending inwardly of the open top for overlapping the top flange of said door of the casing at a point offset relatively to the starting lever and said coin slot to cooperate with said bottoms in securing the casing therebetween, and one of said bottoms being of greater depth than the other to provide a lap thereof at the bottom of said members.

3. A guard for a coin controlled switch of the type including a casing having a back, top, bottom and sides with the top having a coin slot and a starting lever projecting from said top and a door hinged to one of the side walls and having marginal flanges lapping the sides, top and bottom and having a dial in said door, said guard including a back member having a back, sides, a bottom and an open top to pass the starting lever and expose the coin slot, a front member having a front, sides, and bottom corresponding with the front, bottom and sides of the back member for embracing the corresponding parts of the casing, a hinge connecting one of said sides of the front member with the corresponding side of the back member, flanges extending laterally and outwardly from the opposite sides of the front and back members and having registering openings for passing the hasp of a padlock to lock the members together, said front member having an opening to expose the dial, a lateral flange on the front member and extending inwardly of the open top for overlapping the top flange of said door to cooperate with said bottoms of the front and back members in securing the casing therebetween, and angles having flanges fixed to said lateral flanges and flanges fixed to

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inner sides of the front and back members which have said flanges, said first named flanges of the angles having openings registering with the opening in said lateral flanges to reinforce said lateral flanges at the point of the lock.

4. A guard for a coin controlled switch of the type including, a casing having a back and marginal walls with the top wall having a coin slot and a projecting lever and a door hinged to a side marginal wall and having marginal flanges lapping the marginal walls and having a dial and a lock, said guard including a back member having a back, sides, and a bottom, and an open top exposing the coin slot and lever, a front member having a front, sides, and bottom corresponding with the front, bottom and sides of the back member to cooperate with the front, bottom and sides of the back members for embracing the casing, a hinge coextensive with and connecting one of the sides of the front member with the corresponding side of the back member, flanges extending laterally and outwardly from the sides opposite said sides which are connected by said hinge, angles having flanges fixed to the lateral flanges and other flanges secured to innerfaces of said sides which have the lateral flanges, said flanges having registering openings for passing the hasp of a padlock to lock the members together, said front member having an opening to expose the dial and lock, and means on the front member for overlapping the top marginal flange of said door of the casing to cooperate with said bottoms of the front and back members in securing the casing therebetween, said bottom on the back member being of greater depth than that of the front member and the bottom of the front under lapping said bottom of the back member.

5. A guard for a coin control switch of the type including a casing having a coin slot and a starting lever projecting from the casing, a door for removal of coins

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from the casing and having a dial, said guard including a fixed member for seating the casing therein and having an opening to pass said starting lever and to expose the coin slot, a complementary member cooperating with the fixed member to embrace the casing, a hinge connecting complementary member with the one side of the fixed member and having a portion exposing the dial, flanges extending outwardly from the opposite side of said members and having registering openings for passing the hasp of a padlock to lock the members together, and means for reinforcing said flanges at the point of said lock.

6. A guard for a coin control switch of the type including a casing having a coin slot and a starting lever projecting from the casing, a door for removal of coins from the casing and having a dial, said guard including a fixed member for seating the casing therein and having an opening to pass said starting lever and to expose the coin slot, a complementary member cooperating with the fixed member to embrace the casing, a hinge connecting complementary member with the one side of the fixed member and having a portion exposing the dial, flanges extending outwardly from the opposite side of said members and having registering openings for passing the hasp of a padlock to lock the members together, and angles having flanges fixed to said lateral flanges and flanges fixed to said members for bracing and reinforcing said flanges at the point of the lock.

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